Developing Service Performance for the New Zealand House Building Industry: A Study of Auckland Residential Housing

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ATTESTATION OF AUTHORITY

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

(Radyan Dananjoyo)

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ABSTRACT

The residential housing industry has provided a significant contribution to New Zealand's economy over the decade. Recently, there has been a huge demand for new housing development in New Zealand, especially in Auckland. This study concerns housing purchase decisions in Auckland as the largest city in New Zealand. The discussion of this study mainly focuses on an evaluation of the consumer decision process for homeownership in New Zealand. This thesis examines the impacts of determinants of homeownership and service excellence in determining house purchase decisions and evaluating post-purchase satisfaction for homeowners in New Zealand.

The main objective of this study is to define the relationship between determinants of homeownership and service excellence toward a homeowner's purchase decision and post-purchase satisfaction. Only limited studies have examined the consumer decision process in the New Zealand's residential housing industry focussing on the purchase decision and post-purchase decision stage. Thus, the purpose of this study is to fill the gap by investigating determinants of homeownership attributes and service excellence attributes provided by house builders which influence a homeowner's purchase decision and post-purchase satisfaction.

Sequential Explanatory Design was adopted for this study in order to meet the objectives of the study. This design used both quantitative and qualitative methods. The quantitative method was started by data collection using a mail survey from which 414 questionnaires were returned. The quantitative data was analysed by using AMOS software. A measurement model and structural model were used to examine the relationship of each variable toward purchase and post-purchase decisions. The result of the quantitative analysis shows that both determinants of homeownership and service excellence significantly influenced homeowners' purchase decisions and post-purchase satisfaction. The qualitative method used semi-structured interviews with 15 homeowners to validate the result of the quantitative data analysis. The results of this study showed the framework of service excellence as a contribution of knowledge to evaluate the residential housing industry in New Zealand.

LIST OF ABBREVIATIONS

AC – Accessibility

AGFI – Adjusted of Good Fit Index

AMOS – Analysis of Moment Structure

AN – Anticipate Customer Needs

AUTEC – Auckland University of Technology Ethical Committee

AVE – Average Variance Extracted

BD – Number and Size of Bedroom

BH – Number and Size of Bathroom

CA – Credit Affordability

CE – Care

CFA – Confirmatory Factor Analysis

CFI – Comparative Fit Index

CN – Clean Neighbourhood

CR – Composite Reliability

DH – Determinants of Homeownership

DP – Delivering the Promise

DR – Drainage

DT – Do what was Promised

DW – Dealing Well with Problems

FC – Financial Considerations

FS – Fire Systems

GFI – Goodness of Fit Index

GN – Green Neighbourhood

GOF – Goodness of Fit

GTEM – Going the Extra Mile

HC – Helping the Customer

HD – House Design

HF – House Features

HQ – House Quality

IC – Income

IFI – Incremental Fit Index

IS – Infrastructure

IT – Individual Treatment

LS – Land Size

LVR – Loan-to-Value Ratio

ME – Meet Expectations

NB – Neighbourhood

NFI – Normed Fit Index

PC – Protect the customer

PT – Public Transport

PGFI – Parsimony Goodness-of-Fit Index

PLS – Partial Least Square

PNFI – Parsimonious Normed Fit Index

PCFI – Parsimonious Comparative Fit Index

PS – Problem Solver

PT – Personal Touch

QR – Quick Response

RB – Reliability

RC – Recreation Centre

RMSEA – Root Mean Square Error of Approximation

RQ – Rood Quality

SC – Shopping Centre

SE – Service Excellence

SEM – Structural Equation Modelling

SL – Ease of access to School

SN – Safe Neighbourhood

SPSS – Statistical Package for the Social Science

TLI – Tucker-Lewis Index

UK – United Kingdom

US – United States

WM – Waste Management

WP – Ease of access to Workplace

CHAPTER ONE
INTRODUCTION

1.1 Introduction

This chapter describes the discussion of the research background and gives a summary of the research undertaken in this study. The discussion of the research background described in Section 1.2, while a statement of the research problems is explored in Section 1.3. It is followed by discussions of the research questions, research objectives and the significance of the research. Then, structure of the thesis summarized in Section 1.7. The final section of this chapter provides a summary of the study.

1.2 Research Background

Residential building construction plays a significant impact on New Zealand's economy. It contributes about 20% of New Zealand's construction industry (MBIE, 2016). The residential housing industry in New Zealand was the industry with the highest growth over a decade. As can be seen in the Figure 1.1, the number of total dwelling unit consents in New Zealand rose steeply. Since 2012, they increased by 97.56%, while the number of housing consents in New Zealand increased by 68.76% (Statistics New Zealand, 2017). Dwelling consents in Auckland contributed around 30% of the total volume (Statistics New Zealand, 2017).

Even though housing demand in New Zealand generally and Auckland specifically increased significantly, the shortage of housing supply due to immigration and population growth is the main issue for homeownership (Spencer, 2013). As discussed by Cox and Pavletich (2017), overall the housing market in New Zealand is categorized as the least affordable market, while the housing market in Auckland is ranked as severely unaffordable. This means houses in New Zealand are no longer affordable because the housing supply is unable to meet New Zealanders' needs.

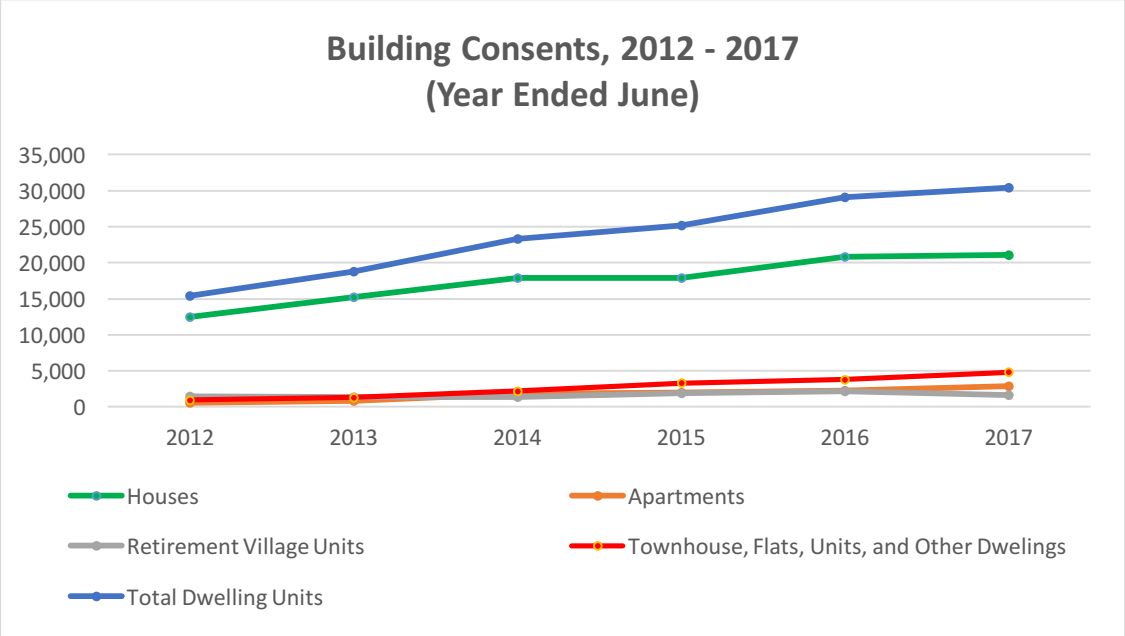

Figure 1.1 Building Consents
(Source: Statistics New Zealand, 2017)

Appropriate measures should be implemented to increase the supply of housing in New Zealand. This needs involvement of all stakeholders in the housing industry to provide the right mix of housing choices in order to meet the varying expectations of New Zealand homeowners. One of the measurements of customers' expectations is determinants of homeownership. The importance of determinants of homeownership has been highlighted and discussed for a number of years. A major obstacle hindering homeowners' purchase decisions was the fulfilment of customer expectations based on the determinants of homeownership.

There are several attributes that are believed to influence determinants of homeownership from a financial point of view, such as housing price, income level and credit availability (Roidoung, 2013). The movement and volatility of the housing price have an impact on the housing purchase decision (Madsen, 2012). The income level of the homeowner has a significant contribution to determining housing purchase decisions (Alhubashi, 2012. A house is categorized as an unaffordable house when costs rise beyond 30 percent of annual household income (Bramley, 2012). In addition, the availability of access to finance is necessary to ease housing purchase decisions (Madsen, 2012; Gan et al, 2013).

The other attribute that influences housing purchase decisions is the ease of access to public facilities such as workplace, school, public transport, shopping centres, recreation and open space (Yusuf & Resosudarmo, 2009; Aluko, 2011; González-González *et al.*, 2011; Amenyah & Fletcher, 2013; Dziauddin *et al*. 2013; Larsen & Blair, 2014). Most of the research says that homeowners are willing to pay more for a house in a good location.

The neighbourhood environment is another assessment used by homeowners when buying their house. According to Choguill (2008), neighbourhood can be described as an area where the residents are drawn and held together by common and beneficial interest. There are several types of neighbourhoods that homeowners can choose from, such as safe, clean and pollution free (Opoku & Abdul-Muhmin, 2010; Tan, 2011; Kemiki *et al.,* 2014).

Furthermore, there are many infrastructure aspects that contribute to homeowner's purchase decisions, for instance road condition, sewage disposal, waste disposal, fire systems and drainage (Dwijendra, 2014). Moreover, housing features also play an important role influencing homeowners' purchase decisions. There are several attributes related to the housing features, such as number of bedrooms and bathrooms, electrical and water supply (Opoku & Abdul-Muhmin, 2010; Owusu-Ansah, 2012; Joshua-Adegoke, 2014).

Housing provision is not only focused on determinants of homeownership, but is also assessed through the lens of housing quality. In New Zealand – as in other countries – housing quality has especially been highlighted in recent years, with particular interest being demonstrated regarding:

- Defect identification, causes, magnitude and cost (Forcada *et al.,* 2012; Park *et al.,* 2013; Rotimi *et al.,* 2015)
- Better housing design, constructability, and pre-manufacture (Goodchild *et al.,* 2014)
- Management of quality, planning and control systems (Meng & Gallagher, 2012; Oyedele *et al.,* 2012; Heravi *et al.,* 2015)

- Management of construction supply chain (Halman & Voordijk, 2012; Vidalakis, *et al.* 2013; AlMaian, *et al.,* 2015)
- Sustainable development (Serpell, *et al.,* 2013; Omardin, *et al.,* 2015; Opoku, *et al.,* 2015)
- Building maintenance (Mohammad, *et al.,* 2014; Yusof, *et al.,* 2014; Cooper, 2015; Ganisen, *et al.,* 2015)

Significantly, the investigations of housing provision concerned with service excellence for the homeowner is limited. In recent years, service level and quality has grown in importance to customers and thus business practice. Service excellence is perceived by business as a critical mechanism for the enhancement of customer satisfaction levels – and thus repeat business, expanded market share and higher profitability. Service excellence is an extension of the service quality model that has been discussed and investigated for many years. The key idea of the service quality model is to identify the gaps between expectation and perception (Verhoef, et al., 2009). Therefore, service excellence is described as the level of service activity beyond the ordinary expectations of customers, or the ability to consistently 'surprise and delight' customers (Al Eisawi, et al. 2012).

1.3 Research Problem

No studies have been conducted in the residential housing industry in New Zealand exploring the relationships between determinants of homeownership and service excellence toward customer satisfaction and the purchase decision process. Previous studies have discussed the connections between service quality and home buyers' purchase behaviour (Forsythe, 2012; Sommerville *et al*., 2012; Zeng, 2013; Sunindijo *et al*., 2014). However, some studies have investigated the importance of determinants of homeownership when homeowners purchase a house (Lauridsen & Skak, 2007; Tan, 2008; Ying & Chen, 2013; Sean & Hong, 2014).

As New Zealand's residential housing market is relatively complex, unaffordable for many New Zealanders and fast growing, the main intention of this study is to investigate how each homeowner makes their purchase decision based on their identification of each attribute which satisfies their needs. This study was conducted in the Auckland residential market as the largest population and residential market in New Zealand.

Therefore, the research problem is:
There is a lack of information concerning the determinants of homeownership and service excellence that influence house purchase decisions and the evaluation of post-purchase satisfaction in New Zealand.

1.4 Research Questions

In order to address the research problem, three research questions were raised to help the researcher to achieve the objective of this study:

1. What are the perspectives of homeowners towards determinants of homeownership and service excellence in order to determine the house purchase decision and achieve customer satisfaction?

2. What are the critical elements that are highlighted by homeowners to examine their house purchase decision?

3. How do homeowners identify the level of service excellence provided by house builders to influence their post-purchase decisions?

1.5 Research Objectives

The aim of this study is to formulate guidelines for homeowners in determining their purchase decision. The investigation of the consumer decision process can be used to foresee the upcoming requirements for the residential housing industry in New Zealand. In order to fulfil the aim of this study and answer the research questions, the objectives of this study are specified as follows:

1. To define the relationship between determinants of homeownership and service excellence toward a homeowner's purchase decision and post-purchase satisfaction.
2. To determine the critical factors for determinants of homeownership and service excellence in determining a homeowner's purchase decision.
3. To identify the level of service excellence provided by house builders which influence homeowners' post-purchase satisfaction.

1.6 Significance of the Research

Little work has to date been undertaken by researchers within construction academia on the dynamics of service quality in the housing industry sector. Most studies of service quality were conducted in service industries like hospitality (Wang *et al*., 2008), bank (Abdullah, *et al*., 2011), ICT (Saraei & Amini, 2012), education (Law, 2013), retail (Amorim & Saghezchi, 2014), health care (Schembri, 2015).

There were several studies which discussed service quality in the construction sector, such as residential real estate brokerage (Seiler & Reisenwitz, 2010); architectural services (Lai & Pang, 2010); building designers (Sporrong, 2011); service relationship between customer and contractor (Chen & Jia, 2012); project management (Lee & Yu, 2012); consulting engineering industry (Tan, 2013); construction professional service (Connaughton & Meikle, 2013); contractors of small and medium construction projects (Sunindijo, et al., 2014); onsite construction services (Forsythe, 2016); design/build contractors (Hadidi, 2016).

However, only limited studies have discussed service quality in the residential housing industry (Zeng, 2013). The investigation of the service sector mostly measures the level of service quality rather than service excellence. There is an even lower proportion of research into the specifics of service quality (i.e. service excellence) in the housing sector. Thus, there is an apparent lack of understanding as to how service excellence and determinants of homeownership relate to a homeowner's purchase decision in New Zealand. The following activities could help to overcome the research gap:

- The implementation of the service excellence concept is identified as a solution to promote sustainable service in the residential housing industry. It can be started from an early stage of housing development.

- This study evaluate and investigate the different expectations and main concerns of homeowners before making a purchase decision. The perspective of homeowners was gained from both quantitative and qualitative methods. The outcomes of this study can be used as a guideline for homeowners to determine their purchase decision, while house builders or developers able to determine specific requirements to meet or exceed customers' expectations.

- This study offers additional knowledge relating to a sustainable residential housing industry, mainly the identification of the consumer decision-making process. It provide a framework for the consumer decision-making process in the residential housing industry in New Zealand and may also be useful for further research in other developed countries.

1.7 Structure of the Thesis

The structure of this thesis mainly comprises of seven chapters. The outline of the thesis can be seen in Figure 1.2. Chapter 1 provides the background, the research problem, the research questions, the research objectives, and the significance of the research.

Chapter 2 explains the literature review related to consumer behaviour and the purchase decision process. This chapter also describes the literature review related to housing affordability and determinants of homeownership.

Chapter 3 discusses the methodological issues related to the research hypothesis. This chapter explains the research philosophy, research approach, research design, and also ethical considerations.

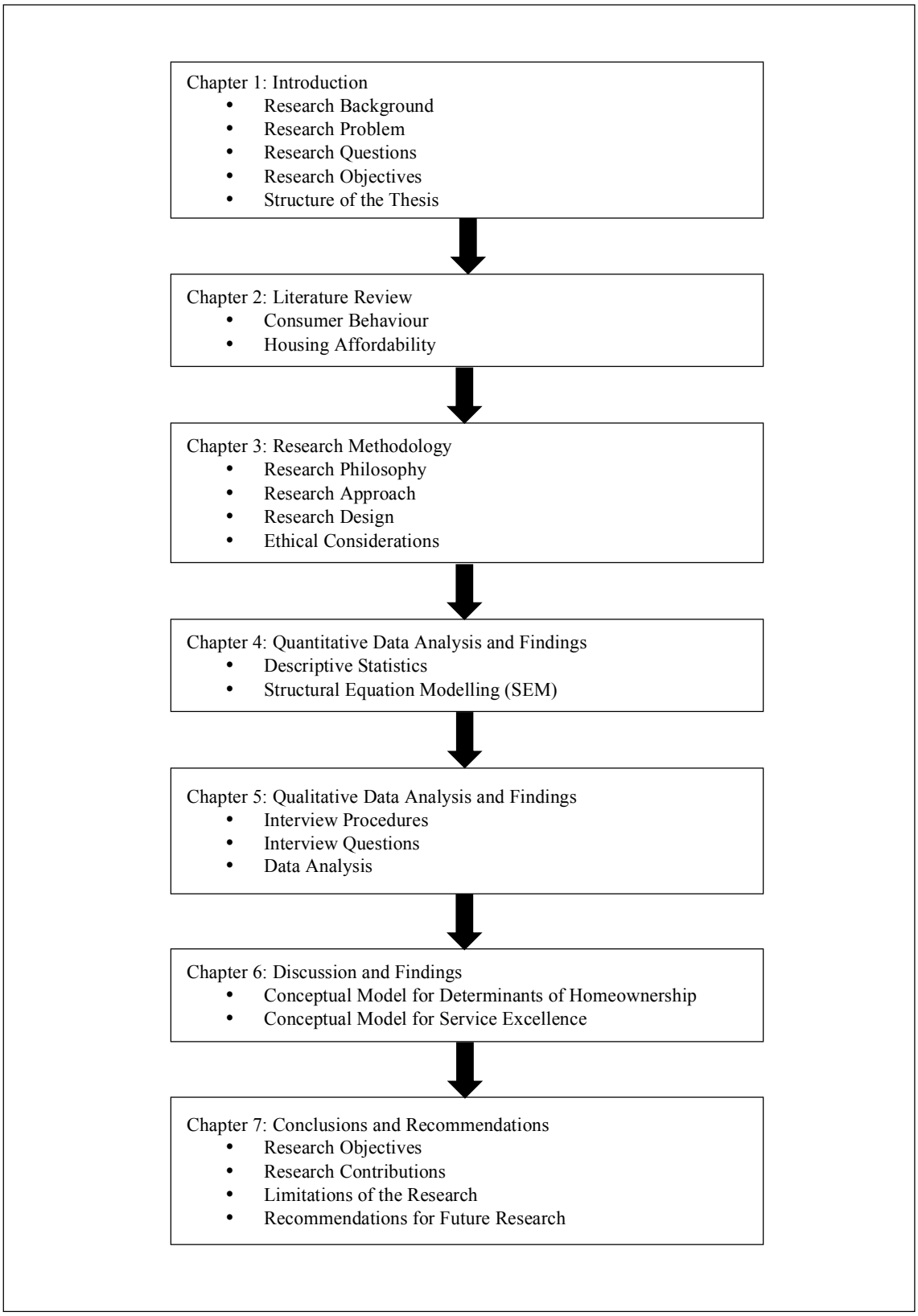

Figure 1.2 Research Outline
(Source: developed for this research, 2017)

Chapter 4 shows the results of quantitative analysis. This chapter shows the descriptive statistics for determinants of homeownership variables and service excellence variables, and the Structural Equation Model (SEM) and Structural Model for each research hypothesis.

Chapter 5 explains the results of the qualitative data analysis. This chapter describes interview procedures, interview questions, and data analysis for each research variable for this study.

Chapter 6 discusses the research findings. This chapter explains the conceptual model for each variable of the determinants of homeownership factors and service excellence factors.

Finally, Chapter 7 concludes each research objective for this study, explains research contributions made by the research, provides limitations of the research, and makes recommendations of future research.

1.8 Summary

This chapter explained the background of this study, overcome research problem of the study, discuss the research questions, expose the research objectives, describes the significance of the research, and also explain structure of the thesis. It also can be said that this chapter used as a foundations for this thesis.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to provide a comprehensive review of the research and to clarify the understanding of the research problem being studied. Discussion in this chapter start with the observation of consumer behaviour. Consumer behaviour is the fundamental foundation to understanding the preferences of the homeowner. Purchase decision process is the next discussion point in this chapter, then the concept of consumer satisfaction and service excellence is addressed. The exploration of determinants of homeownership is also discussed in this chapter. The other theory related to the research problem is also presented in this chapter. An overview of this chapter can be seen in the Figure 2.1.

