

**DETERMINANTS OF COMMERCIAL REAL ESTATE PERFORMANCE:
THE CASE OF ADDIS ABABA, ETHIOPIA**

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Abstract

Ethiopia is one of the world's fastest urbanising countries, with cities such as Addis Ababa constantly expanding. While urbanisation causes a variety of social and economic issues, housing shortages in developing countries are worse than ever, and the number of slum dwellers living illegally in areas with no licenses or property rights is growing. Ethiopia is no exception in this regard. The main objective of the study was to investigate the variables that affect Addis Ababa's commercial real estate market performance. The study employed a mixed research approach with an explanatory sequential mixed method design. The study sample for the quantitative phase consisted of senior specialists, top business leaders and other professionals from 35 commercial real estate developers operating in Addis Ababa. A total of 231 structured and self-administered sets of questionnaires were distributed, with 163 ultimately being used in the analysis. This yielded a real response rate of 71%, which was considered both necessary and adequate for running the requisite statistical tests. For the qualitative phase of the study, 15 key informants from relevant government ministries or agencies and relevant industry sectors were chosen to participate in in-depth interviews. However, only 10 key informants volunteered to be interviewed. The quantitative study's results showed that every factor—firm efficiency, supplier dependability and customer purchase intentions, as well as credit availability, marketing strategy, legal considerations, land availability, infrastructure development, technological adoption and leadership quality—had a significant and positive impact on the performance of Addis Ababa's commercial real estate market. The qualitative study revealed that the additional variables of political and economic instability, the level of coordination and stakeholder participation, political intervention and home buyers' purchasing power affected the performance of commercial real estate. The researcher recommends that, to perform better, real estate firms develop an effective strategy that focuses on performance-improving variables and work closely with the government and other stakeholders. Finally, commercial real estate developers should be guided by the suggested framework for measuring performance in the commercial real estate industry.

Keywords: *Addis Ababa; commercial real estate; determinants; performance*

Kakaretso

Ethiopia ke e nngwe ya dinaha tse potlakileng ka ho fetisisa lefatsheng tse ahang ditoropo, ditoropo tse jwalo ka Addis Ababa e ntseng e hola. Le hoja ho ata ha ditoropo ho baka mathata a sa tshwaneng a setjhaba le a moruo, kgaello ya matlo dinaheng tse ntseng di tswela pele e mpe ho feta pele, mme palo ya baahi ba mekhukhu ba phelang moo ka ntle ho molao dibakeng tse se nang mangolo a tumello kapa ditokelo tsa boahi e ntse e eketseha. Ethiopia ha se mokgelo tabeng ena. Sepheo se seholo sa phuputso ena ke ho batlisisa mefuta e fapaneng e amang tshebetso ya mmaraka wa thekiso ya matlo le meaho Addis Ababa. Phuputso e sebedisitse mokgwa o kopaneng wa ho etsa patlisiso o nang le moralo o hlalolang wa mokgwa o kopaneng wa tatellano. Sampole ya phuputso bakeng sa mokgahlelo wa dipalo e ne e na le ditsebi tsa maemo a phahameng, baetapele ba ka sehloohong ba dikgwebo le ditsebi tse ding tsa kaho tse 35 tsa thekiso ya matlo le meaho tse sebetsang Addis Ababa. Kakaretso ya disete tsa dipotso tse 231 tse hlophisitsweng le tse sa hlophiswang di abilwe, mme qetellong ho sebedisitswe tse 163 bakeng sa manollo. Sena se fane ka sekgahla sa karabelo sa nnete sa 71%, se neng se nkuwa se hlokahala ebile se lekane bakeng sa ho etsa diteko tsa dipalo-palo tse hlokahalang. Bakeng sa mokgahlelo wa boleng ba phuputso, ho kgethilwe ditsebi tse 15 tsa bohlokwa ho tswa makaleng a amehang a mmuso le mafapha a amehang a indasteri ho nka karolo dipuisanong tse tebileng. Leha ho le jwalo, ke ditsebi tse 10 feela tsa bohlokwa tse ileng tsa ithaopela ho botswa dipotso. Diphetho tsa phuputso ya dipalo di bontshitse hore ntho e nngwe le e nngwe – katleho ya feme, ho itshetleha ho bafani le merero ya ho reka ya bareki, hammoho le ho fumanaha ha mekoloto, leano la ho bapatsa, menahano ya molao, ho ba teng ha mobu, ntlafatso ya meaho, ho amohelwa ha thekenoloji le boleng ba boetapele – ho bile le phello e kgolo le e ntle tshebetso ya mmaraka wa thekiso ya matlo le meaho wa Addis Ababa. Phuputso ya boleng e senotse hore dintho tse ding tse fapaneng tsa ho se tsitse ha dipolotiki le moruo, boemo ba kgokahanyo le ho nka karolo ha baamehi, boitshunyako ba dipolotiki le matla a ho reka a bareki ba matlo di amme tshebetso ya kgwebo ya thekiso ya matlo le meaho. Mofuputsi o kgothalletsa hore, e le ho sebetsa hantle, difeme tsa thekiso ya matlo le meaho di lokela ho theha leano le sebetsang hantle le tsepameng ho mefuta e ntlafatsang ya tshebetso le ho sebetsa haufi-ufi le mmuso le ba bang ba amehang. Qetellong, ditsebi tsa kaho tsa thekiso ya matlo le meaho di lokela ho tataiswa ke moralo o kgothaletswang wa ho lekanya tshebetso indastering ya thekiso ya matlo le meaho.

Mantswe a sehloho: Addis Ababa; thekiso ya matlo le meaho; dintho tse amang sebopeliso kapa sephetho sa ntho e itseng; tshebetso

Okucashuniwe

I-Ethiopia ingelinye lamazwe emadolobheni ashesha kakhulu emhlabeni, njengoba amadolobha afana ne-Addis Ababa akhula njalo. Nakuba ukufudukela emadolobheni kubangela izinkinga ezihlukahlukene zezehlalo nezomnotho, ukuntuleka kwezindlu emazweni asathuthuka kubi kakhulu kunaphambilini, futhi inani labantu abahlala emijondolo abahlala ngokungemthetho ezindaweni ezingenawo amalayisensi noma amalungelo endawo liyakhula. I-Ethiopia nayo ayihlukile kulokhu. Inhloso eyinhloko yocwaningo kwakuwukuphenya okuguququkayo okuthinta ukusebenza kwemakethe yezindlu zentengiso yase-Addis Ababa. Ucwano lusebenzise indlela yocwaningo exubile lapho ithola imininingwane ngokuchaza bese ilinganisa okutholiwe. Isampula yocwaningo yesigaba sokuchaza yayihlanganisa ochwepheshe abaphezulu, abaholi bamabhizinisi abaphezulu kanye nabanye ochwepheshe abavela kubathuthukisi bezindlu ezithengiswayo abangama-35 abasebenza e-Addis Ababa. Isamba semibuzo engama-231 ehleliwe futhi ezilawula ngokwazo yasatshalaliswa, kwathi eyi-163 yagcina isetshenziswa ekuhlaziyeni. Lokhu kuveze izinga lokuphendula langempela elingu-71%, elathathwa njengelibalulekile nelifanele ukuqhuba ukuhlolwa kwezibalo okudingekayo. Esigabeni sokuchaza salolu cwano, kwakhethwa ongoti abayi-15 ababalulekile abavela ezindlini zongqongqoshe ezifanelekile noma amanxusa kanye nemikhakha yemboni efanele ukuze babambe iqhaza ezingxoxweni ezijulile. Kodwa-ke, bayi-10 kuphela ongoti abavolontiya ukuthi kuxoxwe nabo. Imiphumela yocwaningo lokulinganisa ibonise ukuthi zonke izici—ukusebenza kahle okuqinile, ukwethembeka kwabahlinzeki kanye nezinhlalo zokuthenga kwamakhasimende, kanye nokutholakala kwesikweletu, isu lokumaketha, ukucatshangelwa komthetho, ukutholakala komhlaba, ukuthuthukiswa kwengqalasisinda, ukutholwa kobuchwepheshe kanye nekhwalithi yobuholi—kube nomthelela omkhulu futhi omuhle ekusebenzeni kwemakethe yezindlu zentengiso yase-Addis Ababa. Ucwano ngokuchaza luveze ukuthi ukuguququka okwengeziwe kokuntengantenga kwezombusazwe nezomnotho, izinga lokudidiyela nokubamba iqhaza kwababambiqhaza, ukungenelela kwezombusazwe kanye namandla okuthenga kwabathengi

bezindlu kuthinte ukusebenza kwezindawo ezithengiswayo. Umcwaningi uphakamise ukuthi, ukuze zisebenze kangcono, amafemu ezindlu ezithengiswayo asungule isu elisebenzayo eligxile ekuguquguqukeni okuthuthukisa ukusebenza kanye nokusebenzisana nohulumeni nabanye ababambiqhaza. Okokugcina, abathuthukisi bezindlu ezithengiswayo bafanele baqondiswe nguhlaka oluphakanyisiwe lokulinganisa ukusebenza embonini yezindlu ezithengiswayo.

Amagama asemqoka:

Addis Ababa

i-Addis Ababa

commercial real estate

Izindlu zentengiso

determinant

okunqumayo

performance

ukuseben

Table of Contents

Acknowledgements.....	i
Abstract.....	i
List of Table.....	xii
List of Figure.....	xiv
CHAPTER ONE: INTRODUCTION.....	1
1.1 Introduction.....	1
1.2 Background Of the Study.....	1
1.3 Statement Of the Problem.....	5
1.4 Research Gaps.....	10
1.5 Main Research Question.....	11
1.5.1 Sub-research questions.....	11
1.6 Objectives of the Study.....	11
1.6.1 General research objective.....	11
1.6.2 Theoretical objectives.....	12
1.6.3 Empirical objectives of the study.....	12
1.7 Importance Of the Study.....	12
1.8 Delimitations Of the Study.....	13
1.9 Limitations Of the Study.....	14
1.10 Structure Of the Thesis.....	15
CHAPTER TWO: COMMERCIAL REAL ESTATE DEVELOPMENT IN ETHIOPIA.....	17
2.1 Introduction.....	17
2.2 Background To Ethiopia Society and Demographics.....	17
2.2.1 Ethnic groups and languages.....	18
2.2.2 Religion of Ethiopia.....	18
2.3 Establishment Of Ethiopia Investment Holdings (EIH) As Sovereign Wealth Fund....	20
2.4 Investment In Real Estate Sector in Ethiopia.....	21
2.5 Policy Framework for Real Estate Markets.....	22
2.5.1 Housing Policy in Developed Countries.....	24
2.5.2 Housing Policy in Developing Countries.....	25
2.5.3 The African Housing Policy.....	25

2.5.4	Housing Policy in Ethiopia	25
2.5.4.1	The pre 1975 Housing Policy.....	25
2.5.4.2	Housing Policy during the Dreg.....	26
2.5.4.3	Housing Policy in Post 1991	27
2.6	Development of Real Estate on A Global Scale	28
2.7	Real Estate Development in Developing Countries	29
2.8	Real Estate Maturity Model	30
2.9	Real Estate Development in Ethiopia.....	35
2.9.1	Real Estate forms of Housing Developments in Ethiopia	35
2.9.2	Private Land Ownership Period (Pre-1975 period)	35
2.9.3	Public Land Ownership with Usufruct rights only (1975-93)	36
2.9.4	Public Ownership of Land with Leasehold Rights (Post -1993)	36
2.10	Commercial Real Estate Development in Addis Ababa.....	37
2.10.1	Sources of finance Real Estate Sector in Ethiopia.....	38
2.10.2	Access to Land.....	38
2.10.3	Legal Issues of Land Ownership, Planning System, Housing Issues, Professional Associations	39
2.10.4	Land Delivery System for Real Estate Developers.....	40
2.10.5	Land Lease Price for Real Estate Developers.....	41
2.10.6	Duration, Renewal and payment of Lease Holding by Real Estate Developers.....	41
2.10.7	Pre-requisite for Acquiring Land for Real Estate Developers	41
2.10.8	Rate of Investment License for Real Estate in Addis Ababa.....	42
2.10.9	Supply and Price of Land.....	43
2.11	Foreign Real Estate Investors in Ethiopia	43
2.12	Real Estate Companies and Developers in Ethiopia Today	43
2.12.1	Local Real Estate Developers in Ethiopia	43
2.12.2	Foreign Real Estate Developers in Ethiopia	48
2.13	Real Estate Performance Reports.....	49
2.13.1	Reviving and transforming the enabling environment.....	50
2.13.2	Reviving and Transforming Human Capital.....	50
2.13.3	Reviving and Transforming Markets	50

2.13.4	Reviving and Transforming the Innovation Ecosystem.....	51
2.14	Performance And Prospects of the African Real Estate Market	51
2.14.1	Lack of High-Quality Office Space Driving Up Rents.....	52
2.14.2	Inflation Threatens Consumer Spending	52
2.14.3	Industrial Sector Remains Stagnant	53
2.14.4	Green Building Concepts and Technologies in Ethiopia.....	53
2.15	Global Real Estate Transparency Index	54
2.16	Corruption Perceptions Index (CPI) Of Ethiopia	56
2.17	Re Sector Report.....	57
2.18	Chapter Summary	62
CHAPTER THREE: LITERATURE REVIEW		63
3.1	Introduction	63
3.2	Theoretical Review	63
3.2.1	The concept of real estate	63
3.3	Neoclassical Economic Theory.....	64
3.3.1	Agency theory of real estate	65
3.3.2	Institutional theory of real estate.....	66
3.3.3	Porter’s diamond model.....	66
3.4	Resource-based view (RBV).....	67
3.4.1	Corporate real estate strategy theories	68
3.4.2	Certified Commercial Investment Member (CCIM) real estate feasibility model .	69
3.5	The Major Players in Real Estate.....	70
3.6	Types Of Real Estate.....	72
3.7	Types of Markets in Real Estate	73
3.8	Real Estate Cycles.....	75
3.9	Macro Factors Affecting the Performance of Commercial Real Estate.....	78
3.10	Real Estate	83
3.11	Empirical Literature Review	85
3.11.1	Macro Factors that Affect the Performance of Commercial Real Estate.....	85
3.11.2	Economic factors: credit availability and the performance of commercial real estate	

3.12	Role of Institutional Investors	87
3.13	Private Equity Re Funds in Ethiopia	88
3.14	Legal And Political Factors and The Performances of Commercial Real Estate	90
3.15	Technology and the Performance of Commercial Real Estate	91
3.16	Infrastructure and the Performance of Real Estate	93
3.17	Location and the Performance of Commercial Real Estate	94
3.17.1	Land Availability and the Performance of Commercial Real Estate	95
3.18	Buyers and the Performance of Real Estate	98
3.19	Suppliers and the Performance of Commercial Real Estate	99
3.20	Firm Efficiency and the Performance of Commercial Real Estate	100
3.21	Measuring the Performance of Commercial Real Estate	102
3.22	Conceptual Framework and Hypotheses of the Study	104
3.22.1	Conceptual framework of the study	104
3.22.2	Hypotheses of the study	106
3.22.2.1	Firm efficiency and commercial real estate performance	107
3.22.2.2	Suppliers' dependability and commercial real estate performance	107
3.22.2.3	The buying intentions of real estate buyers and commercial real estate performance	107
3.22.2.4	Credit availability and commercial real estate performance	108
3.22.2.5	Market strategy and commercial real estate performance	108
3.22.2.6	Legal factors and commercial real estate performance	109
3.22.2.7	Land availability and commercial real estate performance	109
3.22.2.8	Infrastructural development and commercial real estate performance	109
3.22.2.9	Technology adoption and commercial real estate performance	110
3.22.2.10	Leadership and commercial real estate performance	110
3.23	Chapter Summary	111
CHAPTER FOUR: RESEARCH METHODOLOGY		113
4.1	Introduction	113
4.2	Research Paradigm	113
4.2.1	The interpretive paradigm	113
4.2.2	The positivist paradigm	113

4.2.3	The pragmatic paradigm	114
4.3	Research Approach	115
4.4	Research Design.....	115
4.5	Study Areas and Period.....	116
4.6	Population And Sample Framework	117
4.6.1	Study population	117
4.6.2	Population and sample frame for the study.....	117
4.6.2.1	Sampling techniques and sample size for the quantitative study.....	118
4.6.2.2	Sampling techniques and sample size for the qualitative study	119
4.7	Data Sources and Types of Data	119
4.7.1	Primary data	120
4.7.2	Secondary data	120
4.8	Methods of Data Collection	120
4.8.1	Quantitative data-collection methods	120
4.8.1.1	The questionnaire	121
4.8.2	Qualitative data-collection methods	121
4.8.2.1	Semi-structured interview schedule	121
4.9	Instrument Validity and Reliability.....	122
4.9.1	Validity	122
4.9.2	Reliability.....	122
4.9.2.1	Cronbach’s coefficient alpha.....	122
4.10	Pilot Testing.....	123
4.11	Assumptions of Inferential Statistics.....	125
4.11.1	Normality of the error distribution.....	125
4.11.2	Linearity.....	126
4.11.3	Homoscedasticity.....	126
4.11.4	Independence of error terms	126
4.11.5	Multicollinearity	126
4.12	Methods And Procedures of Data Analysis.....	126
4.12.1	Quantitative data-analysis techniques.....	127
4.12.1.1	Descriptive statistics	127

4.12.1.2	Correlation	127
4.12.1.3	Multivariate multiple regression analysis	127
4.12.1.4	Factor analysis	129
4.12.2	Qualitative data-analysis techniques	129
4.12.2.1	Deductive and Inductive Coding Approach.....	130
4.12.2.2	The process of thematic analysis	132
4.13	Methods of Dissemination of the Study Results	133
4.14	Ethical Consideration	133
4.15	Chapter Summary	134
CHAPTER FIVE: QUANTITATIVE DATA RESULTS AND DISCUSSION		136
5.1	Introduction	136
5.2	Data Editing and Coding	136
5.3	Response Rate	136
5.4	Profile of Study Respondents	137
5.4.1	Gender profile of respondents.....	138
5.4.2	Age profile of respondents.....	139
5.4.3	Educational status of respondents	139
5.4.4	Work experience	139
5.4.5	Occupation	139
5.4.6	Leadership style	139
5.5	Description of Study Variables	140
5.6	Estimating Non-Response Bias	141
5.7	Mean Difference Among Demographic Groups in Relation To RE Performance	143
5.7.1	Sex Vs, Commercial Real Estate Performance.....	143
5.7.2	Age Group vs. Real Estate Performance.....	143
5.7.3	Educational level vs Real estate performance	144
5.7.4	Work experience vs Real estate performance	145
5.7.5	Occupation vs. Real estate performance	145
5.7.6	Leadership Style vs Real estate performance	146
5.8	Explanatory Factor Analysis	147
5.9	Assessment of Construct Validity Through CFA	151

5.10	Measurement Models for Study Variables	153
5.10.1	Measurement model for real estate Company’s performance construct.....	154
5.10.2	Measurement Model for Real Estate Firm’s Efficiency Construct.....	156
5.10.3	Measurement model for suppliers’ construction materials construct	157
5.10.4	Measurement model for customers’ buying intention construct.....	158
5.10.5	Measurement model for credit availability construct	160
5.10.6	Measurement model for marketing strategy construct.....	161
5.10.7	Measurement model for legal factors construct.....	163
5.10.8	Measurement model for land availability construct.....	164
5.10.9	Measurement model for infrastructural development construct	166
5.10.10	Measurement model for technological adoption construct	167
5.10.11	Measurement Model for Leadership Quality of CEOs’ Construct	169
5.11	Discriminant Validity and Reliability Test.....	170
5.11.1	Discriminant validity	171
5.11.2	Reliability test	174
5.12	Correlation Analysis	174
5.13	Multiple Linear Regression	176
5.14	Assumption of Multiple Linear Regression.....	177
5.14.1	Sample size (some rules of thumb).....	177
5.14.2	Test of normality.....	177
5.14.3	Test of linearity	178
5.14.4	Test for homoscedasticity	178
5.14.5	Multicollinearity test.....	179
5.14.6	Testing for autocorrelation.....	179
5.15	Multiple Linear Regression Analysis Results	180
5.16	Discussion of Results.....	184
5.17	Chapter Summary	191
CHAPTER SIX: QUALITATIVE DATA RESULTS AND DISCUSSION		193
6.1	Introduction	193
6.2	Profile of the Interview Respondents.....	194
6.3	Interview Findings.....	195

6.3.1	The effect of firm efficiency on commercial real estate performance.....	196
6.3.2	The effect of suppliers' dependability on commercial real estate performance ...	197
6.3.3	The effect of customers' buying intention on commercial real estate performance	201
6.3.4	Effect of credit availability on commercial real estate performance	203
6.3.5	The effect of market strategy on commercial real estate performance	207
6.3.6	The effect of legal factors on commercial real estate performance	210
6.3.7	The effect of land availability on commercial real estate performance.....	213
6.3.8	The effect of infrastructural development on commercial real estate performance	215
6.3.9	The effect of technology adoption on commercial real estate performance.....	217
6.3.10	The effect of leadership quality on commercial real estate performance	219
6.3.11	Commercial real estate performance	222
6.3.12	Other Variables Influencing Real Estate Performance	224
6.3.13	Major challenges facing commercial real estate firms	225
6.3.13.1	Construction delay and not delivering on time.....	226
6.3.13.2	Lack of trustworthiness and communication problems.....	228
6.3.14	Roles and responsibilities expected from stakeholders in the real estate sector...	231
6.3.14.1	Roles and responsibilities expected from real estate developers themselves	231
6.3.14.2	Roles and responsibilities expected from the government	232
6.3.14.3	Integration and cooperation with stakeholders within the real estate development sector	234
6.4	Summary Of Major Qualitative Findings.....	235
6.5	Chapter Summary.....	236
CHAPTER SEVEN: INTEGRATED QUANTITATIVE AND QUALITATIVE FINDINGS .		238
7.1	Introduction	238
7.2	Triangulation Of Quantitative Results and Qualitative Findings.....	238
7.3	Proposed Conceptual Framework Based on Mixed Research Results and Findings...	240
7.4	Chapter Summary.....	241
CHAPTER EIGHT: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS		243
8.1	Introduction	243
8.2	Summary of the Results and Findings	243

8.2.1	Quantitative results	243
8.2.2	Qualitative findings.....	245
8.3	Conclusions	246
8.3.1	What are the determinants of commercial real estate performance in Addis Ababa, Ethiopia?	247
8.3.2	Which of the identified factor(s) has (have) the most significant impact on commercial real estate performance in Addis Ababa, Ethiopia?	248
8.3.3	The third research question in the study concerned additional elements that might significantly influence the performance of commercial real estate	250
8.4	Limitations	253
8.5	Recommendation.....	254
8.6	Contributions of the Study	254
8.6.1	Theoretical contribution of the study.....	255
8.6.2	Implication for real estate developers	255
8.6.3	The Government of Ethiopia	255
8.6.4	Financial institutions.....	256
8.6.5	Improving Registration Process.....	256
8.6.6	Implication for research methodology	256
Reference	257
Appendix-I:	A Questionnaire on Determinants of Commercial Real Estate Performance in Addis Ababa.....	285
Appendix-II:	Interview Check List on Commercial Real Estate Performance.....	293
Appendix-III:	Appendix A: Criterion Validity and Reliability	297
Appendix IV:	Output of the Exploratory Factor Analysis.....	311
Appendix V:	Assumptions of Multiple Linear Regressions	325

List of Table

Table 2.1: Characteristics of the five stage CREM.....	31
Table 2.2: Cumulative Increase of Activities and Services CRE	32
Table 2.3: Transparency Index components	55
Table 2.4: World’s Most Transparent Countries In 2022	55
Table 2.5: Real estate transparency in Sub-Saharan Africa.....	56
Table 4.1: Sampling Distribution for Qualitative Data.....	119
Table 4.2: Research Consistency Matrix	123
Table 4.3: Summary of Pre-Established, Predetermined Codes / Theory-Driven Codes.....	130
Table 5.1: Response Rate of the Questionnaires	136
Table 5.2: Profile of Study Respondents	137
Table 5.3: Description of Study Variables (n = 163).....	140
Table 5.4: Independent Sample t-test for Non-Response Bias	142
Table 5.5: b: Sex vs. Real Estate Performance	143
Table 5.6: Age groups Vs Real estate performance.....	144
Table 5.7: Educational groups Vs Real estate performance	144
Table 5.8: Work experience vs Real estate performance.....	145
Table 5.9: Occupation vs. Real estate performance.....	145
Table 5.10: Occupation vs. Real estate performance-ANOVA Result.....	146
Table 5.11: Occupation vs. Real estate performance-Multiple Comparison	146
Table 5.12: Summary of the EFA Output.....	148
Table 5.13: Categories of GOF Indices	152
Table 5.14: Summaries of Selected Fit Measures and Established Criteria	153
Table 5.15: Statistics for One-Factor Model of Real Estate Company’s Performance	155
Table 5.16: Statistics for One-Factor Model of Real Estate Firm’s Efficiency.....	156
Table 5.17: Statistics for One-Factor Model of Suppliers’ Construction Materials	158
Table 5.18: Statistics for One-Factor Model of Customers’ Buying Intention.....	159
Table 5.19: Statistics for One-Factor Model of Credit Availability	160
Table 5.20: Statistics for One-Factor Model of Marketing Strategy	162
Table 5.21: Statistics for One-Factor Model of Legal Factors	164

Table 5.22: Statistics for One-Factor Model of Land Availability	165
Table 5.23: Statistics for One-Factor Model of Infrastructural Development.....	166
Table 5.24: Statistics for One-Factor Model of Technological Adoption	168
Table 5.25: Statistics for One-Factor Model of Leadership Quality of CEOs.....	170
Table 5.26: Discriminant Validity and Reliability of the Full CFA Measurement Model	172
Table 5.27: Correlations between the Dependent Variable and the Independent Variables	175
Table 5.28: Model Summary	180
Table 5.29: ANOVA.....	181
Table 5.30: Coefficients Table.....	182
Table 5.31: Summary of the Hypotheses Tests	189
Table 6.1: Profile of the Interview Respondents	194

List of Figure

Figure 2.1: The Capital City of Ethiopia	19
Figure 2.2: The Map of Addis Ababa City	20
Figure 2.3: The eight stages in real estate development	29
Figure 2.4: Sunshine Investment Group Apartments, Houses & Commercial Properties	44
Figure 2.5: Ayat Real Estate Apartments, Houses & Commercial Properties.....	45
Figure 2.6: Noah Real Estate Apartments, Houses & Commercial Properties;.....	45
Figure 2.7: Gift Real Estate Apartments & Houses	46
Figure 2.8 Habitat New Flower Homes Houses & Commercial Properties	46
Figure 2.9: Enyi Real Estate Apartments, Houses	47
Figure 2.10: Legacy Real Estate	47
Figure 2.11: Flintstone Homes Apartments, Houses, Commercial Properties	48
Figure 2.12: Tsehay Real Estate Apartments, Commercial Properties.....	48
Figure 2.13: Metropolitan Real Estate Ethiopia Apartments, Commercial Properties;.....	49
Figure 2.14: The Cost of Corruption.....	57
Figure 2.15: Sub-cities of Addis Ababa.....	58
Figure 3.1: Porter’s diamond model	67
Figure 3.2: Resource-based View: VRIO – Valuable, Rare, Imperfectly Imitable, Organisation – Framework Process.....	68
Figure 3.3: CCIM Real Estate Market Analysis and Feasibility Model	70
Figure 3.4: House of Real Estate Economics”. Source: Karl-Werner Schulte (2003).	71
Figure 3.5: The Four Phases of the Real Estate Cycle.....	77
Figure 3.6: Types of Private Equity Funds	89
Figure 3.7: Conceptual Framework of the Study	106
Figure 4.1: Population and Sample Frame of the Study	117
Figure 5.1: Graph of One-Factor Model of Real Estate Company’s Performance.....	154
Figure 5.2: Graph of One-Factor Model of Real Estate Firm’s Efficiency	156
Figure 5.3: Graph of One-Factor Model of Real Estate Suppliers’ Construction Materials	157
Figure 5.4: Graph of One-Factor Model of Real Estate Customers’ Buying Intention	159
Figure 5.5: Graph of One-Factor Model of Real Estate Credit Availability	160

Figure 5.6: Graph of One-Factor Model of Real Estate Marketing Strategy.....	162
Figure 5.7: Graph of One-Factor Model of Real Estate Legal Factors.....	163
Figure 5.8: Graph of One-Factor Model of Real Estate Land Availability	165
Figure 5.9: Graph of One-Factor Model of Real Estate Infrastructure Development	166
Figure 5.10: Graph of One-Factor Model of Real Estate Technological Adoption.....	168
Figure 5.11: Graph of One-Factor Model of Real Estate Leadership Quality.....	169
Figure 7.1: The Flow of the Explanatory Sequential Mixed Methods Research Design	240
Figure 7.2: The Proposed Commercial Real Estate Performance Framework	241
Figure 8.1 the Proposed Commercial Real Estate Performance Framework.....	253

CHAPTER ONE: INTRODUCTION

1.1 Introduction

This chapter introduces the research study reported on in this thesis. It begins by providing the research background and outlining the research problem identified for this study. It lists the research questions and describes the purpose of the research along with the objectives of the research. It identifies the relevance (implications) of the research for the real estate industry and academia and describes the scope and limitations of research. Finally, the chapter concludes with the structure of the remaining chapters of the thesis.

1.2 Background Of the Study

Real estate defines as "land and all permanent improvements on it", including "building"(Kahr and Thomsett 2006)The term “real estate” refers to an artificially bounded space with a fourth time dimension relative to a fixed point on the Earth's surface(Knopman and Roberts 2011).It is built to include economic activity influenced by cultural preferences and constrained by public infrastructure.

The global real estate business is one of the most profitable businesses in many economies and an indicator of a society's economic growth(Romer and Romer 2017). “Real property” refers to land and related goods that are permanently a part of it, and the nature and extent of the interest of its owner. Real property may be acquired, owned and transferred by legal entities established and determined by law (Ariyawansa and Udayanthika 2012).

Company performance is an economic measure of a company's ability to use its human and material resources to achieve its goals(Morales 2005). The relationship between the output results and the input resources used in the company's management process is shown by the company's performance (Foster, Waagen et al. 2009).It is widely understood that the real estate industry plays a pivotal role in the social, political and economic development of a country (Kauškale and Geipele 2019). The development of a nation's social, political and economic systems depends on the real estate market (Do et al. 2021). as this market facilitates the transfer of innovation, creates jobs and balances economic distribution. For example, the industry generates \$10 trillion in annual revenue contributes \$3.6 trillion in value to the global economy. It contributes 5% to the gross domestic product (GDP) of rich countries and 8% to the GDP of developing countries(DESA 2019). However, access to land

and land planning systems for real estate development is a major barrier to the development of the sector, especially in sub-Saharan Africa(Bibri, Krogstie et al. 2020).

Real estate can be classified as three types: residential real estate, commercial real estate and industrial real estate (Alexander Jr 1970). According to(Atellu 2016),changes in the African real estate sector are attracting scholarly interest in the sector to determine the relationship of macro-economic determinants with the performance of the real estate industry (Ramantswana, Cheruiyot et al. 2021).

In recent years, sub-Saharan Africa has seen an increase in inflows of real estate funds from developed countries. Despite the globalisation of real estate markets, this trend is defined by the lack of growth in real estate market analysis for sub-real estate regions and the mismatch between research from academic and industry sources. Market-standard indicators such as rental growth, capital growth, price and rental indices, yields, total returns, and market holdings available in mature markets still exist in relatively few markets in the sub region. Many studies of sub-Saharan African real estate markets have incorporated the perspective of investors in developed countries. It focuses on issues such as whether emerging markets can maintain the professional standards and transparency demanded by outside investors.

Housing is a key factor in influencing the growth of any country, whether developing or developed, urban or rural. The provision of housing can be viewed as both an economic and a social challenge to ensure people's living space in society. Housing is an integral part of a country's prosperity and plays an important role in economic development (Otaha 2012) and the creation of sustainable development. Housing is one of the fundamental socioeconomic conditions that define the quality of life and welfare of people and places(Habitat 2013). This demonstrates that housing is a crucial asset that people require, as well as a critical requirement for the spread of urbanisation.

Approximately one million people are enrolled in public housing(Yohannes and Dinku 2018).This means that Addis Ababa has a severe housing shortage. As a result, study on the issues and viewpoints of overseas property developers are critical.

Ethiopia's economy has developed fast over the last decade, averaging 10.3% each year from 2006/07 to 2016/17. Construction and services industries, in particular, have been major development drivers over the last two decades (Bank 2020).

Ethiopia's construction industry, which accounted for 12.5% of total GDP in 2018, is expanding and performing well while remaining legally developed. Since the country's economy was liberalised in 1991, the government has launched numerous initiatives aimed at increasing the role of the private sector in the economy. In other words, the government is fostering a favourable climate for the development of the private real estate sector.

Despite the government's efforts, the problem of access to adequate housing in Ethiopian cities has reached devastating proportions as a result of rapid population growth, rapid urbanisation, rural-to-urban migration, the breakdown of existing homes and a lack of basic services.

Small-scale housing cooperatives, government housing and private housing are unlikely to cover the great demand for housing. As mentioned above, the decline in the availability of housing is mainly due to population growth and urbanisation. Rapid urbanisation is having a serious impact on housing needs, not only in terms of quantity but also in terms of quality.

Unmet housing needs lead to unproductive /unplanned growth, which in turn leads to uncomfortable housing. If special attention is not paid to the technology needed to solve the City of Addis Ababa's housing problem, unplanned settlements, homelessness and street housing will increase, which do not fall under the jurisdiction of the government and local governments and as such will have a negative impact on the local community.

Housing accounts for the majority of household spending worldwide in both developed and developing countries. Relevant statistics show that rent accounts for 15-40% of monthly household expenses worldwide and the real estate sector accounts for 15-35% of total investment (Goal)

In Africa, real estate (housing) is recognised as becoming an attainable reality in transformative home ownership. However, access to finance, legal frameworks, marketing strategies, infrastructure facilities and advanced technology for real estate development is underdeveloped in many of these economies. These factors clearly affect financial performance and thus property development (Lohri, Camenzind et al. 2014).

Restrictions such as access to land and land-planning systems for real estate development are major obstacles to the development of this sector, especially in sub-Saharan Africa. For example, the real estate market is largely unregulated in terms of area planning, which results in unbalanced market conditions(Mabin, Butcher et al. 2013). Land acquisition is becoming

another challenge to the real estate industry, especially in Ethiopia, where there is price volatility as a result of poor land and sector planning and management. Ethiopia recognises the potential for the economic transformation of cities, as reflected in the 2005 National Urban Development Policy, which formulated urban development strategies, including those related to urban infrastructure, housing investment and job creation (Habitat 2017). In line with these strategies, the City of Addis Ababa has also invested heavily in subsidised and affordable housing for low- and middle-income residents. Condominium production has successfully increased the city's housing stock and improved the physical urban environment by reducing slums. However, these efforts have been less effective than expected, with the housing on offer not affordable for the 20% of city residents whose income is below the poverty line. As pointed out by (Habitat 2017). in a study of 1,315 study participants in the United States, 41% were found to spend more than 30% of their household income on housing, which indicates that this housing strategy is out of reach for the poor.

On the level of world urbanisation indicates that the world average was 52.1% in that year, with 39.6% in Africa and 17% in Ethiopia (WUP/ UN Report (2011). Ethiopia's urban population is expected to triple by 2037 (World Bank Group 2015). Addis Ababa is the home of an estimated 3.24 million people 17% of Ethiopia's total urban population (Tsegaye 2010). Ongoing rural-to-urban migration means that the population size is constantly increasing and this causes a shortage of houses in the city. On the other hand, when we look at the trends of housing development in Addis Ababa, it is clear that the demand and supply is not balanced, with the gap between demand and supply dramatically increasing. This has the effect of increasing the house prices (Melaku 2016).

Previous studies have pointed to evidence that several factors have determined the performance of real estate companies in Ethiopia. The most common issues faced by the real estate industry in Ethiopia are challenges in acquiring land related to lengthy bureaucratic administrative processes; high land lease price; delays in the delivery of finishing material; price escalation; lack of foreign currency; limited access to loans; lack of supervision by municipality expertise; delays in client approval or modification requests; and design changes (Firew 2013).

In addition, research has pointed to three major factors that account for the inability of large portions of the population in developing countries like Ethiopia to get housing loans (Broussard and Tekleselassie 2012). These factors are lack of good collateral;

informality and volatility of income; and lack of information about borrowers. Additionally, the nature of the sector often limits funding options. Especially in Ethiopia, banks only offer credit services to companies with attractive business and good financial standing. Commercial banks consider mortgage finance to be a risky investment because returns and long-term forecasts are difficult to predict. Mortgages, by their very nature, are long-term loans, which create maturity mismatches for lenders and banks, as the source of funds can be repaid when needed in the short term. Additionally, marketing strategy variables, especially advertising, placement, pricing and customer service, have a significant impact on business performance (GbolagadeAdewale and Oyewale 2013)

The purpose of this study is to discover elements that affect or determine the performance and development of real estate investment in Addis Ababa and use these to establish an integrated real estate Conceptual performance model.

1.3 Statement Of the Problem

Ethiopia is one of the fastest urbanising countries in the world. Urbanisation has seen unprecedented growth in recent years with the development and expansion of cities such as Addis Ababa(Zeluel, Asfaw et al. 2011).While urbanisation poses various social and economic problems, housing shortages are becoming more serious in developing countries than ever before, and the proportion of slum dwellers living illegally in places without permits or property rights is increasing(UNFPA 2007).This informal expansion requires the establishment of a formal housing system in Ethiopia. This includes real estate development and comprehensive housing development programmes (according to people's affordability). Property development should facilitate the provision of living space for different groups of people. However, property construction has impacted changes in land prices and has had a negative impact on some parts of the community, particularly those with lower incomes who cannot afford to match the market value of working land or shells on these properties. This makes land delivery and access very difficult for the majority of the population. Real estate developers try to lure landowners into selling large amounts of land. This deprives the seller of land ownership, but in most cases does not deprive it of established services(Nakatudde 2010).

The real estate sector is one of the fastest growing sectors of the Ethiopian economy. Addis Ababa's residential real estate market is dominated by large government-built condominiums (aimed at low-income families), medium-sized multi-family developments, and housing built

by property developers and/or homeowners themselves. The property market has developed into a diverse mix of luxury residences. Most real estate developers only work for high-income households as there are few incentives to build housing for lower-income households. However, Addis Ababa still has a large demand for housing. As announced in 2019 by the UN Economic Commission for Africa (ECA), Ethiopia's urbanisation is increasing, with the urban population projected to exceed 42.3 million by 2037, an estimated threefold increase. Increased urbanisation across the country, especially in Addis Ababa, has created a housing shortage. Addis Ababa's housing sector has always been a challenge.

In Ethiopia, real estate is a major business investment (Abidoye and Chan 2018). There are around 630 real estate investment companies in Ethiopia of which 125 are located in Addis Ababa with a registered investment capital of 3.5 billion ETB. The real estate industry has played a vital role in domestic economic growth, especially over the past two decades. It has also seen incomes generated from the real estate industry grow each year (Fortune 2018). However, the average growth rate of the sector has not demonstrated considerable growth since 2011/12. The annual growth of real estate development has become almost stagnant at an average of 4%, declining from the highest growth of 22.1% in 2009/10 to 4.1% in 2016/17. Similarly, the market share of real estate activities as a percentage of GDP has continuously declined, from 18.4% in 2012/13 to 10.9% as at 2016/17 (NBE 2017).

Although the sector has attractive market potential, it is not well developed, and its performance is not as expected. As outlined in the background to the study, different factors have been identified as influencing the development of real estate investment in the country. Most commonly, scholars identify the absence of adequate land for real estate investment, lack of access to investment capital in the real estate, and problems with supply of appropriate labour for the sector as underlying challenges. To these can be added the challenge of accessing foreign currency, the absence of construction materials in the country, corruption at different levels of the system, and the lack of a proper legal framework. Together these underlying challenges curb the development of the sector (Singh and Komal 2009, Eshete and Teshome 2010). These problems have severe consequences and have resulted in conflict between real estate developers and customers, which has resulted in the poor performance of the sector and individual companies.

Despite the above challenges, more and more property developers are trying to enter the sector and evolve their strategies. However, their contribution to the economy and overall

performance are not as expected. The underlying problem identified for this study is, therefore, that the performance of commercial real estate firms in the country in general and Addis Ababa in particular is weak but these weak fronts are either not known or not clearly articulated. This may be attributed to a lack of adequate prior studies in the area. According to preliminary research, very few studies on the performance, difficulties, and opportunities of real estate developers have been conducted in Ethiopia (Eshete and Teshome 2010).

The need to evaluate the current performance of the real estate sector in Ethiopia (by taking a sample of firms) and the inadequate research pertinent to this topic are the motives behind this research. A comprehensive and in-depth understanding of these dimensions/determinants or factors is required for closing this study gap, and the findings will aid in identifying important determinants that influence the performance of commercial real estate enterprises in Ethiopia in general and Addis Ababa in particular.

To establish the research gap, local and international studies on the performance of commercial real estate were extensively analysed.

The most pertinent Local studies identified by a preliminary literature review were related to challenges encountered by real estate developers in Ethiopia:

Land Management, Low Construction Capacity, Inadequate Infrastructure, Poor Borrowing Capacity, Price Escalation and Low Affordability to be the major challenges faced by commercial real estate companies in Ethiopia (Eshete and Teshome 2010). Acquiring land that result from lengthy bureaucratic administrative processes, high land lease prices, delays in the delivery of finishing material, price escalation, lack of foreign currency, limited access to loans, lack of supervision by municipality expertise, delays in client approvals or modification requests, and design changes were found as the most critical challenges facing real estate developers in Ethiopia (Firew, 2013). Legal challenges, institutional challenges, finance-related challenges and labour-related problems were found as major challenges faced by foreign real estate developers in Ethiopia(Eshete and Teshome 2010). Lack of loans for house buyers; inflation on construction materials; insufficiency of long-term loans; increments on land-acquisition cost; high level of tax; high bureaucracy involved in obtaining land; and low government encouragement as major challenges faced by real estate commercial developers in Ethiopia using descriptive analysis technique.(Gebreyohannes 2021)

Other local studies focused on single variables like real estate property valuation (Bishaw 2021); quality management practices of real estates (MARKOS 2018); measurement of real estate affordability (Dinku 2022); and factors determining the continuing price appreciation (Melesse 2020); which were purely descriptive.

Other local studies on real estate market in Ethiopia, focused on identifying limited number of factors or variables affecting marketing effectiveness of commercial real estate companies such as quality, price fairness, location convenience, brand reliability, salesperson credibility (Ababa 2018). Organisational planning, project manager goal commitment, project's scope and work Definition, project manager's capabilities and experience, safety precautions and applied procedures and control system were found to have a significant effect on the Project Success in the Ethiopian Real estate industry: (Shemekt 2021). Dependence on the Diaspora group of clients for its demand side, Existing economic downturn; slow and insufficient supply of land, shortage and increased prices of housing construction materials, inflation, the global economic crises, (Aqubamicheal 2009)

On the other hand, Selam Yohannes and Abebe Dinku examined the residential facilities and affordability of private real estate and discovered that Addis Ababa people with average incomes cannot afford private residential real estate (Yohannes and Dinku 2018). Floor level, floor area, balcony access, building security, parking space, number of bedrooms, access to a road, a lift, the finish of the outside walls, and environmental pollution were all shown to be important factors in deciding rent for residential apartments in Addis Ababa, Ethiopia (Belete and Yilma 2020).

The most relevant Global studies identified in the literature review are summarised below in terms of factors influencing real estate developers in various countries.

Research on factors affecting the business performance of construction and real estate enterprises in various countries across the world has been carried out by a number of foreign studies. The real estate market in the sub-Saharan Africa (excluding South Africa) suffers from a lack of or low-quality transaction data and problems associated with transparency, valuation standards and the low level of involvement of international market intermediaries

The study further explored that very few markets in the sub-Saharan Africa offer common market development indicators, such as rental growth, capital growth, price and rental

indices, yields, total returns and market stock, which are available in mature markets (Anim-Odame 2015).

Different scholars studied those how five macro-economic factors affected the price of real estate in Nigeria and discovered the GDP, interest rate; inflation rate, exchange rate and crude oil price all have a significant effect on real estate price (Alkali, Sipan et al. 2018). Considering price as one of the measures of real estate performance (Grum and Govekar 2016) examined macro-economic factors such the unemployment rate, current account, GDP and industrial production and discovered significant correlations between real estate prices and the distinct cultural contexts of Slovenia, Greece, France, Poland and Norway. Nana Cui, Hengyu GU, Tiyan Shen and Changchun Feng, Shen and Changchun Feng conducted research on micro-level variables in the real estate environment and found a higher-quality living environment; good structural, locational and neighbourhood characteristics and a good school-attendance zone are preferred by homeowners and renters and companies which fulfil these criteria's perform better (Feng, Ouyang et al. 2018). Moreover, they further enquired how higher-priced homeowners or renters differ in their preferences from lower-priced homeowners or renters. Higher-priced homeowners and higher-priced renters prefer property with a larger number of bedrooms, proximity to a major employment centre, park or school, as well as a location in a school-attendance zone with higher school quality. Top-level commitment to quality, employee empowerment and continuous improvement on the organisational performance of the real estate companies were found to have a significant influence on organisational performance of the real estate companies (Bett et al. 2019)

Wainaina looked at how certain macro-economic factors affected the performance of the real estate sector variables, including interest rates, GDP growth rates, capital growth rates, inflation rates, credit growth rates and money supply growth rates (Agwata and Wainaina 2020). The study found that only GDP and capital growth had a significant impact on performance; the other factors were insignificant. Bo Li and Rita Yi Man on the other hand investigated the impact of management and operation abilities, human resource (HR) abilities, brand abilities and innovation abilities on the overall competitiveness of large real estate firms in China and discovered that all constructs showed a significant effect on the competitiveness commercial real estates (Li, Li et al. 2021). The primary variables influencing the performance of the Vietnamese real estate industry, according to the findings of Ho Nguyen Phi HA's study, are top leaders' dedication, the workplace environment, the ability to

use technology, business contacts and incentives, as well as training and fostering (HA 2022). Lawrence Mbugua, Phil Harris, Holt, and Olomolaiye created a framework based on a thorough literature search and identified four categories of CSFS that are pertinent to the construction industry and influence construction business performance: people factors, project factors, process factors and result factors (Zhang, Harris et al. 1999).

1.4 Research Gaps

A thorough examination of current local and international studies revealed some theoretical, empirical, methodological, and industrial or contextual limitations/gaps:

Theoretical gaps: Prior studies that examined the performance of commercial real estate either used a single theory or did not use a theory. Using a single theory or nothing at all fails to account for an adequate number of variables that could affect commercial real estate performance. As a result, this study attempted to employ different theories in order to encompass a greater number of variables that may affect commercial real estate performance.

Empirical gaps: The research reviewed, both local and global, tended to focus on either macro- or micro-level factors influencing commercial real estate performance, rather than both. Furthermore, several studies lacked an adequate inventory of variables impacting real estate performance and sought to assess the impact of only one or two variables influencing commercial real estate performance. As a result, various variables that may affect commercial real estate performance were addressed in this study.

Methodological gap: Prior study either used a qualitative or quantitative research approach to gather and analyse data on commercial real estate performance. Descriptive statistics, as opposed to inferential statistics, were used particularly by locally based quantitative researchers to assess the key factors that contributed to the performance of commercial real estate. In other words, their statistical techniques were less rigorous because they did not use a mixed research approach or inferential statistics.

Industry/contextual gaps: To the best of the researchers' knowledge, no well-organised, scientific research on real estate performance has been done, other than research to highlight possibilities and difficulties confronting commercial real estate performance in Addis Ababa. This illustrates the scarcity of research in this field.

Thus, in light of theoretical, empirical, methodological, and contextual research gaps, this study tried to analyse the determinants of real estate performance in Addis Ababa, Ethiopia using a mixed research strategy.

1.5 Main Research Question

The current investigation's primary goal is to discover the factors that influence the performance of commercial real estate in Addis Ababa. To that end, the following major research question was posed: *Which of these factors really does have the greatest impact on commercial real estate performance in Addis Ababa?*

1.5.1 Sub-research questions

To obtain a more comprehensive understanding of the phenomenon under investigation, the following specific research questions are addressed by the study:

- What are the determinants of commercial real estate performance in Addis Ababa, Ethiopia?
- Which of the identified factors has the most significant impact on commercial real estate performance in Addis Ababa, Ethiopia?
- What other factors will have an impact on the success of commercial real estate operating in Addis Ababa, Ethiopia?
- What are the commercial real estate performance constraints and challenges in Addis Ababa, Ethiopia?
- What will be the overarching conceptual model for measuring commercial real estate performance in Addis Ababa, Ethiopia?

1.6 Objectives of the Study

1.6.1 General research objective

The general objective of this study is to examine the factors that determine the performance of commercial real estate in the Addis Ababa market.

Along with this main objective, theoretical and empirical objectives were designed to be addressed sequentially.

1.6.2 Theoretical objectives

Theoretically, the study is designed to address the following intertwined objectives, to:

- Present an overview of current concepts, theories and models in the literature of commercial real estate performance.
- Present different models that affect the performance level of commercial real estate companies.

1.6.3 Empirical objectives of the study

Empirically, the study is intended to achieve the following specific objectives, to:

- Determine the factors that influence the performance of commercial real estate in the Addis Ababa market.
- Investigate which of these factors has a major impact on commercial real estate performance in Ethiopia.
- Assess what other factors will have an impact on the success of commercial real estate operating in Addis Ababa, Ethiopia.
- Determine what other factors may affect the performance of the commercial real estate industry in Addis Ababa, Ethiopia.
- Explore the various factors that hinder commercial real estate performance in Addis Ababa, Ethiopia.
- Provide an integrated conceptual model for measuring the performance of commercial real estate.

1.7 Importance of the Study

The rationale for this research study is to identify the determinants of the performance of commercial real estate in Addis Ababa by making use of qualitative and quantitative research methods. Research studies on real estate in Ethiopia are few in number and narrow in the aspects of study that they cover. It is believed that different factors affect real estate performance. The number of study variables they used are highly limited in number. The outcome of this study will provide solutions that will be managerially relevant, pointing to specific factors that affect real estate performance. This will help realtors to develop strategies that accelerate their performance and help to minimise challenges they encounter

by providing a list of the factors and their level of impact on the performance of commercial real estate. In particular, the research will contribute solutions to the following stakeholders:

The Land Management Administration office of the city in particular and the country in general: these offices will be able to distinguish the extent to which land availability affects commercial real estate performance and the views of realtors with regard to the service offered by the office.

Commercial real estate developers: these developers will identify the critical factors that contribute to their level of profitability and cost-reduction methods.

Commercial marketers: marketers will be able to take measures to improve real estate performance in accordance with the findings of the study.

The research community: the research will serve as a stepping-stone for other researchers to undertake intensive research studies.

Academia: the research will add value to the commercial real estate marketing literature.

1.8 Delimitations of the Study

The scope of a study clearly defines the extent of content that is covered by the study in order to come to more logical conclusions and provide conclusive and satisfactory answers to the research questions. In the current study, setting delimitations enables the researcher to focus on the study area, given the complexity and number of variables that can be considered in the context of real estate performance.

The study has the following delimitations:

The performance of real estate could be measured in terms of financial (hard data) and non-financial performance measures. However, panel data in the finance sector about the performance of each firm in terms of profit, market share and return on investment (ROI) are not available or are kept under strict constraints.

As a result of the lack of financial data, one major drawback of the study is the measuring of financial performance in terms of managers' and employees' perceptions.

Geographically, the study is confined to real estate firms operating in Addis Ababa city.

Institutionally, the study focuses on private real estate firms. Hence, it does not consider government-owned enterprises, which construct both residential houses and condominiums. This is because government enterprises have neither the capital and land nor marketing challenges that significantly affect the performance of private-sector enterprises.

Conceptually, the study is limited to exploring, synthesising and analysing factors that influence the performance of commercial real estate firms.

Methodologically, the study is constrained to firm-based cross-sectional data collected from January 2020 to March 2020.

1.9 Limitations of the Study

The study has the following limitations:

The first limitation of the study is the unavailability of financial data from secondary sources. The researcher conducted a preliminary survey to check the availability of secondary data compiled on performance metrics of firms and established that this type of data was not accessible. Consequently, the study focuses on the *perceptions of five functional managers /departments from each of a sample/target of firms. As individuals' perceptions are influenced by several factors, including past experiences, preconceived notions and present circumstances, it is acknowledged that empirical data would be more appropriate.*

The second limitation of this study is the availability and voluntariness of managers and executives as this is usually a major obstacle. This might be attributed to a poor research culture in the country and the busy work schedule of respondents.

The third limitation of the study is Sustainability. Sustainability is one of the most pressing worldwide concerns confronting today's real estate markets and urban property projects. However; in this study sustainability issues were not addressed.

This study is conducted in Addis Ababa and while the majority of real estate firms work in this city, the findings of the research may not be generalizable at country level. Consequently, the external validity of the research will be affected.

1.10 Structure of the Thesis

The thesis is structured as seven chapters, with the content of each chapter presented as follows.

Chapter- 1 deals with the introduction of the study. It presents the background of the study, the real estate industry at a glance, the problem statement, the research questions and the research objectives. The chapter then addresses the significance, limitations and scope of the study.

Chapter- 2 provided an overview of the commercial real estate development in Ethiopia. In this chapter Background to Ethiopian society and demographics; establishment of Ethiopian investment holdings (EIH) as sovereign wealth fund; investment in real estate sector in Ethiopia ; policy framework for real estate markets; development of real estate on a global scale; real estate development in developed and developing countries; ; real estate development in Ethiopia; commercial real estate development in addis ababa foreign real estate investors in Ethiopia; real estate companies and developers in ethiopia today; real estate performance reports; performance and prospects of the African real estate market; global real estate transparency index; corruption perceptions index (CPI) of Ethiopia were highlighted in detail.

In Chapter-3 an Intensive Review of related Literature –theoretical and empirical was made. The chapter begins by presenting the history and status of real estate business in Ethiopia, elucidating both theoretical and empirical reviews pertinent to the study. This section unpacks the various theories of real estate, and the macro- and micro factors that affect the performance of real estate firms, along with the measurement of real estate performance. The chapter ends by presenting the conceptual framework adopted in the study and hypotheses developed for the study.

Chapter- 4 Presents the Research Methods and materials applied in the research. The chapter describes the type of research approach and research design used. It details the study area and period, the study population and sampling technique, and the sources of data and data-collection instruments. Finally, it provides the methods of data analysis, data-quality control and assumptions of inferential statistics, validity, reliability and ethical consideration used in the study.

In Chapter-5. The Quantitative Data Results and Discussion of the research are set out. The research outcomes are presented in different ways, including in texts, tables, graphs and figures. These are arranged in line with the objectives and hypotheses of the study. Comparisons between the findings of the current study and past research works are made and similarities and discrepancies identified.

Chapter -6 presents the Qualitative Data Results and Discussions were summarized and reported. The current study and past research works were compared and contrasted and similarities and discrepancies identified.

Chapter-7 **Integrated Quantitative and Qualitative Results** were summarized and triangulated. The quantitative and qualitative findings were discussed. A comprehensive real conceptual framework to measure real estate performance was proposed based on the finding of the study.

Chapter-8 presents a summary of the major findings, conclusions and recommendations of the study. It also makes theoretical and practical contribution of the study.

CHAPTER TWO: COMMERCIAL REAL ESTATE DEVELOPMENT IN ETHIOPIA

2.1 Introduction

In this chapter Background to Ethiopian Society and Demographics, Establishment of Ethiopia Investment Holdings (EIH) as Sovereign Wealth Fund; Investment in Real Estate Sector in Ethiopia; 2.5 Policy Framework for Real Estate Markets; The African Housing Policy; Housing Policy in Developed and developing Countries; Housing Policy in Ethiopia; Globalization of Real Estate Development; Real Estate Development in Developing Countries; Real estate Development in Ethiopia; Real Estate forms of Housing Developments in Ethiopia; Commercial Real estate development in Addis Ababa; Foreign Real Estate Investors in Ethiopia ; Real Estate Companies and Developers in Ethiopia Today; The Ultimate Guideline to the Performance and Prospects of the African Real Estate Market; The Ultimate Guideline to the Performance and Prospects of the African Real Estate Market; Global Real Estate Transparency Index; Corruption Perceptions Index (CPI) of Ethiopia; will be highlighted.

2.2 Background To Ethiopia Society and Demographics

Ethiopia is Africa's oldest independent country and its second most populous. It has never been colonised, with the exception of a five-year occupation by Mussolini's Italy. It has a distinct cultural past as the home of the Ethiopian Orthodox Church, one of the oldest Christian faiths, and a monarchy that lasted until the 1974 coup. It was a founding member of the United Nations and the African base for numerous international organisations, and it functioned as a symbol of African freedom during the continent's colonial past.

Ethiopia's population was 123 million people in 2022. Ethiopia's population has increased significantly during the previous 50 years, expanding from 30.7 million to 123 million people at an increasing yearly rate that peaked at 4.30% in 1991 and then fell to 2.57% in 2022. Ethiopia's female population was roughly 58.9 million in 2021, while the male population

was approximately 58.98 million. Ethiopia's population growth rate is significantly higher than the global average, and it is among the highest in Africa. The country's birth and death rates are also significantly higher than the global average. Life expectancy is around 50 years old, which is roughly average for the African continent but lower than the global average.

2.2.1 Ethnic groups and languages

Ethiopians are ethnically diverse, with the most significant variances based on language classification. Ethiopia is a melting pot of 85 languages divided into four groupings. The vast majority of languages are classified as sematic, Cushitic, or omotic, and are all part of the Afro-Asian language family. A minor number of languages are classified as Nilotic, which is part of the Nilo-Saharan language family.

2.2.2 Religion of Ethiopia

Christianity was introduced to Ethiopia in the fourth century, and the Ethiopian Orthodox Church (also known as Tewahdo in Ethiopia) is one of the world's oldest organised Christian groups. The church has historically played a major role in Ethiopian culture and politics, serving as the official religion of the ruling elite until the monarchy's demise in 1974. Islam was introduced in the seventh century and is presently followed by around one-third of Ethiopians. It is most prevalent on the country's outskirts, particularly the Eastern Lowlands, but there are isolated concentrations throughout the country.

Ethiopia's GDP was estimated to be \$291 billion in Purchasing Power Parity terms at the end of 2022. World Economics has created a database that presents GDP in Purchasing Power Parity terms, with additional estimates for the size of the Informal economy and corrections for out-of-date GDP Base Year data. Ethiopia's GDP is estimated to be \$438 billion by World Economics, which is 50% more than government projections.

Ethiopia was one of the first sovereign states to sign the United Nations Charter, and it provided moral and material support for Africa's independence and the expansion of Pan-African cooperation. These efforts culminated in the formation of the Organization of African Unity (since 2002, the African Union) and the United Nations Economic Commission for Africa, both of which have offices in Addis Ababa.

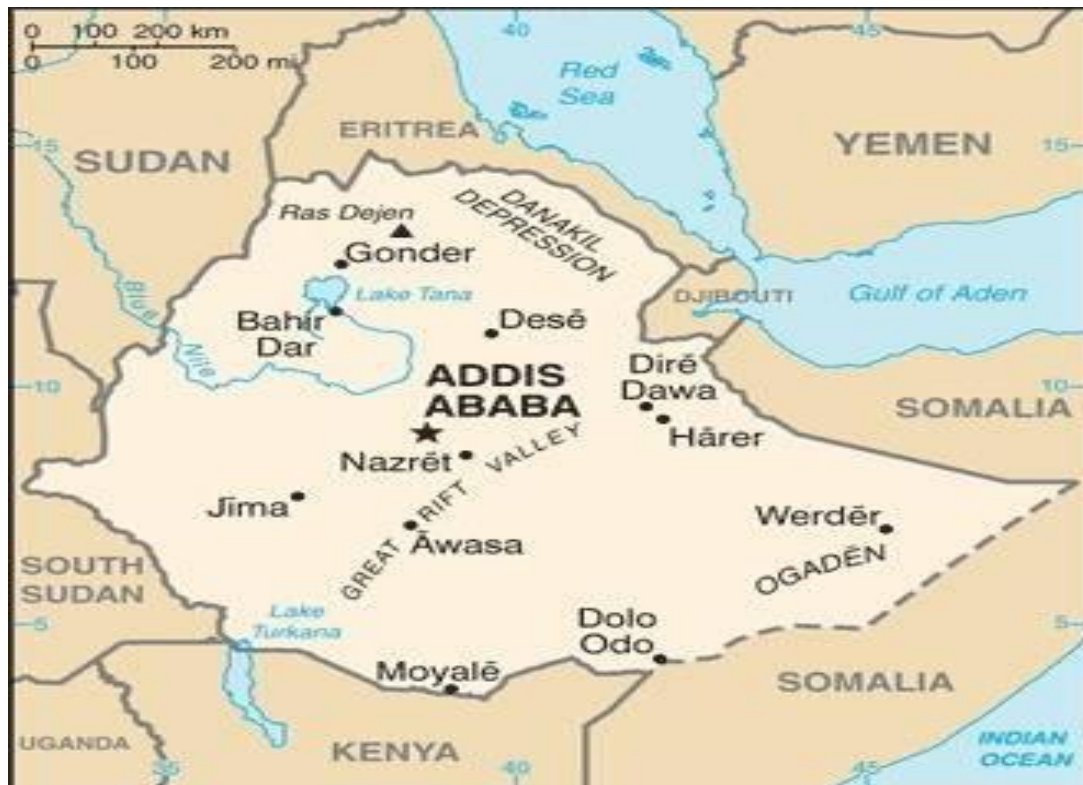


Figure 2.1: The Capital City of Ethiopia

Addis Ababa ("New Flower"), the country's capital, is almost in the centre. Ethiopia is the most populous and largest country in the Horn of Africa. Ethiopia became landlocked following Eritrea's separation from its former Red Sea province in 1993. Ethiopia rose to prominence in modern world affairs after defeating colonial Italy in the Battle of Adowa in 1896, and again in 1935-36, when it was invaded and occupied by fascist Italy. The Allies liberated Ethiopia during WWII, paving the way for Ethiopia to play a more prominent role in world affairs.

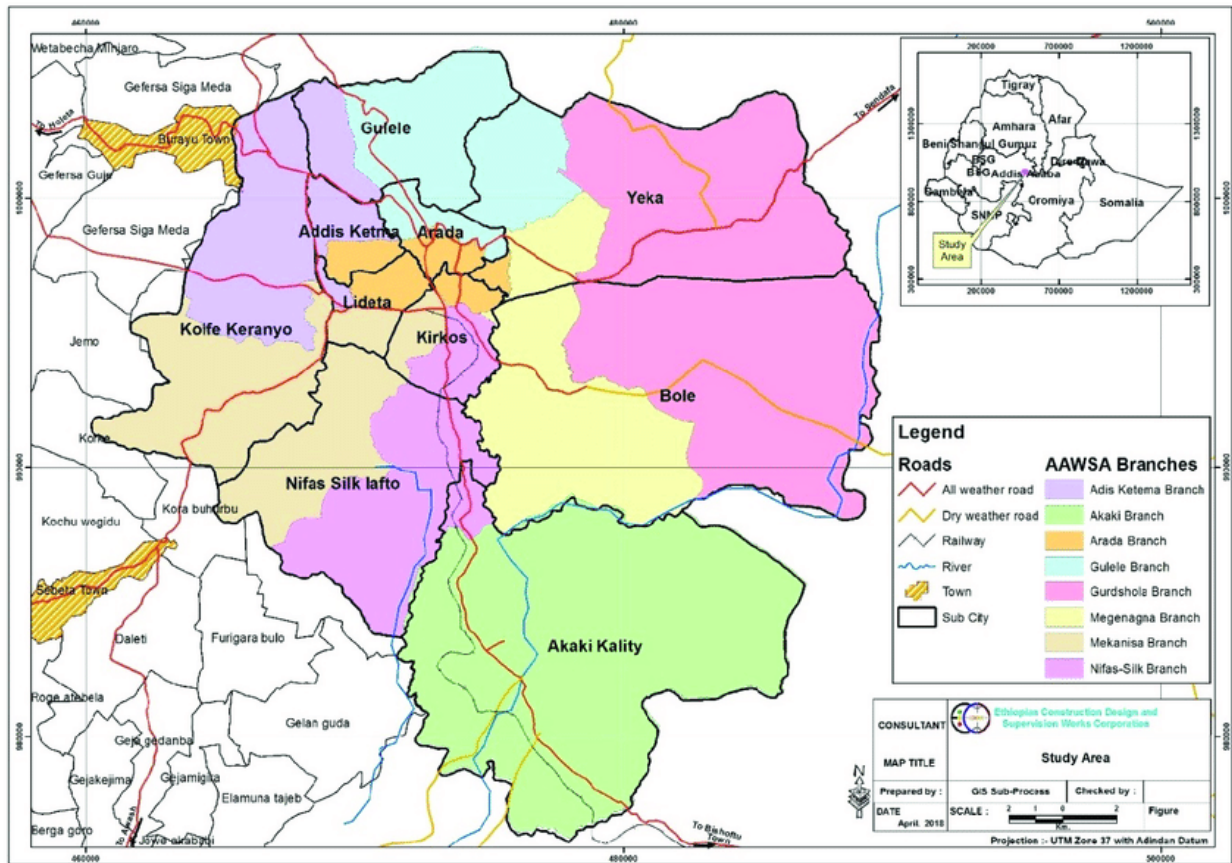


Figure 2.2: The Map of Addis Ababa City

2.3 Establishment Of Ethiopia Investment Holdings (EIH) As Sovereign Wealth Fund

Ethiopian Investment Holdings (EIH) was established as a holding company in January 2022. EIH is Ethiopia's government's strategic investment arm, in charge of providing expert oversight and maximising commercial assets to unlock value. Ethiopian Investment Holdings (EIH) is Africa's largest sovereign wealth fund, managing approximately \$150 billion in assets and receiving additional dividend income. It only recently joined its African counterparts in January 2022. Ethiopia's long-term commercial and investment interests are represented through EIH (Ethiopian Investment Holdings 2015).

EIH's portfolio includes around thirty State-owned firms, including flagships such as Ethiopian Airlines and Ethio Telecom. Its companies operate in a variety of industries and employ approximately a quarter-million people. It aims to improve the performance of public assets and attract significant investment by building a co-investment platform in collaboration with global investors.

Furthermore, EIH is expected to own a stake in the country's stock exchange and manage both tangible and intangible national assets. As an associate member, EIH has joined the International Forum of Sovereign Wealth Funds (IFSFWF), a global network of sovereign wealth funds. The term "emergency" refers to a situation in which an emergency occurs. It also refers to a situation in which an emergency occurs. (Council of Ministers Regulation No. 487/2022).

The International Foundation of Sovereign Wealth Funds (IFSFWF) is a non-profit organisation of global sovereign wealth funds dedicated to collaborating and strengthening the community through dialogue, research, and self-assessment, as well as promoting a better understanding of sovereign wealth fund activity (IFSFWF, <https://www.ifswf.org>). Following discussions with global groups such as the G20, the International Monetary Fund, and the US Department of the Treasury, a group of 23 leading state-owned international investors from around the world established the IFSWF's precursor, the International Working Group of Sovereign Wealth Funds, in 2008.

The Working Group developed the Santiago Principles, a collection of Generally Agreed Principles and Practices for sovereign wealth funds' institutional governance and risk-management frameworks. By coordinated strategic monitoring, EIH has become required to develop an institutional framework that allows for the complete optimisation of the value of a range of state-owned assets such as real estate, land, infrastructure, and state-owned enterprises. EIH also serve as a strategic vehicle for attracting foreign investment by, among other things, developing a co-investment platform, combining assets for future monetisation, unlocking values from present underutilised assets, and bringing the best potential return on investment. (Council of Ministers Regulation No. 487/2022).

2.4 Investment in Real Estate Sector in Ethiopia

According to article 6 (1) of the new Investment Proclamation no. 1180/2020, any investor may engage in any type of investment except where it is prohibited by law, morality, public health, or security. Yet, there are investment zones earmarked for joint ventures with the government, domestic investors, and joint ventures with domestic investors. The following are the results of a survey of people who have used the internet to find out what they think of the internet.

An investor who wishes to develop real estate in Ethiopia must first obtain an investment permit from the Ethiopian Investment Commission, assuming that all requirements are met,

including proof of a minimum capital of USD 200,000 for a wholly foreign owned investment and USD 150,000 for a joint investment of foreign and domestic investors, as well as payment of registration and permit fees. Any foreign real estate developer may obtain land in Ethiopia through a government lease or a private contract with a private landholder. An investor who obtains land through a lease must enter into a land lease agreement with the government and get a lease holding certificate/title in its name.

2.5 Policy Framework for Real Estate Markets

The Real Estate Market Advisory Group (REM) of the United Nations Economic Commission for Europe (UNECE) is a group of real estate experts who advise the Committee on Urban Development, Housing, and Land Management on sustainable real estate markets, working to identify specific measures to strengthen a country's real estate market in a way that would contribute to economic growth and sustainable development. The REM Advisory Group developed the "Policy Framework for Sustainable Real Estate Markets" in 2010, a tool to help member countries create sustainable real estate markets.

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However, the emergence of key international agreements such as the 2030 Agenda for Sustainable Development, the Geneva UN Charter on Sustainable Housing, the New Urban Agenda, the Paris Agreement, and the Basel III Agreement has resulted in the establishment of new global and regional policy frameworks for future sustainable urban development activities at all levels. (Boluk, Cavaliere et al. 2019)

In response to the Committee's request that the Policy Framework be updated to reflect the emergence of such key agreements, the REM Advisory Group produced the current publication, which now includes updates on issues such as urbanisation, migration and mobility flows, technology and innovation, the growth of emerging markets and asset competition, the shift in housing demand toward green buildings and new designs, energy consumption, and climate change.

Furthermore, this edition of the Policy Framework for Sustainable Real Estate Markets emphasises that, contrary to popular assumption, the financial and real estate sectors may genuinely help to the accomplishment of the Sustainable Development Goals by implementing effective and complementary principles. This paper, in particular, demonstrates how these concepts can be absorbed by national, local, and municipal governments and applied to diverse types of real estate (REM, <https://unece.org/housing/advisory-group>).

The following principles underpin the Policy Framework for Sustainable Real Estate Markets:

- Principle-1: Promote the real estate sector and the urban economy as major contributors to equitable and sustainable economic growth.
- Principle-2: Provide a supporting regulatory system by incorporating regional and international norms and standards into national legislation.
- Principle-3. Improving governance to foster a healthy, transparent, professional, and resilient real estate industry.
- Principle-4. Greening the real estate sector to enhance people's quality of life and a healthy environment.
- Principle No. 5: Incorporating real estate markets into smart and sustainable urban development operations.
- Principle-6. Improving the efficiency of land registers and cadastres' operations for transparent land and property management
- Principle-7. Improving people's quality of life by investing in regeneration and renewal of public and private housing, including landscape, historical, and cultural heritage
- Principle 9: Improving financial institutions' capabilities to provide access to financial services for real estate products.
- Principle-10. Supporting property valuation based on transparent asset appraisal criteria in accordance with international norms.
- Principle 11: Promote social and affordable housing for social cohesion, inequality reduction, and inclusivity.
- Principle 12: Supporting training and capacity-building programs to improve service efficiency in the real estate sector. Twelve policy frameworks for long-term real estate markets.

The UNECE real estate market Advisory Group is a group of experts who work with the committee on urban development, housing, and land management, as well as the working party on land administration, to strengthen housing and real estate markets. The advisory group's activities address the following issues (REM, <https://unece.org/housing/advisory-group>.)

- Energy efficient housing;
- Fire safety;
- Affordable and social housing and real estate economics (including sharing economy);
- Housing finance (including transparent and advanced financial products for housing);
- management of multi-apartment buildings;
- property valuation and registration;
- Smart and sustainable urban development;
- Land markets and land administration.

2.5.1 Housing Policy in Developed Countries

According to (Harvey 1996), the goals of housing policy are to make the best use of existing housing resources, to provide adequate housing for all households, to be responsible for the housing needs of special groups, to guide the future requirements and location of new housing, and to influence local government housing policies. Diverse housing policies, in various forms and alternatives, have become a global phenomenon in developed countries since the Industrial Revolution (Marsh and Mullins 1998).

According to Boelhouwer there have been four stages in the development of housing policy in Western Europe since World War II (Boelhouwer and van der Heijden 1998). a) The first stage was characterised by a high level of government involvement, primarily through the use of object subsidies, in order to minimise large-scale housing shortages during the post-war period; b) The second stage, beginning in the late 1950s, saw a focus on housing quality through the adoption of large-scale slum clearance, redevelopment, and a subsequent shift in emphasis to housing rehabilitation. c) The third stage, which began in the late 1970s, consists of major changes in public expenditure, new houses being built in the social sector being superseded by renovation, the introduction of privatisation schemes, the abolition or relaxation of rent control, and increasingly the replacement of object subsidies, benefiting reasonably the well housed at the expense of those inadequately housed or homeless; d) The

fourth stage, emerging in the 1990s, necessitates the introduction of programs to reduce shortages of affordable housing for the poor and the socially excluded.

2.5.2 Housing Policy in Developing Countries

The housing crisis in developing countries began with the advent of urbanisation in the late nineteenth century, when cities were built to service the requirements of colonial powers. In the colonies, urban growth had nothing to do with local conditions, the economics, or the spatial architecture of urban districts, which were modelled in accordance with colonial power. Aside from the obvious paucity of homes, the locals confronted issues with spatial segregation and ownership rights. The new independence nations inherited the legacy of colonial geographical and economic organisation after WWII. Nonetheless, only a few countries have been able to overcome the structural issue and reach decent housing standards (NUPI 2003a).

2.5.3 The African Housing Policy

Throughout the last three decades, Sub-Saharan African countries (Broussard and Tekleselassie) have devoted significant resources in tackling the housing crisis, that is, the problem of qualitative and quantitative shortages in housing stock. Nevertheless, their efforts have had no major good results. In most cases, the attempts have only exacerbated the problem. In their efforts to address the issue, planners in Sub-Saharan African (Broussard and Tekleselassie) countries have mainly relied on planning methods inherited from colonial practices (Njoh 1999).

2.5.4 Housing Policy in Ethiopia

2.5.4.1 The pre 1975 Housing Policy

During this time period, the housing market can be defined as one of the operational aspects based on free market principles. Landlords leased urban property and built residential houses for tenants, and there were no restrictions on the sale and purchase of houses (Fekade 1997). As a result, the government had little participation in the housing sector and was supposed to supply low-cost housing while leaving the private sector to cater to the middle- and upper-income groups (Fekade 1997).

According to Gulte one of the elements cited for the uncontrolled expansion of most metropolitan centres was the laissez faire condition, which was caused by the high cost of

rent tenants (Gulte 1989). In the late 1960s, it was believed that only 5% of urban land was developed, while 55% of the city's houses were rented. This resulted in high urban land prices since there was no national government or municipal jurisdiction to restrict or restrain widespread speculation. As a result, the bulk of the urban population has been compelled to live in overcrowded and congested dwellings, which are largely built and held by small-scale landlords.

2.5.4.2 Housing Policy during the Dreg

The Derg government realised the importance of quick action on property ownership if it was to embark on a social development path. All urban land and extra homes were nationalised by the Derg (Proclamation No. 47/1975). The Derg's policies were intended to benefit low-income people; but, as reality revealed, the nationalisation of land benefitted those who could afford to build standard houses while excluding the needy elements of society. The prohibition on individual developers developing cheap housing exacerbated the predicament of the low-income, forcing the majority to seek kebele dwellings in the face of fierce competition for a static housing supply.

Political bias outweighed income and household problems in housing allotment (NUPI, 2003a). Furthermore, in order to address urban housing issues, the Derg nationalised urban land and extra houses (proclamation No. 47/1975) with the goals of preventing land speculation by bringing all urban areas under its direct control; facilitating the appropriation of property claimed by planning authorities for public use; providing better opportunities and easy access to urban land for the majority of urban dwellers; and lowering house rent and benefiting the majority.

As many people believe, resolving a shelter issue is not an easy task because it involves macroeconomic disparities, political and legal structures, families' purchasing power, and a specific state's asset capability. It requires a long-term outcrop and evaluation. During the Dergue dictatorship, the government was directly concerned with the pool of real properties and the cooperative housing provision system. The government used to provide subsidised land, construction equipment, and home finance. Furthermore, it issued real estate proclamation number 47/1974, by which the government publicly held all municipal lands and additional residences, leaving the private sector's duty in real estate development undone, even though the public sector's performance was foreboding.

2.5.4.3 Housing Policy in Post 1991

With the fall of the communist regime in 1991, the EPRDF administration devised a new market-oriented strategy to rebuild the private sector's position in real estate development. A series of policies were also changed on a consistent basis, in which it removed subsidies on housing supplies and set interest rates on shelter loans at market rates. As a result, the government strained the municipal and leases investment public statement in 1993, which clearly define investment permit stipulation; with a maximum period of 99 years and a minimum period of fifty years.

In the Dergue dictatorship, the government has a strong hold on real estate investment, and the administration has complete authority over the real estate development sector. When the EPRDF-led government was in power, public engagement in real estate development diminished, whereas after 2006, the government began developing condominium houses to close the housing demand-supply gap.

Condominium houses cost 1.3 billion birrs in various places, while the building quality and delivery system is opaque and prone to corruption, and this issue has yet to be remedied. Addis Ababa's population is expected to exceed 4 million by 2021, with the country's population growing at a pace of 4.2% each year. Furthermore, Ethiopia's capital encompasses 527 square kilometres, implying that 5165 people can be found in one square kilometre (World population Review 2021).

Nevertheless, land for communal service and adoration owned by the community are free from leasing Costs. In 2002, the administration published a new proclamation (proclamation No. 272/02) that revoked the previous (proclamation No. 80/1993) and added new provisions that had not previously been included. Shelter issue has become one of the situations that require the administration's attention as a result of regular boost or resettlement results and other considerations.

The 1991 government change resulted in a complete shift in the country's socioeconomic development trajectory. The Transitional Government's official development policy became a market-led economy in which the private sector will play a central role. Unfortunately, due to the many years of centralised administration, it was difficult to turn the economy's management into an effective market structure. This dilemma continues to plague the federal government to this day.

The establishment of the market economy had no discernible impact on the housing industry. Housing cooperatives were denied land access in favour of private applicants, housing loans were completely eliminated, and the lease holding policy was implemented. Although land for basic housing is excluded from leasing, the initial deposit required as a security to develop in accordance with the plan has exacerbated the accessibility problem (NUPI 2003b).

Following the change in administration, the Transitional Government of Ethiopia (TGE) announced an official strategy of rejuvenating the housing market through privatisation of urban dwellings in May 1991(Fekade 1997).

The transitional period's economic policy stated that the state retains ownership of urban land while ensuring its equitable distribution for housing construction; the state issues and enforces regulations, creates favourable conditions for integrated urban development, and encourages the public to take advantage of the policy. Government agencies are urged to build, rent, and sell low-cost residences based on available resources; and Regulations are issued by the state to protect the rights of both landlords and tenants.

2.6 Development of Real Estate on A Global Scale

Globalisation has increasingly involved the internationalisation of service sectors as well as manufacturing, and the many sub-sectors of the real estate business have been eager participants in this global rise. Builders, brokerage businesses, consultancy and services firms, real estate finance firms, and investors have expanded their operations outside their local markets to a global scale(Bardhan and Kroll 2007).

The global need for real estate development is driven by population increase and technological advancement. Therefore, real estate development is the ongoing reconfiguration of the built environment to satisfy the needs of society (Bardhan and Kroll 2007). Some of the largest real estate purchasers are becoming increasingly global. Multinational corporations have global footprints due to their manufacturing sites, distributors and suppliers, and now, increasingly, service sector organisations ranging from financial to legal.

Increased cross-border real estate investments, international development projects, multinational real estate ventures, and integrated housing complexes are now compensating for a lack of international real estate trade (Bardhan and Kroll 2007). Real estate investment

is also popular since it has a track record that can only inspire investors, and the fraction and

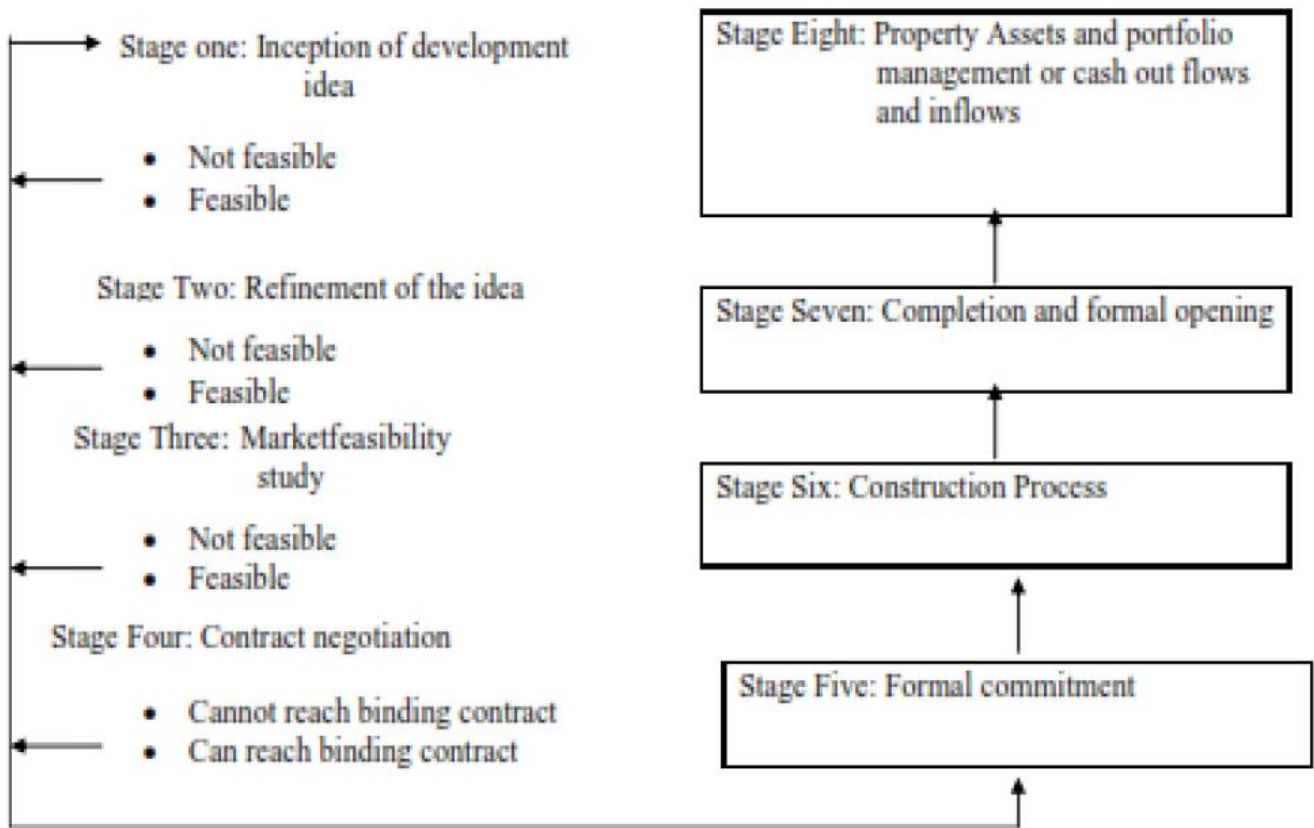


Figure 2.3: The eight stages in real estate development

Source : (Miles et al. 2000) and (Burton 2001)

2.7 Real Estate Development in Developing Countries

The traditional or formal mode of housing provision mostly serves the high-income urban populations of developing countries. This is primarily accomplished through the private market (Keivani and Werna 2001). Real estate development in poor nations, such as Africa, is primarily in the hands of groups overseen by state authorities. It is quite difficult to adequately measure the work done by these governmental agencies in terms of total real estate development (Gh eris 2005). Yet, land and real estate contribute for 45-75 percent of developing countries' wealth. These assets are distinct in that they are both a large input into

production activities and a major consumer of residential real estate and infrastructure services by households (Galal and Razzaz 2001).

2.8 Real Estate Maturity Model

The ability of organizations to consistently increase its effectiveness and efficiency is referred to as maturity. In addition to capital, people, technology, and information, the model considers corporate real estate as "a fifth resource of a firm," outlining a route for the evolution of CREM (Joroff, Lambert et al. 1993).

The Corporate Real Estate 2000 project was launched in 1991 by a group from the Industrial Development Research Foundation (IDRF), the research division of the International Development Research Council IDRC (now CoreNet Global). Michael Joroff was the project's leader. Its goal was to put current experiences in a framework that would encourage further learning, discussion, and change in the field, as well as to understand how changes in the business environment impact the need for service by corporate real estate professionals, as well as their suppliers and partners in the industry.

Corporate real estate management, as defined by (Dewulf, Van Langenhove et al. 2000), is the management of a corporation's real estate portfolio by aligning the portfolio and services to the needs of the core business, with the goal of maximizing added value for the business and optimizing contribution to the overall performance of the corporation.

Phase 2 of the CRE 2000 project was officially launched, and it included tasks including validating and adapting the five-stage model, examining the necessary skills, and creating recommendations for how financial real estate strategies might better meet the life-cycle position of business units. Instead, it was followed by studies of the workplace and the application of fresh ideas, with an emphasis on data management, working environments, financial and service models, and just-in-time real estate management.

(Joroff, Lambert et al. 1993) claim that the traditional role of a corporate real estate manager (Stage 1) as taskmaster - providing physical space and technical maintenance by ad hoc interventions - has changed to a more strategic role, with a cumulative integration of minimizing real estate costs and cost efficiency (Stage 2, controller), standardizing building usage (Stage 3, dealmaker), matching real estate with business plans of the units and market options (Stage 4, intrapreneur) and a more integrated management approach, using performance indicators regarding costs and quality (Stage 5, business strategist);

The fifth step entails acting strategically, being proactive, working with other disciplines, aligning the accommodations with the organizations' vision, mission, and goals as well as the external context, and involving other stakeholders. Each step builds on the ones before it, and they are cumulative. Table 2.1 provides a summary of the five stages' key traits.

Table 2.1: Characteristics of the five stage CREM

1	Taskmaster	Supplies the corporation's need for physical space as requested
2	Controller	Satisfies senior management's need to better understand and minimise real estate costs
3	Dealmaker	Solves real estate problems in ways that create financial value for the business units
4	Intrapreneur	Operates like an internal real estate company, proposing real estate alternatives to the business units that match those of the firm's competitors
5	Business strategist	Anticipates business trends, monitors and measures their impacts, contributes to the values of the corporation as a whole by focusing on the company's mission rather than focusing only on real estate

Source: Joroff et al. (1993)

The fifth step entails acting strategically, being proactive, working with other disciplines, aligning the accommodations with the organizations' vision, mission, and goals as well as the external context, and involving other stakeholders. Each step builds on the ones before it, and they are cumulative. Table 2.1 provides a summary of the five stages' key traits.

Table 2.2: Cumulative Increase of Activities and Services CRE

<i>1. Taskmaster</i>	<i>2. Controller</i>	<i>3. Deal maker</i>	<i>4. Intrapreneur</i>	<i>5. Business strategist</i>
Renovation Planning and management of equipment Maintenance of indoor environment Maintenance schedules Building codes	Maintenance of portfolio Space use Satisfaction Taxation of value of assets Building cost analysis	Acquisition space Lease contracts Lease negotiation Sale, subletting Purchase Space standards Management of large projects Project management tools	Extension and intension Strategic CRE plan Market trends and prices Sale and lease back contracts Pricing methods Benchmark portfolio performance Benchmark CRE unit performance Operating as a profit centre	Joint BU meetings Participation in BUs and corporate strategy planning Impact analysis of capital market Impact analysis of changing legislation Impact analysis of economic and demographic trends City planning Masterplans Match BUs and providers

Source: Lambert et al. (1995)

A five stage CREM maturity model was one of the findings provided in 1993 by the CRE 2000 Phase One Research Team (see Figure 2.4). This model offers a framework for analyzing, developing, and administering a strategy for change, much like earlier maturity models that were created in the early 1970s for Total Quality Management and to better organize and manage Information Technology (IT)(Cusick 2019).

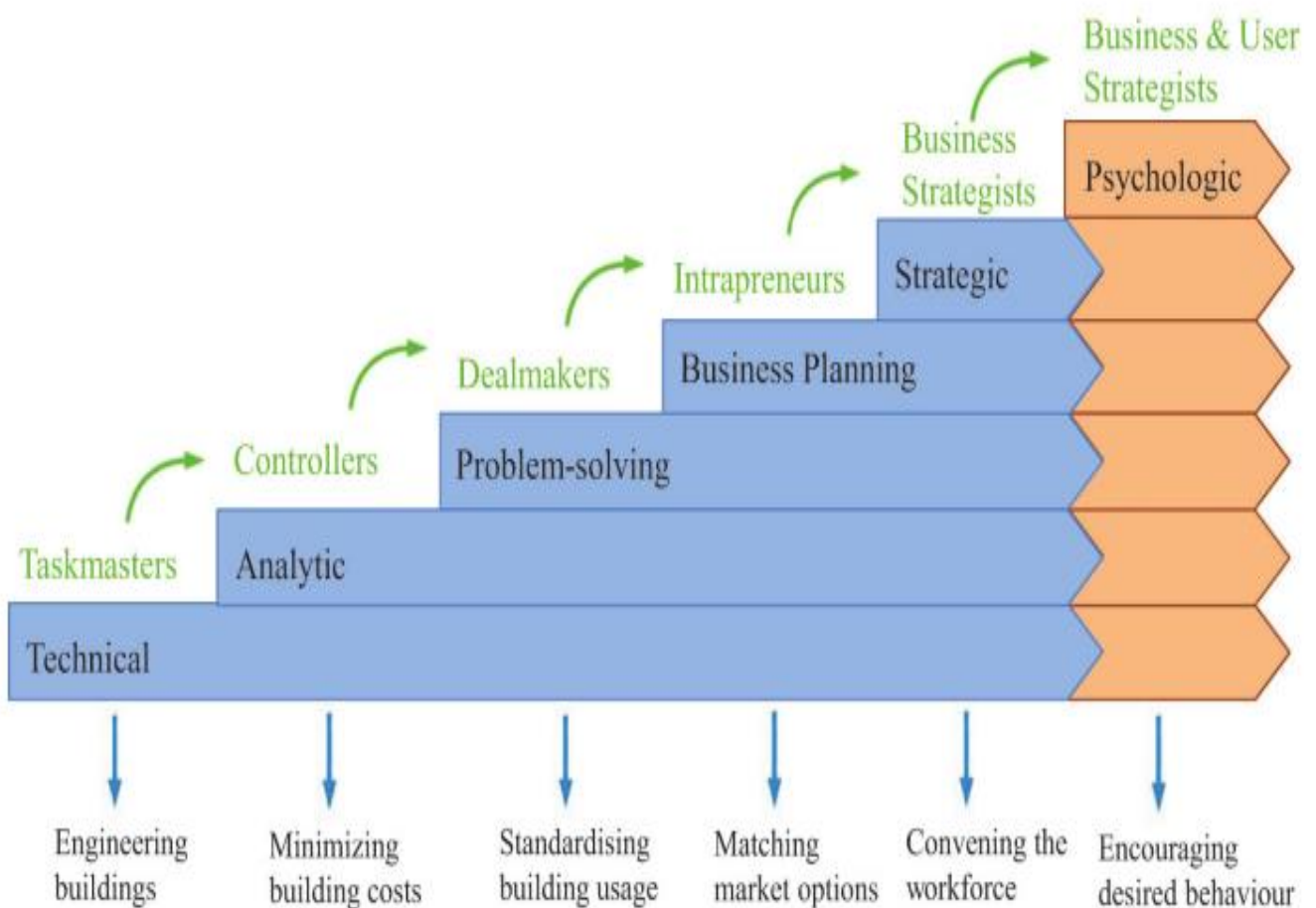
Extension with a Sixth Stage

Organizations and their corporate real estate are currently undergoing additional significant transformations. Due to three concurrent trends, workplace managers must react more forcefully to the requirements and preferences of users, especially knowledge workers.

- To begin with, knowledge workers today routinely engage in the time- and place-independent working that IT enables, which was projected for them in the 1990s ((Joroff, Lambert et al. 1993); (Duffy and Powell 1997);

- Secondly, the role of organizational behavior in carrying out corporate strategy has increased. The behavior of employees at work (including how they cooperate, learn, concentrate, and rest) has a significant impact on desired outcomes, particularly for knowledge-based firms. In light of the fact that behavioral change is typically connected to workplace reform, many corporate programmers are now focused on it.
- Thirdly, knowledge workers are becoming more empowered to voice and adhere to their preferences with regard to workplaces and working methods as a result of the worldwide "war for talent" (Beechler and Woodward 2009).

Given these advancements, (Hoendervanger, Wijnja et al. 2017) expanded the CREM maturity model by adding a sixth stage; see Figure 2.1. The sixth stage adds a user-centered perspective, where the fifth stage concentrated on adding value in connection to company strategy. A CRE manager develops workplaces that promote work practices and encourage behavioral change in accordance with both corporate since they are also company and user strategists.



Source: Corporate Real Estate Management Maturity Model (CREM) - Joroff et al. (1993) and had been extended by Hoendervanger et al (2017a, 2017 b)

The validity of the model has not yet been empirically evaluated, and it has not been updated to reflect recent trends and advancements. The sixth stage was just added and requires more operationalization as well as validity testing through desk research, practitioner interviews, and case studies.

(Akinbogun, Jones et al. 2014) investigated property market maturity in the Nigerian residential real estate market. They altered the market maturity criterion to incorporate a tick list of items relevant to developing countries. They recognized the importance of information in measuring property market maturity in European office markets, citing a sophisticated land registration system as the reason. They discovered the amount of conformity with planning is an essential parameter determining the state of market maturity that was not included in the initial analysis. (Akinbogun, Jones et al. 2014).

(Chin, Dent et al. 2006) conducted an exploratory analysis of market maturity perceptions in five Southeast Asian cities using the following variables: Market openness; professional level of property services; presence of property intermediaries; user and investor potential Market value; market flexibility; market information standardization; market information accessibility Singapore and Hong Kong received the lowest scores across each criteria, suggesting that these markets are believed to be the most mature in comparison to the other markets.

(Chin, Dent et al. 2006) conducted a study on the relative Perceptions of Institution Environment in Five Southeast Asian Cities using Political stability; Currency exchange stability & convertibility; Foreign investor restrictions & regulations; Legal framework; Transparency of legislative system; Legal regulation; Sound financial / economic structure; Liberalization of financial markets; Economic strength & stability Market transparency level; Professionalism; perceived corruption; government interference; taxation; Urban design (planning); The survey discovered that the legal framework in Kuala Lumpur and Taipei is regarded to be reasonably well established, however some factors such as the level of transparency in the Bangkok, Kuala Lumpur, and Taipei markets were deemed to be somewhat immature.

2.9 Real Estate Development in Ethiopia

Real estate define as "a synthesis of numerous specialties, an accumulation of fields resulting in a distinct field of study (Unger and Karvel 1979). Land and structure use is linked with marketing, economics, finance, sociology, management, and law. Rather than its breadth, it is the study of the specific application of these disciplines to people and their use of real estate resources.

2.9.1 Real Estate forms of Housing Developments in Ethiopia

Real estate housing supply is a novel type of home construction in Ethiopia. As real estate development established its own economic sector, it began in the housing sector(Berhanu 2002). Real estate development is associated with the specialisation of developing land and property for sale or rent. Real estate developments in Ethiopia can be classified into three phases based on the method of land ownership: private landownership (pre-1975 period); public ownership with usufruct right only (1975-1993 period); and public ownership with leasehold rights (1993-1995 periods) (Post 1993).

2.9.2 Private Land Ownership Period (Pre-1975 period)

Most land lords sold chunks of land to individuals who wanted to build residences during the time of private land ownership. The occupants were largely the producers of built-up space; this is still true in most of the country's metropolitan areas, particularly for housing. Where rental space was created, the developers were generally landlords themselves. Apart for a few modern buildings in city centres, landlord-developed estates lacked both planning and building permits.

The ability of the system to use traditional means of mobilising project money and the accessibility of rental dwellings to locals were both good characteristics of this mode of development. However, this method of development had downsides, such as the lack of planning and building permits, which made urban administration difficult.

Homes were substandard in terms of size, space organisation, construction, and infrastructure, posing health and safety risks. Rental housing was promoted, causing urban maintenance issues once it was nationalised. The retention of a monopoly on land and real estate in the hands of a few landlords hindered the transition of the economic order to a modern system. Before to 1975, Ethiopia's imperial state held a monopoly on political and economic power over land and other tangible properties. This was inherited hereditarily and

was restricted by law and other ways; other parts of society were barred from possessing land and other goods.

2.9.3 Public Land Ownership with Usufruct rights only (1975-93)

At this time, land was centrally allotted to individuals and institutions (both private and public) for their exclusive use (Proclamation No. 47/1975). During this time, the government, parastatal institutions, and public associations were the primary developers of estates for purposes other than housing (Berhanu 2002).

Although public ownership of land allowed urban centres to plan their development, land allocation constraints have stifled progress. The conversion of houses to other use classes and the supply of private rental houses may be a natural outgrowth of urban change, but the limitation on land supply and the prohibition on real estate development as an economic activity have been observed to have accelerated the conversion of houses to other use classes and the supply of private rental houses. Furthermore, while these alterations were mostly informal, they constituted real estate advancements for the time period (Berhanu 2002).

2.9.4 Public Ownership of Land with Leasehold Rights (Post -1993)

The Ethiopian government, which took power in 1991, pursued a free market economic policy, with Agricultural Development Led Industrialization (ADLI) as its primary development strategy; it also launched a structural adjustment program aimed at liberalising price control and import tariffs, devaluing the national currency and privatising state-owned public enterprises, and opening up trade and investment policy by limiting the government's role to discharging and discouraging.

The Government of Ethiopia which came to power in 1991 has adopted a free market economic policy with Agricultural Development Led Industrialization (ADLI) as its leading development strategy; it also launched a structural adjustment program, aimed at liberalising price control and import tariff, devaluing national currency and privatising state owned public enterprises, open-up policy in trade and investments, by limiting government role to discharging and discouraging and facilitating responsibilities in the area where the private sector is not able to efficiently and effectively deliver the goods and services required by the society.

Such market economy plans, strategies, and initiatives prompted the incumbent government to change rules and regulations regulating urban land, land housing, investment, and industry,

among other things. As a result of this reform framework, urban land leasing policy and legislation were established and implemented as of 1993(Abuye 2006).

Unlike the previous socialist administration, the federal government of Ethiopia's national investment strategy encouraged the private sector to play an active part in the national economy (Proclamation No. 37/1996). The government has also offered a fantastic opportunity for Ethiopian Diaspora members who want to purchase real estate or invest in one of the main real estate companies. As a result, real estate is helping to alleviate the housing scarcity (Access Capital, 2010). Unlike the previous socialist administration, the federal government of Ethiopia's national investment strategy encouraged the private sector to play an active part in the national economy (Proclamation No. 37/1996).

As a result, the administration has recently placed a high priority on urbanisation and housing development for city people. A good example is the construction of condominium houses at reasonable prices for low and middle-income individuals. The nation's industrialised approach boosts the construction industry while also developing service chances and banking commerce. The current violent shift toward public and private shelter investment and an amendment of leading rules could have a variety of effects on the economy, to name a few: opportunity of the market for overseas investors and private investors, primarily the Diaspora; boosting the building abilities of firms through education, forming advisory bodies, and redrafting the minimum amount requirement of construction companies; and banks have a variety of loan strangleholds (MULUGETA 2018).

Such market economy plans, strategies, and programs compelled the incumbent government to modify rules and regulations governing urban land, land housing, investment, industry, and so on. As a result, urban land leasing policy and legislation were established and implemented as of 1993 within this reform framework(Abuye 2006).

2.10 Commercial Real Estate Development in Addis Ababa

Addis Ababa is not only the capital of Ethiopia, but also the home of many continental and international organisations. It has also served as an economic, manufacturing, and cultural centre from its inception. The term "next generation" refers to the process of creating a new generation of technology. Ethiopia's population is increasing at a rate of roughly 2.7% per year, with no forecast peak year or period of decline. Ethiopia has a birth rate of 36 births per 1,000 inhabitants.

The fertility rate is 4.1 children born per woman. Religion, as well as a lack of contraception, have a significant part in Ethiopia's high birth rate. Because of the growing need for more resources, the economy's ability to grow and develop at a faster rate has been hampered by the disproportionate population expansion. Due to its rapid population growth, Ethiopia remains one of the world's poorest countries (World Population Review 2021).

2.10.1 Sources of finance Real Estate Sector in Ethiopia

In Ethiopia, both public and private commercial banks offer integrated loans to real estate developers and buyers. The Ethiopian mortgage market is not functioning effectively, and this has created difficulties for home buyers. The lack of a mortgage market has hampered the emergence of either. The Ethiopian mortgage market is not functioning effectively, and this has created difficulties for home buyers. The country's lack of a mortgage market has hampered the establishment of either investment institutions or long-term financing options. At the moment, only the government-owned Commercial Bank of Ethiopia and the Building and Business Bank offer residential housing loans. These two banks have just amalgamated (World Bank 2019).

Because there is no built proper system of housing finance institutions, the housing financing segment will have a small impact on the growth of the larger banking structure. Over the previous four decades, the distribution of mandated financial institutions into the urban shelter financing sector has been by and large minimal. The purpose of this study was to see if there was a link between the usage of a computer and the use of a computer (PADCO 2016).

2.10.2 Access to Land

Throughout the last century, the rate of urbanisation and the number of people living in cities has expanded dramatically, with cities currently housing more than half of the world's population (UN 2017). Several cities are contending with a fast-growing population as the world urbanises, increasing demand for land (Lipman and Rajack 2011). At the moment, one billion people live in informal settlements that lack essential facilities, and 60% of city dwellers are physically exposed to natural risks and pollutants (USAID, 2014). The urban slum population is expected to reach 2 billion people by 2030. (UN 2003).

Land is a major factor of production and a critical asset in any countries or societies socioeconomic growth. Access to urban land has become difficult as the urban population

continues to grow, resulting in rapid urbanisation(Nagya and Udoekanem 2022). Access to land is obtained either formally, inside the statutory framework, or informally, outside of the statutory framework.

It can be private-private (acquired through the transfer of ownership in private transactions), public-private (acquired through state allocation), private public-private (acquired through land pooling), private/public-private (acquired through invasion), or customary allocation (acquired through the framework of customary law) (Aluko 2011). It also comes with a number of problems, as the path to authorised land acquisition is long and perplexing; access to land, registration of land, and approval to develop the land all involve time-consuming, too complicated, and expensive procedures(Farvacque and McAuslan 1992, Mabogunje 2002)

Land is necessary for a variety of purposes around the world. It is a major factor of production and an important asset in any country's or society's socioeconomic growth. As a result, when nations grow and rural areas become urban centres and urban centres become large metropolitan areas, competition and demand for land for various purposes increases (Enisan and Aluko 2015).

Road accessibility, gender, income level, cost of land, time taken to acquire land, time taken to receive title document, high cost of titling, multiplicity of charges, access to infrastructure, site topography, neighbourhood development, nearness to work, level of education, marital status, occupation, distance to centre of attraction, double allocation, and encroachment are all factors that influence access to land for private housing development(Nagya and Udoekanem 2022).

2.10.3 Legal Issues of Land Ownership, Planning System, Housing Issues, Professional Associations

Private land ownership in Ethiopia is now a pipe dream rather than a reality. In simple terms, the state is the sole legitimate owner of land in the country. Worst of all, it is described as feudalism. Labelling aside, the Ethiopian state has successfully linked rural people and farmers to its most precious resources by retaining control of land. Serfdom arose as a result of massive land reform and nationalisation in March 1975. Despite a political shift in 1991, the state never relinquished its right to the land. Ethiopians today have the right to use the land on which they reside, but not to possess it.

In Ethiopia, there is no national valuation standard that governs valuation processes and techniques. Because nations' contexts change, the selection of certain value bases, methodologies, techniques, and criteria may differ (Adair et al., 2003). Parker (2016), on the other hand, said that property value standards in diverse countries must align with one another, and that to do so, there must be a firm, single benchmark of common norms to which states can connect. In this context, IVSC established some common property value bases while allowing for flexibility in approach and application to fit different countries and conditions (Ballwieser 2020).

Despite the fact that real estate appraisal has been practiced in Ethiopia for a long time, there is no national standard. The expropriation law now governs value for expropriation. The expropriation proclamation provides in Art. 7 (1) that a landholder whose holding has been expropriated is entitled to compensation for his property located on the land as well as permanent improvements made to such land (FDRE, 2005). By neglecting the economic worth of land, this undermines the entire core of market value (Habtamu, Bastawrous et al. 2019).

In Ethiopia, there is no valuation standard; hence real estate value has been done without a framework and on the basis of intuitive knowledge by a committee. This is in contrast to international valuation practice, in which certified valuers do valuation assignments in accordance with national or international norms (RICS 2017a). Although the constitution and subsequent legislation deny the economic value of land, in actual market transactions, the land contributes significantly to the whole worth of the property.

2.10.4 Land Delivery System for Real Estate Developers

According to Addis Ababa land administration and building permit authority specialists, around 5.5 million square meters of land were delivered to 125 real estate developers via auction, negotiation, and free of lease. The pricing of auction land was based on competition among applicants (developers) for the lowest price provided for each square meter of land to be allotted.

Misganaw argued that an auction has at least three stages: initiation (statement of purpose), offer, and acceptance (Misganaw 2009). During the initial step, the government selects and prepares the land for auction. Once the plots are determined to be offered by auction, the government estimates the floor price and advertises it in a public area. Following the

publication of the advertisement, bidders purchase a tender document from the sub-city where the advertised plot is located and fill it out as instructed in the document.

2.10.5 Land Lease Price for Real Estate Developers

The Addis Ababa City Administration's land administration and construction permit authority has established the benchmark lease price based on zoning and land grades. The land zones are designated as CBD (Central Business District), transition, and expansion zones, according to information obtained from the authorities. The land grades range from 1 to 5 depending on the availability of various service facilities such as soil type, road network, and population density in specific locations.

The floor price of a specific plot in the city is determined by whether the plot is located in the central business district (CBD); areas with access to transportation and communication that attract more people and socioeconomic activities, zones of transition and sub-urban areas that are suitable for residence; or zones of transition and sub-urban areas that are suitable for residence (Bayrau and Bekele 2007).

2.10.6 Duration, Renewal and payment of Lease Holding by Real Estate Developers

The period of a lease for urban land varies based on the level of urban development and the sector or kind of development activity on which the land is held by lease, according to Proclamation No. (272/2002). The lease period can be extended until the lease expires if an agreement is reached between the leaser and the leases (EIA, 2010). In Addis Ababa, the land lease length ranges from 99 years at the most to 50 years at the most.

Leases for the building of dwelling dwellings have maximum lease duration of 99 years, and leases for other purposes, such as industry, commerce, and others, have a minimum lease period of 50 years. The lease price can be paid in whole at the signing of the lease contract or in instalments with bank compound interest on the outstanding balance (EIA 2010). A person or entity to which the leasehold of urban land is granted.

2.10.7 Pre-requisite for Acquiring Land for Real Estate Developers

Prospective real estate developers, according to the land administration and building permit official, submit applications for the office, which include investment licenses, a plan, and a site indication map of the project. The office considers the project's economic and social

importance, the investor's project execution strategy, the fact that the project's implementation does not have a negative impact on the area's social, economic, and environmental impact, and the conditions that must be met by real estate developers in order to obtain the land, such as the address, area of the places required for development, and so on. According to the land administration and building permit official, prospective real estate developers submit applications for the office which consists of investment licenses, proposal and site indication map of the project. The office considers the economic and social importance of the project, the project execution strategy submitted by the investor, the fact that the implementation of the project does not bring about a negative effect of the social, economic and environmental impact on the area, and condition that must be fulfilled by the real estate developers to obtain the land like the address, area of the places required for development, whether or not there is construction over it; the quantity of the investment, the start date of the project, the role it will play in relocating the displaced; and the developer's development experience and financial capacity as validated by a reputable bank. If this is the developer's initial request, the size of land approved is up to 25,000 square meters. Similarly, real estate developers that request additional land for the second time might acquire the same size (i.e., 25, 000) if they complete 75% of the prior project.

(Mengistu and van Dijk 2018) conducted a study on the credibility of government regulations on real estate developers and discovered inconsistencies and contradictions in formal norms and enforcement mechanisms. Despite this, economic growth has continued, and real estate developers have continued to invest in Addis Abeba. Land acquisition is one of the most important steps in the real estate development process. In Addis Abeba, lease contracts are utilized to allocate urban land. The land lease system has three leasehold permission mechanisms: auction, negotiation, and award. According to the study results, the majority of respondents (42.9%) choose 'negotiation,' while 28.6% favor 'auction' and 'award,' accounting for 71.5% of respondents. (Mengistu and van Dijk 2018)

2.10.8 Rate of Investment License for Real Estate in Addis Ababa

The Addis Ababa Investment Agency (AAIA) granted licenses to real estate developers based on EIA (Ethiopia Investment Agency) statistics on investment registrations (Access Capital 2010, Tsegaye 2010). The real estate developers had no trouble acquiring an investment permit; but obtaining a land and building permit is challenging due to the city's increasing demand for property and the real estate developers' lack of cash to proceed with the project

(Tsegaye 2010). According to Building Permit Regulation No. 1/97, any structure constructed without a building permit is prohibited.

2.10.9 Supply and Price of Land

Land, among other things, is the most important input for real estate developers. The availability and condition of land provision have a significant impact on the sector's development (Abraham 2008). Land is currently the property of the state and may only be acquired through leasing. Land lease prices are expensive, and land supply is limited. As a result, the exorbitant land lease price is frequently out of reach for many potential buyers. Simultaneously, there is a scarcity of serviced pieces of land in the city.

2.11 Foreign Real Estate Investors in Ethiopia

There is no legal framework for real estate investors; there is a lack of legislative support to provide incentives to real estate developers; and the complex and bureaucratic transfer method of land users. The lack of an effectively organised financial institution that provides housing finance, the scarcity of skilled labour compared to other sectors, and the bulk of Ethiopian employees being unskilled compared to skilled labours (Mulugeta 2017).

The real estate business in Ethiopia has been one of the fastest expanding sectors of the economy. The Addis Ababa residential real estate market is expanding into a diverse mix of extensive government-constructed condominiums (presumably for lower-income people), mid-market housing cooperative buildings, and primarily high-end properties developed by real estate developers and/or individuals themselves. Because there is little incentive to provide low-income homes, most real estate developers exclusively work with high-income clients (Mulugeta 2017).

2.12 Real Estate Companies and Developers in Ethiopia Today

In Addis Ababa, there are approximately 100 real estate developers. Nonetheless, the top 10 performing real estate developers are shown below:

2.12.1 Local Real Estate Developers in Ethiopia

The following are real estate developers in Ethiopia



Figure 2.4: Sunshine Investment Group Apartments, Houses & Commercial Properties



**Ayat Hill Bottom Apartments
and Business Outlets**

Figure 2.5: Ayat Real Estate Apartments, Houses & Commercial Properties



Figure 2.6: Noah Real Estate Apartments, Houses & Commercial Properties;



Figure 2.7: Gift Real Estate Apartments & Houses



Figure 2.8 Habitat New Flower Homes Houses & Commercial Properties



Figure 2.9: Enyi Real Estate Apartments, Houses

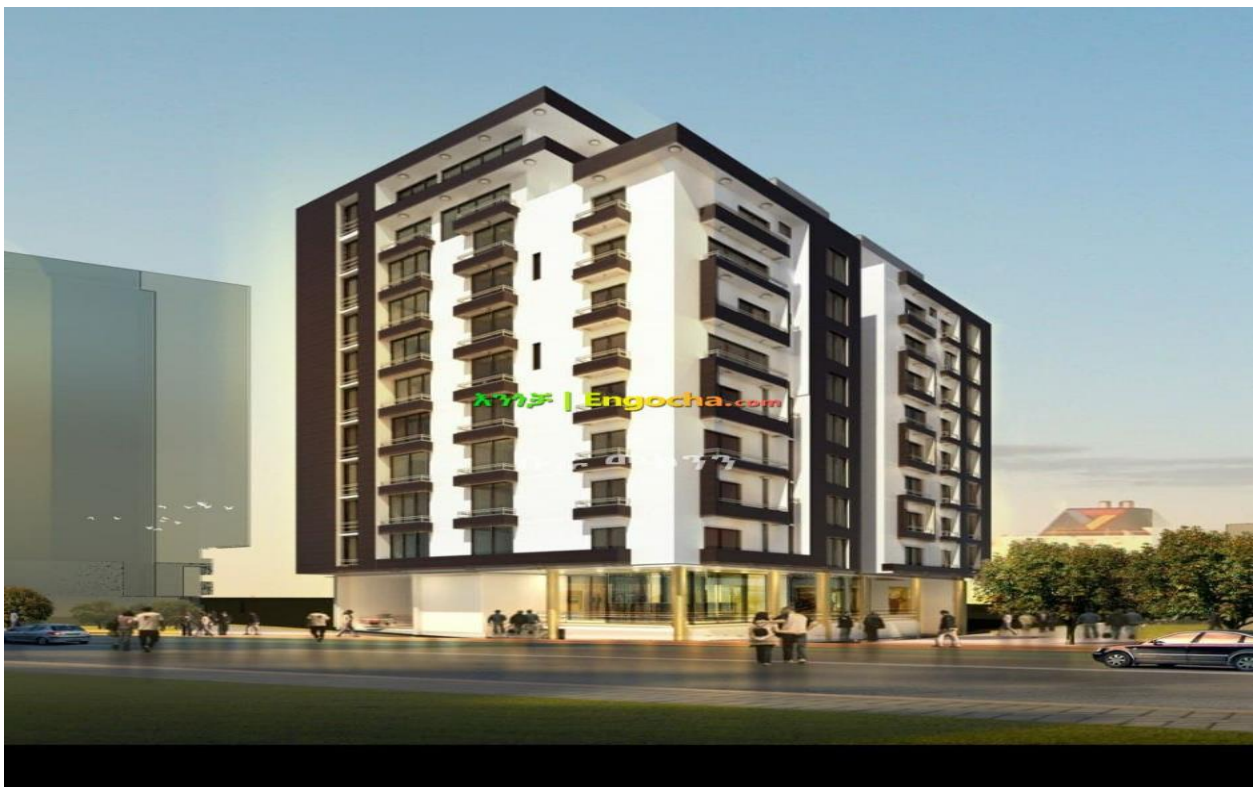


Figure 2.10: Legacy Real Estate



Figure 2.11: Flintstone Homes Apartments, Houses, Commercial Properties

2.12.2 Foreign Real Estate Developers in Ethiopia



Figure 2.12: Tsehay Real Estate Apartments, Commercial Properties



Figure 2.13: Metropolitan Real Estate Ethiopia Apartments, Commercial Properties;

2.13 Real Estate Performance Reports

The 2020 economic and health shocks have impacted millions of households, disrupted business operations and exposed vulnerabilities in the current social safety and healthcare systems. The crisis has also accelerated the Fourth Industrial Revolution's implications on trade, skills, digitisation, competition, and employment, drawing attention to the mismatch between our economic systems and societal resilience.

It is critical at this moment to explore not only the best approach to restart growth, but also the best way to rebuild better economies that benefit people and the environment. The paper provides leaders with ideas for proactively incorporating transformative policies, bold investments, and creative firms into the recovery agenda while striking a delicate balance between the short and long term (Schwab and Zahidi 2020). The 2020 Edition investigates how countries define recovery targets toward new economic systems, with an emphasis on the enabling environment, human capital, markets, and the innovation ecosystem.

2.13.1 Reviving and transforming the enabling environment

Schwab and Zahidi reported in the World Economic Forum's Global Competitiveness Report Special Edition:

“An economy’s enabling environment encompasses both formal and informal institutions; utilities and infrastructure such as transport, energy, water and telecommunications; as well as the framework conditions set by monetary and fiscal policy, and more broadly, public finances. With worsening social and economic polarisation and the looming threat of climate change, the economic foundations created by well-functioning institutions, a stable macroenvironment and high-quality infrastructure will be critical. However, the quality of a country’s enabling environment will not only have to be assessed on its ability to support growth and productivity, but also on the ability to transform the economy to achieve environmental and shared prosperity targets.” (Schwab and Zahidi 2020).

2.13.2 Reviving and Transforming Human Capital

Schwab and Zahidi reported the following in the World Economic Forum's Global Competitiveness Report Special Edition:

“Human capital—the capabilities and skills of individuals and populations—is a key driver of economic prosperity and productivity. It can be developed by ensuring individuals are able to sustain good health, and they are in possession of in-demand skills and capabilities. The value of human capital is realised in the labour market through productive employment, and it is developed through education during the first two decades of an individual’s life as well as through mid-career training investments. Finally, a set of preconditions aligns incentives between workers and businesses—maintaining a tight connection between pay and productivity, meritocracy in pay and professionalization in firm management as preconditions for wider workforce productivity.” (Schwab and Zahidi 2020).

2.13.3 Reviving and Transforming Markets

Schwab and Zahidi reported in the World Economic Forum's Global Competitiveness Report Special Edition:

“Over the past decade, while financial systems have become sounder compared to the pre-financial crisis situation, they continued to display some fragility, including increased corporate debt risks and liquidity mismatches. In addition, access to finance, despite efforts to increase inclusion in recent years (including through fintech applications), is not sufficiently widespread. Against this backdrop, countries should in the revival phase prioritise reinforcing financial markets stability, while starting to introduce financial incentives for companies to engage in sustainable and inclusive investments. In the transformation phase, the attention should shift to create incentives to direct financial resources towards long-term investments, strengthening stability while continuing to expand inclusion.” (Schwab and Zahidi 2020).

2.13.4 Reviving and Transforming the Innovation Ecosystem

In the Global Competitiveness Report Special Edition disseminated at the World Economic Forum, Schwab and Zahidi reported the following:

“In this area, a paradox had recently emerged: a positive evolution of entrepreneurial culture in the past decade, but the creation of new firms and breakthrough technologies had stalled. Technology has lagged especially in the capacity to delivering solutions to energy consumption, emissions and meeting the demand for inclusive social services. To manage these complexities, countries should in the revival phase expand public investments in R&D, incentivise venture capital and R&D in private sector, and promote the diffusion of existing technologies that support the creation of new firms and employment in “markets of tomorrow”. In the longer run (transformation) countries should create incentives that favour patient investments in research, innovation and invention, support the creation of new “markets of tomorrow” and incentivise firms to embrace diversity, equity and inclusion to enhance creativity.” (Schwab and Zahidi 2020).

2.14 Performance and Prospects of the African Real Estate Market

The 2022/23 Africa Report includes property market coverage in 22 countries, as well as three market insight articles addressing some of the most pressing concerns impacting the continent's real estate. According to Frank getting meaningful amounts of institutional money into Africa remains difficult and recent global macroeconomic events appear to be complicating matters even more (Frank 2022/23).

Indeed, total cross-border investment in African commercial real estate in 2021 was \$274 million, a 49% decrease from 2020 and a 54% decrease from 2019. Because of the political and social volatility that has occurred over the previous two years, the situation in the Ethiopian real estate market remains delicate. Inflation is at an all-time high; monthly industrial rentals remain low at around US\$ 4 PSM; monthly office rents are at US\$ 18 PSM; and Ethiopia has three green-rated buildings (Frank 2022/23).

2.14.1 Lack of High-Quality Office Space Driving Up Rents

The telecoms sector was opened to international operators and investors just before the Civil War began in late 2020, which raised demand for office space; nevertheless, the extraordinary political instability swiftly curtailed practically all development in the office market. Notwithstanding this lack of activity, office rents have increased slightly, owing primarily to a lack of new product entering the market and a scarcity of high-quality office space.

Monthly rates are now around US\$ 18 per month, up around 6% since 2020. Much of the construction activity is concentrated in the Financial District, where banks and insurance businesses are seeking 'build-to-suit' possibilities. The reason for this is a severe lack of office space, despite Addis Ababa's almost 90,000 sqm of Grade A and Grade B office space. (Frank 2022/23).

Monthly rents currently stand at US\$ 18 psm, up by about 6% since 2020. Much of the development activity is concentrated in In the Financial District, where banks and insurance companies are pursuing 'build-to-suit' options. The driver behind this is the acute shortage of office space, despite Addis Ababa boasting nearly 90,000 sqm of Grade A and Grade B office space (Frank 2022/23).

2.14.2 Inflation Threatens Consumer Spending

The retail industry has been hurt the worst by the present upheaval. The pandemic has only exacerbated the situation, with the war in Ukraine worsening the situation. The term "sustainability" refers to the process of converting something into something else. As a result, consumer spending is likely to significantly drop. If current conditions continue, demand for retail space will inevitably fall even further. (Frank 2022/23).

2.14.3 Industrial Sector Remains Stagnant

Prior to 2020, there were plans to establish industrial parks to speed and deepen agricultural industrialisation. But, as a result of present economic and political restraints, the industrial and logistical sectors have suffered as well. Leasing activity is nearing a record low, while monthly rents remain low at below US\$ 4 per month.

2.14.4 Green Building Concepts and Technologies in Ethiopia

The construction industry contributes significantly to climate change, accounting for 40% of worldwide energy consumption and 39% of CO₂ emissions (Gelan 2022). Green buildings are now seen as critical solutions for mitigating the harmful consequences of the construction industry. Nonetheless, green construction research is frequently conducted in affluent countries, but little is known in Sub-Saharan African countries. (Gelan 2022).

According to the United Nations research, the world will continue to urbanise over the next three decades, increasing from 56% in 2021 to 68% in 2050. (United Nation, 20022). This growing population, combined with increased urbanisation around the world, raises the demand for housing, resulting in massive investments in new housing and infrastructure building (Cao et.al 2020).

Environmental, Social, and Governance (ESG) is becoming a more global emphasis for real estate investors, and we anticipate that this will drive capital flows to green-rated buildings. Africa has 785 green-rated buildings, with South Africa accounting for 641 of these. In recent years, the emergence of investment notion of ESG, or sustainable investing 'OR 'sustainable investing 'as it is commonly known, may also be another powerful motivation for buildings to become "greener". This approach is rapidly gaining pace, as evidenced by the introduction of real estate sustainability guidelines, such as the U.S. (Frank 2022).

The Horn of Africa Regional Environment Center and Network (HoA-REC&N), CBE's New Head Quarter Building Project, and the United States Department of State Office are the only Ethiopian buildings to have received the Leadership in Energy and Environmental Design (LEED) certification award by meeting various LEED criteria (Knight 2022).

The HoA-REC&N focuses on environmental concerns and sustainable development options within the Horn of Africa. It facilitates, strengthens and advocates for initiatives related to environmental conservation and natural resource management. The HoA-REC&N is

currently located in the Graduate Program building of the College of Natural Sciences, formerly Faculty of Science (Knight 2022).

The HoA-REC&N is concerned with environmental issues and sustainable development solutions in the Horn of Africa. It promotes, strengthens, and advocates for environmental conservation and natural resource management projects. The HoA-REC&N is currently housed in the Graduate Program building of the College of Natural Sciences, which was previously known as the Faculty of Science (Knight 2022).

The Gullele Botanic Garden is currently constructing a new eco-friendly facility to house the Center (GBG). The GBG is collaboration between Addis Ababa University and the Addis Ababa City Administration; HoA-REC&N has provided technical and financial support for its inception. LEED focuses on green building construction and design; however, the certification does not include a rating for after the project is completed. Despite design efforts to limit usage, tenants in a LEED-certified building may use more energy or water than tenants in other buildings.

2.15 Global Real Estate Transparency Index

Since 1999, the Global Real Estate Transparency Index (GRETI), published jointly by JLL and LaSalle Investment Management, has tracked the progress of real estate openness around the world. GRETI 12 is based on a comprehensive survey of the availability and quality of performance benchmarks and market data, governance structures, regulatory and legal environments, transaction processes, and sustainability instruments in 156 cities across 94 countries and territories, and is updated every two years. GRETI is a must-have resource for cross-border real estate investors, developers, and occupiers, as well as government and industry entities looking for worldwide standards.

The Global Real Estate Transparency Index is based on a global poll of real estate market specialists conducted by JLL and Lassalle. It includes 254 indicators to analyse market transparency in 94 nations and territories, as well as 156 cities worldwide, and is a crucial resource for enterprises operating in foreign markets. During this period of increased uncertainty and rapid change in the real estate business, openness is more crucial than ever. (GRETI 2022)

6 Sub-indices

1 Performance measurement	2 Market fundamentals	3 Governance of listed vehicles	4 Regulatory and legal	5 Transaction process	6 Sustainability
14 Transparency topics					
<ul style="list-style-type: none"> • Direct property indices • Listed real estate securities indices • Private real estate fund indices • Valuations 	<ul style="list-style-type: none"> • Market fundamentals data: <ul style="list-style-type: none"> - Offices - Retail - Industrial - Hotels - Residential - Alternatives 	<ul style="list-style-type: none"> • Financial disclosure • Corporate governance 	<ul style="list-style-type: none"> • Real estate tax, Land-use planning, Building controls, Enforceability of contracts • Property registration, Beneficial ownership • Compulsory purchase • Debt regulation 	<ul style="list-style-type: none"> • Pre-sale information, Bidding processes, Professional standards of agents, Anti-Money Laundering regulations • Occupier services 	<ul style="list-style-type: none"> • Green Building certifications; Energy reporting; Energy benchmarking and efficiency standards; Emissions reporting and standards; Green leases; Financial performance of green buildings; Health and wellness certification; Resilient building standards; Climate risk reporting

Table 2.3: Transparency Index components

World's most transparent countries in 2022

Level	Composite rank 2022	Market	Composite score 2022	
Highly transparent	1	United Kingdom	1.25] The U.S. 's leading cities (e.g., New York) among most improved France leads on Sustainability measures, among global top improvers
	2	United States	1.34	
	3	France	1.34	
	4	Australia	1.38] Canada 's top market Toronto benefits from ambitious sustainability requirements New energy performance requirements, beneficial ownership regulations and open data push Netherlands higher
	5	Canada	1.44	
	6	Netherlands	1.54] Greater data coverage of niche property types, beneficial ownership and sustainability boost Germany
	7	Ireland	1.69	
	8	Sweden	1.76	
	9	Germany	1.76] Japan continues to advance and enters the 'Highly transparent' tier for the first time
	10	New Zealand	1.77	
	11	Belgium	1.84	
		12	Japan	1.88

Source: JLL, LaSalle, 2022

Table 2.4: World's Most Transparent Countries In 2022

Level	Composite rank 2022	Market	Composite score 2022
Transparent	26	South Africa	2.40
Semi	48	Kenya	3.27
	51	Mauritius	3.35
	54	Botswana	3.46
Low	60	Nigeria	3.60
	65	Zambia	3.67
	75	Rwanda	4.11
	76	Ghana	4.13
Opaque	79	Angola	4.30
	81	Uganda	4.40
	82	Mozambique	4.41
	86	Ivory Coast	4.44
	88	Senegal	4.49
	90	Tanzania	4.52
	94	Ethiopia	4.60

South Africa registers moderate improvements with mandatory display of EPCs and implementation of the Property Practitioners Act
 Digitization of land registry and new beneficial ownership regulations boost **Kenya's** score
 Implementation of Lagos State Real Estate Regulatory Authority and beneficial ownership legislation in **Nigeria**
 Stalling progress leads several markets including **Ivory Coast, Senegal, Tanzania** and **Ethiopia** to slip in the rankings

Source: JLL, LaSalle, 2022

Table 2.5: Real estate transparency in Sub-Saharan Africa

2.16 Corruption Perceptions Index (CPI) Of Ethiopia

Corruption is described as the misuse of power for personal benefit. Corruption undermines trust, undermines democracy, stifles economic development, and exacerbates inequality, poverty, social division, and the environmental disaster. According to the 2022 Corruption Perceptions Index (CPI), most countries are failing to combat corruption. The Corruption Perceptions Index rates nations and territories based on the perceived corruption of their public sector. On a scale of 0 (extremely corrupt) to 100, a country's or territory's score shows the perceived level of public sector corruption (very clean).



Figure 2.14: The Cost of Corruption

Transparency International's 2022 Corruption Perceptions Index gave Ethiopia 38 points out of a possible 100. Ethiopia - Credit Rating at 16.00; Ethiopia Inflation Rate at 33.80 percent; Ethiopia Corruption Rank at 94.00; Ethiopia Corruption Index at 38.00 Points; Ethiopia Government Debt to GDP at 57.00 percent of GDP; Ethiopia GDP Constant Prices at 2114.20 ETB Billion; Ethiopia Current Account at -1085.00 USD Million; Ethiopia Consumer Price Index Cpi at 328.90 points; Ethiopia Inflation Rate MoM at 0.50 percent and Ethiopia Food Inflation at 32.90 percent. (CPI 2022)

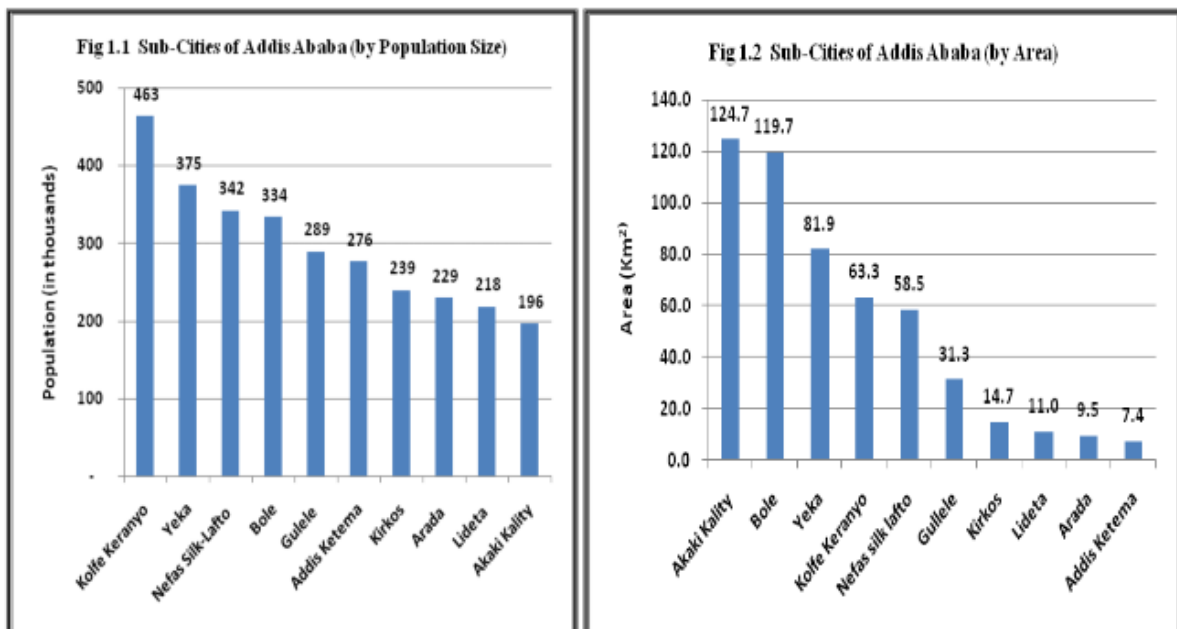
2.17 Re Sector Report

The real estate business in Ethiopia has been one of the fastest expanding sectors of the economy. Moreover, an analysis of GDP figures reveals that if this sector and the closely related construction sector had not expanded, Ethiopia would not have seen double-digit economic growth during the last five years.

Regarding the commercial market, we see that rental rate for office space in Addis Ababa average roughly Birr 100 per square meter, while they can sometimes reach Birr 200 per square meter for prime, city centre locations. Based on the citywide average, these square meter expenses equate to monthly rental rates of roughly Birr 5,000 for a tiny one-room

office in the city centre. Average monthly rents for firms looking to rent a half-floor or a full floor in a commercial building are Birr 20,000 and 40,000, respectively (Access 2010).

Addis Ababa covers 522 square kilometres (0.05 percent of Ethiopia's landmass) and is home to an estimated 3 million people, according to official data. The city is divided into 10 sub-cities, each having a population of roughly 300,000 people (see below); the three largest sub-cities by population are Kolfe Keranio (with 463,417 inhabitants), Yeka (374,583), and Nefas Silk Lafto (with 374,583). (341,743). The largest sub-cities in terms of land area are Akaki Kality, Bole, and Yeka, each of which covers more than 80 square kilometres. Population densities vary greatly amongst sub-cities, with Addis Ketema and Arada having the most densely populated neighbourhoods and Bole and Akaki Kality having the least densely populated (Access 2010).



Source: Addis Ababa City Administration (2009 estimates)

Figure 2.15: Sub-cities of Addis Ababa

Throughout the last decade, commercial real estate activity has been just as active as residential real estate activity. Data on building permits issued by the City Administration between 2005 and early 2009 show that, of the two major real estate categories, commercial buildings received the largest share (40 percent) of building permits issued during this time period, while residential building permits accounted for 30 percent. In terms of the distribution of commercial building licenses issued by the City Administration, Bole Sub-

City led with 29 percent, followed by Nefas Silk Lafto (21 percent), and Kirkos (21 percent) (19 percent) (Access 2010).

Many of the same reasons that drive residential sector growth are driving commercial market growth, including strong economic growth and supportive public infrastructure development. Additional variables related to commercial buildings include huge expansions in national and international businesses, notably firms in the services sector. At the same time, government offices that used to be spread out around the city are focusing on new and modern buildings, including renting properties from private landlords. Increasingly, embassies, foreign organisations, and non-governmental organisations (NGOs) that formerly converted apartments into office space are increasingly renting entire floors or even multiple floors in modern city-centre commercial buildings (Access 2010).

The real estate sector faces a range of challenges in the coming years if the policy and regulatory environment remains broadly unchanged from its present form (Access 2010).

- **Land Availability and Price:** Under current legislation, land in Ethiopia is the property of the state and may typically only be purchased through lease. There are free-hold plots of land owned by private individuals outside of the lease system in several residential neighbourhoods; nevertheless, even for these plots of land, the owners officially only own the buildings on the land and not the land itself (which remains state property).
- **Availability and Cost of Construction Materials:** The fact that the construction and related material production sectors are not well developed in the Ethiopia has created severe shortages of some key construction sector inputs in recent years. These, in turn, have raised the costs of building construction substantially: up by 125 percent since the mid-2000s according to CSA price data on -House Rent, Construction Materials, Water, Fuel & Power,^{ll} and by even higher amounts (300 percent) for certain critical items such as cement.
- **Infrastructure and Services:** The supply of supporting infrastructure is a critical component of the real estate sector's expansion. Yet, the lack of essential infrastructure and services has slowed progress in some communities and stymied the aspirations of developers who have leased land. The lack of forward planning and coordination between city/sub-city administration and infrastructure providers (e.g., electricity/water suppliers) exacerbates the problems, resulting in additional expenses and delays in the real estate industry.

- **Financing Availability:** A lack of funding, particularly long-term finance is a common limitation for Ethiopian private businesses, including the real estate sector. Yet, the repercussions of insufficient financing may be more obvious in the real estate industry, given the effects on both sellers (who find it difficult to start and complete their ventures without adequate money) and buyers (who are often unable to secure sufficiently affordable mortgages). In the current economic climate, both project finance (for developers) and long-term mortgages (for purchasers) are limited, suggesting that most real estate developers self-finance the majority of their new constructions, whereas most house buyers pay in full for the purchase of their homes or apartments. The banking system's lack of development will keep the real estate market from expanding as quickly and widely as it otherwise could, and affordability will continue to be a problem. This is due to the fact that sellers and prospective buyers both require access to such long-term finance.

Despite the limitations mentioned above, the access capital research (2010) revealed that business owners and real estate developers still have huge opportunities. According to their market research, the following opportunities stand out:

- **Targeting Undeveloped and Underdeveloped City-Center Plots:** Addis Ababa's historical pattern of unplanned growth has resulted in modern commercial buildings being built (nearly without exception) immediately next to informal, illegal, and/or wholly undeveloped dwelling units. Thus, even in what would be considered prime city centre neighbourhoods—whether in Bole, Churchill Road, Meskel Square, Kazanchis, Mexico Square, Lideta, Piazza, or many others—modern buildings and developments are typically surrounded by thousands of square meters of undeveloped (often empty) land just behind the main roads or -hidden within close proximity to city centre roadways. However, with the Addis Ababa Municipality presently striving to restore and rejuvenate several portions of the city centre, as well as greater enforcement of city usage laws,
- **Concentrating on underserved market segments like middle-income buyers:** Real estate developments in the last decade have tended to focus on the upper end of the market, which was to be expected given strong demand from diaspora buyers, pent-up demand for larger homes (due to restrictions on such homes under the previous government), and limited credit options that favoured well-to-do buyers who could afford to purchase homes with full upfront financing. While demand from these

groups of buyers sustained new development for many years, our discussions with real estate developers indicate that there is now much less buyer interest in this segment of the market following large scale developments of higher end homes and given much reduced demand from diaspora buyers (who represented a significant portion of the market).

- Utilising less expensive and unusual building materials: Conventional construction techniques in Ethiopia are costly, inefficient, and time consuming, including the significant usage of bricks, blocket, and cement in practically every stage of the construction process. Nevertheless, considering the country's income levels and the need to produce cost-effective housing at a significantly faster and larger scale, it is fairly astonishing that low-cost building techniques and materials are so underutilised in the local market. Given this situation, developers who use less expensive and unorthodox construction materials are bound to have considerable cost, efficiency, and delivery time advantages over competitors. In this regard, promising prospects include the use of prefabricated boards (such as drywall and gypsum), steel-based high-rise structure construction, and locally available environmentally friendly materials.
- Introducing Commercial Parking Developments: A lack of parking space is growing as a prevalent problem in numerous of Addis Ababa's business and commercial districts, owing in part to the very limited parking space built with the construction of new commercial buildings. This situation is only going to get worse as the city's automobile population continues to rise (vehicle registrations have been rising by more than ten percent per annum in recent years). Several well-placed and contemporary commercial parking garages that function to accommodate both daytime commercial users and night-time residential/recreational users could benefit key city centre locations such as Bole, Kazanchis, Merkato, Piassa, Churchill Road, and many more.