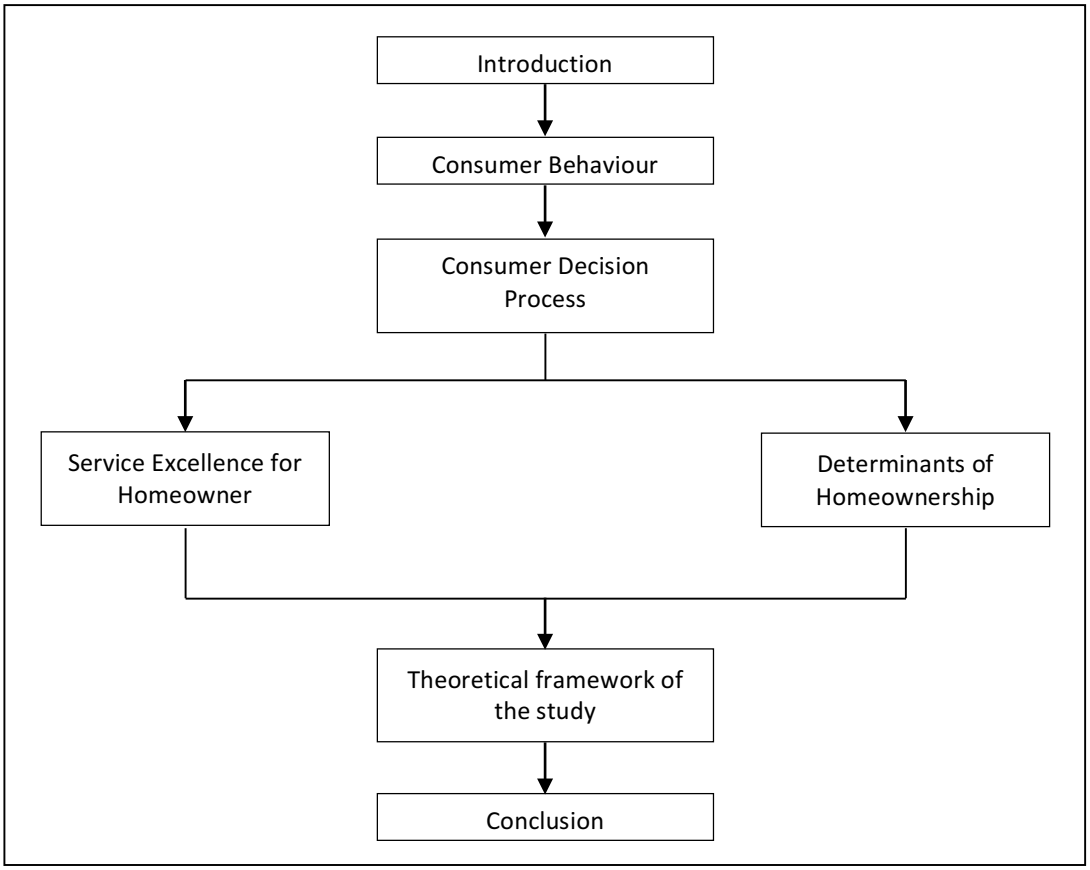

Figure 2.1 Overview of Chapter 2
(Source: developed for this research, 2017)

2.2 Consumer Behaviour

This section explains consumer behaviour concepts used in the study. Understanding consumer behaviour is a critical aspect to get to know customer preferences. The definition of consumer, type of consumer and housing consumer is the first part of this section, followed by a discussion of the consumer behaviour model. Then a discussion of the consumer decision-making process also presented. The final stage of this phase is the discussion of post-purchase evaluation that consists of consumer satisfaction, service quality and service excellence from the house builder.

2.2.1 Consumer Definition

According to Youssefian, et al. (2015), a consumer is an individual acting for purposes that are wholly or mainly outside that individual's trade business, craft or profession. A consumer can also be described as a person who obtains or attains any kind of goods or services, for personal, family or household purposes, including the credit transactions associated with such purchases or personal transactions (Donohue, 2016). Specifically, a consumer is anyone engaging in any of the activities like evaluating, acquiring, using or disposing of goods and services (Schiffman, 2013). Furthermore, consumers are people who consume goods and services obtained on the market and they are the objective of all economic processes and relations that are realized in society (Lehutová & Cisko, 2012).

In simple terms, a consumer is related to the person who obtains goods and services for their own satisfaction (Derakhshide & Emadzadeh, 2012). Anyone or institution who purchases goods or services, ideas or information for either personal or business use can be called a consumer (Uwadiegwu, 2014). Additionally, a consumer can be described as a person who buys or uses any goods or services or is adversely affected by a good or service (Monye, et al., 2014). It can also be said that consumers are people who purchase or use goods or services, while customers are buyers or users of products of an individual/organization (Schroten, 2011).

2.2.1.1 Housing Consumer

In terms of housing, a consumer can be defined as a person who is in the process of acquiring or has acquired a home and includes such person's successor in title (Housing Act, 2008). Basically, the housing consumer happens in the transition from custom homes built by speculative builders for anonymous potential buyers (Cook & Ryan, 2015). In other words, the housing consumer can be described as an entity (person/couple/syndicate) that spends their savings and available income on a physical asset that provides shelter, privacy and so forth (Harris, 2009). Furthermore, a housing consumer's social position has an impact on their capabilities to make better decisions on housing demand and the demand for a residential neighbourhood (Akinyode & Ahmad, 2015). The socio-economic status of a housing consumer or homeowner stimulates the choice of the housing demand and the type of houses (Akinyode, et al., 2015).

2.2.1.2 Type of Consumer

The consumers of goods or services can be grouped into several criteria. The classification of consumer is important for marketers to determine their position in the market and thus it messages that attract them to a product (Hill, 2016). The type of consumer can classified as follows:

1. Seasonal Consumers

   Some consumers purchase and obtain goods or services only at certain times. In other words, seasonal consumers are consumers who buy or consume goods or services on a seasonal time scale without question but only at the certain period they want it.

2. Personal Consumers

   These types of consumers are those individuals who buy the goods or services for their own consumption (Cudjoe, et al., 2015). Personal consumers also can be defined as those who buy and consume the goods or services for their personal need and they are also end-users (Tran, 2016).

Personal consumers are often propelled to obtain satisfaction from social affection, belonging and acceptance; and create interaction with family members, other consumers and salespeople (Seshana, 2015). According to Lehutová & Cisko (2012), the definition of a personal consumer is an individual who buys goods and services for their own consumption, their family member, or their family usage or as a present for another person.

3. Organizational Consumers

   Usually, organizational consumers purchase or obtain goods or services for resale, operational needs or for use in further production (Finch, et al., 2013). Specifically, the main goals of organizational consumers are to purchase goods and services to produce other goods or services, resell them to other organizations or individual consumers, and help manage and run their organization (Kardes, et al., 2011). Organizational consumers can be classified into three categories: government consumers (federal, state and local), commercial and manufacturing firms and non-profit organizations (Essien & Etuk, 2012).

4. Impulse Consumers

   An impulse consumer can be defined as the consumer who makes the unplanned decision to purchase suddenly (Britsman & Sjölander, 2011). Moreover, impulse consumers do not have any precise idea or plan for their buying decisions and they are only purchase what seems good (Noroozi, 2012). Since the impulse consumers do not have accurate plans to purchase anything, they are easily persuaded by the external environment (Wang, 2013).

5. Need-Based Consumers

   This type of consumer only purchases or obtains goods or services based on specific needs and only makes purchase decisions when they actually need something and not at any other time (Patidar, 2014). Usually need-based consumers have precise objectives and desires to satisfy and terminate or suspend the purchase if no potential items are found (Haddad, et al., 2012).

6. Discount Driven Consumers

   The purchase decision for discount driven consumers is mainly based on discounts available in the market (Patidar, 2014). The main objective from discount driven consumers is to find the cheapest price among several alternatives in the market (Ball, 2012). These types of consumers are price sensitive and prefer to purchase goods or services that come with discounts over goods or services sold for full price (Buidon, 2016).

7. Habitual Consumers

   In simple terms, a habitual consumer is less sensitive to price, distribution, advertising and promotion (MacInnis, 2014). Usually habitual consumers repeat their past behaviour with little concern to current goals and valued outcomes (Wood & Neal, 2009). Most strong habitual consumers are resistant to changing their routine. Promotion is ineffective for those with weak habits (Liu-Thompkins & Tam, 2013). Furthermore, the habitual consumer is reinforced by contexts and past performance (Neal, et al., 2012).

In the context of the homeowner, individual factors mostly influence their decisions as a personal consumer. Individual factors are the consumer's psychological developments that influence consumer behaviour in acquiring, obtaining, consuming and disposing of goods or services. They include a consumer's personality, demographics, motivation, attitudes, lifestyle, intentions, beliefs and feelings (Schiffman, et al., 2012).

All the individual factors were evaluated at the "evaluation of alternatives" stage of decision-making process. At this stage, an individual factor which providing the most perceived advantages has been chosen by the homeowner to make the house purchase decision. Homeowners also can be categorized as need-based consumers since they have specific needs of the house quality and house services at specific time. Most homeowners only purchase a house once and do not repeat every year.

2.2.2 Consumer Behaviour Definition

Consumer behaviour is the study of the process involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and desires (Solomon, et. al., 2012:7). In addition, the combination between marketing and other stimuli, consumer psychological processes and consumer characteristics generate decision-making processes and purchase decisions (Kotler & Armstrong, 2012). Consumer behaviour can also be defined as the study of individuals, groups or organizations and the processes they use to select, secure and dispose of products, services, experiences, or ideas to satisfy needs, and the impacts that these processes have on the consumer and society (Kuester, 2012).

Therefore, consumer behaviour is the measurement of the consumers' attitude towards brand performance, based on psychology, economics, sociology, anthropology and neuroscience factors (Blythe, 2013, 13). Then, consumer behaviour is the study of the processes involved when consumers acquire, consume and dispose of goods, services, activities and ideas to satisfy their needs and desires (Noel, 2009: 10). Consumers, as the pivotal point for all business activity (Kardes, et al., 2011:8) can be grouped into:

1. Individual consumers
   The main goal of the individual consumer is to purchase goods and services to satisfy their own personal needs and wants or to satisfy the needs and wants of others.

2. Organizational consumers
   The objectives of organizational consumers are to produce goods or services, resell goods or services to other organizations or to individual consumers, and help manage and run their organization.

2.2.3 Consumer Behaviour Model

Consumer behaviour varies enormously according to age, income, education level and taste which influences consumer's choices toward goods or services. There are several factors affecting consumer behaviour (Armstrong, et al., 2014) and they can be classified into four domains:

1. Cultural Factors

   The cultural factors affect what motivates consumers and influences consumers' processing information and decision making (Hoyer, et.al, 2013).

   Culture

   Culture is defined as the set of basic values, perceptions, wants and behaviours learned by a member of society from family and other important institutions (Hall, 2005: 188). Moreover, culture is described as the sum of learned beliefs, values and customs that serve to direct the consumer behaviour of members of a particular society (Hoyer, et. al., 2013: 342).

   Culture is growing up in a particular society. It was influence consumer behaviour based on basic values, perceptions, wants and responses from family, peers and other important institutions (Harris, 2011). Additionally, the process of learning from culture can be identified into three distinct forms: formal learning, in which adults and other siblings teach a young family member 'how to behave'; informal learning by imitating the behaviour of family, friends or others; and technical learning in which teachers instruct what should be done, how it should be done, and why it should be done (Schiffman, et.al., 2012).

   Subculture

   This can be described as a distinct cultural group that exists as an identifiable segment within a larger, more complex society. Moreover, it also can be a group of people with shared value systems based on common life experiences and situations (Blackman, 2014).

Social Class

Social Class can be classified as the division of members of a society into a hierarchy of distinct status classes, so that members of each class have relatively the same status and members of all other classes have either more or less status (Schiffman, et.al., 2012). Almost every society in the world has their own type of hierarchical class structure that defines consumer's access to goods and services (Solomon, 2012: 465).

2. Social Factors

   The elements of social factors like the consumer's reference group, family, social roles and statuses (Pandey & Dixit, 2011:24). They argue a consumer's reference group can be classified as a group that an individual belongs to and there are interactions among them. The member of consumer's reference group share information, affect choice goods and services, form of manner and shopping behaviours (Lanchance *et al.*, 2003. Moreover, family members such as a spouse, children, and parents also play an important roles influence on the consumer's purchase behaviour (Durmaz, Y., & Taşdemir, 2014).

3. Personal Factors

   Personal characteristics such as age and life cycle stage, occupation, economic situation, lifestyle, personality and self-concepts influence a consumer's opinion (Hall, 2005).

4. Psychological Factors

   Major psychological factors like motivation, perception, learning, and beliefs and attitudes influence a person's buying choices.

Most people make buying decisions every day, and even small ones are made very carefully. The process of consumer response for purchase of goods or services can be seen in the Figure 2.2.

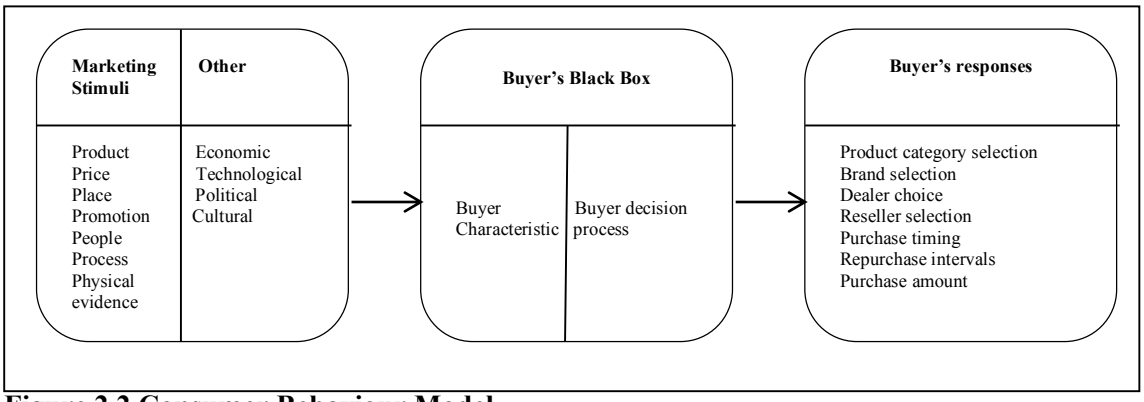

Figure 2.2 Consumer Behaviour Model
(Source: adapted from Kotler, et.al., 2010)

Cultural factors influencing all five stages of the purchase process involve problem recognition, information search, evaluation of alternatives, purchase decision and post-purchase behaviour. The impacts of social factors also play an important role in determining the housing purchase decision for the homeowner. The existence of social factors causes differences in terms of consumer behaviour and has a noticeable impact on the evaluation of alternatives.

Moreover, personal factors and psychological factors are also internal factors in the purchase decision. Most homeowners recognize internal factors such economic benefit, motivation and belief as their priority for the purchase decision making process. Each element of consumer behaviour that provides the biggest benefits beneficial for the homeowner in their consideration to making the housing purchase decision. The process of consumer decision making explained in the following section.

2.2.4 Consumer Decision-Making Process

To gain sufficient knowledge about the consumer, understanding the purchase decision-making process is a key point for the marketer. Obviously, the purchasing process starts long before the actual purchase and remains having impacts long after the purchase. A buyer passes through several stages to reach their buying decision.

There is a series of interrelated activities that lead a consumer to their choice. It is started by problem recognition, followed by information search, evaluation of alternatives, purchase decision and post-purchase behaviour as described in Figure 2.3.

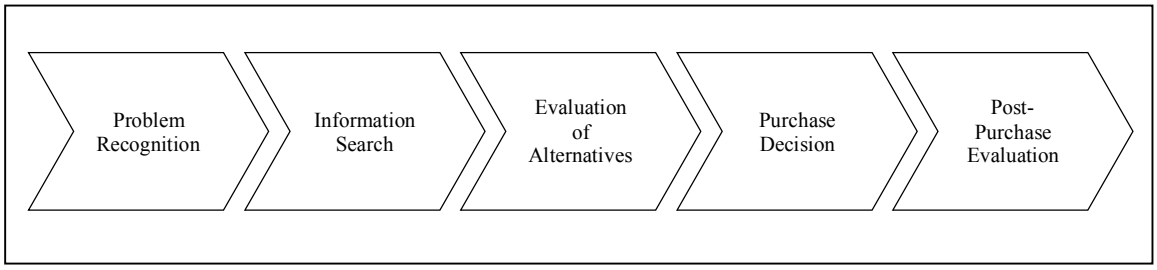

Figure 2.3 Purchase Decision-Making Process
(Source: adapted from Armstrong, et al., 2014)

2.2.4.1 Problem Recognition

Problem recognition occurs when the consumer experiences a significant difference between their current state of affairs and some state of the consumer's desire (Solomon *et al.*, 2012). Moreover, problem recognition can be described as the result of a discrepancy between a desired state and an actual state that is sufficient to arouse and activate the decision process (Hill, 2001). An actual state is the situation when the consumer perceives their feelings and situation to be at the present time. On the other hand, a desired state is the way the consumer wants to feel or be at the present time (Hawkins & Mothersbaugh, 2013). The nature of problem recognition can be seen in Figure 2.4.

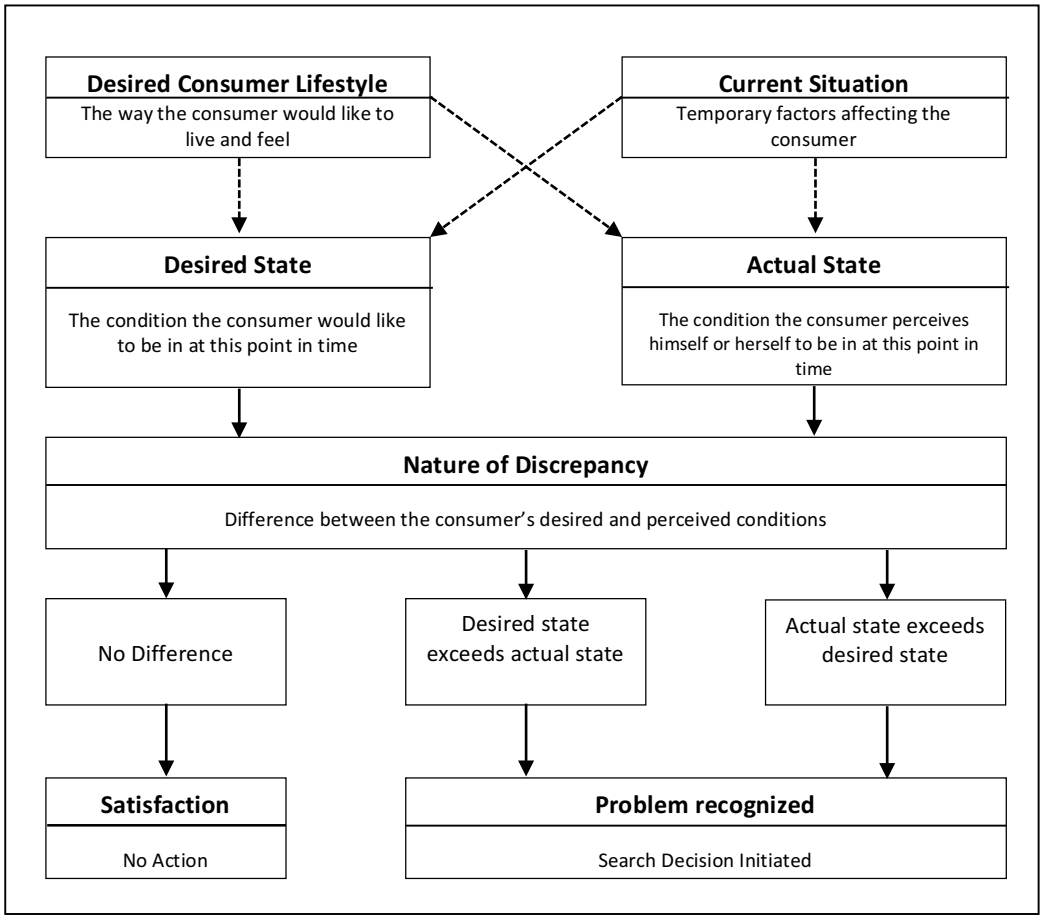

Figure 2.4 The Nature of Problem Recognition
(Source: adapted from Hawkins & Mothersbough, 2013)

If there is no discrepancy between the consumer's desired state (consumer's expectation) and the consumer's actual state (consumer's perception), it means there is no recognition of a problem and there is no need for a decision. On the contrary, recognition of a problem occurs when there is a discrepancy between the consumer's expectation and perception.

In addition, the discrepancy between a consumer's expectation and perception is called a *want-got gap* (Clawson & Yemen, 2008). Got can be described as the current situation, while *want* can be described as the desired situation. The problem recognition is triggered by the actual state changes, the desired state changes, or the actual and desired change simultaneously (Bruner & Pomazal, 2013).

A *need* occurs when the consumer's actual state is below the consumer's desired states. A *need* is a fundamental physical or psychological state of felt deprivation (Kardes, et. al., 2011). When there is a *need,* it means problem recognition occurs because there is a gap between the desired state (consumer's perception) and actual state (consumer's expectation). A *need* is also described as informational or negative-oriented motives because when a consumer's actual state drops below the ideal, it creates a negative condition and a desire for information (Percy & Donovan, 1991).

A motive means an internal drive that pushes people to resolve a problem or reduce a need (Kardes, et. al., 2011). The larger discrepancy between consumer's perceptions and consumer's expectations generates the stronger motives from the consumer to satisfy their needs.

Another situation related to problem recognition is called *wants.* Wants can be defined as the need satisfiers that are shaped by a consumer's personality, experiences and culture (Kardes, et. al., 2011). Wants occur when consumers identify an improvement in their expectations while the consumer's perceptions remain constant. There is a transformational motive or positive reinforcement from the consumer to purchase goods and services that generate benefits beyond the consumer's normal state (Rossiter & Percy, 1997).

Lastly, the consumer modifies their actual state into an ideal state called an *opportunity* (Kardes, et. al., 2011:192). The relationship between needs, wants and opportunities is depicted in the Figure 2.5.

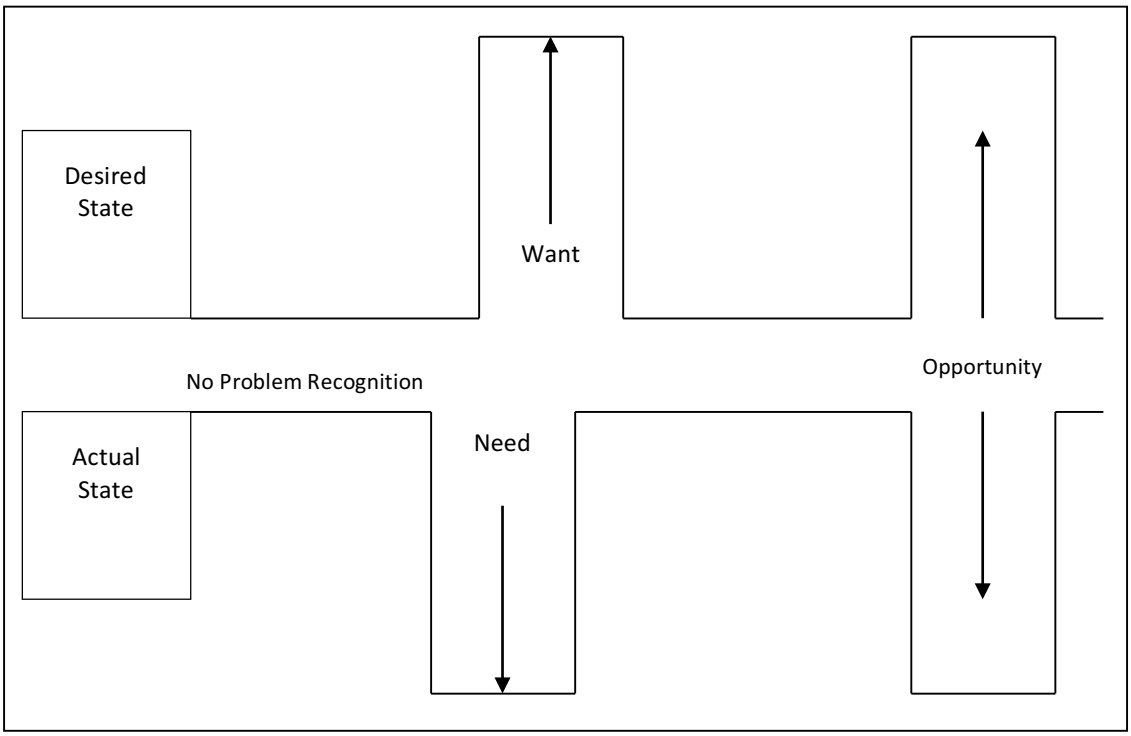

Figure 2.5 Problem Recognition Stages
(Source: adapted from Bruner & Pomazal, 2013)

Furthermore, the desired state is influenced by culture, social status, reference group, household characteristics, financial status/expectations, previous decisions, individual development, emotions, motives and situation. On the other hand, the actual state is influenced by past decisions, normal depletion, product/brand performance, individual development, emotions, government/consumer groups, availability of products and situation (Hawkins & Mothersbough, 2013).