2.18 Chapter Summary

Real estate in Ethiopia is one of the most profitable, high in demand sectors. The sector majorly resides in Addis Ababa, one of the tops fastest growing cities in Africa, which makes the city the right destination for real estate companies in Ethiopia to invest in to build luxury homes. Real estate sector has been one of the fastest growing sectors of the Ethiopian economy and it is contributing a large sum to the nations GDP. Metropolitan Real Estate is proud to be part of this growth story which is contributing to the nation's economic development. The sector has gone through several phases from its emergence in 1990's to where it has gotten now.

The primary destination of the real estate industry in Ethiopia, of course, is Addis Ababa. The fuel for real estate in Addis Ababa has been and will always be the enormous housing demand which seems to be ever growing. There is a tremendous migration to Addis Ababa from all over Ethiopia. People keep migrating to Addis in the hopes of making a better living. This benefits real estate in Addis Ababa, as more and more people look for property for sale or rent. The capital of Africa – as we all know; Addis Ababa is the capital of Africa. For this very reason, lots of people come to Addis. In conclusion, Addis Ababa is an ideal location for real estate developers and investors because of the supportive government policies for real estate investment, advancements in building technology, and the city's unmet housing demand.

CHAPTER THREE: LITERATURE REVIEW

3.1 Introduction

This chapter presents a review of the literature consulted, beginning with a discussion of theoretical and empirical research in the real estate performance area. It identifies critical success factors that affect real estate performance. Lastly, it presents the theoretical and conceptual framework of the study and the operationalization of the construct variables of the study as hypotheses.

3.2 Theoretical Review

3.2.1 The concept of real estate

Real estate is a complex concept that is based on multiple theories across disciplines and with many role players coming to the market for different purposes. For example, there are opposing theories of real estate from neo-classical to Marxist theories and others in between. The most common theories mentioned in various theoretical and empirical studies are the transaction cost theory of real estate, the agency theory and the institutional theory of firms. Although most of the theories are dominated by economic insights, there are also legal concepts, and social and cultural issues, which all have very countable impacts on the business. In the real estate dynamics, players could operate at the macro- or micro level. Players include, for example, governments, banks, suppliers, buyers, landowners, the firm itself and others.

In fact, the above complications mean that there is no common and simple definition of real estate and that it has a multitude of definitions. Real estate is property that is composed of both tangible and intangible components (Mettling and Cusic, 2015). It is considered as a tangible property as it demonstrates characteristics of physical property, for example, buildings, and it is considered as an intangible asset as it involves the rights of contracting parties, financial claims and interests.

The concept of real estate business and its value can be explained with different theories; for example, transactional, agency and institutional theories. The following sections present the new classical and institutional theories with relevance to real estate.

3.3 Neoclassical Economic Theory

In this economic theory, real estate can be viewed as a market where suppliers and buyers come together to affect a transaction that is a reason-based /rational/ decision. The assumption of rational man is based on the existence of abundant information about the products among buyers to make an informed decision and that property ownership can be transferred without any cost. In other words, as per the theory, the market is efficient operationally owing to efficiencies derived from allocation and information (Evans 2008). However, the real world is not totally symmetrical with regard to information and allocation efficiency; there is a fundamental asymmetry of information and cost incurred in the process of transferring ownership. Evans argues that prevailing market efficiency is difficult owing to information asymmetry. He further identifies the many factors that create the asymmetric nature of information in the real estate market, which creates market inefficiency in the real estate sector (Evans 2008)

One of the reasons for real estate market inefficiency is that the properties being sold are not homogeneous, with location considered the critical factor that creates a different value for the same properties /if this is possible/ at different locations. Location has a chain effect on the heterogeneity of the property of real estate by affecting the level of price of the same property in different locations.

Thus, price is another factor that contributes to the heterogeneity of the sector and creates inefficiency. Another reason given by researchers for the existence of an inefficient market is the involvement of psychology and negotiations in the property market. The decision-making process of acquiring a durable asset such as real estate, while it takes much effort, study and analysis, contains an emotional element that affects the psychology of the buyers.

The decision process is affected by the agent they are approaching, the number of alternative real estates they have searched, when the buyers will use the real estate and the purpose of buying it. (Archer & Ling, 1997) points to heterogeneity and immobility as the two unique behaviours of a real estate. Here, (Evans 2008) argues immobility as a characteristic of

locations; in turn, location is a cause of heterogeneity, whereas (Archer & Ling, 1997) views location as a main reason rather than a sub-reason for heterogeneity. The third reason for real estate market inefficiency is the time on the market. In the short- and long term, the price, psychology and value of the asset vary through time (Evans 2008). The agents have two roles in the real estate market: one role as a researcher for the information, price, availability of the item and to offer some kind of advice and the second role as a market /a place/ for at least residential property. Thus, in the real estate chain, the existence of agents, which also make the process long, add to the heterogeneity of the real estate market (Evans 2008).

In an efficient market, the price is available without any cost to the buyer. In addition, a buyer and a seller transact without the involvement of real estate lawyers, agents and other members of the real estate sector, who increase the cost of the property exponentially, which in turn creates allocation inefficiency.

Transaction costs associated with prices of contractual negotiation, performance monitoring and knowledgeable training partners create market inefficiency (Prada 2009). Transactions differ from one another because of information asymmetry about prices and the behaviour of the buyer. In addition, certain actions are sources of transaction cost, such as information-search costs, analysing and evaluating options regarding housing products and taking contracts. When transaction costs are increased with these actions, this in turn affects real estate performance.

3.3.1 Agency theory of real estate

Agency theory is primarily associated with theories of transaction costs and property rights (Kusiluka 2012). According to this theory, by using their power of information asymmetry, agents are in a position to form inefficient institutions to satisfy their personal interest at the expense of principals' resources. This affects the ability of real estate firms to deliver their product or service on time, which in turn leads to higher costs (Okunlola & Ogunkoya, 2015).

Both, agency theory and transaction cost economics (TCE) have in common that human beings are rationally bounded and both approaches are aimed at creating an efficient contracting system (Williamson 1981). Whereas agency theory goes for minimising agency issues, however, TCE looks for ways to minimise costs. Yet, agency theory has a long-term duration, which can be renewed, whereas TCE is a one-time approach, which can survive only until the project is concluded.

3.3.2 Institutional theory of real estate

Although the neo-classical theories strove to achieve market efficiency through information symmetry and avoiding transaction costs, this efficiency has still not been realised. This resulted in the emergence of a newly developed paradigm called institutional theory. Proponents of institutional theory argue that this theory combines all the other main theories, including agency theory, property rights theory and transaction costs theory (Obińska-Wajda 2016). According to this theory, institutions are affected by formal and informal factors, such as law, property rights, society's culture and traditions (Ankarloo 2006).

3.3.3 Porter's diamond model

Porter's National Competitive Advantage Theory, also known as his diamond model, was devised in search of answering "why some countries have more international success in particular industries than other countries (Porter 1998). ***"Demand conditions"*** is one element of the diamond model and addresses the issue of market size and the purchasing power of buyers. ***"Factor conditions"*** is the second element of the diamond model and includes variables such as material resources, HR, and knowledge resources and infrastructure, which directly and indirectly have economic and non-economic values in the country. ***"Strategy, structure and rivalry"*** is the third factor in Porter's diamond model and is related to the way in which an organisation is established, its corporate goals and its ways of measuring performance. This factor also addresses the relative stand of the firm in comparison with the competition. The final factor in the model is ***"related and supporting industries"***. This factor relates to the idea that industries complement each other in horizontal and vertical relations and the success of a market depends on the suppliers and related organisations.

Government and opportunity are the external elements that affect the demand factor at a loss in the same model (Porter 1998). Opportunities outside the company's control, such as new inventions, political decisions, changes in global financial markets and exchange rates, and wars, can have a positive or negative impact on commercial real estate performance while governments strongly communicate in terms of laws and policies. The government's role is to act as a catalyst and challenger by formulating tax laws and applying appropriate land-supply policies, credit policies and foreign direct investment.

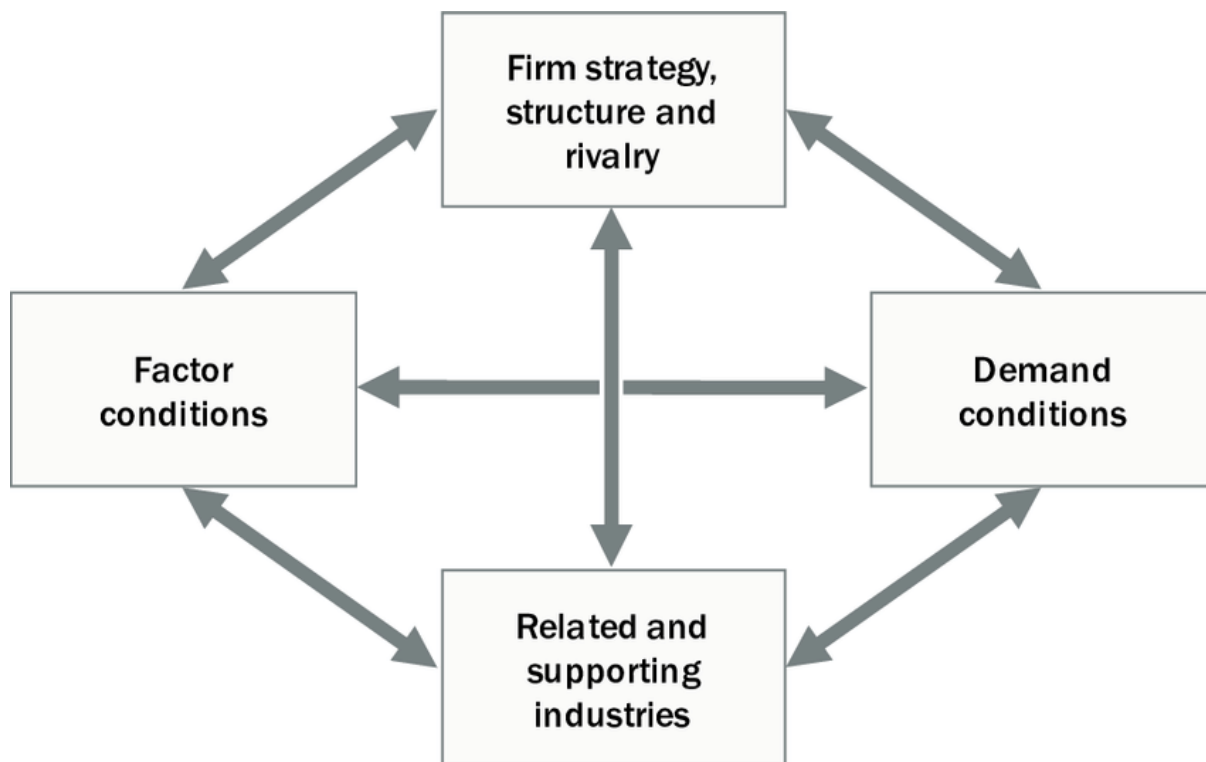


Figure 3.1: Porter's diamond model

3.4 Resource-based view (RBV)

Commercial real estate is an industry and as with other industries uses resources and capabilities to realise its objectives. Thus, the RBV model is also a practical strategic framework for the real estate business. In this model, companies can beat the competition by building core competence or capabilities that their competitors cannot easily imitate or copy and thus cannot be purchased in factor markets. In other words, these are the firm's capabilities, which are difficult-to-imitate by its competitors (Barney 2001).

It is theorised in the RBV that competitive advantages that result from unique competencies generate value, which is relevant for retaining the sustainability of the company, and finally timing, which adds value by compensating the cost of getting resources and competences. In connection with this, Best 2009 argues that real estate developers, in addition to having the normal real estate skills in financing, marketing and property management, are expected to be informed critics of architecture and to be knowledgeable about construction, law and public finance. The few successful developers who survive in the market usually have had experience as managers of sister companies in construction, contracting or engineering/development consultancy or building materials suppliers.



Figure 3.2: Resource-based View: VRIO – Valuable, Rare, Imperfectly Imitable, Organisation – Framework Process

3.4.1 Corporate real estate strategy theories

Most recently theories concerned with real estate strategy have evolved. Corporate real estate strategy theories demonstrate layers of associated key action that provide feasible competitive advantage inferred from conceivable sources of maintainable competitive advantage (Kongela 2013). This model connects various actors as organisational operational techniques through the critical layers of movement and coordination that create organisational competitiveness. The model linking works on two levels. The first level derives from its three sources of sustainable competitive advantage: cost, innovation and differentiation, which constitute an organisation’s overall competitive approach or strategy. The second level of connectivity in the model is the functional strategy. This contributes to sustained competitive advantage arising from organisational capabilities created from operational, marketing, financial, HR, information and technology resources.

(Roulac 2001) identifies eight main strategies that create value for a firm in the process of delivering buildings. Under corporate property strategies, he advises that value can be created through minimising cost; increasing flexibility; promoting HR objectives, marketing message, and the sales and selling process; facilitating production, operation and service delivery; promoting the managerial process and knowledge work; and capturing the real estate value creation of business (Roulac 2001). The author uses these strategies to develop a comprehensive model that can be used to perform the real estate business both at operational

and strategic levels. In the process, he suggests that one or a combination of these strategies leads real estate companies into growth and profitability (Roulac 2001).

3.4.2 Certified Commercial Investment Member (CCIM) real estate feasibility model

In looking at the feasibility of real estate, this model considers four factors that both interact with and impact on the real estate business. The model considers real estate as a space to live in, work in, shop in and store things in. According to this model, a four-factor analysis is helpful in improving the performance of real estate (Manning et al., 2015). These factors are demand and supply analysis; financial analysis; location, site and building analysis; and political and legal analysis (Choi 2008).

Demand and supply analysis is the most important and rudimentary level of analysis. At this level the competing properties in the area; the quality and quantity of commercial real estate funnelled to the market from the supply side; and the proximity of the location to airports, stations, city malls and other infrastructure, along with the purchasing power and market size of the demand side, need to be compared. Location, site and building analysis takes into consideration the proximity of the site to infrastructure, any future change in the design of the infrastructure and other relevant factors. A business is intended for profit. Thus, the analysis of credit-availability issues tied to leasing is critical. In addition, operational efficiency and profitability will depend on the extent to which financial source alternatives are wisely selected and a higher selling price achieved as a result of marketing and unique selling skills.

Political and legal analysis concerns issues such as lease restriction and preservations on a specific zoning of the land, both at federal and local government levels. In addition, the extent to which the location would benefit from any substantial investment in infrastructure needs to be considered. In addition, real estate mapping could have an impact on the type of real estate that realtors choose to construct (Choi 2008). The main elements of this model are set out in Figure 3.2.

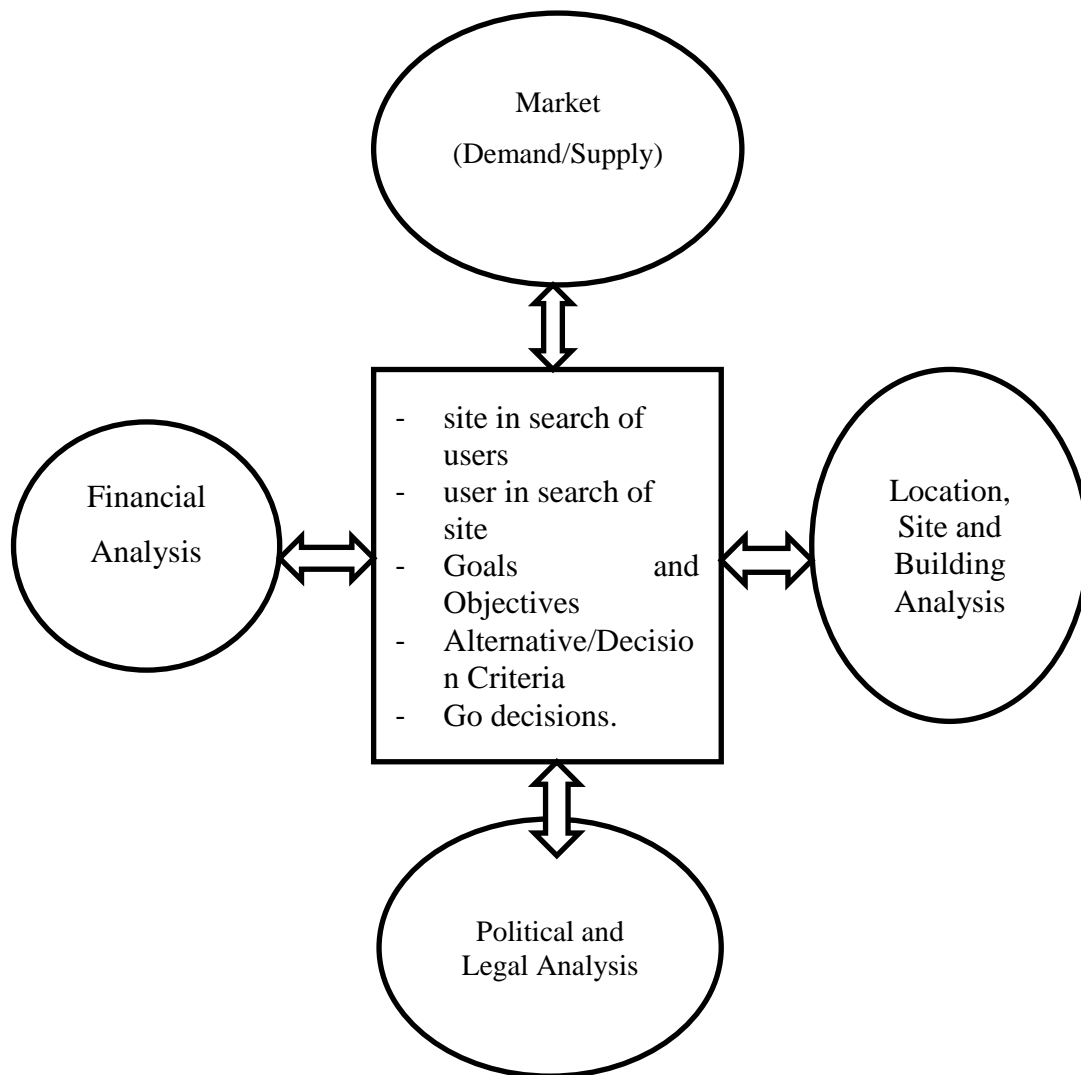


Figure 3.3: CCIM Real Estate Market Analysis and Feasibility Model

Source: (Gary M. Ralston, Ralston 2015)

3.5 The Major Players in Real Estate

Real estate development and investment can be seen as a process that involves various actors directly and indirectly along the entire value chain. For example, construction companies, mortgage banks or financial institutions, real estate developers and investors, users and service suppliers are among the stakeholders involved in real estate business. These players in general affect the performance of real estate business (Schulte et al., 2005). The “house of real estate” is a model that can be used as a road map of real estate that portrays the variety of players (Schulte et al., 2005). The roles of these players can also be derived from institutions, such as economic and social. The country’s economic status is the basic factor in this conceptualisation (Baum 2009). There are several forces at work in the real estate market and

several invisible forces that influence the asking price of a property, land, house or development (Brophy 2010). Buyers try to buy as cheaply as possible, while sellers try to sell as high as possible, so buyers and sellers try to outwit each other.

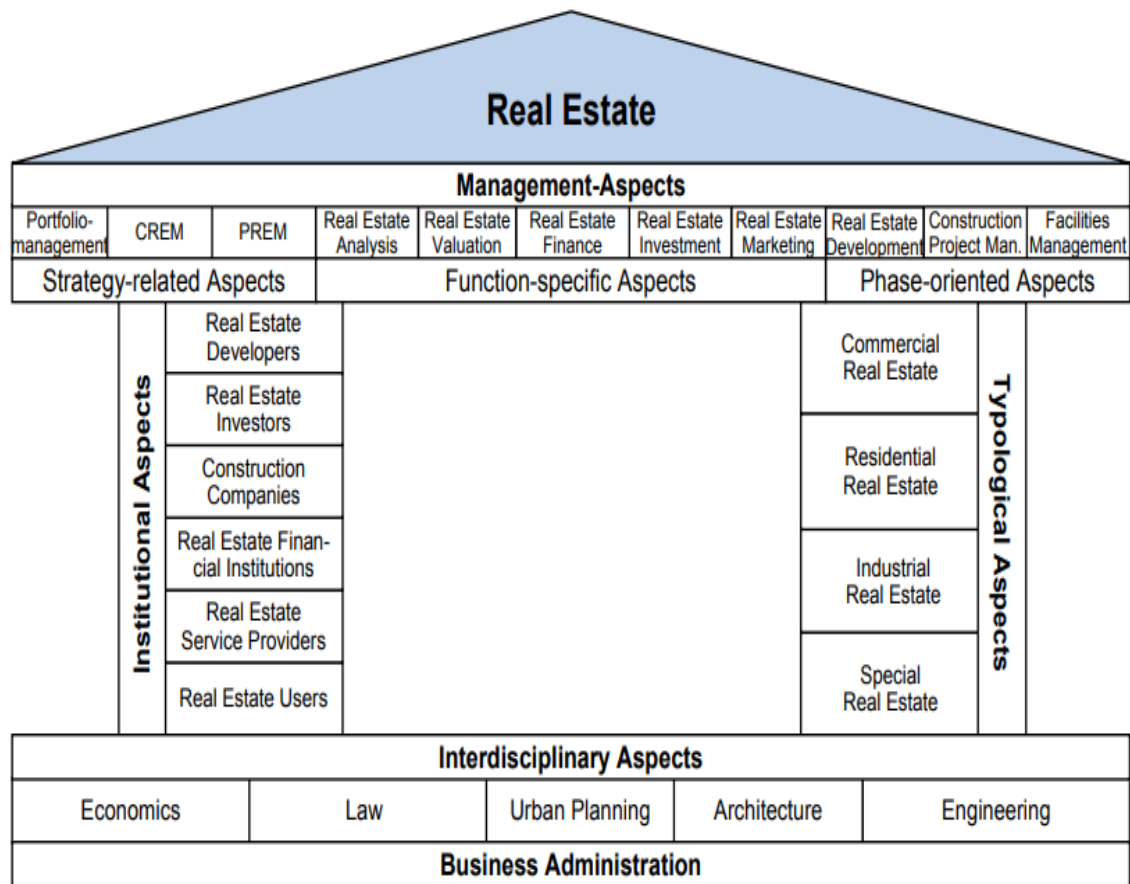


Figure 3.4: House of Real Estate Economics”. Source: Karl-Werner Schulte (2003).

Figure 3.4 presents the “house of real estate” framework, which was developed by (Schulte 2003) to assess the overall aspects of real estate. While the framework is widely applicable in a European context, there are multiple points that are relevant to this study too. For example, the framework portrays that real estate is a multi-disciplinary sector with different players both at the functional and strategic levels. In addition, managerial aspects of real estate can be divided into strategy-related, function-specific and phase-oriented aspects and the real estate business is classified into four types as commercial, residential, industrial and special (Schulte 2003).

Real estate development is a complex task that requires a lot of experience in different business activities and specialties. Thus, it involves actors such as architects, marketing professionals, graphic designers, financial technologists, salespeople and lawyers (Neary

2009). The roles of real estate developers, construction companies and financial institutions as important players in the institutional aspect of the model are described below.

Real estate developers: The job of being a real estate developer is a very complex. It requires many skills and knowledge of the numerous characteristics of developing real estate. Some of the aspects that characterise real estate development are local politics, financial issues, marketing, zoning, geography, urban planning and the real estate market. A real estate developer has to be able to communicate well and work together with a large group of different professionals, such as architects and contractors. Developers may work for a large or small real estate company, or even work for themselves. Generally, developers specialise in a certain type of real estate. These main types of real estate include commercial office, retail and residential development, but there are many more and each has its own sub-categories. Developers must understand and be able to initiate all these roles in order to work successfully (Neary 2009).

Construction companies: Construction companies are the primary and most influential players in real estate business. For real estate business to succeed reliable contractors are needed.

Real estate financial institutions: There are different types of financial institutions that participate in the real estate development process. Joint venture players, construction lenders, permanent lenders and long-term equity investors are among the many players who provide financial services for the real estate business (Fesler et al. 2006).

3.6 Types Of Real Estate

It is hard to find a single classification system for the types of real estate. This is because scholars use multi-faceted criteria to categories real estate, which has resulted in a multitude of classifications. However, the most common can be divided into three categories, as follows:

- **Residential:** This usually refers to houses and townhouses that people own individually. Condominiums and co-operatives are other types of residential real estate that involve different forms of individual ownership.
- **Mixed use:** This is business property, including office space, shopping centres, stores, theatres, hotels and parking facilities.

- **Commercial:** This includes construction in progress, land lease, office buildings and apartment complexes where tenants rent units. Commercial real estate also includes retail centres or properties where there are stores and other businesses that sell merchandise and services.

The purpose of real estate is a single parameter used to distinguish between residential and commercial real estate (De Roos 2010). Roos defines residential real estate as real estate where people live (in residences), in contrast to commercial real estate, which is real estate where commerce is conducted. He uses the purpose for which the real estate is constructed as a labelling parameter to classify real estate into residential and commercial divisions. Similarly, real estate in the context of an asset class can be classified further into residential and commercial components (Staiger 2015).

Although the differences between residential and commercial real estate may appear to be obvious, it is important to reclassify each to best describe their financial characteristics – i.e., residential is non-income producing and commercial is income producing. Classifying commercial as income producing is the conventional methodology. The difference is that the commercial asset class has historically been purchased for investment purposes (i.e. an investment-type asset), while traditionally residential real estate purchased as a primary home is considered for personal consumption (i.e. residential home). To further extrapolate, residential is also quasi-income producing when one considers the rental expense that is incurred if individuals are not in their own homes.

3.7 Types of Markets in Real Estate

The unpredictability of commercial property market performance is revealed by the market's internal and external forces that influence property decisions. Because of the large amount of money required to locate and invest in commercial properties, it is important to understand the basic concept and framework that enable the commercial real estate market. Archer and Ling developed a three-market conceptual framework that shows the relationships and differences between the space, capital and property markets (Archer & Ling, 1997). The individual characteristics of each of these markets are presented below.

Space market: The need for space is largely influenced by rent and other exogenous economic factors. Likewise, it can also be affected by the type of economic activity and the site and accessibility this activity requires. Fully understanding the dynamic characteristics of

demand for space is a complex activity, as it has a lot to do with a particular economic activity, timeframe and locality (Archer & Ling, 1997).

Capital market: In the last three decades, real estate has become an asset class that has captured the attention of many. Among the many benefits of property are its reported inflation-hedging properties, benefits related to taxation (e.g., depreciation and tax allowances) and its relatively low correlation with equities in the case of direct property investment. Low correlation connotes the possibility of diversification, and investors whose intention is to optimise a multi-asset portfolio are very much attracted to this opportunity (Fisher & Hudson-Wilson, 1993). Within the capital markets, real estate must compete with other assets (such as bonds and shares) in order to win a place in investors' portfolios.

The right choice of investments with minimum trade-offs and deriving the highest possible gains with a relatively low risk are dictated by the modern portfolio theory. There are two major components (the risk-free rate and a risk premium that reflects the risk profile of the property's cash flow) that make up the required rate of return on real estate investment (Archer & Ling, 1997). Concerning risk, the required risk premium for investments is based on both property (specific systematic risk) and capital markets (risk-free rate). Hendershot put it that the space market could be affected by the capital market (risk-free interest rate and the real estate risk premium) and this is caused by altering equilibrium rents (Hendershott et al., 1998).

Property market: Archer and Ling suggest that the property market entertains decisions made on property-specific discount rates, property values, capitalisation rates and the practicability of construction plans (Archer & Ling, 1997). At the preliminary stages, the interaction between the risk-free rate, market risk premium and the risk profile of the specific property influences the property-specific discount rate. Then, taking any government income tax effects into account, the market value and capitalisation rate of a property are evaluated by discounting the expected cash flow of the specific property. On this basis, developers can assess the existing property market situations by making use of the information not only on property values but also on construction costs to know the feasibility of constructing a particular project. When construction costs are surpassed by the value of the property, investors receive an additional incentive to start the new construction in order to obtain profits (DiPasquale & Wheaton, 1992).

3.8 Real Estate Cycles

Real estate defines as the peaks and valleys of real estate activities (Sirota 2015). The real estate cycle refers to the recurrence of events to some extent in a regular pattern. Real estate cycles can be viewed at both macro- and micro levels (Rottke & Wernecke, 2002). Macro real estate cycles can be seen as part of a business cycle that it is caused by and interacts with (Musil 2006). At this level, emphasis is on general construction activity and sector unemployment rates so as to understand relationships between cyclical behaviour of real estate and other comprehensive markets. In contrast, the micro-economic perspective makes a distinction between four markets as elements of the real estate market. These are space, investment, new construction and land markets. At this level, emphasis is also placed on elements such as levels of rent, vacancy and absorption rates, and the role played by the different types of expectation formation (Rottke & Wernecke, 2002).

Both investors and portfolio managers have acknowledged the significance of real estate cycles (Pyhrr et al., 2003); their persistent and vigorous effects on investment profits and risks; and their strategic implications for decisions on projects and portfolios. It is clear that real estate cycles are the object of research, with research on the real estate market suggesting that there are two main types of cycles: demand-side and supply-side cycles. Demand-side cycles, which are influenced by changes in demand, are strongly related to economic conditions, with an average duration of four to five years, while supply-side cycles are more dependent on market conditions than on general economic conditions and have a long period of about 10 years (Aus 2015). The real estate cycles in the housing market are reflected first in the activity of transactions and then in prices, where the transactions are related to the change in demand and supply of the volume of real estate in the market (Aus 2015).

The real estate market is a kind of market with predictable cycles of success and failure (Smith 2010). A boom describes a period of rising market prices, often followed by a crash, which is a period of falling prices. This cycle presents opportunities for several people who make a living from the real estate market. These people wait patiently until they are certain that the housing market will either crash or boom, and then act accordingly (Smith 2010).

Mueller argues that real estate cycles go through four stages owing to the continuous interaction between the demand and supply of the construction sector (Mueller, 2018). The primary stage is called the recovery stage, which is followed by the expansion stage, then hyper supply and finally the recession stage.

The four stages are cyclical in nature even if the duration of a specific segment of a cycle and of the whole life of the cycle is not agreed on. The two main factors that are used to describe each stage of the cycle – construction and vacancy rate – have an inverse relationship. When there is new construction, the vacancy rate begins to decline, other things being constant. The demand for new construction perpetually increases and the vacancy rate perpetually decreases until the demand for new construction reaches a maximum. This behaviour characterises the first two stages of the cycle. While in stage one, the recovery stage, even if demand keeps increasing, the supply is still greater than the demand. In contrast, in the next stage, expansion, while demand keeps increasing, the supply is lower than the demand rate.

The flux of equilibrium is a transversion point between demand and supply. After this stage the third and fourth stages of the cycle begin.

The third stage, which is usually named hyper supply, is self-explanatory. Actually, at this stage, however, demand for new construction is declining and the vacancy rate begins to increase, which creates under supply.

This stage is immediately followed by the completion of the new real estate constructions that alarmingly oversupply and by demand increasing. This stage is the final stage and is the recession stage.

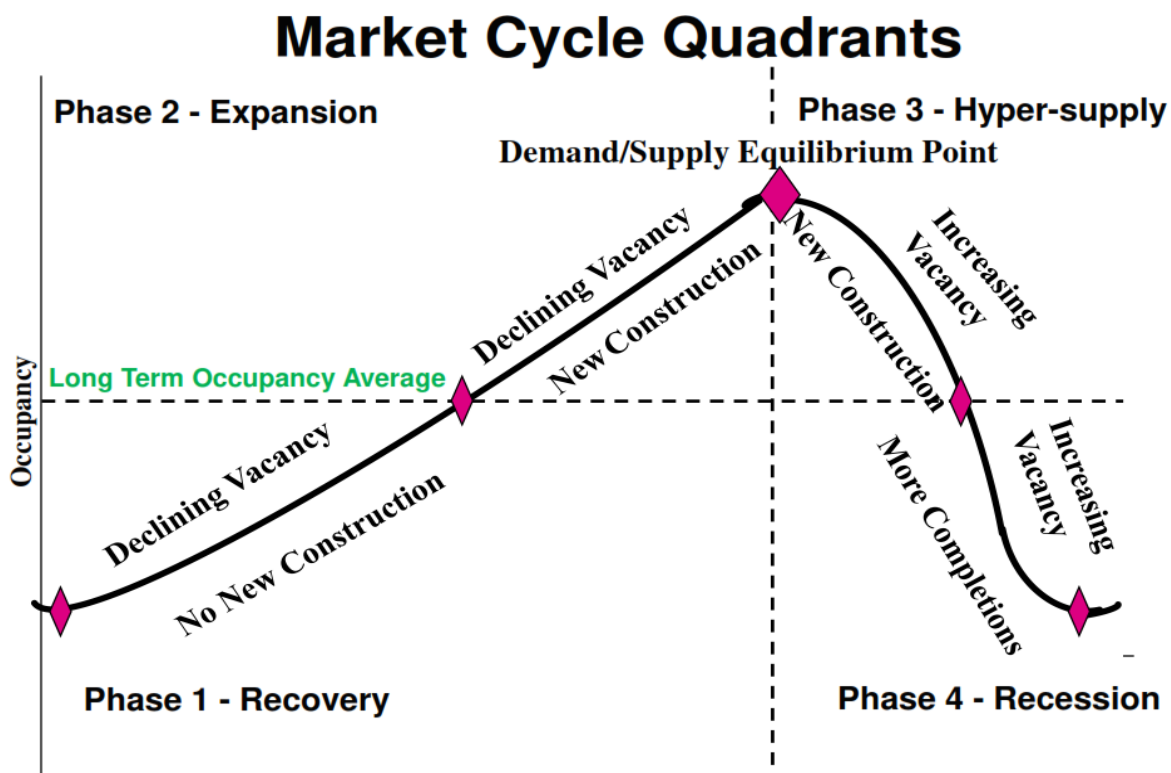


Figure 3.5: The Four Phases of the Real Estate Cycle

Source: Mueller, Real Estate Finance 1995,

Phase 1: Recovery: The recovery phase is the bottom of the trough. Occupancies are likely at or near their low point with tepid demand for space and minimal leasing velocity depicted above is a single cycle. The end of the recession phase connects to the beginning of the recovery phase to form the continuous wave pattern.

Phase 2: Expansion: During the expansion phase, the market is on the upswing in terms of growing demand for space. From a macroeconomic perspective, GDP growth is back to normal levels and quarterly job growth is strong. Occupancy rates are improving, and rents are on the rise. Rents now approach levels that can justify new construction, and in certain very tight markets, surge ahead at breakneck speeds.

Phase 3: Hyper supply: The equilibrium between supply and demand in the expansion wave often tips over into excess. Oversupply of space can be caused by overbuilding, or a pullback in demand caused by a shift in the economy. Hyper supply is marked by rising vacancies. Rent growth may remain positive, but at declining levels.

Phase 4: Recession: Supply outweighs demand, which produces higher vacancies. Rent growth during a recession is either negative or at levels that are below the rate of inflation. In addition, operators often resort to offering more concessions and rent reductions to entice and retain tenants.

3.9 Macro Factors Affecting the Performance of Commercial Real Estate

Franklin identifies five market fundamentals that drive the individual real estate markets: economic growth, population growth, affordability of the house, desirability, and supply- and demand-side factors (Dolan et al., 2012). Kvedaraviciene holds a similar view, positing national and world economies as external condition features that have an influence on actual property markets (Boguslauskas & Kvedaraviciene, 2009). Anbalagan and Shivaram argue that real estate is greatly influenced by macro-economic factors (Anbalagan and Shivaram 2012).

Real estate investment is controlled and affected by a set of external factors that form the real estate environment. The real estate investment pattern is very different when compared to other investment patterns because it is fixed in terms of location, lasts for a long period and has great value. Moreover, real estate investment is affected by economic policy, social needs, market capacity, and laws and regulations, among other things. In line with this, voila reports that the construction industry in Russia came under the influence of a host of external factors in 2015, including the ruble exchange rate, negative dynamics of GDP, high interest rates, political instability and many other factors (Voila 2018). The consequence of this was that people struggled to make a reasonable decision about the real estate investment environment in general and about the investment to buy their house, in particular. Hence, it is certain that a good investment environment is important to real estate investors for them to obtain better returns and minimise risk (Wen et al., 2019).

Fullerton states that although numerous studies have surveyed residential property valuation issues, commercial properties have received less attention (Fullerton et al.2018). Abdelgalil states that macro- and micro factors affect the real estate sector of (Abdelgalil 2005) .Groh states that socio-economic and perceived political uncertainty affects institutional real estate attractiveness (Mueller, 2018). The author further states that even if countries might have the same level of ease in doing real estate business, the lack of protection given to legal and property rights severely affects the attractiveness of countries in regions such as East Asia, and Middle and Eastern Europe. Natsvaladze points out that the availability of investment capital for the construction of new office projects could be affected by government policies, public and private equity markets, and private loan providers (Kharaisvili et al., 2014).

Finance and real estate are two sides of the same coin and there is a lineal relationship between the availability of finance in different forms and real estate performance. In line with

this, research reveals different types of sources of finance. Included in these are owner's capital, down payment made by customers, loans from banks, joint ventures and the like. Since real estate needs a huge investment, it is difficult to underwrite all the finances obtained from internal sources, such as equity and customer down payment. Hence, there is a strong demand for finance from banks and other forms of external financing systems. Nevertheless, the financing of real estate activity demands a large amount of money and, as such, projects need to be supported to base long-term mortgage financing, and government subsidy in a number of cases (EPA 2010). This means that accessing financing is a critical problem for developing nations rather than developed nations.

In emerging economies, mortgage lending is an essential means of increasing financial development, stability and inclusion simultaneously, provided that the development of housing price bubbles can be tackled (Morgan & Zhang, 2015). Mortgage lending is commonly used to facilitate business investment and housing finance and as a step to solving problems that arise in credit markets of transition countries by having security of loans, reliable information about borrowers and enforcement of contracts. This presents a solution to a finance problem that requires immediate attention (Tsvihun 2000).

Mortgage borrowing is defined as the process by which a borrower (mortgage lender) obtains a mortgage facility from a financial institution. As such, a mortgage transfers ownership of land and guarantees the payment of money and the performance of other obligations. This is a provision for advance lending at the request of the mortgagee (Nwamara & Aronu, 2014).

A mortgage is a loan guaranteed by collateral of some particular real estate asset that the borrower is required to pay back with a prearranged set of instalments (Galo et al. 2015). Nwamara and Aronu point out that a statutory mortgage is created when a signed contract is entered into or when ownership passes from the borrower/mortgage to the creditor/mortgage and is passed to the mortgage lender upon payment of the mortgage debt that needs to be refunded (Nwamara & Aronu, 2014).

Mortgaging requires that a borrower knows how much needs to be paid over a specified period from the beginning and that he or she has access to a cash flow, which the mortgagor can utilise for the moment to meet special needs and requirements (Asamoah & Decardi-Nelson, 2014). The mortgage market could also be approached as a financial system that creates opportunities for originating and trading mortgage loans. A mortgage loan is used for financing real estate investments (Akenga et al., 2015). Mortgage financing compels

borrowers to deposit some savings as down payment for the property and that lessens the ratio of nonperforming loans (NPLs). Akin to other markets, the mortgage market has two major players: the mortgagor (the borrower who is on the side of demand) in a mortgage contract, who guarantees property or an asset as security for a debt, and the mortgagee (the lender on the side of supply), who offers the loan (Bank of Ghana 2007). Mortgage finance is a loan given by a commercial bank or mortgage bank to finance the purchase of real estate with a specific payment schedule and interest rate.

Mortgage financing is necessary, since it allows individuals and institutions to meet the housing needs of the public (Okidim and Ellah 2013). All types of loans, inclusive of mortgages, have a fixed time to maturity; that is, a date at which the loan is supposed to be fully paid back. Loans are required to be paid back in instalments over the period of the mortgage, in great amount at the final date of the contract, or in some arrangement of instalments and a last big sum (McDonald & Thornton, 2008). In a mortgage, the lender is not entitled to have a share in the ownership of the property but is only granted the right to take back the principal sum and the interest added on the principal money lent. (Nelson & Asamoah, 2014)

Rising demand for loans increases the pressure on interest rates in a given economy. On the other hand, when there is less need and competition for money, interest rates decrease, and potential homebuyers have lower interest rates during periods of low economic growth that help to reduce the long-term cost of home ownership (Riro et al.2015).

The loan-able fund theory presupposes that the level of mortgage interest rates influences the demand for and supply of mortgages; hence, the equilibrium interest rate determines the amount of loan-able funds commercial banks will advance towards mortgage financing (Sen, 2015). Thus, the rise or fall of mortgage interest rates, also known as the mortgage contract rate, will affect mortgage uptake by borrowers (Mbogha 2015).

Fougère advances the idea that a firm needs external financing when an initial cash flow is inadequate for funding an investment (Fougère 2017). The author argues that unless the necessary credit is obtained from a deep-pocket “foreign-investor”, another source of finance can be seen as a competitor, even if borrowing is a must for doing business. Thus, for real estate business, which obviously needs a huge resource, borrowing seems a must, even for residential purpose, let alone commercial. In line with this, Zhu and Davis compared where value can be created between residential and commercial properties (Zhu and Davis 2004).

They identified that residential property has an intrinsic reservation value, which is meant primarily for accommodation. Thus, the value is earned after owning it. In contrast, the value of commercial property is affected by the worth of future rents and will be earned in the future. In order to realise the future benefits until the ownership is transferred to the buyer, realtors need at least working capital finance to run an operation with a routine or significant size. The available loans cover acquisition, advancement and financing of construction of income-producing real estate. This sort of real estate involves real estate held for lease to third parties and non-residential real estate occupied by its possessor or a related party (Office of Controller of the Currency 2017). The loan not only results in future profit but also helps investors to mitigate currency risks (Worzala and Newell 1997), a key factor of success (Obwocha et al. 2014).

New technology plays a positive role in the real estate industry. Most people across the world cannot afford conventional building materials, which are beyond the majority's reach. In addition, rising building material costs, environmental concerns from extensive exploitation of natural resources, and large-scale construction and other housing projects have increased the need for alternative technologies. Natural resource depletion can be addressed through the use of new and alternative building materials, methods and techniques. These alternatives have the potential not only to replace traditional building structures but also to save energy (Reddy and Jagadish 2001). Thus, technological advancement offers a twofold benefit for realtors. First, it speeds up the process and reduces cost and, second, it increases the rate at which governments install infrastructure. A location that is endowed with infrastructure generates greater value than its counterparts. In addition, technological changes result in changes in the amount of office space available.

Torgomyan and Laskowska have identified many ways in which governments regulate the real estate business. Methods of regulation include laws, taxation, banking systems, subsidies, zoning (land), limits on financial institutions' exposure to the real estate market, licensing of market participants, transaction costs and procedures, rent control, and maximum and minimum prices (Torgomyan and Laskowska 2016). According to an Economic Forum report, the biggest obstacle to real estate transactions in Ethiopia is the lack of access to bank financing (Economic Forum 2011). The financial sector covers only 10% of the demand, which is a low level and cannot meet the needs of the majority. As a report in the UN Policy Framework for Sustainable Real Estate Development points out, credit policy puts direct pressure on real estate market dynamics (UN 2010). This means that the property assets are

deducted from the collateral against which the mortgage or loan is made. Real estate performance can improve when the market offers competitive and affordable mortgage rates. For the same reason, Ethiopia's performance scored lower in the financial system pillar, according to the 2018 Competitiveness Report. This is 1.5% higher in low-performing countries (29% of GDP). Furthermore, Ethiopia has a credit gap of 99.2%, while the highest credit gap by criteria is 2.3%.

All businesses operate for profit, and this applies to real estate as well. Real estate investment as a business is an economic activity that consumes physical and non-physical resources and constantly interacts with the environment to provide space such as buildings and land. This allows land on which buildings are erected with favourable legal guidelines governing the business. In addition, since real estate investment requires a large amount of funds, it is not possible to install a tower only with the initial investment of the owner. The availability of infrastructure not only influences brokers but also their decision to buy commercial properties from the perspective of users of the space. As per Pirounakis, in general, real estate is one of the major components of the macro-economy, together with (local) government finances (Pirounakis 2013). It is also related to consumption, saving and the GDP. However, it has an investment aspect, and a connection with capital and the labour market.

Amidu Abdul-Rasheed and Aluko Tajudeen (2006) investigated the investment performance of publicly traded real estate and construction firms in Nigeria between 1998 and 2005 in order to identify their competitive and comparative advantage in attracting investment. He used Sharpe ratios to show that, while real estate and construction companies may not outperform equities, they do offer diversification opportunities due to their low correlation with the stock market.

A study on real estate research directions and priorities for *Nigerian institutions* was undertaken by Yewande Adewunmi and Abel Olaleye (2011). The survey includes 135 real estate specialists from Lagos. There have been fifteen general and 35 particular real estate research subjects reviewed. The broad real estate research interests were dominated by development funding and land policy issues. The impact of money flows into and out of the property market, land reform, and taxation issues were the top real estate study topics. Property portfolio diversification and risk management, land policy challenges, development finance, and variables impacting property investment were the underlying general real estate

study subjects. The findings highlight the importance of thoroughly reviewing Nigeria's real estate investment climate and tax legislation.

In a study on identifying important factors impacting *Nigerian real estate prices*, alkali, Musa Abubakar, Sipan, Ibrahim, and Razali, Muhammad Najib (2018) discovered that GDP, inflation rate, exchange rate, interest rate, and crude oil price all have a significant impact.

Elile, R.U., Akpan, S.S. and Raju, V., (2019) looked into the macroeconomic elements that influence real estate *investment success in Nigeria*, such as inflation, exchange rate, and per capita GDP. The study employed a quantitative research strategy with secondary data across a 37-year period (1980-2017). To account for endogeneity in the data set, OLS multiple regression with a lagged dependent variable model was used. According to statistics, inflation and GDP have a big positive impact on real estate sector performance; however the exchange rate has a significant negative impact.

3.10 Real Estate

The macro factors, such as the economy, technology and politics, are not the only variables in the real estate function. In addition, there are also variables at the micro level that affect the performance of real estate theory, with the internal capabilities of the firm leveraged from financial, human, marketing, and physical and organisational factors (Barley and Hesterly 2010). In addition to the above capabilities, specific skills related to architecture, design, project management and managing of sister companies are essential (Best 2009).

The supply of land and its price is another micro factor to be considered. It is affected by marketing, non-marketing and environmental factors (Wisniewski et al. 2014). Where land (usually a scarce commodity) is abundantly supplied, the nature of real estate is constrained by other factors, such as unreliable suppliers, internal inefficiencies, and the lack of professional management without which the business cannot achieve good growth (Ramnarian, 2012). Sometimes, firms lack working capital for operating. Thus, raising capital is a must and commercial real estate has to fight hard to obtain mortgage loans other than the secured mortgage loans available from banks (Abdelgalil 2005).

Land, fixed resources and skills on their own are not enough for a firm to be successful in the real estate business. There are also a large number of variables such as suppliers, locations and nearby infrastructure that need to be considered. Agency theory comes into play in the context of suppliers (Okunlola et al. 2015) to explain the successes and failures of

a building project. According to this theory, the prime contractor delegates the work to another contractor (sub-contractor), who performs this work for a fee, in this way transferring and sharing risk between many parties. However, the responsibility always remains with the original contractor. Mirawati proposes a relationship-based contractor-supplier association, arguing that this will solve serious problems such as poor quality, poor productivity, bad image, economic instability, bureaucratic delays and cost overruns (Mirawati 2015). According to Hinze and Tracey 85% of construction tasks are executed by sub-contractors, which means that the sub-contractor's performance will determine the success or failure of any project (Hinze and Tracey 1994). Murigu (2009) argues that difficulties in delivering construction projects within the scheduled time and cost, and debt-servicing obligations are the major constraints exhibited in commercial real estate investments in Kenya's capital city Nairobi.

In connection with the capabilities needed for successful operations, Best argues that real estate developers must not only equip themselves with normal real estate skills in financing, marketing and property management but also be well-informed about architecture, construction, law and public finance (Best 2009). Some developers who have succeeded and been able to survive in the market have had experiences of working as managers of sister companies whose businesses are focused on construction, contracting or engineering/development consultancy or building materials' suppliers.

Construction productivity improvement is a major concern for businesses and nations and also enables firms to enhance profitability, cut costs, and create and sustain competitive advantage. In line with this, Kauskale suggest that for firms in general, and construction industries in particular, ineffective management and decision making cost the firms greatly (Kauskale 2017). Costs of ineffective management include financial losses; cuts in salaries; unemployment and socio-economic problems that are related to unemployment; stress of dealing with the unexpected; unmanufactured GDP; and others. Thus, operational efficiency at a corporate level, both strategically and tactically, ensures the performance success of real estate developers.

The aforementioned theories in section 3.1, as well as the empirical review in Section 3.2, were used to generate variables for the study. For example, study variables generated for each theory are summarized herein under:

- * The supplier-buyer relationship, the rational or reason-based decision, relevant information and operational efficiency can be linked to Neoclassical Theory (Evans 2008, Prada 2009);
- * Demand and supply analysis political and legal analysis (Certified Commercial Investment Member (CCIM) real estate feasibility model: (Choi 2008);
- * Leadership quality, shareholders, managers and hired professionals can be linked to the agency theory of real estate (Williamson 1981, Okunlola and Ogunkoya, 2015, Kusiluka 2012);
- * Legal factors, property rights can also be linked to the institutional theory of real estate (Ankarloo, 2006, (Obińska-Wajda 2016) ;
- * Related supporting industries, firm strategy and demand conditions can all be linked to Porter's diamond model; (Porter 1998));
- * Land availability, and credit availability, tangible and intangible resources serving as source of competitive advantage (Resource-based View: VRIO – Valuable, Rare, Imperfectly Imitable, Organisation – Framework Process: (Ketchen et al 2001, Best 2009));
- * Cost, innovation, differentiation, functional strategies – operations, marketing, financial, HR, information and technology can also be linked to corporate real estate strategy theories (Kongela 2013).

3.11 Empirical Literature Review

3.11.1 Macro Factors that Affect the Performance of Commercial Real Estate

Several studies conducted on real estate business in different countries have directed their focus towards certain common constraints. For example, Fidelis and Chinedu conducted research on financial shortfalls, effects of underutilisation of land, institutional factors such as high cost of building materials, and labour and management issues in Nigeria (Fidelis and Chinedu 2011).

According to Muhammad workmanship quality, location and neighbourhood attractiveness are key attributes that add value to the real estate sector in Abuja, Nigeria. Haddad, Judeh and Haddad find that aesthetic, economic, marketing, geographic and social factors affect buyers' decision to acquire residential real estate (Muhammad 2016, Haddad 2011).

Similarly, from the viewpoints of developers in Ethiopia, Dessie's study found high cost and limited supply of land; lack of finance; high cost and shortage of supply of construction materials; shortage and high turnover of skilled manpower; limited number of high-income-segment buyers that would be able to afford to purchase; and lack of government support to be among the top challenges encountered by the real estate sector (Dessie's 2018). Hoxha and Salaj (2014), discussing current Kosovar real estate prices, suggest that the question to be addressed here is whether the traditional fundamentals of real estate prices, such as GDP per capita, real interest rates, demographic factors and construction costs, are driving these prices.

3.11.2 Economic factors: credit availability and the performance of commercial real estate

A shortage of finance means that no property is developed. Institutional real estate mortgage lenders and equity investors are interested in having existing and new constructions as collateral. In all kinds of real estate, general monetary situations are believed to affect the involvement of developers in constructing offices. Macro-economic factors thus affect finance directly and the supply of office space indirectly. Shortage of finance also results in delayed plans for new construction, especially smaller office buildings.

As Kiros explains, a slowdown in real estate development is brought about by a lack of affordable funding (Kiros 2009). Low interest rates and a stable economy force banks to extend maturities and make more loans available at lower interest rates, lowering the barriers to getting loans, according to Kiros. Most recently, I had a three-year mortgage.

Brown assert that an increase in disposable income, low mortgage loan interest, high inflation rate, ease of access to mortgage loans, and low Real Property Gains Tax (RPGT) are amongst the major factors that influence property investment in Australia (Brown et al. 2008). These factors also happen to be drivers of markets of property investment. In New Zealand also, De Bruin and Flint discovered that certain economic factors strongly influence property investment (Bruin and Flint 2000). These factors are wealth accumulation and capital gains, as well as retirement income, and all of these factors contribute to property investment decisions. Bruin and Flint argue that low property gains tax has no influence on property investment in New Zealand, however, as the gain from property is let off tax (Bruin and Flint 2003).

Hashim identifies three economic factors that influence the value of real estate investment as a means of personal wealth (Hashim 2010). These factors are user markets, capital markets

and governments. Shemin also explains that real estate investing is a best-in-class wealth-building vehicle for five main reasons: payment (Shemin 2003). Researchers such as Goodhart and Kupke add inflation rate as another valuable variable (Goodhart 2011, Kupke et al. 2005).

In his work, Shroder encountered an economic model of personal investment decisions that emphasises after-tax returns over alternative investments and the size of an individual's net worth (Shroder 2001). Shroder found that investment decisions are driven by three main motivations (Shroder 2001). The first motivation is whether the net return on rental investments is higher than other investments. The second motivation regards the management of asset liquidity, where rental investment is the vehicle for investing and accumulating savings. The third motivation is perceived risk. Seelig discuss important parameters closely related to these motivations. Builders and developers, on the other hand, have the right to receive working capital at affordable rates and can secure loans against their ownership title to the property they develop (Seelig et al. (2009).

Mortgages play a major role in improving housing affordability, increasing the flow of funds into the housing sector and better diversifying the risks associated with emerging market housing finance (World Bank 2011). As a source of housing finance, a mortgage is essential for developing economies from a social point of view, as government supply and investments in housing have dramatically decreased (Tsvihun 2000). For Ngugi and Njori mortgage finance influences the development of an economy and the lives of people (Ngugi and Njori 2013).

Accordingly, mortgage provisions create opportunities for many to be homeowners. Compared to other types of bank assets, mortgage loans contribute to financial stability and have reduced risk properties, although they have some share in diversifying the risk of a bank's portfolio. On the other hand, other assets such as commercial loans create high and diversified risk. More mortgage loans can be taken as a form of financial inclusion in which households gain access to the formal financial system (Morgan and Zhang 2015). In addition, Li writes that other factors also have an influence on real estate business and recommend that real estate developers need to have unique financial competency (Li et al. 2009).

3.12 Role of Institutional Investors

A key factor in global capital markets is the fast-growing importance of institutional investors. According to the International Monetary Fund (IMF), these professional investors

manage financial assets exceeding US\$45 trillion (including over US\$20 trillion in equities) (IMF 2005). Assets under management of institutions have tripled since the early 1990s. Further, institutional investors are major players not just in developed markets; their role is rapidly growing in emerging market countries (Tufano et al. 2005).

3.13 Private Equity Re Funds in Ethiopia

Private equity, both as a contracting strategy and an industry, is relatively young. PE investment first emerged in its organised form in America after WW II, when the first true PE firm American Research and Development (Dolan et al.) - was established in 1946. ARD was a publicly traded and closed-end investment company with a view to offer a private-sector financing for new and small businesses. PE spread to the Europe in the late 1970s and early 1980s when a number of PE firms were founded in UK.

Stewoll and Lerner shortly defined PE as a risk capital provided in a wide variety of situations, ranging from finance provided to business start-ups, small and middle to the purchase of large mature companies (Stewoll and Lerner 1999). Gilligan and Wright, a form of "investment club" in which the principal investors are institutional investors such as pension funds, other investment funds, endowment funds, insurance funds, banks, family offices/high net worth individuals and funds of funds, as well as the private equity fund managers themselves" (Gilligan and Wright 2010). Private equity (Okunlola & Ogunkoya) refers to capital investment made into companies that are not publicly traded. Leveraged buyouts (LBOs) and venture capital (VC) investments are two key PE investment sub-fields. Leveraged buyout (LBO) refers to the purchase of all or most of a company or a business unit by using equity from a small group of investors in combination with a significant amount of debt and the targets of LBOs are typically mature companies that generate strong operating cash flow. (Stewoll and Lerner 1999). Buy-outs are examples of PE investments in which investors and a management team pool their own money, usually together with borrowed money, to buy a business from its current owners (Stewoll and Lerner 1999).

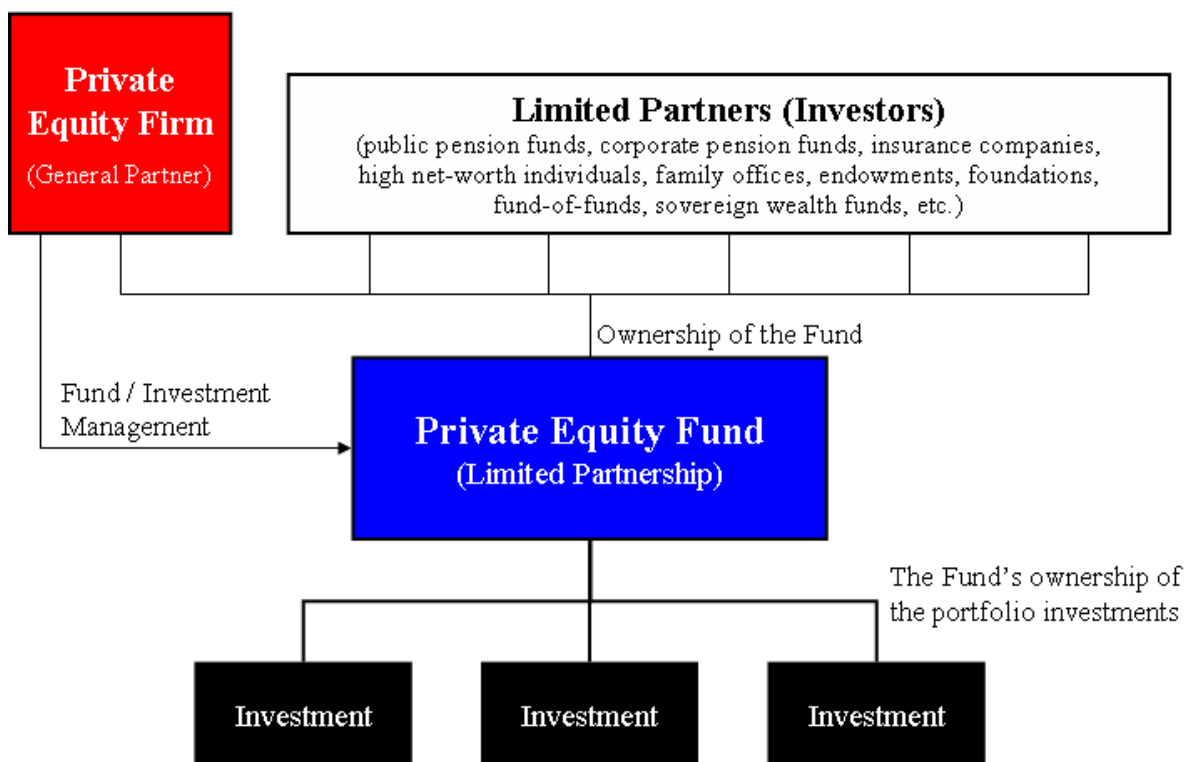


Figure 3.6: Types of Private Equity Funds

(Source: Metrick, Andrew; Yasuda, Ayako (2010))

PE investing in Africa in general, and in Ethiopia in particular, is a relatively new and unexplored subject African Venture Capital Association (AVCA 2017). Another purpose is therefore to best describe, analyse and discuss PE investing in Ethiopia. Most funds have a regional or sectoral focus, and those with an East Africa focus are heavily invested in Kenya, Uganda, and Tanzania (AVCA 2016). Abdela is quoted as saying For decades, Private Equity (Okunlola & Ogunkoya) Investment has been a driver of global economic growth, and it is now emerging in many countries, particularly in Africa. Despite being one of the most important sources of capital for emerging countries, private equity is underdeveloped in Ethiopia (Abdela 2019). It is established that access to finance remains a major barrier for Ethiopian businesses, despite the fact that the industry is underdeveloped in the country.

Ethiopia, as one of Africa's fastest growing economies and the second most populous country, should be a natural beneficiary of greater private equity investment flows to the continent. Regrettably, Ethiopia is currently one of the African continent's and East Africa's lowest recipients of private equity money, both in terms of volume and number. Unlike in many Sub-Saharan African nations, PE investment was first introduced in Ethiopia in 2012, when Schulz Global Investments (SGI), an American investment firm and family, became the

first foreign PE firm to create an office in Ethiopia. Even though more investors look into East Africa as a PE investment destination and funds raised for East Africa investment have also increased nowadays, Ethiopia is proved to be one of the least recipients of PE in the region.

Hayat claims that. Private businesses are critical to national economies since they contribute significantly to employment and GDP growth. Nevertheless, the source of money to enable the private sector grow in Ethiopia is confined to the country's commercial banks, which lack the capital or capacity to fund the private sector's growth (Hayat 2019). Private equity can be an additional source of funding to help Ethiopia's private sector flourish. Private equity in Africa was pioneered by the Development Finance Institutions (DFIs), who had a mandate to invest in private sector businesses in developing countries. The DFIs aimed to stimulate economic growth, create jobs, develop better business standards and encourage commercial investors to also invest in these developing regions. (AVCA 2017). Compared to other emerging markets, the PE industry in Africa is still at an early stage of Development but several circumstances suggest that its growth is proceeding at a sustained pace. (AVCA 2016).

DFIs investing in African countries at this time included the African Development Bank (AfDB), the UK's CDC Group plc. (CDC), Germany's Deutsche Investitions (DEG), the European Investment Bank (EIB), the Netherlands' Nederlandse Financierings Maatschappij voor Ontwikkelingslanden N.V (FMO), the World Bank's International Finance Corporation (IFC), France's Proparco, and Sweden's Swedfund, amongst others. The DFIs are strategically aligned: all investing in Africa to achieve a positive impact through building businesses, creating jobs and sustainably improving the lives of people in poorer communities (AVCA 2017).

3.14 Legal and Political Factors and the Performances of Commercial Real Estate

Studies indicate that political and legal support increases the performance of commercial real estate. Komisarov (2016) writes that the support and activities of the Lithuanian government are attracting international companies to invest in real estate in the country (Komisarov 2016). The realtors/companies receive support from an agency known as "Invest Lithuania", and receive tax deductions in free economic zones, along with open shared service centres,

offices, branches and factories in Lithuania. These companies are expected to have commercial property and that provides a chance for real estate developers to work with international companies and be able to supply appropriate premises to them. The improvement of construction procedures is considered a further advantage.

The Centre for Affordable Housing Finance in Africa (CAHF) 2018 yearbook states that across Africa the change in legal and political factors may not be as rapid as changes in emerging innovation. In addition, lack of finance has its own impact. In light of these issues, CAHF advises policy-maker bodies to direct investors' attention by creating niches that may interest them in the policy and economic context.

Governments at different levels play a pivotal role in the real estate business. For example, in the case of Ethiopia, land is made available by the government and the lease price also affects the rate of availability. In addition, the credit policy of the government is a gear that directs the mortgage loan for financing real estate, especially with a relatively lower interest rate. On top of this, the government also subsidises the low-income segment of the society, and this creates an opportunity to build more houses. In line with this, the Ethiopian government's contribution is positive. However, Abera points out that the government's lack of regulation of this business has been seen to create opportunities for crime; thus, the sector has shown numerous cases of fraud and this has created mistrust in potential clients (Abera 2010).

Helble and Yong state that Singapore has introduced a housing system that has enabled the country's home ownership rate of 90%. In terms of this system, the houses are built by the Housing and Development Board (HDB), and house ownership is financed by Central Provident Fund (CPF) savings (Helble and Yong 2016) The system has been in operation for the last 75 years and has resulted in one of the highest home-owner rates for citizens among market economies.

Yuichiro Ito, Muto and Takizukau claim that bold moves in the real estate market increase fluctuations in the real economy and threaten the financial system. Thus, they advise that the central banks need to monitor real estate markets' monetary and prudential policies (Muto and Takizukau 2015).

3.15 Technology and the Performance of Commercial Real Estate

The influence of technology on commercial real estate seems to run from A to Z. According to Navigant Construction Forum the variety of changes in technology related to the

construction industry have the capacity to significantly change the way in which owners, designers, construction managers, contractors and sub-contractors execute their work (Navigant Construction Forum 2016).

The Navigant Construction Forum report predicts that once these technological advancements are more widely embraced by the industry, construction productivity and site safety will be greatly improved and construction costs will reduce. Technological advancements have been seen to influence the amount of office space available, and technological alternatives allow reductions in the cost and time of construction of an office project (Reiz, Valuation Part 1).

Thompson and Dixon suggest that commercial real estate, especially commercial offices, receive two order impacts from information and communication technology (ICT) connectivity. The first order includes changes in space intensity, improvement in design and construction, increment in productivity, better experience of the location and change in the organisational culture. The second order impact is the creation of value and improvements in lease provision and service (Thompson and Dixon 2005).

According to Hinds commercial real estate is reaping the benefits of technology in four ways. The first is related to property development, where the most successful commercial real estate professionals are relentlessly working to find ways to design and construct properties in the most quick, efficient and cost-effective way possible (Hinds 2019). The second way concerns property management, in which changes in smart sensor technology and cloud computing, for example, have enabled the improvement of operational efficiencies. The third and the fourth ways are related to sales and marketing respectively. In the third way, personalisation technologies have transformed property portals and minimised extra channels, such as brokers, by directly connecting with the customer, which has secured more sales than otherwise. In the last way, virtual and augmented reality has helped buyers to see and analyse properties from different angles remotely, particularly in the pre-construction stages.

Since Akerlof's ground-breaking study in 1970, the importance of information asymmetry in driving market behaviour has been widely developed. Low quality items (lemons) drive out high grade goods due to knowledge asymmetry (peaches). This prediction is generally disproved by actual evidence because it ignores the potential of diverse organisations emerging to reduce information asymmetry (Bond 1982, Genesove 1993, Janssen & Roy 2002, Enger et al.2009). (L. Li and K. W. Chau 2023) investigated how heterogeneous buyers on both sides of transactions behave in the housing market when knowledge asymmetry

exists. In the empirical experiments, two types of customers, informed and uninformed buyers, correspond to local and non-local purchasers. The findings revealed that non-local purchasers, due to the high expenses of decreasing information asymmetry, prefer to buy in the first-hand housing market; otherwise, they end up paying more than local buyers in the second-hand market for comparable housing units.

3.16 Infrastructure and the Performance of Real Estate

Cahill finds that access to infrastructure is critical for real estate success in that the cost of building new roads and other infrastructure is similar to maintaining old roads and infrastructure, and areas with good roads are priced higher than those with poor roads. Good infrastructure is a precondition for developing commercial office real estate and has an impact on the supply of office space (Cahill 2010). Water, electricity and sewerage connection points need to be maintained before construction of the offices start, while telephone and communication linkages can be installed after completing the construction. Igbinsosa finds that whether a property is connected to the city or detached has a significant influence on property investment decisions (Igbinsosa 2011), with Seo finding that the transport facilities of different models have differing degrees of impact on commercial real estate (Seo 2016).

Arogundade, Gbadebo, A. and O.M point out that patronage of residential and office apartments is a function of four main variables. These are facility type, cost of maintenance, location and class of residence (Arogundadem et al.2018). Transport infrastructure, including roads (Wambugu 2017, Murungi and Gatauwa 2015, Orekan 2015); social amenities (Wambugu 2017, Murungi and Gatauwa 2015); security institutions and improved infrastructure (Wambugu 2017); industries; expanded educational institutions (Murungi and Gatauwa 2015, Orekan, 2015) and commercial centres (Murungi and Gatauwa 2015) have a considerable impact on the market price of commercial real estate. Product differentiation strategies, location and proximity to infrastructure have been found to be key to the success of real estate industry in Kenya (Kibiru et al, 2014).

The impact of infrastructure development and improvements on property values has been studied extensively in the literature (Ahlfeldt and Wendland, 2011, Bowes and Ihlanfeldt 2001, Voith 1993). The economic impact of infrastructure improvements derives from the bid-rent theory of urban economics which posits that an improvement in accessibility or local

amenities increases land and property values due to higher productivity, superior quality of life and lower transportation costs (Vadali 2014, Mulley et al., 2016).

The bid-rent theory of urban economics has generated extensive literature on the impact of infrastructure such as highways, metro stations, telecommunication lines, light rail, etc. on land and property values (light rail – Hess and Almeida 2007), Damm et al. 1980), bus rapid transit – Cervero and Kang 2011), Mulley 2014); and transit-oriented development (Duncan 2011)). Most of these studies are set in developed markets where data are readily available. Exceptions include (Targa 2003), who examines rental prices around bus way stations in the city of Bogo.

3.17 Location and the Performance of Commercial Real Estate

As Cahill puts it, prices of real estate vary owing to different factors, with location being a factor that greatly influences price (Cahill 2010). Usually, when a site is found near a commercial centre or popular spot, its price goes up. (Kuryj-Wysocka et al. 2014) claim that the location where real estate is found offers multi-dimensional facets that affect customer preference, including space and the economic nature of the real estate.

Ge and Du state that real estate property has no value if it is not endowed with unique benefits. They argue that its distinctive characteristics are found in its location (Ge and Du 2007), neighbourhood and infrastructure. (Klimczak 2010) finds that location is one major factor that affects the preference of real estate investors. Thus, a geographical location plays a great role in making investment decisions. Broader than his view, location is also seen as an aspect of additional values, including physical value and socio-economic value (Bryx and Matkowski, 2001). For Muhammad (2016), location and neighbourhood attractiveness are two of the key attributes that add value to the real estate sector in Abuja, Nigeria. Kamal identifies location among the factors that influence house prices from a developer's viewpoint (Kamal 2016) i. As per Igbinsosa neighbourhood attractiveness has a significant influence on the investment decisions (Igbinsosa 2011). Aluko considers spatial variations of location and neighbourhood attributes to have an impact on differences in house prices (Aluko 2011). Lastly, McMahan strongly forwarded the fundamentality of location in the real estate business, presenting the old adage that the three major factors in real estate value creation are (1) location, (2) location and (3) location (McMahan 2006).

Certain studies consider location to be merely one of a range of factors that investors consider when selecting property. Seelig for example, argue that location is the dominant consideration when selecting a particular property but that many other factors also influence an investor's decision (Seelig et al. 2009). Messah finds, on the contrary, that land is not a significant factor although it has an impact on the price of residential homes (Messah 2011). Arogundade suggest that patronage of residential and office apartment space is a function of four main variables (Arogundade et al. 2018). These are facility type, cost of maintenance, location and class of residence. Thomsett believes that site evaluation is the second most important step after a market analysis and that site selection should be made in comparison with other sites in terms of physical properties such as landscape (Thomsett 2005) shape of land, surrounding uses, and access to roads and other features. In the Haruma Estate in Nairobi, Wambugu found that a real estate that is secure and has social amenities has a significant impact on the market price of commercial real estate (Wambugu (2017) . Location has been found to be a key factor in the success of the real estate industry in Kenya (Kibiru et al.2014).

Nasir in his study, found that quality of workmanship also affects the market value of a property (Nasir 2009). Majid reports that locations have shrunk to be more affordable, with some property buyers looking for lower-cost properties in high-demand areas to guarantee earnings during minimal vacancies and some attracted to the lower floors owing to their potential for renovation and development. Investors generally need to be aware of trends in physical characteristics and conditions when making real estate investments (Majid 2008).

3.17.1 Land Availability and the Performance of Commercial Real Estate

Natsvaladze theorises that land is a physical property with natural ownership rights that can be restricted for a society's good. She further views land as an economic factor that is a source of wealth measured in monetary terms (Natsvaladze 2014). Where there is no development opportunity and activity, there will be no demand and supply for real estate property and even if there is supply, the property will not be affordable. Although it is generally not difficult to obtain land, it is challenging to find the required land at an affordable price. Developers who are interested in developing housing that is affordable by many are generally unable to compete with those developers who seek maximum returns. This is because most government policies are not fine grained and back capitalistic rather

than socialist development. The different attitudes of landowners have an impact on the land supply and development of affordable houses.

According to Satsangi while there is interest among property owners in developing affordable housing on their properties (Satsangi et al. 2006), this is not widespread. In their study Satsangi found that the main factors that discourage landowners from developing surplus land are policy planning and zoning at 41%, lack of adequate funding at 25%, and lack of adequate service provision at 18%, with the remaining percentage the sum of other small factors (Satsangi et al. 2006). According to Kamal in Scotland, about three in five landowners believe that there are many challenges in developing low-cost housing in their area (Kamal 2016).

Igbinosa suggests that real estate investment decisions are influenced by property characteristics, which include property category (e.g., single-family or semi-detached), neighbourhood attractiveness (e.g., very, considerable or less attractive), number of properties, size of lot, age of lot and type of lot (vacation home or apartment) (Igbinosa 2011).

Muhammad found that the value of land, owing to intangible factors such as that it is free from or experiences a minimum of ethno-religious conflicts, is greater than the value created from the main tangible factors in violence-prone areas and vice versa (Muhammad et al. 2016).

According to Lorenz land or land ownership is the usual form of wealth in Nigeria and is distinct from non-asset ownership (Lorenz (2006). The terms “real estate” and “property” are synonyms, but “property” is more commonly used in the United States (Kusiluka) and Canada. The term “land” or “property” also refers to physical land and appurtenances, including structures attached to it. Immobility and tangibility are the main characteristics of land or real estate. Real property consists of land and everything that is permanently and substantially connected to it, either naturally or by man himself. Natural trails include trees and natural resources, while man-made structures, fences and bridges are built by landowners (Bhagwati 2015).

Wysocka argue that land is a function of multiple variables and is dynamic (Wysocka et al. 2012). These variables are attractiveness, workforce, location, HR, accommodation and income. Wysocka state that these factors can be put into three main baskets: supply, demand

and price of land (Wysocka et al. 2012). They add that the value of a property can also be considered a multi-dimensional category (with spatial, economic and other aspects).

Discussing the history of real estate, Grenadier shows that as soon as developers start to anticipate uncertainty, they venture into building more or they get possession of land with the expectation that its value will continue to increase so that it can eventually be sold at a higher price owing to adjustment costs (Grenadier 2008). Sudden or uncommon price hikes result in land holding or overbuilding. Thus, developers' strategic behaviour of land holding and overbuilding is caused and shaped by such anticipated uncertainty included in the information they collect (Grenadier 2008).

Various studies that have been conducted by different scholars have put forward factors that affect property values, with location, size, neighbourhood characteristics, economic activity, population and transport being the major ones (Oyebanji and Kauko 2003) groups the variables that determine property values into neighbourhood variables, accessibility (location) variables and property variables. Unfortunately, slow and insufficient supply of land is a reality in Ethiopian real estate (Kiros 2009).

Land access is defined by the United Nations Human Settlement Programme as "opportunities for temporary or permanent use and occupation of land for purposes of shelter, productive activity, or the enjoyment of recreation and rest" (UN-HABITAT 2008, p.5 and Thontteh and Omirin 2021). The Nigerian National Housing Policy of 2002 aimed to create an enabling environment for land accessibility to boost housing construction by organised private developers. The policy encouraged land acquisitions by developers, especially in the Lagos fringe areas, in anticipation of development of housing units to bridge the gap between housing need and supply. Despite this, the housing deficit in Lagos has persisted.

Rakodi noted that many studies carried out in Tanzania, Vietnam, Ecuador and Ghana, among others showed that informal land delivery systems are often more effective in delivering land for housing than the formal land delivery systems because of their user-friendly characteristics and social legitimacy (Rakodi 2005). Land accessibility, according to Omirin entails land tenure security, land affordability, land availability and the ease with which land is acquired. Indeed, it is now a common knowledge that due to a variety of factors, informality is the predominant characteristic of urban growth and that a majority of urban residents, especially the poor, access property rights through transactions occurring outside state regulations and formal land markets (Omirin 2002). According to Ajayi the land

title registration process in Nigeria presents difficulties that frequently discourage landowners from registering their properties (Ajayi (2021). Slow and arduous manual procedures (marked by a paper filing and information card system), insecure data storage prone to destruction by termites or fire, a lack of integrity, and major administrative discrepancies exist in practically all of the federation's 36 states.

The importance of land cannot be overemphasised. Land contributes significantly to production (agriculture, manufacturing and building Construction); and it is a source of power, social prestige, cultural identity and heritage (Lipton 2009 and Odeny 2013). According to Thontteh and Omirin the perceived barriers to housing development in Lagos's outskirts were noted by High building material costs; delayed title documentation; a shaky mortgage system; long and stringent planning approval; high interest rate/cost of borrowing; policy/regulation changes; a lack of coordination among numerous institutions; Local objection to the expansion of the periphery(Thontteh and Omirin 2021),Disruption from local landowners; Loan availability is limited; The planning process's complexity; Land preservation for future sale; High construction development tax; Modifications in development charges; Uncertainty over development policies; Government delay in constructing infrastructure; Unavailability of long-term loan; Long-term credit availability; lack of collaboration between developers and government in infrastructure installation; limited potential for automatic acceptance of conforming building applications; Confusion regarding planning standards Opposition to high-density development on a local level; objection to urban expansion on a local level; High labour costs; inclement weather that causes delays or damages to building; land topography; the land is not ready for development; Inadequate demand and insufficient cash flow planning for proper implementation.

3.18 Buyers and the Performance of Real Estate

Customers play a significant role in whether the performance of real estate increases or decreases. Commercial real estate is constructed for customers either in a lease form or as owned property. A 2018 Occupier Survey conducted by CBRE EMEA highlights that a steady and growing attention is being paid by the corporate world to technology, wellness and flexible space as major components of its agenda of enhancing the experience of the user. According to this report, companies aim to invest more in the short- and long term to improve the operational efficiency of the building first so that using applications, connecting

sensors, protecting personal spaces and environments, and making room or seat reservations can be handled easily. All in all, technologies are used to improve the user experience and help to support space efficiency. Although there are such opportunities globally, this is not the case in Ethiopia, because studies show that space users repeatedly request that the original building design be changed, which a critical challenge is posed by customers to real estate developers (Firew 2013).

Other challenges posed by customers are a preference for the real estate to be constructed from particular material and a preference for the real estate to be situated in an ideal location in an appealing vicinity, in which different public infrastructures, including roads and a large amount of traffic, are found. Jamil finds performance, geographical and infrastructural factors have significantly determined consumers' criteria of choice when buying residential apartments in Bangladesh (Jamil 2018). A buyer usually has a specific interest when interacting with the space developer, such as to find a location that enhances social value, fulfils the customer's aesthetic needs and brings economic as well as geographic value (Haddad et al. 2011).

Since Akerlof's ground-breaking study in 1970, the importance of information asymmetry in driving market behaviour has been widely developed. Low quality items (lemons) drive out high grade goods due to knowledge asymmetry (peaches). This prediction is generally disproved by actual evidence because it ignores the potential of diverse organisations emerging to reduce information asymmetry (Bond 1982, Genesove 1993, Janssen and Roy 2002, Enger et al. 2009). Li and Chau) investigated how heterogeneous buyers on both sides of transactions behave in the housing market when knowledge asymmetry exists (Li and Chau 2023). In the empirical experiments, two types of customers, informed and uninformed buyers, correspond to local and non-local purchasers. The findings revealed that non-local purchasers, due to the high expenses of decreasing information asymmetry, prefer to buy in the first-hand housing market; otherwise, they end up paying more than local buyers in the second-hand market for comparable housing units.

3.19 Suppliers and the Performance of Commercial Real Estate

While Kibru have argued that a major challenge in the real estate industry is lack of finance, suppliers have also contributed to the success or failure of commercial real estate performance (Kibru et al. 2014). For example, 85% of construction tasks are undertaken by sub-contractors. Hinze and Tracey identify continuous sub-contracting as

a major problem between suppliers and contractors (Hinze and Tracey 1994) see also (Okunlola 2015). Thus, the success or failure of any project is determined by the performance of sub-contractors.

The real estate market is also negatively affected by the shortage and increased prices of housing construction materials. This affects the Ethiopian real estate sector (Aqubamicheal 2009). According to Egert and Mihalject the real construction cost is the function of wages and salaries of workers, the price of the land, and costs of building materials (Egert and Mihalject 2007). As per the Ethiopian Investment Commission Report the cost of labour is lower in the Ethiopian context than in other countries (EIC Report 2014). The report states that the country is endowed with abundant, trainable and industrious labour, with an average daily cost of less than \$5.

3.20 Firm Efficiency and the Performance of Commercial Real Estate

Efficient and effective organisations grow and prosper in their business dealings by implementing well-considered strategies. It is recommended in real estate that cost, flexibility, differentiation, retaining and attracting talented HR, proactive marketing and selling methods, operational efficiency and involvement in corporate social responsibility (Roulac 2011) are adopted as strategies for improving productivity and profitability in the sector (Lindholm 2012). Natsvaladze found that cost factors, such as keeping regular office-property prices, greater development costs, as well as costs such as financial capital (interest rates), construction (of labour and materials) and land, reduce investment profitability and do not encourage the construction of offices (Natsvaladze 2014). In Kenya it has been found that product-differentiation strategies, location and proximity to infrastructure are key factors in the success of real estate (Kibiru et al. 2014).

Voila argues that the lower the volume of investment costs, the higher the current yield of real estate. This author further advances the idea that return is determined not only by construction cost but also by pure operational income of commercial real estate at the operation stage (Voila et al. (2018)). Thus, the firm's internal operation makes its own contribution to the effectiveness of the performance.

Factors related to real estate operations are the quality of material, location of the real estate, availability of social amenities, design, accessibility of infrastructure, customer's participation in design selection, time delivery, availability of raw material, size of plot, number of rooms, capacity of consultant, accessibility of integrated information commutation

and affordability. These are all factors that finally affect the price and determine the demand for the real estate.

According to Frew the most important factors that affect the sale price of a home are floor area and number of rooms, building materials, property size and rent (Frew 2013). David J. Paladino asserts that by delineating possible and target markets, small real estate companies could provide high-quality service for their customers and secure profit. In order to do this, these companies must have a strategic service vision (Paladino 2000).

Heywood and Kenley conducted an evaluation study of the commercial real estate model, which provides a useful framework for CREMs to better align their practices with business objectives and achieve greater competitive advantage for their organisations (Heywood and Kenley 2008). The model identifies the types of practice categories that can maximise the competitive effectiveness of the CREM as a basis for strategic positioning by steadily focusing on the sources of competitive advantage within the organisations.

The CBRE EMEA report shows that real estate firms are using technology to support their companies' operational performance (CBRE EMEA 2018). By the same token, Fund states that as a supply factor, the cost of construction affects the price of real estate (Fund 2005). This means that unless costs are minimised and efficiency is maintained, both the financial and non-financial performance of a commercial real estate will be at stake.

This study explores how marketing effectiveness is measured. Firms are not entirely content with their present marketing measurement systems and the improvements required give insights into how measurements vary. Marketing strategies play a major role in persuading sellers and buyers to agree. They involve the customer and real estate in completing the legal paperwork required to complete the transaction. As the lifecycle of a real estate project is lengthy, such a project needs strong marketing strategies. The conception phase, planning phase, execution phase and termination phase are the broad work of marketing activities. All real estate investment has some elements in common – such as design, financial and legal considerations – that require a coordinated marketing strategy. In addition, it is useful to have a project delivery strategy, promotion strategy and so on.

Lastly, according to Moges it is important for real estate firms to be knowledgeable about the principles and procedures of valuation in all decisions that have to do with real estate buying, selling, financing, developing, managing, owning, leasing, trading and income tax considerations (Moges (2008)).

3.21 Measuring the Performance of Commercial Real Estate

Earlier research leanings point to a strong foundation in the relationship between organisational performance and cost advantage. Firms that have a margin in cost competency perform relatively better than those with low built-up manufacture cost, cost of goods sold and low prices. Rose examined the organisational edge from the resource-based perspective and discovered it to be fundamental (Rose et al.2010). Business organisations use it as a conceptual guideline to improve their varied positions of advantage. Company performance achieved by using appliances and known internal resources will also be improved by improving the company's competencies. Rose study added these into the body of knowledge by using the experimental approach and RBV and found that these qualities helped the companies to improve their excellence (Rose et al.2010).

The literature consulted on this topic revealed a strong bond between competitive advantage and an organisation's sales assessment. Studies have also confirmed a positive bond between an organisation's performance and competitive advantage. Wang and Lo used an efficient organisational internal process to approach company excellence (Wang and Lo 2003). Morgan confirms that export businesses are strongly affected by resources and competencies (Morgan 2004). The diverse options and the positional betterment achieved in the export market in turn change export venture performance. This study shows that resources and skills are interrelated and relate to the competitive strategy options of exporters. The authors also found a strong correlation between organisational performance and product quality.

The impact of Porter's competitive advantage strategies on a company's performance has been the focus of many studies. Dess and Davis (1984) assessed the performance effects of the competitive advantage strategies on the basis of a sample of non-diversified manufacturing companies (Dess and Davis 1984). The authors discovered that these companies could be categorised under four clusters in terms of the strategies that they implemented: cost leadership, stuck in the middle, focus and differentiation. In relation to the increase of sales, the four clusters were found to be greatly different from one another. The focus cluster had the highest sales' growth, followed by cost leadership, differentiation and, lastly, stuck in the middle. Concerning return on total assets, not much disparity in performance was found between the four clusters. The highest return was found in the cost leadership group, but it was lowest in the focus group. Powers and Hahn looked into the performance impact of competitive advantage strategies in banking (Powers and Hahn 2004). Their study showed that banks can be categorised into five clusters according to the

type of strategy they implement: general differentiation strategy, focus strategy, stuck in the middle, cost leadership strategy and customer service differentiation strategy. They also found that banks that used a strategy had better performance, and those that had no strategy showed no improvement in performance in terms of return of assets. The performance of banks that followed the cost leadership strategy was found to be higher than those banks with no strategy. Conversely, banks that followed other strategies had no major performance advantage over the stuck in the middle cluster.

Companies that have a product-based margin on their competitors have been found to have a relatively better performance. Morgan measured product competency on the basis of higher quality of product, packaging, design and style (Morgan et al. (2004)). Likewise, the study demonstrated that there is a strong bond between services-based advantage and the organisational consequences. These companies profited from services as their competitive edge when compared to their rivals. For instance, better performance was registered when there was more product elasticity, delivery speed, convenience, consistency and technological assistance.

The connection between the size of a firm and its economic performance has always been a point of debate and has gained much attention. Numerous arguments support the idea that a larger firm size enables an attainment of maximised performance. According to Singh and Whittington big firms have the advantage of being able to exploit economies of scale, and they have more negotiation power over their clients and suppliers (Singh and Whittington 1975). Yang and Chen add that big firms are likely to obtain credit for investment easily; have larger groups of qualified human capital; and attain better strategic diversification (Yang and Chen 2009). On the flip side of the coin, small firms have some characteristics that can compensate for their smallness. For example, agency problems and complex hierarchical structures are the least of small firms' worries, and their organisational forms are suited to changing business environments (Yang and Chen 2009).

In terms of determining dominant performance, a balanced scorecard (BSC) comes out on top, as confirmed by Neely's study of performance measurement systems and manufacturing strategy. There are many types of metrics for the measurement of marketing performance (Neely's 2005). Some deal with financial aspects such as ROI, and return on asset (ROA), while others concern non-financial aspects (such as customer satisfaction, brand quality, balance scorecard and dashboard).

Gibler and Lindholm developed eight strategies that maximise the wealth of the shareholders (Gibler and Lindholm 2012). These strategies are broadly aimed at achieving two goals: growth in revenue and growth in profitability. The first five strategies contribute to shareholder wealth maximisation in the course of revenue growth, while the remaining three fulfil the aim of wealth maximisation through profitability growth. In the current study, the performance measurement of the commercial real estate in Addis Ababa used this framework. The framework was selected as it had been examined empirically with a survey from the same group of respondents in 2010, which guaranteed stability of concepts and allowed for (partial) comparison of results of the two surveys on key commercial real estate strategy-related outcomes.

3.22 Conceptual Framework and Hypotheses of the Study

3.22.1 Conceptual framework of the study

In a research study, a conceptual framework is developed as a tool to guide the researcher's inquiry; it embraces ideas used to organise the research (Holborn 2008). One of the aims of the current study is to construct an integrated commercial real estate performance measurement model related to Addis Ababa.

In creating a conceptual framework, the study's independent and dependent variables are identified and the problem related to these concepts set out. The conceptualisation of the construction of an integrated commercial real estate performance model in Addis Ababa is discussed in the context of the developmental economy of Ethiopia. The independent variables are assumed to be the sources of the problem. The independent variables in the current study are identified as external environmental factors such as macro-economic problems (economic, political, social and technological), industry factors, land availability and location as adopted from Ernawati (Ernawati 2016). Also considered are the internal efficiency and effectiveness of the firm; eight variables adopted from Roulac (Roulac 2001). The recent version of commercial real estate strategies as put forward by Ginder and Lindholm that aim at increasing the revenue and profit level of the firm (Ginder and Lindholm 2012). All of these variables are used to measure the performance of the firm. Finally, for the remaining portion of the conceptual framework, the buyer is added, following site-related literature. Dependent variables are assumed to be the outcomes of these variables.

The researcher's dependent variable is commercial real estate performance. The effect of the independent variables is assumed to change the pace of real estate development. The conceptual framework model developed for the study, as shown in Figure 3.6, is assumed to depict or show the link between the independent variables, which influence the dependent variables as the result of their interaction.

Commercial real estate can be defined in various ways; however, according to Kooymans, "commercial real estate" is a term used in a broad sense (Kooymans 2000). It includes construction in progress, buildings, freehold and leasehold real estate utilised by organisations for the purpose of production, whether or not similar real estate is considered by the corporation to be an investment. Many studies have examined different aspects of real estate developments. There is, however, limited evidence of factors that have an impact on its performance that can be applied to the Ethiopian situation. Given this context, the following conceptual framework is proposed for this study. The factors or barriers that determine the commercial real estate performance in Addis Ababa are seen in light of three main variables that are assumed to have an influence over the commercial real estate performance: firms (real estate developers), customers (users) and external environment forces.

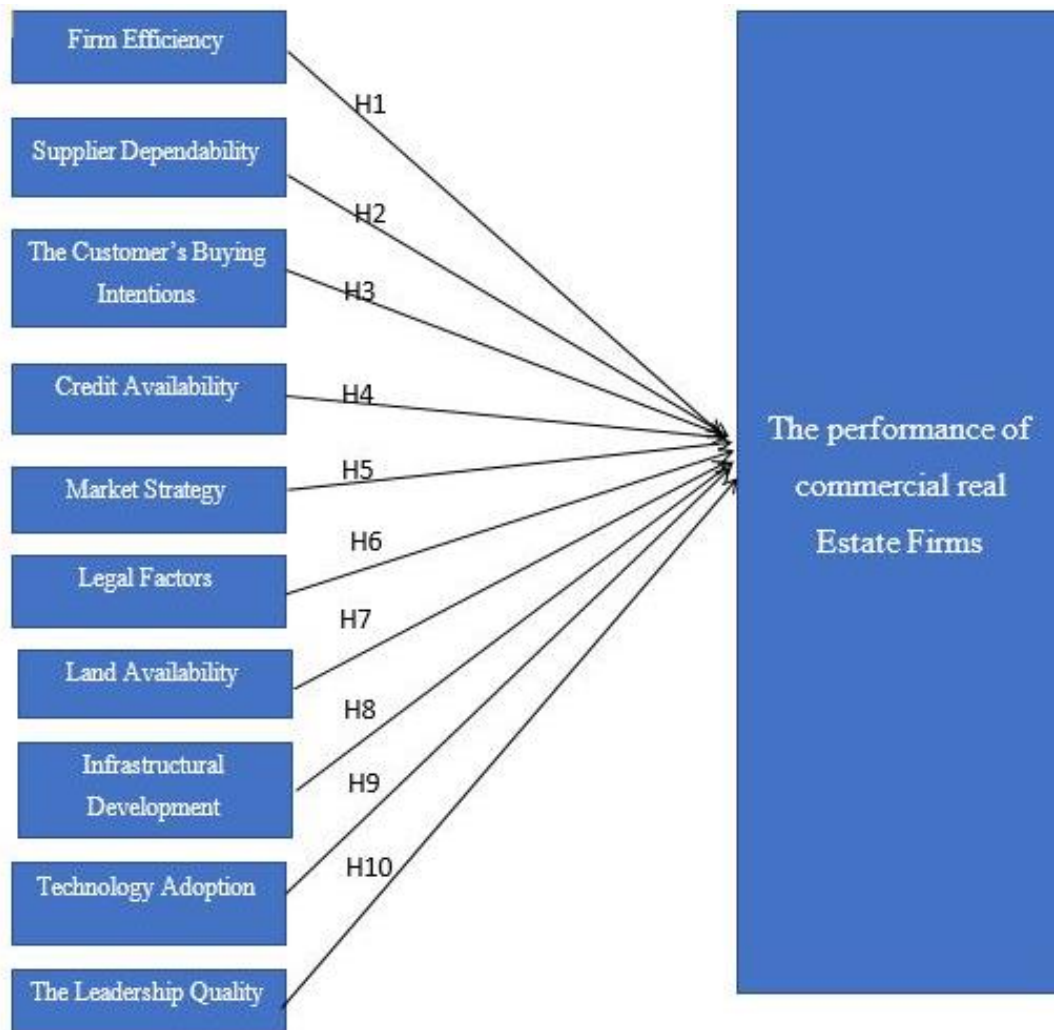


Figure 3.7: Conceptual Framework of the Study

Source: Adapted from Ernawati (2016), Roulac (2001) and Giber and Lindlom (2012) with own elaboration

3.22.2 Hypotheses of the study

As discussed above, so as to develop the conceptual framework of the study, works of various researchers and authors were adopted. For the conceptual relationship among real estate determinants and performance of commercial real estate, theoretical and empirical studies were reviewed and variables for the conceptual model for this study adopted from Ernawati , Roulac, Giber and Lindlom for the measurement model. In this study, it was assumed that credit availability, legal and political factors, technological factors, location, infrastructure, supplier, buyers and firm efficiency have an impact on a commercial real estate's performance. The paragraphs below set out the theoretical and empirical supports of the determinants that are hypothesised to affect the performance of commercial real estate in Addis Ababa significantly and positively.

3.22.2.1 Firm efficiency and commercial real estate performance

Efficient and effective organisations grow and prosper in business dealings by implementing appropriate strategies. It is suggested that in real estate cost, flexibility, differentiation, the retention and attraction of talented HR, proactive marketing and selling methods, operational efficiency and becoming involved in corporate social responsibility (Roulac 2011) are strategies that improve productivity and profitability in the real estate sector (Lindholm 2012). For Natsvaladze barriers to investment profitability and the construction of offices are cost factors, such as keeping regular office-property prices, greater development costs, and costs such as financial capital (interest rates), and labour and materials costs in construction and land (Natsvaladze 2014). In Kenya, research found product differentiation strategies to be a key factor in the success of real estate (Kibiru et al. 2014).

H-1: Firm efficiency has a positive significant impact on the performance of commercial real estate firms in Addis Ababa

3.22.2.2 Suppliers' dependability and commercial real estate performance

Real estate growth is affected by unreliable suppliers (Ramnarian 2012). As identified by agency-theory factors, the risk level shouldered by the contractor and the sub-contractor is not the same, with the principal contractor shouldering most of the risk. This discrepancy is responsible for real estate not being delivered on time and at the agreed-upon cost (Okunlola and Ogunkoya 2015). Mirawati suggests that, in contrast, a relationship-based connection between the supplier and the contractor improves quality, image and productivity (Mirawati 2015).

H-2: Suppliers' dependability has a significant impact on the performance of commercial real estate firms

3.22.2.3 The buying intentions of real estate buyers and commercial real estate performance

On-going changes to the original design of commercial real estate are a critical challenge for customers in Ethiopia (Firew 2013). Buyers consider aesthetic, economic, marketing, geographic and social factors when deciding whether to buy a piece of real estate. Considering these factors, they try to outsmart the sellers and, if possible, reduce the price (Brophy 2010 and Haddad et al., 2011). These studies suggest that the intention of buyers in

buying real estate has an impact on **the performance of commercial real estate firms in Addis Ababa.**

H-3: The buying intentions of real estate buyers have a direct and statistically significant effect on the performance of commercial real estate in Addis Ababa

3.22.2.4 Credit availability and commercial real estate performance

Although real estate leads to personal wealth as a result of interaction between the government, capital markets, buyers' markets and government markets (Hashim 2010), the real estate industry in Ethiopia is slow because of a lack of affordable capital (Kiros 2009). Credit availability for financing is necessary since it enables individuals and cooperations to provide the housing needs of the populace (Okidim and Ellah 2013). A mortgage loan is meant to finance real estate investments (Akenga et al. 2015). Since real estate is a business that consumes a large amount of capital, it is hypothesised that there is a positive bond between credit availability and positive real estate performance.

H-4: Credit availability has a positive and significant impact on commercial real estate performance

3.22.2.5 Market strategy and commercial real estate performance

Corporate real estate strategy theorises that firms become productive and profitable by minimising costs, being flexible, providing a unique service or product, attracting and retaining professionals, marketing proactively and managing HR effectively (Roulac 2001). Slow real estate growth is affected by internal inefficiencies and the absence of professionals in different streams (Ramnarian 2012). According to Adewale the performance of a firm is significantly affected by marketing strategy variables such as advertising, place, price, packaging and after-sales services (Adewale et al. 2013). Competitive advantage is a source of superior performance and is made up of competencies of the firm that are not able to be imitated by competitors (Barney 1991). Thus, from the theoretical and empirical findings, it is theorised that marketing strategy has a positive and significant effect on real estate performance.

H-5: Market strategy has a statistically significant and positive impact on commercial real estate performance

3.22.2.6 Legal factors and commercial real estate performance

Ownership issues, tax and business permit rules have impacted real estate business considerably, especially that of commercial real estate. For example, tax deductions and free economic zones in Latvia have attracted foreign direct investment (Komisarov 2016), whereas fraud and corruption that result from the lack of a comprehensive real estate framework retard the business in the case of Ethiopia (Abera 2010). Governments regulate the real estate business through legislation, taxation, subsidies, the banking system and the zoning of land (Torgomyan and Laskowska 2016).

On the basis of the above theoretical and empirical studies, it is proposed that legal factors both positively and strongly determine the performance of commercial real estate in the Addis Ababa market.

H-6: Legal factors have a statistically significant and positive impact on commercial real estate performance

3.22.2.7 Land availability and commercial real estate performance

While demand for land is increasing constantly, the supply of land remains constant. This makes land expensive. Sometimes government policy also affects land prices, which reduces the availability still further. Land availability is affected by marketing, non-marketing and environmental factors, including political and legal factors (Kuryj-Wysocka et al. 2014). Lack of land availability is one of the main drivers of the urban housing shortage (World Bank 2015). Consequently, it is hypothesised that land availability positively and considerably affects the performance of commercial real estate in the Addis Ababa market.

H-7: Land availability positively and significantly affects the performance of commercial real estate firms

3.22.2.8 Infrastructural development and commercial real estate performance

Cahill suggests that access to infrastructure is critical for real estate success (Cahill 2010). Locations that are connected with the city attract much investment (Igbinosa 2011), transport facilities of different models have influenced commercial real estate (Seo 2016); and the success of real state in Kenya has been found to depend on location and proximity to infrastructure (Kibiru et al. 2014). Following the above scholarly support, it seems safe to theorise that development in infrastructure has a significant positive impact on commercial real estate in Addis Ababa.

H-8: Infrastructural development has a significant and positive impact on commercial real estate performance

3.22.2.9 Technology adoption and commercial real estate performance

Technology is increasing the efficiency of real estate construction through ICT (AutoCAD), digital selling and marketing, and involving customers in the design process so that frequent change from the original design can be minimised (Navigant Construction Forum 2016, Thompson and Dixon 2005). Real estate is reaping four kinds of benefits from property development, including the ability to design and construct properties easily, store data, and promote sales and marketing. It is hypothesised in the current study that the adoption of the latest technology has a major direct influence on the performance of the commercial real estate market.

H-9: Technology adoption has a statistically significant and positive effect on the performance of commercial real estate firms

3.22.2.10 Leadership and commercial real estate performance

Organisational performance is the “transformation of inputs into outputs by achieving certain outcomes. With regard to its content, performance informs about the relation between minimal and effective cost (economy), between effective cost and realised output (efficiency) and between output and achieved outcome (effectiveness)” (Chen 2002, as cited in Karamat 2013). Daft and Marcic define organisational performance as the measure of when and how an organisation determines its own objectives (Daft and Marcic 2009). According to Obiwuru, Okwu, Akpa, and Nwankwere one of the reasons why there is a relationship between leadership and organisational performance is that increased performance necessitates innovation-oriented competitiveness within today’s concentrated and dynamic market (Obiwuru et al. 2011). Reduced profit and competencies also need to be dealt with creatively (Santora et al. 1999). Studies suggest that, in the face of such challenges, effective leadership can facilitate performance development (McGrath and MacMillan 2000). In addition, to understand the effects of leadership on performance, it is important to understand that leadership plays a key role in developing the performance of organisations (Obiwuru et al. 2011). The improvement of organisational performance requires the development of management, and a sustainable competitive advantage requires leadership (Avolio 1999 and Rowe 2001).

H10: Leadership quality has a positive significant impact on the performance of commercial real estate firms in Addis Ababa

3.23 Chapter Summary

Real estate is a complicated concept built on several theories from various fields, with many role players entering the market for various reasons. Several theories can be used to explain the concept of real estate business and its value, such as transactional, agency, and institutional theories.

In the theoretical review section of the chapter, the following multiple theories were discussed in brief: Neoclassical economic theory; Agency theory; institutional theory, National Competitive Advantage Theory; Resource based view model; Certified Commercial Investment Member (CCIM) and The Four Phases of the Real Estate Cycle market has been discussed. According to Neoclassical economic theory can be considered as a market in which suppliers and purchasers join together to affect a transaction that is a reason-based (rational) decision. According to Agency theory of real estate by using their power of information asymmetry, agents are in a position to form inefficient institutions to satisfy their personal interest at the expense of principals' resources. This affects the ability of real estate firms to deliver their product or service on time, which in turn leads to higher costs (Okunlola and Ogunkoya 2015). According to institutional theory, institutions are affected by formal and informal factors, such as law, property rights, society's culture and traditions (Ankarloo 2006). Michael E. Porter's National Competitive Advantage Theory, also known as his diamond model, was devised in search of answering "why some countries have more international success in particular industries than other countries" (Michael E. Porter, 1998). Resource based view model, companies can beat the competition by building core competence or capabilities that their competitors cannot easily imitate or copy and thus cannot be purchased in factor markets. In other words, these are the firm's capabilities, which are difficult-to-imitate by its competitors (Barney et al. 2001). Corporate real estate strategy theories demonstrate layers of associated key action that provide feasible competitive advantage inferred from conceivable sources of maintainable competitive advantage (Kongela 2013). This model connects various actors as organisational operational techniques through the critical layers of movement and coordination that create organisational competitiveness. Certified Commercial Investment Member (CCIM) real estate feasibility model is a four-factor analysis is helpful in improving the performance of real estate

(Manning et al. 2015). These factors are demand and supply analysis; financial analysis; location, site and building analysis; and political and legal analysis (Choi 2008). The Four Phases of the Real Estate Cycle-Similar to the broader economy, commercial real estate is a cyclical market. There are four phases to the real estate cycle: Recovery; Expansion; Hyper Supply and Recession. Macro factors Micro factors affecting the performance of commercial real estate were articulated.

In the empirical section of the literature review all the constructs affecting real estate performance including credit availability and the performance of commercial real estate; Legal and political factors and the performances of commercial real estate; Technology and the performance of commercial real estate; Infrastructure and the performance of real estate; Land availability and the performance of commercial real estate; Buyers/customers and the performance of real estate; Suppliers and the performance of commercial real estate; Firm efficiency and the performance of commercial real estate and Measuring the Performance of Commercial Real Estate were discussed in detail.

In the last section of this chapter a conceptual framework is developed as a tool to guide the researcher's inquiry; it embraces ideas used to organise the research (Holborn 2008). One of the aims of the current study is to construct an integrated commercial real estate performance measurement model related to Addis Ababa. In addition to the conceptual framework of the study hypothesis was developed for all ten constructs supported by adequate Empirical support.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction

This chapter presents the research methods used to conduct the entire study. In particular, this chapter focuses on issues of design, the research approaches used, and the methods of sampling, variable measurement and data analysis.

4.2 Research Paradigm

Before presenting the method of research used in a study, it is necessary for the researcher to position himself on world view or paradigm as a way of breaking down the complex research phenomenon (Patton 1990, Weaver and Olson 2006, Taylor, Kermode et al. 2007). In this regard, there are three different types of paradigms commonly used to guide academic research: interpretivism, post positivism and pragmatism. These paradigms are discussed in the following paragraphs.

4.2.1 The interpretive paradigm

The main tenet of interpretivism is that it is not possible to observe a research phenomenon objectively from the outside; instead, it has to be examined or observed from within or inside (Weaver and Olson 2006). By implication, this paradigm argues that the causal relationships among variables that are used in pure natural sciences may not be applied in social settings, where people construct meanings and interpretations for the relationships. This means that the researcher has to understand and clarify the social reality from the perspective of the different actors or participants (Cohen et al. 2007). Thus, researchers in this paradigm seek to understand rather than explain.

4.2.2 The positivist paradigm

This perspective is based on the assumption that there is a stable reality with absolute principles, and predictions can be made with accuracy (Halcomb and Andrew 2005). Following this paradigm, the effectiveness of research is verified only by the degree to which observed data confirm the phenomenon under investigation (Hope and Waterman 2003).

4.2.3 The pragmatic paradigm

This paradigm provides the researcher with more flexibility as it allows the researcher to move between the above-mentioned paradigms and other worldviews to gain a deeper understanding of the phenomenon being studied. This paradigm does not incline itself to either paradigm of complete subjectivity or objectivity mentioned above. It assumes that there is no complete objectivism or complete subjectivism in understanding a particular phenomenon and the reality is explained by what works best at the present time (Tashakkori and Teddlie 2003).

Generally, at the one extreme, subjective reality is presented in the interpretive paradigm, where the role of a researcher is to understand social and organisational reality. This paradigm also assumes that contextual factors are understood in the typical case of a company where the aim is to solve that immediate problem contextually.

At the other extreme, the positivist paradigm considers complete objective reality to exist independently of the researcher. Hence, the researcher is required to unfold that reality and generalise the findings to the entire population using the deductive approach. Between these two approaches lies the pragmatic paradigm, which does not lend itself to either of the extreme assumptions about reality and knowledge.

The choice of a particular worldview for a given study depends primarily on the objective of the study and the type of data used for the investigation. The key to the pragmatic method is a commitment to end-causes and outcomes of practice, rather than abstract first-causes. Pragmatism involves research designs that incorporate operational decisions based on 'what will work best' in finding answers for the questions under investigation and this enables pragmatic researchers to conduct research in innovative and dynamic ways to find solutions to research problems. With these assumptions in mind and considering the objective of this study of examining determinants of the performance of commercial real estate firms operating in Addis Ababa, this investigation involved why and how questions to obtain an in-depth understanding of the underlying reality. This would enable the researcher to come up with possible solutions to solve the immediate and context-specific problem concerned. To address the study objectives, both quantitative and qualitative data needed to be employed. Hence, the pragmatism paradigm was considered the appropriate paradigm to be applied in this study. This implies that deeper context-specific company reality should be understood through thoroughly understanding the practices of commercial real estate business.

4.3 Research Approach

There are two commonly used research approaches in any academic research: the quantitative and qualitative approaches (Saunders, Lewis et al. 2007). Between the two, there is also a mixed research approach which involves a blend of quantitative and qualitative data (Creswell 2014). This study involved both a structured relationship that could be addressed through quantitative data and an interpretative approach that employed qualitative data. Hence, in order to gain a deeper understanding of the phenomenon under investigation and overcome the limitations of each individual method, the researcher employed a mixed research approach. Bethlehem claimed that mixed research reduces both cost and time demands while increasing response rate (Bethlehem 2009).

Although a mixed research approach was used, in terms of sequence, a survey questionnaire for quantitative data collection and analysis was carried out first. This was then followed by interviews for qualitative data collection. The purpose of this sequence was to properly extract all possible factors that might determine the performance of commercial real estate firms in the study area through a questionnaire and interview. The interview or qualitative phase was considered to have the potential to substantially improve the contents and quality of the questionnaire that would be administered, in the first phase, to collect quantitative data. Finally quantitative data collection and analysis were undertaken to maintain the right mixture among research objectives, hypotheses and questions.

4.4 Research Design

A research design can be described as a procedural plan or blueprint that a researcher adopts to answer the research questions under consideration step by step (Creswell 2014). It is a type of enquiry that falls within the above three approaches – that is qualitative, quantitative and mixed methods – which gives the researcher a clear direction in which to travel to arrive at his destination.

For this study, an explanatory sequential mixed method design was adopted. Using this design, the study started with an explanatory, quantitative phase and moved sequentially to qualitative aspects. In this context, the first phase used a quantitative method in the survey questionnaire. This was followed by the second phase in which a qualitative method was used; that is, interviews with key informants (qualitative) and enhancing the analysis through producing codes or conceptual themes. The results of this analysis were used to improve the quantitative phase (survey questionnaire).

In the explanatory design, the researcher first conducts quantitative data collection and analysis, and then supports the findings with qualitative methods (Creswell 2014). In contrast, the exploratory design uses the two primary variants of the theory development variant, where the larger objective of the mixed methods study is to develop theory, and the instrument-development variant, where the objective is to develop a refined instrument to test a hypothesis (Creswell and Plano Clark 2018).

4.5 Study Areas and Period

Ethiopia, located in the horn of Africa, is a land-locked country bordering Eritrea, Somalia, Kenya, Djibouti, Sudan and South Sudan. The country is the second most populous nation in Africa after Nigeria, with more than 112 million people (World Bank 2019).

Addis Ababa is the capital city of Ethiopia and is also the largest city in the country. According to the Ethiopian Central Statistical Agency (CSA), in 2016 the city had 3,433,999 residents. Addis Ababa hosts the headquarters of various regional and international organisations, with the most important being the African Union (AU) and the United Nations Economic Commission for Africa (UNECA).

The city is therefore often referred to as "the political capital of Africa" for its historical, diplomatic and political significance for the continent. This capital city has an area of 527 square kilometres. Population density is estimated at approximately 5,165 people per square kilometre of available space.

In terms of altitude, Addis Ababa is one of the highest cities in the world at 2100–3000 metres above sea level. This altitude explains the temperate climate. The average temperature ranges from 15 to 18°C, with a maximum temperature of 24°C and a minimum temperature of 10°C. The city receives more than half of its annual rainfall of 110 cm (43 inches) during the summer months of June, July and August (Mubneh 2013). The city is divided into two watersheds: the Big Akaki River (the eastern and central two-thirds of the city) and the Little Akaki River (the western third). While the Big and Little Akaki are the city's major rivers, five smaller rivers and many streams also flow through the city.

Owing to rapid urbanisation and rural-to-urban migration, the population is continually increasing from and this is attracting real estate developers. Accordingly, more than 160 firms have been registered, although only 100 were operational in 2019 and 2020.

The current study was geographically delimited to Addis Ababa, with data collected from March to May 2021 from the selected firms and respondents.

4.6 Population And Sample Framework

4.6.1 Study population

The study population for this research was all the commercial real estate firms operating in Addis Ababa. The respondents chosen for the study were all employees and managers of the 35 commercial real estate firms operating in Addis Ababa. The employees and managers were selected from the construction or operation, finance, marketing and legal divisions of these firms. These managers of these divisions were sought as they were considered to have knowledge that would be very relevant in responding to the structured questionnaires in this study.

4.6.2 Population and sample frame for the study



Figure 4.1: Population and Sample Frame of the Study

In this case, the study population was all employees and managers engaged in commercial real estate companies in Addis Ababa. The number of registered firms in the real estate sector at the time of the study was 160. However, out of the 160 registered firms, 100 of them were operational.

4.6.2.1 Sampling techniques and sample size for the quantitative study

The researcher used the purposive sampling technique as this allowed him to select and approach appropriate firms and potential study respondents. The following inclusion and exclusion criteria were considered:

- Only private and commercial real estate firms that had been in operation for five years or more were considered.
- The top 35 real estate companies in terms of popularity were chosen.

The researcher considered the following five departments to have a significant influence on the performance of real estate firms and considered it appropriate to consult the heads of these departments. For this reason, a self-administered questionnaire was distributed to the following positions in each of the 35 firms:

- 1) Chief Executive Officer or General Manager (CEO/GM) or Deputy General Manager
- 2) Operation (construction) Department Manager
- 3) Finance Department Head
- 4) Procurement Department Head
- 5) Contract and Marketing Manager
- 6) Legal advisor/officer of the company

Thus, a total of 231 respondents (six individuals from each firm and 10% allowance for non-response) were considered. In the absence of managers or heads of managers were considered. This sample size satisfied the sample size adequacy recommendation by Comrey and Lee (1992) that a sample size of 50 is very poor, 100 is poor, 200 is fair, 300 is good, 500 is very good, and 1000 or more is excellent.

The proposed sample size exceeded the recommendations of the above-mentioned authors. In other words, as per the recommendation of Nunnally (1978), the researcher is supposed to take 90 respondents (ten times nine factors). However, the sample of 231 established for the current study was higher than that suggested by other authors, and it was possible to conclude that the sample size was adequate for running any inferential statistics on.

4.6.2.2 Sampling techniques and sample size for the qualitative study

For the qualitative part of this study, the purposive sampling technique was employed. This sampling technique was chosen to obtain the appropriate answers for some research questions from purposely selected respondents. This is recommended in situations of extreme cases, heterogeneity (maximum variation), homogeneity (maximum similarity), critical cases or typical cases (Saunders and Lewis 2009).

To triangulate the data sources and obtain an in-depth understanding of the research topic, a sample of senior government officials from pertinent offices (land administration, basic utility authorities, urban development and construction) and private firms (banks, suppliers of construction materials and technology, external marketing consultants) was considered. Consequently, a total of 15 key informants were identified for interviewing.

Table 4.1: Sampling Distribution for Qualitative Data

S. No	Category	List of offices	Sampling method	Number of samples
1	Government Offices	Land administration	Judgmental	2
		Basic utility authorities (Electricity, Water, Road)	Judgmental	2
		Urban development and construction	Purposive	2
2	Private Firms	Suppliers of construction materials and technology	Convenience	3
		External marketing consultants	Snowball sampling	3
		Bankers (senior loan officers from three different banks)	Referral	3
	Total	15 ey informants		

4.7 Data Sources and Types of Data

This study employed both primary and secondary data.

4.7.1 Primary data

The study used both quantitative and qualitative data that were obtained from both primary and secondary sources. The primary sources of data were the use of a survey questionnaire (closed questions) that was designed taking into consideration expert views on determinants of commercial real estate performance. The researcher also employed an in-depth personal interview (and used an interview schedule) to obtain more information from real estate developers who did not participate in filling in the questionnaire.

4.7.2 Secondary data

Secondary data were extracted from the selected companies' documents, annual reports of the Ethiopian Ministry of Urban Development about real estate trends and performance, and other relevant sources, such as journals, research studies in related areas and publications.

4.8 Methods of Data Collection

The following set of data-collection instruments was used.

4.8.1 Quantitative data-collection methods

Quantitative data were collected by means of a structured questionnaire. The questionnaire consisted of questions with an interval five-point Likert scale, with the questions aimed at commercial real estate managers and employees. The questionnaire focused on the extent of challenges faced by real estate companies in relation to operation/construction, finance, marketing, and regulatory frameworks, as well as opportunities that might contribute to the development and viability of the sector. The independent and dependent variables were identified from the literature review (see Section 2.4 above) and questions were set from these variables according to the five-point Likert scale. The questionnaire was distributed to the sample of respondents who worked in the operations, finance, procurement, marketing and legal divisions of selected real estate companies operating in Addis Ababa. The questionnaires were used to collect data from general managers; the department heads of operation, finance, marketing and procurement; and the legal officers of real estate developers. The questionnaires were then collected by the researcher personally.

4.8.1.1 The questionnaire

The questionnaire contained three sections. The first section sought general information on the respondents. The second section concerned the determinants of the real estate performance level of real estate marketers. The third section contained questions regarding the performance level of commercial real estates. (See Appendix I.)

4.8.2 Qualitative data-collection methods

The instrument for qualitative data collection was designed in the form of a set of open-ended questions on the topic of the research. In-depth face-to-face interviews using a discussion guide and interview schedule were carried out with experts, senior-level operation/construction managers, financial managers, marketing and procurement managers, and legal advisors of real estate developers. These questions were supported by the literature review and opinions of experts in the area. The interviews mainly focused on challenges and opportunities faced by this sector with respect to operations, finance, marketing and legislative framework.

4.8.2.1 Semi-structured interview schedule

An advantage of the face-to-face interview as a data-collection method is that it allows for the clarification of responses and probing, which result in fewer missed responses (Carey and Durant 2000). For this part of the data collection, open-ended questions were customised to obtain reliable information about commercial property development in the capital city of Ethiopia. Semi-structured interviews were conducted to provide a better avenue for prober deeper into the problems under investigation. Unlike structured interviews, which are standardised and do not allow the interviewer to deviate from the questions on the interview schedule (Saunders et al. 2003), semi-structured interviews do not limit the responses of the respondents.

Open questioning during the face-to-face interview was chosen to help the researcher to explore the issues raised in a more detailed manner. The method provides respondents with the opportunity to clarify vague statements and to further elaborate on earlier brief comments. The researcher determined that he would not share his own beliefs and opinions so as not to influence the answers of the respondents. Importantly, leading questions and showing personal bias were restricted as these might result in response bias (Saunders 2003).

4.9 Instrument Validity and Reliability

4.9.1 Validity

Validity is often defined as the extent to which an instrument measures what it is intended to measure (Creswell 2009). A perfectly valid scale will have no measurement error. Before a proposed model can be used in hypothesis testing, the validity of its measurement model must first be checked. Validity can be measured in several ways. Among these, content and construct validity are the major methods.

Content validity, as the name suggests, refers to the content of the scale. This involves a subjective yet systematic assessment of how well the content represents the task at hand. Here, industry experts are polled to look at the scale and give their opinion on whether the scale measures the phenomenon. In the current study, a pilot survey of 30 potential respondents was conducted. From this pilot study, feedback was collected, and tools were validated prior to the full data collection.

4.9.2 Reliability

Reliability refers to the extent to which a data-collection technique or analytical procedure provides consistent results (Creswell 2009). Finding reliable measures is important when choosing measures to include in a study. Reliability has many facets. One of the main issues affecting scale is internal consistency. This indicates how related the elements are that make up the scale and whether they all measure the same basic structure. One of the most commonly used measures of internal consistency is Cronbach's Alpha coefficient, as explained below.

4.9.2.1 Cronbach's coefficient alpha

The normal range of Cronbach's coefficient alpha value is between 0.0 and + 1.0, with the higher values reflecting a higher degree of internal consistency. A value exceeding 0.7 is assumed to be sufficient and an instrument with such a value is said to be reliable as recommended by Nunnally and Creswell (Nunnally 1994 and Creswell (009).Nunnally states that "in the early stages of predictive or construct validation research," it may be "satisfactory" to "have only modest reliability (.70)". Similarly, as cited in the work of Gliem and Gliem (2003) and Malhotra and Dash (2010), the following rule of thumb is available:

“ ≥ 0.9 – Excellent, ≥ 0.8 – Good, ≥ 0.7 – Acceptable, ≥ 0.6 – Questionable, ≥ 0.5 – Poor, and ≤ 0.5 – Unacceptable”.

Accordingly, the actual reliability score of each dimension was compared against the standard value and decisions were made by the researcher and his advisor.

4.10 Pilot Testing

Before running the entire data collection, all measurement items for all the variables were tested by 20 to 30 randomly selected respondents to make sure that everyone in the sample would be likely to understand the questions in the same way. Using the inputs from the pilot respondents, the items were refined to make them more understandable by respondents. In addition, five experts in the area (real estate developers and senior consultants in construction management) were invited to improve the quality of the items.

Table 4.2 presents the alignment of hypotheses, research questions and data-analysis techniques in a research consistency matrix.

Table 4.2: Research Consistency Matrix

S. No	Literature Review	Hypotheses/Propositions	Research Questions	Methods of Data Analysis
1.			What are the major factors that hinder the performance of commercial real estate firms in Addis Ababa?	Thematic analysis
2.			Which factors are the underlying dimensions that influence the performance of CR firms?	Explanatory factor analysis
3.	Adequate theoretical and empirical evidence has been presented	H-1: Credit availability has a positive and significant impact on commercial real estate	To what extent does credit availability affect performance of commercial real estate in Addis Ababa?	Multiple Linear regression (MLR)
4.	Adequate theoretical and	H-2: Legal factors have a statistically significant and positive impact on	To what extent do legal factors affect performance of	MLR

S. No	Literature Review	Hypotheses/Propositions	Research Questions	Methods of Data Analysis
	empirical evidence	commercial real estate performance	commercial real estate in Addis Ababa?	
5.	Adequate theoretical and empirical evidence	H-3: Technology adoption has a statistically significant and positive effect on the performance of commercial real estate firms	To what extent does infrastructural development affect performance of commercial real estate in Addis Ababa?	MLR
6.	Adequate theoretical and empirical evidence	H-4: Infrastructural development has a significant and positive impact on commercial real estate performance	To what extent does adopting a latest technology affect performance of commercial real estate in Addis Ababa?	MLR
7.	Adequate theoretical and empirical evidence	H-5: Land availability has positive and significant effects on the performance of commercial real estate firms	To what extent does land availability affect performance of commercial real estate in Addis Ababa?	MLR
8.	Adequate theoretical and empirical evidence	H-6: Location of real estate sites has a direct and statistically significant effect on the performance of commercial real estate firms	To what extent does location of real estate sites affect performance of commercial real estate in Addis Ababa?	MLR
9.	Adequate theoretical and empirical evidence	H-7: The buying intentions of real estate buyers have a direct and statistically significant effect on the performance of commercial real estate in Addis Ababa	To what extent does the intention of the buyer affect performance of commercial real estate in Addis Ababa?	MLR
10.	Adequate theoretical and empirical evidence	H-8: Suppliers' dependability has significant impact on the performance of commercial real estate firms	To what extent does suppliers' dependability affect performance of commercial real estate in Addis Ababa?	MLR
11.	Adequate theoretical and empirical evidence	H-9: Firm efficiency has a positive significant impact on the performance of commercial real estate firms in Addis Ababa	To what extent does the efficiency of the firm affect performance of commercial real estate in Addis Ababa?	MLR

S. No	Literature Review	Hypotheses/Propositions	Research Questions	Methods of Data Analysis
12.				<ul style="list-style-type: none"> Whether demographic profiles of respondents affect their perception about the performance of real estate firms or not using binary logistics regression
13.	<p><u>Note that:</u></p> <ul style="list-style-type: none"> Data type and source: all the data are primary and data sources are management staff and key informants from selected offices and firms Determined significance level (P value) is 95% – $Z = 1.96$ Sample size for quantitative data – 231 management staff (6 individuals from each firm, including 10% added for non-response) For all hypotheses, the type of variable is ordinal, and the remaining is nominal. <ul style="list-style-type: none"> Cronbach’s alpha will be used to check the reliability of scale data and construct validity will also be maintained through EFA, expert review and pilot study. 			

4.11 Assumptions of Inferential Statistics

Before running the entire data analysis, the data were checked to establish whether they satisfied the assumptions of linear regression or not. This is because failure to consider the characteristics of the distribution may bring in faulty decisions. It is understood that in research, statistical tests have certain assumptions to satisfy before results are interpreted and researchers should verify whether the statistical assumptions associated with the statistical tests are met or not. If the statistical assumptions are not met, the resulting inferences cannot be interpreted and generalised to the population. The validity of any reported *p*-value is based on meeting the statistical assumptions and should also be supported by literature. Accordingly, the following common assumption tests were run using their respective measurements.

4.11.1 Normality of the error distribution

Regression models require that the errors of prediction described by the differences between the obtained and predicted dependent variable scores are normally distributed within the data set. Researchers can detect the violation of this assumption by constructing a histogram of residuals, with a visual check to see whether the distribution approximates the normal distribution.

4.11.2 Linearity

Basically, regression analysis is based on the principle of correlation. As such, the existence of a linear relationship or linearity between independent and response variables is very important. This assumption can be checked by examining residual plots. For nonlinear relationships, corrective action to accommodate the curvilinear effects of one or more independent variables can be taken to increase both the predictive accuracy of the model and the validity of the estimated coefficients.

4.11.3 Homoscedasticity

This assumption requires the existence of equal variances among pairs of variables, and researchers can identify any violation of this assumption by either residual plots or simple statistical tests which measure the equality of variances for a single pair of variables.

4.11.4 Independence of error terms

In regression, it is assumed that the predicted value is not related to any other prediction; that is, each predicted value is independent. Violation of this assumption can be identified by plotting the residuals against a sequence of cases. If the residuals are independent, the pattern should appear random. Violations are indicated by a consistent pattern in the residuals. The Statistical Package for the Social Sciences (SPSS) software provides the Durbin-Watson (Beechler and Woodward) test result to check for this assumption.

4.11.5 Multicollinearity

This exists when independent variables are highly correlated to each other, which indicates that these variables overlap each other and share predictive power. This in turn may lead to the paradoxical effect, in which the regression model fits the data well but none of the predictor variables has a significant impact in predicting the dependent variable.

4.12 Methods And Procedures of Data Analysis

Data analysis involves methodically spreading statistical and logical techniques to produce, demonstrate, condense and evaluate the collected data. Different data-analysis methods offer a way of drawing inductive inferences from data (Shamoo and Resnik 2003). In this study, both quantitative and qualitative data analysis techniques were used and, procedurally, quantitative data analysis was carried out first and qualitative analysis followed, which

maintained the right alignment among the research objectives, hypotheses and questions. The steps that the researcher followed in analysing the data are set out below.

- i. Initially, the questionnaires were modified, pilot tested and distributed.
- ii. The completed questionnaires were collected and checked for omissions, legibility and consistency.
- iii. Cleaned data was entered into the appropriate software and then data clearance, coding and identification of missing values was carried out.
- iv. The researcher conducted interviews with selected key informants using semi-structured interview sheets that were based on the major constructs of the study.
- v. Finally, to determine the type of inferential statistics that would be the best fit for analysis, all the necessary assumptions of inferential statistics discussed earlier (Section 3.10) were checked and made ready for analysis.

4.12.1 Quantitative data-analysis techniques

The data collected from the self-administered questionnaire were entered into SPSS) Version 22, and MS Excel. Consequently, appropriate *Univariate*, *bivariate* and multivariate statistics were used to address the research questions and test the hypotheses. The following statistical tests were used.

4.12.1.1 Descriptive statistics

Descriptive statistics were used to describe the characteristics of various variables and to summarise the study sample. For instance, firms' corporate profile (size of firms, number of houses they have constructed and delivered to customers and similar data sets) can be summarised using measures of *central tendency* and measures of *dispersion*.

4.12.1.2 Correlation

Pearson correlation was employed to examine the relationship between the independent variables (perception of managers across ten factors) and the dependent variable (firms' performance).

4.12.1.3 Multivariate multiple regression analysis

This analysis was considered in identifying the effect of two or more explanatory variables on outcome variables. Similarly, multivariate analysis was considered a useful test for

identifying the strongest underlying dimension (factor) to influence the performance of commercial real estate firms in the study area.

After collecting responses, data analysis was conducted. Descriptive statistics were used to describe the sample of the study. Regression analysis has been carried out to find out which of the predictor variables has the biggest effect on the dependent variable.

Regression Functions

Dependent Variable

$$\text{REP} = \text{RE Firm Performance Productivity}$$

Independent Variables

Determinants of real estate Company's performance

The regression model is illustrated as follows:

$$\text{CREP} = \alpha + \beta_1 \text{FE} + \beta_2 \text{SD} + \beta_3 \text{BI} + \beta_4 \text{CA} + \beta_5 \text{MS} + \beta_6 \text{LF} + \beta_7 \text{LA} + \beta_8 \text{ID} + \beta_9 \text{TA} + \beta_{10} \text{LQ} + e$$

Where

α = the constant

$\beta_1 - \beta_{10}$ = the parameters

CREP = Real Estate Performance

FE = Firm's Efficiency

SD = Suppliers' Dependability

BI = Customers' Buying Intention

CA = Credit Availability

MS = Marketing Strategy

LF = Legal Factors

LA = Land Availability

ID = Infrastructure Development

TA = Technological Adoption

LQ = Leadership Quality

e = error term

β_0 = is the intercept term-it gives the average value of REP when the stated independent variables are set equal to zero.

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ refers to the coefficient of their respective independent variable which measures the change in the mean value of REP, per unit change in their respective independent variables.

ε = Error term

4.12.1.4 Factor analysis

Exploratory and confirmatory factor analysis was used to measure the underlying factors that affected the variables in a data structure without setting any predefined structure to the outcome. Similarly, confirmatory factor analysis was considered to reconfirm the effects and correlation of an existing set of predetermined factors and variables that affected these factors.

4.12.2 Qualitative data-analysis techniques

The qualitative data collected from the sample of key informants (senior government officials and experts from private firms) through interviews were analysed with the help of the qualitative data-analysis software ATLAS.ti.

The researcher used the thematic analysis method in terms of which similar data sets and themes were identified, organised, analysed and reported (Braun and Clarke, 2006). Prior to the collection of primary data, the study identified the five themes of operation, finance, marketing, procurement and legislative framework. These themes were identified from prior empirical evidence and the researcher tried to narrate the agreements reached and debates put forward.

Thematic analysis aims to identify themes within the data. It is more inductive than content analysis because the categories into which themes are sorted are not decided prior to the data being coded. These categories are 'induced' from the data. While the general issues that are of interest are determined prior to the analysis, the specific nature of the categories and themes to be explored is not predetermined. This means that this form of research may take the researcher into issues and problems that he had not anticipated. In addition, thematic analysis provides a highly flexible approach that can be modified for the specific needs of a study, in this way providing a rich and detailed, yet complex account of data (King, 2004, Braun and Clarke 2006).

To protect against measurement error, bias and personal interpretations were avoided or minimised from the results and outcomes of the interviews of this study.

4.12.2.1 Deductive and Inductive Coding Approach

The study used a deductive and inductive coding approach to analyse the data. Thematic analysis is a method used for analysing qualitative data that entails searching across a dataset to identify, analyse and report repeated patterns (Braun and Clarke 2006). Hybrid thematic analysis is a method, or process, for identifying and encoding patterns of meaning in primary qualitative research (Braun and Clarke 2006, 2013). A hybridised coding approach was used in this study for the qualitative-data analysis. However, to adopt a hybrid approach, the researcher begins his analysis with a set of a priori codes (deductive) and then adds new codes (inductive) as he works his way through the data. Essentially, therefore, the hybrid coding approach provides the best of both worlds: deductive and inductive.

A deductive or theory-driven coding approach was used to analyse the qualitative data associated with the 10 constructs of real estate developers' efficiency, real estate suppliers' dependability, real estate consumers' buying intention, credit availability for real estate developers, marketing strategy, real estate-related legal and policy frameworks, land availability for real estate developers, infrastructure development, technology adoption and leadership quality or competency of the real estate developers. Prior to the interview, each Construct was defined/operationalised for the interviewee to have the same degree of understanding as stated in table 4.3.

Table 4.3: Summary of Pre-Established, Predetermined Codes / Theory-Driven Codes

S. No	Constructs /A Priori Codes/Predetermined Codes	Definition
1.	Firm efficiency	Firm-level efficiency (or firm efficiency) is the efficiency with which a firm converts its input into output and is an important element in asset pricing (Cochrane, 1991).
2.	Suppliers' dependability	Supplier reliability is simply defined as the ability of a company to consistently supply an acceptable product at the required time.
3.	Consumer's buying	A consumer's purchasing intention refers to that consumer's attitude towards a specific purchasing

Constructs /A Priori		
S. No	Codes/Predetermined Codes	Definition
	intention	behaviour and the consumer's degree of willingness to pay.
4.	Credit availability	Credit availability is the credit amount that a borrower can access at a specific time.
5.	Market strategy	Marketing strategy is a process that can allow an organisation to concentrate its limited resources on the greatest opportunities to increase sales and achieve a sustainable competitive advantage.
6.	Legal factors	Legal factors are the <i>regulatory framework</i> governing the <i>real estate</i> sector business in Ethiopia.
7.	Land availability	Land availability is the amount of land available for real estate development, based on a set of rules and guidelines that govern how a country's administration governs, manages and administers land in that country.
8.	Infrastructural development	Infrastructure development is the construction of basic foundational services in order to stimulate economic growth and improve quality of life.
9.	Technology adoption	“Technology adoption” refers to the process of accepting, integrating and using new technology in the construction sector.
10.	Leadership quality	A business leader is someone who motivates a group of people in order to achieve a common goal in a company.
11.	Commercial real estate performance	“Commercial real estate performance” refers to how well an organisation is doing in reaching its vision, mission and goals in terms of market share, sales and

Constructs /A Priori		
S. No	Codes/Predetermined Codes	Definition
		profit.

In addition, inductive, data-driven coding was used for additional factors found to affect commercial real estate performance as obtained from the interviews. This was achieved by creating a set of codes that was **based on the data itself** – in other words, the codes emerged from the data. The two steps used in the qualitative data analysis were code categorisation and theme identification. Simply put, categorisation is the act of reviewing everything that has been coded and creating groups of codes that can be used to guide additional research. Explicitly identifying and presenting the themes in the dataset was the next level of reasoning. As shown in Table 4.3 of the qualitative Data analysis chapter, themes are created and included in accordance with the study's research questions and objectives and are then followed by narratives.

4.12.2.2 The process of thematic analysis

Thematic analysis has been defined broadly as “a way of seeing” and “making Sense out of seemingly unrelated material” (Boyatzis 1998, 4). Braun and Clarke identify this type of analysis as a method of identifying and analysing patterns of meaning in a dataset (i.e., texts) (Braun and Clarke 2006). Clarke and Braun (2014, see also Braun and Clarke 2006 and Braun, Clarke and Rance 2015, 188–189) present a recursive six-phase process of thematic analysis:

- Familiarising oneself with the data (text; may be transcriptions) and identifying items of potential interest;
- Generating initial codes that identify important features of the data that are relevant for answering the research question(s); applying these codes to the dataset (segmenting and “tagging”) consistently; and collating codes across segments of the dataset;
- Searching for themes: examining the codes and collated data to identify broader patterns of meaning;

- Reviewing themes: applying the potential themes to the dataset to determine if they tell a convincing story that answers the research question(s); themes may be refined, split, combined or discarded;
- Defining and naming themes: developing a detailed analysis of each theme;
- Producing a report: weaving together the analytic narrative and data segments, relating the analysis to extant literature.

4.13 Methods of Dissemination of the Study Results

The research findings were presented to various audiences. The study findings were delivered to the examiners primarily through this thesis and an oral presentation supplemented by an LCD projector and MS PowerPoint. The findings were also presented at a number of conferences and workshops to a wide range of real estate business audiences. Copies of the entire report will be distributed to the Ethiopian Ministry of Urban Development and Construction, as well as other relevant forums. Furthermore, extracted pieces from this thesis will be submitted for publication to reputable international journals.

4.14 Ethical Consideration

Moral issues are present in any sort of research (Angelica, 2001). The study procedure creates pressure between the pursuits of research to make generalisations for the best of others and the rights of study participants to keep their privacy. Ethics relate to doing well and averting damage. According to Leedeey there are a number of key ethical considerations that protect the rights of research participants (Leedeey 2010). These are safety from harm, informed consent, the right to privacy and the requirement for honesty with expert colleagues (Leedeey 2010). In the current study, the following moral issues were considered.

A letter of cooperation was written by the university to the different stakeholders of the study. The researcher made appointments with the key decision makers, visiting them and explaining the research project to them and then finally requesting them to sign a letter of permission if they were willing to participate in the study.

Confidentiality relates to the right of access to the data provided by the respondents and in particular the need to keep the data secret or private (Saunders et al. 2009). For the purpose of confidentiality, the university coordination office in Ethiopia wrote an introductory letter to validate that a student from the university would conduct this research project and that the project had received ethical clearance. The researcher gave each respondent an informed

consent form and explained the content of the form. The respondents were given sufficient time for questions and clarifications regarding the form and the study. Once all the questions of the respondents had been adequately addressed, they were requested to sign the form.

4.15 Chapter Summary

There are three different types of paradigms commonly used to guide academic research: interpretivism, post positivism and pragmatism. In this study, the pragmatism paradigm was thought to be the most suited. This suggests that comprehending deeper context-specific firm realities requires a detailed comprehension of commercial real estate business procedures. In this study, the researcher also employed a mixed research approach (Quantitative and Qualitative). An explanatory sequential mixed method design was used for this investigation. Utilising this methodology, the study began with an explanatory, quantitative phase and progressed to qualitative aspects in a sequential manner. In this context, the survey questionnaire utilised a quantitative method in the first phase. Then came the second phase, in which a qualitative method has been used.

The study population for this research was all the commercial real estate firms operating in Addis Ababa. A self-administered questionnaire was distributed to the following positions in each of the 35 firms: Chief Executive Officer or General Manager (CEO/GM) or Deputy General Manager; Operation (construction) Department Manager; Finance Department Head; Procurement Department Head; Contract and Marketing Manager; and Legal Advisor/Officer of the Company. Purposive sampling was used to choose roughly ten appropriate institutions for the qualitative study (government offices; private firms; etc.).