Housing consumers recognize their housing needs when they realize the difference between their expectation and their perception of the present housing situation. The advantage of understanding problem recognition of housing consumers is being able to identify the relationship between a housing market with unsatisfied housing consumers and also provide new ideal criteria to meet the housing needs of different consumers (Akinyode *et al.*, 2015).

Each homeowner has different perspectives towards their needs, wants and opportunities to purchase a house and make a careful analysis of their desire to purchase a house and then make a comparison with the actual situation. The advantages and disadvantages of the homeowner's needs and wants have been considered as their purchase decision's critical factor. The result of the analysis of need recognition is used by the homeowner to find out information related to their needs and wants. Then the information search about house quality and builder's services is mainly based on the result of needs recognition analysis.

2.2.4.2 Information Search

The next stage, when a problem is recognized, the consumer starts to explore the information related to their needs and wants. Information search is one of the critical element of the purchase decision process for most consumer. In this stage, the consumer decision requires some information (Smith & Deppa, 2009), such as:

- The appropriate evaluative criteria for the solution of a problem
- The existence of various alternative solutions
- The performance level or characteristic of each alternative solution on each evaluative criterion

The information for the consumer decision process can be gathered through the following resources (Hawkins & Mothersbough, 2013):

- Memory of past searches, personal experiences and low-involvement learning
- Personal sources like friends, family and others
- Independent sources like magazines, consumer groups and government agencies
- Marketing sources like sales personnel, websites and advertising
- Experiential sources like inspections or product trials

The whole process of the information search for the consumer decision process can be seen in Figure 2.6.

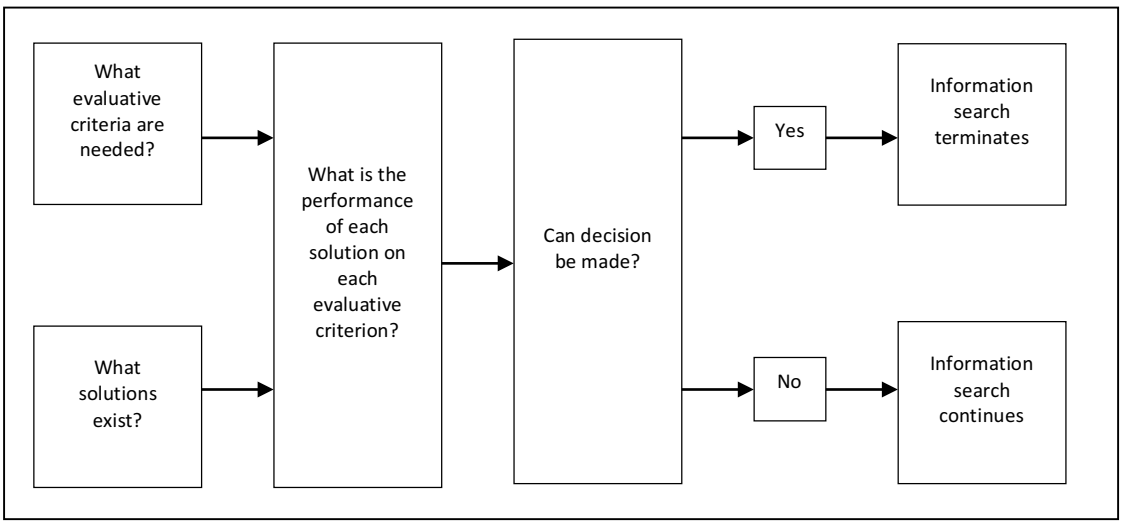

Figure 2.6 Information Search in Consumer Decisions
(Source: adapted from Hawkins & Mothersbough, 2013)

In addition, a consumer's information search is influenced by consumer involvement, the marketing environment, situational influences and individual differences (Kardes, et.al., 2011). Consumer involvement can be classified into two distinct types: 1) Enduring involvement – consumer's long-standing and continuous curiosity in a brand or product category; 2) Situational involvement – consumer's relatively impermanent and context-dependent curiosity in a product or category (Houston & Rothschild, 1978).

The marketing environment is the actors and forces outside marketing that affect marketing management's ability to develop and maintain successful transactions with its target customers (Anderson, 2012). Situational influences are the other aspect influencing a consumer's information search and it can be described as all those factors particular to a time and place that do not follow from a knowledge of the stable attributes of the consumer and the stimulus that has an effect on current behaviour (Hawkins & Mothersbough, 2013). Gathering information about goods and services for a consumer also depends on their age, education and income level (Kardes, et.al., 2011).

Housing consumers may conduct an information search by communicating with market intermediaries or reading newspaper advertisements. They can also use informal sources of search like asking friends, reading house vacancy signs and contacting family (Kleit & Galvez, 2011). In particular, potential homeowners would generally search for information on housing legislation, infrastructure, security of the area, social and public utilities, sewerage system, transport network, among others (Oundo, 2011).

The information search process by housing consumers may also include physically visiting property sites, reading property magazines, journals and billboards and calling property agents (Omagwa & Aduda, 2015). Furthermore, the homeowner may make their housing decisions based on information related to their lifestyles, preferences, utility, distance to work and commuting distance (Rashidi *et al.,* 2012). Additionally, personal attributes of a homeowner influence the choice process when purchasing a house (Koklic & Vida, 2011).

2.2.4.3 Evaluation of Alternatives

Evaluation of alternatives is the stage of the consumer decision process in which the consumer uses information to evaluate alternative options (Roozmand, et. al., 2008). On one occasion the consumer gathers and evaluates the relevant options into categories, but eventually the consumer has to choose one (Sujan & Bettman, 1989). Consumers tend to use two types of information when evaluating alternative choices (Schiffman, 2012):

1. A list of brands or models from which they plan to make their selection
2. The criteria they use to evaluate each brand or model.

Moreover, evaluative criteria can be described as the various dimensions, features or benefits a consumer looks for in response to a specific problem (Hawkins & Mothersbough, 2013). The type of evaluative criteria used by the consumer to make a purchase decision varies from tangible cost and performance features to intangible factors like style, taste, prestige, feelings generated and brand image (Horsky, et.al., 2004). In addition, the individual characteristics like product familiarity and age, and the situational characteristic like time pressure also influence the number of evaluative criteria considered (Ramaswamy & Srinivasan, 1998).

According to Schiffman, et al. (2012), brand credibility, which consists of trustworthiness and expertise on brand choice, is able to improve evaluation of alternatives for consumers. There are three factors that influence a brand's credibility: the perceived quality of the brand, the perceived risk associated with the brand and the information costs saved with that brand (Erdem & Swait, 2004). The other factors impacting on the evaluation of alternatives are usage situation, competitive context, and advertising effects (Hawkins & Mothersbaugh, 2013). The evaluation of alternatives procedures can be seen in Figure 2.7.

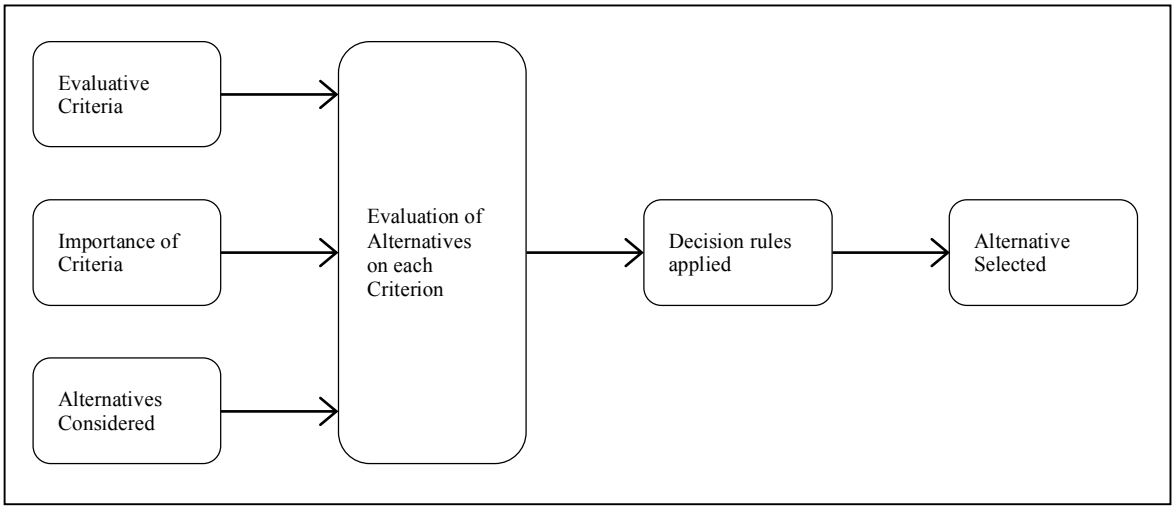

Figure 2.7 Evaluation of Alternative Procedures
(Source: adapted from Hawkins & Mothersbough, 2013)

Furthermore, the complexity to find information about goods and services as well as the fact that some aspects of performance can be evaluated only after extensive use and make accurate comparisons more difficult (Ang, et al., 1996). Most consumers normally use an observable attribute of a good or service to indicate the performance of the good or service on a less observable attribute (Kirmani & Rao, 2000). The incapability of consumers to precisely evaluate goods or services can result in incorrect purchase decisions (Lee & Lee, 2004).

A significant factor leading to the lack of consumer's capability to evaluate goods or services is missing information from advertisements or the consumer's own imperfect memory of attributes for alternatives (Burke, 1990). To anticipate missing information, there are several activities taken by the consumer (Schiffman, et.al., 2012):

- The consumer may suspend their decision until missing information is gained. This would be suitable for high-risk decisions.
- The consumer may ignore missing information and decide to continue by using the available information.
- The consumer may change their purchasing strategy to accommodate missing information.
- The consumer may infer the missing information.

The evaluation of alternatives is an important stage for the housing consumer to assess various alternatives such as size, quality and house price. During this stage, housing consumers are attempting to obtain answers to some questions that might come to their mind: which out of these alternative housing units is best to be selected, which can be acceptable in terms of housing type preference and choice of environment as it relates to the housing consumer's taste and social class or that are affordable in terms of cost as it relates to the housing consumer's financial capability (Akinyode, et al., 2015). The other alternatives considered by the housing consumer are dwelling size and cost, and distance to work (Lawton *et al.*, 2013).

Housing accessibility (Liao *et al.*, 2014) and the environmental quality of the neighbourhood (Phaneuf *et al.*, 2013) are important factors evaluated by homeowners when purchasing a house. Therefore, information about the role of urban green spaces is another important alternative used by housing consumers to choose their house (Tu *et al.*, 2016). Lastly, housing consumers use evaluation alternatives already stored in memory to select a house that would satisfy their housing preference in terms of its acceptability and affordability. It can also be said that a housing consumer's housing decision-making process is extremely complicated and depends on individual circumstances (Shekarian, 2015).

2.2.4.4 Purchase Decision

Purchase decision can be defined as a continuous process, which refers to thoughtful, consistent action undertaken to bring about need satisfaction (Shareef, et.al., 2008). The consumer's purchase decision can be adjusted with the circumstances of the consumer's consumption situation derived from the quality characteristics of vendors. Moreover, purchase decision also can be described as a personal phenomenon, a situational phenomenon, a social phenomenon and a perceived contextual phenomenon (Blackwell *et. al.*, 2005).

In addition, two factors appear between the purchase intention and the purchase decision, consisting of the attitudes of others and unexpected situational factors (Mei *et al.*, 2012). Basically, there are three types of purchase: trial purchases, repeat purchases and long-term commitment purchases (Schiffman, et.al., 2012). Most decisions made by consumers can be grouped into (Hagshenas, et al., 2013):

a) Complicated decision
   The decision-making process to solve the complicated problems was started by collecting all available information. The housing purchase decision can be categorized into these decisions because there are many considerations to be made.

b) Limited decision making
   This decision is easier for the consumer and they do not need make a complicated evaluation for this purpose.

c) Regular decision making
   The process of regular decision-making only requires minimum effort and no prior experience.

During this stage, housing consumers decide whether to buy/rent, when to buy/rent, what to buy/rent (the type and quality of the house), where to get the house (the location of the house to buy/rent) and decide on how to pay (Akinyode, 2015). At the point of purchase, there are several factors that influences house purchase decision such as house price; income level; housing price and payment methods; income level, house price, and responsiveness to fixed costs; accessibility; location; environment; infrastructure facilities; housing features. Several factors which influence the house purchase decision can be seen in the following table.

Table 2.1 Factors Influences House Purchase Decision

No	Factors	Author
1	House price	Mills & Reed (2003) Kippes & Eves (2010) Si (2012) Al-Nahdi, et al. (2015) Anastasia & Suwitro (2015)
2	Income level	Haddad (2011) Attanasio, et al. (2012) Zeng (2013)
3	Access to finance	Paco & Raposo (2009) Opoku & Abdul-Muhmin (2010) Wang *et al.* (2011) Lonappan (2013) Bajpai & Bhalchandra (2015)
4	Accessibility to public facilities	Mills & Reed (2003) Kippes & Eves (2010) Si (2012)
5	Location of the house	Otegbulu & Johnson (2011)
6	Environment	Ratchatakulpat, et al. (2009) Cellmer, et al. (2012) Si (2012)
7	Infrastructure facilities	Ratchatakulpat, et al. (2009) Si (2012) Anis, et al. (2014)

8	Housing features	Mills & Reed (2003) Ratchatakulpat, et al. (2009) Si (2012)

Source: Author (developed for this research, 2017)

2.2.4.5 Post-Purchase Evaluation

Post-purchase evaluation is the stage of the buyer decision process in which consumers take further action after purchasing, based on their satisfaction or dissatisfaction with a purchase (Park & Cho, 2012). They argue most consumers evaluate their purchase decision and there are some possible aftereffects of these evaluations:

- Actual performance matches expectations, leading to a neutral feeling
- Actual performance exceeds expectations, known as positive disconfirmation of expectations. The consumer probably make a repeat order when they are satisfied with the goods or services.
- Actual performance is under expectations, called negative disconfirmation of expectations, and it lead to consumer dissatisfaction. Most consumers were search for more suitable alternatives when facing this situation.

At the same time as the goods or services are purchased, the consumer assess the performance in the process of consumption (Assael, 2008). In post-purchase evaluation, there are two situations: (1) satisfaction or a situation when consumer's expectations are matched by actual performance and (2) dissatisfaction or a condition when actual performance falls short of consumer's expectations (Mahapatra, et. al., 2010). The result of post-purchase evaluations is important to consumers because they keep the outcome in their mind and refer to their memory for the forthcoming purchase decision.

This stage is the expression of the housing consumer's response related to their experience of either satisfaction or dissatisfaction toward their decision. The manifestation of their feedback could be beneficial, neutral or undesirable feelings (Akinyode, 2015). If the housing consumer's expectations are matched by the housing standard, they feel satisfied, but they would be dissatisfied if the housing standard fell short of their expectations (Aribigbola, 2011).

Furthermore, the post-purchase evaluation stage is the condition where the consumer enjoys the deal and evaluates the general effectiveness of their collaboration with the house builder (Udalova, 2016). It can be concluded that most housing consumers specify their feedback about the results of comparison between their expectations and perceptions.

2.2.4.5.1 Consumer Satisfaction

Satisfaction is called a response to a perceived discrepancy between prior expectations and perceived performance after consumption (Eid, 2011). Additionally, satisfaction is an emotional state resulting from a continuous consumer's communication with a service provider (Jani & Heesup, 2011).

Consumer satisfaction is described as a person's feeling of pleasure or disappointment resulting from comparing a product or service's perceived performance in relation to his or her expectation (Nam, et al., 2011). Therefore, consumer satisfaction can be viewed as a result of assessment between the consumption expectation and experience; and consumer satisfaction is attained when the final deliverable (i.e., experience) meets or exceeds a consumer's expectation (Khristianto & Sutyadi, 2012).

In other words, consumer satisfaction is defined as a consumer's perspective based on expectation and then subsequent post purchase experience (Tahir, et al., 2013). According to Biamukda & Tan (2016), consumer satisfaction can be explained as an outcome of positive disconfirmation reflected by product performance perceived to be better than the initial expectation. It also can be said that consumer satisfaction is key for a company to build a profitable relationship with a consumer (Sukati, et al., 2015).
Moreover, consumer satisfaction represents the difference between consumer's expectation and experience with the goods and services (Johan et al., 2014). Constructing a perfect consumer experience has been a method to improve consumer relationship and consumer loyalty (Meyer & Schwager, 2007). Additionally, consumer experience and consumer behaviour plays a significant role in consumer loyalty (Mantymaa, 2013).

The other studies specify that the quality of service and consumer satisfaction may actually be declining as consumers often experience service that falls well below their expectations (Frow & Payne 2007). Mascarenhas, et al. (2006) also points out that an organization should deliver actual emotional experiences to their consumers by providing entertainment, friendly and caring service, belongingness and memorable experience.

Most consumers are always in search of better alternatives to satisfy their needs (Munir Hossain, et al., 2012). A consumer was choose goods or services based on their perception of consumer value and which can be satisfying their needs (Kotler & Armstrong, 2012). A consumer satisfies if the goods or services outcome is over their expectations and they are not satisfied if the goods or services outcome is below their expectations (Ariffin & Maghzi, 2012).

There is a consumer tendency to repurchase if they feel satisfied and if the service provider can reach or exceed their expectation (Alam & Yasin, 2010). In addition, a satisfied consumer has a positive purchase intention towards repurchase, positive word of mouth and loyalty in the long-term (Byambaa & Chang, 2014).

Consumer satisfaction is the fundamental element to get consumer loyalty and the higher the consumer satisfaction, the higher the goods or services usage consumption (Suwono & Sihombing, 2016). Repeatedly, it has been noted that consumer satisfaction has a positive effect on customer loyalty in various goods or services (Auka, 2012). A consumer's willingness to remain loyal and purchase or use the goods or services of an organization in the future depends on consumer satisfaction (Shanka, 2012). This means that consumer satisfaction is the foundation leading to repeat purchases, brand loyalty and positive word of mouth (Angelova & Zekiri, 2011).

In terms of residential housing; customer needs, service level, marketing stimuli, consumer satisfaction and word of mouth have an impact to the consumer's purchase decision (Anis, et al., 2014). The key factor of housing satisfaction is the experience that the consumers have, attached to the sum amount of money paid on the housing in relation to the standard of the housing unit (Akinyode, et al., 2015). Experience or perception is the observing, encountering or undergoing of things generally as they arise in the course of time (Anis, et al. 2014). Based on consumer's experience about previous goods or services consumption, usually consumers are able to make quick decisions (Haghshenas, et al., 2013).

Consumer satisfaction in the housing product is measured based on the specific trade of the house at a specified time (Yang & Zhu, 2006). This means that the housing companies or builder should be concerned with the consumer's satisfaction and confidence level in order to generate a higher intention from the consumer to purchase a house (Luo & James, 2013). The overall satisfaction of the homeowner is driven by dimensions of product quality, service quality and project facilities (Zadkarim & Emari, 2011).

The biggest factor influencing homeowner's satisfaction is service quality (Kaiman & Zani, 2013). These findings were in line with a study conducted by Nahmens & Ikuma (2009) which indicated that improving the service quality improves better consumer satisfaction. Furthermore, homeowner's satisfaction, in common with service quality, is the outcome of the house builder's providing services that are perceived as meeting or exceeding the homeowner's satisfaction (Kaiman & Zani, 2013).

2.2.4.5.2 Service Quality

Service is an interactive process of doing something to deliver a significant advantage for someone else which forms the basis for all exchange (Vargo & Lusch, 2008). Moreover, service can be described as an act or performance offered by one party to another (Lovelock, 2011). Additionally, the service can be described as an activity or advantage provided by one party to another, basically intangible or not, entailing of any ownership and its production might be associated or not with a material commodity (Clark *et al.*, 2000).

The service can also be defined as a process that consists of a series of more or less intangible activities that occur in collaboration between the consumer and service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to consumer problems (Grönroos, 2007).

According to Yap, et al. (2012), almost half of the satisfaction experienced by the consumer is derived from service quality. Superior service leads to satisfied and loyal consumers; and on the contrary, poor service quality creates consumer dissatisfaction (Qin & Prybutok, 2009). Previous studies indicate that service quality is a key contributor to consumer satisfaction and an important strategy for success and survival in today's competition (Wirtz, et al., 2008). Likewise, the key characteristics of service can be summarized as follows (Lovelock, 2011):

1. Intangibility

   This means service cannot be measured, touched, looked at, handled, smelled or tasted (Zeithaml, 1981). The performance and specifications of services cannot easily be set or determined (Tuan, 2012). Most services are not quantifiable and cannot be measured or even tested, let alone verified, prior to any sale to assure quality. Regarding this intangibility, it is difficult to conclude how consumers perceive and evaluate their services (Kayabasi, et al., 2013)

2. Inseparability

   Basically, the implementation of services, both to provide and to receive services cannot be separated from each other (Parasuraman, et al., 1985). The process of creating a service is not developed or constructed at the factory and then delivered to the consumer (Kayabasi, et al., 2013).

3. Heterogeneity

   A service is unique because it is only generated one time and cannot be repeated in the original set (Parasuraman, et al., 1985). Most consumers are unable to obtain an identical service package from a similar service provider (Rodrigues, et al., 2011). The performance of the service provider is highly fluctuating and depends on the skills of each person who delivers it (Mosahab, et al., 2010).