To collect data from appropriate target groups, a structured questionnaire as well as an interview checklist were constructed and used. The quantitative data was examined using descriptive and inferential statistics after validity and reliability were confirmed. The researcher employed the thematic analysis method to identify, organise, analyse, and report on related data sets and themes (Braun and Clarke 2006).

To analyse the data, the study utilised a deductive and inductive coding approach/hybridised approach. Thematic analysis is a method for studying qualitative data that involves searching over a dataset for, analysing, and reporting on repeating patterns (Braun and Clarke 2006). Clarke and Braun (2014; see also Braun and Clarke 2006, and Braun, Clarke, and Rance, 2015, 188-189) offer a recursive six-phase thematic analysis technique that was used to analyse qualitative data.

According to Leedey there are three important ethical issues that must be addressed in order to protect the rights of study participants (Leedey 2010). These are safety, informed consent, the right to privacy, and the requirement for candour with expert colleagues (Leedey 2010). The rights of the participants were scrupulously observed throughout the data collecting and processing process.

CHAPTER FIVE: QUANTITATIVE DATA RESULTS AND DISCUSSION

5.1 Introduction

This chapter focuses on the analysis and interpretation of data collected through questionnaires on the determinants of commercial real estate performance in the case of Addis Ababa, Ethiopia. Tables, figures and short descriptions are used to present the findings clearly. This chapter begins with the presentation of the response rates, followed by the profiles of the respondents, demographic characteristics of respondents and descriptive statistics (means, standard deviations, counts and percentages and individual correlations in tables) followed by inferential statistics. The regression results obtained from the data analysis carried out by running SPSS Version 26 and Analysis of Moment Structures (AMOS) software are presented. This analysis includes descriptive analysis with clear checks of scale, demographic judgments and statistical fact-checking.

5.2 Data Editing and Coding

The primary data were collected through questionnaires. After the questionnaires had been returned, they were checked to establish whether they had been properly filled in or not and whether they were fit for data analysis prior to the commencement of the data analysis. Those questionnaires that had not been properly filled in were discarded and not included in the analysis of the data. Those that had been properly filled in were coded and entered into SPSS AMOS Version 26, which was used for the subsequent data analysis. Fincham (2008) considers the acceptable response rate of a study to be approximately 60% and above. According to Rubin and Babbie (2010), a response rate of 70% is “very good” for further assessment. The response rate of 71% obtained for the current study was therefore considered good enough.

5.3 Response Rate

Table 5.1: Response Rate of the Questionnaires

Sample size	231
Number of Questionnaires Distributed	231

Sample size		231
Number of Questionnaires Collected		185
Number of Questionnaire Not Returned		46
Number of Questionnaires Collected but Discarded		22
Number of Questionnaires Used for Analysis		163
Response Rate		71%

Source: Author's own survey result (2022)

As shown in Table 5.1, out of the 231 questionnaires that were distributed, 185 were returned, with 46 not returned. Of those that were returned, 22 were discarded and 163 questionnaires were used in the final analysis. These figures yielded a real response rate of 71%, which is necessary and adequate for conducting the necessary statistical tests.

5.4 Profile of Study Respondents

From the answers to Section 1 of the questionnaire, the profiles of the 163 study respondents were compiled using frequency and percentage. The respondents' demographic data collected for this study, including gender, age, educational background, work experience, occupation and leadership styles, are summarised in Table 5.2.

Table 5.2: Profile of Study Respondents

Variable		Count	Per cent
Sex	Male	106	65.0%
	Female	57	35.0%
Age group	18-24 Years	9	5.5%
	25-34 Years	79	48.5%
	35-44 Years	60	36.8%
	45-54 Years	8	4.9%
	55-64 Years	7	4.3%
Educational level	College Certificate or Diploma	11	6.7%
	Bachelor's Degree	80	49.1%

Variable		Count	Per cent
	Master's Degree	65	39.9%
	Doctoral Degree	7	4.3%
Work experience	1 to 4 Years	49	31.4%
	5 to 10 Years	68	43.6%
	11 to 20 Years	36	23.1%
	21 to 30 Years	0	0.0%
	Above 21 Years	3	1.9%
Occupation	CEO	7	4.6%
	Deputy	18	11.8%
	Operation Head	36	23.5%
	Finance Head	27	17.6%
	Marketing Head	28	18.3%
	Purchasing and Property Head	30	19.6%
	Legal Officer	7	4.6%
Leadership Style	Democratic	75	52.8%
	Transformational	36	25.4%
	Autocratic	3	2.1%
	Laissez-Faire	27	19.0%
	Others	1	0.7%

Source: Author's Own Survey Result (2022)

5.4.1 Gender profile of respondents

As indicated in Table 5.2, the study's findings show that 106 (65%) of respondents were male and 57 (35%) were female when these demographic features of the respondents were considered. These figures show that men made up a larger portion of the selected organisations' leadership.

5.4.2 Age profile of respondents

According to the results of the survey, as shown in Table 5.2, 9 (5.5%) of respondents were found to be between the ages of 18 and 24, followed by 79 (48.5%) between the ages of 25 and 34. The study revealed that 60 (36.8%) of the respondents were over the age of 34, compared to 60 (36.8%) respondents who fell into the 35–44 age group. In addition, 8 (4.9%) of respondents fell into the 45- to 54-year-old age group, while 7 (4.3%) fell into the 55- to 64-year-old group.

5.4.3 Educational status of respondents

When respondents' educational backgrounds were taken into consideration, the study's findings, as shown in Table 5.2, indicated that 11 respondents (6.7%) had a diploma as their highest qualification, followed 80 respondents (49.1%) who had a degree. A total of 65 (39.9%) had a master's degree, while 7 (4.3%) of the respondents possessed doctorates, according to the study's findings. This implies that most respondents had a bachelor's degree or higher. By being able to respond to the questions, the respondents demonstrated their knowledge and competence.

5.4.4 Work experience

As shown in Table 5.2, 49 respondents (or 31.4%) had experience in the real estate sector of 1–4 years, 68 (43.6%) had experience of 5–10 years, and 36 (23.1%) had experience of 11–20 years.

5.4.5 Occupation

In terms of occupation, Table 5.2 shows that 7 (4.6%) of the respondents held the position of CEO; 18 (11.8%) held the position of deputy; 36 (23.5%) held the position of operation head; 27 (17.6%) held the position of finance head; 28 (18.3%) held the position of marketing head; 30 (19.6%) held the position of purchasing and property head; and 7 (4.6%) held the position of legal officer.

5.4.6 Leadership style

Table 5.2 indicates that 75 (52.8%) of the respondents followed a democratic style of leadership, with 36 (25.4%) following a transformational style, 3 (2.1%) following an autocratic style, 27 (19.1%) following a laissez-faire style, and 1% following other styles.

5.5 Description of Study Variables

Descriptive statistics were used to examine frequencies and percentages, as well as means, standard deviations and other information. A common goal of these techniques is to summarise both the central variability and spread of numerical values and data. In this study, the mean indicates the degree to which the sample group agrees or disagrees with various statements on average. The lower the average, the more likely it is that the respondents disagree with the statement. The higher the average, the more likely it is that respondents agree with the statement. The standard deviation, on the other hand, indicates the observed variability of the response from a single sample.

Table 5.3: Description of Study Variables (n = 163)

Variable	Minimum	Maximum	Mean	Std. Deviation	Rating Status
Firm's Efficiency	2	5	4.396***	0.581	Positive
Suppliers' Construction Materials	2.67	5	4.339***	0.5475	Positive
Customers' Buying Intention	2	5	4.091***	0.6698	Positive
Credit Availability	2.75	5	4.159***	0.6073	Positive
Marketing Strategy	2	5	4.118***	0.6655	Positive
Legal Factors	1.5	5	4.072***	0.7059	Positive
Land Availability	2	5	4.245***	0.6816	Positive
Infrastructure Development	3	5	4.391***	0.5394	Positive
Technological Adoption	2.5	5	4.237***	0.6772	Positive
Leadership Quality	2.43	5.25	4.244***	0.7048	Positive
Real Estate Performance	2	5	4.108***	0.7245	Positive

Note: *Mean. The mean of a variable is significantly different from the mid-point 3, at 0.001 significance level

Source: Author's Own Survey Result (2022)

The descriptive statistics shown in Table 5.3 provide a more in-depth analysis of the study's factors, including the Firm's Efficiency (Mean = 4.396***, SD = 0.581); Dependability of its Suppliers (Mean = 4.339***, SD = 0.5475); Customers' Buying Intention (Mean = 4.091***, SD = 0.6698); Credit Availability (Mean = 4.159***, SD = 0.6073); Marketing Strategy (Mean = 4.118***, SD = 0.6655); Legal Factors (Mean = 4.072***, SD = 0.7059); Land Availability (Mean = 4.245***, SD = 0.6816); Infrastructure Development (Mean = 4.391***, SD = 0.5394); Technological Adoption (Mean = 4.237***, SD = 0.6772); Leadership Quality (Mean = 4.244***, SD = 0.7048); and Real Estate Performance (Mean = 4.108***, SD = 0.7245). The mean of a variable is significantly different from the mid-point 3, at the 0.001 significance level. If the mean of a single quantitative variable was equal to a value that was assumed to be representative of the population, one-sample t-tests were utilised. The essential concept is depicted in Table 5.3. The issues and items specified for the full construct covered by this study were generally accepted by the study respondents, as demonstrated in Table 5.3. Hence, these results of the variables of the study show the agreement of the real estate experts and professional commercial real estate firms in Addis Ababa.

5.6 Estimating Non-Response Bias

Failure of respondents to respond may result in sample bias and difficulty in generalising the findings to the general public. Comparing the responses of early and late responders during the data-collection period can help to assess the potential impact of non-response bias. Although there are no established criteria for traits that can be used to compare early and late responders, the literature suggests that respondents who are interested in surveys respond sooner than those who do not, and therefore those who are less likely to respond are presumed not to be interested in surveys (Collis et al. 2003, Lewis-Beck, Bryman and Liao 2004).

In this study, the first 40 responses received (representing 24.5% of the sample) and the last 40 responses received (representing 24.5% of the sample) were selected and an independent sample t-test was performed to compare the results of these responses. Table 5.4 shows the results of the independent-samples t-test. The results show no significant difference between the before and after responses at the 95% confidence interval for the selected variables. The results show that even where there is non-response bias, it is not statistically significant and

therefore does not skew the data and prevent generalisations from the sample to the population.

Table 5.4: Independent Sample t-test for Non-Response Bias

Variable	t-value	df	p-value	Mean			Std. Error Difference
				Earlier	Later	Difference	
Firm's Efficiency	-3.040	78	.080	4.235	4.503	-0.268	.1209
Suppliers' Construction Materials	1.762	78	.082	4.533	4.332	.201	.114
Customers' Buying Intention	2.606	78	.091	4.229	3.838	.391	.150
Credit Availability	1.095	78	.277	4.148	3.981	.167	.152
Marketing Strategy	-.649	78	.518	3.923	4.024	-.101	.155
Legal Factors	1.985	78	.051	4.195	3.865	.329	.166
Land Availability	1.021	78	.310	4.180	4.018	.162	.159
Infrastructure Development	-.828	78	.410	4.325	4.428	-.104	.125
Technological Adoption	-.445	78	.658	4.109	4.178	-.070	.156
Leadership Quality	.939	78	.351	4.254	4.117	.137	.146
Real Estate Performance	1.546	78	.126	4.182	3.939	.243	.157

Source: Author's Own Survey Result (2022)

5.7 Mean Difference Among Demographic Groups in Relation To RE Performance

5.7.1 Sex Vs, Commercial Real Estate Performance

An independent sample t test was performed to assess the mean difference in real estate performance between the male and female participants in the study. At the 5% level of confidence, Table 5-5 demonstrated that there was no statistically significant difference in real estate performance between male and female participants [F (161, 127) = 2.349, p =.829]. Table 5.5 shows the Independent Sample t-test findings comparing males and females on real estate performance.

Table 5.5: b: Sex vs. Real Estate Performance

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Pi_mean	Equal variances assumed	2.349	.127	-.216	161	.829	-.02576	.11936
	Equal variances not assumed			-.224	126.608	.823	-.02576	.11527

Source: Author's Own Survey Result (2022)

5.7.2 Age Group vs. Real Estate Performance

The one-way analysis of variance (ANOVA) is used to determine whether there are any statistically significant differences between the means of three or more independent (unrelated) groups in relation to a single continuous dependent variable. A one-way ANOVA was used to evaluate whether there is a significant mean difference among different age groups with respect to commercial real estate performance. According to the ANOVA test results, there was no statistically significant difference in real estate performance among age groups [F (2, 160) = 2.369, p-value =.097] as shown in table. 5.6 Below.

Table 5.6: Age groups Vs Real estate performance

Pi Mean	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.446	2	1.223	2.369	.097
Within Groups	82.597	160	.516		
Total	85.043	162			

Source: Author's Own Survey Result (2022)

5.7.3 Educational level vs Real estate performance

The one-way analysis of variance (ANOVA) is used to determine whether there are any statistically significant differences between the means of three or more independent (unrelated) groups in relation to a single continuous dependent variable. A one-way ANOVA was used to evaluate whether there is a significant mean difference among different age groups with respect to commercial real estate performance. According to the ANOVA test results, there was no statistically significant difference in real estate performance among age groups [F (2, 160) = 1.073, p-value =.345] as shown in table. 5.7 Below.

Table 5.7: Educational groups Vs Real estate performance

Pi Mean	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.125	2	.563	1.073	.345
Within Groups	83.918	160	.524		
Total	85.043	162			

Source: Author's Own Survey Result (2022)

5.7.4 Work experience vs Real estate performance

A one-way ANOVA was used to evaluate whether there is a significant mean difference among different Work experience groups in relation to commercial real estate performance. According to the ANOVA test results, there was no statistically significant difference in real estate performance among age groups [$F(2, 153) = .328$, $p\text{-value} = .721$] as shown in table. 5.8 Below.

Table 5.8: Work experience vs Real estate performance

Pi Mean	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.350	2	.175	.328	.721
Within Groups	81.683	153	.534		
Total	82.033	155			

Source: Author's Own Survey Result (2022)

5.7.5 Occupation vs. Real estate performance

A one-way ANOVA was used to evaluate whether there is a significant mean difference among different Work experience groups in relation to commercial real estate performance. According to the ANOVA test results, there was no statistically significant difference in real estate performance among age groups [$F(6, 146) = .411$, $p\text{-value} = .871$] as shown in table. 5.9 Below.

Table 5.9: Occupation vs. Real estate performance

PI Mean	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.344	6	.224	.411	.871
Within Groups	79.536	146	.545		
Total	80.881	152			

Source: Author's Own Survey Result (2022)

5.7.6 Leadership Style vs Real estate performance

A one-way ANOVA was used to determine whether there is a significant mean difference among different leadership styles with respect to commercial real estate performance. Furthermore a Post Hoc Test was used to determine where the difference lies.

Table 5.10: Occupation vs. Real estate performance-ANOVA Result

Pi Mean	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.716	3	1.905	3.796	.012
Within Groups	69.270	138	.502		
Total	74.985	141			

Source: Author's Own Survey Result (2022)

A one-way ANOVA revealed that there was a statistically significant real estate performance difference among the categories of leadership style [$F(3, 138) = 3.796$, $p\text{-value} = .012$]. The result showed that there is a significant mean difference among leadership styles as shown in table.

Table 5.11: Occupation vs. Real estate performance-Multiple Comparison

Multiple Comparisons							
Dependent Variable: Real Estate Performance							
	(I) LEADERSHIP STYLE	(J) LEADERSHIP STYLE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey	Democratic	Transformational	.32764	.14365	.108	-.0459	.7012

HSD		Autocratic	.97427*	.36357	.041	.0288	1.9198
		Laissez-Fair	.04183	.15901	.994	-.3717	.4554
	Transformational	Democratic	-.32764	.14365	.108	-.7012	.0459
		Authocratic	.64663	.37341	.311	-.3245	1.6177
		Laissez-Fair	-.28581	.18037	.391	-.7549	.1833
	Autocratic	Democratic	-.97427*	.36357	.041	-	-0.288 1.9198
		Transformational	-.64663	.37341	.311	-	.3245 1.6177
		Laissez-Fair	-.93243	.37958	.072	-	.0547 1.9196
	Laissez-Fair	Democratic	-.04183	.15901	.994	-.4554	.3717
		Transformational	.28581	.18037	.391	-.1833	.7549
		Authocratic	.93243	.37958	.072	-.0547	1.9196

*. The mean difference is significant at the 0.05 level.

Source: Author's Own Survey Result (2022)

As shown in table 5.11, a Tukey HSD post-hoc test revealed significant pairwise real estate performance differences between Democratic and Authocratic leadership styles, with an average difference of .974 (p-value = .041).

5.8 Explanatory Factor Analysis

Exploratory Factor Analysis (EFA) is conducted to understand whether a theoretical construct is a one-dimensional or multi-dimensional factor (Holmes-Smith 2010). It is a method that is used to reduce data to a smaller set of summary variables and to explore the underlying theoretical structure of the phenomena being studied. In the current study it was used to identify the structure of the relationship between the variable and the respondents. To establish the appropriateness of the data for the 11 EFA constructs, the factorability of the

data was checked. The factorability of the data was tested through the Kaiser-Meyer-Olkin measure of sampling adequacy (KMOMSA) and Bartlett's Test of Sphericity (BTOS).

Generally, data are factorable (that is, the EFA is possible) if the KMOMSA is between 0.5 and 1 and the BTOS is significant (that is, the p-value is below 0.05) (Hair, Black, Babin and Anderson, 2010, 132). This study consisted of 11 constructs with a total of 54 items. The KMOMSA value was about 0.715 and the BTOS was statistically significant (i.e., p-value <0.001) (see Table B-1 in Appendix B of Appendix-III). Hence, the data under study were considered appropriate for EFA analysis as they satisfied these criteria.

Table 5.12: Summary of the EFA Output

Factor/Construct	Item	Loadings	Communality
Real Estate Firm's Efficiency (FE)	FE1	.852	.807
	FE2	.849	.869
	FE3	.834	.745
	FE4	.694	.612
	FE5	.647	.622
	FE6	.607	.685
Suppliers' Construction Materials (SCM)	SCM1	.721	.781
	SCM2	.815	.813
	SCM3	.668	.717
	SCM4	.603	.727
Customers' Buying Intention (CBI)	CBI1	.716	.704
	CBI2	.703	.722
	CBI3	.526	.769
	CBI4	.723	.812
Credit Availability (CA)	CA1	.752	.787
	CA2	.666	.719
	CA3	.804	.797

Factor/Construct	Item	Loadings	Communality
	CA4	.665	.680
Marketing Strategy (MS)	MS2	.632	.721
	MS3	.786	.753
	MS4	.760	.748
	MS5	.561	.669
	MS6	.661	.723
	Legal Factors (LF)	LF1	.633
LF2		.764	.780
LF3		.807	.801
LF4		.736	.774
LF5		.584	.770
Land Availability (LA)	LA1	.739	.672
	LA2	.696	.699
	LA3	.723	.702
	LA4	.721	.718
Infrastructural Development (ID)	ID1	.735	.693
	ID2	.806	.830
	ID3	.755	.803
	ID4	.707	.805
	ID5	.742	.794
Technological Adoption (TA)	TA1	.801	.826
	TA2	.837	.821
	TA3	.830	.827
	TA4	.727	.835
Leadership Quality of CEOs (LQ)	LQ1	.735	.775

Factor/Construct	Item	Loadings	Communality
	LQ2	.819	.838
	LQ3	.847	.833
	LQ4	.754	.826
Real Estate Company's Performance	Pi1	.863	.846
	Pi2	.909	.887
	Pi3	.808	.850
	Pi4	.909	.855
	Pi5	.860	.823
	Pi6	.879	.872
	Pi7	.819	.810
Total Variance	70.39%		

Source: Author's Own Survey Result (2022)

Fifty-four items were factor analysed using principal component analysis with Varimax (orthogonal) rotation. One item from MS (Marketing Strategy) and another item from LF (Legal Factors) were excluded from the analysis as these items had low factor loadings and communalities.

As can be seen in Appendix B: Table B-2: Total Variance Explained, EFA output for the remaining 52 items was produced. The item loading and communality values showed that the items chosen for this analysis in each construct were strongly related to each other (all of the items had significant factor loadings of above 50) (cf. Lewis, Templeton and Byrd, 2005, 393, Hair et al. 2010).

The analysis yielded 11 factors, which explained a total of 70.386% of the variance for the entire set of items. Factor 1 was labelled real estate company's performance owing to the high loadings by the seven items listed in Table 5.5 and it explained 20.166% of the variance. The second factor derived was labelled real estate firm's efficiency and this factor explained 10.573% of the variance. Infrastructural development, legal factors, technological adoption, marketing strategy, leadership quality of CEOs, land availability, credit availability, customers' buying intention, and suppliers' dependability / suppliers' construction materials

explained 7.900%, 6.216%, 5.168%, 4.307%, 3.689%, 3.405%, 3.206%, 2.939% and 2.816%, respectively (See Appendix-B: Table B-2.) Overall, the EFA procedure dropped two items that did not meet one or more of the factor extraction criteria, returning 52 items, which were grouped into 11 factors or constructs.

EFA was conducted to understand whether each theoretical construct was a one-dimensional or multi-dimensional factor (cf. Holmes-Smith 2010). Construct validity assesses the extent to which a set of measured items actually reflects the underlying factor model that those items are designed to measure (Hair et al. 2010, 708).

5.9 Assessment of Construct Validity Through CFA

Construct validity assesses the extent to which a set of measured items actually reflects the underlying factor model that those items are designed to measure (Hair et al. 2010, 708). Construct validity focuses on the measurement of individual constructs. Two construct validity assessments, convergent and discriminant are known in literature. This study focused on convergent validity to measure individual items in a construct. The tests were undertaken first for each individual factor model, and then for the full measurement model (cf. Lewis et al. 2005, 394). This section provides an overview of convergent validity and reports the results of the construct validity assessment of the measurement model.

Convergent validity assesses the extent to which the items that constitute the construct converge or share a high proportion of variance in common (Straub, Boudreau and Gefen, 2004; Hair et al., 2010, 709). The term “convergent validity” refers to how closely the new scale is related to other variables and other measures of the same construct. Not only should the construct correlate with related variables, but it should also not correlate with dissimilar, unrelated ones. SPSS-AMOS can assess the effectiveness of construct convergence using one or a combination of the following measures: goodness-of-fit (GOF) measure; squared multiple correlation (SMC), which is a function of the size of the standardised factor loadings (SFL); sampling mean variance (Weaver and Olson); and construct reliability (Creswell) (Straub et al. 2004, Hair et al. 2010). If the GOF showed a poor fit to the theorized model, the model was reassigned. Various measures of convergence validity and considerations for respecifying the model are briefly described below.

GOF Indices (Statistics): GOF compares the goodness of fit between theory and reality (Hair et al. 2010). The closer the covariance matrices between the two, the better the theory is said to fit the data. Thus, GOF indices reflect the model’s ability to represent the data (Hair et

al. 2010). GOF indices are grouped into four general categories: Chi-Square, Absolute Fit Indices, Incremental Fit Indices and Parsimony Fit Indices (see Table 5.6).

Table 5.13: Categories of GOF Indices

Category	Statistics	Definition
Chi-Square	Chi-Square	Difference between observed and estimated covariance matrices
Absolute Fit Measures	GOF Index	Measure indicating how well a model reproduces the variance/covariance matrices of the observed sample
	Root Mean Square Error of Approximation (RMSEA)	Badness-of-fit index measuring how well a model fits a population taking into account both model complexity and sample size
	Root Mean Square Residual (RMSR)	Average of the residuals between individual observed and estimated covariance and variance terms
	Standardised Root Mean Residual (SRMR)	Standardised value of RMSR
	Normed Chi-Square	Ratio of chi-square to degrees of freedom for a model
Incremental Fit Indices	Normed Fit Index (NFI)	Assesses how well a specified model fits relative to some alternative baseline model (often a null model that assumes all observed variables are uncorrelated)
	Comparative Fit Index (CFI)	
	Tucker-Lewis's Index (TLI)	
	Incremental Fit Indices (IFI)	
Parsimony Fit Indices	Parsimony Comparative Fit Index (PCFI)	Evaluates the parsimony ratio of the model compared to the GOF, such as Parsimony comparative or normed fit indices CFI and NFI
	Parsimony Normed Fit Index (PNFI)	

Source: Hair et al. (2010)

In this study, the model fit was evaluated in terms of the selected fit measures as summarised in Table 5.13

Table 5.14: Summaries of Selected Fit Measures and Established Criteria

Category	GOF Statistics	Acceptable Level	Reference
Chi-Square	Chi-Square	P-Value can be less than 0.05	Hair et al. (2010, 666); Holmes-Smith (2010, 5, 7)
Absolute Fit Indices	Root Mean Square Error of Approximation (RMSEA)	Values < 0.08	Lewis et al. (2005); Hair et al. (2006, 748); Hair et al. (2010, 672)
	Root Mean-Square Residual (RMR)	Values < 0.09	Hair et al. (2010, 672)
	Normed Chi-Square	Value between 1 and 5	Lewis et al. (2005); Hair et al. (2010, 668)
Incremental Fit Indices	Normed Fit Index (NFI)	Values ≥ 0.92	Hair et al. (2010, 672)
	Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Incremental Fit Indices (IFI)		
Parsimony Fit Indices	Parsimony Comparative Fit Index (PCFI) and Parsimony Normed Fit Index (PNFI)	Values ≥ 0.5	Hair et al. (2010, 672)

Squared Multiple Correlations (SMC): Standardised estimates of 0.5 or above and SMC from 0.3 but preferably 0.5 and above suggest construct validity and item reliability (Hair et al. 2010, 725) With the GOF indices supporting the model’s fit with the data, the model’s convergent validity is further assessed, based on CR. Evidence of convergence validity exists if the CR value is at least 0.5 (Hair et al. 2010, 722).

5.10 Measurement Models for Study Variables

Confirmatory factor analysis (CFA) is a statistical technique used to verify the factor structure of a set of observed variables. CFA allows the researcher to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists. Factor models are a specific kind of latent-variable model in multivariate statistics, where the latent

variables and the observable variables are both continuous, and the relationship between the two is linear.

5.10.1 Measurement model for real estate Company's performance construct

The real estate company's performance construct was hypothesised to consist of seven items. Figure 5.1 and Table 5.15 present the CFA result of this construct.

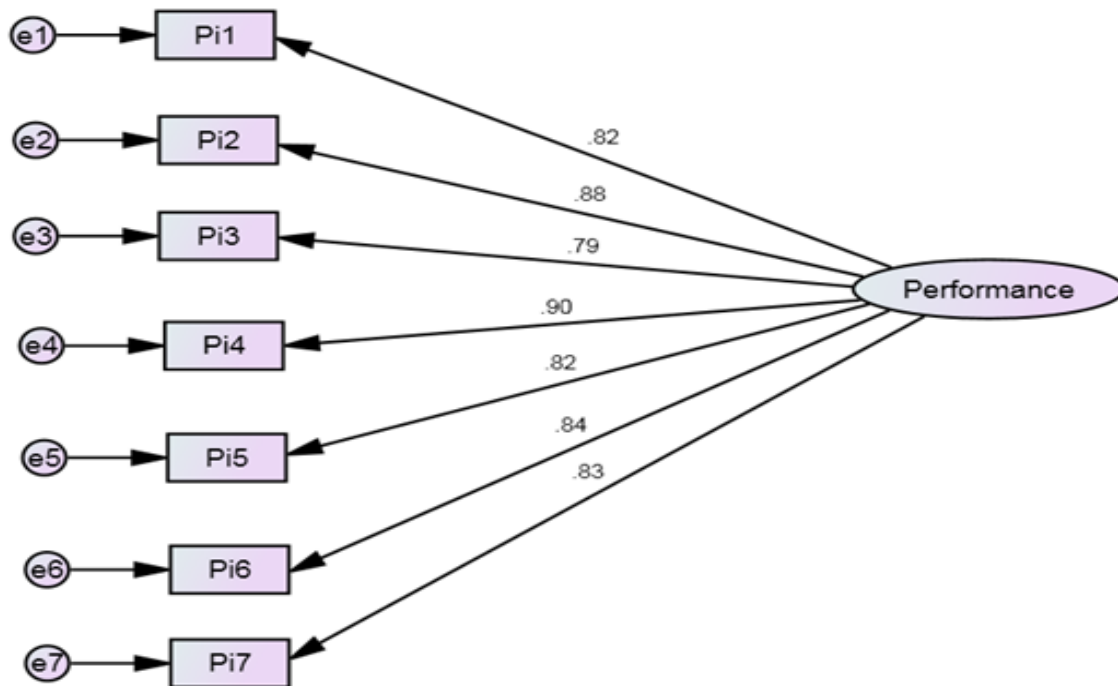


Figure 5.1: Graph of One-Factor Model of Real Estate Company's Performance

Table 5.15: Statistics for One-Factor Model of Real Estate Company’s Performance

Chi-Square		Incremental Fit Indices		Absolute Fit Indices		Parsimony Fit Indices	
Chi-Square (P-Value)	29.731(.003)	CFI	.984	RMSEA	.076	PCFI	.562
Degree of Freedom (DF)	12	IFI	.984	RMR	.034	PNFI	.557
Chi-Square/DF	2.478	TLI	.972				
Factor Loadings (***) = p < 0.001, ** = p < 0.01, * = p < 0.05							
Item	Estimate			SMC			
Pi1	.819***			0.671			
Pi2	.875***			0.766			
Pi3	.797***			0.635			
Pi4	.904***			0.817			
Pi5	.816***			0.666			
Pi6	.844***			0.712			
Pi7	.827***			0.684			

As shown in Figure 5.1 and Table 5.15, all factor loadings are 0.7 or higher, and the values for SMC are all above .50.

As can be seen in Table 5.8, each GOF index is also consistent with a strong model fit. The four types of GOF indices listed in Table 5.8 can be summarised as follows: Chi-Square, Incremental, Absolute and Parsimonious Fit Indices: Chi-Square – P Value = $X^2 = 29.731(.003)$; Incremental Fit Indices (CFI = .984; IFI = .984; TLI = .974; Values $\geq .92$); Absolute Fit Indices (RMSEA = .076; RMR = .034; Values $< .08$); and Parsimony Fit Indices (PCFI = .562; PNFI = .557; Values $\geq .5$). This indicates that the measurement model fits the data very well.

5.10.2 Measurement Model for Real Estate Firm's Efficiency Construct

The real estate firm's efficiency construct was hypothesised to consist of six items. Figure 5.2 and Table 5.16 present the CFA result of this construct.

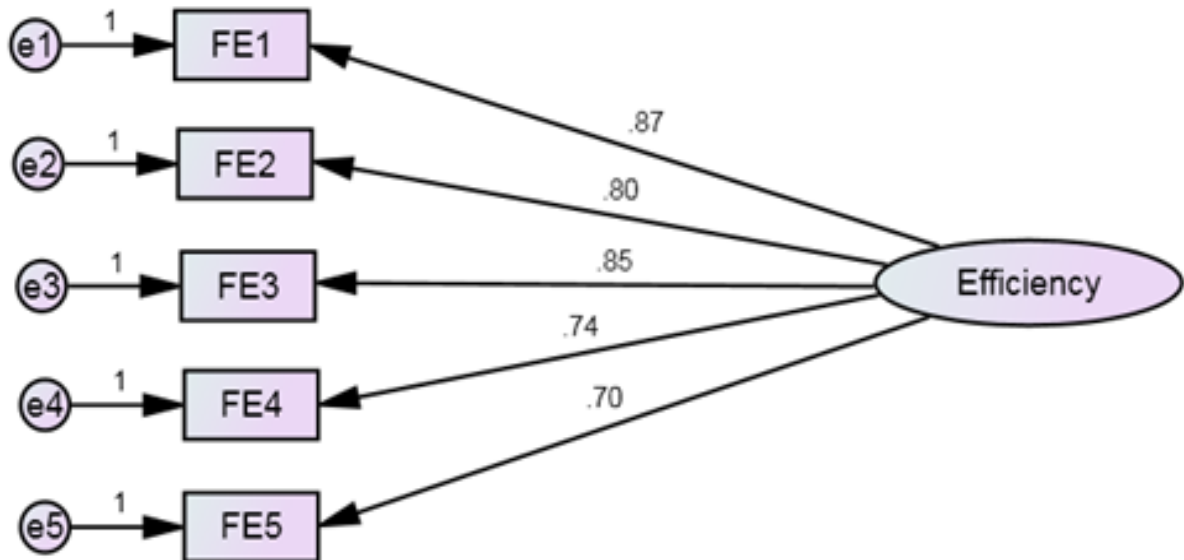


Figure 5.2: Graph of One-Factor Model of Real Estate Firm's Efficiency

Table 5.16: Statistics for One-Factor Model of Real Estate Firm's Efficiency

Chi-Square		Incremental Fit Indices		Absolute Fit Indices		Parsimony Fit Indices	
Chi-Square (p-value)	20.681(.001)	CFI	.961	RMSEA	.039	PCFI	.581
Degree of Freedom (DF)	5	IFI	.962	RMR	.024	PNFI	.575
Chi-Square/DF	4.136	TLI	.922				
Factor Loadings (*** = $p < 0.001$, ** = $p < 0.01$, * = $p < 0.05$)							
Item	Estimate			SMC			
FE1	.871***			0.759			
FE2	.804***			0.646			
FE3	.848***			0.719			
FE4	.740***			0.548			
FE5	.709***			0.502			

Figure 5.2 and Table 16 show that all of the factor loadings are 0.7 and above and SMC values are all above 50, apart from those for item 6 (item 6 was excluded from the analysis as its factor loadings and SMC values were below 7 and 5, respectively).

As can be seen in Table 11, each GOF index is also consistent with a strong model fit. The four types of GOF indices listed in Table 11 are summarised as follows: Chi-Square, Incremental, Absolute and Parsimonious Fit Indices: $\chi^2 = 20.681(.001)$ with 12 Degrees of Freedom; Incremental Fit Indices (CFI = .961; IFI = .962; TLI = .922; Values $\geq .92$); Absolute Fit Indices (RMSEA = .039; RMR = .024; Values $< .08$); and Parsimony Fit Indices (PCFI = .581; PNFI = .575, Values $\geq .5$). For the five elements, each of the GOF indices is consistent with good model fit. Therefore, the measurement model can be considered to fit the data very well.

5.10.3 Measurement model for suppliers' construction materials construct

The suppliers' construction materials construct was hypothesised to consist of four items. Figure 5.3 and Table 5.17 present the CFA result of this construct.

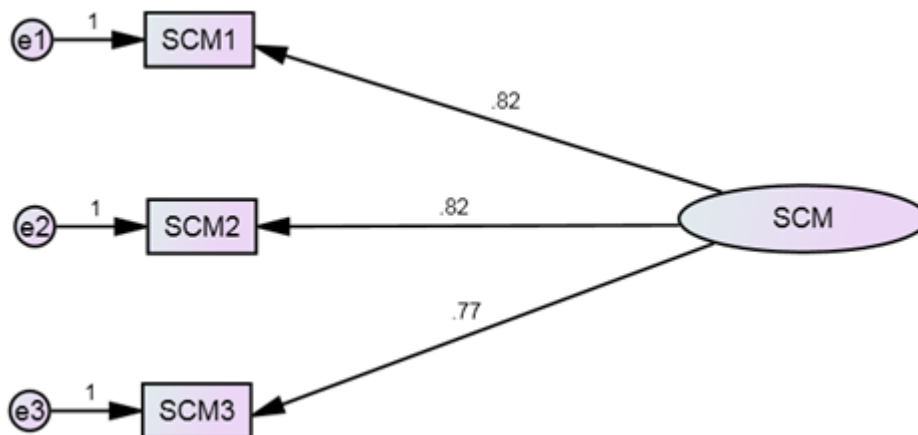


Figure 5.3: Graph of One-Factor Model of Real Estate Suppliers' Construction Materials

Table 5.17: Statistics for One-Factor Model of Suppliers' Construction Materials

Chi-Square		Incremental Fit Indices		Absolute Fit Indices		Parsimony Fit Indices	
Chi-Square (P-Value)	5.511 (.173)	CFI	.991	RMSEA	.068	PCFI	.530
Degree of Freedom (DF)	2	IFI	.991	RMR	.015	PNFI	.526
Chi-Square/DF	2.755	TLI	.972				
Factor Loadings (***) = p < 0.001, ** = p < 0.01, * = p < 0.05							
Item	Estimate			SMC			
SCM1	.821***			0.674			
SCM2	.816***			0.666			
SCM3	.773***			0.598			

Figure 5.3 and Table 5.17 show that all of the factor loadings are 0.7 and above and SMC values are all above 50, apart from those for item 4 (item 4 was excluded from analysis as its factor loadings and SMC values were below 7 and 5, respectively).

As can be seen in Table 5.10, each GOF index is also consistent with a strong model fit. The four types of GOF indices listed in Table 5.10 are summarised as follows: Chi-Square, Incremental, Absolute and Parsimonious Fit Indices: $\chi^2 = 5.511(.173)$ with 2 Degrees of Freedom, ratio $\chi^2 / df = 2.755$ ($P < .05$); Incremental Fit Indices (CFI = .991; IFI = .991; TLI = .972; Values $\geq .92$); Absolute Fit Indices (RMSEA = .068; RMR = .015; Values $< .08$); and Parsimony Fit Indices (PCFI = .530; PNFI = .526). All of the GOF indices for the three items are consistent with good model fit. This indicates that the measurement model fits the data very well.

5.10.4 Measurement model for customers' buying intention construct

The customers' buying intention construct was hypothesised to consist of four items. Figure 5.4 and Table 5.11 present the CFA result of this construct.

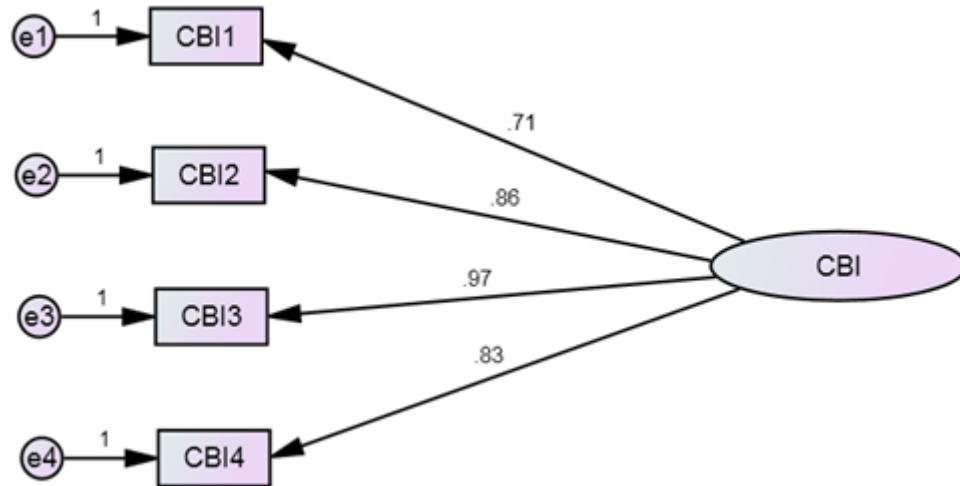


Figure 5.4: Graph of One-Factor Model of Real Estate Customers' Buying Intention

Table 5.18: Statistics for One-Factor Model of Customers' Buying Intention

Chi-Square		Incremental Fit Indices		Absolute Fit Indices		Parsimony Fit Indices	
Chi-Square (p-value)	9.597(.008)	CFI	.946	RMSEA	.073	PCFI	.515
Degree of Freedom (DF)	2	IFI	.947	RMR	.033	PNFI	.511
Chi-Square/DF	4.799	TLI	.927				
Factor Loadings (*** = p < 0.001, ** = p < 0.01, * = p < 0.05)							
Item	Estimate			SMC			
CBI1	.713***			0.508			
CBI2	.862***			0.743			
CBI3	.914***			0.835			
CBI4	.826***			0.682			

Figure 5.4 and Table 5.18 show that all of the factor loadings are 0.7 and above and SMC values are all above 50.

As can be seen in Table 5.11, each GOF index is also consistent with a strong model fit. The four types of GOF indices listed in Table 5.11 are summarised as follows: Chi-Square,

Incremental, Absolute and Parsimonious Fit Indices: $X^2 = 9.597(.008)$ with 2 Degrees of Freedom, ratio $X^2 / df = 4.799$, $P < .05$; Incremental Fit Indices (CFI = .946; IFI = .947; TLI = .927; Values $\geq .92$); Absolute Fit Indices (RMSEA = .073; RMR = .033; Values $< .08$); and Parsimony Fit Indices (PCFI = .515; PNFI = .511; Values $\geq .5$). All of the GOF indices for the four items are consistent with good model fit. Therefore, it can be concluded that the measurement model fits the data very well.

5.10.5 Measurement model for credit availability construct

The credit availability construct was hypothesised to consist of four items. Figure 5.19 and Table 5.12 present the CFA result of this construct.

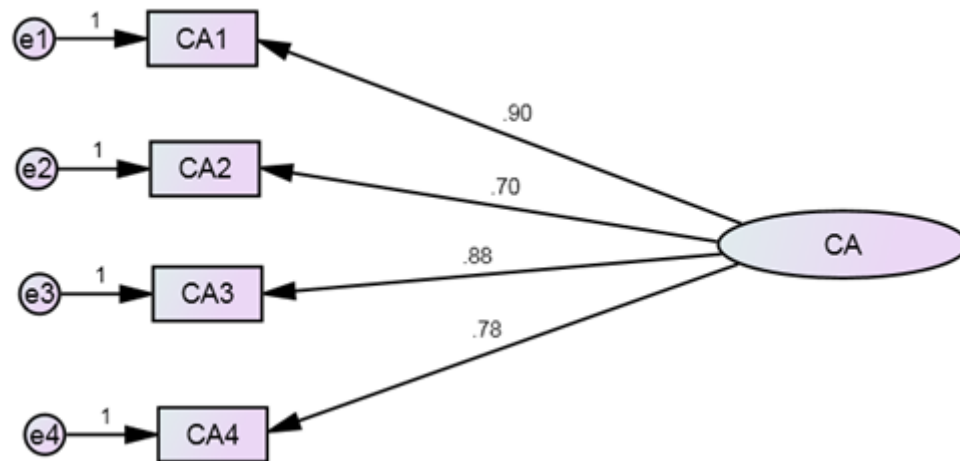


Figure 5.5: Graph of One-Factor Model of Real Estate Credit Availability

Table 5.19: Statistics for One-Factor Model of Credit Availability

Chi-Square		Incremental Fit Indices		Absolute Fit Indices		Parsimony Fit Indices	
Chi-Square (P-Value)	2.209 (.346)	CFI	.998	RMSEA	.034	PCFI	.533
Degree of Freedom (DF)	2	IFI	.998	RMR	.008	PNFI	.531
Chi-Square/DF	1.105	TLI	.953				
Factor Loadings (***) = $p < 0.001$, ** = $p < 0.01$, * = $p < 0.05$							

Item	Estimate	SMC
CBI1	.902***	0.814
CBI2	.704***	0.496
CBI3	.884***	0.781
CBI4	.783***	0.613

Figure 5.5 and Table 5.19 show that all of the factor loadings are 0.7 and above and SMC values are all above 50.

As can be seen in Table 5.12, each GOF index is also consistent with a strong model fit. The four types of GOF indices listed in Table 5.12 are summarised as follows: Chi-Square, Incremental, Absolute and Parsimonious Fit Indices: $\chi^2 = 2.209(.346)$ with 2 Degrees of Freedom, ratio $\chi^2 / df = 1.105$, $P < .05$; Incremental Fit Indices (CFI = .998; IFI = .998; TLI = .953; Values $\geq .92$); Absolute Fit Indices (RMSEA = .034; RMR = .008; Values $< .08$); and Parsimony Fit Indices (PCFI = .533; PNFI = .531, Values $\geq .5$). All of the GOF indices for the four items are consistent with good model fit. Therefore, the measurement model can be considered to fit the data very well.

5.10.6 Measurement model for marketing strategy construct

The marketing strategy construct was hypothesised to consist of six items. Figure 5.6 and Table 5.20 present the CFA result of this construct.

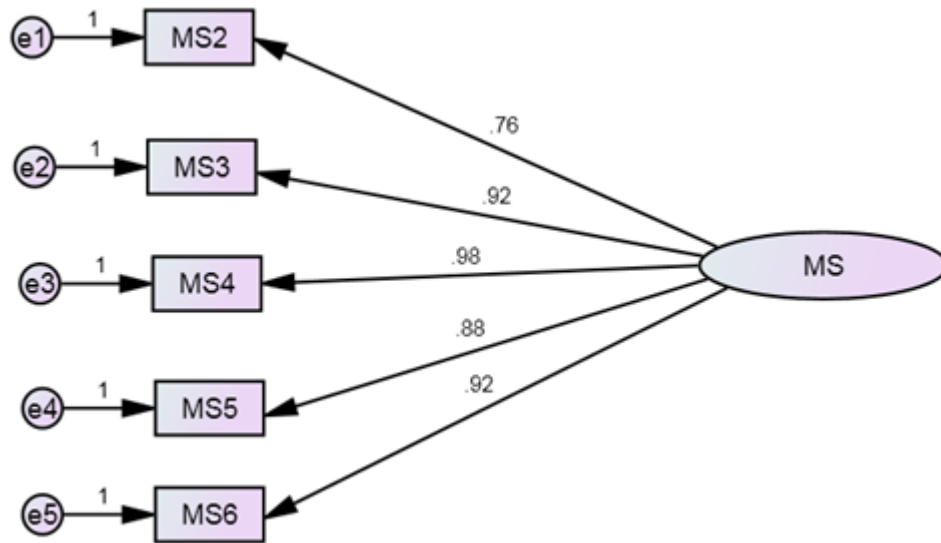


Figure 5.6: Graph of One-Factor Model of Real Estate Marketing Strategy

Table 5.20: Statistics for One-Factor Model of Marketing Strategy

Chi-Square		Incremental Fit Indices		Absolute Fit Indices		Parsimony Fit Indices	
Chi-Square (p-value)	13.594 (.018)	CFI	.967	RMSEA	.073	PCFI	.584
Degree of Freedom (DF)	5	IFI	.968	RMR	.024	PNFI	.575
Chi-Square/DF	2.719	TLI	.935				
Factor Loadings (*** = p < 0.001, ** = p < 0.01, * = p < 0.05)							
Item	Estimate			SMC			
MS2	.757***			0.573			
MS3	.924***			0.854			
MS4	.979***			0.958			
MS5	.883***			0.780			
MS6	.915***			0.837			

Figure 5.6 and Table 5.20 show that all of the factor loadings are 0.7 and above and SMC values are all above 50, apart from item 1 (item 1 was excluded from analysis as its factor loadings and SMC values were below 7 and 5, respectively).

As can be seen in Table 5.13, each GOF index is also consistent with a strong model fit. The four types of GOF indices listed in Table 5.13 are summarised as follows: Chi-Square, Incremental, Absolute and Parsimonious Fit Indices: $\chi^2 = 13.594(.018)$ with 5 Degrees of Freedom, ratio $\chi^2 / df = 2.719$, $P < .05$; Incremental Fit Indices (CFI = .967; IFI = .968; TLI = .935; Values $\geq .92$); Absolute Fit Indices (RMSEA = .073; RMR = .024; Values $< .08$); and Parsimony Fit Indices (PCFI = .584; PNFI = .575; Values $\geq .5$). All of the GOF indices for the five items are consistent with good model fit. This points to the measurement model fitting the data very well.

5.10.7 Measurement model for legal factors construct

The legal factors construct was hypothesised to consist of six items. Figure 5.7 and Table 5.21 present the CFA result of this construct.

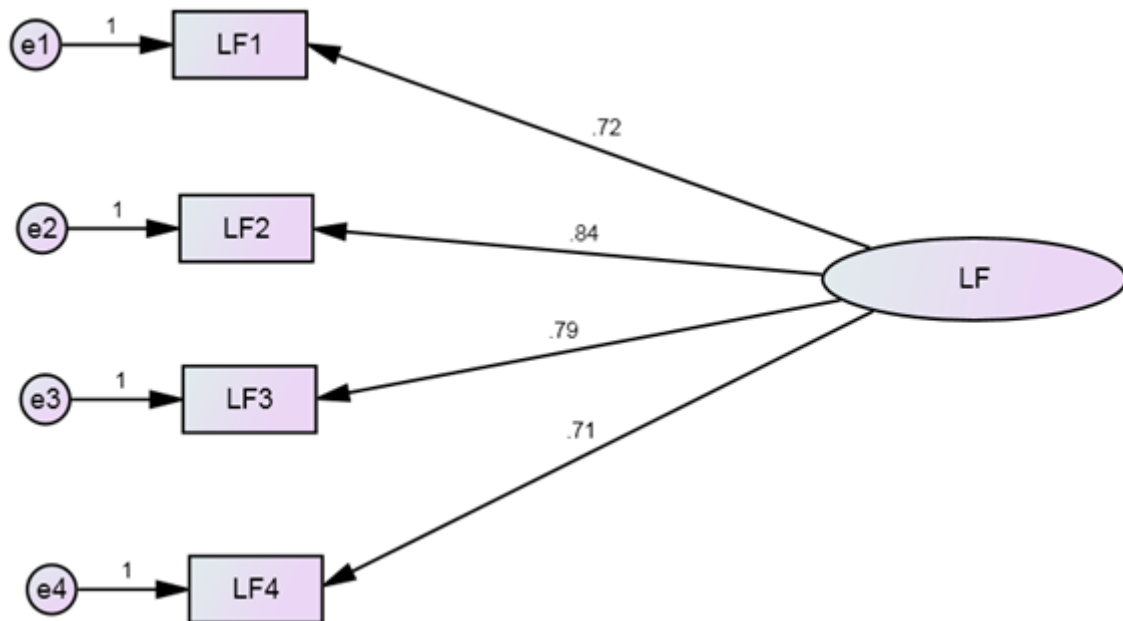


Figure 5.7: Graph of One-Factor Model of Real Estate Legal Factors

Table 5.21: Statistics for One-Factor Model of Legal Factors

Chi-Square		Incremental Fit Indices		Absolute Fit Indices		Parsimony Fit Indices	
Chi-Square (p-value)	2.021(.364)	CFI	.999	RMSEA	.008	PCFI	.533
Degree of Freedom (DF)	2	IFI	.999	RMR	.011	PNFI	.531
Chi-Square/DF	1.011	TLI	.997				
Factor Loadings (***) = p < 0.001, ** = p < 0.01, * = p < 0.05							
Item	Estimate			SMC			
LF1	.722***			0.521			
LF2	.838***			0.702			
LF3	.794***			0.630			
LF4	.714***			0.510			

Figure 5.7 and Table 5.21 show that all of the factor loadings are 0.7 and above and SMC values are all above 50, apart from items 5 and 6 (items 5 and 6 were excluded from analysis as these items did not satisfy the criteria set for factor loadings, SMC values and the GOF indices).

As can be seen in Table 5.14, each GOF index is also consistent with a strong model fit. The four types of GOF indices listed in Table 5.14 are summarised as follows: Chi-Square, Incremental, Absolute and Parsimonious Fit Indices: $X^2 = 2.021(.364)$ with 2 Degrees of Freedom, ratio $X^2 / df = 1.011$, $P < .05$; Incremental Fit Indices (CFI = .999; IFI = .999; TLI = .997; Values $\geq .92$); Absolute Fit Indices (RMSEA = .008; RMR = .011; Values $< .08$); and Parsimony Fit Indices (PCFI = .533; PNFI = .531, Values $\geq .5$). All of the GOF indices for the four items are consistent with good model fit. This suggests that the measurement model fits the data very well.

5.10.8 Measurement model for land availability construct

The land availability construct was hypothesised to consist of four items. Figure 5.8 and Table 5.22 present the CFA result of this construct.

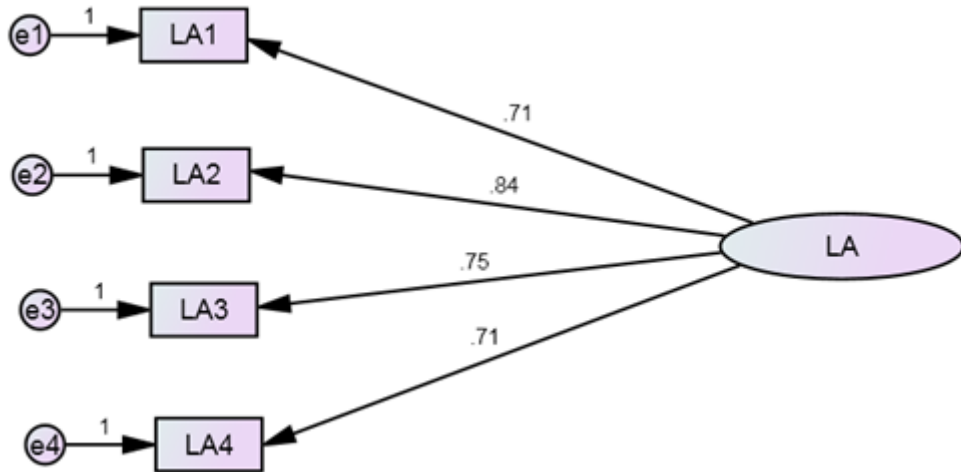


Figure 5.8: Graph of One-Factor Model of Real Estate Land Availability

Table 5.22: Statistics for One-Factor Model of Land Availability

Chi-Square		Incremental Fit Indices		Absolute Fit Indices		Parsimony Fit Indices	
Chi-Square (p-value)	4.518(.104)	CFI	.989	RMSEA	.08	PCFI	.530
Degree of Freedom (DF)	2	IFI	.989	RMR	.014	PNFI	.527
Chi-Square/DF	2.259	TLI	.966				
Factor Loadings							
(*** = p < 0.001, ** = p < 0.01, * = p < 0.05)							
Item	Estimate			SMC			
LF1	.710***			.504			
LF2	.843***			.711			
LF3	.752***			.566			
LF4	.714***			.510			

Figure 5.8 and Table 5.22 show that all of the factor loadings are 0.7 and above and SMC values are all above 50.

As can be seen in Table 5.15, each GOF index is also consistent with a strong model fit. The four types of GOF indices listed in Table 5.15 are summarised as follows: Chi-Square, Incremental, Absolute and Parsimonious Fit Indices: $X^2 = 4.518(.104)$ with 2 Degrees of Freedom, ratio $X^2 / df = 2.259$, $P < .05$; Incremental Fit Indices (CFI = .989; IFI = .989; TLI = .966; Values $\geq .92$); Absolute Fit Indices (RMSEA = .08; RMR = .014; Values $\leq .08$); and Parsimony Fit Indices (PCFI = .530; PNFI = .527; Values $\geq .5$). All of the GOF indices for the four items are consistent with good model fit. Therefore, the measurement model is considered to fit the data very well.

5.10.9 Measurement model for infrastructural development construct

The infrastructural development construct was hypothesised to consist of five items. Figure 5.9 and Table 5.23 present the CFA result of this construct.

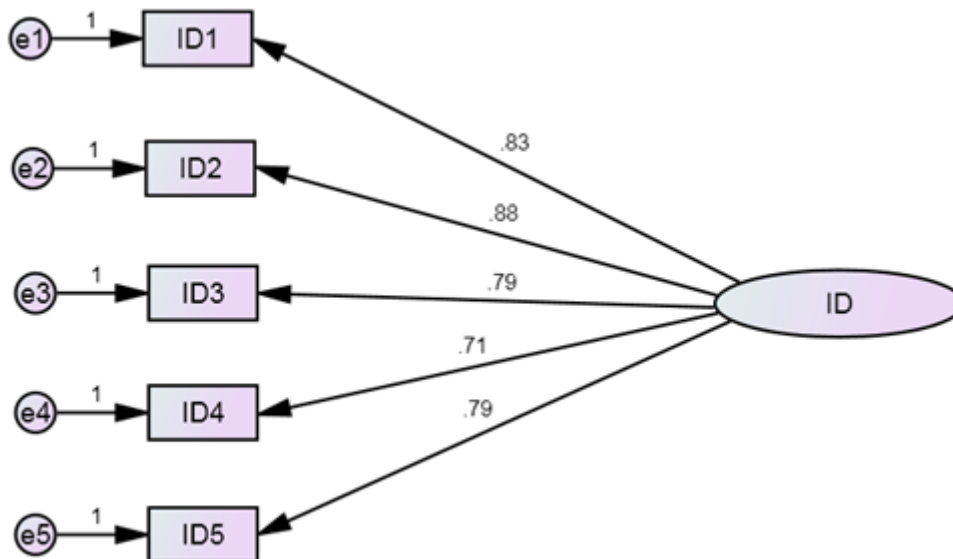


Figure 5.9: Graph of One-Factor Model of Real Estate Infrastructure Development

Table 5.23: Statistics for One-Factor Model of Infrastructural Development

Chi-Square	Incremental Fit Indices (IFIs)		Absolute Fit Indices		Parsimony Fit Indices	
	Chi-Square (p-value)	CFI	RMSEA	PCFI	PNFI	IFIs
Chi-Square (p-value)	6.097 (.057)	.990	.078	.498	.990	.497
Degree of Freedom (DF)	2	.990	.009	.497	.990	.497

Chi-Square/DF	3.048	TLI	.950				
Factor Loadings (*** = p < 0.001, ** = p < 0.01, * = p < 0.05)							
Item	Estimate		SMC				
ID1	0.826***		0.682				
ID2	0.879***		0.773				
ID3	0.793***		0.629				
ID4	0.710***		0.504				
ID5	0.794***		0.630				

Figure 5.9 and Table 5.23 show that all of the factor loadings are 0.7 and above and SMC values are all above 50.

As can be seen in Table 5.16, each GOF index is also consistent with a strong model fit. The four types of GOF indices listed in Table 5.16 are summarised as follows: Chi-Square, Incremental, Absolute and Parsimonious Fit Indices: $X^2 = 6.097(.057)$ with 2 Degrees of Freedom, ratio $X^2 / df = 3.048$, $P < .05$; Incremental Fit Indices (CFI = .990; IFI = .990; TLI = .950; Values $\geq .92$); Absolute Fit Indices (RMSEA = .078; RMR = .009; Values $< .08$); and Parsimony Fit Indices (PCFI = .498; PNFI = .497; Values $\geq .5$). All of the GOF indices for the five items are consistent with good model fit. Therefore, the measurement model is considered to fit the data very well.

5.10.10 Measurement model for technological adoption construct

The technological adoption construct was hypothesised to consist of four items. Figure 5.10 and Table 5.24 present the CFA result of this construct.

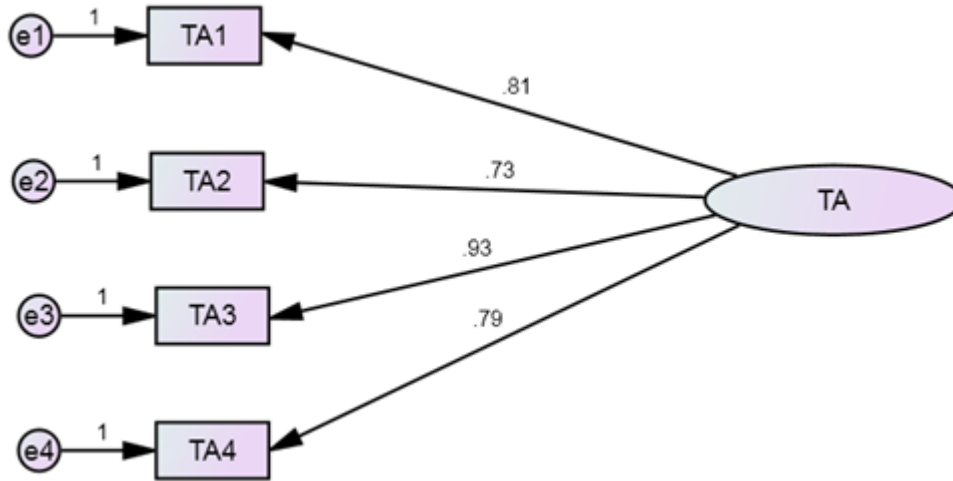


Figure 5.10: Graph of One-Factor Model of Real Estate Technological Adoption

Table 5.24: Statistics for One-Factor Model of Technological Adoption

Chi-Square		Incremental Fit Indices		Absolute Fit Indices		Parsimony Fit Indices	
Chi-Square (p-value)	1.558 (.212)	CFI	.999	RMSEA	.059	PCFI	.566
Degree of Freedom (DF)	1	IFI	.999	RMR	.004	PNFI	.566
Chi-Square/DF	1.558	TLI	.991				
Factor Loadings (*** =p< 0.001, ** =p< 0.01, * =p< 0.05)							
Item	Estimate		SMC				
TA1	.810***		.655				
TA2	.726***		.527				
TA3	.934***		.872				
TA4	.788***		.621				

Figure 5.10 and Table 5.24 show that all of the factor loadings are 0.7 and above and SMC values are all above 50.

As can be seen in Table 5.24, each GOF index is also consistent with a strong model fit. The four types of GOF indices listed in Table 5.24 are summarised as follows: Chi-Square, Incremental, Absolute and Parsimonious Fit Indices: $X^2 = 1.558(.212)$ with 2 Degrees of

Freedom, ratio $X^2 / df = 1.558$, $P < .05$); Incremental Fit Indices (CFI = .999; IFI = .999; TLI = .991; Values $\geq .92$); Absolute Fit Indices (RMSEA = .059; RMR = .004; Values $< .08$); and Parsimony Fit Indices (PCFI = .566; PNFI = .566; Values $\geq .5$). All of the GOF indices for the four items are consistent with good model fit. This means that the measurement model fits the data very well.

5.10.11 Measurement Model for Leadership Quality of CEOs' Construct

The leadership quality of CEOs' construct was hypothesised to consist of four items. Figure 5.11 and Table 5.25 present the CFA result of this construct.

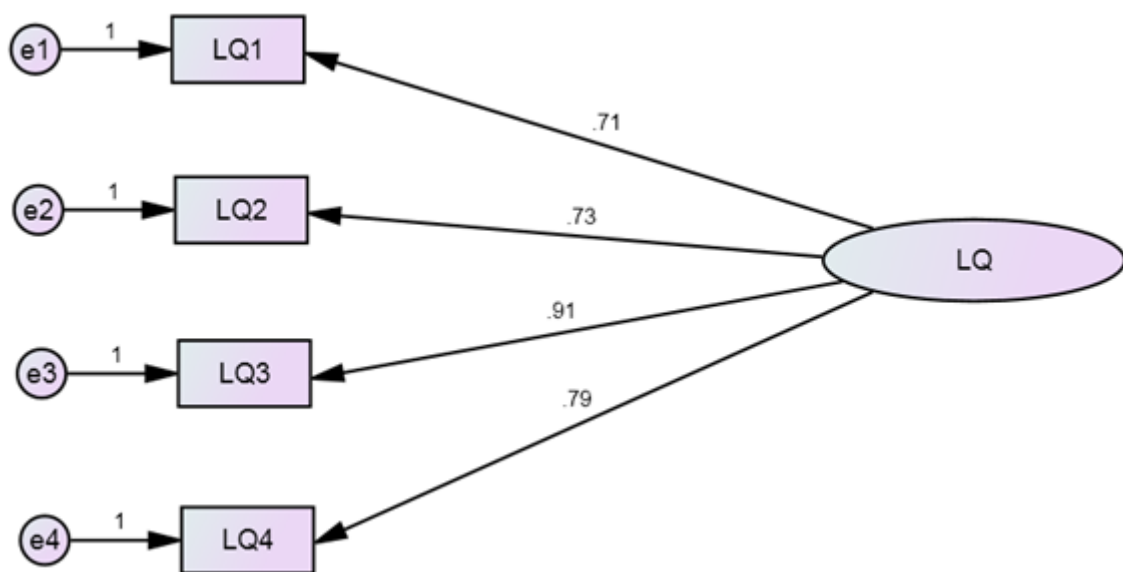


Figure 5.11: Graph of One-Factor Model of Real Estate Leadership Quality

Table 5.25: Statistics for One-Factor Model of Leadership Quality of CEOs

Chi-Square		Incremental Fit Indices		Absolute Fit Indices		Parsimony Fit Indices	
Chi-Square (p-value)	1.233(.529)	CFI	.997	RMSEA	.014	PCFI	.567
Degree of Freedom (DF)	1	IFI	.999	RMR	.002	PNFI	.567
Chi-Square/DF	1.233	TLI	.981				
Factor Loadings (*** = p < 0.001, ** = p < 0.01, * = p < 0.05)							
Item	Estimate			SMC			
LQ1	.713***			.508			
LQ2	.734***			.539			
LQ3	.910***			.828			
LQ4	.787***			.619			

Figure 5.11 and Table 5.25 show that all of the factor loadings are 0.7 and above and SMC values are all above 50.

As can be seen in Table 5.25, each GOF index is also consistent with a strong model fit. The four types of GOF indices listed in Table 5.18 are summarised as follows: Chi-Square, Incremental, Absolute and Parsimonious Fit Indices: $X^2 = 1.233(.529)$ with 2 Degrees of Freedom, ratio $X^2 / df = 1.233$, $P < .05$; Incremental Fit Indices (CFI = .997; IFI = .999; TLI = .991; Values $\geq .92$); Absolute Fit Indices (RMSEA = .014; RMR = .002; Values $< .08$); and Parsimony Fit Indices (PCFI = .567; PNFI = .567; Values $\geq .5$). All of the GOF indices for the four items are consistent with good model fit. This indicates that the measurement model fits the data very well.

5.11 Discriminant Validity and Reliability Test

Discriminant validity is demonstrated by evidence that measures of constructs that theoretically should not be strongly related to each other are, in fact, not found to be highly correlated to each other. Discriminant validity shows that two measures that are not supposed to be related are, in fact, unrelated. To establish discriminant validity, the researcher needs to

show that measures that should not be related are in reality not related. Reliability is a measure of the stability or consistency of test scores. It can also be considered as the capacity of a test or research findings to be repeatable.

5.11.1 Discriminant validity

After verifying that the full CFA measurement model met the GOF statistics, this research next conducted an analysis to establish discriminant validity. As specified above, discriminant validity assesses the extent to which conceptually related constructs are indeed different (or not identical). Discriminant validity provides evidence that a construct is unique and captures some phenomena that other constructs do not. A more rigorous demonstration of discriminant validity is provided through the comparison of the average variance extracted (Weaver and Olson) estimates for each factor with the squared inter-factor correlation estimates associated with that factor (Hair et al. 2006, 778, Hair et al. 2010, 710). If the AVE is consistently higher than the squared inter-construct correlations of the construct, discriminant validity is supported (Straub et al. 2004; Hair et al. 2006, 810). The discriminant validity analysis results, as set out in Table 5.19, show that the AVE values are greater than their respective squared inter-construct correlations in several of the cases.

Table 5.26: Discriminant Validity and Reliability of the Full CFA Measurement Model

No.	Variable	1	2	3	4	5	6	7	8	9	10	11	No. of items	Cronbach's Alpha
1	Firm's Efficiency	0.609	0.062	0.109	0.115	0.203	0.089	0.123	0.138	0.323	0.214	0.402	5	0.868
2	Suppliers Construction Materials	0.248	0.543	0.149	0.144	0.031	0.045	0.099	0.061	0.084	0.187	0.303	3	0.776
3	Customers' Buying Intention	0.331	0.386	0.452	0.205	0.135	0.092	0.149	0.036	0.189	0.207	0.403	4	0.735
4	Credit Availability	0.339	0.38	0.453	0.452	0.204	0.154	0.219	0.112	0.266	0.169	0.464	4	0.776
5	Marketing Strategy	0.451	0.175	0.368	0.452	0.469	0.063	0.222	0.106	0.257	0.203	0.412	5	0.817
6	Legal Factors	0.299	0.212	0.303	0.392	0.251	0.544	0.191	0.05	0.154	0.103	0.318	4	0.841
7	Land Availability	0.351	0.314	0.386	0.468	0.474	0.437	0.518	0.118	0.291	0.3	0.494	4	0.815
8	Infrastructure	0.371	0.246	0.189	0.335	0.325	0.231	0.343	0.562	0.259	0.154	0.324	5	0.869

No.	Variable	1	2	3	4	5	6	7	8	9	10	11	No. of items	Cronbach's Alpha
	Development													
9	Technological Adoption	0.568	0.29	0.435	0.516	0.507	0.392	0.539	0.509	0.64	0.298	0.441	4	0.892
10	Leadership Quality	0.463	0.433	0.455	0.411	0.451	0.321	0.548	0.393	0.546	0.624	0.445	4	0.873
11	Real estate performance	0.634	0.55	0.635	0.681	0.642	0.564	0.703	0.569	0.664	0.667	0.748	7	0.948

Note: Values on the diagonal are the constructs' calculated AVE. The values below the diagonal are the constructs' implied correlations. Values above the diagonal are the squared correlations.

5.11.2 Reliability test

Once all the measurement factors underlying the research constructs have been empirically derived and validated, the instrument is checked for reliability before proceeding with the regression model (Straub et al. 2004; Lewis et al. 2005, 393). Reliability assesses the degree of consistency of the items that are used to measure a construct and, as such, ensures trustworthiness of the measurement instrument. A common statistic for evaluating reliability is the coefficient of internal consistency (Cronbach's Alpha) (Churchill, 1979). This statistic should be computed for each of the factors that has passed all the tests of validity.

The recommended and widely accepted threshold value in the literature for Cronbach's Alpha is 0.7 (i.e., Cronbach's Alpha should at least be 0.7) (Hair et al. 2010, 125). Table 5.26 provides the reliability estimates of each of the items. As they are all above 0.7, this satisfies the recommended threshold in the literature.

5.12 Correlation Analysis

Correlation is the most important system for the analysis of bivariate relationships as it provides a yardstick that can be used to gauge the intensity or strength of such relationships (Bryman and Cramer, 2005). Bivariate analysis was conducted between each independent variable with the dependent variable to assess initial significant predictors (Hair et al. 2010, Field 2009).

The two significance levels used in correlation analysis are 0.05 and 0.01. The correlation coefficient has both magnitude and direction. As a result, the correlation coefficient can take a number with a + or – sign. Pearson product-moment correlation is one of the commonly used methods to calculate a correlation coefficient. This method results in a number between –1 and +1 that expresses how closely the two variables are related: ± 1 shows a perfect 1:1 relationship (positive or negative) and 0 indicates that no systematic relationship exists between the two variables. Correlation analysis is a preliminary stage to the multiple linear regression analysis. Correlations measure the direction and strength of a linear relationship between two numerical variables. As shown in Table 5.20, for this study a statistically significant positive correlation was found between the dependent variable (real estate performance) and each of the independent variables considered in this study. This meant that all the independent variables could be incorporated in the regression model. Table 5.26 shows that each of the independent variables considered in this study is statistically significantly correlated with the dependent variable (real estate performance).

Table 5.27: Correlations between the Dependent Variable and the Independent Variables

		1	2	3	4	5	6	7	8	9	10
1	Firm's Efficiency	-									
2	Suppliers' Construction Materials	.248**	-								
3	Customers' Buying Intention	.331**	.386**	-							
4	Credit Availability	.339**	.380**	.453**	-						
5	Marketing Strategy	.451**	.175**	.368**	.452**	-					
6	Legal Factors	.299**	.212**	.303**	.392**	.251**	-				
7	Land Availability	.351**	.314**	.386**	.468**	.474**	.437**	-			
8	Infrastructure Development	.371**	.246**	.189**	.335**	.325**	.231**	.343**	-		
9	Technological Adoption	.568**	.290**	.435**	.516**	.507**	.392**	.539**	.509**	-	
10	Leadership Quality	.463**	.433**	.455**	.411**	.451**	.321**	.548**	.393**	.546**	-
11	Real estate performance	.634**	.550**	.635**	.681**	.642**	.564**	.703**	.569**	.664**	.667**

Regarding the magnitude of a correlation coefficient as developed by Davis 1971 and cited by Larry E. Miller 1994 a correlation coefficient of between 0.70 and 0.90 indicates a very strong association; between 0.50 and 0.69 a strong association; between 0.30 and 0.49 a moderate association; and between 0.10 and 0.29 a low association. The findings set out in Table 5.20 show that the associations between the independent variables and the dependent variable range from strongly positive to very strong. The results shown in Table 5.27 indicate that there is a positive relationship between Firm's Efficiency and real estate performance with a value of 634** ($r=634^{**}$, $p < 0.01$); the relationship between Suppliers' Construction Materials and real estate performance has a value of 550** ($r =550^{**}$, $p < 0.01$); the relationship between Customers' Buying Intention and real estate performance has a value of 635** ($r =.635^{**}$, $p < 0.01$); Credit Availability and real estate performance has a value of 681** ($r =.681^{**}$, $p < 0.01$); Marketing Strategy and real estate performance has a value of 642** ($r =.642^{**}$, $p < 0.01$); Legal Factors and real estate performance has a value of 564** ($r =.564^{**}$, $p < 0.01$); Land Availability and real estate performance has a value of 703** ($r =.703^{**}$, $p < 0.01$); Infrastructure Development and real estate performance has a value of 569** ($r =.569^{**}$, $p < 0.01$); Technological Adoption and real estate performance has a value of 664** ($r =.664^{**}$, $p < 0.01$); and Leadership Quality and real estate performance has a value of 667** ($r =.667^{**}$, $p < 0.01$).

5.13 Multiple Linear Regression

Regression is a technique that can be used to investigate the effect of one or more predictor variables on an outcome variable. Regression allows the researcher to make statements about how well one or more independent variables will predict the value of a dependent variable. Multiple linear regression analysis consists of more than just fitting a linear line through a cloud of data points. It consists of three stages: 1) analysing the correlation and directionality of the data; 2) estimating the model, i.e., fitting the line; and 3) evaluating the validity and usefulness of the model.

There are three major uses of multiple linear regression analysis: 1) causal analysis; 2) effect forecasting; and 3) trend forecasting. Unlike correlation analysis, which focuses on the strength of the relationship between two or more variables, regression analysis assumes a dependence or causal relationship between one or more independent variables and one dependent variable.

In terms of its three major uses, firstly, multiple linear regression analysis may be used to identify the strength of the effect that the independent variables have on a dependent variable. Secondly, it can be used to predict the effects or impacts of changes; that is, it can be used to ascertain how much the dependent variable will change when the independent variables change. Thirdly, multiple linear regression analysis can be used to predict trends and future values. Prior to running any type of regression analysis, it is necessary to conduct a correlation analysis and obtain detailed information about the strength and direction of the linear relationship between the dependent variable and each of the independent variables. This was achieved in the current study.

5.14 Assumption of Multiple Linear Regression

Before a regression analysis was conducted for this study, the following major assumptions regarding multiple linear regressions were tested: sample size (some rules of thumb); normality; linearity; homoscedasticity; multi-collinearity; and autocorrelation. These tests are necessary for explaining the relationships between dependent and independent variables. For this reason, the researcher checked these major least square assumptions and proved that they were met reasonably well.

5.14.1 Sample size (some rules of thumb)

When determining sample size, it is usually recommended that 20 to 30% of the population is used as a sample size, as a rule of thumb, with a sample of this size usually being acceptable. The ratio of cases (sample size) to independent variables should be at least 5:1 (enough data is needed to provide reliable correlation estimates). Ideally 20 cases per predictor (20:1), with an overall sample size of at least 100, is recommended. Moreover, Tabachnick and Fidell (2007) suggest that a sample size should ideally be $50 + 8(k)$ for testing a full multiple linear regression model or $104 + k$ when testing individual predictors, where k is the number of independent variables.

5.14.2 Test of normality

The variables in a multiple linear regression model must follow a normal distribution. To check the normality of the variables that are incorporated into the multiple linear regression model, histograms are used with a normal curve imposed. Moreover, the Univariate descriptive statistics (M, SD, Skewness and kurtosis) are established. Estimates of correlations will be more reliable and stable when the variables are normally distributed. The

frequency distribution of a regression standardised residual result shows that the histogram is a bell-shaped curve and data are normally distributed. Normality can be visually assessed by looking at a histogram of frequencies output (Garson 2012). Therefore, no data problem would lead to assumption have violated. (See Figure C-1: Residuals Normal Distribution Histogram in Appendix C of Appendix-III.)

5.14.3 Test of linearity

Linearity means that the predictor variables in the regression have a straight-line relationship with the outcome variable. When data is charted, linearity is essentially conceived of as a straight line. A predictable, well-ordered structure is uncommon in nature. This suggests that the parameters (regression coefficients) and indicator factors may combine linearly to form the mean of the reaction variable. Note that this assumption is far less restrictive than it may initially appear to be. The scatter plot shown in Figure C-2: Normal Probability Plot of Regression: Standardised Residuals, in Appendix C, shows the results of the test for linearity in the current study.

The plotted dots should follow a straight line to demonstrate that the dependent and independent variables have a linear relationship. Figure C-2 displays the residuals' normal distribution around the zero mean. Therefore, based on Figure C-2, the assumption of linearity for the variables of this study was correct, with residuals that are uniform. Therefore, if the relationship is linear, standard multiple regressions can provide an appropriate estimate of the relationship between the dependent and independent variables (Jason and Waters 2014).

5.14.4 Test for homoscedasticity

The assumption of homoscedasticity refers to the equal variance of errors across all levels of the independent variables (Osborne and Waters 2002). This means that researchers assume that errors are spread out consistently between the variables (Keith 2006). This is evident when the variance around the regression line is the same for all values of the predictor variable. Figure C-3: Graph showing Test of Homoscedasticity, in Appendix C, shows each of the 10 determinants against commercial real estate performance. Figure C-3 shows how the points are randomly and evenly dispersed throughout the plot. In addition, these patterns are indicative of a situation in which the assumption of homoscedasticity has been met in all of the four dimensions of organisational culture against employee engagement.

The bivariate distributions in Figure C-3 are made almost evenly around the line of greatest fit. To ascertain homoscedasticity, the researcher needs to examine scatter plots between the dependent variable and each of the independent variables, as well as residuals (ZRESID) and forecasted values, if applicable (ZPRED).

5.14.5 Multicollinearity test

In multiple regression analysis, multi-collinearity refers to the correlation among the independent variables (Matt et al. 2013). In addition, multi-collinearity is the existence of a linear relationship among the independent variables. Multi-collinearity exists when there is a strong correlation between two or more predictors in a regression model. Multi-collinearity poses a problem only for multiple regressions because simple regression requires only one predictor. The results of the communality statistics for the current study are presented in (Table – 3) , where two values are given: tolerance and variance inflation factor (VIF). Tolerance is an indicator of how much of the variability of the specified independent variables is not explained by the other independent variables in the model. If this value is very low (less than 0.10), this indicates that the multiple correlations with other variables are high, suggesting the possibility of multi-collinearity. The VIF value is just the inverse of the tolerance value (1 divided by tolerance). The multi-collinearity statistics of this study revealed a tolerance value of greater than 0.1 and a VIF value significance of below 10. This shows that there was no multi-collinearity problem in the model. (Note that $TOL=1/VIF$ so only one needs to be used). See Table C-1: Assumptions of Collinearity and Autocorrelation in Appendix C.

5.14.6 Testing for autocorrelation

Autocorrelation or independence of errors refers to the assumption that errors are independent of one another, implying that subjects are responding independently (Stevens 2009). The Durbin-Watson (Beechler and Woodward) statistic can be used to test the assumption that residuals are independent (or uncorrelated). This statistic can vary from 0 to 4. For this assumption to be met, the DW value needs to be close to 2. Values of below 1 and above 3 are problematic and a cause for concern. As per Table C-1 in Appendix C, the DW value is 1.595, which indicates that the model is free from autocorrelation.

5.15 Multiple Linear Regression Analysis Results

Regression is a powerful tool that summarises the nature of the relationship between variables and assists in making predictions of the likely values of the dependent variable (Bryman and Cramer 2005).

The model summary, ANOVA and coefficients table, as presented in Tables 5.21, 5.22 and 5.23, respectively, are all interpreted in this section. The necessary assumptions of the multiple linear regression models were checked as part of the study and found to be correct.

Table 5.28: Model Summary

Model	R	R-Square	Adjusted R-Square	Std. Error of Estimates
1	.894 ^a	.801	.787	.33457

Dependent Variable: Real estate performance

Predictors: (Constant), Leadership Quality, Legal Factors, Infrastructure Development, Suppliers' Construction Materials, Marketing Strategy, Customers' Buying Intention, Firm's Efficiency, Technological Adoption, Land Availability and Credit Availability

The model summary table contains the multiple correlations between the set of independent variables and the dependent variable.

The results shown in Table 5.21 predict the regression's goodness of fit to the model. The multiple regression analysis coefficients (R), coefficient of determination (R-square), and standard error were examined.

The coefficient of determination (R): is the measure of predictive accuracy of the regression model, and it ranges from 1.0 (perfect prediction) to 0.0 (no prediction) (Hair et al. 2019). According to Field the value of R indicates the simple correlation between the two variables (Field 2005).

R-Square: is the square of the correlation coefficient and indicates the percentage of the total variation of the dependent variable that is explained by the independent variable (Hair et al. 2019).

Standard Error of Estimates: represents an estimate of the standard deviation of the actual dependent values around the regression line or the measure of variation around the regression line. The lower the value is the better (Hair et al. 2019).

Adjusted R-Square: the coefficient of determination (R-square) is the square of the multiple correlations and reflects the proportion of the variation in the dependent variable explained by the independent variables considered. R-square is positively biased (as an estimator of population R-square) when the sample size is smaller and there are greater numbers of independent variables. In this case, the adjusted R-square can be used.

As can be seen in Table 5.21, 78.7% of the variation in real estate performance can be explained by all independent variables considered in this study (leadership quality, legal factors, infrastructure development, suppliers' construction materials, marketing strategy, customers' buying intention, firm's efficiency, technological adoption, land availability and credit availability).

Table 5.29: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68.028	10	6.803	60.774	.000 ^b
	Residual	17.014	152	.112		
	Total	85.043	162			

Dependent Variable: Real estate performance

Predictors: (Constant), Leadership Quality, Legal Factors, Infrastructure Development, Suppliers' Construction Materials, Marketing Strategy, Customers' Buying Intention, Firm's Efficiency, Technological Adoption, Land Availability and Credit Availability

The ANOVA table is used to test the statistical significance of the R-square value in the model summary. The null hypothesis is that the R-square value is zero (i.e., all the independent variables incorporated in the multiple linear regression model do not have a statistically significant impact on the dependent variable (real estate performance)). Table 5.22 indicates statistical significance ($F(10, 152) = 60.774$, $p\text{-value} < .0001$), which suggests that all the independent variables incorporated in the multiple linear regression model have a statistically significant impact on the real estate performance (i.e., the overall significance of the regression model is good).

Table 5.30: Coefficients Table

Model	Unstandardised Coefficients		Standardised Coefficients	T-value	P-value
	B	Std. Error	Beta		
(Constant)	-1.934	.275	-	-7.039	<.0001***
Firm's Efficiency	.137	.062	.110	2.205	.029**
Suppliers' Construction Materials	.146	.061	.110	2.395	.018**
Customers' Buying Intention	.138	.053	.128	2.614	.010***
Credit Availability	.143	.064	.120	2.236	.027**
Marketing Strategy	.118	.056	.108	2.104	.037**
Legal Factors	.138	.045	.135	3.068	.003***
Land Availability	.159	.056	.150	2.847	.005***
Infrastructure Development	.140	.061	.104	2.287	.024**
Technological Adoption	.117	.056	.110	2.088	.038**
Leadership Quality	.191	.050	.186	3.800	<.0001***

Dependent Variable: Real estate performance

Significance codes: *** (Sig. at 0.01), ** (Sig. at 0.05)

The real estate data were analysed by using the multiple linear regression model as shown in Table 5.23. The results showed that all the independent variables considered were statistically significant predictors of real estate performance: **Firm's Efficiency** (beta = .137; t-value = 2.205; p-value = .029); **Suppliers' Dependability** (beta = .146; t-value = 2.395; p-value = .018); **Customers' Buying Intention** (beta = .138; t-value = 2.614; p-value = .010); **Credit Availability** (beta = .143; t-value = 2.236; p-value = .027); **Marketing Strategy** (beta = .118; t-value = 2.104; p-value = .037); **Legal Factors** (beta = .138; t-value = 3.068; p-value = .003); **Land Availability** (beta = .159; t-value = 2.847; p-value = .005); **Infrastructure Development** (beta = .140; t-value = 2.287; p-value = .024); **Technological Adoption** (beta

= .117; t-value = 2.088; p-value = .038); and **Leadership Quality** (beta = .191; t-value = 3.8; p-value <0001).

The Regression Equation

The primary data gathered through the administration of questionnaires were examined mainly through the use of descriptive and inferential statistics: mean, standard deviation, Pearson's correlation and multiple linear regression. Correlation and regression analysis were the inferential statistics used. A multiple regression equation was also used to determine the strength and directions of the association between the variables with the results, with the aid of SPSS Version 25.

The regression model is illustrated as follows:

$$CREP = \alpha + \beta_1 FE + \beta_2 SD + \beta_3 BI + \beta_4 CA + \beta_5 MS + \beta_6 LF + \beta_7 LA + \beta_8 ID + \beta_9 TA + \beta_{10} LQ + e$$

Where

α = the constant

$\beta_1 - \beta_{10}$ = the parameters

CREP = Real Estate Performance

FE = Firm's Efficiency

SD = Suppliers' Dependability

BI = Customers' Buying Intention

CA = Credit Availability

MS = Marketing Strategy

LF = Legal Factors

LA = Land Availability

ID = Infrastructure Development

TA = Technological Adoption

LQ = Leadership Quality

e = error term

$$CREP = 1.934 + .137FE + .146SD + .138BI + .143CA + .118MS + .138LF + .159LA + .140ID + .17TA + .191LQ + e$$

5.16 Discussion of Results

This study proposed and examined a conceptual model of how firm efficiency, suppliers' dependability, customers' buying intentions, credit availability, marketing strategy, legal factors, land availability, infrastructural development, technology adoption and leadership quality influence commercial real estate performance in Addis Ababa. The following ten constructions were found to have a substantial effect, as addressed below.

H-1: Firm efficiency has a positive significant impact on the performance of commercial real estate firms in Addis Ababa.

The relationship between firm efficiency and performance of commercial real estate was shown to be positive and significant ($\beta=.137$; $t\text{-value}=2.205$; $p\text{-value}=.029$) confirming Hypothesis 1. This result is in line with the assertion made by Lindholm (2012) and Roulac (2011) that successful businesses grow and thrive in commercial transactions by putting plans into practice. As part of these plans, Lindholm (2012) and Roulac (2011) advise real estate marketers to implement cost-cutting measures, flexibility, differentiation, the retention and attraction of qualified HR, proactive marketing and selling strategies, operational efficiency, and involvement in corporate social responsibility (CSR) to increase productivity and profitability in the real estate sector.

H-2: Suppliers' dependability has a significant impact on the performance of commercial real estate firms.

The research suggests that the performance of commercial real estate firms is positively and significantly correlated with the dependability of suppliers to provide construction materials ($\beta=.146$; $t\text{-value}=2.395$; $p\text{-value}=.018$). The results of this study confirm those of Mirawati (2015), who found that real estate enterprises' quality, reputation and productivity are all enhanced by a relationship-based connection between the supplier and the contractor. The results also support those of Ramnarian (2012), who claims that unreliable suppliers have an impact on real estate expansion.

H-3: The buying intentions of real estate buyers have a direct and statistically significant effect on the performance of commercial real estate in Addis Ababa.

The results suggest that there is a significant and positive relationship between customers' intentions to buy and the performance of commercial real estate ($\beta=.138$; $t\text{-value}=2.614$; $p\text{-value}=.010$). This finding is consistent with Brophy and Haddad (Brophy 2011 and Haddad

et al. 2011), who assert that when deciding to purchase real estate, buyers consider aesthetic, economic, marketing, geographic and social factors. They also try to outsmart the sellers and, if at all possible, negotiate a lower price than the asking price. The results of this study are also relevant to the conclusions of Firew's (Firew's 201) study, which found that Ethiopian consumers' major difficulty is the on-going modification of commercial real estate's original design.

H-4: Credit availability has a positive and significant impact on commercial real estate performance.

The relationship between credit availability and performance of commercial real estate was shown to be positive and significant (beta=.143; t-value=2.236; p-value=.027), supporting H-4. The findings of this study are in line with those of Okidim and Ellah (Okidim and Ellah 2013), who claim that access to credit for financing is essential since it enables individuals and firms to meet the population's housing needs. Additionally, it is in line with the claim made by Akenga that a mortgage loan is intended to finance real estate developments (Akenga et al. 2015). It is assumed that there is a positive relationship between credit availability and successful real estate performance because the real estate industry requires significant amounts of money.

H-5: Market strategy has a statistically significant and positive impact on commercial real estate performance.

The relationship between marketing strategy and the performance of commercial real estate was shown to be positive and significant (beta=.118; t-value=2.104; p-value=.037). This finding is consistent with Adewale (Adewale et al. 2013), who argue that the performance of a firm is significantly affected by the marketing strategy variables of advertising, place, price, packaging and after-sales services. It is also consistent with the position put forward by Barney that competitive advantage is a source of superior performance, and it is made up of competencies of the firm that cannot be copied by competitors (Barney 1991). A study conducted in Nigeria by Amin, H. J. (2021) found that a well-designed marketing strategy had a significant impact on organisational success, which is consistent with this study.

H-6: Legal factors have a statistically significant and positive impact on commercial real estate performance.

The relationship between legal factors and the performance of commercial real estate was shown to be positive and significant (beta=.138; t-value=3.068; p-value=.003), which supports H-6. This conclusion supports Komisarov's claim that tax breaks and free economic zones encourage foreign direct investment, citing Latvia as an example (Komisarov's 2016). This is in contrast to Ethiopia, where a lack of a complete real estate framework has resulted in fraud and corruption that has slowed operations (Abera 2010). The finding is also consistent with Torgomyan and Laskowska's (2016) argument that governments control and regulate the real estate industry through legislation, taxation, subsidies, the banking system and zoning (land). The major pertinent issues addressed in the legal factors, such as real estate housing policies, land lease policies/land price policies, taxation policies, credit policies, real estate permission and registration proclamations, investment and financing policies, property transfer policies, commercial real estate laws, and so on, were discovered to be critical for improving RE performance.

H-7: Land availability positively and significantly affects the performance of commercial real estate firms.

The availability of land was revealed to be positively and significantly correlated with the performance of commercial real estate (beta=.159; t-value=2.847; p-value=.005), supporting H-7. The study's results for this hypothesis are in line with those of Kuryi-Wysocka et al. (2014), who contend that while land supply is stable, demand is rising steadily, driving up prices and occasionally having an impact on land prices as well, reducing the amount of available land. According to Kuryi-Wysocka et al. (2014), environmental, political and legal variables, as well as marketing and non-marketing elements, have an impact on land availability (Wysocka et al. 2014). Lastly, this study's findings are in line with a report by the World Bank (World Bank 2015), which identified the shortage of land as one of the primary causes of urban housing scarcity. A study conducted in Nigeria by (Nagya, U. & Udoekem, 2022) found that due to the constant growth in urban population, resulting in fast urbanization, access to urban land has become a challenge, which is consistent with the findings of this study.

H-8: Infrastructural development has a significant and positive impact on commercial real estate performance.

The relationship between infrastructural development and the performance of commercial real estate was shown to be positive and significant ($\beta=.140$; $t\text{-value}=2.287$; $p\text{-value}=.024$), supporting H-8. The findings of this study are consistent with those of Cahill (Cahill 2010), 2010), who discovered that infrastructure access is essential for real estate profitability. The findings of this study are likewise in line with those of Igbinosa (Igbinosa 2011), who contends that the more connections a site has to the metropolis, the more investment it draws. It is also consistent with the findings of Seo (Seo 2016), who claims that the success of commercial real estate has been influenced by transportation facilities of various models. The results of this study also coincide with those of Kibiru (Kibiru et al. 2014), who claim that in Kenya real estate success is influenced by location and closeness to infrastructure. Location was proven to be an important factor for commercial real estate marketers in Nigeria to set prices in metropolitan Lagos (Aluko 2011), which is somewhat in line with this study. The findings of (Oyetunji 2018) in Nigeria, found that technological infrastructure, service delivery efficiency enhancement, and productivity branding encouraged the deployment of ICTs in Lagos' real estate market.

H-9: Technology adoption has a statistically significant and positive effect on the performance of commercial real estate firms.

The relationship between technology adoption and the performance of commercial real estate was shown to be positive and significant ($\beta=.117$; $t\text{-value}=2.088$; $p\text{-value}=.038$), supporting H-9. The study's findings are in line with those of Navigant Construction Forum (Navigant Construction Forum 2016) and Thompson and Dixon (Thompson and Dixon 2005), who suggest that technology increases construction efficiency by utilising ICT (such as AutoCAD), digital selling and marketing, and involving customers in the design process to reduce the likelihood of frequent changes from the initial design.

H-10: Leadership quality has a positive significant impact on the performance of commercial real estate firms in Addis Ababa.

Leadership quality was revealed to be positively and significantly correlated with the performance of commercial real estate ($\beta=.191$; $t\text{-value}=3.8$; $p\text{-value} < .0001$), supporting H-10. This finding of the study is consistent with the view of McGrath and MacMillan (2000) who proposes that in the face of current challenges faced by the real estate sector effective leadership can facilitate performance development.

According to the research, management development is crucial for enhancing organisational performance and leadership is required for long-term competitive advantage. (Avolio, 1999; Rowe, 2001). According to the study conducted by (Obiwuru et al. 2011), in Legos state , transformational leadership styles and the combination of these styles have a considerable positive impact on the financial performance of organizations. On the other side, transactional leadership severely undermines the financial success of SMEs, which is also somewhat consistent with the results of our research.

Table 5.31: Summary of the Hypotheses Tests

Hypothesis #	Research Hypothesis	Beta Value	T-Value	P-Value	Decision
H-1	Firm efficiency has a positive significant impact on the performance of commercial real estate firms in Addis Ababa.	Beta=.137	T-Value=2.205	P-Value=.029	Supported
H-2	Suppliers' dependability has a significant impact on the performance of commercial real estate firms.	Beta=.146	T-Value =2.395	P-Value=.018	Supported
H-3	The buying intentions of real estate buyers have a direct and statistically significant effect on the performance of commercial real estate in Addis Ababa.	Beta=.138	T-Value=2.614	P-Value=.010	Supported
H-4	Credit availability has a positive and significant impact on commercial real estate performance.	Beta=.143	T-Value=2.236	P-Value=.027	Supported
H-5	Market strategy has a statistically significant and positive impact on commercial real estate performance.	Beta=.118	T-Value =2.104	P-Value=.037	Supported
H-6	Legal factors have a statistically significant and positive impact on commercial real estate performance.	Beta=.138	T-Value =3.068	P-Value=.003	Supported
H-7	Land availability positively and significantly affects the performance of commercial real estate firms.	Beta=.159	T-Value=2.847	P-Value=.005	Supported
H-8	Infrastructural development has a significant and positive impact on commercial real estate performance.	Beta=.140	T-Value =2.287	P-Value=.024	Supported

Hypothesis #	Research Hypothesis	Beta Value	T-Value	P-Value	Decision
H-9	Technology adoption has a statistically significant and positive effect on the performance of commercial real estate firms.	Beta=.117	T-Value=2.088	P-Value=.038	Supported
H-10	Leadership quality has a positive significant impact on the performance of commercial real estate firms in Addis Ababa.	Beta=.191	T-Value=3.8	P-Value <0001	Supported

5.17 Chapter Summary

To evaluate the real estate data collected, descriptive statistics (means, standard deviations, counts, and percentages) were utilised first, followed by inferential statistics (correlation and regression). SPSS Version 26 was used for the correlation and regression analyses, and the Analysis of Moment Structures (AMOS) program was used for exploratory analysis (convergent and discriminant validity).

Out of the 231 questionnaires distributed, 185 were returned, with 46 remaining unanswered. Of those returned, 22 were rejected, and 163 questionnaires were used in the final analysis, yielding a 71% real response rate. Descriptive statistics were used to examine frequencies and percentages, as well as means, standard deviations and other information.

The real estate data was analysed using descriptive statistics to evaluate the degree of agreement among real estate specialists and professional commercial real estate firms in Addis Ababa on all 11 constructs. The greatest mean score in the descriptive analysis was Leadership Quality (Mean = 4.244***, SD = 0.7048), while the lowest mean score was Legal Factors (Mean = 4.072***, SD = 0.7059). All of the mean scores of the 11 variables were found to be significantly different from the mid-point 3 at the 0.001 significance level. As a result, the study's variables demonstrate agreement among real estate specialists and professional commercial real estate firms in Addis Ababa.

In this study, the first 40 responses obtained (representing 24.5% of the sample) and the last 40 responses received (representing 24.5% of the sample) were chosen, and the outcomes of these responses were compared using an independent sample t-test. The independent-samples t-test findings showed no significant difference (no non-response bias confirmed) between before and after replies at the 95% confidence interval for the selected variables.

EFA was conducted to understand whether each theoretical construct was a one-dimensional or multi-dimensional factor (cf. Holmes-Smith, 2010). Two construct validity assessments, convergent and discriminants were undertaken. The analysis revealed that the construct should not only correlate with related factors, but it should also not correlate with unrelated variables. In this study, factor models for each construct were tested in relation to a specific type of latent-variable model, where the latent variables and the observable variables are both continuous and the relationship between the two is linear.

The real estate data was analysed using a correlational analysis, and the results revealed that each of the independent variables studied had a positive relationship with the dependent variables, ranging from the strongest associations -land availability and Real Estate Performance ($r = .703^{**}$, $p < 0.01$) to the lowest associations -Technological Adoption ($\beta = .117$; $t\text{-value} = 2.088$; $p\text{-value} = 0.038$). The basic assumptions involving multiple linear regressions were examined and met reasonably well, including sample size (some rules of thumb); normality; linearity; homoscedasticity; multi-collinearity; and autocorrelation. The real estate data was analysed using a multiple linear regression model, and the results revealed that all of the independent variables considered were statistically significant predictors of real estate performance, ranging from the highest- Leadership Quality ($\beta = .191$; $t\text{-value} = 3.8$; $p\text{-value} = 0.0001$) to the lowest- Technological Adoption ($\beta = .117$; $t\text{-value} = 2.088$; $p\text{-value} = 0.038$).

CHAPTER SIX: QUALITATIVE DATA RESULTS AND DISCUSSION

6.1 Introduction

This chapter deals with the qualitative research findings of the study. As explained in the methodological procedure of the study outlined in Chapter 3, a mixed or blended method that used both quantitative and qualitative data was applied. The study employed quantitative data-collection and analysis methods for the first phase of the study, and then further clarified the results of the quantitative study with the qualitative research findings in the second phase of the study. The qualitative data analysis aims to further explain the “how” details of the research questions of the study, and based on the findings from the quantitative analysis, the qualitative study examined the significance and ways that factors the research raised affect or impact performance of the commercial real estate developers under study. The qualitative study also tried to identify and clarify unexpected results obtained from the bulk of qualitative data gathered.

In line with the research objectives and questions, semi-structured interview questions were developed. The interview questions address whether those factors the study raised affect the performance of commercial real estate developers and explore the way in which they may do this. Ten key informants were selected from seven stakeholder institutions in the commercial real estate development sector and interviewed for the qualitative phase of the study using the interview questions. Relevant data was selected and filtered from a bulk of qualitative data gathered. The data was also identified and thematically categorised to correspond to the research objectives and questions. To achieve the intended objectives from the qualitative data-collection and analysis phase of the study, identification of themes and categorisation of data were performed.

The interview questions were also sought to assess the relationships among the constructs of the study. In line with the objectives of the study, respondents were asked about eleven questions to address the research questions of the study in great detail. The results of the qualitative study were presented as follow.

6.2 Profile of the Interview Respondents

The study employed the purposive sampling method to collect qualitative data from key informants selected from various stakeholder institutions in the commercial real estate sector. About 10 managers and senior professionals from these institutions were interviewed to obtain the qualitative data. The respondents were selected considering the fact that they might be expected to have ample knowledge on the real estate development sector. The profile of the respondents is depicted in Table 6.1.

Table 6.1: Profile of the Interview Respondents

No	Voice Data ID/ Key Informant (KI) Code	Position	Sex	Qualification	Years of Experience
1	KI-01	Director, Finance and Economy Analysis @ NBE	Female	MA in Economics	14
2	KI-02	Chief Corporate Loan Officer @ CBE	Male	MA in Accounting	10
3	KI-03	Team leader, Land Mangt. and Administration @ AA City LMAA	Male	MA in Project Management	8
4	KI-04	Land Mangt. and Administration @ AA City LMAA	Male	MA in Investment and Finances	12
5	KI-05	Ministry of Urban and Infrastructure Devt.	Male	MA in Development Economics	16
6	KI-06	Sales and Store Head @ ABEAMA Trading PLC (Ceramics and Finishing Materials Importer and Distributer)	Male	BA in Sales and Marketing	15
7	KI-07	Manager @ ADERA PLC	Male	MBA	Over 20 years
8	KI-08	Head, High Taxpayers Division @ the Ministry	Male	MA in	17

No	Voice Data ID/ Key Informant (KI) Code	Position	Sex	Qualification	Years of Experience
9	KI-09	Investment Licensing and Registration Director @ AAC Investment Commission	Male	MA in Development Economics	18
10	KI-10	Head, Construction Permission and Control Office @ Bole Sub-City, W4	Male	MBA	12

Source: Researcher's Own Interview Data (2022)

As shown in Table 6.1, most of the respondents in the interview sample were male. All of the respondents were master's degree holders with years of experience that ranged from 8 to over 20 years. These qualifications and years of experience were anticipated since the respondents were managers and senior experts, and qualifications and experience needed for these positions were presumed to be high.

6.3 Interview Findings

The interview questions dealt with factors identified in the quantitative phase of the study as affecting the performance of commercial real estate developers. The factors identified included the real estate developer's efficiency, real estate suppliers' dependability, real estate consumers' buying intention, credit availability for real estate developers, marketing strategy, real estate-related legal and policy frameworks, land availability for real estate developers, infrastructure development, technology adoption and leadership quality or competency of the real estate developers. The interview questions also sought to assess the extent and nature of the impact of the factors on the overall performance of the real estate developers. The findings of the qualitative study are presented as follows.

In the course of conducting the interviews, audio recordings were used by the interviewer, who received training on this. The use of audio recordings has over the past 30 years become a taken-for-granted approach to generating transcripts of in-depth interviewing and group discussions (Lee 2004, 878), and their use is now considered as a "normalised discursive practice" (Nordstrom 2015, 388). Tuckett, quoting May suggests that the use of a recorder is necessary to "counter criticism" that qualitative research is "prone to systematic bias" Tuckett

2005, 33), quoting May 1991, 190),. Seale and Silverman (Seale and Silverman 1997) list among the strategies required for ensuring “rigor and validity” in qualitative research: “Recording data objectively and comprehensively, including the use of audiotapes, videotapes and different levels of details in the transcription of data” (p. 380).

6.3.1 The effect of firm efficiency on commercial real estate performance

The real estate firm’s efficiency was one of the key issues raised in all the interviews conducted with the informants of the research. Respondents were asked whether they considered the efficiency of the real estate firm to affect commercial real estate performance. Data extracted from respondents’ explanations pertinent to the question indicated that the real estate development sector in general may have a significant impact taking into cognisance its economic potential and ability to address the critical shortage of housing in the city.

For Example, interviewee KI-01, a Director, Finance and Economy Analysis at NBE, stated that company efficiency contributes to real estate performance.

“Commercial real estate development is one of the sectors that has the potential to make a significant contribution and will reduce the government's burden of providing housing development and supply. This respondent, who asserted that the government does not have the capacity to address housing demand in the city completely, suggested that the government is expected to provide subsidies to at least some low-income earners, with the rest covered by commercial real estate developers. Real estate developers have a big role to play in alleviating the government's housing crisis and reducing unemployment; as these sectors grow and prosper; the number of people they employ will increase. Not only will there be an increase in the number of employees, but also the transfer of knowledge by developers through the use of new technologies as technologies bring their own economic benefits. This respondent further explained that the sector as a whole may have a great contribution to make to the nation and the economy. “

According to KI-02, the Chief Corporate Loan Officer for the banking and finance sector, and KI-08, from the Ministry of Revenue, business efficiency will be critical to the success of the financial and commercial real estate markets, as well as play a multifaceted role in the overall economic growth.

"The real estate sector should not just be understood as a construction business; it should be considered as a multi-faceted economic sector. For example, it has an impact on the manufacturing, imports, and exports sectors. They also stated that "real estate developers contribute to the national economy by creating company revenue and paying taxes to the government, which in turn advances the well-being of society through developing development-driven infrastructure."

6.3.2 The effect of suppliers' dependability on commercial real estate performance

The interview respondents were also asked about their assessment of the impact of the role of construction material suppliers on commercial real estate performance. The data collected revealed a range of effects on the efficiency and performance of real estate developer companies.

According to KI-02, a Chief Corporate Loan Officer, remarked that any firm faces internal and external limits when it comes to significant inputs or supplies:

"He said that as any business operates under both internal and external influences, the role of construction material suppliers can be expected to have an impact on real estate development companies as an outside influence. Further information on the potential impact of the supply of construction materials on real estate developers collected by this study indicated that real estate developers enter into contracts with clients and increase the cost of the construction process over time as a result of increased prices of construction materials. This will have an impact, not only on the increase of prices but also on market volatility. The pace market volatility is slowly increasing as much as people can predict. If it goes up suddenly, according to one respondent, it will have a big impact on real estate development companies."

To remain competitive and be profitable in business, KI-10 Head, Construction Permission and Control Office stated that he needed to be a visionary thinker. He justified himself by saying:

"Business leaders who builds and operates a business must be a visionary strategist. They need to establish a team of experts who can analyse and predict the future of the construction sector and the housing market before estimating the value of the houses they are building, not just long-term considerations about the real estate business."

Such strategic measures can reveal challenges that may be mitigated by creating an institutional capacity to take action, even if these businesses are not able to avoid the potential impact of the supply of construction materials on their performance. This respondent advised that real estate developers should not say, "I just increased the price because I have increased cement." Rather, as a business company, they need to be able to predict the future of their business and be prepared. As a business company, they need to create the capacity to predict and prepare for the future of their business." He further added that "If we have such a viable business institution, we will not be able to make our contracts in a way that annoys our customers the most. If we have information that can be used to predict the future, we can also have a risky margin that our client can clearly enter into when negotiating with the customer." The same respondents further suggested that "simply because the real estate market is booming, the prospect of increasing it is not good for the business, as it is distracting for customers, and as it is necessary to increase the firm's internal capacity.

According to the responses obtained from KI-05, Ministry of Urban and Infrastructure Development, the country's market is not structured, and it is difficult to say that it is driven by demand and supply; this will have an impact on the supply of construction materials, especially in the current context of the national economy and the market. The respondent highlighted a serious lack of foreign currency for the import of steel and finishing materials, which can be expected to have a substantial negative influence on the sector's performance.

The viewpoints of KI-06, a large Construction Material Importer and Distributer Sales / Store Head, and KI-04, a Land Development and Administration officer, on the importance of supplier dependability on commercial real estate performance are given below.

"The supply of construction materials is a problem for the market system, especially cement, which is being supplied by the black market. The respondent also pointed out that a shortage of building materials will delay construction, increase the cost of housing, make it difficult for them to meet the needs of the community in terms of income and economic potential, and will thus have a significant impact. (KI-06)"

"Owing to the current economic and market instability in the country, the limited supply and rising prices of construction materials are having a significant impact on

the construction performance of real estate companies. The source stated that they were having a difficult time building and delivering. (KI-04)”

According To KI-06, a major Construction Material Importer and Distributer Sales / Store Head, the current economic and market volatility in the country, as well as the limited availability and rising prices of building supplies, are having a significant impact on the construction performance of real estate firms.

"He claimed that because of the government's meddling in the retail trade, a quintal of cement may be worth up to 1,000 birrs. This source asked the government to stop doing this, to perform its regulatory role correctly, and to work to address the sector's supply chain and trade constraints. He stated that the country's tiny number of cement mills remain unregulated due to political insecurity, unrest, and other issues, and that the country's construction sector, especially real estate, is paying a heavy price due to cement shortage and inflation."

According to KI-06, a major Building Material Importer and Distributor Sales / Store Head, construction material prices have risen dramatically and affected real estate performance as follows:

"The respondent explained that, in the past, the supply and marketing of real estate was under the control of a few elites, and that the problem had now worsened because it was unknown who owned and controlled the supply and distribution of steel products: "in some cases, there is a sense of entitlement for preferential treatment, feeling teregninet (that this is their time)". This respondent also indicated that the significant increase in steel prices, purportedly as a result of increased oil prices, was placing a lot of pressure on real estate developers. Real estate developers took a risk by failing to work carefully on their house development project, which required the use of large amounts of steel, signalling that the supply chain and the role of suppliers had a significant impact on the sector's performance. "According to the comments of a respondent involved in the supply of construction materials, construction input supply has a substantial impact on the activities of real estate development enterprises, with costs that are not even reasonable to high-income individuals. The reasons for these high prices include a lack of supply, inflation induced by a lack of foreign exchange, and a variety of other issues. This suggests,

according to the answer, that the supply of construction materials will have a substantial impact on the activities of the industry.”

According to KI-08 from the Ministry of Revenue, inputs are the most expensive in all industries, and he tried to justify this by stating:

“For example, in the manufacturing sector, 60 to 70% of the cost is determined by the profit of that company. When it comes to real estate construction, the main cost is the raw material. The lack of supply and the cost of construction materials make it very challenging for the two parties (the builder and the buyer) to complete the work and deliver it according to the contract. The fact that the cost of building materials fluctuates or is not constant is a big factor in real estate construction, meaning that construction might not be completed or that increased prices could lead to unnecessary disputes between the two parties. For various reasons, the slowdown in housing construction has led to the ever-increasing cost of building materials and the increase in labour costs, which will bring the burdens to the customer. As a result, deals could fall apart. The person who used to save money to pay for their housing bond may not be able to continue, so there will be an occasional resale to a new customer, and when a person decides to buy a home, he or she can enter into a home purchase agreement. However, unreasonable price increases may not consider the purchasing power of the homeowner, and this may lead to controversy. For this reason, the respondent recommended that homes be completed on time, which would reduce the cost for both the developer and the consumer, and that it should be selected by the buyer sooner rather than later.”

According to KI-09, a respondent from the Investment Commission asserted the following about the importance of construction materials in improving real estate performance:

“That the cost of construction materials makes real estate developers vulnerable, explaining that if cement, steel, stone and the cost of their supply increase, the cost will affect everyone, including the cost of construction labour. So, the supply and cost of construction materials will obviously have a negative impact on real estate development. Another respondent, who worked with construction permits and supervision, said that developers could face construction delays if they are not provided with the necessary building materials in quality and quantity during the construction process.”

The data gathered from interviews and other research sources indicate that the supply of building materials, as well as the role of suppliers, have a significant impact on the performance and efficiency of commercial real estate developers.

6.3.3 The effect of customers' buying intention on commercial real estate performance

The interview respondents were asked about the impact of real estate buyers' purchasing or buying intention on commercial real estate performance. *Data collected indicated that a home buyer's intention reflected the customer's economic condition or capacity.*

As per the opinions of the respondent from the Ministry of Urban and Infrastructure Development (KI-05) regarding the impact of home buyers' purpose and needs on the performance of real estate developers, there is a huge demand for housing in Addis Ababa and the problem is with housing development and supply. Even real estate condominiums, which are currently on the market, are becoming more expensive, and in terms of price this poses questions like: "Who are these real estate developers supplying houses to?" Homes built by real estate developers do not consider the middle-income and low-income housing community and point to the fact that the current state of affairs in the real estate industry does not take into account the needs of home buyers.

The respondent who was a senior banking and financial policy consultant (KI-01) stated that currently, homeowners are buying a condominium for up to 4 million birrs.

"People may perceive the houses supplied by real estate developers to be only for those who are rich because of the work record of the companies themselves. These companies could be more successful if they adapted the houses they are building to the market for medium income, in addition to high income, considering the living conditions of the community. Real estate companies may benefit more if they demonstrate and promote to the community that they are building houses that are even lower in price than the existing government condominiums, with an already complete infrastructure, On the other hand, as an alternative, the government should be requested to build houses that benefit the middle- and lower classes in a way that combines business with social responsibility. The government could also be approached for sponsorship. As a policy action for the government, real estate developers can make a case to the government that they build a percentage of the houses that the government supplies to the lowest-income residents of the population.

If the government is open to this arrangement, real estate developers can negotiate their role in these projects. This respondent also suggested that real estate firms can build and supply housing that considers the community's income potential and expand their market share.”

KI-10, the head of the Construction Permission and Control Office, said that the massive demand and supply mismatch in Addis Ababa’s real estate market is the result of large migration of rural inhabitants to Addis Ababa and underlined the gravity of the problem.

“Ethiopia is a developing country, and its housing demand is large, which might be considered as a fantastic opportunity and a broad field for real estate enterprises. In terms of issuing a construction permit and building supervisor, he highlighted a study that advocated striking a balance between the interests of the city buyer and the requirements of the homes being built. According to him, development businesses should not only create houses but also make these dwellings available to the community to suit their demands. Massive migration from rural areas to Addis Ababa is exacerbating the present housing shortage.”

A respondent from the Land Management and Administration office (KI-04) stated the following regarding the impact of home buyers' aspirations and wants on the performance of real estate developers.

“In the past the real estate developers had better capacity and competency to build and deliver houses in accordance with the terms of the contract with their clients. This meant that the perception and trust of the buyers regarding the real estate developers was better. However, over time the trust and interest of home buyers has waned owing to the growing trend of illegal activities in the real estate development sector. He also pointed out that the high cost of real estate and the lack of consideration for the income and purchasing power of the community could affect the activities of the real estate development sector. He further suggested that despite the high demand for and shortage of housing in the city, the high cost of housing offered by real estate developers and the lack of consideration for the economic potential of most communities have a Negative impact on the efficiency and performance of real estate companies.”

According To KI-06, a major Construction Material Importer and Distributer Sales / Store Head, argued how real estate developers are failing to meet the demands of home buyers:

“Real estate development enterprises must research the expectations of their house buyers before entering into a contract based on such needs. Failure to meet home buyer requests will have an impact on real estate developers if the quality, quantity, and building materials stipulated in the agreement are not received. He went on to say that home purchasers want to buy a home that fits their budget, and this source alluded to a method of delivering houses in accordance with the purchase agreement with consumers upon completion or partial completion of the property. The same respondent also mentioned the risk of misunderstandings between clients and developers in such organisations about the creation and interpretation of a property purchase agreement. Customers complain when they have not thoroughly read and signed the contract paperwork supplied by the developers while engaging into a mortgage contract during construction or delivery, saying things like, “We thought such and such. We were duped.” There are also occasional purposeful attempts by real estate developers to generate unnecessary profits by leveraging problematic provisions in procurement documents under the guise of customer.”

A question was presented to the KI-10, Investment Licensing and Registration Director, in accordance with the needs of property buyers, regarding the construction process and payment performance and he stated the following:

“The client has a contract to buy the house that specifies, in part, “You will pay this sum in advance and the balance amount when the construction is completed.” The buyer will make the needed payments on time, but the real estate developer will frequently fail to comply with the terms of the agreement. Customers are frequently refused the final product and complain that they have paid the advance instalment payments but have not received the house as agreed.”

In summary, the study's sources indicate that the purchasers' economic status and expectations have a significant impact on real estate development and the sales performance of real estate organisations.

6.3.4 Effect of credit availability on commercial real estate performance

The respondents were asked how they assessed the credit availability for the commercial real estate business and whether they thought that credit availability significantly affected commercial real estate performance. Regarding the availability of loan financing and its

impact as well as the size and nature of its impact on the performance of real estate development companies, the interview data collected show the existence of a decisive impact. Concerning the credit availability to real estate developers, the thoughts of KI-01 are summarized below:

"Credit availability is a major consideration because they do not operate on a budget." He added that because food inflation has reached 40%, even in this market environment, it is difficult to operate without a 40% incentive budget. The sector requires financing, and financing is reliant on cash flow. Real estate companies rely on credit, and the majority of individuals who receive credit also have other credit, and their buyers are also loan seekers. Banks lend to both the home buyer and the real estate developer in such a volatile economic situation; there are financial services accessible to the sector, but in terms of service delivery, either party may not obtain as much credit as they would like at the right time (KI-01). He also stated that most banks, particularly in light of the country's recent political upheaval, have had an impact on the country's overall economic performance. According to this respondent, the liquidity crisis may limit banks' ability to fund as much as they should. Lending institutions may prioritize industries other than real estate development in the event of such a liquidity crisis. In this view, private banks, in particular, may shift away from long-term lending sectors such as real estate and focus on lending to businesses that only require short-term loans. The overall financial situation has also been noted as having a significant impact on the real estate sector (KI-01).

Regarding loan availability to real estate developers, the opinions of KI-02, chief Corporate Loan officer is summarized herein under:

"The availability of finance or capital is determined by the country's economic growth potential." Credit or money is provided on the expectation that they will expand and strengthen the country's banking and financial services sector. When it comes to real estate, most people do not have access to credit on their own, and there are other sectors that require assistance in the current economic climate. In actuality, the loans of other developing sectors in the economy as a whole have no effect on the real estate industry, and real estate developers can easily borrow and collect collateral like any other competing sector. To accomplish this, lending banks seek out and secure the houses to be

built as collateral, and the sector as a commercial enterprise encourages banks to lend money. Banks, particularly private banks, would rather lend to real estate developers than agricultural borrowers. "He also stated that, as part of a series of reforms, the banks have developed a credit line to compete with the services provided by nearby banks in order to diversify their services." This service is available to both real estate developers and home buyers. The reply continued by noting, "In light of the potential impact on legal policy, land supply, and other issues in the sector, credit provision is a key challenge for real estate developers (KI-02)."

Regarding loan availability to real estate developers, the opinions of KI-03, Team leader, Land Managt and Administration is summarized herein under

"KI-03, Team Leader, Land Management, and Administration, who participated in this study, also stated that financing can be viewed as a reason why real estate developers are not building and delivering houses on time in accordance with their contracts and plans." According to the respondents, while funding is available to real estate developers, banks, particularly private banks, priorities other short-term and more lucrative commercial projects over the real estate sector. The fact that the loan repayment time (grace period) for real estate projects is long discourages banks from lending money to the industry, as banks prefer to get loans repaid as quickly as possible. In light of this, the respondent stated that the sector's need for long-term loans is not encouraged. Another responder, who was in charge of building permits and supervision, claimed that the lending rate affected the performance and efficiency of real estate development firms."

KI-04, the Head of Land Management and Administration, expresses his thoughts on the loan availability for real estate developers:

"This respondent pointed out that, under the previous system, the real estate development sector was incentivized by policy regarding the supply and access to bank loans, in addition to the supply of low-value lease land." However, the reply acknowledged that, in practice, there was an issue with treating developers fairly. The answer emphasized the significant demand for homes in Addis Abeba, but also stated

that the country's current political scenario is contributing to the weakening of the real estate sector, emphasizing the importance of making the sector a priority."

KI-05, the the Ministry of Urban and Infrastructure Development, expresses his thoughts on the loan availability for real estate developers:

"This respondent stated that land is becoming more expensive and that companies are facing capital constraints, that they frequently carry out housing development projects with money raised from their buyers, and that sometimes market value precedes them and they find it difficult to hand over their pre-paid homes to their owners." He stated that funding is vital in the operation of real estate development enterprises because it provides them with the funds to purchase and construct the necessary inputs. "

A research respondent who works as a sales and marketing executive for a company that imports and distributes building materials (KI-06) stated the following:

"There are only around 20 private and public banks that offer credit to real estate developers overall, and these financial institutions frequently run out of loans. In contrast to local real estate developers, only a small number of foreign real estate developers operating in Addis Abeba have access to other sources of financing."

According to a research participant who provides construction equipment to real estate developers (KI-07):

"The National Bank had previously urged real estate developers to obtain loans from banks, but now the banks are refusing to do so, citing this prohibition. Additionally, he discussed instances in which "the supply of loans is suddenly denied and suddenly allowed" and revealed that in certain circumstances, in what appeared to be a one-time campaign move, loans were permitted to be given to specific developers in an effort to enable them to finish ongoing projects. This answer stressed the need for a strategy to direct the financiers' approach and suggested that it be equally accessible to real estate developers and potential buyers. The availability of credit has an impact on the activities of real estate developers, especially if they are unable to get the construction financing they require in a timely manner or the bank lending process is

challenging, he added. Real estate developers should be given land by the government, but only in proportion to their potential for growth and financial success. Furthermore, banks formerly based all of their loan proposals on the developer's construction project's performance. Unfortunately, recent bank lending restrictions, a lack of foreign currency, and the high cost of construction materials and equipment have resulted in a scarcity of capital and operation fees. According to the respondent, real estate developers' ability to obtain financing as well as their financial resources have a significant impact on how rapidly their firm moves. "

According to a research respondent who works in the head of the high tax payers division (KI-08) to real estate developers:

"According to KI-08, head of the high tax payers division, real estate developers can operate their businesses financially in two ways: first, by lending the house as is or by building it up with his own capital; second, by carrying out construction projects by collecting two or three installments as customer pre-paid work." According to the reply, "real estate developers, like any other commercial firm, will be able to borrow the collateral required by the bank in cases where they lack sufficient capital."

According to a Director of Investment Licensing and Registration (KI-09), to real estate developers:

"Banks must accept legitimate collateral in order to make loans, according to KI-09, Investment Licensing and Registration Director." Real estate developers can receive loans by using the land they have acquired or begun work on as collateral, in addition to developing residences using money paid up front from their clients. Because real estate developers only receive payments in advance from their clients, having access to loans may not have a substantial impact on them, according to the respondent."

The majority of the key informants acknowledged that the performance of commercial real estate functioning in Addis Ababa is significantly impacted by the availability of financing.

6.3.5 The effect of market strategy on commercial real estate performance

The respondents were presented with the question: How do you assess real estate firms' marketing strategy on the performance of commercial real estate firms?

According to the responses, there is a high demand for housing and the need for marketing in the city, but most commercial real estate companies do not consider the income and livelihoods of the urban population in the marketing strategies that they follow.

The marketing strategy of the companies has neglected the demand and market for affordable housing in the city. They target a few wealthy people in the city and Ethiopians living abroad and this marketing strategy has neglected the demand and market for affordable housing in the city. Building and supplying housing for a few indicates that they are focused on making a large profit and thriving on a limited market.

The Chief Corporate Bank Loan Officer (KI-02) who commented on the case, as a respondent of the study, said that:-

“The real estate developers' marketing strategy should not have much impact on their operations, because housing demand is high. If the demand is addressed, there is no market problem.”

A Land Management and Administration official (KI-04) confirmed that:

“There is a severe shortage of housing in the city and that the development companies will not have a market problem and will not have to do much marketing if they address this shortage. However, the other respondent from the same sector pointed out that owing to the volatility and unpredictability of the current political situation in the country, real estate developers have little access to affordable land for housing development. As a result, companies are focusing on housing development and marketing strategies aimed at middle-income citizens. For these citizens their homes are more likely to be occupied by those living abroad than locally, and their payments and transactions are largely made in hard currencies.

The Ministry of Urban and Infrastructure Development (KI-05) gave the following response about the effect of marketing strategy on commercial real estate performance:

“He explained that many people cannot afford to buy houses to be built by real estate companies. For this reason, there is only a limited market, and most of the developer companies have focused on the segment that lives abroad. Hence, the marketing strategy they follow seems to be relevant only to the business needs of the companies. This respondent pointed out that real estate marketers often use the same marketing strategy to promote themselves in the media, which is more influenced by traditional brokers than by modern marketing. A respondent of the study engaged in construction materials supply found that real estate developers use a marketing strategy in

addition to advertising in the media, stating that this marketing strategy is appropriate and encouraging.”

The respondent in charge of Investment Licensing and Registration Director (KI-09), gave an opposite view to the foregoing Judgement and argued that real estate businesses' marketing strategy is often neglected by individual sellers.

As a result, a marketing strategy is rendered ineffective, and market connections must be formed. According to a Manager of ADERA PLC (KI-07), real estate prices are high in the current market and economic environment, and developers are also attempting to capitalise on the limited market opportunities available, citing high advertising costs.

The Director of Investment Licensing and Registration, KI-09, discussed about the role of ***commercial real estate marketing strategies on performance.***

“He stated that since there is a shortage of housing in Addis Ababa no need of developing a marketing strategy. He further argued that Real estate development companies were also allowed to operate in the housing sector, which was intended to address the housing needs of low-income people. After the sector was opened to real estate developers, the government itself attempted to make housing more accessible. It would be more profitable for the commercial real estate development sector if they worked on housing accessibility as a focus as this would benefit the country. However, because they are focused on making a profit, they prioritise only the money they make out of it, so their only targets are wealthy people. This respondent also said that real estate developer’s do not take the poor into consideration as a market, as it was previously suggested that if real estate developers could easily provide housing, it would become accessible to the poor, and if it was cheap, there would be an opportunity for low-income people to live on their own. But in process and practice, he pointed out, that the opposite is true. “

The following is a summary of comments made by the Ministry of Revenue's High Taxpayers Director (KI-08), regarding the impact of marketing strategy on real estate performance:

“The real estate market is potentially large and there is a high demand for housing. However, most people find it very difficult to buy real estate with a salary income as employees. Real estate is often unaffordable unless the buyers are from abroad. So, the marketing strategies that real estate developers follow may be focused on

attracting those who are living abroad or potential individuals who can lease or hold on to or to sell to others who have a better income and can afford it. According to this respondent, in addition to the main marketing strategies, developers can attract more customers through completing the work in a reliable manner and in delivering it in accordance with the specifications set out in their agreements. This is because sometimes the customer's testimony is more important than the advertisement itself. When customers say, "I bought a good house", this word of mouth will have a spreading effect and will be more effective and marketable. Thus, this respondent believed that it is better for real estate developers to build trust in their customers by using their technology and capacity to deliver quality homes on time."

The responses obtained from the majority of respondents regarding the potential impact of real estate developers' marketing strategies on their operations indicate that strategies that real estate development companies follow have a limited impact on their operations and performance. In other words, the marketing strategy of real estate developers was found to have the least influence on the performance of real estate companies of all the factors considered so far.

6.3.6 The effect of legal factors on commercial real estate performance

The interview respondents were asked for their assessment of the impact or effect of legal factors on the performance of commercial real estate firms. They were also asked whether they thought that legal factors significantly affected commercial real estate performance. The responses and data collected from all the sources in the study indicated that legal and policy issues do have a significant role to play in the performance of real estate companies.

Respondents from the Finance and Economy Analysis Director(KI-01), The Team leader, Land Management and Administration (KI-03), The land management and administration Manager (KI-04), the Ministry of Urban and Infrastructure Development (KI-05), A major supplier of construction equipment (KI-07), The Ministry of Revenue (KI-08),Addis Ababa Investment Licensing and Registration Director (KI-09), the Head of Construction Permission and Control Office (KI-10), provided the following explanation on the importance of the legal and policy framework in improving real estate performance:

"Everything starts with a policy framework and there is a need for a dynamic policy shift to address structural linkages, with the current macro-economic instability a

major factor that needs to be addressed. The respondent pointed to the large budget deficit owing to the high inflation rate and suggested that, as these issues need to be addressed at the macro level, the government needs to address these issues in a policy-oriented manner. The same respondent added that financial institutions must consider the sector as a private sector and must have invested enough funds in it. If, in the financial sector, both private and public banks are financing the sector, there will be enough financing. The respondent also said that the shortage of foreign currency and inflation-related issues can be addressed if finance is made available, and if the issue of a skilled workforce can be addressed through the government, the sector could see a huge transformation. The sector has great potential in connection with population growth and urbanisation. If the policy can be improved in terms of structure and if the finance sector can provide adequate funding for the development of the sector, then the government can make a big difference if it plans well in terms of skilled labour.” (KI-01).

A good legal and policy framework is important for commercial real estates to perform well (KI-03 & KI-04)

“The respondent explained that the availability and implementation of laws and policies play a vital role in transforming the performance of real estate developers. The other land development and management expert however, pointed out that, while government laws and policies are promoting the performance of the sector, many investors are entering the sector and are not affected by these policies. For example, he said that the houses provided by real estate companies are expensive and that they are aimed at the diaspora or those living abroad instead of local residents.” (KI-03 & KI-04).

“We will build about 7 million houses”. He posed the question: “How can such a large number of houses be built in Addis Ababa and in the country?” and suggested that the question needs to be answered through policies and laws. The respondent also pointed to a lack of transparency in governmental policy in the sector, with the government being seen as trying to execute initiatives only through circular letters. He suggested that there are problems in the sector that need to be addressed at policy and strategy levels, but currently the reality is more a reflection of politically based decisions and the issue of law and policy has a significant impact on the activities and effectiveness of real estate developers. He further stated that since problems are being

detected in the market and are not being managed properly, the government should do something to solve them. He argued that, because the purpose and origin of law and policy is to solve problems, where there is a problem, such as that the market needs to be fixed; the appropriate law and policies should be used to solve it. The respondent also suggested that construction materials should be redesigned locally. He put forward the idea that there is a need for having a policy to encourage real estate developers. There must be a legal system in place to create a market that is led by demand and supply, and once such laws exist, they must be strictly enforced. “(KI-05)

“A real estate development company is required to obtain land and construction permits to enter into housing construction. In this regard, there is a lack of efficiency in the provision of services by the relevant government agencies, which has raised concerns that there is a problem with the implementation of the project that affects real estate developers.” (K-07).

“There are no tax-exemption privileges for those the real sector business in Ethiopia. Like other business, they are expected to collect Value Added Tax upon selling a house.” (KI-08)

“The investment commission has not provided any support to commercial real estate developers other than licensing. Previously, when real estate developers needed construction inputs, the process of and procedures for getting them would already be in place. This might include arrangements for acquiring the land and other inputs such as cement for construction. However, this is no longer the case. The respondent added that developers come to acquire the investment licenses, mostly when the bank pushes them to present it. The respondent asserted that the investment Commission does not provide any follow-up assistance other than licensing and that the government as a whole has no policies or practices in place to encourage developers or the real estate sector in general. From the response of the respondent, it is clear that, currently, the City Investment Commission focuses only on development investors who are engaged in other sectors that benefit from government-approved incentives” (KI-09)

“The policies and legislation were issued to guide the real estate development sector but should be properly implemented. He mentioned the existence of gaps in this

regard, which were attributed to the executive government organs for legislation and policies. (KI-10).

Legal and policy issues have a significant impact on the operation and performance of real estate development companies, as per the responses of all the interview respondents. Accordingly, there are a number of legal and policy issues that need to be addressed to deal with the structural problems of real estate developers, such as land, finance or loans, construction input supply and related structural problems that affect the performance of real estate.

6.3.7 The effect of land availability on commercial real estate performance

The interview respondents were asked to comment on whether access to land significantly affects commercial real estate performance. Data collected from all of the interview respondents indicate that land supply and access have a fundamental impact on the activities and performance of commercial real estate developers. In particular, the lack of access to land for real estate developers and the rising cost of living are the main reasons for the high cost of real estate.

The Head, Construction Permission and Control Office (KI-10) responded as follows when asked about how *land availability* impacts the performance of real estate firms:

“He stated that there is a lack of compliance with the directive on urban land supply. This respondent also mentioned that low prices will have a positive impact on the construction of houses that take into account the income and economic potential of the society. “

The Director, Finance and Economy Analysis (KI-01) responded as follows when asked about how *land availability* impacts the performance of real estate firms:

“He underlined that land access is still a challenge for the commercial real estate sector. This respondent added that the government should make land available to real estate developers through leasing, since developers are buying from private landlords at high prices owing to the suspension of land-lease transfer by the government. The respondent explained that real estate developers were originally encouraged to acquire land at low lease rates, but more recently, this modality has been suspended. There is a lack of land for land-lease lending, and there is a tendency for land to be

offered politically in the name of important development projects. The respondent noted that affordable cost and accessibility of land leased to real estate developers will have a positive impact on the development and operation of the sector. "Regarding the supply of land, the government has stopped leasing bids with the supply of land. Currently, land is being allocated for projects of national interest, but the respondent did not believe that such a system will address all development needs. The respondent added that although the real estate development sector is expected to contribute significantly to economic growth, including job creation, the lack of incentives and support from the Ministry of Urban and Infrastructure Development means that a major source of land is removed from real estate developers. The respondent also pointed out that land should be provided to real estate developers in the current system, through both allocation and leasing arrangements."

A Construction Material Importer and Distributer (KI-06) responded as follows when asked about how *land availability* impacts the performance of real estate firms:

"Land supply and accessibility are a critical issue and a precondition for real estate developers. This respondent believed that real estate developers are gaining ground owing to the current land supply system."

A major supplier of construction equipment (KI-07, responded as follows when asked about how *land availability* impacts the performance of real estate firms:

"Regarding the accessibility of land, he had heard about it from people in his work environment: "It is easier to buy land in Washington DC or Ankara, Turkey than in Addis Ababa." People believed that prosperity is still being used for political purposes, and that the desired development is still politically motivated. The respondent said that the government, both during the era of the Ethiopian People's Revolutionary Democratic Front (EPRDF) and currently under the Prosperity Party, uses land as political consumption, and transfers it to whatever project it wants in the name of development".

A Land Management and Administration official (KI-04), responded as follows when asked about how *land availability* impacts the performance of real estate firms:

"Respondents concluded that the issue of land supply and access can be very important, both positively and negatively affecting the activities of state developers. They did not believe that commercial real estate developers are being encouraged by the supply of land, with the

conditions and procedures for obtaining land under the previous lease tender policy now suspended. They stated that the lack of the supply of land and the high cost of land contribute to the high prices of the houses constructed by real estate developers. The private real estate development sector set up by the government to alleviate the severe housing shortage in the city is not responding as expected. They felt that the future of the sector is also a matter of concern, with the prices of the houses constructed by the commercial real estate developers unaffordable, since they are asking buyers to pay between 70,000 and 100,000 birr per square meter. There is a need for the government to revisit its policy in connection with the provision and availability of land. The government declared its intent to offer a lease tender to developers in its policy, but it is not currently implementing this part of the policy. A respondent also said that land should not be used for political purposes and decisions, that the government should give due consideration to the country's sustainable development needs, and that land should not be used for political extension and promotion. “

The vast majority of respondents to the study stated that the accessibility and availability of land in general has a significant impact on how well real estate developers.

6.3.8 The effect of infrastructural development on commercial real estate performance

The respondents were asked to assess how access to basic infrastructure in nearby areas affected the performance of commercial real estate firms. According to most of the respondents interviewed, the availability and accessibility of infrastructure has a modest impact on the performance of real estate developers.

Respondents from the land management and administration Manager (KI-04), the Ministry of Urban and Infrastructure Development (KI-05), Sales and Store Head (KI-06), The Ministry of Revenue (KI-08), Addis Ababa Investment Licensing and Registration Director (KI-09), the Head of Construction Permission and Control Office (KI-10), provided the following explanation on the importance of the legal and policy framework in improving real estate performance:

“The provision of infrastructure is crucial because unless this is provided the developers may not find a buyer for homes and villages in areas where the necessary infrastructure is not available. (KI-04)

“The supply of infrastructure does not have much of an impact on the urban areas being developed by real estate companies. The same respondent said that the supply

of infrastructure will not have a significant impact on a company's operations, given the current tendency to develop real estate that is mainly in central or downtown areas” (KI-05).

“He believed that real estate developers were affected by whether there was infrastructure available, stated that the government is working to resolve the infrastructure issues and forecast that this will have a positive impact on real estate developers. However, there are times when real estate developers are forced to deliver houses without having fulfilled road and electricity connections and that real estate development companies find it difficult to deliver unfinished housing to their customers. This respondent added that the completion of infrastructure is often one of the causes of disputes with their clients” (KI-06).

“Although real estate developers are for-profit companies, their main goal is to solve the housing problem, and because housing is a community problem, the government will work with the developers to provide electricity, water, roads, and telephone and internet connection. The respondent also reflected that the real estate developer focuses on completing the construction after acquiring land, while the relevant stakeholders will work on related infrastructure, since the village requires infrastructure. The respondent also added that since the beneficiary is the community in the area, they are expected to work with the relevant stakeholders starting from the day of receiving the land. (KI-08).

“A commercial real estate developer like any other investor needs roads and electricity. Although the government has a duty to provide this infrastructure, in practice it is not being implemented properly. The respondent cited as an example that many factories are forced to delay starting work owing to power outages. However, he believed that in the case of real estate, the situation is different. The respondent also mentioned that when the developers choose a site, they make sure that they have access to infrastructure, that they have access to public transport and that they do not start construction on a site that is not feasible; however, there may be problems with electricity supply. He also added that they do not build in a city centre and they do not build on a difficult site, because they can invest their money better by building on a good site. Since developers conduct feasibility studies before starting to construct houses, they do not face a significant problem in this regard” (KI-09).

“The supply of land to developers should be provided with the necessary infrastructure in place, as lack of access and delays in the provision of infrastructure will affect the performance of real estate developers” (KI-10).

The overwhelming majority of those surveyed claimed that the availability and accessibility of infrastructure generally has a modest impact on how effectively real estate developers perform because the bulk of them construct homes in areas with developed infrastructure.

6.3.9 The effect of technology adoption on commercial real estate performance

The respondents were also asked whether access to advances in technology has an impact on the performance of commercial real estate firms. Data were collected from most of the study respondents on the nature of new technology development in the construction sector and whether access to this technology has an impact on the performance and efficiency of real estate companies. The data showed that the use of modern technology in the sector can be expected to affect the overall performance of developers and that this use has brought about a change in their performance.

A Senior Bank Loan Analyst (KI-02) who took part in the survey expressed the following ***opinions about the impact of technology adoption on real estate performance:***

“The use of advanced technology in the real estate development sector has advantages and disadvantages. The respondent mentioned that the use of technology can reduce constraints and enable the building of houses on time. On the other hand, the respondent stated that the use of modern advanced technology will increase the cost or price of the houses for the community, even though the benefits are greater in terms of increasing the efficiency and performance of real estate developers.”