4. Perishability

   Service cannot be replaced and cannot be stored for future use. Service is only produced and consumed during the same period of time (Zeithaml, et al., 1990). This means that the qualities of the service attributes can be discerned only after the service has been consumed or delivered (Hansen, 2005). On the other hand, the qualities of the physical goods can be easily evaluated before and after the consumer makes any purchase decision (Mattila & Wirtz, 2002).

Therefore, quality can be described as the whole of descriptions and characteristics of goods or services that allows on its ability to satisfy or imply consumer's needs (Madill, et al., 2002). Goetsch & Davis (2014) point out that quality is a dynamic state connected with product, services, people, processes and environments that meet consumer needs and expectations and help generate superior value. Moreover, Sahney, *et al.* (2004) clarifies that the word quality was invented from the Latin word "qualis", which means "what kind of", and the definition of quality is not conclusive but indicates different points to different individuals.

Perceived quality is explained as consumer perception about an individual's overall experience or knowledge (Zeithaml, 1988). The consumer's perceived quality is the result of a comparison between the consumer's expectation and experience (Caruana, 2002). Nowadays quality has been known to be one of the fundamental drivers of business efficiency and business excellence (Fararah & Al-Swidi, 2013). If an institution or organization is able to deliver high quality service, they are not only able to retain existing consumers and to attract new ones but also to ensure the success of their business (Angelova & Zekiri, 2011).

Then, service quality can be defined as the representation of the outcome from consumer comparisons between their expectations about the service they use and their perceptions about the service provider (Hellen, 2014). As interpreted by Mukhtar *et al.* (2014), service quality is the understanding the power of the organization's performance.

According to Park *et al.* (2004), service quality can be described as a consumer's overall impression of the relative efficiency of the organization and its services. Moreover, service quality is a chain of services in which the whole service delivery is divided into a series of activities (Chen & Chang, 2005). The measurement of how well delivered service meets the consumer's expectations (Hien, 2014) and the assessment of the overall consumer's impression of the relative efficiency of the organization and its service (Archana & Subha, 2012) can be categorized as service quality.

In simple terms, service quality can be identified as a level of service delivery based on the consumer's perception (Wisniewski, 2001; Chakrabarty *et al.*, 2008; Wilson *et al.*, 2012; Lovelock & Wright, 2014). It can also be said that service quality exerts influence on the differences between consumer's expectations and perceptions of the service experience (Parasuraman & Zeithaml, 2002; Ojo, 2010; Ghouri, et al., 2012). This means that achieving the consumer's expectation is important in order to obtain good service quality (Hasbullah *et al.*, 2014).

Service quality can be improved by focusing on consumer's problems and understanding consumer's problems is the most important factor influencing the consumer purchase decision (Njama, 2012). Johnston (2004) points out that fifty percent of the consumers who express what make service excellence, mention problem handling. This means that if the consumer's perceptions are higher than the consumer's expectations the service is categorized as service excellence. If the consumer's expectations are equal to the consumer's perceptions the service is classified as good service and if the consumer's perceptions are not met, the service is called bad service (Manani, et al., 2013; Luxman & Dissanyake, 2014).

The importance of service quality has attracted attention from academicians and professionals to generate the measurement of service quality (Tuan, 2012). Tuan (2012) states that the measurement of service quality is more difficult compared to the measurement of goods quality because the quality of goods is assessed by using certain technical specifications, while service quality depends on various factors. During the last three decades, there have been many service quality models proposed by many scholars but only some of them can be applied in many industries (Tu, 2013).

Table 2.2 Service Quality Conceptual Model

No	Year	Author(s)	Service Quality Conceptual Model	Dimensions/Attributes
1	1984	Grönroos	Technical and Functional Quality Model	• Technical quality • Functional quality • Image
2	1985	Parasuraman, Ziethaml, & Berry	Gap Model/SERVQUAL	• Tangible • Reliability • Responsiveness • Assurance • Empathy
3	1988	Haywood-Farmer	Attribute Service Quality Model	• Physical facilities and processes • People's behaviour • Professional judgment
4	1990	Brogowicz, Delene, & Lyth	Synthesized Model of Service Quality	• Company image • External influences • Traditional marketing activities
5	1992	Cronin & Taylor	Performance only Model	Similar attributes with SERVQUAL but only measure performance
6	1992	Mattson	Ideal Value Model of Service Quality	Comparison between perceived ideal standard and experienced outcome
7	1993	Teas	Evaluated performance and normed quality model	Limited subset of SERVQUAL item.
8	1993	Rust & Oliver	The Three Component Model	• Service product perception • Service environment perception • Service delivery perception
9	1994	Berkley & Gupta	IT Alignment Model	• Reliability • Responsiveness • Competence • Access • Communication • Security • Understanding the customer

10	1995	Dabholkar, Thorpe, & Rentz	Retail Service Quality Scale (RSQS)	• Physical aspects • Reliability • Personal interaction • Problem solving • Policy
11	1996	Spreng & Mackoy	Perceived Service Quality and Satisfaction Model	• Convenience in making appointment • Friendliness of the staff • The advisor listened to my questions • The advisor provided accurate information • The knowledge of the advisor • The advice was consistent • Advisor helped in long-range planning • The advisor helped in choosing the right courses for career • Advisor was interested in personal life The offices were professional
12	1996	Dabholkar	Attribute Based Model	• Expected speed of delivery • Expected ease of use • Expected reliability • Expected enjoyment • Expected control
13	1996	Dabholkar	Overall Affect Model	• Attitude toward using technological product • Need for interaction with service employee
14	1997	Philip & Hazlett	PCP Attribute Model	• Pivotal • Core • Peripheral
15	1997	Sweeney, Soutar, & Johnson	Retail Service Quality Scale and Perceived Value Model	• Functional Service Quality • Technical Service Quality • Product Quality • Relative price

16	1999	Oh	Service Quality, Customer Value, and Customer Satisfaction Model	• Perceptions • Service quality • Consumer satisfaction • Customer value • Intentions to repurchase
17	2000	Dabholkar, Shepherd, & Thorpe	Antecedents and Mediator Model	• Reliability • Personal attention • Comfort • Feature
18	2000	Frost & Kumar	Internal Service Quality (INTERSERVQUAL)	• Internal customer • Internal supplier
19	2000	Soteriou & Stavrinides	Data Envelopment Analysis (DEA) Model	• Consumable resources • Account structure
20	2001	Brady & Cronin	Multidimensional and Hierarchical Model	• Interaction quality • Physical environment quality • Outcome quality
21	2002	Broderick & Vachirapornpuk	Internet Banking Model	• Customer expectation of the service • The image and reputation of the service organization • Aspects of the service setting • The actual service encounter • Customer participation
22	2002	Zhu, Whymer, & Chen	IT Based Model	• Needs of personal attention • Age • Self-control in using IT • Comfort in using IT • Personal interaction • Institutional encouragement to use IT • IT service fee

23	2003	Santos	Model of e-Service Quality	• Incubative dimension (ease of use, appearance, linkage, structure and layout, content. • Active dimension (reliability, efficiency, support, communication, security, incentive.
24	2005	Parasuraman, Zeithaml, & Malhotra	E-S-QUAL Model	• Efficiency • Fulfillment • System availability • Privacy
25	2005	Parasuraman, Zeithaml, & Malhotra	E-RecS-QUAL Model	• Responsiveness • Compensation • Contact
26	2007	Forsythe	Service Quality of Housing Construction	• Reliability • Responsiveness • Empathy • Assurance • Tangible • Aesthetic (construction) workmanship • Technical (construction) workmanship Design detailing by workers onsite
27	2009	Baharum, Nawawi, & Saat	Property Management Service Quality (PROPERTYQUAL) Model	• Reliability • Assurance • Tangibles • Empathy • Responsiveness • Cleanliness • Building services • Signage • Security • Parking
28	1995	Nelson & Nelson	Real Estate Service Quality (RESERV)	• Agent characteristics • Tangibles

29	2011	Abdullah, Suhaimi, Saban, & Hamali	Bank Service Quality (BSQ) Model	• Systemization • Reliable Communication • Responsiveness
30	2013	Miller, Hardgrave, & Jones	ISS-Qual Model	• Service delivery • Service product • Service environment

Source: Author (developed for this research, 2017)

Among the previous service quality models, the SERVQUAL model is the most predominant method used to measure consumer's perceptions of service quality (Adefisan, 2016). As mentioned by Parasuraman, et al. (2002), the SERVQUAL model focuses on the five gaps affecting the delivery of excellent service quality:

- Gap 1: Difference between consumers' expectations and management's perceptions of those expectations.
- Gap 2: Difference between management's perceptions of consumer's expectations and service quality specifications.
- Gap 3: Difference between service quality specifications and the service actually delivered.
- Gap 4: Difference between service delivery and what is communicated about the service to consumers.
- Gap 5: Difference between consumer's expectation and perceived service. This gap depends on size and direction of the four gaps associated with the delivery of service on the marketer's side.

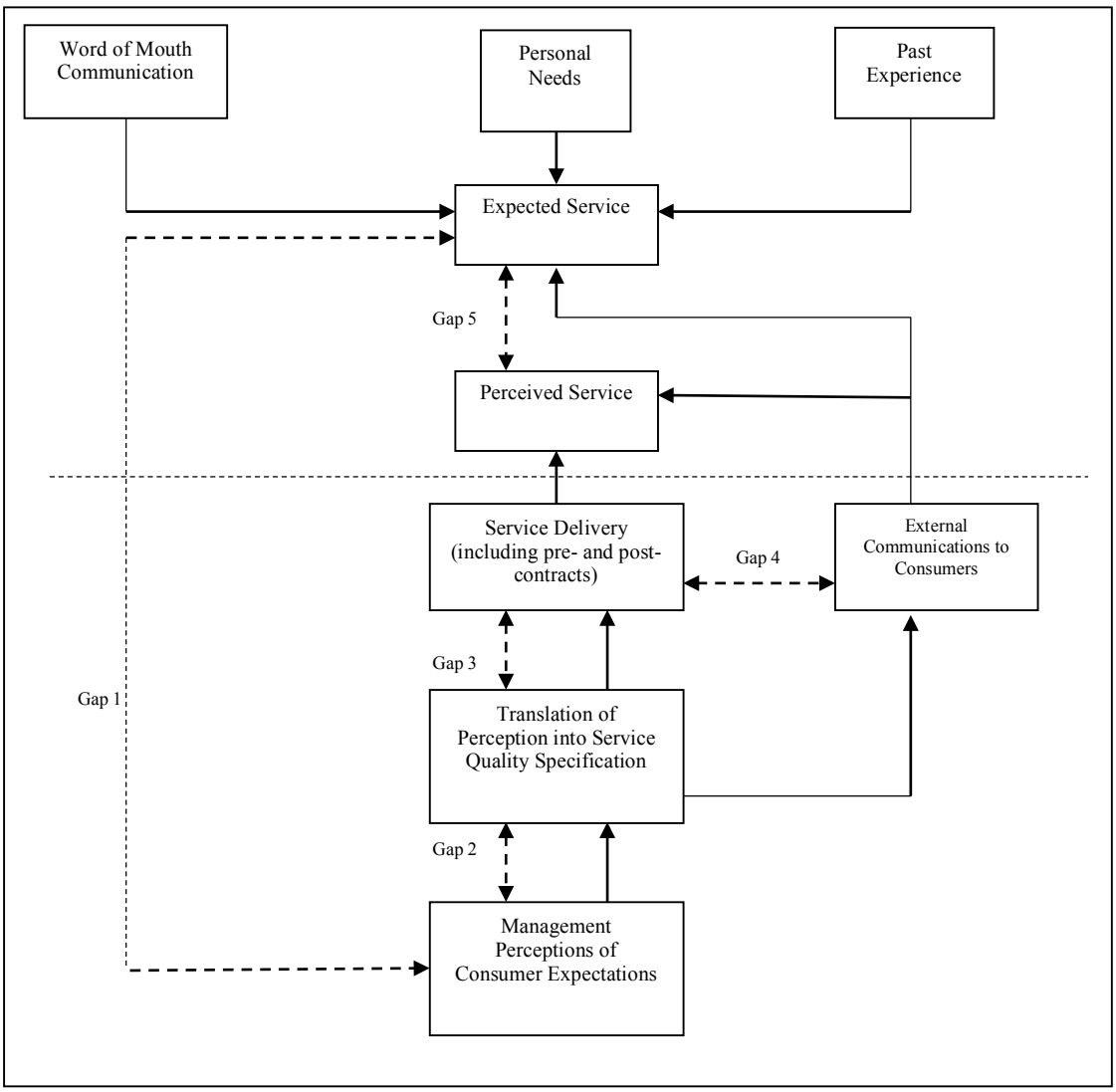

Figure 2.8 Gap Analysis Model
(Source: adapted from Parasuraman et al., 2002)

Firstly, the SERVQUAL dimensions were classified into ten dimensions comprising tangible, reliability, responsiveness, competence, courtesy, credibility, security, access, communication and understanding the customer (Parasuraman, et al., 1985). Later, those dimensions of SERVQUAL were simplified into five dimensions also identified as RATER including (Wilson, et al., 2012):

1. Reliability: ability to perform the promised service dependably and accurately
2. Assurance: employee's knowledge and their ability to inspire trust and confidence
3. Tangible: appearance of physical facilities, equipment, personnel, and communication materials
4. Empathy: caring, individualized attention given to consumers
5. Responsiveness: willingness to help consumers and provide prompt service

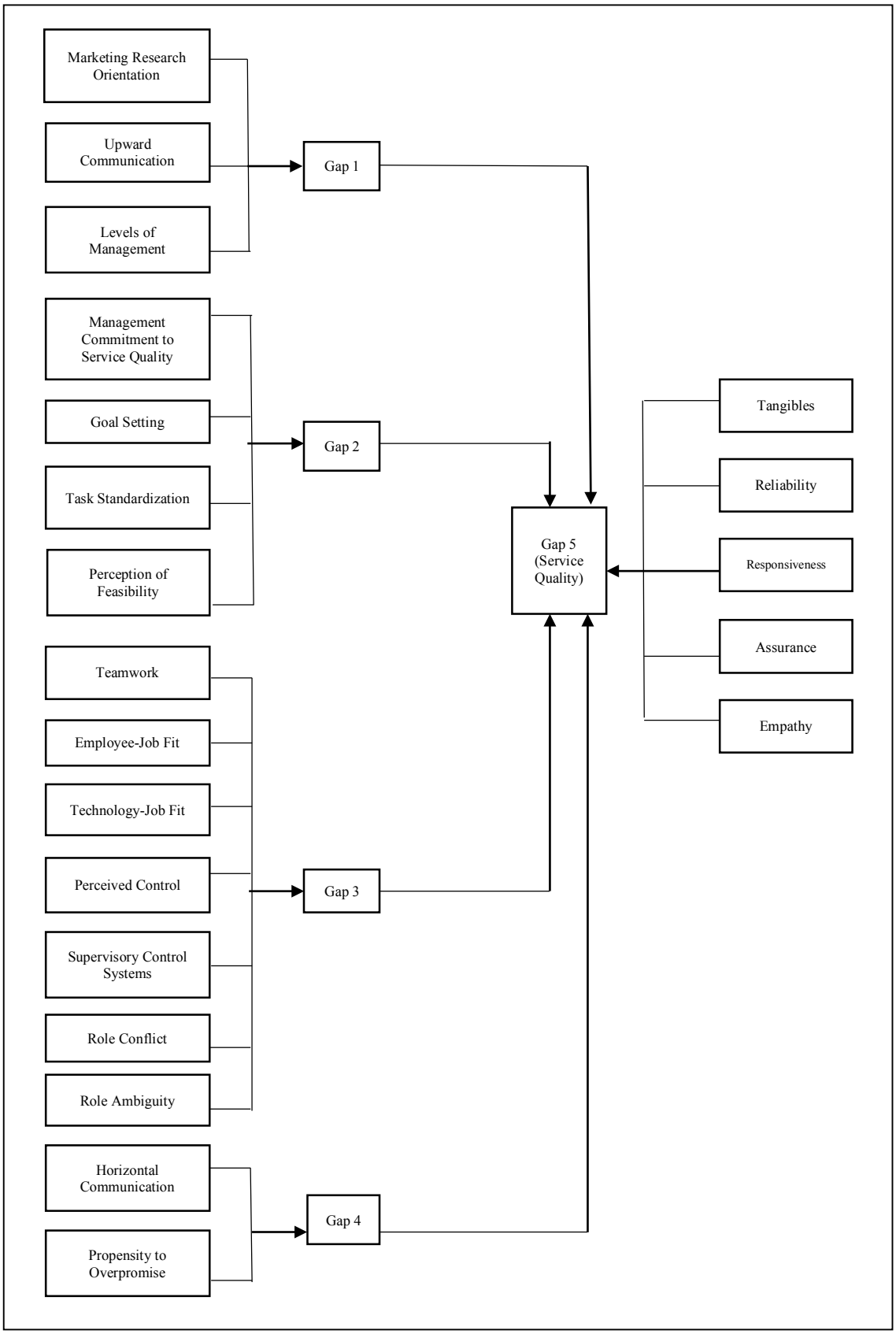

Figure 2.9 Extended SERVQUAL Model
(Source: adapted from Wilson et al., 2012)

Since the development of the service quality model, SERVQUAL has been employed to measure service quality to numerous industries such as the hotel industry, healthcare industry, banking industry, airline industry, education industry, financial industry, ICT industry, telecommunication industry, and retail industry. The explanation of SERVQUAL implementation can be seen in the following table.

Table 2.3 SERVQUAL Implementation

No	SERVQUAL Implementation	Author
1	Hotel Industry	Kwortnik & Han (2011); Ariffin & Maghzi (2012); Kuo *et al.* (2012); Ladhari (2012); Najafi *et al.* (2013); Ryglová *et al.* (2013); Zoraghi *et al.* (2013); Batista *et al.* (2014); Giannakos *et al.* (2014)
2	Healthcare Industry	Altuntas *et al.* (2012); Zarei *et al.* (2012); Fotiadis & Vassiliadis (2013); Gul & Derin (2014); Nasim *et al.* (2014); Ayoubian *et al.* (2015); Shabbir *et al.* (2016)
3	Banking Industry	Emari *et al.* (2011); Kamble *et al.* (2011); Abdelghani (2012); Amiri Aghdaie & Faghani (2012); Ramachandran & Chidambaram (2012); Çırpın & Sarıca (2014); Marković *et al.* (2015); Untaru *et al.* (2015)
4	Airline Industry	Chou *et al.* (2011); Chikwendu *et al.* (2012); Wu & Cheng (2013); Basfirinci & Mitra (2015)
5	Education Industry	Bahadori *et al.* (2011); Fares *et al.* (2013); Vaz & Mansori (2013); Wu *et al.* (2013); Malik & Malik (2015)

6	Financial Industry	Bala *et al.* (2011); Carrasco *et al.* (2012); De Clercq *et al.* (2012); Tarigan & Hery (2015)
7	ICT Industry	Saraei & Amini (2012); Ebrahimi & Farhadi (2014); Onyimbo (2015); Tsai & Yeh (2015); Ahmad, et al. (2016)
8	Telecommunication Industry	Hosseini, et al. (2013); Omonge (2013); Alnsour (2014); Patel (2015)
9	Retail Industry	Yeap Ai Leen & Ramayah (2011); Chhabra (2013); Chanaka & Achchuthan (2014)

Source: Author (developed for this research, *2017*)

As mentioned earlier, the implementation of the SERVQUAL model is mostly concerned with the service industries. There are 370 articles examining service quality by using the SERVQUAL model produced in the last fifteen years in different contexts across different sectors (Wang, et al., 2015). Not much research has been done using SERVQUAL to measure service quality in the construction sector. Based on the exploration in the *Google Scholar* database by using the keywords of "servqual" and "construction industry", there are only ten articles discussing service quality in the construction sector. Among the ten articles, there is only one research focused on the homeowner in residential construction. The other publications are concerned with service providers in the construction industry, such as surveyors, consultants, agents, refurbishment providers and maintenance providers. This study discussed the relationship between three components: consumer purchase decision, service excellence and consumer satisfaction. The consumer purchase decision was based on housing affordability attributes and the measurement of service quality was based on the Service Excellence Model.

Table 2.4 Service Quality Research in the Construction Industry

No	Year	Author(s)	Title	Object of the study
1	1994	Hoxley	Assessment of Building Surveying Service Quality: Process or Outcome?	Building surveying provider
2	1994	Samson & Parker	Service Quality: The Gap in the Australian Consulting Engineering Industry	Engineering Consultant providers
3	1995	Nelson & Nelson	RESERV: An Instrument for Measuring Real Estate Brokerage Service Quality	Real Estate Brokerage providers
4	2000	Hoxley	Measuring UK construction professional service quality: the what, how, when and who	Consultant service providers
5	2000	Love, et al.	Some empirical observations of service quality in construction	Consultant service providers
6	2000	Holm	Service quality and product quality in housing refurbishment	Refurbishment service providers
7	2001	Siu, et al.	Assessing the service quality of building maintenance providers: mechanical and engineering services	Building maintenance providers
8	2007	Forsythe	An instrument for measuring customer perceived service quality in housing construction	Homeowner
9	2010	Lai & Pang	Measuring performance for building maintenance providers	Building maintenance providers
10	2014	Sunindijo, et al.	Modeling service quality in the construction industry	Projects client

Source: Author (adapted from Google Scholar, 2016)

2.2.4.5.3 Service Excellence

The output of an excellent service is often mentioned by a satisfied consumer (Otiso, et al., 2012). A consumer satisfies when the consumer's expectations met or exceeded by the service provider (Chen & Jia, 2012). Johnston (2004) points out that delivering the consumer with service excellence provides the outcome of delight. Service excellence is defined as the ability to provide an excellent service in order to attract and retain customers. Service users want greater choice and cannot be manipulated on their perception of reality (Cook, 2010). Moreover, service excellence is described as the accumulation of total alignment, consistency, accountability, teamwork and empowerment (Kabanda, 2014).