The manager of Land Management and Administration (KI-04) responded as follows when asked about how technology impacts the performance of real estate firms:

“Modernisation of the construction sector with the help of new technologies and practices will make positive contributions in addressing the gaps in construction efficiency, dealing with the issues related to quality in the real estate sector and reducing the cost of construction.”

The respondent from the Ministry of Urban and Infrastructure Development (KI-05) gave the following reflections on the impact of technology on real estate performance:

“He stated that there is there is a problem with real estate developers using the latest construction technology. For example, most real estate developers use powder cement and do not use ready-made concrete, and this slows down construction efficiency and poses a threat to the environment. Foreign companies involved in the field use other technological advances such as project-management tools to speed up construction. Domestic real estate developers need to be supported by technology. The respondent argued that higher education institutions need to play their part in developing the sector, both in terms of producing a qualified workforce and in producing low-cost, high-quality, and fast-growing technologies and practices. The respondent did not believe that higher learning institutions have played a relevant role in this regard.”

A Construction Material Importer and Distributer (KI-06) responded as follows when asked about how technology impacts the performance of real estate firms:

“He believed that technological advancement in the construction industry is taking place. He also noted that the cement-based construction sites of the past using labour-intensive and time-consuming construction processes with semi-skilled manpower are being replaced by the rapid completion of the construction of houses with the help of modern cement and mobile filling machines. He pointed out that coming and serving has a positive impact on the operations of development companies. He gave as an example that, in the past, it took up to 21 days to complete the floor of a building under construction, but now with advanced technology the same result can be delivered within two days. “

A respondent from the Construction Permission and Control Office (K-10) who took part in the survey expressed the following opinions about the impact of technology on real estate performance:

“He believed that technology has contributed significantly to the acceleration and efficiency of construction around the world, with evidence of real estate development companies in China completing construction projects in a short period of time.”

A respondent from the Ministry of Revenue (K-08) who took part in the survey expressed the following opinions about the impact of technology on real estate performance:

“He stated that the use of modern technology will help to complete work in a short period of time and with limited manpower, which, he believed, will help real estate developers to resolve problems related to inflation caused by delays in construction. The respondent also added that the use of advanced technologies will contribute to the strength and aesthetics of construction and that better technology can eliminate real-world questions and concerns from real estate developers about the speed and strength of housing.”

6.3.10 The effect of leadership quality on commercial real estate performance

Real estate companies’ leadership quality was one of the issues raised in the interviews conducted with the respondents. The respondents were asked whether they thought that leadership quality affected commercial real estate performance. Regarding the impact of leadership competence on the performance of real estate developers, the respondents explained that the quality and competence of real estate developers' leadership and leadership skills can have a significant impact on the performance of real estate developers.

When asked how leadership abilities affect the performance of real estate enterprises, a construction material importer and distributor (KI-06) provided the following response:

“Leadership skills are crucial in the real estate development sector, adding that development companies need to be more proactive in project management.”

A respondent from the land Management and Administration (K-04) who took part in the survey expressed the following opinions about the impact of Leadership skills on real estate performance:

“He stated that leadership skill or ability is an important part of any business venture and pointed out that the lack of trust and accountability among real estate developers in the country is related to the lack of project management competence.”

The team leader from Land Management and Administration (K-03) who took part in the survey expressed the following opinions about the impact of Leadership skills on real estate performance:

“This respondent added that real estate companies prioritise their business, and focus on profit and profitability, and the value of their homes, which is a reflection of their leadership. This respondent further believed that their effectiveness is measured by

their perception of profit as they focus on profit and gains rather than on social responsibility. “

The Licensing and Registration Director from investment commission (KI-09), who took part in the survey, expressed the following opinions about the impact of Leadership skills on real estate performance:

“He pointed to the existence of project management problems in Ethiopia as a whole, suggesting that the completion of any construction project is a problem. He said the same is true of real estate development projects, where if a construction project is not completed on time; it can lead to loss or bankruptcy.”

A Construction Material Importer and Distributer (KI-06) responded as follows when asked about how leadership ability/leadership quality impacts the performance of real estate firms:

“The performance of real estate companies, commented that real estate developers invest their money and knowledge into construction projects, and, in this regard, the leadership skills of the companies are highly valued and expected by their customers and are crucial to their work.”

The head of Construction Permission and Control Office (KI-106) responded as follows when asked about how leadership ability/leadership quality impacts the performance of real estate firms:

“He truly believed that the production and development sector requires leadership skills. In this regard, it is important to encourage and motivate real estate developers who follow a good leadership style, and to encourage the weak ones to learn, gain experience and excel.”

The Director, Finance and Economy Analysis (KI-10), who took part in the survey, expressed the following opinions about the impact of Leadership skills on real estate performance:

“He pointed out that business cannot be free from the impact of leadership; as such, real estate development companies require closer inspection to evaluate their leadership quality and status.”

Ministry of Revenue /high Tax Paying Officer of ministry of revenue (KI-08), who took part in the survey, expressed the following opinions about the impact of Leadership skills on real estate performance:

“He underlined leadership is decisive for the success of real estate developers, adding that leadership is an indicator of success to real estate developers and leaders are expected to study the historical background of the institution. For example, it requires leadership skill to establish if there are organisations in the same sector and use their experience and the experience of other countries to understand the current situation and predict what might happen in the future.” As a real estate company leader, the goal is to build houses that can be used and to work with stakeholders to make their project a success. This requires the company leader to understand the current and future environment of the industry and take them into account. For example, if the leader anticipates a future supply of construction materials, he or she can consider the market to be safe; however, if there may be a shortage of construction materials the leader may decide to secure sufficient raw materials in advance. Thus, leadership will play an important role not only in the real estate sector but also in all fields of endeavour. For any business company, leadership quality is a must and leadership skills need to be well organised. The respondent also pointed out that satisfying the first customer will have an impact on the subsequent marketing potentials, and hence leadership quality is important when it comes to fulfilling the company’s obligations to customers.

The Chief Corporate Bank Loan Officer (kI-02) who took part in the survey, expressed the following opinions about the impact of Leadership skills on real estate performance:

“The respondent expressed the opinion that it is the leadership’s task to focus on safeguarding the long-term benefits of the company rather than just a seasonal or one-time profit. For example, if payments are delayed and there is a need to shift the pressure on to the customer under contract, they may end up complaining. So, if the real estate developer is able to make a small profit today and keep its promise to its customers, then it may build up a good reputation tomorrow. The respondent also commented that leadership quality is about transforming, with leaders required to plan beyond the profit margins that the company aspires to today, and that it also requires the company to deliver as per the promises made and contracts entered into. The respondent also added that leadership in business is about building and maintaining a positive image and reputation.”

6.3.11 Commercial real estate performance

Regarding the performance of the real estate companies operating in Addis Ababa, including their reputation and overall nature, the data collected and analysed as part of this study indicated that real estate developers do not have a good performance reputation in terms of the quality and value of the houses they build and in terms of timely delivery as per their contracts with their customers.

The Director, Finance and Economy Analysis (KI-01) who took part in the survey, expressed the following opinions about *Commercial real estate performance*:

“He pointed out that all real estate companies set prices for the houses they build using the dollar, which is currently showing an annual depreciation of 26% and is affecting supply and access. The respondent also suggested that the fact that real estate companies are proposing housing for marginalised women today does not mean that these women can afford to pay for the houses they are building owing to the rising dollar value. When real estate companies determine their profit margin, given that the exchange rate of the birr against the dollar is continuously changing, house prices become unaffordable for the community. The respondent suggested that these companies should not have an exaggerated profit margin, also mentioning that they are displaying significant delay in building and delivering.”

Respondents from the land management and administration Manager (KI-04), who took part in the survey, expressed the following opinions about *Commercial real estate performance in Addis Ababa*.

“He stated that there are gaps in the real estate industry's performance and experience. This is especially true in terms of building and delivering houses in accordance with their contract agreements made with their clients, even in those instances where they have positive experiences. The respondent added that there is a tendency for real estate developers to misappropriate the land use, illegally transferring the land they receive (through rent seeking and profiteering), and not complying with the 30/30/40 guidelines for land use. According to the respondent, real estate companies are expected to make 30% of the land they receive available for road use, 30% for green areas and 40% for building houses. In general, real estate developers have limitations in terms of building and delivering quality houses with commitment and accountability.”

The respondent from the Ministry of Urban and Infrastructure Development ((KI-05), who took part in the survey, expressed the following opinions about *Commercial real estate performance in Addis Ababa*.

“He underlined the it is quite difficult to evaluate all commercial real estate development companies operating in the sector because it may not be appropriate to reach similar conclusions regarding all developers. In addition to the complexity of the current housing development and supply problem in the city, he said, although they are expensive, commercial real estate companies are better options than other actors in the development of housing in terms of quality and speed.”

Ministry of Revenue /high Tax Paying Officer of ministry of revenue (KI-08), who took part in the survey, expressed the following opinions about *Commercial real estate performance in Addis Ababa*.

“He pointed out that real estate developers need to increase their production capacity and leadership capacity, and be loyal to their customers, given the country's current size and the vast potential of the sector.”

Addis Ababa Investment Licensing and Registration Director (KI-09), who took part in the survey, expressed the following opinions about *Commercial real estate performance in Addis Ababa*.

“He highlighted that real estate developers critically lack loyalty and that they often fail to deliver houses after collecting money from their individual clients.”

The Head of Construction Permission and Control Office (KI-10), who took part in the survey, expressed the following opinions about *Commercial real estate performance in Addis Ababa*.

“He pointed out that real estate developers have their own set of limitations as business entities; the respondent from the banking and finance sector also believed that gaps in real estate developers exist in this regard. “

In summary, the predetermined set of factors influencing commercial real estate performance (firm efficiency, real estate suppliers' dependability, real estate consumers' purchasing intentions, credit availability for real estate developers, marketing strategy, real estate-related legal and policy frameworks, land availability for real estate developers, infrastructure

development, technology adoption, and leadership quality) were all perceived to play a significant role

Overall, the impact of marketing and technology adoption on commercial real estate performance varies, although there is a general consensus for other variables by important informant, as illustrated below:

Marketing strategy has little impact on the performance of real estate developers because there is an enormous demand for buildings and little market difficulty. There is no market problem as long as demand is met, he added. One example is the Chief Corporate Bank Loan Officer (KI-02).

Others argue that, while marketing strategy is vital for improving performance, the commercial real estate marketing strategy is inadequately designed since it fails to define the true target market for the commercial estate sector. He went on to say that, despite increased demand for real estate buildings, the strategy was geared at the diaspora, or Ethiopians living abroad, which is fairly restricted. {(For example, Land Management and Administration official (KI-04)}.

Some argue that incorporating cutting-edge technology raises the cost of the building, making it unaffordable to commercial building buyers (for example, Senior Bank Loan Analyst (KI-02), Furthermore, he stated that the usage of cutting-edge building technology is underutilized since there are insufficient higher education institutions that train students practically in the use of cutting-edge technologies to global standards.

Other key informants, on the other hand, claim that it will improve the building's quality, aid in completing the building in a short period of time and with limited manpower, and that China real estate companies have found it to be competitive in completing construction projects in a short period of time." {Ministry of Urban and Infrastructure Development (KI-05)}

6.3.12 Other Variables Influencing Real Estate Performance

In addition to the factors discussed in the sections above, data collected from the explanations given by some of the respondents identified the following factors as influencing real estate performance:

- An expert from the banking and finance sector pointed out that the country's political and economic instability could affect the supply of construction materials and increase the delays facing the development companies in accessing those materials and, in turn, could also affect the timely completion of construction by real estate developers.
- A respondent from the land Management and Administration sector identified coordination and participation of stakeholders in the sector as crucial for the development and efficiency of the sector.
- Another respondent from this sector pointed to the income and living conditions of the community/purchasing power of home buyers as important factors in the activities of the real estate sector.
- A respondent from the construction material supplies' business explained that political interest, intervention and influence/political interest and intervention by the government) are crucial issues for the real estate development sector.

6.3.13 Major challenges facing commercial real estate firms

The interview respondents were asked for their reflections and evaluation of the overall performance of commercial real estate firms in Addis Ababa. They were also asked what they thought were the reasons for the effectiveness or ineffectiveness of commercial real estate companies. Data collected from explanations given by most of the respondents indicated that the commercial real estate sector is not playing the expected and desired role of easing the housing crisis in Addis Ababa and that real estate firms' productivity is low. In connection with this, one of the land Management and administration officials who participated in the study mentioned that there are four housing development schemes, including those that are being implemented in commercial or private real estate, in line with the government's policy to alleviate the serious housing problem in the city. The government official also cited a recent study on housing development in Addis Ababa that found that commercial real estate companies account for only 8% of the total housing development in the city. Evidence from most of the study respondents indicates that most of the commercial real estate development companies have a wide range of performance issues, and the commercial housing development environment is very challenging. The main challenges identified by the respondents are outlined below.

The major challenges identified are summarized here in under:

6.3.13.1 Construction delay and not delivering on time

Construction delays and late deliveries were identified and highlighted by (KI-01; KI-04; KI-10; KI-08, and KI-06) and are described below:

Failure to build houses and deliver them to customers on time was one of the main challenges identified by the respondents in the study for commercial real estate developers. According to a bank and finance expert who participated in the study, delays in the construction of housing are the main gaps in the overall housing and construction sector, including real estate developers. Regarding this problem from the perspective of real estate developers, a land administration and management official pointed to a problem with project management as preventing the timely completion of houses. This respondent identified a further problem related to delays in construction projects as unexpected increases in prices for commodities such as in cement, steel and similar building materials, with both real estate developers and buyers often exposed to incurring additional costs as a result. He added that this in itself is a reflection of the low performance of real estate developers. The respondent who was a construction permit and supervision officer also stated that real estate companies have a problem with timely completion, construction and delivery in accordance with their agreement and as a result mishandle their customers.

The respondent from the Ministry of Revenue, reflected that he had not yet seen real estate developers meet agreed-upon terms and that they usually fail to deliver on the agreements with their customers. The respondent indicated that this issue could be caused by financial constraints, a lack of management skills or a lack of raw materials, and he said some real estate companies have even reached the point of litigation with customers owing to delays in construction and delivery.

A respondent from the land development and management sector confirmed that despite the increasing number of developers in the sector, in terms of competency, real estate developers are not building houses and delivering as per the agreed timeline and that his department often receives complaints from customers regarding this issue.

Regarding the competence and efficiency of real estate developers, a respondent who specialised in the supply and sale of construction materials put forward a different view. This respondent said that although some real estate developers experience delays in construction and delivery, most of them do not have problems that affect quality construction and timely

delivery, specifically mentioning two real estate development companies in the sector. The respondent stated that, in discharging his regular duty, he had personally met some home buyers who had expressed appreciation about those real estate developers for their work.

Not taking into account the cost of their homes and the income and purchasing power of the community

Not taking into account the cost of their homes and the income and purchasing power of the community were identified and highlighted by (KI-01; KI-05; KI-10;) and are described below:

Another finding from the respondents is that the cost of housing for real estate developers is high and does not take into account the income of the community. In connection with this, one of the respondents in the study, a banker and financier, commented that the houses that the commercial real estate developers build and put on the market are "not affordable, they are very expensive".

A comment from the respondent from the Ministry of Urban and Infrastructure Development confirms this idea. This respondent explained that it is difficult to say whether real estate developers are competent in their performance and the type of house that developers supply in the market "does not address the middle income and lower income class and, the asking price is too high".

The respondent in charge of construction permits and supervision said that real estate developers are having difficulty constructing houses at affordable prices, and the prices they charge for houses do not take into account the living conditions of the city. Most houses are supplied solely in consideration of Ethiopians in the Diaspora, with gaps being observed in the ability of real estate developers to supply housing to city dwellers. Regarding the efficiency and performance challenges faced by the commercial real estate companies, as described by the study respondents, especially housing construction delays and high housing prices unrelated to the purchasing power of the society, the causes of these challenges were related to construction inputs and land supply and costs.

According to a bank and finance expert who participated in this study, there is a shortage of supply in the construction sector owing to the shortage of imported and manufactured construction materials. These shortages are contributing to the failure of projects to be completed on time. While many real estate agents assure their client that a project will be completed within two or three years, it is reported that they do not complete the construction

even within five years. According to the response from the Ministry of Revenue respondent, the houses are often not completed on time. The respondent pointed out that the general uncertainty of supply and price of building materials can lead to further contractual amendments and unnecessary disputes between real estate developers and home buyers.

A respondent who was the head of sales and stores at construction materials import and Distribution Company said that the current economic situation in the country, especially the lack of dollar supply, has hampered the country's construction sector, including the real estate sector. He explained that they are not doing anything to meet the high demand for housing in the city. Noting that there are internal and external factors that determine the competence and performance of real estate developers, the respondent from the Ministry of Urban and Infrastructure Development said that the real estate development sector is striving to cope with many challenges. The respondent added as an example that the price of construction materials is constantly rising, the supply of land is not being leased as it used to be and the approach to the national interest is not satisfactory to all, including by real estate developers.

6.3.13.2 Lack of trustworthiness and communication problems

According to most data and information obtained from the interview respondents, the gap observed in the competency and performance of commercial real estate developers concerns the failure to comply with the legal obligations and responsibilities set forth in the contract with their customers, leading to mistrust on the part of these and future customers. In connection with this competency problem, a respondent from the banking and finance sector stated that while it may be difficult to take it as a characteristic of all real estate developers, most developers are not loyal to their home buyers and do not keep to what they promise. As the community places great value in loyalty, if real estate developers do not keep their promises to their customers, their reputation may be ruined and they may face market problems. The fact that the country's marketing system, including housing, is largely based on people and relationships (a marketing strategy that real estate developers themselves use) means that when these companies create a lack of trust and confidence in the timely and complete construction of houses as promised to customers, this leads to such problems being reported in the media and on the news. This news also spreads via word of mouth, where potential clients personally know customers who have fallen victim to this.

In addition, this respondent highlighted that when buyers first think about signing a contract with real estate developers to buy a house, they think about the money they have today and

decide on a date on which to move into the house. Owing to the lack of trust and confidence in real estate developers, companies are finding it difficult to bring in new customers, at the expense of their first customers. A damaged reputation, lack of trust on the part of customers and the lack of efficiency negatively affects their subsequent performance and may prevent them from requesting support and benefits from government departments, which have encountered the claims: “I have entered these commitments, doing these, but have not managed to obtain these...”

According to a respondent engaged in the supply of construction materials, most real estate developers have failed to deliver homes as promised to their customers and have in this way let down their customers. This respondent recalled that there was a case when the government intervened in disputes with consumers and this led to a political resolution as a result. The respondent also expressed concern that the government was not pursuing the real estate sector as a major development sector.

As per the opinion of a land management and administration official who participated in the study, in addition to the failure to deliver houses on time, with the required quality and fully in accordance with the terms of the contract with the buyer, real estate companies are also mishandling their customers in other ways. Most real estate developers are keeping land leased from the government at low lease prices for a long time without having to develop it, taking a loan from a bank for housing development and using it for unwanted purposes. There is also a tendency to sell the land to individuals illegally by pretending to have built the intended houses it. This respondent pointed out that there is a gap in the practice of government authorities regarding monitoring and supervision of real estate development companies that practise such corruption.

An official from the Addis Ababa Investment Commission who participated in the study pointed to the practice of developers squandering people's money without constructing buildings. Initially, when the Investment Commission was established, support was provided to all sectors and likewise the Commission provided land for real estate developers because the government thought it would help to solve housing problems. The Commission used to facilitate building material supply, and the sector was able to import cement and steel duty-free. However, the Investment Proclamation/Directive that was enacted in 2012 does not state anything about incentives and support for real estate developers. The government has lifted the incentive on its own initiative, having identified these developers as “Defaulters”. The

government will only incentivise through a regulation and only to those that are believed to be useful by creating employment and making other contributions that are beneficial.

The same respondent also reflected that the government might have waived the incentives because real estate developers' prices are so high and not accessible to the public, considering only those who have money. As a result, these companies are considered to be able to stand on their own since they are profitable and can operate by acquiring land on which they can build houses. This respondent also added that the sector is not supported by the investment proclamation, that real estate companies are not being given any incentive or support, and that they are not being monitored by the government because they do not monitor the performances of the developers.

A banking and finance senior policy expert who participated in this study indicated that the reputations of real estate development companies are not good and "Real estate is considered to be the builders of homes for a wealthy family". For their part, real estate developers have a distorted view of the community, and the promotion work these companies are doing to help the community understand real estate developers is not enough. The respondent added that when people with a better understanding of the sector, including him, consider buying a home, their preference is for a condominium or a privately owned home. The development companies are also weak in their efforts to create sufficient information and awareness about the type of houses they are building and the sales and distribution system. Their relationship with the community is weak, their social engagements are not active, their social links are weak and they are not discharging their social responsibility, and they are not hiring as many workers as they are expected to do.

Referring to their experience with two real estate companies, one of the respondents of this study expressed the opinion that real estate development companies are not being led by an organised expert and are driven by the interests and decisions of independent owners, work only for their own gain and benefit, dismiss their employees as they please, and do not pay their employees fairly. They also do not respect the rights and interests of their workers and focus on making huge profits.

Commenting on the problems that real estate developers need to address, the construction permit and supervision official who participated in the study noted that there is a gap in capacity and reliability among experts employed by real estate developers, which is an

obstacle for real estate companies in their efforts to build and deliver housing efficiently and quickly.

6.3.14 Roles and responsibilities expected from stakeholders in the real estate sector

As per the data obtained from the qualitative study regarding the roles and responsibilities that real estate developers and sector stakeholders are expected to carry out, there are many internal and external factors that affect the activities of business real estate developers and prevent them from fulfilling these roles and responsibilities. These problems in the development sector are partly internal and can be solved by individual and collective efforts by commercial real estate developers. The study also indicated that some of the problems in the sector are external and require the participation, cooperation and support of other stakeholders, including external and government actors. The roles and responsibilities identified as relevant to the real estate developers and internal and external stakeholders are detailed below.

6.3.14.1 Roles and responsibilities expected from real estate developers themselves

According to the majority of the respondents in the study, real estate companies need to take the initiative in solving the problems of the commercial real estate development sector. They should do this in collaboration with relevant stakeholders and should create information and communication platforms to enable them to do so. The study respondent in charge of construction permits and supervision advised real estate companies to strengthen and self-regulate. In addition, the respondent from the bank and finance sector commented that real estate developers need to create coordination, cooperation and communication forums among stakeholders in the sector and take the initiative to find solutions to any problems faced by the companies, individually and collectively. They should also explain, inform and convince the stakeholders of the problems in the sector. This respondent recommended that they form an association of real estate developers that represents their rights and interests in an organised manner. In this regard, companies can improve their ability to hear, influence and negotiate.

The respondent also indicated that developers have gaps in marketing and promotion and suggested that their products and services are not visible to the society. In light of these problems, their marketing strategy should be reconsidered to go beyond advertising. In

addition to advertising in the media, companies need to create other platforms that reach the community about their products and services. If possible, they should do some promotional and publicity work, including buying media coverage. The respondent also mentioned that developers should reach perhaps not only home buyers but also the community. Government and policymakers need to be mobilised and sensitised regarding the sector's activities to make their lobby more accessible, regarding expansion of their access to land, tax issues and access to other facilities, such as credit and foreign currency.

6.3.14.2 Roles and responsibilities expected from the government

Another issue raised by this study was that the government is not providing the necessary legal and policy support for the development of the sector. A respondent from the banking and finance sector explained that the government had previously designed projects to make the community homeowners in the construction sector under its "Growth and Transformation Plan". However, although these projects were funded by several billion birrs, they were not efficient. The respondent commented that it is important to find a way to reduce the government's investment in the housing sector and turn it into a private sector. Surplus funds for government services can achieve better performance and results if allocated to the private sector. In this regard, the respondent also recommended that the government revise its policy and allow private sector investment in the sector to grow more.

According to this respondent, the government has invested in the development of the sector and will take over most of the land, with private developers not being provided with opportunities for development. The services associated with land supply are decisive for real estate developers.

The respondent also added that it is currently very difficult to get a building permit, and the public service in the sector needs to be modernised and made more efficient. At present, private real estate developers are faced with a daunting challenge in terms of land supply. This makes the cost of houses for customers very high because real estate developers need to add the price of the land to the house price. The respondent argued that if the government provides developers with free access to land, they will be able to build and provide affordable housing.

The respondent from the Ministry of Urban and Infrastructure Development suggested that the construction sector has a key role to play in shaping the image of Addis Ababa and benefiting the city economically. The respondent believed that the new market should be

created by a small group of entrepreneurs, and that the sector should create a context in which not only a few actors but also a large number of interested developers can participate and be governed by law and regulation.

Another major issue raised by the study was the provision of construction materials for the development of the private real estate development sector. According to a respondent involved in the construction material trade, the government needs to take policy corrective measures to alleviate the problems faced by real estate developers brought about by the limited supply of construction materials and inflation. The respondent also mentioned that, in terms of the supply of construction materials, real estate developers, especially in the case of cement supply deficit and inflation, are urging the government to take safe and secure measures to ensure that all cement companies do their best to provide sustainable services.

Regarding technology, the respondent from the Ministry of Revenue said that the government should encourage the sector by creating opportunities for real estate companies to use technology, such as through tax-free provision. In addition, as the sector is new, the government is supporting condominium development to address the community's needs. Likewise, since real estate developers will also work to meet the needs of the government and the public, the respondent recommended that the government should offer similar support to the developers, such as by incentivising them financially.

It was pointed out that the government should support real estate developers in HR development and follow up this support to make sure that the companies comply with the rules and regulations of the sector in which they operate. In this regard, the study found that the government should guide and support the sector by establishing an independent training institute with the aim of filling the vacancies in the real estate industry, to improve the activities of the real estate development sector and contribute to the country. The respondent from the Addis Ababa Investment Commission on his part recommended that the government should expand its control chain, especially as it is not properly controlling the commercial real estate companies currently.

The respondents of the study indicated that in addition to the government, other stakeholders should be responsible for the development of the real estate sector. A respondent from the banking and finance sector highlighted that in terms of financing, private banks are providing credit and financing to the sector and, in this regard, the Commercial Bank, which has a large financial capacity, could provide significant support to the commercial real estate

development sector. The respondent pointed out that if the real estate sector could be included in the support provided by the Commercial Bank, results could be achieved. The respondent from the Ministry of Revenue added that the facilitation of financing not only for real estate development companies but also for home buyers will have a significant impact on the overall development of the sector and its economic benefits.

The official from the Ministry of Urban and Infrastructure Development said that the training provided by higher education institutions is aimed at maintaining the professionalism and integrity of the developers and at helping real estate developers in their research work. In particular, he stressed the need to help developers build low-cost housing and address the middle-income segments of society.

In addition, trade unions need to focus on empowering their members, bringing in best practices from other countries with better development experience in the sector and focusing on the development of the sector. The respondent also advised that they should be able to influence and advocate for effective policies and procedures.

A respondent engaged in construction materials' trading said that higher education institutions should play their part in boosting the productivity of the sector by providing skilled manpower to the sector and creating new technologies and practices in their research activities, suggesting that they create a forum for their consultation.

6.3.14.3 Integration and cooperation with stakeholders within the real estate development sector

According to the study findings, coordination and cooperation among stakeholders is a key factor in the development and efficiency of the private real estate development sector. As per the response from an official from the land management and Administration office, coordination and cooperation between the stakeholders in the sector is crucial for addressing the high demand for housing in the city. In this regard, urban and infrastructure development, planning, financial institutions and the private real estate sector need to focus on housing development and supply that meets the income and economic potential of the community.

The study respondents reflected that, starting from the government, all stakeholders in the sector need to work together. The problems related to the supply and cost of construction materials should be addressed, as customers are reluctant to accept increases in payments required from them by real estate developers owing to increases in construction costs. The government needs to support all efforts to address the problem of housing supply.

In summary the key informants identified Construction delay and not delivering on time; Lack of trustworthiness and communication problems; Roles and responsibilities expected from stakeholders in the real estate sector; Roles and responsibilities expected from real estate developers themselves; Roles and responsibilities expected from real estate developers themselves and Integration and cooperation with stakeholders within the real estate development sector.

According to the interview findings covered in 9.5.13 above in this study, Ethiopia's commercial real estate industry faces challenges that are primarily related to microeconomic factors and negatively affect their performance, as opposed to other countries like Nigeria where issues are closely related to macroeconomic causes.

Inflation, the exchange rate, and per capita GDP were determined to be macroeconomic factors that affect real estate investment success in Nigeria (Elile, R.U., Akpan, S.S., and Raju, 2019); Property portfolio diversification and risk management, land policy challenges, development finance (Yewande Adewunmi and Abel Olaleye 2011); GDP, interest rate; inflation rate, exchange rate and crude oil price all have a significant effect on real estate price (Razali et al.2018) etc. were found to be major challenges facing the real estate performance

6.4 Summary of Major Qualitative Findings

The qualitative data analysis revealed that the commercial real estate market in Addis Ababa, Ethiopia, was significantly impacted by the pre-coded and predetermined constructs put forward by the study.

- Firm efficiency was found to have an impact on the performance of commercial real estate firms in Addis Ababa.
- Suppliers' dependability was found to have a significant impact on the performance of commercial real estate firms.
- Customers' buying intentions regarding real estate had an impact and effect on the performance of commercial real estate firms in Addis Ababa.
- Credit availability also had a positive and significant impact on commercial real estate performance.
- Market strategy was shown to have a significant role to play in the performance of real estate companies.

- Legal factors had a significant role to play in the performance of real estate companies, with the overall performance or activity of these companies depending on legal factors and policies related to the sector.
- Land availability had a fundamental impact on the activities and performance of commercial real estate developers. In particular, the lack of access to land for real estate developers and the rising cost of living were the main reasons found for the high cost of real estate.
- Infrastructural development was found to have some impact on commercial real estate performance.
- Technology adoption had a positive effect and impact on the performance of commercial real estate firms.
- Real state companies' leadership quality was also found to have an impact on the performance of commercial real estate firms in Addis Ababa.

In addition to the pre-established constructs, the following additional constructs were identified in the interview process with the key informants: 1) Current Political and Economic Instability; 2) Coordination and Participation of Stakeholders; 3) Purchasing Power of Home Buyers; and 4) Political Interest and Intervention.

The current political and economic volatility in the country may have an impact on the supply of building materials, as well as the delays experienced by developer businesses in obtaining these materials. It may also have an impact on the timely completion of construction by real estate developers. Coordination and participation of players in the industry are also seen as critical for the sector's development and efficiency. The purchasing power of home buyers was identified as having a major influence on commercial real estate performance. Finally, for the real estate development sector, political interest, involvement and intervention, and influence are critical issues.

6.5 Chapter Summary

In the first phase of the study, quantitative data collection and analysis methods were used; however, in the second phase of the study, qualitative research analysis were used to further explain the conclusions of the quantitative study and to identify additional factors affecting the performance of commercial real estate. Based on the conclusions from the quantitative analysis, the qualitative study examined the applicability and the manner in which the factors the research raised affect the performance of the commercial real estate developers.

In line with the research objectives and questions, semi-structured interview questions were developed. The interview questions address whether those factors the study raised affect the performance of commercial real estate developers and explore the way in which they may do this. Semi-structured interview questions were developed with the research objectives and research questions of the study. The interview questions looked at whether the factors the study brought up have an impact on the success of commercial real estate developers and how they could.

According to the objectives of the study, a total of eleven questions were asked of respondents in order to fully address the research issues. The qualitative analysis also supported the quantitative phase's findings regarding the effectiveness of real estate developers, the dependability of real estate suppliers, the purchasing intentions of real estate consumers, the credit availability for real estate developers, marketing strategy, real estate-related legal and policy frameworks, the availability of land for real estate developers, infrastructure development, technology adoption, and the leadership qualities of real estate developers. The information gathered from the interviewees revealed other variables that affected real estate performance in addition to those discussed in the sections above: Instability in the country's politics and economy, stakeholder cooperation and engagement, homebuyers' purchasing power, and political interest and intervention by the government).

Here are some of the difficulties that evolved during the qualitative data processing phases. Construction delay and not delivering on time; Not considering the cost of their homes and the income and purchasing power of the community and Lack of trustworthiness and communication problems. The government's obligations, the roles and responsibilities expected from those involved in the real estate industry, the roles and responsibilities expected from real estate developers themselves; the development and effectiveness of commercial real estate firms were shown to be significantly influenced by integration and cooperation with players in the real estate development sector.

CHAPTER SEVEN: INTEGRATED QUANTITATIVE AND QUALITATIVE FINDINGS

7.1 Introduction

This chapter integrates and discusses the quantitative results and qualitative findings of the study in relation to the hypotheses developed for the study and the empirical evidence derived from previous research studies reviewed. The quantitative results and qualitative findings were also integrated to explain the determinants of commercial real estate market performance in Addis Ababa.

It was critical to identify performance-related factors in order to develop a commercial real estate performance framework that real estate developers and future researchers could use to assess commercial real estate performance. Thus, the quantitative survey questionnaire-based and qualitative interview-based phases of the study were conducted to address the following major research question of the study:

Which factors have a significant impact on commercial real estate performance in Addis Ababa?

The sub-research questions that were formulated for this study were:

- 1) What are the determinants of commercial real estate performance in Addis Ababa, Ethiopia?
- 2) Which of the identified factors has the most significant impact on commercial real estate performance in Addis Ababa, Ethiopia?
- 3) What other factors will have an impact on the success of commercial real estate operating in Addis Ababa, Ethiopia?
- 4) What are the commercial real estate performance constraints and challenges in Addis Ababa, Ethiopia?
- 5) What will be the overarching conceptual model for measuring commercial real estate performance in Addis Ababa, Ethiopia?

7.2 Triangulation of Quantitative Results and Qualitative Findings

Triangulation is a technique used to analyse results of the same study using different methods of data collection. It is used for three main purposes: 1) to enhance validity; 2) to create a

more in-depth picture of a research problem; and 3) to interrogate different ways of understanding a research problem. Triangulation of measures may also be used for analytical purposes. For instance, Keen use the concept in an assessment study of an investigative type (or constructive type) to address cause-effect relations within the pattern of outcomes (Keen et al. 1995). The deviations exposed by triangulation may be applied to elaborate the understanding of the subject under investigation. Triangulation has been called “a veritable ‘magical’ word in mixed methods research” (Tashakkori and Teddlie, 2003, 674) and a “near-talismanic method” to combine qualitative and quantitative research (Miles and Huberman 1994, 266).

Triangulation emphasises the use of multiple methods and theoretical constructs (Guba 1990, 23), thus adding rigor, breadth and depth to a study (Denzin and Lincoln 1998, 4). There are four common forms of triangulation: 1) Data triangulation: using data from different times, spaces and people – a range of different informants; 2) Investigator triangulation: involving multiple researchers in collecting or analysing data to provide multiple perspectives; 3) Theory triangulation: using varying theoretical perspectives in the research, i.e. multiple theories and/or perspectives to interpret a single set of data; and 4) Methodological triangulation: using different methodologies to approach the same topic.

Considering the nature of the research problem and research questions of the study, the current study adopted an explanatory sequential mixed methods research design (quantitative-dominated mixed methods research) that employed quantitative data collection and analysis in the first phase of the study, and then further explained the results of the quantitative study with qualitative data collection and analysis.

An explanatory sequential mixed methods research design was chosen for the study as the main objective of the research was to establish a strategy implementation framework by examining and testing various research hypotheses. The hypotheses testing was performed through quantitative data collection and analysis in the quantitative phase of the study. Subsequently, the qualitative phase of the study further explained the quantitative relationships and findings using qualitative-data analysis. Figure 7.1 depicts the flow of the adopted explanatory sequential mixed methods research design.

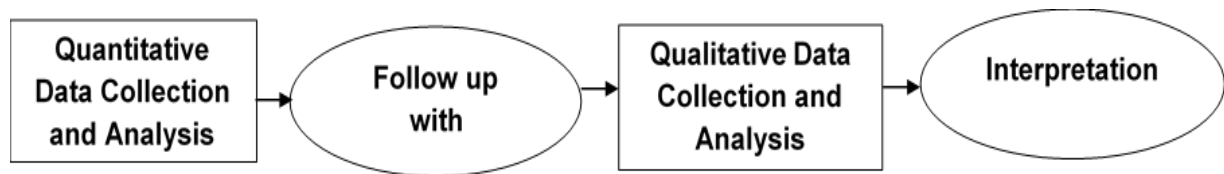


Figure 7.1: The Flow of the Explanatory Sequential Mixed Methods Research Design

Source: Creswell (2014)

The researcher was able to compare and contrast the findings from the quantitative and qualitative phases of the study owing to the outcomes produced by the two methodologies (qualitative and quantitative). The triangulation carried out by the qualitative phase of the analysis established the nature and magnitude of links among the latent variables found in the quantitative phase of the study.

The quantitative and qualitative forms of research supported a positive relationship between the latent variables (firm efficiency, supplier dependability, customer purchase intentions, credit availability, market strategy, legal considerations, land availability, infrastructure development, technology adoption and leadership quality) and commercial real estate performance in Addis Ababa. The qualitative study adequately addressed the relationships between the study's latent variables.

Additional factors that affect the performance of commercial real estate firms were also discovered through the qualitative data analysis. These factors were the security and economic instability of the nation, the degree of coordination and stakeholder participation, political interest and intervention, and consumer purchasing power.

7.3 Proposed Conceptual Framework Based on Mixed Research Results and Findings

Using quantitative data analysis, ten constructs (Firm Efficiency, Supplier Dependability, Customers' Buying Intention, Credit Availability, Marketing Strategy, Legal Factors, Infrastructural Development, Technology Adoption, Land Availability and Leadership Quality) and four variables (Country's Political and Economic Instability, Coordination and Participation of Stakeholders, Political Intervention by the Government and Purchasing Power of Home Buyers) were identified during data analysis. In accordance with the quantitative and qualitative findings of the study, the following conceptual model for measuring commercial real estate performance was drawn up.

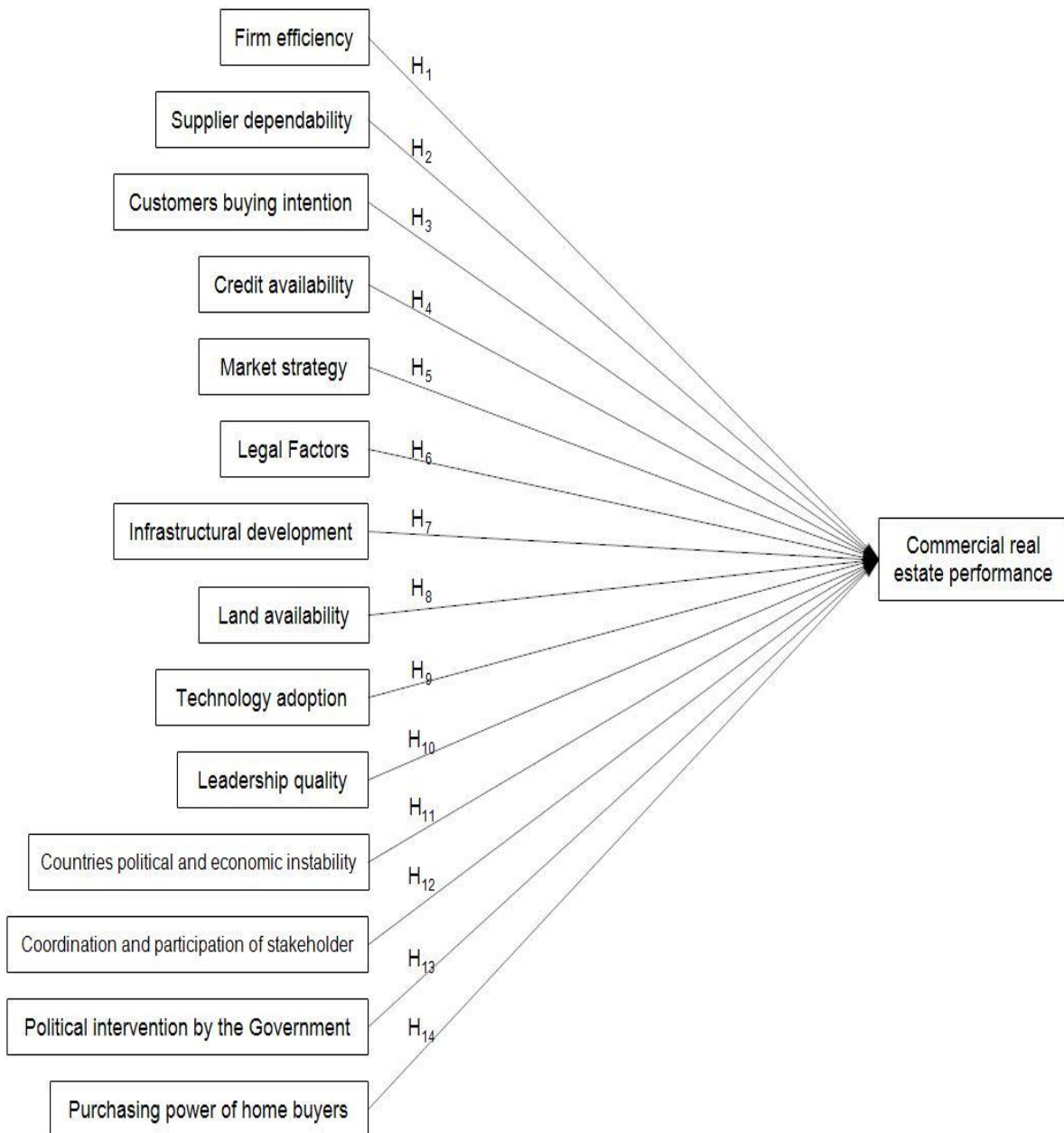


Figure 7.2: The Proposed Commercial Real Estate Performance Framework

7.4 Chapter Summary

An Explanatory Sequential Mixed Methods Research Design was utilised in this study to identify critical factors influencing commercial real estate performance and to construct a comprehensive conceptual framework to assess commercial real estate performance. The quantitative and qualitative findings were combined to understand the factors influencing commercial real estate market performance in Addis Ababa. Identifying performance-related

characteristics was necessary in order to create a commercial real estate performance framework that real estate developers and future scholars could use to evaluate commercial real estate performance. As a result, the quantitative survey questionnaire-based and qualitative interview-based stages of the study were carried out in order to answer the following major research question.

Triangulation can be classified into four types: 1) Data triangulation: using data from many time periods, locations, and persons - a diverse set of informants; 2) Investigator triangulation: using multiple researchers to collect or analyse data in order to present multiple points of view. 3) Theoretical triangulation: using different hypotheses and/or points of view to assess a single piece of data; and 4) Methodological triangulation: using multiple techniques to tackle the same problem. An attempt was made in this study to discover which of the predefined factors significantly affect commercial real estate performance, and a methodological triangulation technique was employed to develop additional variables influencing commercial real estate performance. An integrated Conceptual Framework consisting of (14 constructs) for measuring commercial real estate performance was presented based on triangulated data.

CHAPTER EIGHT: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1 Introduction

The main objective of the study was to identify factors that might affect commercial real estate performance in Addis Ababa. Examining the impact of numerous factors on Addis Ababa's commercial real estate performance was the main purpose of the study. A conceptual framework was drawn up to include 11 factors – firm efficiency, supplier dependability, customer purchase intentions, credit availability, market strategy, legal considerations, land availability, infrastructure development, technology adoption, leadership quality and commercial real estate performance – which were validated by the study's empirical findings. Additionally, a qualitative study was conducted, which identified additional factors such as the nation's security and economic instability, the level of coordination and stakeholder participation, governmental interest and interference, and consumer purchasing power. The following sections present a summary of the findings and conclusions reached by the study. The limitations of the study are listed and directions for future study identified. The chapter makes recommendations on the basis of the study conclusions and the chapter ends with the contributions of the study.

8.2 Summary of the Results and Findings

This section provides an overview of the findings from both the quantitative and qualitative data in line with the study's objective.

8.2.1 Quantitative results

The results of factor analysis, correlation analysis and multiple regression analysis are summarised below.

The factor loadings for all 11 constructs were found to be 0.7 and above in the EFA, and the SMC values were all above 50. CFA was performed to test each construct's convergent and discriminant validity and to determine the relevance of the data for the 11 EFA constructs. The Chi-Square, Incremental, Absolute and Parsimonious Fit Indices—four GOF indices that assess how well the measurement model fits the data—were shown to be consistent with good model fit.

The researcher used descriptive statistics and inferential statistics to analyse the data. Descriptive statistics are used to describe or summarise the characteristics of a sample or data

set, such as a variable's mean, standard deviation or frequency. Descriptive statistics were used to determine the degrees of agreement in relation to study variables. The researcher also conducted inferential statistical analyses such as correlation analysis and regression analysis to examine the relationship between the independent variables and the dependent variable of the study, and also to test the devised hypothesis of the study.

The descriptive statistics provided a deeper analysis of the study's factors, including the Firm's Efficiency (Mean = 4.396***, SD = 0.581); Dependability of its Suppliers (Mean = 4.339***, SD = 0.5475); Customers' Buying Intention (Mean = 4.091***, SD = 0.6698); Credit Availability (Mean = 4.159***, SD = 0.6073); Marketing Strategy (Mean = 4.118***, SD = 0.6655); Legal Factors (Mean = 4.072***, SD = 0.7059); Land Availability (Mean = 4.245***, SD = 0.6816); Infrastructure Development (Mean = 4.391***, SD = 0.5394); Technological Adoption (Mean = 4.237***, SD = 0.6772); Leadership Quality (Mean = 4.244***, SD = 0.7048); and Real Estate Performance (Mean = 4.108***, SD = 0.7245). The mean of a variable is significantly different from the mid-point 3, at the 0.001 significance level. Hence, these results of the variables of the study indicate that the real estate experts and professional commercial real estate firms in Addis Ababa agree.

All of the independent variables and the study's dependent variable were found to be significantly correlated, according to the correlation analysis. The connection between separate real estate performance and Firm Efficiency has a value of = .634** ($r = .634^{**}$, $p < 0.01$); the relationship between Customers' Buying Intention and real estate performance has a value of = .635** ($r = .635^{**}$, $p < 0.01$); the relationship between Suppliers' Construction Materials and real estate performance has a value of = .550** ($r = .550^{**}$, $p < 0.01$); and the relationship between Credit Availability and real estate performance has a value of = .681** ($r = .681^{**}$, $p < 0.01$).

The correlation analysis indicates a significant correlation between all of the independent variables and the dependent variable of the study. The relationship between the independent variable Firm's Efficiency and real estate performance has a value of = .634** ($r = .634^{**}$, $p < 0.01$); Suppliers' Construction Materials and real estate performance has a value of = .550** ($r = .550^{**}$, $p < 0.01$); Customers' Buying Intention and real estate performance has a value of = .635** ($r = .635^{**}$, $p < 0.01$); Credit Availability and real estate performance has a value of = .681** ($r = .681^{**}$, $p < 0.01$); Marketing Strategy and real estate performance has a value of = .642** ($r = .642^{**}$, $p < 0.01$); Legal Factors and real estate performance has a value

of = .564** (r = .564** , p < 0.01); Land Availability and real estate performance has a value of = .703** (r = .703** , p < 0.01); Infrastructure Development and real estate performance has a value of = .569** (r = .569** , p < 0.01); Technological Adoption and real estate performance has a value of = .664** (r = .664** , p < 0.01); and Leadership Quality and the dependent variable real estate performance has a value of = .667** (r = .667** , p < 0.01).

Consequently, the researcher conducted a multiple linear regression analysis to investigate each dimension of the independent variables and to determine the unique relationship of the independent variables with the dependent variable and their significance for the dependent variable. To assess the study's data distribution and the redundancy with other variables, the researcher first performed tests of assumptions such the normalcy test and multicollinearity test. These presumptions are essentially requirements that must be met before anything can be deduced about the model estimates or a model can be used to predict the future.

Utilising every regression assumption, the data set was validated. The results showed that all the independent variables considered were statistically significant predictors of real estate performance: Firm's Efficiency (beta = .137; t-value = 2.205; p-value = .029); Suppliers' Dependability (beta = .146; t-value = 2.395; p-value = .018); Customers' Buying Intention (beta = .138; t-value = 2.614; p-value = .010); Credit Availability (beta = .143; t-value = 2.236; p-value=.027); Marketing Strategy (beta = .118; t-value = 2.104; p-value = .037); Legal Factors (beta = .138; t-value = 3.068; p-value = .003); Land Availability (beta = .159; t-value = 2.847; p-value = .005); Infrastructure Development (beta = .140; t-value = 2.287; p-value = .024); Technological Adoption (beta = .117; t-value = 2.088; p-value = .038); and Leadership Quality (beta = .191; t-value = 3.8; p-value <0001).

As illustrated in the data analysis report, summary of results, and discussion chapter, RE Business leaders Managers must prioritise variables with higher beta coefficient values. It is also proposed that the government reconsider its land and financial policies, as well as avoid discriminatory measures. All property developers must be treated fairly and squarely. Ethiopian private equity is underdeveloped, and the government must provide a favourable policy environment for private equity.

8.2.2 Qualitative findings

The following findings were generated from the interviews:

- It was discovered that each factor: firm efficiency, supplier dependability, customer purchase intentions, credit availability, marketing strategy, legal considerations, land availability, infrastructure development, technological adoption, and leadership quality, had an effect on Addis Ababa's commercial real estate market's performance.
- The degree of coordination and stakeholder participation, political interest and interference, home buying and purchasing power, and the country's political and economic instability were also determined to have a major impact on commercial real estate.
- The biggest problems faced by real estate companies were late deliveries and construction delays; a disregard for customer income and purchasing power; lengthy bureaucratic administrative processes; high levels of tax; high levels of bureaucracy to obtain land; low government encouragement; an increase in housing prices; and a lack of trust between buyers and real estate organisations.

8.3 Conclusions

Commercial real estate can be defined as a property that is used exclusively for business or workplace purposes or to generate cash flow in some way for the owner or lessee. Commercial real estate spaces include office space, industrial properties, multi-family residential rental buildings containing more than five units, and retail spaces.

The global real estate business is one of the most profitable undertakings for many economies and one of the ways of gauging a society's economic growth. Real estate refers to land and associated elements made permanently a part of it and the nature and extent of one's interest in it (Romer and Romer 2017). The real estate industry plays a pivotal role in the social, political and economic development of a country (Kauškale and Geipele, 2019). The real estate market in Addis Ababa, Ethiopia, has been evolving into a varied mix of extensive government-built condominiums (for lower-income groups), mid-market developments by housing cooperatives, and largely high-end homes built by real estate developers and/or homeowners themselves. An initial literature review revealed that Addis Ababa's real estate sectors are confronting a multitude of challenges that include long bureaucratic administrative processes; high land-leasing prices; material supply delays; shortage of foreign currency; limited credit availability; inadequate infrastructure; a lack of long-term loans for buyers; increases in land acquisition costs; a high level of taxation; inflation on construction materials; a lack of government encouragement; and unreliable brokers, among others. As a

result, this research set out to determine the key variables that have a significant impact on Addis Ababa's commercial real estate performance.

The following sub-research questions were investigated in this study to get a thorough grasp of the phenomenon being studied:

1. What are the determinants of commercial real estate performance in Addis Ababa, Ethiopia?
2. Which of the identified factors has the most significant impact on commercial real estate performance in Addis Ababa, Ethiopia?
3. What other factors will have an impact on the success of commercial real estate operating in Addis Ababa, Ethiopia?
4. What are the commercial real estate performance constraints and challenges in Addis Ababa, Ethiopia?
5. What will be the overarching conceptual model for measuring commercial real estate performance in Addis Ababa, Ethiopia?

The conclusions regarding each of the five research questions are presented succinctly below according to the results of the quantitative and qualitative data analyses.

8.3.1 What are the determinants of commercial real estate performance in Addis Ababa, Ethiopia?

The first research question asked which were the major determinants that influence commercial real estate performance in Addis Ababa, Ethiopia. The following alternative theories were used to create variables for the study in addition to the empirical literature review to identify the major factors that influence the performance of commercial real estate. Neoclassical economic theory (supplier-buyer relationship, rational-based decision, relevant information and operational efficiency); Agency theory of real estate (leadership quality, shareholder, managers, hired professionals); Institutional theory of real estate (legal factors, property rights); Porters Diamond Model (related supporting industries, firm strategy and demand conditions); Resource-based View (VRIO – Valuable, Rare, Imperfectly imitable, Organisation; and competitive advantage, tangible and intangible resources, land availability and credit availability); and Corporate Real Estate Strategy theories (cost, innovation, differentiation, functional strategies – Operations, Marketing, Financial, HR, Information and Technology).

On the basis of the theoretical and empirical review, 10 constructs were developed: Firm's Efficiency; Dependability of its Suppliers; Customers' Buying Intentions; Credit Availability; Marketing Strategy; Legal Factors; Land Availability; Infrastructure Development; Technological Adoption; and Leadership Quality. The study employed a mixed research approach to examine these determinates' influence on commercial real estate performance. The research also used a multiple theory approach to set solid and sound theoretical lenses for the study.

8.3.2 Which of the identified factor(s) has (have) the most significant impact on commercial real estate performance in Addis Ababa, Ethiopia?

The second research question focused on the elements that were found to have the biggest impact on real estate performance in Addis Ababa, Ethiopia.

The real estate data was analysed using descriptive statistics to evaluate the degree of agreement among real estate specialists and professional commercial real estate firms in Addis Ababa on all 11 constructs. The greatest mean score in the descriptive analysis was Leadership Quality (Mean = 4.244***, SD = 0.7048), while the lowest mean score was Legal Factors (Mean = 4.072***, SD = 0.7059). All of the mean scores of the 11 variables were found to be significantly different from the mid-point 3 at the 0.001 significance level. As a result, the study's variables demonstrate agreement among real estate specialists and professional commercial real estate firms in Addis Ababa.

In this study, the first 40 responses obtained (representing 24.5% of the sample) and the last 40 responses received (representing 24.5% of the sample) were chosen, and the outcomes of these responses were compared using an independent sample t-test. The independent-samples t-test findings showed no significant difference (no non-response bias confirmed) between before and after replies at the 95% confidence interval for the selected variables.

Prior to identifying which of these constructs has a substantial impact on commercial real estate performance, exploratory factor analysis (EFA) is performed to determine whether a theoretical construct is a one-dimensional or multi-dimensional factor (Holmes-Smith, 2010). It is a method for condensing data into a smaller collection of summary variables and investigating the underlying theoretical structure of the phenomenon being examined. It was utilised in the current study to determine the structure of the link between the variable and the respondents.

The factorability of the data was evaluated to determine its suitability for the 11 EFA constructs. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMOMSA) and Bartlett's Test of Sphericity were used to assess the data's factorability (BTOS). Principal component analysis with Varimax (orthogonal) rotation was used to factor analyse 54 items. One MS (Marketing Strategy) and one LF (Legal Factors) item were omitted from the study due to low factor loadings and communalities.

EFA and CFA were employed to measure the research instrument and validate the results in the quantitative investigation. The measurement model outcome for all ten determinants revealed that all factor loadings were 0.7 or higher, and all SMC values were greater than .50. The four GOF indices (Chi-square, incremental fit indices, absolute fit indices, and parsimonious fit indices) were computed and found to be consistent with good model fit.

The study's hypotheses were tested using correlation analysis and multiple regression analysis. To determine initial significant predictors, bivariate analysis was performed between each independent variable and the dependent variable (Hair et al., 2010; Field, 2009). Correlation analysis has two significance levels: 0.05 and 0.01. A statistically significant positive connection was discovered between the dependent variable (real estate performance) and each of the independent factors studied in this study. This meant that the regression model could include all of the independent variables. However, before doing a regression analysis for this study, the following major assumptions about multiple linear regressions were tested: Normality, linearity, homoscedasticity, multicollinearity, and autocorrelation are some general guidelines for sample size.

Multiple linear regression analysis has three key applications: 1) causal analysis, 2) effect forecasting, and 3) trend forecasting. Regression analysis, as opposed to correlation analysis, which focuses on the strength of the link between two or more variables, presupposes dependence or causal relationship between one or more independent factors and one dependent variable.

Every independent variable (10 variables) was proven to be a statistically significant predictor of commercial real estate performance. The prediction capability of each construct is listed below, from highest to lowest, and real estate business leaders must pay attention to each construct accordingly. Leadership Quality (beta = .191; t-value = 3.8; p-value <.0001); Land Availability (beta = .159; t-value = 2.847; p-value = .005); Supplier Dependability (beta = .146; t-value = 2.395; p-value = .018); Credit Availability (beta = .143; t-

value = 2.236; p-value = .027); Infrastructure Development (beta = .140; t-value = 2.287; p-value = .024); Legal Factors (beta = .138; t-value = 3.068; p-value = .003); Customers' Buying Intention (beta = .138; t-value = 2.614; p-value = .010); Firm Efficiency (beta = .137; t-value = 2.205; p-value = .029); Marketing Strategy (beta = .118; t-value = 2.104; p-value = .037); Technological Adoption (beta = .117; t-value=2.088; p-value = .038);

8.3.3 The third research question in the study concerned additional elements that might significantly influence the performance of commercial real estate

In the first part of the investigation, quantitative data collection and analysis methods were used, and the outcomes of the quantitative study were clarified with qualitative research findings in the second phase of the study. Key informants chosen from a variety of stakeholder institutions in the commercial real estate sector were surveyed using the purposive sample method for the study. To get the qualitative information, ten managers and senior professionals from these institutions were questioned. The respondents were chosen with the expectation that they would have extensive knowledge of the real estate development sector.

In the study's qualitative phase, the ten (10) constructs that were looked at in the quantitative phases were also looked at. In addition, the qualitative study also sought to uncover and explain any unexpected outcomes from the vast amount of qualitative information gathered. Also, researchers looked into other constructs that could influence the performance of commercial real estate.

The qualitative data analysis revealed that the commercial real estate market in Addis Ababa, Ethiopia, was significantly impacted by the by all ten constructs (Firm efficiency, Suppliers' dependability, Customers' buying intentions. Credit availability; Market strategy, Legal factors Land availability, Infrastructural development; Technology adoption, real state companies' leadership quality)

The qualitative data analysis showed that all ten constructs (including firm efficiency, supplier dependability, and customer purchasing intentions) had a significant impact on the Addis Ababa commercial real estate market in Ethiopia. Access to credit, market strategy, and legal considerations Land availability, infrastructure growth, technology adoption, and the leadership abilities of real estate corporations).

All the ten key informants agreed that all of the ten constructs really determine commercial real estate performance though there is a very slight variation in the degree of influences among limited variables such as marketing strategy and technology adoption. Technology had the lowest beta coefficient in the quantitative analysis when compared to other constructs, and it had a positive impact on real commercial performance. Yet, the majority of the key informants in the qualitative study emphasised its significance in real estate performance.

In addition to the 10 specified variables used in the quantitative study, the qualitative study also attempted to investigate any additional elements that might have an impact on real estate performance levels.

A thematic approach was used to analyse information regarding commercial real estate that was acquired from relevant key informants. A hybrid approach that combined both an inductive and a deductive coding strategy was used in the qualitative research methodology. The qualitative data was analysed using a deductive qualitative (concept-driven and theory-driven) approach based on predetermined constructs. To uncover additional constructs from the main informants, the qualitative data-analysis approach additionally used an inductive data-analysis (data-driven and semantic-driven) approach.

The qualitative research demonstrated that factors such as the country's political and economic instability, the level of stakeholder coordination and participation, political interest and intervention ruling party and Customer purchasing power all had a major impact on the performance of commercial real estate.

The additional observations of key informants were critical in determining the performance of commercial real estate firms. But key informants were also asked how significant they thought each construct was. From greatest to least major contributions, the nation's political and economic instability, the ruling party's political interest and intervention, consumer spending power, and the degree of stakeholder coordination and participation were therefore rated in that order.

The fourth study question looked at the limitations and difficulties that commercial real estate operators in Addis Ababa, Ethiopia, must deal with.

The thematic analysis of the qualitative data revealed challenges in acquiring land that resulted from lengthy bureaucratic administrative processes; high land lease prices; delays in the delivery of the commercial building materials; price escalation; lack of foreign currency;

limited access to loans; lack of loans for house buyers; and inflation on construction materials as major challenges that the Ethiopian commercial real estate market is facing.

The fifth research question sought to create a holistic conceptual model for assessing the performance of commercial real estate in Addis Ababa, Ethiopia.

An integrated research model was developed to measure and assess the performance of commercial real estate based on the mixed research findings. This model considered the degree of coordination and stakeholder involvement, political interest and interference by the ruling party, political and economic instability in the country, home buyers' purchasing power, firm efficiency, suppliers' dependability, customers' purchasing intentions, credit availability, marketing strategy, legal considerations, land availability, infrastructure development, technological adoption and leadership quality.

Finally, the results of the quantitative and qualitative phases of the study confirmed the application of a multiple theory approach to identifying and testing the results using factor analysis (EFA and CFA), correlational analysis and regression analysis. Thus, based on the quantitative and qualitative results of the study, the final commercial real estate performance research model was proposed.

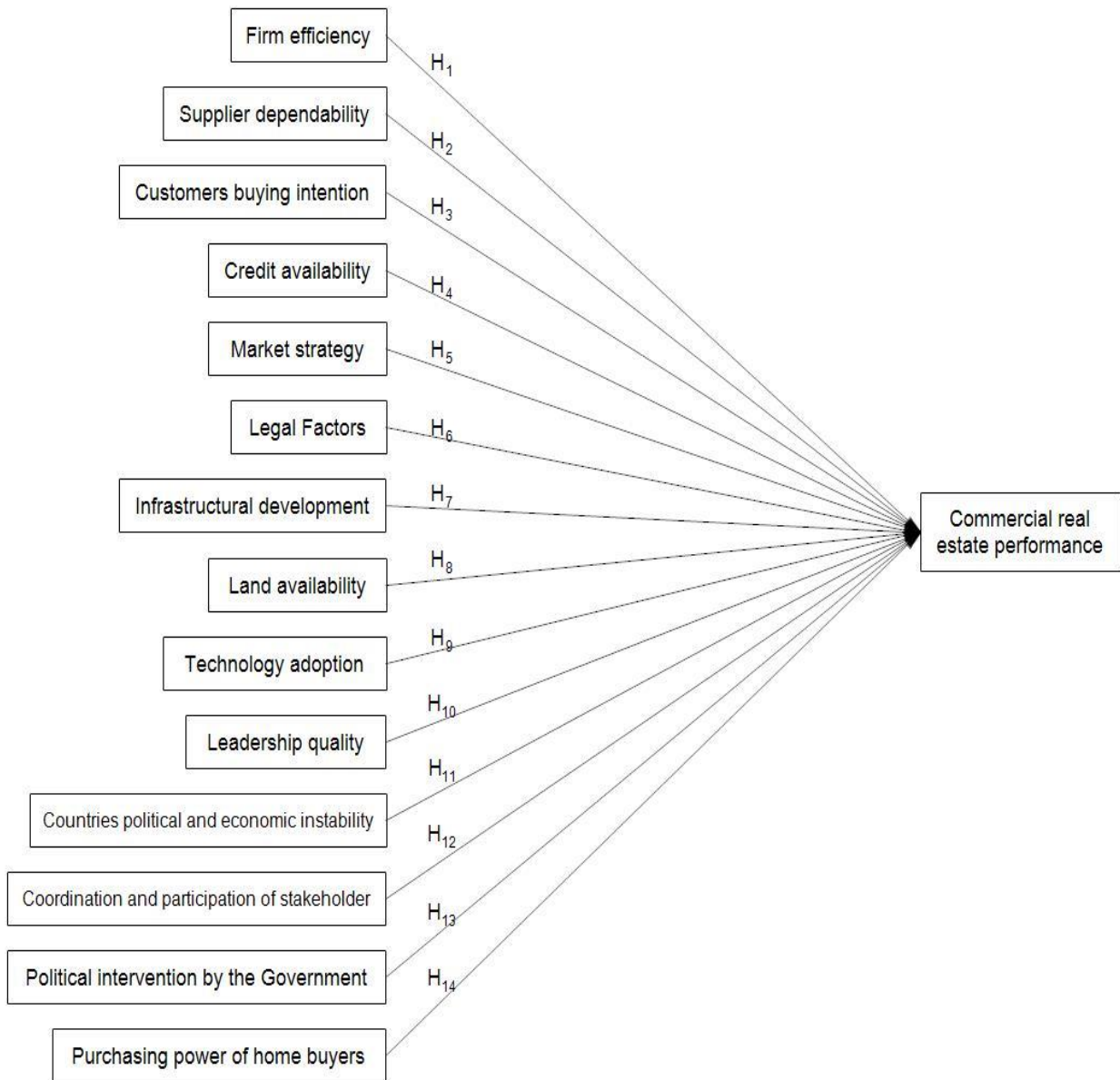


Figure 8.1 the Proposed Commercial Real Estate Performance Framework

8.4 Limitations

Various limitations were identified in this study, which present opportunities for future research. The researcher determined that it is not possible to obtain secondary data compiled on the performance measures of organisations after conducting a preliminary survey to ascertain their availability. The study was conducted using the opinions of five important professional target organisations and commercial real estate professionals. Empirical data would be more relevant because people's perceptions as revealed in the responses may be impacted by a variety of factors, including prior experiences, preconceived conceptions and current situations.

Primary and secondary data sources were employed in the investigation. Nevertheless, finding solid genuine data from sample real estate developers that could indicate the pattern of real estate development proved impossible.

The availability and voluntariness of managers and executives, which is typically the biggest hindrance, was another limitation of this study. This may be a result of the respondents' demanding work schedules and that the research culture is perceived unfavourably in the nation.

This research was carried out at Addis Ababa. Although the majority of real estate firms are located in cities, the study's conclusions could not be applied to the entire nation because regional states within the nation may vary. As a result, the study's external validity was impacted.

8.5 Recommendation

On the basis of the research conclusions, the researcher offers the following recommendations to enhance Addis Ababa's commercial real estate performance.

- To improve commercial real estate performance, real estate developers should pay close attention to all the factors analysed in the study (firm efficiency; dependability of its suppliers; customer purchasing intentions; credit availability; marketing strategy; legal factors; land availability; infrastructure development; technological adoption; and leadership quality).
- Because real estate developers refused to offer secondary data on their performance, subjective metrics (perceptions of professionals) were employed to assess real estate performance. If real estate developers are willing to provide performance data, objective measurements (performance financial data) could be used to measure commercial real estate performance.
- To further investigate the relationships between determinants and commercial real estate performance, the researcher recommends looking at the revised model that was developed based on a combined assessment of quantitative and qualitative study.

8.6 Contributions of the Study

Following the research findings and conclusions, the following theoretical contributions and implications for real estate developers and policy makers and researchers are put forward.

8.6.1 Theoretical contribution of the study

The study expands the previous performance framework to a broad-based and integrative framework that illustrates the relationship between factors that impact on commercial real estate performance, adding to the body of knowledge regarding the performance of commercial real estate. The ten (10) variables studied (firm efficiency, supplier dependability, customer purchasing intentions, credit availability, marketing strategy, legal factors, land availability, infrastructure development, technological adoption, and leadership quality) were generated from multiple theories and tested and found to have a significant impact on commercial real estate performance using appropriate statistical tools. Furthermore, based on the qualitative theme analysis, these same variables were discovered to play a significant role. Thus, theory testing, theory modification and theory extension are all aspects of theoretical contribution. Other variables explored in the qualitative study included the country's political and economic stability, stakeholder coordination and participation, government initiatives, and buyer purchasing capacity, which can be contributed to the literature on real estate performance. The proposed comprehensive research framework to measure real estate performance will be a contribution to the real estate literature.

8.6.2 Implication for real estate developers

The study established a comprehensive framework for the effective measurement of real estate performance. The commercial real estate framework provides a clear direction that real estate developers and marketers can follow while measuring their performance and can be used as a practical tool.

8.6.3 The Government of Ethiopia

The Ethiopian government must devise a strategy to control all the key elements of the real estate market, including housing costs and land availability. It should also make loans available with affordable interest rates. The policy must include fees for new land development, stringent building codes, and zoning and land use regulations to control the supply and cost of real estate. Ethiopian banks should be urged to accept "reasonable risk" in vetting loan applications from small and medium-sized Real estate businesses. In urging banks to take "reasonable risk", it is suggested that government should institute some form of tax incentives to banks involved in RE lending. This will encourage others to consider the option of lending to this sector.

8.6.4 Financial institutions

Commercial real estate developers must be provided with loans from financial institutions such as central banks, retail and commercial banks, internet banks, credit unions, savings and loan associations, investment banks, investment companies, brokerage firms, insurance companies and mortgage companies at reasonable interest rates. Despite the fact that banks suffer limits, it is proposed that they engage in active banking by mobilising resources and allocating them to needy REs.

8.6.5 Improving Registration Process

Ethiopia may proactively prepare itself for, and promote, the flow of private equity capital into the country by establishing the necessary policy and regulatory environment. In order to exploit the opportunities associated with private equity investments, it must think very strategically about the development of a robust private sector. Ethiopia must consider the following minimal prerequisites for a thriving private equity and venture capital sector while building a framework.

Ethiopia's private equity Investment is underdeveloped. , on the other hand. Investors make repeated journeys over a ten-day to two-month period to register capital. To improve this procedure, government officials responsible for registering foreign investments should be trained to make consistent choices and instructions, and the number of entities responsible for approving investments should be reduced.