In addition, service excellence should not only exceed customer expectations through providing extraordinary service, but also be concerned with the customer view of what constitutes excellence in a service that does not necessarily exceed customer's expectations (Gouthier, *et al.,* 2012). The existence of service excellence as a concept is crucial for business success and growth (Asif & Gouthier, 2014). It means that the implementation of service excellence is mandatory to achieve business growth. Johnston (2004), cited in Gouthier, *et al.,* (2012) posits that service excellence falls into four categories:

1. <u>Delivering the promise</u>

   Delivering on the service promise is of utmost importance because if the service provider fails to fulfill this stage, all prior efforts towards strengthening a relationship with the customer would be worthless (Souca, 2012). Delivering on what was previously stated by the provider is related to the "must be" requirement, when failing to meet this requirement is guarantee dissatisfaction. To meet the necessity of delivering the promise stage, the extraordinary commitment and determination is required from the team members of the service provider.

The successful implementation of this stage depends on several factors, such as an organization's mission and strategic goals; management's values, orientations and principles applied in the organization; organizational structure and organization of work (definition and analysis of formal and informal groups within the organization); decision making process; management of personnel policy; organizational behaviour (work motivation, organizational stress, participation in organized activities outside of working hours, job satisfaction and career intentions); individual and organizational variables (age, education, personal values, status and role); satisfaction in work; and management perception (Johnston, 2004). Based on the customer's point of view, the characteristics of delivery of the promise are as follows (Johnston, 2007):

- They do what they say
- They don't let you down
- If you ask it just happens
- It's delivered consistently
- They are reliable

2. Providing the 'personal touch'

The establishment of service delivery needs to be consistent with the organization's strategy, meet customer's requirements, and also maintain a strong relationship with the customer. Providing a personal touch is one of key success factors for a positive customer relationship engagement. When an organization is able to build a strong bond with the customer, it create a sense of satisfaction. The ability to create intense feelings based on the strong relationship with the customer enables customers' understanding if they receive excellent service, even if it is hard to say why (Gouthier, *et al.* 2012). Based on the customer's point of view, the characteristics of providing the so called 'personal touch' are as follows (Johnston, 2007):

- They treat me like an individual
- They care about me
- It feels personal
- They give me the time
- They know about me; I don't have to keep telling them

3. Going the extra mile (GTEM)

   GTEM is needed by any organization to make a difference from competitors. In an absolute sense, it is all about not just meeting, but exceeding base levels of expectation for a particular service. Indeed the very nature of the GTEM ethos is one in which service provision is not a fixed concept, but continually evolving and developing over time. Based on the customer's point of view, the characteristics of GTEM are as follows (Johnston, 2007):

   - They went out of their way
   - They anticipated my needs
   - They call you back, I didn't have to chase them
   - They fall over themselves to help

4. Dealing well with problems and queries

   Dealing well with problems is crucial because all customers want to overcome their problems effectively and accurately. Based on the customer's point of view, the characteristics of dealing well with problems and queries are as follows (Johnston, 2007):

   - When it goes wrong they sort it out
   - They were happy and willing to sort it out
   - They did not pass me around
   - They phoned me back
   - They know what to do if there is a problem

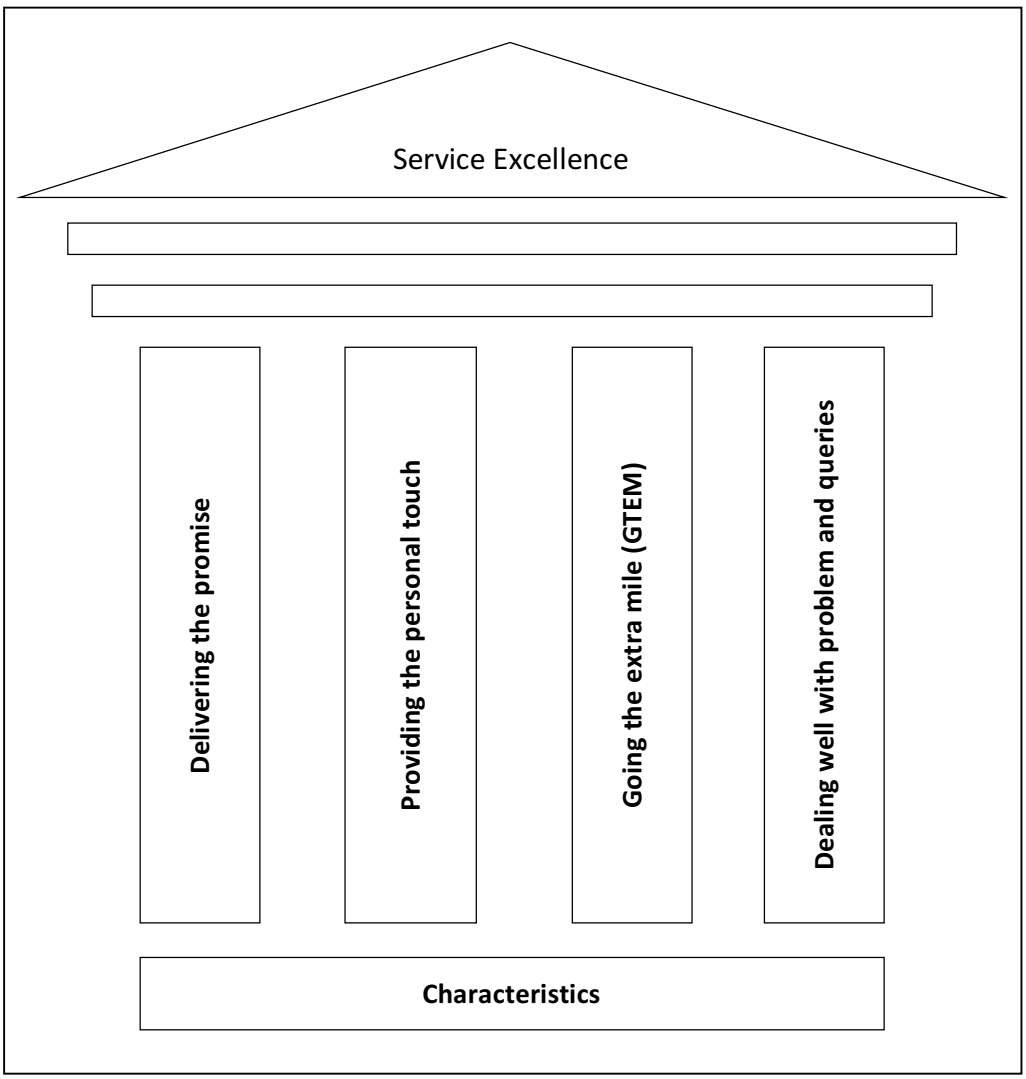

Figure 2.10 Service Excellence Model
(Source: adapted from Gouthier, et al., 2012)

From a construction organisation's perspective, the service level delivered by the house builder can be an important source of competitive advantage. In addition, the capability of the house builder is often an important driver of consumer loyalty. House builders are expected to be fast and efficient at executing their job as well as friendly and helpful in dealing with their consumers. During the construction process, house builders are in constant contact with homeowners and there is solid evidence showing that a house builder's performance and consumer satisfaction are highly correlated.

A key challenge of implementing consumer's needs is the effective management by the house builder to deliver their promise. The ability of the house builder to deliver their promise should be followed with their ability to maintain a relationship with the homeowners and the ability to provide solutions. At any moment, happy consumers who get their issues resolved were telling their positive experience to many people. Conversely, a negative experience for consumers creates massive dissatisfaction and generates a bigger impact compared to a positive experience. This is the reason to create an excellent experience for consumers. One key element of successful service excellence is the effective alignment between house builder and homeowner.

2.3 Housing Affordability

In this section, researcher mention the definition of housing affordability and an explanation of the determinants of homeownership towards the consumer purchase decision.

2.3.1 Housing Affordability Definition

Housing affordability is the ability of the consumer to purchase a house with relatively constant quality consistent with his/her socio-economic level, given the financial and income structure (Asici, et al., 2011). Hence, housing affordability can be described as the ratio of household income to the monthly housing loan payment or rent, which is less than thirty per cent of monthly income (Bujang et al., 2008). In simple terms, housing affordability is the comparison between housing expenditure and household income (Kutty, 2005).

In other words, housing affordability measures the financial outcome of the homeowner toward the housing cost. The problem of housing affordability arises when the housing price is seen to be higher relative to homeowner incomes (Henman & Jones, 2012). Most fundamentally, a homeowner can be categorized as having a housing affordability problem if their disposable income after deducting non-housing costs is smaller than the housing cost (Yang & Shen, 2008).

2.3.2 The Determinants of Homeownership

The housing industry is the fundamental element for sustainable development of every country in the world (Kamal, et al., 2016). Having a house is an extremely important goal for the homeowner and most people invest their savings to build a new house or to improve an old one (Xiao, et al., 2003). Therefore, homeownership is a complicated problem that is the result of many determinants, comprising housing characteristics (house types and property types), employment and income trends, and sociocultural and demographic descriptors (Tan, 2008).

However, housing affordability has become a vital issue towards homeownership and the housing price in the main cities across the world has increased tremendously to unaffordable levels (Kamal, et al., 2016). In terms of unaffordable levels, housing in Auckland is labelled severely unaffordable with a house price 10 times household income (Cox & Pavletich, 2017). This study was examine the determinants of homeownership, which influence homeowner's purchase decisions in Auckland. The discussion was focused on financial considerations, accessibility, neighbourhood, infrastructure facilities and house features.

2.3.2.1 Financial Considerations

Financial considerations are a highly important factor for consumers to consider when purchasing a house (Si, 2012). Occasionally, the financial considerations have the highest influence on the decision to purchase goods or services (Paço & Raposo, 2009). Purchasing a house is one of the most important financial decisions that people make, and it involves gathering a lot of information regarding its features (Anastasia & Suwito, 2015). Moreover, the financial considerations for the homeowner to buy a house consist of (Roidoung, 2013):

1. Household Income

   This can be described as the sum of wages and salaries, self-employment income, government transfers and miscellaneous income (retirement pensions, registered retirement savings plans, retirement income funds and purchased annuities), minus taxes paid (Lafrance & La Rochelle, 2011). It also can be said as the total of cash income from all sources such as labour market earnings from employment and self-employment, investment and savings income, occupational and private pensions, plus all cash benefits from the government like retirement pensions, minus direct income taxes and social security contributions (Jenkins, 2000). Hence, the household income is the amount of income from all sources by all members of the household (Cherlin, et al., 2009).

   Household income plays an important role for each homeowner who wants to purchase or build a house. Homeowners should make a thorough analysis to make an appropriate allocation of their income. The amount of income also influences the quality of house purchased by homeowners.

2. Housing price

   The housing price can be considered as the equilibrium point where the willingness to pay for a house meets the willingness to sell a house (Qin & Han, 2013). While Michele (2009) defined house price as a value for a residential property that gets the perfect balance between receiving an amount of money and attracting suitable offers. Meanwhile house price can be classified as the most important determinant of the affordability of home ownership (Chen, et al., 2007). Furthermore, there are several factors influencing house price consisting of (Liew & Haron, 2013):

   - Fluctuations in the housing market
   - The increase of the construction costs
   - Population growth over housing
   - High housing demand
   - Long term profit of housing
   - GDP growth
   - Shortage of supply of housing
   - Transfer fee and taxation of housing
   - Housing quality, house appearance and public facilities

Moreover, housing price is another crucial element that determines the ability of homeowners to purchase a house. Most people cannot afford to purchase a house with a high price. The importance of house price was considered as a factor that influences the consumer purchase decision.

3. Credit accessibility

Credit accessibility appraises the probability that a consumer who wants to apply for credit can secure a loan at a given time (Li, et al., 2014). Property prices are influenced by the accessibility of credit and the demand for property increase if credit is more accessible, especially when households receive loan incentives (Booysen, 2013). There are a several reasons for the importance of the relationship between house prices and household credit: (Oikarinen, 2009)

- Accurate decisions can be made based on the movements in house prices and changes in household borrowing.
- The relationship between the house market and credit probably increase the economic life cycle in the financial sector.

In addition Loan-to-Value Ratio (LVR) is also critical to determine ability of homeowner to access credit from bank or other financial institution.

The Reserve Bank of New Zealand introduced a LVR restriction for housing loans from October 2013. The main purpose of the policy was to help slow the rate of housing-related credit growth and house price inflation, with the ultimate goal of reducing the risk of a substantial downward correction in house prices that would damage the financial sector and the broader economy (Wheeler, 2013). Therefore, the restriction was employed as a 'speed limit' whereby banks can make high-LVR loans (more than 80 percent of the house value) up to 10 percent of the value of their new mortgage lending over any three-month period (Rogers, 2014).

According to Booysen (2013), if credit becomes more accessible, there is a possibility that lending rates decrease and it is stimulate current and future economic activity. The wealth of households is closely related to the credit demand of households, as can be seen from several indicators (Goodhart & Hofmann, 2007):

- The high value of collateral when purchasing a house indicates that credit is more accessible as a result of wealth improvement.
- If household wealth increases, a household's consumption increases and it indicates higher credit demand.
- The changes in house prices influence the supply of credit through the alleged balance sheet effect.

2.3.2.2 Accessibility

The concept of accessibility is concerned with the attractiveness of a place and easiness off getting there from all other origins (Guiliano, 2004). In terms of residential housing, ease of access means location of the house plays an important role in the house purchase decision. There are several locational attributes considered by the homeowner such as access to market, location of workplace, distance of house to workplace, distance of house to children's school, distance of house to place of shopping, distance of house to place of recreation and worship, transportation expenses from home to area of activities (place of work, children's school, recreation and worship), time spent from home to area of activities (Aluko, 2011). Moreover, it can also be said that a good location of the house is an extremely important factor that determines the success or failure of a residential housing development project (Kauko, 2007).

2.3.2.3 Neighbourhood Environment

The other consideration for the house buyer is the neighbourhood that can be described as an area where the residents are drawn and held together by common and beneficial interests (Choguil, 2008). There are many aspects leading to a suitable neighbourhood environment such as a gated-guarded landscaped compound neighbourhood or a green network within the gated and guarded neighbourhood (Tan, 2011). There are some reasons for the homeowner wanting a gated and guarded property such as a status symbol for the property buyer by owning a house that is protected (Salleh, et al., 2015); safety perception for the homeowner's quality of life in any neighbourhood (Okunola & Amole, 2012).

Furthermore, the other characteristics of the neighbourhood environment are cost of refuse collection, the feeling or level of security, frequency of crime, the noise level, the number of markets or shopping centres, the number of waste disposal centres, the number of police stations, the number of children's playgrounds, the number of recreational facilities, the number of nursery and primary schools, the number of public hospital or health centres, and the number of private clinics in the neighbourhood (Aluko, 2011).

Decent environment neighbourhoods carry significant property values (Poudyal, et al., 2009). It can be concluded that a house or property that is located in a strategic neighbourhood is more attractive and homeowners are willing to pay more for such a house with good-looking environmental qualities (Tan, 2011).

2.3.2.4 Infrastructure Facilities

The establishment of new land for housing development or the upgrading of existing residential houses requires installation of infrastructure facilities such as water, sewerage, roads, electricity, social services and security (Kandia, 2015). The provision of infrastructure facilities is a most important aspect for property development (UN-HABITAT, 2006). The creation of such infrastructure facilities is extremely correlated to the house price (Kandia, 2015). The developments of residential houses without an improvement in infrastructure facilities (water, electricity, road and sanitation facilities) create a problem for homeowners and house builders (Bihon, 2007).

2.3.2.5 House Features

The structural attribute for the residential house is an important factor influencing a homeowner's purchase decision (Opoku & Abdul-Muhmin, 2010). There are several factors of the structural attributes that mostly affect a house purchase decision consisting of size of housing, number of bedrooms and bathrooms, and the existence of a garden around a house (Tan, 2011). The structural improvement and materials used, age and condition of the structure and size of the structure also can be considered as the structural attributes of the house purchase decision (Owusu-Ansah, 2012). Since the size of housing can be seen as a luxury symbol, some homeowners try to enlarge the size of their house (Clark, et al., 2006).

The other significant factor to influence house purchase decisions is the private living space like the number of bedrooms, the size of bedrooms and the number of bathrooms (Opoku & Abdul-Muhmin, 2010). Some homeowners are willing to pay more for their property as long as it meets the expectations (Owusu-Ansah, 2012). Moreover, the presence of a garden plays an important role for the homeowner for relaxation and social purposes (Tan, 2011). Owusu-Ansah (2012) finds that the materials used to build a house and the structural improvement made to the house affect the price of the house.

2.4. Theoretical Framework of the Study

Previous sections described theories of consumer purchase decision-making in general and in relation to residential housing in New Zealand's housing market. Based on this review, it can be seen that limited research has investigated the combined influence of housing, the determinants of homeownership and service excellence on homeowners' purchase decisions and homeowners' post-purchase satisfaction.

Further, no research has been conducted specifically into the segmentation of Auckland's housing market. As discussed in the section 1.3, the research problem addressed in this research is:

There is a lack of information concerning the determinants of homeownership and service excellence that influence house purchase decisions and the evaluation of post-purchase satisfaction in New Zealand.

Based on the previous problem definition, this section proposes a theoretical framework with five hypotheses linking the consumer purchase decision process to desirable attributes for the determinants of homeownership and service excellence. The theoretical framework of the study can be seen in Figure 2.11, while hypotheses for this study can be seen as follows:

- H1: Housing purchase decision for the homeowner in Auckland influenced by the determinants of homeownership.
- H2: Housing purchase decision for the homeowner in Auckland influenced by the service excellence of the house builder.
- H3: The overall homeowner's satisfaction with their purchase decision is determined by their assessments of the determinants of homeownership.
- H4: The overall homeowner's satisfaction with their purchase decision is determined by their assessments of the service excellence delivered by house builders.
- H5: The homeowner in Auckland satisfied with their housing purchase decision.

These hypotheses were developed based on the purchase decision process described by Armstrong (2014) and Service Excellence measurement created by Johnston (2007).

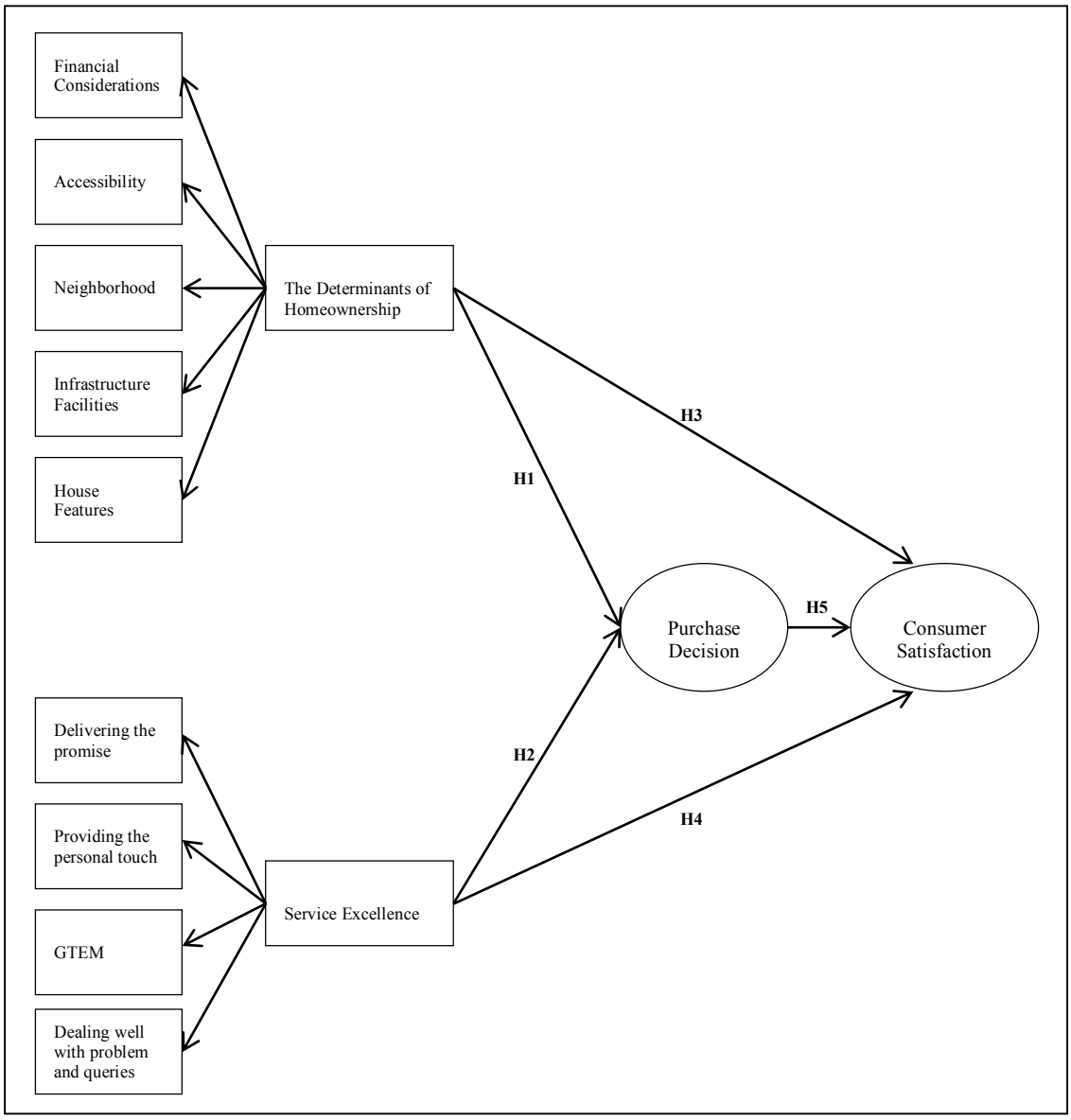

Figure 2.11 Theoretical Framework of the Study
(Source: developed for this research, 2017)

2.5 Summary

A housing purchase decision is one of the most important decisions for most people in their entire lives. Many people spend time, money and any other resources to purchase a house that meets their expectations. Usually people feel satisfied if they meet or exceed expectations. On the other hand, people feel dissatisfied when expectations are below perceptions. The comparison between expectations and perceptions can be measured by using the SERVQUAL Model and the Service Excellence Model.

The SERVQUAL Model has been used in different studies, but only a few studies have focused on the construction industry. This study was evaluate the house purchase decision from service excellence perspectives using the Service Excellence Model.

This chapter reviewed the literature that focused on consumer purchase decision processes, and the attributes and services which influence purchase decisions of home buyers. The literature review conducted here has revealed gaps in the research into home buyers' purchase decisions and post-purchase satisfaction with both housing attributes and services in the Auckland's residential housing market. It then developed theory-based models to develop hypotheses in this research.