8.6.6 Implication for research methodology

In order to conduct the study's many phases, an explanatory sequential mixed methods research design was used, with quantitative data collection and analysis in the first part of the investigation and qualitative data collection and analysis in the second half to support and complement the quantitative results and findings. This study provides a real-world illustration of how combining quantitative and qualitative methods can provide a more thorough understanding than using either a quantitative or qualitative method alone. The outcomes of the analyses of the quantitative and qualitative data were complementary. The study's internal validity is undoubtedly improved by this design as well.

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Appendix-I: A Questionnaire on Determinants of Commercial Real Estate Performance in Addis Ababa

A questionnaire on Determinants of Real estate performance in Addis Ababa

(To be filled by CEOs, GM, and CFOs of Real Estate Firms)

Dear Respondents,

As part of my Doctoral study at University of South Africa, I am undertaking research aimed at investigating factors influencing the performance of commercial real-estate firms operating in Addis Ababa city.

The information you provide in this survey will be used for the stated purpose. It is purely for academic purpose, and I would like to assure you that I will treat all data as confidential and it will be reported anonymously in aggregate way. Hence, you are kindly requested to reply to all questions appropriately and return the questionnaire at your earliest possible.

I thank you in advance for sharing your valuable experience and time with us in completing the questionnaire.

Thank you!

(The researcher)

If you would like to communicate the researcher, you can use this email thomasimmanuel2013@gmail.com

Section 1: General /Corporate Information

Direction: Please put a tick mark (✓) in front of a response that best describes your firm.

1. Which one of the following department/positions best explain your current position in the company/
 - a) CEO/GM
 - b) Deputy or Operation Manager
 - c) Head, Finance Department
 - d) Head, Contract and Marketing Department
 - e) Procurement Department Head
 - f) Legal advisor/officer of the company
2. Firm Size (Number of full -time employees plus daily labourers):
 - a) Less than 50
 - b) [50-499]
 - c) [500-4,999]
 - d) 5000 or more
3. Annual Sales of Firm in ETB
 - a) Less than 20 million
 - b) [20 Million-50 Million]
 - c) [51 million -100 million]
 - d) [101 million-200 million]
 - e) 200 million or above
4. Years of company operation:
 - a) Less than 5 years
 - b) 6-10 years
 - c) [11-20]
 - d) [21-30]
 - e) 30 or more
5. What are the purposes of your property development?
 - A) Sale
 - B) Lease
 - C) Build operate and transfer
6. Which of the following alternative is/are your main source (s) of finance? (you can select more than one option(s))
 - a) Equity/share issuing.
 - b) Bank loan.
 - c) Obtained from Advance payment of Buyers
 - d) The supply of raw materials and equipment's on credit
 - e) From other sources (please specify_____)
7. The type of leadership style that the firm has adapted
 - a. Democratic
 - b. Transformational

- c. Authoritarian
- d. Transactional
- e. Any other, please specify -----

Section II: Factors Affecting Commercial Real Estate Performance

Direction: Please indicate your degree of agreement/disagreement with the following statements associated with commercial real estate performance by circling the appropriate number. (1-Strongly disagree; 2-Disagree; 3-Neutral; 4-Agree; and 5-Strongly agree) Key: SDA= strongly disagree; DA= Disagree; N=Neutral; A= Agree, SA= strongly agree.

S/No	Statements	SDA	D	N	A	SA
1	Firm Efficiency					
FI1	Project management skill of the project leader has a significant impact on real estate performance	1	2	3	4	5
FI2	Experiences of Technical Personnel have significantly affect commercial real estate performance.	1	2	3	4	5
FI3	The uniqueness of each office building architectural design boost real estate performance	1	2	3	4	5
FI4	Experience and capacity of consulting firm advance the efficiency of commercial real estate	1	2	3	4	5

S/No	Statements	SDA	D	N	A	SA
FI5	Management efficiency highly influence the performance of commercial real estate	1	2	3	4	5
FI6	A real estate companies which adapt dynamic digital environment is highly profitable	1	2	3	4	5
FI7	Our real estate Construction of in a unique manner influence commercial real estate organizations performance	1	2	3	4	5
2	Suppliers' Dependability					
SU1	Lack of material in local market (unreliable supplier) setback development of real estate	1	2	3	4	5
SU2	The availability of dependable real estate raw material suppliers significantly affects real estate performance	1	2	3	4	5
SU3	The time taken to import of constructions equipment's from abroad significantly affect real estate performance	1	2	3	4	5
SU4	The availability of construction raw materials on credit affects real estate performance					
3	Customers'/Buyers' buying intention					
CU1	Frequent Change of client's interest on the original design and specification design impact on real estate performance	1	2	3	4	5
CU2	Change of client's interest in type of construction material highly affects real estate performance	1	2	3	4	5
CU3	Customers attracted by visibility and view of office building from various distances	1	2	3	4	5
CU4	Customers prefer a real estate which has better technical features of building—heating, air conditioning, ventilation and telecommunications etc.	1	2	3	4	5
4	Credit availability					
FA1	The need for commercial bank borrowing/ mortgage institutions significantly affects real estate performance.	1	2	3	4	5
FA2	Lack of credit facilities for capital investment to acquire all required equipment impacts real estate performance.	1	2	3	4	5

S/No	Statements	SDA	D	N	A	SA
FA3	Lack of credit facilities for working capital significantly setback real estate performance.	1	2	3	4	5
FA4	Failures to get construction material on credit bases will significantly affects real estate investment.	1	2	3	4	5
FA5	The cost of financial services such as interest rate (e.g., insurance, loans, and trade finance) largely impedes real estate business performance	1	2	3	4	5
FA6	The availability of financial sector products and services that meet the specific needs of real estate business affects real estate performance	1	2	3	4	5
FA7	The extent to which real estate companies raise money by issuing shares and/or bonds on the capital market is high.	1	2	3	4	5
FA8	Down payment highly affects the construction of period of real estate	1	2	3	4	5
5	Marketing Strategy					
MS1	Our company has developed a clear vision, mission and strategy for the future.	1	2	3	4	5
MS2	Clear organizational structure and delegation of professional and staffing impact on firm performance.	1	2	3	4	5
MS3	The company usually undertakes print, electronic and digital promotion in an integrated way.	1	2	3	4	5
MS4	Proper controlling of workers, materials and equipment impact on real estate performance.	1	2	3	4	5
MS5	Availability of customer's choice of space for rent based on customer income will increase real estate performance.	1	2	3	4	5
MS6	The real estate, which sells at reasonable price, builds customer loyalty.	1	2	3	4	5
MS7	Real estate investment in prestigious location significantly affects real estate performance.	1	2	3	4	5
MS8	The real estate investment made on unique location significantly affects the firm performance.	1	2	3	4	5
6	Legal factors					

S/No	Statements	SDA	D	N	A	SA
LP1	There is favourable legal framework on taxation and purchasing that fosters real estate	1	2	3	4	5
LP2	There is policy that support real estate developmnt through real estate permit ,easy of registering property and the like.	1	2	3	4	5
LP3	The investment office has overall framework that facilitate to do real estate business such as easy of starting real estate development.	1	2	3	4	5
LP4	The government use of ICTs (e-commerce, e-payment and e-promotions) to serve the real estate sector positively affects the performance of real estate business.	1	2	3	4	5
LP5	The government ensure a stable policy environment for doing real estate business in Ethiopia	1	2	3	4	5
LP6	The Government monetray policies such as credit policy forster real estae business performance in Ethiopia sees real estate as priority sector.	1	2	3	4	5
7	Land Availability					
L1	Adequate supply of land for real estate construction affects real estate performance	1	2	3	4	5
L2	Real estate development, which has more parking space than at previous location significantly, influences firm's performance	1	2	3	4	5
L3	Space availibility to meet your specfic requirements affects real estate performance	1	2	3	4	5
L4	Future space availability determine the effectiveness to meet your specific requirements	1	2	3	4	5
L5	Forecast property market rentals (greater than a year)	1	2	3	4	5
8	Infrastructural Development					
In1	Real estate investment on better transportation links significantly affects real estate performance.	1	2	3	4	5
In2	The avialabilily of water supply significantly affects real estate performance.	1	2	3	4	5
In3	The avialabilily of electric (energy) supply significantly	1	2	3	4	5

S/No	Statements	SDA	D	N	A	SA
	affects real estate performance.					
In4	The availability of public services such as schools and health centers significantly affects real estate performance	1	2	3	4	5
9	Technological adoption					
B1	Advancement in construction materials has a positive influence on RE performance	1	2	3	4	5
B2	The company's readiness to adopt latest technological solutions influences CRP	1	2	3	4	5
B3	Employees Technological knowhow impacts on CREP	1	2	3	4	5
B4						
10	LEADERSHIP Quality /Competency					
LQ1	Leadership quality influences the performance of Real estate firms	1	2	3	4	5
LQ2	The leadership competency of GM/CEO of the firm is high	1	2	3	4	5
LQ3	Leadership quality of officials of relevant government bodies affects performance	1	2	3	4	5
LQ4						

Section III. Real estate Performance indicators (proxy variables used to measure the performance of real estate firms in Addis ---- Perception of CEOs, CFOs and Managers

1. To what extent does your firm perform well in each of the following key performance indicators (please put a “✓” sign) on your response

	Performance indicators	Not at all -1	Little extent -2	Moderate- 3	Great- 4	Very great- 5
PI1	Sales/revenue					
PI2	Profitability level					
PI3	Return on Investment/Marketing					
PI4	Market share					
PI5	Market growth rate					
PI6	Overall company image					
PI7	Customer acquisition /attraction --					
PI8	Customer satisfaction					
PI9	Customer loyalty					
PI10	The rate of sales due to Customer recommendation (referral)					

2. How would you rate the performance of your firm in the market (please put a “✓” sign) on your response?

Excellent [] Good [] Average [] Poor [] very poor []

3. **What measures should be taken to enhance the performance of real estate firms in the city/area?**

4. *If you have any points which are not discussed in the above questions with regard to determinants of Real estate performance, please mention them.*

Appendix-II: Interview Check List on Commercial Real Estate Performance

(To be held with Industry Analysts, Business Consultants, Senior Government Officials,
Bank Loan Officers)

Dear Participant,

I am conducting a doctoral research study on “Determinants of the Performance of Commercial Real Estate Firms in Addis Ababa.”

The study aims to investigate factors that determine the performance of commercial real estate firms operating in the city of Addis Ababa.

- Would you please confirm your consent to participate in this Interview? 1. Yes
2. No
- Participant’s Signature: _____ Date: _____
- Interviewer’s name: _____ Signature _____
Date _____
- Date of Interview: _____ Starting Time _____ Ending
Time _____

Section-I: Key informant basic information

1. Age: _____
2. Sex: _____
3. Qualification /Educational: Degree-----Masters-----Doctorate-----
----(Others-----
4. Position held in your respective organizations _____.
5. Experience related to Commercial Real Estate: Less than 5 years ----- 5 to 15 -----
--16 to 20
6. Which occupation describes best your present Job?

II. Commercial Real Estate Performance Measures

1. How do you evaluate the overall Performance of Commercial Real Estate Firms in Addis Ababa? What do you think are the reasons for effectiveness or ineffectiveness of Commercial real estate performance? In your opinion, what are the major skills real estate marketers need to be successful in their business /real estate?
2. How do you assess the effectiveness of Firms’ efficiency in your commercial estate? Do you think Firms’ efficiency affect commercial real estate performance?

- [Firm efficiency refers to how much a company or organization can produce as it relates to the amount of time, money and resources needed].
3. How do you assess the role of local and international Construction Material suppliers in your commercial real estate? Do you think these Suppliers role affect commercial real estate performance?
 - [**The construction materials supply includes:** such materials like brick, stone, concrete and cement, lumber, wood panelling and mill work products, etc.
 4. How do you assess the Real estate buyers' purchasing/buying intention in the Commercial Estate Business? Do you think Real estate buyers' purchasing/buying intention significantly affect commercial real estate performance?
 - [**Buyers Purchasing/Buying Intention/** is defined as a measure of the strength of one's intention to perform a specific behaviour or make the decision to buy a product or service].
 5. How do you assess the Credit Availability for the Commercial Estate Business? Do you think Credit Availability Significantly affect Commercial Real Estate Performance? In your opinion, what activities shall be performed to increase credit availability?

[Credit availability is the credit amount to which a borrower can access at a specific time\

6. How do you assess the Firms' Marketing Strategy for the Performance of Commercial Real Estate Firms? Do you think Firms' Marketing Strategy Significantly affect Commercial Real Estate Performance?
 - [**A Marketing Strategy** refers to a business's overall plan for reaching prospective consumers and turning them into customers of their products or services. A marketing strategy contains the company's value proposition, key brand messaging, data on target customer demographics, and other high-level elements].
7. How do you assess the Legal Factors for the Performance of Commercial Real Estate Firms? Do you think Legal Factors Significantly affect Commercial Real Estate Performance?
 - [**Legal Factors** are external which refer to how the law affects the way businesses operate and customers behave].

8. Do you think Access to land significantly affect Commercial Real Estate Performance?
 - [Access to land refers to the ability to use land and other natural resources, to control the resources and to transfer the rights to the land and take advantage of other opportunities].
9. How do you assess Access to basic infrastructures in nearby areas for the Performance of Commercial Real Estate Firms? In your opinion, do you think commercial real estates are able to get access to various infrastructures?
 - [Basic Infrastructure includes water supply, drainage, sewerage, internal roads, pedestrian walkways, cycle tracks, underground telecom cables and other required infrastructure, indoor substation, underground cables for transmission and distribution.].
10. How do you assess the Advance in Technology and having Access for the Performance of Commercial Real Estate Firms? Do you think Advance in Technology and Access affect Commercial Real Estate Performance?
 - [A technological advancement is an attempt at extending or further understanding the underlying science used to develop current materials, devices, products or processes for the commercial real estate business].
11. How do you assess the Leadership Quality in the Commercial Real Estate Firms operating in Addis Ababa? Do you think Leadership Quality affect Commercial Real Estate Performance?
 - [The most important **qualities of a good leader** include integrity, accountability, empathy, humility, resilience, vision, influence, and positivity]
12. Based on your knowledge and experience in real estate, what do you think are the major factors affecting the performance of commercial real estate business operating In Addis Ababa?
13. Do you think that real estate firms in Addis Ababa have good records in terms of delivering houses as per project's estimated cost, time and quality mentioned upon agreement)?

14. The following lists of institutions and organizations are identified as key stakeholders in the Real Estate business, in Ethiopia. Thus, you are kindly asked to explain the constructive role they may play in helping firms to enhance performance.

- Firms themselves
- The government (Through relevant offices mentioned above)
- Financial institutions
- Suppliers of Construction Materials
- Providers of Technology (latest software's and solutions)
- Higher Learning Institutions
- Private and external business consultants and analysts

15. Any other stakeholders (Please specify) _____

16. Major challenges face by the industry?

17. Hereunder ten determinant factors that influence the performance of Commercial real estate firms are listed. Hence, please rate each factor and indicate their relative rank in front of each factor. Where, 1 = the most important and 10=the least important/ factor having minimal effect.

S. No	Factor	Relative Rank (1-10)
1.	Firms' efficiency	
2.	Dependable Construction Material suppliers	
3.	Real estate buyers' buying intention	
4.	Credit availability	
5.	Firms' Marketing strategy	
6.	Legal factors	
7.	Access to land	
8.	Access to basic infrastructures in nearby areas	
9.	Advance in Technology and access	
10.	Leadership Quality	
11.	Any other factor /s ----- Please specify	

Thank You very much for participating!!!

Appendix-III: Appendix A: Criterion Validity and Reliability

Table A-1: Pearson Correlation Matrix for Real Estate Firm's Efficiency Construct

Construct		FE1	FE2	FE3	FE4	FE5	FE6	FE Total
FE1	Pearson Correlation	1	.722**	.727**	.583**	.474**	.503**	.847**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	163	163	163	163	163	163	163
FE2	Pearson Correlation	.722**	1	.692**	.459**	.425**	.369**	.785**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	163	163	163	163	163	163	163
FE3	Pearson Correlation	.727**	.692**	1	.512**	.560**	.507**	.845**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	163	163	163	163	163	163	163
FE4	Pearson Correlation	.583**	.459**	.512**	1	.514**	.531**	.756**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	163	163	163	163	163	163	163
FE5	Pearson Correlation	.474**	.425**	.560**	.514**	1	.572**	.734**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	163	163	163	163	163	163	163
FE6	Pearson Correlation	.503**	.369**	.507**	.531**	.572**	1	.727**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	163	163	163	163	163	163	163
FE Total	Pearson Correlation	.847**	.785**	.845**	.756**	.734**	.727**	1

	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	163	163	163	163	163	163	163
**. Correlation is significant at the 0.01 level (2-tailed).								

Table A-2: Pearson Correlation Matrix for Suppliers' Construction Materials Construct

Construct		SCM1	SCM2	SCM3	SCM4	SCM Total
SCM1	Pearson Correlation	1	.676**	.465**	.272**	.810**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	163	163	163	163	163
SCM2	Pearson Correlation	.676**	1	.457**	.280**	.807**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	163	163	163	163	163
SCM3	Pearson Correlation	.465**	.457**	1	.309**	.732**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	163	163	163	163	163
SCM4	Pearson Correlation	.272**	.280**	.309**	1	.637**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	163	163	163	163	163
SCM Total	Pearson Correlation	.810**	.807**	.732**	.637**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	163	163	163	163	163
**. Correlation is significant at the 0.01 level (2-tailed).						

Table A-3: Pearson Correlation Matrix for Customers' Buying Intention Construct

Construct		CBI1	CBI2	CBI3	CBI4	CBI Total
CBI1	Pearson Correlation	1	.456**	.355**	.268**	.688**
	Sig. (2-tailed)		.000	.000	.001	.000
	N	163	163	163	163	163
CBI2	Pearson Correlation	.456**	1	.495**	.367**	.757**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	163	163	163	163	163
CBI3	Pearson Correlation	.355**	.495**	1	.533**	.821**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	163	163	163	163	163
CBI4	Pearson Correlation	.268**	.367**	.533**	1	.721**
	Sig. (2-tailed)	.001	.000	.000		.000
	N	163	163	163	163	163
CBI Total	Pearson Correlation	.688**	.757**	.821**	.721**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	163	163	163	163	163
**. Correlation is significant at the 0.01 level (2-tailed).						

Table A-4: Pearson Correlation Matrix for Credit Availability Construct

Construct		CA1	CA2	CA3	CA4	CA Total
CA1	Pearson Correlation	1	.401**	.629**	.535**	.840**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	163	163	163	163	163
CA2	Pearson Correlation	.401**	1	.335**	.314**	.646**
	Sig. (2-tailed)	.000		.000	.000	.000

Construct		CA1	CA2	CA3	CA4	CA Total
	N	163	163	163	163	163
CA3	Pearson Correlation	.629**	.335**	1	.550**	.834**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	163	163	163	163	163
CA4	Pearson Correlation	.535**	.314**	.550**	1	.763**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	163	163	163	163	163
CA Total	Pearson Correlation	.840**	.646**	.834**	.763**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	163	163	163	163	163

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

Table A-5: Pearson Correlation Matrix for Marketing Strategy Construct

Construct		MS1	MS2	MS3	MS4	MS5	MS6	MS Total
MS1	Pearson Correlation	1	.323**	.206**	.316**	.140	.167*	.488**
	Sig. (2-tailed)		.000	.008	.000	.075	.033	.000
	N	163	163	163	163	163	163	163
MS2	Pearson Correlation	.323**	1	.476**	.432**	.363**	.340**	.695**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	163	163	163	163	163	163	163
MS3	Pearson Correlation	.206**	.476**	1	.589**	.480**	.458**	.757**
	Sig. (2-tailed)	.008	.000		.000	.000	.000	.000
	N	163	163	163	163	163	163	163

Construct		MS1	MS2	MS3	MS4	MS5	MS6	MS Total
MS4	Pearson Correlation	.316**	.432**	.589**	1	.488**	.571**	.803**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	163	163	163	163	163	163	163
MS5	Pearson Correlation	.140	.363**	.480**	.488**	1	.574**	.742**
	Sig. (2-tailed)	.075	.000	.000	.000		.000	.000
	N	163	163	163	163	163	163	163
MS6	Pearson Correlation	.167*	.340**	.458**	.571**	.574**	1	.736**
	Sig. (2-tailed)	.033	.000	.000	.000	.000		.000
	N	163	163	163	163	163	163	163
MS Total	Pearson Correlation	.488**	.695**	.757**	.803**	.742**	.736**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	163	163	163	163	163	163	163
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

Table A-6: Pearson Correlation Matrix for Legal Factors Construct

Construct		LF1	LF2	LF3	LF4	LF5	LF6	LF Total
LF1	Pearson Correlation	1	.615**	.565**	.449**	.264**	.446**	.765**
	Sig. (2-tailed)		.000	.000	.000	.001	.000	.000
	N	163	163	163	163	163	163	163
LF2	Pearson Correlation	.615**	1	.654**	.573**	.327**	.352**	.812**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000

Construct		LF1	LF2	LF3	LF4	LF5	LF6	LF Total
	N	163	163	163	163	163	163	163
LF3	Pearson Correlation	.565**	.654**	1	.569**	.529**	.454**	.846**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	163	163	163	163	163	163	163
LF4	Pearson Correlation	.449**	.573**	.569**	1	.567**	.299**	.772**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	163	163	163	163	163	163	163
LF5	Pearson Correlation	.264**	.327**	.529**	.567**	1	.331**	.648**
	Sig. (2-tailed)	.001	.000	.000	.000		.000	.000
	N	163	163	163	163	163	163	163
LF6	Pearson Correlation	.446**	.352**	.454**	.299**	.331**	1	.621**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	163	163	163	163	163	163	163
LF Total	Pearson Correlation	.765**	.812**	.846**	.772**	.648**	.621**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	163	163	163	163	163	163	163

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

Table A-7: Pearson Correlation Matrix for Land Availability Construct

Construct		LA1	LA2	LA3	LA4	LA Total
LA1	Pearson Correlation	1	.592**	.502**	.420**	.766**
	Sig. (2-tailed)		.000	.000	.000	.000

Construct		LA1	LA2	LA3	LA4	LA Total
	N	163	163	163	163	163
LA2	Pearson Correlation	.592**	1	.574**	.567**	.833**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	163	163	163	163	163
LA3	Pearson Correlation	.502**	.574**	1	.548**	.817**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	163	163	163	163	163
LA4	Pearson Correlation	.420**	.567**	.548**	1	.807**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	163	163	163	163	163
LA Total	Pearson Correlation	.766**	.833**	.817**	.807**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	163	163	163	163	163

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

Table A-8: Pearson Correlation Matrix for Infrastructural Development Construct

Construct		ID1	ID2	ID3	ID4	ID5	ID Total
ID1	Pearson Correlation	1	.627**	.532**	.465**	.563**	.775**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	163	163	163	163	163	163
ID2	Pearson Correlation	.627**	1	.727**	.516**	.510**	.825**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	163	163	163	163	163	163
ID3	Pearson	.532**	.727**	1	.541**	.531**	.819**

Construct		ID1	ID2	ID3	ID4	ID5	ID Total
	Correlation						
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	163	163	163	163	163	163
ID4	Pearson Correlation	.465**	.516**	.541**	1	.721**	.812**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	163	163	163	163	163	163
ID5	Pearson Correlation	.563**	.510**	.531**	.721**	1	.825**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	163	163	163	163	163	163
ID Total	Pearson Correlation	.775**	.825**	.819**	.812**	.825**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	163	163	163	163	163	163

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

Table A-9: Pearson Correlation Matrix for Technological Adoption Construct

Construct		TA1	TA2	TA3	TA4	TA Total
TA1	Pearson Correlation	1	.691**	.752**	.653**	.885**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	163	163	163	163	161
TA2	Pearson Correlation	.691**	1	.685**	.544**	.823**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	163	163	163	163	161
TA3	Pearson Correlation	.752**	.685**	1	.736**	.913**

Construct		TA1	TA2	TA3	TA4	TA Total
	Sig. (2-tailed)	.000	.000		.000	.000
	N	163	163	163	163	161
TA4	Pearson Correlation	.653**	.544**	.736**	1	.853**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	163	163	163	163	161
TA Total	Pearson Correlation	.885**	.823**	.913**	.853**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	161	161	161	161	161
**. Correlation is significant at the 0.01 level (2-tailed).						

Table A-10: Pearson Correlation Matrix for Leadership Quality of CEOs Construct

Construct		LQ1	LQ2	LQ3	LQ4	LQ Total
LQ1	Pearson Correlation	1	.681**	.618**	.547**	.839**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	163	163	163	163	161
LQ2	Pearson Correlation	.681**	1	.670**	.571**	.853**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	163	163	163	163	161
LQ3	Pearson Correlation	.618**	.670**	1	.716**	.884**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	163	163	163	163	161
LQ4	Pearson Correlation	.547**	.571**	.716**	1	.824**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	163	163	163	163	161
LQ	Pearson Correlation	.839**	.853**	.884**	.824**	1

Construct		LQ1	LQ2	LQ3	LQ4	LQ Total
Total	Sig. (2-tailed)	.000	.000	.000	.000	
	N	161	161	161	161	161

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

Table A-11: Pearson Correlation Matrix for Real Estate Company's Performance

Construct

Construct		Pi1	Pi2	Pi3	Pi4	Pi5	Pi6	Pi7	PI Total
Pi1	Pearson Correlation	1	.888*	.726*	.735*	.673*	.731*	.651*	.883*
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	163	163	163	163	163	163	163	161
Pi2	Pearson Correlation	.888*	1	.785*	.781*	.714*	.755*	.691*	.916*
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	N	163	163	163	163	163	163	163	161
Pi3	Pearson Correlation	.726*	.785*	1	.750*	.585*	.607*	.616*	.827*
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000
	N	163	163	163	163	163	163	163	161
Pi4	Pearson Correlation	.735*	.781*	.750*	1	.736*	.760*	.737*	.895*
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000

Construct		Pi1	Pi2	Pi3	Pi4	Pi5	Pi6	Pi7	PI Total
	N	163	163	163	163	163	163	163	161
Pi5	Pearson Correlation	.673*	.714*	.585*	.736*	1	.860*	.717*	.860*
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
	N	163	163	163	163	163	163	163	161
Pi6	Pearson Correlation	.731*	.755*	.607*	.760*	.860*	1	.709*	.885*
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
	N	163	163	163	163	163	163	163	161
Pi7 Total	Pearson Correlation	.651*	.691*	.616*	.737*	.717*	.709*	1	.834*
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000
	N	163	163	163	163	163	163	163	161
PI	Pearson Correlation	.883*	.916*	.827*	.895*	.860*	.885*	.834*	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	161	161	161	161	161	161	161	161
**. Correlation is significant at the 0.01 level (2-tailed).									

Table A-12: Reliability Test: Item-Total Statistics

Construct	Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Real Estate Firm's Efficiency	FE1	17.57	5.666	.786	.816
	FE2	17.55	6.114	.709	.836
	FE3	17.53	6.164	.778	.820
	FE4	17.59	6.676	.616	.858
	FE5	17.47	7.028	.580	.866
Suppliers' Construction Materials	SCM 1	9.06	1.250	.673	.626
	SCM 2	9.01	1.290	.668	.633
	SCM 3	8.97	1.585	.503	.772
Customers' Buying Intention	CBI1	12.02	4.302	.443	.722
	CBI2	11.94	4.188	.575	.654
	CBI3	12.17	3.378	.605	.629
	CBI4	11.96	4.227	.504	.688
Credit Availability	CA1	12.40	3.156	.680	.665
	CA2	12.39	4.066	.415	.768
	CA3	12.45	3.052	.650	.683
	CA4	12.28	3.710	.591	.718
Marketing Strategy	MS2	16.83	6.365	.500	.813
	MS3	16.75	6.088	.648	.771
	MS4	16.74	5.825	.674	.762
	MS5	17.07	5.607	.608	.784

Construct	Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
	MS6	16.69	6.167	.630	.776
Legal Factors	LF1	11.94	4.472	.638	.816
	LF2	11.93	4.002	.742	.768
	LF3	11.82	4.509	.715	.783
	LF4	11.77	4.856	.616	.824
Land Availability	LA1	12.80	3.372	.590	.788
	LA2	12.85	3.266	.709	.740
	LA3	12.90	3.094	.655	.758
	LA4	12.88	2.943	.610	.786
Infrastructural Development	ID1	17.53	4.794	.652	.852
	ID2	17.52	4.634	.723	.835
	ID3	17.58	4.529	.705	.839
	ID4	17.64	4.379	.680	.846
	ID5	17.60	4.488	.714	.837
Technological Adoption	TA1	12.94	2.978	.794	.849
	TA2	12.98	3.277	.709	.881
	TA3	13.01	2.815	.836	.832
	TA4	12.98	2.882	.721	.879
Leadership Quality of CEOs	LQ1	12.84	3.456	.701	.849
	LQ2	12.89	3.593	.742	.833
	LQ3	12.97	3.277	.778	.817
	LQ4	13.04	3.690	.698	.850
Real Estate Company's	Pi1	23.34	22.103	.838	.938

Construct	Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Performance	Pi2	23.37	22.495	.887	.934
	Pi3	23.28	22.670	.764	.945
	Pi4	23.17	22.748	.859	.937
	Pi5	23.17	22.818	.812	.941
	Pi6	23.19	22.229	.841	.938
	Pi7	22.92	23.099	.776	.944

Appendix IV: Output of the Exploratory Factor Analysis

Table B-1: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMOMSA) and Bartlett's Test of Sphericity (BTOS)

Construct	No. of items	KMOMSA	BTOS	Case-to-variable ratio	Comment
Real Estate Company's Performance	7	.902	.000	23.3:1	EFA supported
Real Estate Firm's Efficiency	6	.854	.000	27.1:1	EFA supported
Suppliers' Construction Materials	4	.706	.000	40.75:1	EFA supported
Customers' Buying Intention	4	.717	.000	40.75:1	EFA supported
Credit Availability	4	.760	.000	40.75:1	EFA supported
Marketing Strategy	6	.813	.000	27.1:1	EFA supported
Legal Factors	6	.808	.000	27.1:1	EFA supported
Land Availability	4	.787	.000	40.75:1	EFA supported
Infrastructural Development	5	.791	.000	32.6:1	EFA supported
Technological Adoption	4	.819	.000	40.75:1	EFA supported
Leadership Quality of CEOs	4	.798	.000	40.75:1	EFA supported
Overall	54	.715	.000	NA	EFA supported

Table B-2: Total Variance Explained

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.890	20.166	20.166	10.890	20.166	20.166	5.616	10.401	10.401
2	5.710	10.573	30.740	5.710	10.573	30.740	4.249	7.869	18.269
3	4.266	7.900	38.639	4.266	7.900	38.639	3.667	6.791	25.061
4	3.357	6.216	44.855	3.357	6.216	44.855	3.418	6.330	31.390
5	2.791	5.168	50.023	2.791	5.168	50.023	3.393	6.284	37.674
6	2.326	4.307	54.330	2.326	4.307	54.330	3.201	5.928	43.603
7	1.992	3.689	58.019	1.992	3.689	58.019	3.046	5.642	49.244
8	1.839	3.405	61.424	1.839	3.405	61.424	2.953	5.469	54.713
9	1.731	3.206	64.630	1.731	3.206	64.630	2.842	5.262	59.975
10	1.587	2.939	67.569	1.587	2.939	67.569	2.348	4.347	64.323
11	1.521	2.816	70.386	1.521	2.816	70.386	2.272	4.208	68.531
12	1.285	2.380	72.766						
13	1.185	2.195	74.960						

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
14	1.021	1.890	76.850						
15	.944	1.748	78.598						
16	.826	1.529	80.127						
17	.737	1.364	81.492						
18	.690	1.279	82.770						
19	.646	1.196	83.967						
20	.600	1.111	85.078						
21	.581	1.075	86.153						
22	.531	.983	87.136						
23	.480	.889	88.026						
24	.468	.866	88.892						
25	.455	.843	89.735						

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
26	.420	.777	90.513						
27	.395	.731	91.244						
28	.381	.706	91.950						
29	.358	.662	92.612						
30	.349	.646	93.259						
31	.325	.602	93.861						
32	.321	.594	94.455						
33	.286	.530	94.986						
34	.258	.477	95.463						
35	.237	.438	95.901						
36	.219	.405	96.306						
37	.214	.396	96.702						

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
38	.202	.375	97.076						
39	.171	.316	97.392						
40	.163	.302	97.695						
41	.154	.285	97.980						
42	.148	.273	98.253						
43	.144	.267	98.520						
44	.118	.218	98.738						
45	.106	.196	98.934						
46	.103	.191	99.125						
47	.083	.154	99.279						
48	.081	.150	99.429						
49	.077	.143	99.572						

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
50	.071	.132	99.704						
51	.056	.104	99.808						
52	.046	.084	99.892						
53	.036	.066	99.958						
54	.023	.042	100.000						
Extraction Method: Principal Component Analysis.									

Table B-3: Communalities of the Items Considered in the Study

	Initial	Extraction
FE1	1.000	.807
FE2	1.000	.869
FE3	1.000	.745
FE4	1.000	.612
FE5	1.000	.622
FE6	1.000	.685
SCM1	1.000	.781
SCM2	1.000	.813
SCM3	1.000	.717
SCM4	1.000	.727
CBI1	1.000	.704
CBI2	1.000	.722
CBI3	1.000	.769
CBI4	1.000	.812
CA1	1.000	.787
CA2	1.000	.719
CA3	1.000	.797
CA4	1.000	.680
MS1	1.000	.717
MS2	1.000	.721
MS3	1.000	.753
MS4	1.000	.748
MS5	1.000	.669
MS6	1.000	.723

	Initial	Extraction
LF1	1.000	.713
LF2	1.000	.780
LF3	1.000	.801
LF4	1.000	.774
LF5	1.000	.770
LF6	1.000	.722
LA1	1.000	.672
LA2	1.000	.699
LA3	1.000	.702
LA4	1.000	.718
ID1	1.000	.693
ID2	1.000	.830
ID3	1.000	.803
ID4	1.000	.805
ID5	1.000	.794
TA1	1.000	.826
TA2	1.000	.821
TA3	1.000	.827
TA4	1.000	.835
LQ1	1.000	.775
LQ2	1.000	.838
LQ3	1.000	.833
LQ4	1.000	.826
Pi1	1.000	.846
Pi2	1.000	.887

	Initial	Extraction
Pi3	1.000	.850
Pi4	1.000	.855
Pi5	1.000	.823
Pi6	1.000	.872
Pi7	1.000	.810
Extraction Method: Principal Component Analysis.		

Table B-4: Rotated Component Matrix

Item	Component													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
FE1		0.852	0.19	0.109						0.126				
FE2		0.849										-0.222	0.152	0.208
FE3		0.834	0.105								0.107			
FE4		0.694	0.103		0.166					0.119	0.186		-0.103	
FE5		0.647					0.207				0.24	0.203	0.187	
FE6	0.104	0.607						0.128	0.326	0.182	0.265	0.149	-0.147	-0.157
SCM1		0.335	0.169						0.212		0.721	-0.125	-0.148	
SCM2		0.245	0.11		0.176						0.815	0.102		
SCM3	0.13	0.188	0.1					0.101			0.668		0.388	0.182
SCM4	0.173	0.136	0.125	0.236	0.201				0.236	0.235	0.603	0.189		0.189
CBI1		0.205		0.211	0.111	0.126				0.716	-0.195	0.147		

Item	Component													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CBI2		0.154	0.162	0.165			0.193		0.202	0.703	0.172		0.134	
CBI3				0.21	0.134			0.324	0.209	0.526	0.366		-0.271	0.226
CBI4				0.11	0.138	0.172	0.128	0.225	0.163	0.723	0.167	0.109		0.269
CA1		0.203				0.293			0.752	0.181			0.153	0.1
CA2	-0.163			0.122		0.116		0.159	0.666				0.399	-0.114
CA3			0.124	0.223				0.128	0.804					0.218
CA4		0.129	0.145	0.203	0.152	0.2			0.665			0.182		-0.202
MS1	0.129	0.335			0.354	0.391		-0.199		0.301				
MS2		-0.116	0.223			0.63	0.178			0.304		-0.19	0.29	
MS3						0.79		0.25		0.103		0.124	0.126	
MS4	0.118	0.131	0.122			0.76		0.11	0.29			-0.107		
MS5		-0.157		0.228		0.56	-0.113	0.284	0.375	0.127	0.131			

Item	Component													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MS6			0.327	0.131		0.66		0.152	0.226				-0.239	
LF1	0.105	0.156	0.105	0.633	0.116	0.305	-0.101		0.139	0.207		0.124	-0.236	
LF2	0.112			0.764				0.265	0.218	0.182				
LF3			0.134	0.807	0.193	0.173						0.133	0.136	
LF4		0.105	0.145	0.736	0.134		0.183			0.263		-0.146	0.109	-0.163
LF5			0.217	0.584	0.144		0.166		0.125			-0.454	0.293	
LF6		0.236	0.292	0.374	0.106	0.284	0.184	0.106		-0.281		0.203	-0.108	0.277
LA1				0.162	0.129		0.101	0.739					0.157	
LA2			0.23	0.114		0.276		0.696				0.154	-0.109	
LA3			0.143		0.198			0.723	0.132			-0.206	0.172	
LA4			0.319			0.189		0.721					-0.122	0.146
ID1		0.118	0.735	0.15				0.242					0.207	

Item	Component													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
ID2		0.114	0.806	0.131		0.178						0.248		0.176
ID3		0.141	0.755	0.113	0.134	0.128		0.103	0.222			0.199	-0.161	0.157
ID4	0.129	0.118	0.707		0.177			0.112	0.117	0.191	0.142	-0.364		
ID5			0.742		0.163			0.238	0.121	0.144		-0.26		-0.198
TA1				0.121	0.8		0.274	0.128		0.157				-0.146
TA2				0.103	0.84		0.167	0.137	-0.127				0.184	
TA3		0.122	0.13	0.118	0.83		0.151		0.163					
TA4	0.18		0.171	0.201	0.73		0.178		0.234			0.203	-0.2	0.169
LQ1	0.132	0.25			0.322		0.74					0.16		
LQ2	0.154				0.171		0.82	0.107	-0.128		-0.121			0.215
LQ3	0.106		-0.122		0.132	0.155	0.85	0.131			0.103			
LQ4	0.194			0.164	0.191		0.75		0.135	0.229	0.124	-0.177	-0.139	-0.119

Item	Component													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Pi1	0.86				0.15	0.123			0.112				-0.137	0.112
Pi2	0.91				0.116					0.112				
Pi3	0.81		-0.105				0.165	0.223				-0.21		0.202
Pi4	0.91												0.147	
Pi5	0.86						0.115			-0.109				
Pi6	0.88			0.133								0.24		-0.1
Pi7	0.82	0.152			0.131	-0.14			-0.102		0.103			-0.196

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 13 iterations.

Appendix V: Assumptions of Multiple Linear Regressions

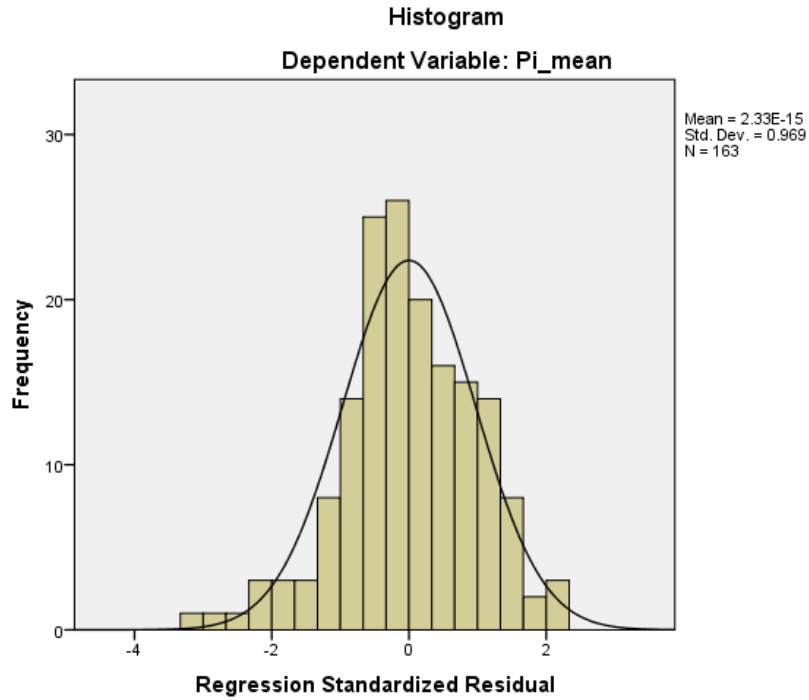


Figure C-1: Residuals Normal Distribution Histogram

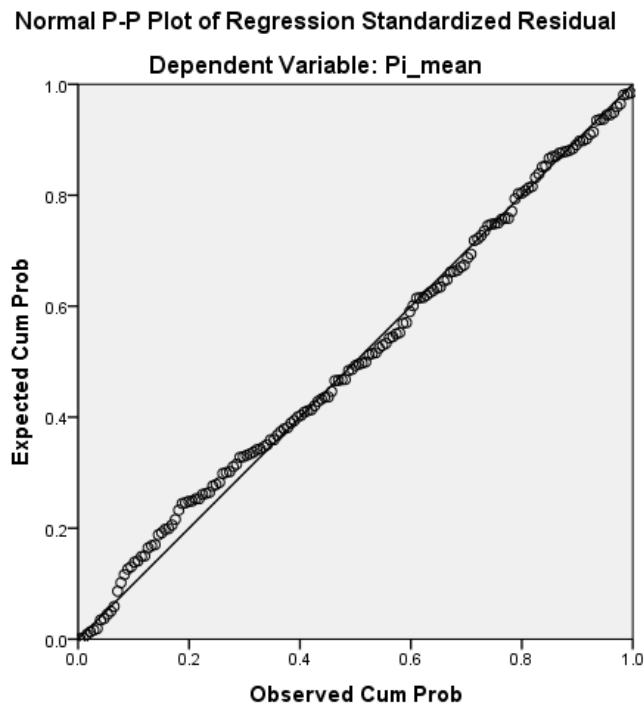


Figure C-2: Normal Probability Plot of Regression Standardised Residuals

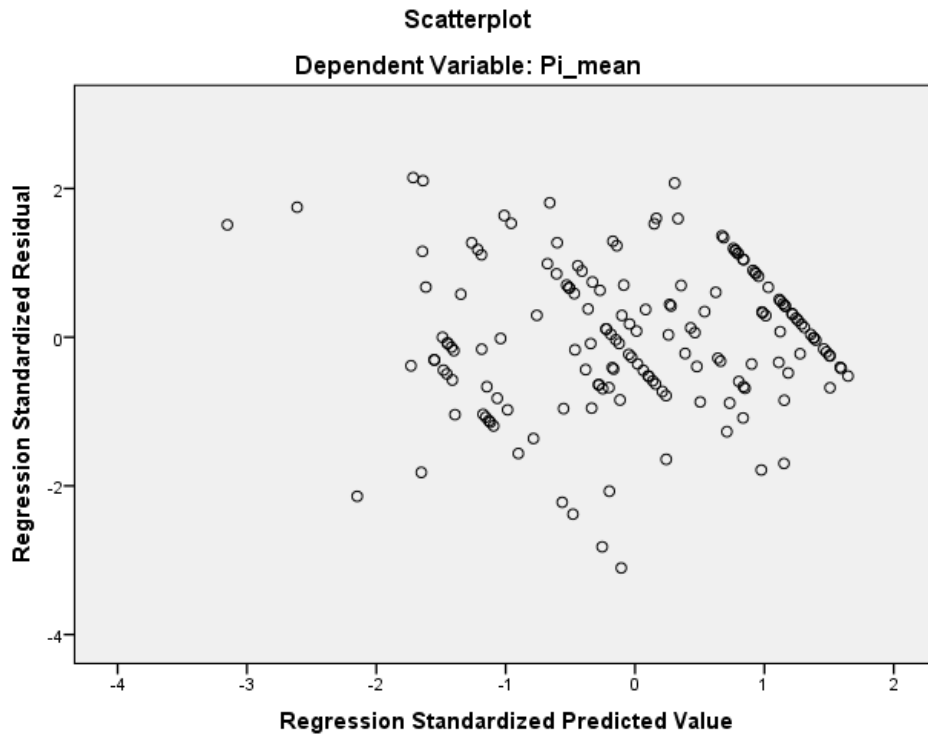


Figure C-3: Graph showing Test of Homoscedasticity

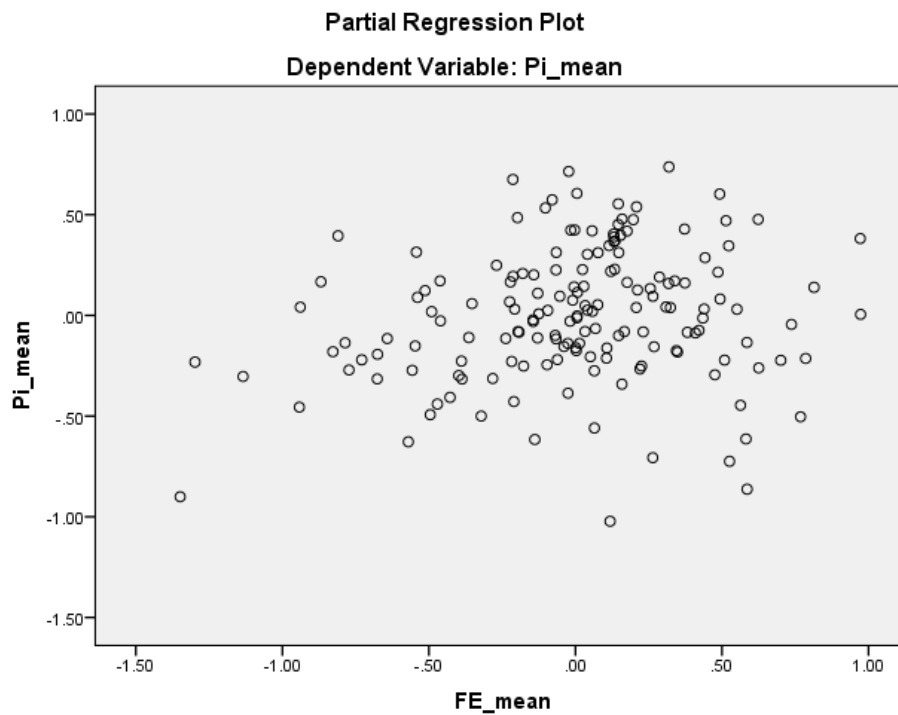


Figure C-4: Linearity Plot of Real Estate Performance versus Firm's Efficiency

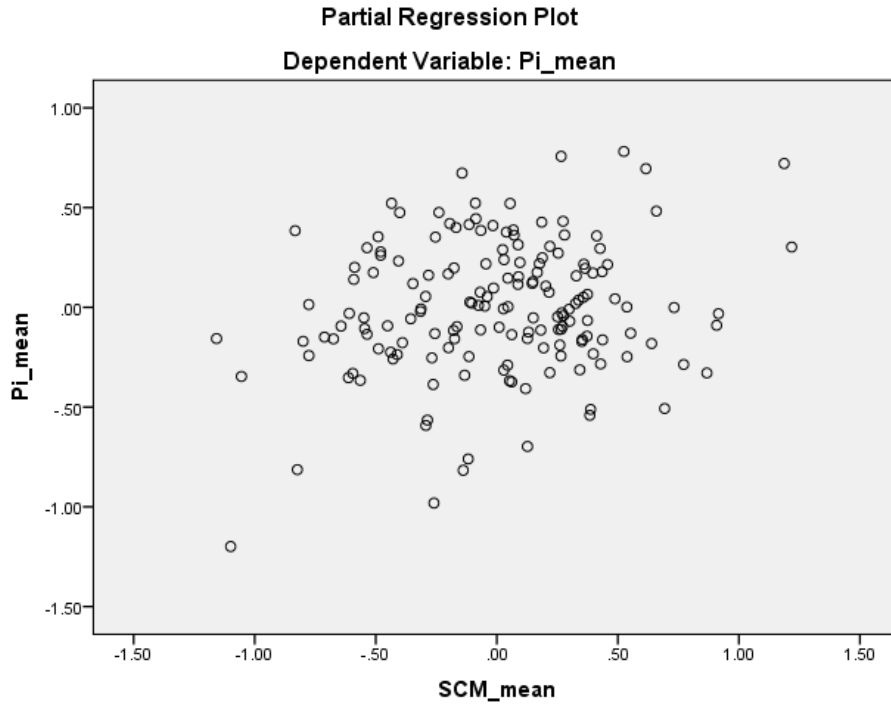


Figure C-5: Linearity Plot of Real Estate Performance versus Suppliers' Construction Materials

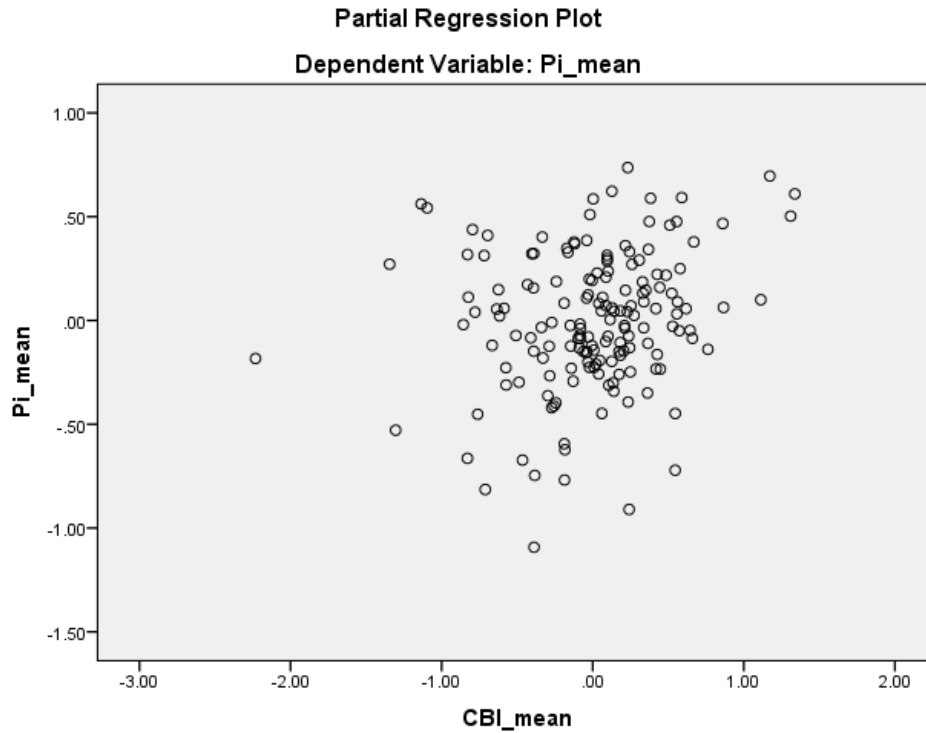


Figure C-6: Linearity Plot of Real Estate Performance versus Customers' Buying Intention

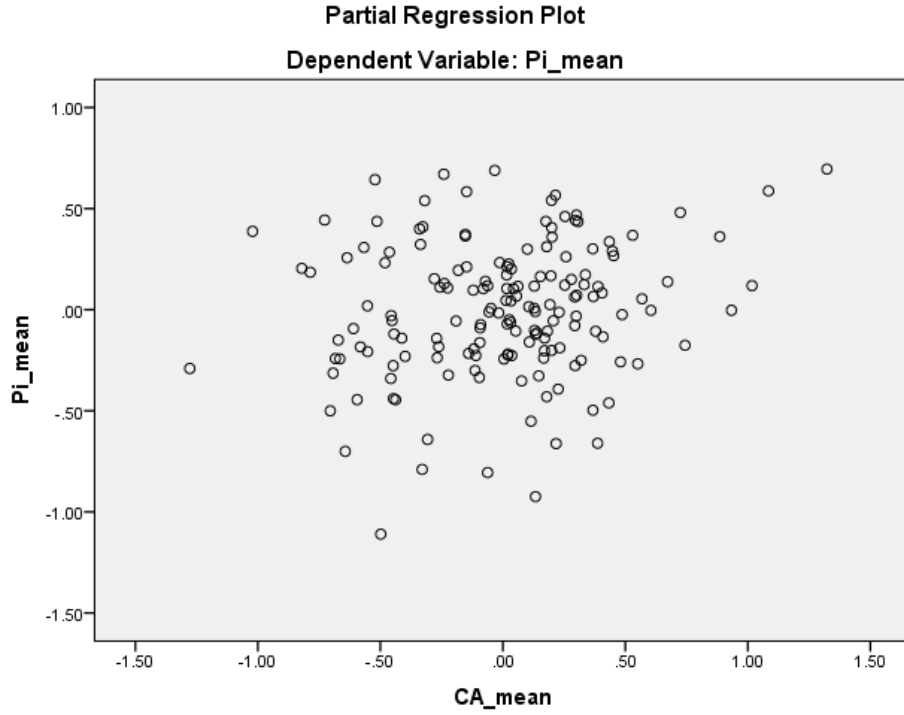


Figure C-7: Linearity Plot of Real Estate Performance versus Credit Availability

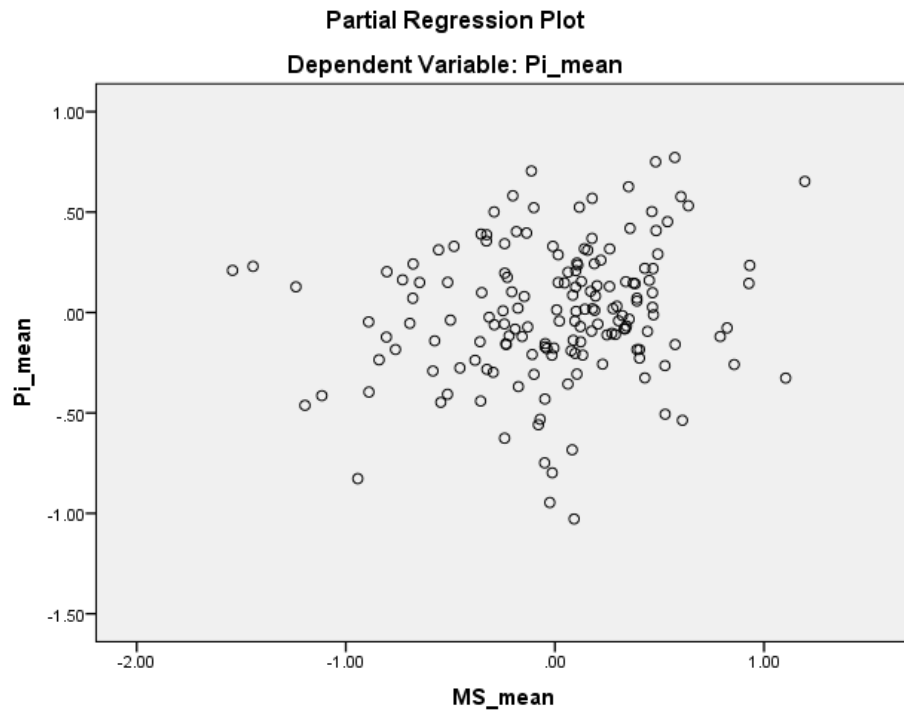


Figure C-8: Linearity Plot of Real Estate Performance versus Marketing Strategy

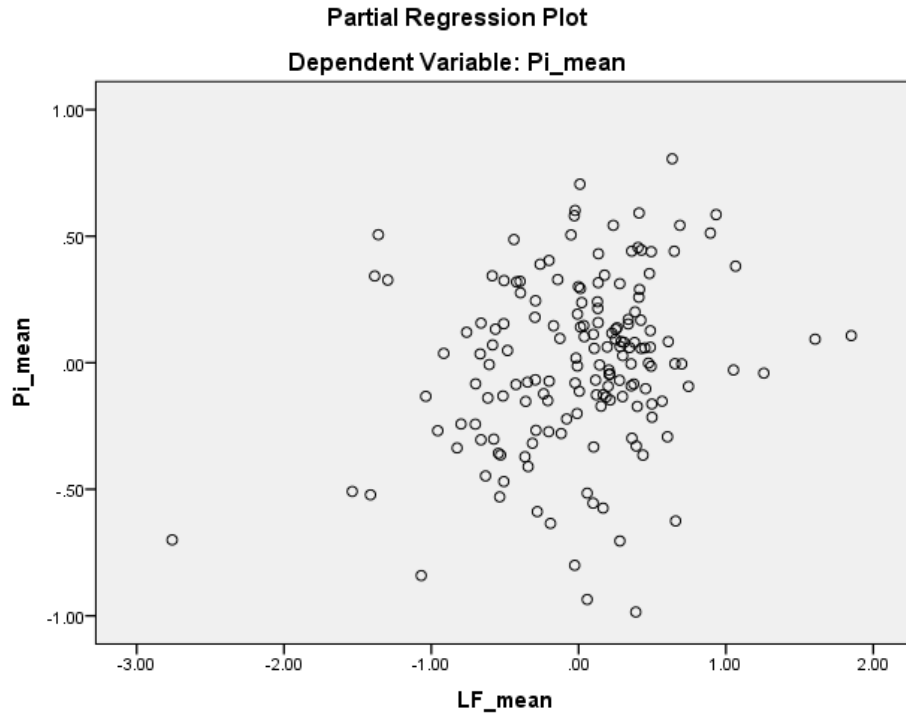


Figure C-9: Linearity Plot of Real Estate Performance versus Legal Factors

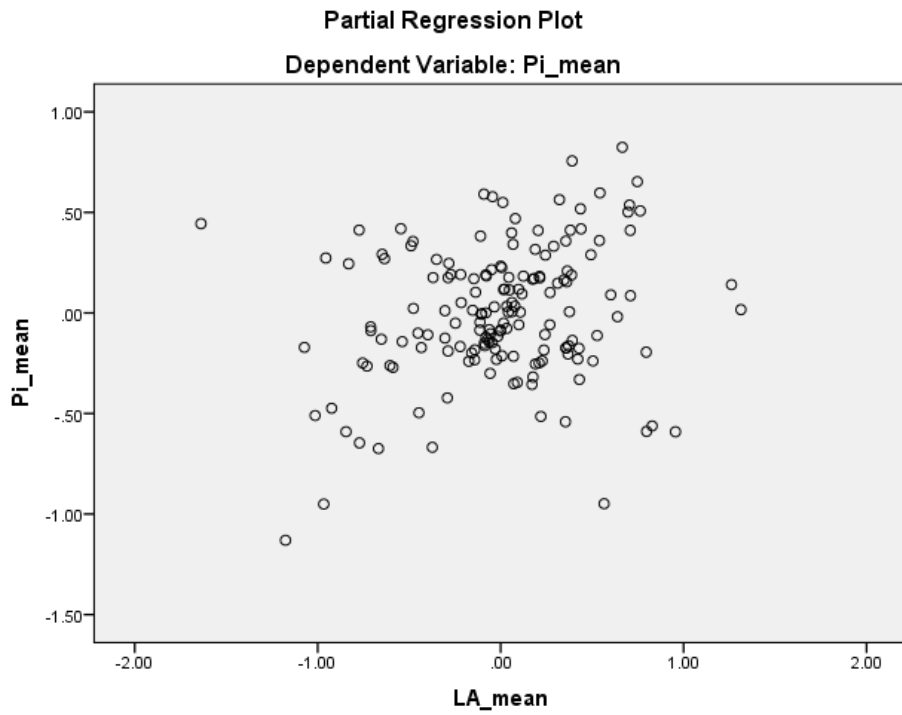


Figure C-10: Linearity Plot of Real Estate Performance versus Land Availability

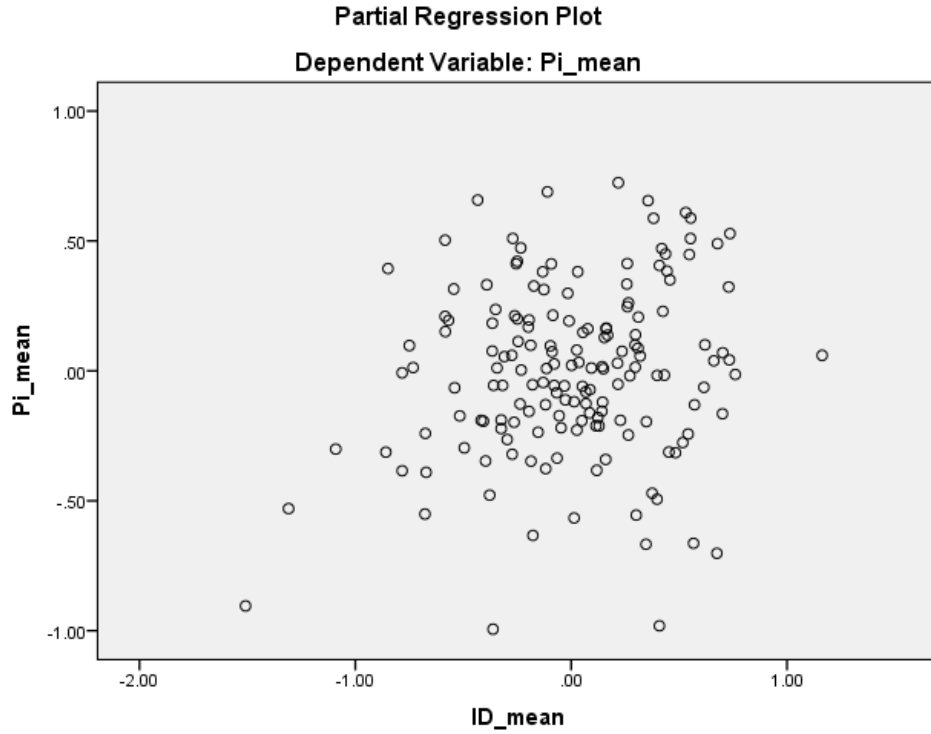


Figure C-11: Linearity Plot of Real Estate Performance versus Infrastructure Development

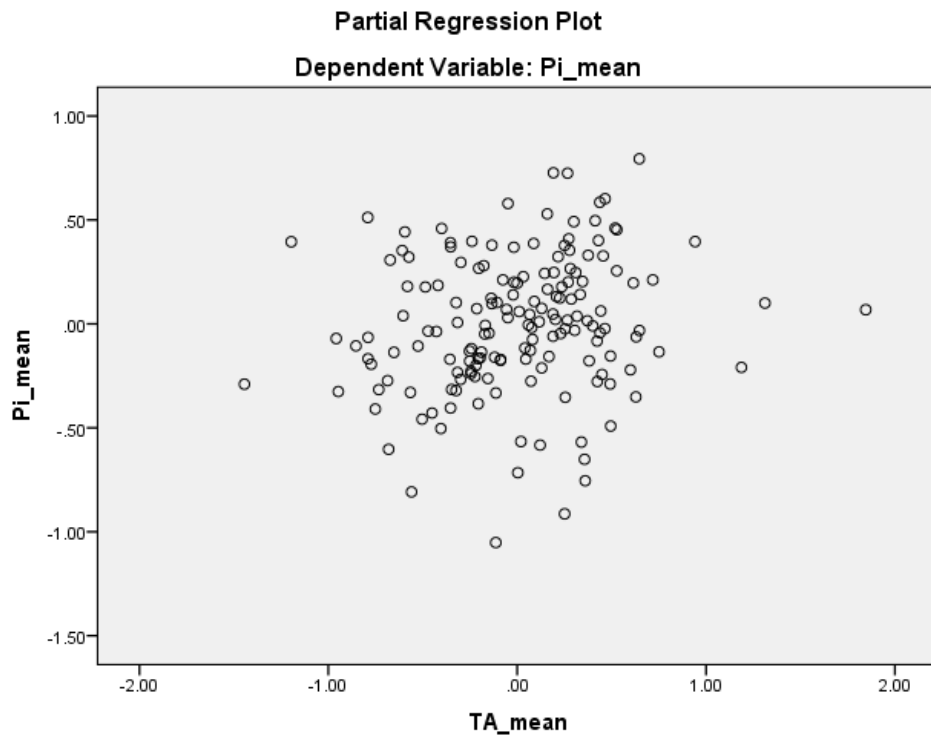


Figure C-12: Linearity Plot of Real Estate Performance versus Technological Adoption

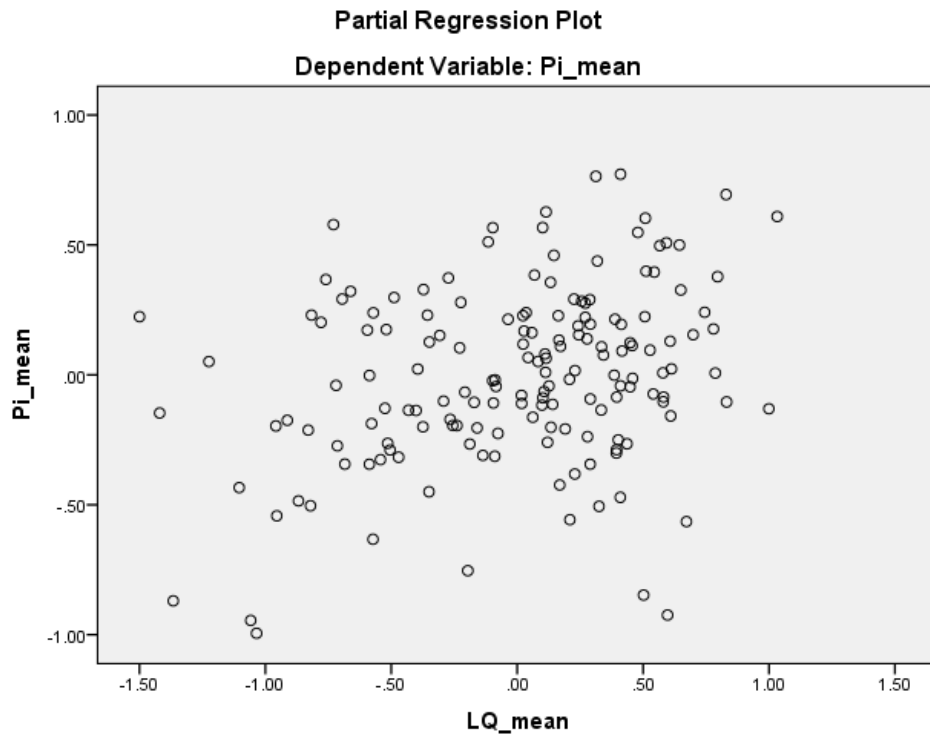


Figure C-13: Linearity Plot of Real Estate Performance versus Leadership Quality

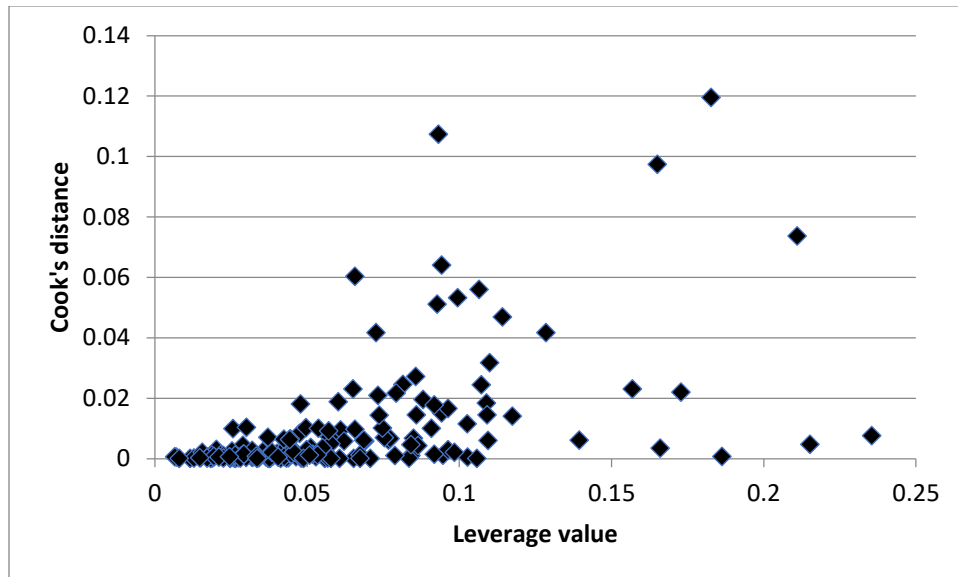


Figure C-14: Cook's Distance by Leverage Value for Diagnosing Outliers

Table C-1: Assumptions of Collinearity and Autocorrelation

Dependent Variable: Real estate performance

Correlations			Collinearity Statistics		Durbin-Watson
Zero-order	Partial	Part	Tolerance	VIF	
.634	.176	.080	.531	1.884	1.595
.550	.191	.087	.621	1.611	
.635	.207	.095	.553	1.809	
.681	.178	.081	.456	2.192	
.642	.168	.076	.498	2.007	
.564	.242	.111	.685	1.460	
.703	.225	.103	.476	2.102	
.569	.182	.083	.633	1.580	
.664	.167	.076	.477	2.095	
.667	.295	.138	.550	1.820	