Five hypotheses were developed and presented within one main theoretical model showing the interrelationships between them. In order to test each hypothesis adopted for this study, mixed-method research examined in this study. It was started by using quantitative data analysis and validated by using qualitative data analysis. The next chapter explains the methodology used and how the research was conducted to address the research problem.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights the research methodology that employed in the entire study. The outline of the chapter is presented in Figure 3.1. It is concerned with the methodology used in the study to answer the research questions defined earlier. According to Saunders, et al. (2012), research methodology can be divided into several layers which so-called as *Research Onion* and it comprised of the following layers: research philosophy, research approach, research design, research strategy (ies), and research techniques.

The first section of this research methodology describes an overview of the philosophy applied that clarifies and justifies the approach of methodology. This is followed by choice and strategy (ies) of the methodology which is ideal for the purpose of this research. Then it spells out the underlying research techniques which consist of target population, target representative sample, types of data, data collection methods and the data analysis approaches. An ethical consideration is also discussed in this chapter. Finally, a conclusion is provided for the chapter.

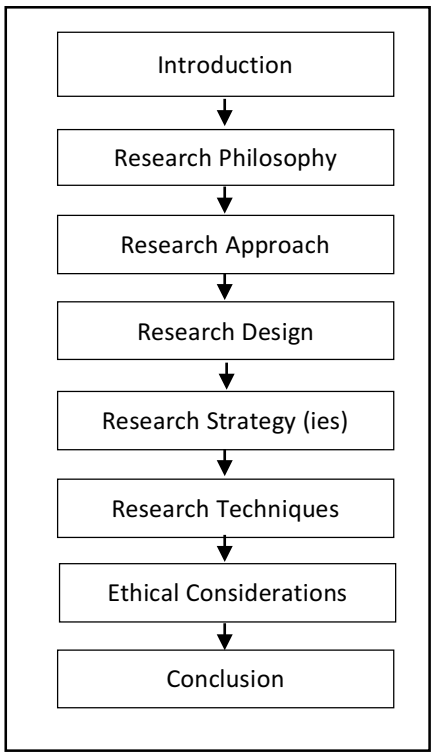

Figure 3.1 Chapter Outline

3.2 Research Philosophy

Research philosophy is described as the ways of a researcher strategy to collect and analyse the information required to conduct the study (Bahari, 2010:18). It is very important and also central to the notion of research design. Moreover, research philosophy has correlation with the development of knowledge and the nature of that knowledge in social world. The importance of research philosophy is pointed by Easterby-Smith, et al. (2012) as follows:

- It can help the researcher to clarify and specify research designs; determine the type of evidence to gather an information; and also helps to answer the research question raised.
- It enable and support the researcher to evaluate different methodologies and avoid inappropriate use and unnecessary work.
- Identify and create research designs that may be outside the researcher past experience.

Research philosophy consists of the several approaches, such as realism, pragmatism, positivism, and interpretivism (Lewis *et al.*, 2012). The fundamental beliefs of research philosophy can be seen based on ontology, epistemology, axiology, and methodology. Ontology can be defined as a hierarchically structured set of concepts describing a specific domain of knowledge that can be used to create a knowledge base (Blomqvist & Sandkuhl, 2005). Moreover, the term epistemology refers to the search of knowledge with the objective of arriving at a result that is as close to the truth as possible (Buys, 2011).

In other words, epistemology provides a philosophical grounding for determining the kinds of knowledge possible and how to guarantee that it is adequate and justifiable (Cranfield & Taylor, 2008). Therefore, axiology can be described as the researcher's view of the role of values in research (Saunders *et al.*, 2012). In addition, it is not possible to create distinction between researcher's values against the area of discussion; therefore opinions, findings and recommendations are subjective in nature (Byrne, 2013:28). The discussion of research philosophy is presented in the following section.

Table 3.1 Fundamental Beliefs of Research Philosophy

	Research Philosophy			
Fundamental Beliefs	*Realism*	*Positivism*	*Interpretivism*	*Pragmatism*
Ontology (the researcher's view of the nature of reality or being)	Objective. Exists independently of human thoughts and beliefs or knowledge of their existence (realist), but is interpreted through social conditioning (critical realist).	External. Objective and independent of social actors.	Socially constructed, subjective, may change, multiple.	External, multiple, view chosen to best enable answering of research question.
Epistemology (the researcher's view regarding what constitutes acceptable knowledge)	Focus on explaining within a context or contexts.	Focus on causality and law-like generalisations, reducing phenomena to simplest elements.	Focus upon the details of situation, a reality behind these details, subjective meanings motivating actions. Subjective meanings and social phenomena.	Focus on practical applied research, integrating different perspectives to help interpret the data.

	Observable phenomena provide credible data, facts. Insufficient data means inaccuracies in sensations (direct realism). Alternatively, phenomena create sensations which are open to misinterpretation (critical realism).	Only observable phenomena can provide credible data, facts.		Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question.
Axiology (the researcher's view of the role of values in research)	Research is value laden. The researcher is biased by world views, cultural experiences and upbringing.	Research is undertaken in a value-free way. The researcher is independent of the data and maintains an objective stance.	Research is value bond. The researcher is part of what is being researched, cannot be separated and also subjective.	Values play a large role in interpreting results. The researcher adopting both objective and subjective points of view.
Methodology (the model behind the research process)	Methods chosen must fit the subject matter. Quantitative or Qualitative.	Highly structured, large samples, and measurement. Quantitative.	Small sample, in-depth investigations. Qualitative.	Mixed or multiple method designs. Quantitative and Qualitative.

Source: Adapted from Saunders *et al.*, 2012:140

3.2.1 Realism

Realism paradigm argues that we perceive the world as it really is, that cognition is a relation between subject (the perceiver) and object (the perceived), and that the existence of the object does not depend upon the subject perceiving it (Smith & Darlington, 1996). As described by Horn, the concept of realism philosophical approach explains a reality can be seen as completely independent of the mind exists and governs how this knowledge is in fact created (Wolmer, 2012).

According to Saunders et al (2012:136), realism can be classified into two categories, consist of direct and and critical realism. Direct realism states "what you see is what you get", what we experience through our senses portrays the world accurately. Hence, critical realism says that "what we experience are sensations", the images of the things in the real world not the things directly.

3.2.2 Positivism

Positivism can be defined as an epistemological position that encourages the implementation of methods of natural science to the study of reality and beyond, the "truth" is out there to be discovered (Sutrisna, 2009:7). It is also can be called as a philosophical position that combines logic and rationality with empirical observation to identify causes that influences outcomes (Creswell, 2013). Moreover, the purpose of positivism is to test a theory or describe an experience "through observation and measurement in order to foresee and manage forces that surround us" (O'Leary, 2013:5).

Positivists see the world as existing independently of our knowledge of it, and thus they seek objectivity in research believing that researches can be done independently of what is being observed (Al khalaf, 2014:84). Positivism generally assumes the existence of the social world, whose properties can be measured using objective methods rather than being subjectively inferred through sensation, intuition or reflection (Easterby-Smith et al., 2012). A positivist research philosophy deals with the formation of data by observing an existing theory, and experimenting a potential hypothesis derived from this observation is what the deduction approach is all about (Maylor & Blackmon, 2005:156). Based on those perspective, it is easy to observe the links that exist among the different aspects of the research. The *slogan* for the positivist is simple, if it exists measure it (Michell, 2003).

Another important characteristic of the positivist research philosophy is that it tend to stress on observations that are quantifiable and often make use of statistical analysis (Wolmer, 2012:30). Basically, positivists' research is most frequently related with quantitative methods of data collection and analysis (Moffat, 2014:70).

Quantitative methodology can be defined as *experimental* or *manipulative* where questions and hypotheses are planned, then, tested and verified while ensuring confounding conditions to prevent outcomes from being improperly influenced (Guba & Lincoln, 1994). Quantitative research is associated to the views in the objectivity of the social world and the idea of causality in social processes (Bahari, 2010). The objectivists belief that social phenomena and their consequences have an existence that is independent of social actors (Bryman, 2015).

The objective of positivist is to assess reliability, validity, and generalizability that provide a basic framework for conducting quantitative research (Saunders *et al.*, 2012). The assessment of reliability is to examine the consistency of the means of data collection (Hair, 2015). Therefore, validity test is concerned with investigating the degree where the researcher truly measures the item under observation (Adams *et al.*, 2014). Finally, generalizability refers to the scope of applicability of the research findings in one organizational setting to other settings (Sekaran & Bougie, 2016). It means researcher extrapolate findings from a specified sample to a wider population.

3.2.3 Interpretivism

Interpretivism can be described as an epistemological position that separate the objects of natural science from the actors, the researchers/observers somehow construct their own "truth" in viewing the world (Sutrisna, 2009). Therefore, the ontological position of interpretivism is relativism, it means that reality is subjective and differs from individual to individual (Lincoln *et al.*, 2011). It also can be said that multiple realities could be created, and reality is dependent on an observer's perceptions (Creswell, 2011). Furthermore, interpretivism is associated with the view of phenomenology. Phenomenology is argue a philosophy that refers to the way in which how human make sense of the world around them and how in particular the philosopher should set out preconceptions in his or her grasp of that world (Bryman, 2015).

The basic idea of interpretivism is to work with the subjective meanings already there in the social world; that is to acknowledge their existence, to reconstruct them, to understand them, to avoid distorting them, to use them as building-blocks in theorizing (Goldkuhl, 2012). Most of the interpretivists have the objective of understanding reality through human experience, which suggests that reality is socially constructed (Cohen et al., 2013). Each individual or participants has different background or experience; it was offering different research outcomes. In addition, interpretivism paradigm says that there is a difference between investigating people and objects, due to human's roles as "social actors" (Saunders, et al., 2012). Thus, reality is constructed based on social actors and people's perceptions of it (Wahyuni, 2012).

The process of understanding individual's perception for interpretivist research mostly rely on qualitative methods for data collection and analysis (Bailey, 2007). Researcher recognize each individual with their own varied backgrounds, assumptions and experiences contribute broader social context through social interaction. Usually researchers decide how to interpret data and participants are exposed based on their own subjective interpretations (Danby & Farrell, 2004). Research outcomes emerge from the researchers' interaction with the participants, and all of the existing interpretations are considered contextually dependent on the history and culture that influences how each individual interprets and makes meaning of their domain (Moon & Blackman, 2014).

3.2.4 Pragmatism

As a technique, pragmatism recognises the existence of objective reality as well as that lodged in mind, and appreciates the importance of using multiple methods, different world views, assumptions, forms of data collection and analysis (Creswell 2013). Pragmatism is also opens the door to multiple methods, different worldviews, and different assumptions, as well as different form of data collection and analysis (Creswell 2013).

Moreover, pragmatism believes that a mixture of ontology, epistemology and axiology is acceptable to approach and understand social phenomena (Wahyuni, 2012). In addition, pragmatism is concerned not just for the efficiency of means but for their appropriateness, which is a matter of combining a whole range of evaluative factors not efficiency and effectiveness alone but also their broader normative nature (Pihlström & Rescher, 2000)

Pragmatism argues that there is no need to adopt a specific philosophy since it is possible to combine the others as long as the research question does not indisputably point to one of the alternatives (Gleerup & Harborn, 2009:). It also can be said that pragmatism can be seen as the guiding paradigm of mixed methods research in the behavioral and social sciences (Tashakkori & Teddlie, 1998). Mixed methods research strategies refer to combine qualitative and quantitative methods. The main advantage of mixed methods research is its methodological pluralism or eclecticism, which frequently results in superior research compared to single method research (Johnson & Onwuegbuzie, 2006). The usage of mixed methods not only leads to greater validity but also provides a comprehensive approach to research, whereby one method could be used to explain the findings of another or investigate deeper in case of unexpected results (Bryman, 2008).

3.2.5 Research Philosophy of the Study

The objective of this study was to test the relationship of the service excellence model and homeownership attributes toward housing purchase decisions and consumer satisfaction. Regarding the epistemological position, all potential variables were measured and observed in an objective way with a focus on causality. It is relevant to the theory stated by Strauss & Corbin, a set of well-developed categories (themes or concepts) that are systematically interrelated through statements of relationship to form a theoretical framework that explains some relevant phenomenon (Service, 2009).

Moreover, as the study related to the cause and effect thinking, reduction to specific variable, hypothesis and questions, measurements and observations, and test of theories; researchers use the philosophical position of positivism in developing knowledge (Easterby-Smith *et al.*, 2012).

Therefore, if the research problem focused to test the validity of a model where all the variables which influence a phenomena or process is already known, a quantitative methodology is appropriate for this study (Levy, 2006). The process of quantitative methodology utilizing suitable statistical techniques. Correlation and validity test was conducted to reduce complicated relations between dependent and independent variables.

The implementation of a positivism approach in construction management research alone faces possible obstacles in developing theory because of the nature of human beings involved in construction project (Love *et al.*, 2002). Therefore, human being behavior is changing both intentionally and unintentionally, which impact to the form and structure of any system that they are a part of (Shank & Brown, 2013). In order to solve the difficulties to measure human behavior in construction management, qualitative data can be used to enrich, explain, or elaborate upon results gained from quantitative approaches (Creswell & Clark, 2011).

The qualitative approaches allow researchers to work closely with participants to collect information pertaining to their personal thoughts and experiences (Yin, 2013). The philosophical position of interpretivism for this study is based on the opinion of participants to provide better understanding of the relationship between service excellence model and homeownership attributes with housing purchase decision and consumer satisfaction.

The appropriate research paradigm should be able to build the foundation for an appropriate research methodology through appropriate philosophical assumptions. This study seeks to explore the identification of significant factors in a homeowner's purchase decisions and homeowner's satisfaction; and how significant of each variable towards homeowner's purchase decision and homeowner's satisfaction. The combination of factors within the research problem points strongly to mixed philosophical positions for this study.

It is clear that in terms of the philosophical position and methodological approach, the most applicable research paradigm for this study is pragmatism. It seems that this study employ both quantitative and qualitative approaches (mixed-methods), and both deductive and inductive soundness to explain reality as much as possible (Tashakkori & Teddlie, 1998). Thus, it is enthusiastically in line with construction management as intersection between social science and natural science (Love *et al.*, 2002).

The proposed mixed method approach (quantitative and qualitative data analysis) for this study is an excellent approach since it ensures an all-round effectiveness of research (Creswell & Clark, 2011). The other reasons for conducting a mixed methods are to (a) better understand a research problem by converging numeric trends from quantitative data and specific details from qualitative data; (b) identify variables/constructs that may be measured subsequently through the use of existing instruments or the development of new ones; (c) obtain statistical, quantitative data and results from a sample of a population and use them to identify individuals who may expand on the results through qualitative data and results; and (d) convey the needs of individuals or groups of individuals who are marginalized or underrepresented (Mertens, 2003; Punch, 2013).

3.3 Research Approach

The objective of this study is to observe which determinants of homeownership and which attributes of service excellence influence homeowners' purchase decisions and homeowner's satisfaction in Auckland-New Zealand. This research collects data from Auckland home owners. The research method chosen to investigate the research problem embodied the underlying assumptions discussed above. The research methods can be described as process(es) that involve obtaining scientific knowledge by means of various objective methods and procedures (ten Ham-Baloyi & Jordan, 2016). In addition, research methods are techniques and procedures used in the process of data gathering, then used by the researcher to develop research questions, analyse and interpret the information gathered (Cohen et al., 2013).

In order to get an appropriate method for this study, researcher determine suitable approach for this research. Therefore, research approach defined as plans and procedures for research that span the steps from broad assumptions to detailed method of data collection, analysis, and interpretation (Creswell, 2013). This type of research approach consists of quantitative, qualitative, and mixed-method approaches. (Tashakkori &Teddlie, 1998). The discussion of each approach is presented in the next section.

Table 3.2 Research Approach Classification

Feature	Quantitative Approach	Qualitative Approach	Mixed Methods Approach
Philosophical Assumption	- Objectivism - Positivism	- Constructivism - Interpretivism	- Pragmatism - Critical realism
Relationship between Researcher and Participant	The possibility and necessity of separating the researcher from the participant	An interdependence between the researcher and participant	Can follow tenets of objectivity and/or subjectivity depending on research/researcher (referred to as intersubjectivity)
Logic	When the premises are true, the conclusion must also be true	Known premises are used to generate untested conclusions	Premises are used to generate testable conclusions
Generalisability	Generalising from the general to the specific	Generalising from the specific to the general	Generalising from the interactions between the specific and the general
Use of Data	Data collection is used to evaluate propositions or hypotheses related to an existing theory	Data collection is used to explore a phenomenon, identify themes and patterns and create a conceptual framework	Data collection is used to explore a phenomenon, identify themes and patterns, locate these in a conceptual framework and test this through subsequent data collection and so forth
Theory	Theory falsification or verification	Theory generation and building	Theory generation or modification; incorporating existing theory where appropriate, to build new theory or modify existing theory
Research Focus	Finding out numerical qualities of an event or case	Understanding the nature and essence of an event, person, or case	Emphasizes identifying practical solutions

Research Purpose	- Predict, describe, test theory - Tackle macro-issues, using large, random, and representative samples - Identify general patterns and relationships	- Understanding and theory building - Tend to analyze micro-issues, using small, non-random, and non-representative samples - Interpreting events of significance	- Determine practical solutions and meanings - Useful for programmatic or invention- based Studies - Facilitate dialogue and compatibility between quantitative and qualitative approaches - Useful for evaluation-based studies
Research Design	- Deductive - Surveys and experiments	- Inductive - Ethnography, phenomenology, grounded theory, case study, and narrative	- Abductive - Explanatory Sequential Design - Exploratory Sequential Design - Convergent Parallel Design
Research Methods	- Questionnaires (close-ended questions) - Structured interviews or observations	- Open-ended questions - In-depth interviews - Participant observation	- Close-ended and open-ended questions - Questionnaires, structured interviews, in-depth interviews
Sample	Tend to be large, representative samples	Tend to be small, non-representative samples	Integrate both quantitative and qualitative sample
Analysis and Finding	- Computerized analysis dominated with statistical and mathematical methods - Clear distinction between facts and judgments - Findings rely heavily on the quality of the data collection instrument - Findings attempt to be comprehensive, holistic, and generalized	- Human analysis following computer or human coding - Tend to consider the contextual framework which makes distinction between facts and judgments less clear - Findings depend on how the researcher can probe deeper during data collection - Findings are seen to be deep, precise, narrow, and not generalized	- Both computerized and human analysis - Combine between facts, judgments, and contextual framework. - Findings depend on both the quality of the data collection instrument and the researcher's capability to gain data based on interview - Findings tend to be more comprehensive and precise

Source: Adapted from Bergman (2008), Saunders, et al. (2012), Creswell (2013), Cooper & Schindler (2014), Zou, et al. (2014)

3.3.1 Quantitative Approach

As shown in Figure 1.2, the first stage of the research method of the study is the quantitative approach. Quantitative research is defined as an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers, and analysed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true (Creswell, 2013). Furthermore, quantitative approaches also can be described as deductive because a researcher may build theories or hypothesis, explanations and conceptualizations from details provided by a participant (Harwell, 2011). As stated by Sukamolson, quantitative approach defined as manipulation of observations and numerical representation for the purpose of explaining and describing the phenomena that those observations reflect (Mokhsin *et al.*, 2016). The purpose of quantitative approach is to maximize objectivity, replicability, and generalizability of findings, and are typically interested in prediction (Harwell, 2011).

The quantitative method has been chosen for this study because the objective of this study is to test the hypotheses, instead of to propose a new theory (Neuman, 2014). As all variables used in this study were quantifiable and measurable, the quantitative method is suitable for this study (Creswell, 2013).

This approach is normally characterized by collecting numerical data, using deductive reasoning to link theory and research, a preference for a natural science approach (positivism) to explain social phenomena, and having an objectivist conception of social reality (Bryman, 2015). It also can be specified as a method to study social phenomena by mainly aiming to create a mathematical or statistical model between measurable constructs based on numerical data (Huysmans & De Bruyn, 2013).

Basically, there are two major research designs for conducting quantitative approach: (Creswell, 2013)

1. Surveys – provide a numeric description of trends, attitudes, or opinions of a population by reviewing a sample of that population. Normally, data for quantitative approach are collected using questionnaires, structured interviews, or structured observations with the aim to generalize from a sample of a population.

2. Experiments – the purpose is to determine a specific treatment influences an outcome. An experiment usually includes providing a specific treatment to one group and withholding it from another. Then, the performance of each group in relation to a predetermined set of outcomes was compared and analyzed.

Researcher usually employing quantitative approach in order to gather quantifiable data, enhances the scientific reliability of the findings and develops more confidence owing to the accurate data demonstrated in tables and diagrams (Ayhan, 2013). The hypotheses are tested by researcher in an attempt to support or refute the relationship statements in the theories. It started by collecting and analyzing data using quantitative approaches requires an understanding of the relationships among variables using either descriptive or inferential statistics (Soiferman, 2010:9).

Moreover, descriptive statistics can be used to attract inferences about populations and to estimate the parameters of those populations (Trochim, 2002). According to Creswell (2013), descriptive statistics indicates central tendencies in the data (mean, mode, median), the spread of scores (variance, standard deviation, and range), or a comparison of how one score relates to others (z-scores, percentile rank). In addition, inferential statistics acknowledges the researcher to compare the effect of independent variables on one or more groups by analyzing changes in the dependent variable (Creswell & Clark, 2011).

A quantitative approach was adopted for a number of reasons. First, a quantitative approach is aligned with construction of structural models that explain independent and dependent constructs. This research suggests that there are two independent variables (the determinants of homeownership including five sub-attributes, and service excellence including four sub-attributes). The framework aims to investigate the relationship between the two independent variables and the two dependent variables (purchase decision; and consumer satisfaction). The current study was considered to be explanatory in nature, in light of limited literature on the service excellence of house builders. It was anticipated that general capabilities and relationships within and among homeowners and house builders were to be examined, rather than the more in-depth 'how' and 'why' answers that qualitative research may provide (Verreynne, 2005).

Second, the goal of this study is to test the hypothesis derived from a broad research problem, examining the relationships between variables in the research model. Third, quantifiable measurements of the variables are possible and inferences can be drawn from a large sample of a population. Finally, all the variables in this study can be quantified and measured. The six-point Likert scale in the survey can indicate homeowners' purchase attitudes and the respondents' answers can be expressed as numbers. All the data collected by the mail survey have been transformed into numbers. Thus, a quantitative approach was appropriate for this study and it was employed in this research by collecting and analyzing data in terms of numbers.

The quantitative approach of this study uses a questionnaire survey as the research strategy because it creates responses from a large number of respondents (Saunders, *et al*., 2012). The respondents for the questionnaire survey are homeowners who have lived in their own newly established house for at least one year. The approaches of the questionnaires can be divided into self-administered and interviewer-administered (Saunders et al., 2012). Self-administered techniques consist of Internet-administered, postal and other delivery types. There are several advantages with a self-administered questionnaire: no interviewer prejudice, less time consumed, easier questions, more leisure to respond and more accurate data offered – especially on sensitive issues. This study was using the self-administered technique, because it needs a large sample. The implementation of a self-administered technique for this study uses postal mail instead of the internet. Postal mail is an accessible option to reach the homeowner.

3.3.2 Qualitative Approach

The next stage for this study was validating the results of quantitative approach by using a qualitative approach. Qualitative research is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting (Creswell, 2013).

Qualitative approaches focus on discovering and understanding the experiences, perspectives, and thoughts of participants (Harwell, 2011). It means that qualitative researchers study things in their natural settings, trying to make sense of, or interpret phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 2011).

The primary objective for employing qualitative methods is to ensure more detailed understanding and enhanced perception of social communications and associations (Ayhan, 2016). Mostly, researchers collect information from participants to recognize themes which allow them to develop theories inductively (Owino, 2015). As stated by McBride & Schostak, researchers interpret individual's understandings or their past experiences in regards to the corresponding research questions (Björn, 2013). The qualitative researcher tends to be subjective and cannot produce an objective account, because of their pre-existing assumptions, attitudes and beliefs (Glogowska, 2011:252).

Qualitative approach highlights words and meaning rather than quantification in the collection and analysis of data (Zou, et al., 2014:319). The main characteristics of qualitative approach are using inductive reasoning to link theory and research, an interpretivist epistemological position which stresses on the understanding of the social world through the interpretation of social participants, and a constructionist ontological position which views that social interactions influence social phenomena (Bryman, 2015). Therefore, qualitative approach strategies comprised of: (Creswell, 2013)

- Ethnography is the art and science of describing group or culture (Fetterman, 2010). Usually the researcher participates in the activities of the cultural group under investigation.

- Grounded theory is a systematic development of theory from data through inductive and deductive thinking (Phelps & Horman, 2009). The purpose of the grounded theory is to derive a general, abstract theory of a social phenomenon grounded in the views of participants.

- A case study is an idiographic examination of a single individual, family, organization, event, activity, or process (Rubin & Babbie, 2016). A variety of data collection methods can be employed to gain in-depth understanding concerning the case under investigation.

- Phenomenology is a research design which aims to understand people's perceptions, perspectives, and understanding of a particular situation (Zou, et al., 2014). A lengthy interview with people who have had direct experience with the phenomenon being studied is a typical method adopted in a phenomenology study (Leedy & Ormrod, 2010).

- Narrative is a study of the lives of individuals. The researcher asks one or more individuals to provide stories about their lives and then the researcher often retell the stories into a narrative chronology which combines views from the participants and the researcher (Zou, et al., 2014).

In order to get a better understanding of the service level provided by house builders in Auckland, the researcher was attempting to capture an understanding of the experience of the service provided to each homeowner. It was in line with the opinion expressed by Punch (2013) who argues that interviews provide an in-depth understanding of what people think about a particular research question.

During the qualitative stage, a semi-structured face-to-face interview was used to explore results from the findings in the quantitative stage. The most important stage when conducting an interview is interview preparation. It was able to identify problematic circumstances that could potentially happen during the implementation of the research. This is in line with the argument of Myers and Newman (2007) who define that the semi-structured face-to-face interview allows the research findings to be expanded by adjusting the research questions during interviews. Face-to-face interviews were executed in a satisfactory environment to create a comfortable atmosphere for all participants.

3.3.3 Mixed Approach

Mixed approach is formally defined as a method which uses quantitative and qualitative research methods, either concurrently (i.e., independent of each other) or sequentially (e.g., findings from one approach inform the other), to understand a phenomenon of interest (Venkatesh *et al.*, 2013). It means that a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration (Johnson, et al., 2007). They also argue that mixed methods research also is an attempt to legitimate the use of multiple approaches in answering research questions, rather than restricting or constraining researchers' choices (i.e., it rejects dogmatism). It is an expansive and creative form of research, not a limiting form of research. It is inclusive, pluralistic, and complementary, and it suggests that researchers take an eclectic approach to method selection and the thinking about and conduct of research (Harwell, 2011).

Thus, mixed-methods research is becoming the standard terminology for research comprising both quantitative and qualitative methods (Glogowska, 2011:253). Mixing or integrating methods and data is the core value of mixed-methods research because, by doing so, one can gain insights from multiple methods (Fielding, 2012). In addition, mixed methods can be seen as a means of beneficial social transformation and of promoting greater social justice (Mertens, 2010).

Furthermore, the purpose of mixed approaches can be described as follows: 1) complementarity (i.e., to gain complementary views about the same phenomena or relationships), 2) completeness (i.e., to gain a complete picture of phenomena), 3) developmental (i.e., to ensure the questions from one strand emerge from the inference of a previous one or one strand is used to develop hypotheses the researcher test in the next one), 4) expansion (i.e., to explain or expand on the understanding obtained in a previous strand of a study), 5) corroboration/confirmation or triangulation (i.e., to assess the credibility of inferences obtained from one approach), 6) compensation (i.e., to eliminate potential design weaknesses of one approach by using the other), and 7) diversity (i.e., to obtain divergent views of the same phenomenon) (Venkatesh *et al.*, 2016)

However, there are some advantages of mixed-methods research: 1) it enables researchers to simultaneously address confirmatory and explanatory research questions and, therefore, evaluate and generate theory at the same time; 2) it enables researchers to provide stronger inferences than a single method or worldview; and 3) it provides an opportunity for researchers to produce a greater assortment of divergent and/or complementary views (Venkatesh *et al.*, 2013). Even though a mixed methods approach clearly has certain advantages over a mono method approach, it does not mean that mixed methods approach without weaknesses. Strength and weaknesses of quantitative, qualitative, and mixed methods approach can be seen in the following table.

Table 3.3 Strengths and Weaknesses of Quantitative, Qualitative, and Mixed Approach

Research Approach	Strengths	Weaknesses
Quantitative Approach	- Testing and validating already constructed theories about how phenomena occur - Testing hypotheses that are constructed before the data are collected. Able to generalize research findings when the data are based on random samples of sufficient size - Generalize a research finding when it has been replicated on many different populations and subpopulations	- The researcher's categories that are used may not reflect local constituencies' understandings - The researcher's theories that are used may not reflect local constituencies' understandings - The researcher may miss out on phenomena occurring be- cause of the focus on theory or hypothesis *testing* rather than on theory or hypothesis *generation* (called the *confirmation bias*)

	- Useful for obtaining data that allow quantitative predictions to be made - The researcher may construct a situation that eliminates the confounding influence of many variables, allowing one to more credibly assess *cause-and-effect* Relationships - Data collection using some quantitative methods are relatively quick - Provides precise, quantitative, numerical data - Data analysis is relatively less time consuming (using statistical software) - The research results are relatively independent of the researcher (e.g., effect size, statistical significance) - It is useful for studying large numbers of people	- Knowledge produced may be too abstract and general for direct application to specific local situations, contexts, and individuals
Qualitative Approach	- The data are based on the participants' own categories of meaning - It is useful for studying a limited number of cases in depth - It is useful for describing complex phenomena - Provides individual case information - Can conduct cross-case comparisons and analysis - Provides understanding and description of people's personal experiences of phenomena (i.e., the "emic" or insider's viewpoint) - Can describe, in rich detail, phenomena as they are situated and embedded in local contexts - The researcher identifies contextual and setting factors as they relate to the phenomenon of interest - The researcher can study dynamic processes (i.e., documenting sequential patterns and change)	- Knowledge produced may not generalize to other people or other settings (i.e., findings may be unique to the relatively few people included in the research study) - It is difficult to make quantitative predictions - It is more difficult to test hypotheses and theories - It may have lower credibility with some administrators and commissioners of programs - It generally takes more time to collect the data when compared to quantitative research - Data analysis is often time consuming - The results are more easily influenced by the researcher's personal biases and idiosyncrasies

	- The researcher can use the primarily qualitative method of "grounded theory" to generate inductively a tentative but explanatory theory about a phenomenon - Can determine how participants interpret constructs - Data are usually collected in naturalistic settings in qualitative research - Qualitative approaches are responsive to local situations, conditions, and stakeholders' needs - Qualitative researchers are responsive to changes that occur during the conduct of a study (especially during extended fieldwork) and may shift the focus of their studies as a result - Qualitative data in the words and categories of participants lend themselves to exploring how and why phenomena occur - One can use an important case to demonstrate vividly a phenomenon to the readers of a report - Determine *idiographic* causation (i.e., determination of causes of a particular event)	
Mixed Approach	- Words, pictures, and narrative can be used to add meaning to numbers - Numbers can be used to add precision to words, pictures, and narrative - Researcher can generate and test a grounded theory - Can answer a broader and more complete range of research questions because the researcher is not confined to a single method or approach - A researcher can use the strengths of an additional method to overcome the weaknesses in another method by using both in a research study - Can provide stronger evidence for a conclusion through convergence and corroboration of findings - Can add insights and understanding that might be missed when only a single method is used	- Can be difficult for a single researcher to carry out both qualitative and quantitative research, especially if two or more approaches are expected to be used concurrently; it may require a research team - Researcher has to learn about multiple methods and approaches and understand how to mix them appropriately - Methodological purists contend that one should always work within either a qualitative or a quantitative paradigm - More expensive - More time consuming

	- Can be used to increase the generalizability of the results. - Qualitative and quantitative research used together produce more complete knowledge necessary to inform theory and practice	

Source: Adapted from Johnson & Onwuegbuzie (2004)

This research employed a mixed methods approach with the employment of both a quantitative approach and a qualitative approach. The use of a mixed methods approach is increasingly employed in this study as their ability to engage complementary research approaches that can lead to a more robust research (Malina, 2011). The involvement of quantitative analysis and qualitative analysis in this study leads to a determination of the role of service excellence from house builders for housing purchase decision and homeowner's satisfaction.

In addition, the combination of both research approach also led to a robust result in confirming the role and influence of homeownership attributes toward housing purchase decision and homeowner's satisfaction. Thus, the researcher believes that the employment of mixed methods research design, consisting of a quantitative survey along with qualitative in-depth interviews was improving the validity and strength of the collected data and subsequent data analysis.

3.4 Research Design

Research design typically demonstrate the entire research process, from conceptualizing a problem to the literature review, research questions, methods, and conclusions, whereas in another study, research design refers only to the methodology of a study such as data collection and analysis (Harwell, 2011). Mixed method design obtains to build on the strengths and reduce the weaknesses of both quantitative and qualitative approaches to draw inferences which can stimulate to better understanding of the topic being researched (Palinkas *et al.*, 2011). Thus, determining an appropriate research design is important for this study because it communicates information about key features of the study.

There are several mixed method designs exist, but they can be largely categorized into two classifications based on their timing which consist of concurrent which collected both quantitative and qualitative data at the same time; while sequential collected quantitative and qualitative data in a linear fashion (Creswell & Clark, 2011). They argued there are six types of mixed methods design, consist of:

1. Concurrent Triangulation Strategy: researcher comparing both quantitative and qualitative data to determine their convergence, differences, or combination. This design employing both quantitative and qualitative data in one phase of the research.

2. Concurrent Embedded Strategy: researcher use one data collection phase, both quantitative and qualitative data are collected simultaneously. This approach has a primary method that conducts the study and followed by a secondary method that provides additional role in the study.

3. Concurrent Transformative Strategy: researcher use a specific theoretical perspective as a foundation for both data collection. This design collecting both quantitative and qualitative data at the same time through one data collection phase and may have equivalent or inequivalent priority.

4. Sequential Explanatory Strategy: researcher conduct the collection and analysis of quantitative data in the first phase of study and followed by the collection and analysis of qualitative data in the following phase that support the outcomes of the first quantitative results.

5. Sequential Exploratory Strategy: researcher conduct the collection and analysis of qualitative data as the initial phase of study and followed by the collection and analysis of quantitative data in the following phase that support the outcomes of the initial quantitative results.

6. Sequential Transformative Strategy: researcher establish two phase study (either started with quantitative or qualitative) and supported with theoretical perspective.

3.4.1 Sequential Explanatory Design

As described earlier, Sequential Explanatory Design comprised of two discrete phases. In the first phase, the collection and analysis of quantitative data was started. Then it was followed by the collection and analysis of qualitative data. There are two variants of the Sequential Explanatory Design: *first,* follow-up explanation model, where a researcher using qualitative information to describe or expand on quantitative results; *second,* participant selection model, where a researcher using quantitative data to recognize and purposefully select participants for a follow-up, in-depth, qualitative study (Creswell & Clark, 2011).

The purpose of this study is to investigate the relationship between homeownership attributes and service excellence attributes on housing purchase decision and homeowner's satisfaction. This study collecting data from homeowner's perspective by using questionnaire and analyzed by using statistical techniques. In order to validate the result of quantitative data analysis, this study followed by in-depth interview with homeowner.

It means research design employed for this study is Sequential Explanatory Design which focus on *Follow-up Explanation Model.* The process of follow-up explanation model can be seen in the following figure.

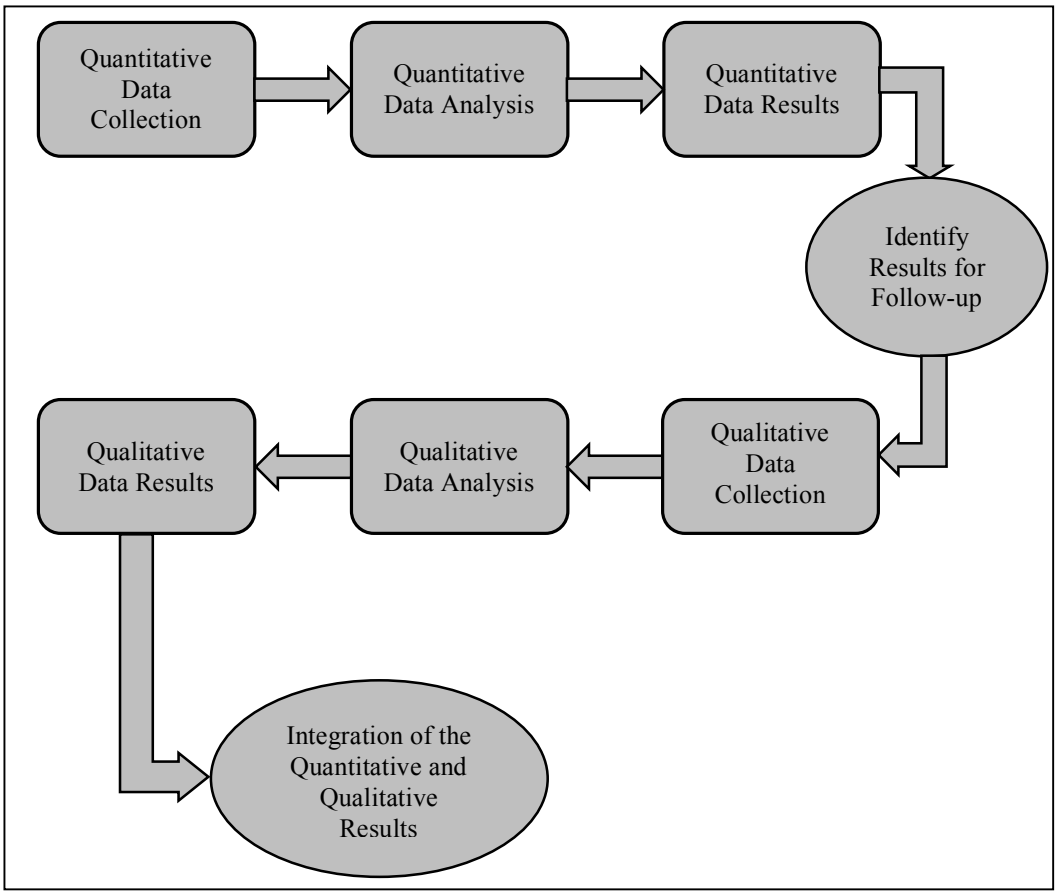

Figure 3.2 Sequential Explanatory Design
(Source: adapted from Creswell & Clark, 2011)

Sequential Explanatory Design has been implemented for many studies in the different industry. There were only limited studies in the construction management which adopting sequential explanatory design as discussed in the following table.

Table 3. 4 Sequential Explanatory Model in the Construction Management Studies

No	Research Area	Author
1	Investigation of the registered indigenous developers based on their business setup, business strategy, and company's performance	Jaafar, M. & Ali, R. (2011)
2	Decision making guidelines for sustainable construction of Industrialised Building Systems	Yunus, R. (2012)
3	Determinants of housing developer's performance	Jaafar, M. *et al.* (2014)
4	Risk management implementation in small and medium enterprises in the UK construction industry	Rostami, A. *et al.* (2015)
5	Transformation strategies for Facilities Management in Malaysia	Abdul Wahab, M. (2016)

Source: Author (developed for this research, 2017)

3.4.2 Research Design Phase One – Quantitative Study

The priority for this research was given to the quantitative research. The purpose of the quantitative study is to obtain homeowner's perception toward homeownership attributes and service excellence attributes. The quantitative study for this research was started by collecting data using questionnaire. The development of questionnaires was based on the literature review. The questionnaires are employed to provide appropriate data and information from a large number of respondents within a limited time frame (Naoum, 2012). Questionnaire was recognized as suitable tool for this study because it involves a large number of respondents. The respondents for the questionnaire survey was homeowner in Auckland who owned a house since last three years. The survey was conducted to develop suitable measurement of services provided by house builder for homeowner.

3.4.2.1 Quantitative Data Collection

The process of data collection was started by determine research sample for the study. Hence, this section identifies the sample design such as selection of sample design and sample size. In addition, questionnaire design also explored in this section started by question development, question and response format, levels of scale measurement, and physical characteristics.

3.4.2.1.1 Sampling Design

Sampling is a procedure that collects data from some members of a given population as a basis for drawing conclusions about the whole population (Sekaran & Bougie, 2016). Sampling is employed when the population is too large to conduct surveys on everyone; the purpose of sampling being to estimate an unknown characteristic of a population (Bryman & Bell, 2015).

The target population refers to the total group of people, events or things that the researchers want to investigate. Individuals in the population share some common sets of characteristics (Sekaran & Bougie, 2016). The population in this research consisted of all new homeowners who live in Auckland in last three years, it means a population of approximately 6 thousand people. It would have been impossible to cover the whole target population in this research.

3.4.2.1.1.1. Selection of Sampling Design

There are two main types of sampling design in business research: probability sampling and non-probability sampling. In probability sampling every element in the population has an equal chance or has a known chance of being selected as a subject in the sample. Non-probability sampling is employed when the elements in the population do not have an equal chance, or some of the elements have an unknown chance of being selected as sample subjects (Sekaran & Bougie, 2016).

The sampling design in this research was a procedure that collected data from some members of a homeowner's population as a basis for drawing conclusions about the whole population. However, the findings from non-probability sampling cannot be confidently generalised to the whole population. Probability sampling design can achieve this goal and has been selected in this research.

3.4.2.1.1.2 Sample size

Sample size refers to the number of observations to be investigated in the research. The exact size of the sample required depends on the budget of the research, knowledge of the variability within the sample, the degree of confidence and precision of outcome needed (Babbie, 2015). Statistical problems are unavoidable without a very large sample size (> 400) (Zikmund et al., 2013).

Setting sample size at around 400 is considered appropriate in a business study and gives almost the same accuracy in a population of 200 million as it does in a population of 4,000 (Cooper & Schindler, 2014). Moreover, in order to improve precision for multivariate analysis, the critical sample size is between 300 and 500 (Cooper & Schindler, 2014). Auckland is the largest city in Auckland with a population of approximately 4.5 million. Therefore, the researcher employed a stratified random sampling procedure. By using a 95% confidence level and a ±5% confidence interval, the sample size needed is 356. Thus, the researcher set the sample size at around 400, with a 95% confidence level and a ±4.9% confidence interval. This is appropriate for the population of Auckland.

3.4.2.1.2 Questionnaire Design

A questionnaire is a pre-formulated written set of questions to which respondents record their answers, usually using closely defined alternatives (Sekaran & Bougie, 2016). Questionnaires are used to collect primary data with maximum reliability (Babbie, 2015). Questionnaire design in survey research is very important. Basically, problem definition and objectives influence questionnaire design (Bryman & Bell, 2015).

Based on the literature review, this questionnaire contained only questions that were directly relevant to the research questions. Then, this section has been divided into several sub sections to explain the questionnaire design process, which included question development, question and response formats, scales of measurement and physical characteristics, data collection method, and physical characteristics. Each step was discussed below.

3.4.2.1.2.1 Questions Development

There are two sections in the questionnaire. Every question in the questionnaire is based on the literature review in Chapter 2. The first section of the survey is about background information and it provided information about respondents' characteristics. The second section is homeowner's opinions. This section includes seven questions about financial considerations, accessibility, neighbourhood, infrastructure, house features, service excellence, purchase-build decision, and consumer satisfaction.

3.4.2.1.2.2 Constructs in the Questionnaire

The study aims to measure respondents' perceived the importance of determinants of homeownership, as well as their attitudes toward service excellence. In order to gather more accurate answers and increase the response rate, the objective was to make the questionnaire clear and simple (Sekaran & Bougie, 2016). Table 3.6 gives a summary of the variables found in the questionnaire. All these variables were chosen based on the literature review in Chapter 2.

Table 3.5 Research Variables

First Order Construct	Second Order Construct	Third Order Construct
Determinants of homeownership **(DH)**	Financial considerations **(FC)**	• House Price (**HP**) • Income (**IC**) • Credit Affordability (**CA**)
	Accessibility **(AC)**	• Ease of access to workplace (**WP**) • Ease of access to school (**SL**) • Public Transport (**PT**) • Shopping Centre (**SC**) • Recreation Centre (**RC**)
	Neighbourhood **(NB)**	• Safe Neighbourhood (**SN**) • Clean Neighbourhood(**CN**) • Green Neighbourhood (**GN**)
	Infrastructure **(IS)**	• Road Quality (**RQ**) • Waste Management (**WM**) • Fire Systems (**FS**) • Drainage (**DR**)
	House Features **(HF)**	• House Design (**HD**) • House Quality (**HQ**) • Number and size of Bedroom (**BD**) • Number and size of Bathroom (**BH**) • Land Size (**LS**)

Service Excellence **(SE)**	Delivering the Promise **(DP)**	• Do what was Promised (**DT**) • Meet Expectations (**ME**) • Protect the Customer (**PC**) • Reliability (**RB**)
	Dealing well with problems **(DW)**	• Quick Response (**QR**) • Helping the Customer (**HC**) • Problem Solver (**PS**)
	Personal Touch **(PT)**	• Individual Treatment (**IT**) • Care (**CR**)
	Going the Extra Mile **(GE)**	• Anticipate Customer Needs (**AN**)

Source: Author (developed for this research, 2017)

3.4.2.1.2.3 Question and Response Formats

There are two major types of response formats: open-ended unstructured and closed structured (Neuman, 2014). Both formats are employed in this study and details are discussed below. *Open-ended questions* are designed to encourage respondents to answer the questions with full, meaningful words using their own knowledge or feelings. *Closed questions* limit the possible answers by providing the respondent with options from which to select a response. *Scaled-response questions* are closed questions. They use numbers assigned to identify categories or rank order, or to identify equidistant points on a scale. Scaled-response questions measure opinions of respondents directly by using scales (Neuman, 2014).

In the questionnaire in this study, the question which asks respondents for additional comments, is open-ended; questions which gather information on respondents' purchase decisions and respondent's demographic, are closed questions; and questions which are attitude measurement questions, are scaled-response questions. The disadvantages of the question forms can be reduced by using a mixture of open-ended and closed questions (Neuman, 2014), making it possible to collect more complete and accurate information.

3.4.2.1.2.4 Levels of Scale Measurement

There are four levels of scale measurement: nominal, ordinal, interval and ratio scales. Each of them is discussed later. A nominal scale uses numbers to label, classify or identify people or objects of interest (Creswell & Clark, 2011). Nominal scales are employed in the background section of the questionnaire to identify the respondents' gender and marital status.

An ordinal scale of measurement is capable of categorising information, it arranges objects based on their magnitudes, and the data are capable of being ordered (Neuman, 2014). In the questionnaire of this study, a six-point Likert scale is used to measure attitudes. The Likert scale is a psychometric scale commonly used in research that employs questionnaires to measure respondents' attitudes. It has been the most widely used approach to scaling responses in survey research since the 1930s (Creswell & Clark, 2011).

A six-point Likert scale has three negative and three positive responses used for this study. Because a six-point Likert scale offers more options than a five-point scale, it provides a higher degree of reliability (Creswell & Clark, 2011). Six-point scales have been used in past studies related to housing choice (Fierro et al., 2009). The six-point scale was considered to minimize neutral responses.

An interval scale indicates there is an equal distance between adjacent numbers as well as preserving the property (Creswell & Clark, 2011). An interval scale is used to investigate respondents' ages and incomes in the background section. A ratio scale has a true zero point when a given object is absent. It is the scale that has absolute rather than relative quantities (Creswell & Clark, 2011). A ratio scale is applied to ask whether respondents purchased residential house(s).

3.4.2.1.2.5 Data Collection Method

In business research, researchers distribute questionnaires to consumers through the mail or in other ways. A personally administered questionnaire is used when the survey is confined to a local area, and the organisation where the survey is being conducted is willing and able to assemble groups of employees to respond to questionnaires at the workplace. In this situation the questionnaire is conducted and completed in person. Respondents with any doubts about the questions can have them clarified on the spot, and researchers can collect the completed responses within a short period time.

However, it is impossible to employ personally administered questionnaires when the sample is widely spread due to the large cost and the time required. In addition, many organisations are disinclined to allow work time to be spent on data collection (Sekaran & Bougie, 2016).

A mail survey is a self-administered questionnaire which collects data by sending the questionnaire and receiving answers through the mail. Mail surveys can reach a wide geographical area and are inexpensive compared to personal interviews. Mail questionnaires are anonymous, and can be filled out by the respondents at their convenience. Their most significant disadvantage is the low response rate. Researchers always send follow-up letters, and provide self-addressed, stamped return envelopes to ensure a higher response rate. Mail surveys are most suitable when the sample is widely dispersed and the budget is limited (Bryman & Bell, 2015).

In previous studies related to this research, many researchers adopted mail surveys to collect primary data to investigate housing attributes preferences. Compared with the other data collection methods described above, a mail questionnaire-based survey is the most suitable method and was selected for this research for the following reasons:

1. It is an efficient method to collect primary data about the widespread population of Auckland.

2. A large number of respondents could be reached at a relatively low cost, and researcher time involvement was low compared to telephone interviews, face-to-face interviews and personally administered questionnaires.

3. Respondents could complete this survey at their convenience. This allowed respondents to gather the necessary information to give thoughtful answers, resulting in reduced errors and biases (Creswell, 2013).

4. Respondents are more likely to provide sensitive or embarrassing information when they can remain anonymous (Bryman & Bell, 2015). Mail surveys can meet this requirement.

5. There are some effective measures to increase response rates for mail surveys, such as interesting cover letters and question design, follow-up letters and providing self-addressed, stamped return envelopes (Sekaran & Bougie, 2016).

3.4.2.1.2.6 Physical characteristics

Careful design of the questionnaire can increase response rates in mail surveys (Marsden & Wright, 2010). The physical layout of the questionnaire is presented in the Appendix. The questionnaire was designed and printed on A4 paper and in 12-point type. Keywords are italicised, and the cover sheet contained the title of the survey. All the above features can attract the respondents' attention (Lavrakas, 2008).

3.4.2.2 Quantitative Data Analysis

After data were gathered, the next step was to edit and code the questionnaire responses, dealing with incomplete answers or omissions, transforming and transcribing, cleansing the data, and finally, typing the key data into software programs for analysis (Cooper & Schindler, 2014). Each step in the data analysis is discussed in the following section.

3.4.2.2.1 Data Preparation

In order to prepare the data, there are several stages for completing data preparation, consisting of:

1. Editing data

   This stage is the process of checking data for omissions, consistency and legibility, in order to increase accuracy and precision (Cooper & Schindler, 2014). The task of researchers in this stage is to check for errors and omissions in the data, and then to adjust the data so that it is complete, consistent and readable.

2. Coding Data

   Coding data is the practice of assigning numerical scores or classifying symbols to the edited data. In quantitative research, the data are generally coded simply by using the number corresponding to the choice selected by the respondent (Cooper & Schindler, 2014).

3. Data Transformation

   This is the process of changing the original numerical representation of a quantitative value to another value. The purpose of data transformation is to convert survey responses into a form that can be analysed by computer and to avoid problems in the data analysis process (Cooper & Schindler, 2014). Through the above three stages, the key data of the research were typed into the software program for analysis. The data in this study were entered into the Statistical Package for the Social Science (SPSS) and Analysis of Moment Structure (AMOS) software to analyse the outcomes.

3.4.2.2.2 Structural Equation Modelling (SEM)

Structural Equation Modelling (SEM) is defined as a statistical methodology that takes a confirmatory (i.e., hypothesis-testing) approach to the analysis of a structural theory bearing on some phenomenon (Byrne, 2016). She was argued that there are two important aspects of SEM which contained of: (a) the causal processes under study are characterised by a series of structural (i.e., regression) equations; (b) the structural relations can be modelled pictorially to allow a better conceptualization of the theory under study. It is linear with the previous study argued that SEM was an attempt to use correlational data to model hypothesized causal processes (Maruyama, 1997).

SEM measures the causal relationship between one or more factors which is not directly measured or called as *latent variable* with one or more directly measured variable (Ullman, 2006). The primary focus of this study was to examine relationships between latent (unobservable) constructs which consist of homeownership attributes, service excellence attributes, housing purchase decision, and homeowner's satisfaction.

The other technique used to measure *latent variable* is Partial Least Square (PLS) approach (Wold, 1982). PLS was designed to explain variance, i.e. to examine the significance of relationships and their ensuing R^2. Thus, PLS is suited for predictive applications and theory building (Chin, 1998). Since the purpose of this study to test the theory, SEM is the most appropriate research approach of the study.

The main objective of the analysis for this study was to create linear combinations of observed and latent independent variables to explain linear combinations of dependent variables (Tabachnick & Fidell, 2013). Thus SEM was chosen as the primary analytical technique of the study. Testing the assumptions that underlie Multivariate Analysis Statistical assumptions required for multivariate analysis, such as outliers, normality, linearity, and homoscedasticity, require careful testing to ensure that basic data assumptions are met for statistical conclusion validity (Scandura & Williams, 2000). Then, Analysis of Moment Structures (AMOS) is used to configure and analyse the inter-relationship among latent constructs accurately and efficiently (Byrne, 2016).

SEM combines multiple regression with factor analysis. SEM approach considers many techniques as special cases, including regression analysis, analysis of variance, path analysis; and both exploratory and confirmatory factor analysis (Wolfle, 2003). The methodology has an advantage that it can characterise and test latent construct and measurement linkages. In summary, SEM methodology has been found to be useful in the behavioural and social sciences where many of the constructs are unobservable (Jöreskog & Sörbom, 1993).

3.4.2.2.2.1 Confirmatory Factor Analysis (CFA)

CFA is employed to investigate the relationships between one or more observed variables and one or more latent variables. It also can be said that CFA used to describe the manner in which latent or unobserved variables are assessed in terms of the manifest variables (Ho, 2013). CFA tries to verify hypotheses and uses path analysis diagrams to represent variables and factors (Child, 2006). In addition, CFA is used to assess unidimensionality, validity, reliability, and fitness of a model constructs (Nazim & Ahmad, 2013).

3.4.2.2.2.1.1 Unidimensionality

As stated by Hair et al., unidimensionality is a statement focusing the calculation of reliability and is validated when the indicators of a construct have acceptable fit on a single factor model (Shammout, 2007). Unidimensionality was used to explains items or test scores. An item can be categorized as unidimensional if the systematic differences within item variance are only due to one variance source which called as latent variable (Ziegler & Hageman, 2015). Assessment of unidemensionality was conducted prior to the reliability and validity test of each construct. Defining the measurement of constructs is an essential step in the process of ensuring accuracy (Hair *et al.* 2010).

The main objective of CFA is to remove all redundant items in each construct. Redundant items relate to item(s) with factor loading higher than 0.5 or also can be said as highly correlated to each other. If the item(s) with factor loading less than 0.5, the item(s) should be removed from the model to achieve unidimensionality state (Nazim & Ahmad, 2013).

3.4.2.2.2.1.2 Reliability

The quality of a survey is mainly measured in terms of reliability and validity, which are important in establishing the credibility of the research (Bryman & Bell, 2015). Reliability is an indicator of a measure's internal consistency. A measurement can be considered reliable when it is free from error and presents the same results over time and across items (Sekaran & Bougie, 2016). Four procedures were employed to increase the reliability of this research: firstly, developing clear concept constructs in the literature review chapter; secondly, using the six-point Likert scale in the questionnaire to investigate homeowners' attitudes; and lastly, using multiple indicators of a variable to enhance research reliability.

There are three main methods to measure reliability: the test-retest, split-half reliability and equivalent-form methods. The test-retest method administers the same instrument or measures the same respondents at two different times to test for stability. The split-half method takes one half of the items of the scale and checks them against the results from the other half. The equivalent-form method employs two alternative instruments to measure equivalency (Bryman & Bell, 2015).

The most common statistical test to estimate a multiple-item scale's reliability is Cronbach's coefficient. Cronbach's coefficient is an index of the internal consistency of the items' tendency to correlate with one another. It ranges in value from 0 (no reliability) to 1 (perfect reliability). A high value of Cronbach's Alpha coefficient represents higher reliability. It also indicates that the item of an observed variables test correlates well with the true scores (Nunnally & Berstein, 1994). They argues that for a reliable scale, the minimum score for Cronbach's Alpha is 0.7.

3.4.2.2.2.1.3 Validity

Validity is the accuracy of a measure or the extent to which a score truthfully represents a concept. There are seven approaches to examining validity: face validity or content validity, criterion validity, concurrent validity, predictive validity, convergent validity, and construct validity (Neuman, 2014). Face validity is an agreement among professionals that a scale logically reflects the concept being measured. It also can be said as the degree to which a measure covers the domain of interest (Neuman, 2014).

Criterion validity refers to the ability of a measure to correlate with other measures of the same construct (Neuman, 2014). Then, concurrent validity is described as the relationships between an indicator and a preliminary validated measure of the same or closely related construct (Alpers et al., 2005). Nunnally & Bernstein argues that predictive validity can be described as the ability of the scale to assess result of variable that is external to the measurement instrument itself (Lin *et al.*, 2015).

Therefore, construct validity can be seen based on convergent validity and discriminant validity (Campbell & Fiske, 1959). Convergent validity can be stated as the extent to which a single measure connected with another measure of the identical concept (Longworth *et al.*, 2014). Conversely, discriminant validity was argued that two different constructs are not similar, the measurement of both constructs should not be connected (Neuman, 2014).

Finally, construct validity is defined as the degree of confirmation of the network of related hypotheses developed from theory on the basis of the concepts (Bryman & Bell, 2015). The purpose of this study is to investigate hypothesis based on the existing concepts. It means construct validity is an appropriate for this study. The measurement of construct validity for this study can be seen in the following table.

Table 3.6 Validity Measurement

Validity	Measurement Index	Level of Acceptance	Indicators of the Model
Convergent Validity	Factor Loadings	• < 0.3 = not interpreted • 0.32 = poor • 0.45 = fair • 0.55 = good • 0.63 = very good • 0.71 = excellent	Measure the relationship of each variables to predict the indicators based on the latent variables (Tabachnick & Fidell, 2013). The higher number of factor loadings is the better prediction.
	Average Variance Extracted (AVE)	• 0.5 = acceptable • > 0.7 = very good	Assess the level of variance taken by a constructs against the level of measurement error (Fornell & Larcker, 1981).
	Composite Reliability (CR)	• > 0.7 = acceptable value of adequate internal consistency	The comparison between indicators of construct with the combination of factor loadings and error variance of the indicator construct (Alarcón & Sánchez, 2015:7).
Discriminant Validity	Heterotrait – Monotrait (HTMT) Ratio of Correlations	• Correlations should not exceed 0.85. If the values of the correlations higher than 0.85, it means there is a lack of discriminant validity.	Measure the distinction of each construct (Henseler, et al., 2015; Kline, 2015)

Source: adapted from Fornell & Larcker (1981); Tabachnick & Fidell (2013); Alarcón & Sánchez (2015); Henseler et al (2015); Kline (2015)

3.4.2.2.2.1.4 Goodness of Fit (GOF)

Goodness of fit (GOF) measures the difference between the variables investigated in the data and the variables foresee in a statistical model (Maydeu-Olivares, 2013). GOF is used to determine the best indicating copula of the dependence structure of variables from the observed data (Yee, et al., 2014). In addition, GOF is also can be used to verify the fittest probability distribution of the duration of each construct (Cheng, et al. 2006). There are several measurements of GOF used for this study as described in the following table.

Table 3.7 Goodness of Fit (GOF) Measurement

Fit Indices	Recommended Level	Indicators of the Model
Absolute Fit Indices		
Chi-square ($\chi 2$) Model	P > 0.05	• If P > 0.05, the chi-square ($\chi 2$) is not significant and the model is rejected • If P < 0.05, the chi-square ($\chi 2$) is significant and the model is accepted (Barrett, 2007) • Chi-square ($\chi 2$) almost rejects the model when large samples are used (Bentler & Bonnet, 1980; Jöreskog & Sörbom, 1993)
Relative/normed chi-square ($\chi 2$/df)	• 2.0 = low, means accepted • 5.0 = high, means rejected	• This model is used to minimize the impact of sample size on the chi-square model (Wheaton *et al.*, 1977) • Chi-square test is proper only for moderate sample, between 100-200 (Tabachnick & Fidell, 2013)
Goodness of Fit (GFI)	Greater than 0.9, means accepted, well fitting models (Hooper *et al.*, 2008)	• Scales range from 0 to 1. Scales close to 0 shows a poor fit, while scales close to 1 shows a perfect fit • If sample sizes are low, higher threshold of 0.95 is more suitable (Miles & Shevlin, 1998)

Adjusted Goodness of Fit Index (AGFI)	Values > 0.9, means accepted, well fitting models (Hooper *et al.*, 2008)	• Scales range from 0 to 1. Scales close to 0 shows a poor fit, while scales close to 1 shows a perfect fit • AGFI adjusts GFI based on degrees of freedom, appropriate for large sample size (Tabachnick & Fidell, 2013)
Root Mean Square Error of Approximation (RMSEA)	• 0.05 = good fit • 0.08 = mediocre fit • 0.1 = poor fit (Kenny *et al.*, 2015)	Explains how well the model with unknown but optimally chosen parameter estimates would fit the populations covariance matrix (Byrne, 2013)
Root Mean Square Residual (RMR)	Small RMR indicates good fitting model (Tabachnick & Fidell, 2013)	Measure the square root of the difference between the residuals of the sample covariance matrix and the hypothesised covariance model (Hooper, et al, 2008)
Standardised Root Mean Square Residual (SRMR)	• Values range from 0.0 – 1.0	• Less than 0.05 is well fitting models (Byrne, 2013; Diamantopulos & Siguaw, 2013) • 0.08 = acceptable (Hu & Bentler, 1999) • 0 = perfect fit (Hooper, et al, 2008)
Incremental Fit Indices		
Incremental Fit Index (IFI)	• Values range from 0.0 – 1.0	• Values = 0 (poor fit), values = 1 (perfect fit) • Values ≥ 0.95 = good fitting model (Hu & Bentler, 1999)
Normed Fit Index (NFI)	• Values range from 0.0 – 1.0	• Values = 0 (poor fit), values = 1 (perfect fit) • Values ≥ 0.95 = good fitting model (Hu & Bentler, 1999)
Non-Normed Fit Index (NNFI) or Tucker-Lewis Index (TLI)	• Values range from 0.0 – 1.0	• Values = 0 (poor fit), values = 1 (perfect fit) • Values = 0.80 → acceptable (Hooper *et al.*, 2008) • Values ≥ 0.95 = good fitting model (Hu & Bentler, 1999)
Comparative Fit Index (CFI)	• Values range from 0.0 – 1.0	• Values = 0 (poor fit), values = 1 (perfect fit) • Values ≥ 0.95 = good fitting model (Hu & Bentler, 1999)

Parsimony Fit Indices		
Parsimony Goodness-of-Fit Index (PGFI)	• Values > 0.5, means good fitting model (Mulaik *et al.*, 1989)	• The purpose is to overcome complex model with a less rigorous theoretical model that produces better fit indices (Mulaik *et al.*, 1989; Crowley & Fan, 1997)
Parsimonious Normed Fit Index (PNFI)	• Values range from 0 – 1, higher values indicating a more parsimonious fit (Trost *et al.*, 2003)	• Adjusts degrees of freedom of Normed Fit Index (Mulaik *et al.*, 1989) • No threshold levels, used in tandem with other goodness of fit indices (Hooper *et al.*, 2008)
Parsimonious Comparative Fit Index (PCFI)	Values > 0.05 means good model fit (Lee *et al.*, 2017) Lowest value is the most superior (Hooper *et al.*, 2008)	• Used as parsimonious fit model (Lee *et al.*, 2017)
Akaike Information Criterion (AIC)	Lowest value is the most superior (Hooper *et al.*, 2008)	• A model selection to investigate which model best estimate the next sample (Aho *et al.*, 2014)
Consistent Version of AIC (CAIC)	Lowest value is the most superior (Desrosiers, *et al.*, 2013)	• CAIC is more accurate than AIC for the model with large sample sizes (Lin & Dayton, 1997)
Bayesian Information Criterion (BIC)		• BIC is consistent to measure variable selection (Lian, 2014)

Source: adapted from Bentler & Bonnet, 1980; Mulaik *et al.* (1989); Jöreskog & Sörbom, 1993; Crowey & Fan (1997); Lin & Dayton (1997); Miles & Shevlin (1998); Hu & Bentler (1999); Trost *et al.* (2003); Hooper *et al.* (2008); Byrne (2013); Desrosiers, *et al.* (2013); Diamantopulos & Siguaw (2013); Aho *et al.* (2014); Lian (2014); Kenny *et al.* (2015); Lee *et al.* (2017)

3.4.2.2.2.2 Structural Model

After all constructs in the measurement model through confirmatory factor analysis validated, a structural model was tested and presented as the main stage of the analysis. The structural model described as the portion of the model that identifies the relationship between latent variables (Arbuckle, 2014). The purpose of the structural model is to identify which latent constructs directly or indirectly influence the values of other latent constructs in the model (Byrne, 2012).

The structural model shows details on the links between the independent or exogenous variables and dependent or endogenous variables (Hair *et al.*, 2010; Ho, 2013). The process of the structural model evaluation is started by focusing on the overall model fit; then it followed by the size, direction and significance of the hypothesized parameter estimates, as presented by the one headed arrows in the path diagrams (Hair *et al.*, 2010). They argued that the final part of the model is the involvement of the the confirmation of the structural model of the study. It was constructed on the proposed relationship between the identified variables and measured variables.

Hence, the structural model or hypothesized relationships can be presented by using a path diagram. Path diagram consist of unobserved variables which represented by ovals; measured variables which represented by rectangles; single-headed arrows which represent dependence relationships; and double-headed arrows which represent covariance or correlations between pairs of variables.

Unobserved variables in this study includes financial consideration, accessibility, neighbourhood, infrastructure facilities, house features, delivering the promise, personal touch, GTEM, dealing well with problem, homeownership attributes, service excellence, purchase decision, and consumer satisfaction.

Therefore, observed variables for this study are house price, income, credit affordability, ease of access to workplace, ease of access to school, ease of access to public transport, ease of access to shopping centre, ease of access to recreation centre, safe neighbourhood, clean neighbourhood, green neighbourhood, road quality, waste management, fire systems, drainage, house design, house quality, number and size of bedrooms, number and size of bathroom, land size, do what is promised, meet expectations, protect the customer, reliability, quick response, helping the customer, problem solving, individual treatment, care, and anticipate customer needs.

The other symbol in path diagram is the single arrows which indicates direct relationship between a variable with another variable. For instance, the arrow linking service excellence with consumer satisfaction indicates a relationship or hypothesis between these two variables. Moreover, a double-headed arrows indicates correlations or covariance between two variables. If there is no arrow between two variables means no relationship among them. In addition, measurement error symbolized with **(e)**, whereas residual errors symbolized with **(z).** Path diagram of this study shown in Figure 3.3.

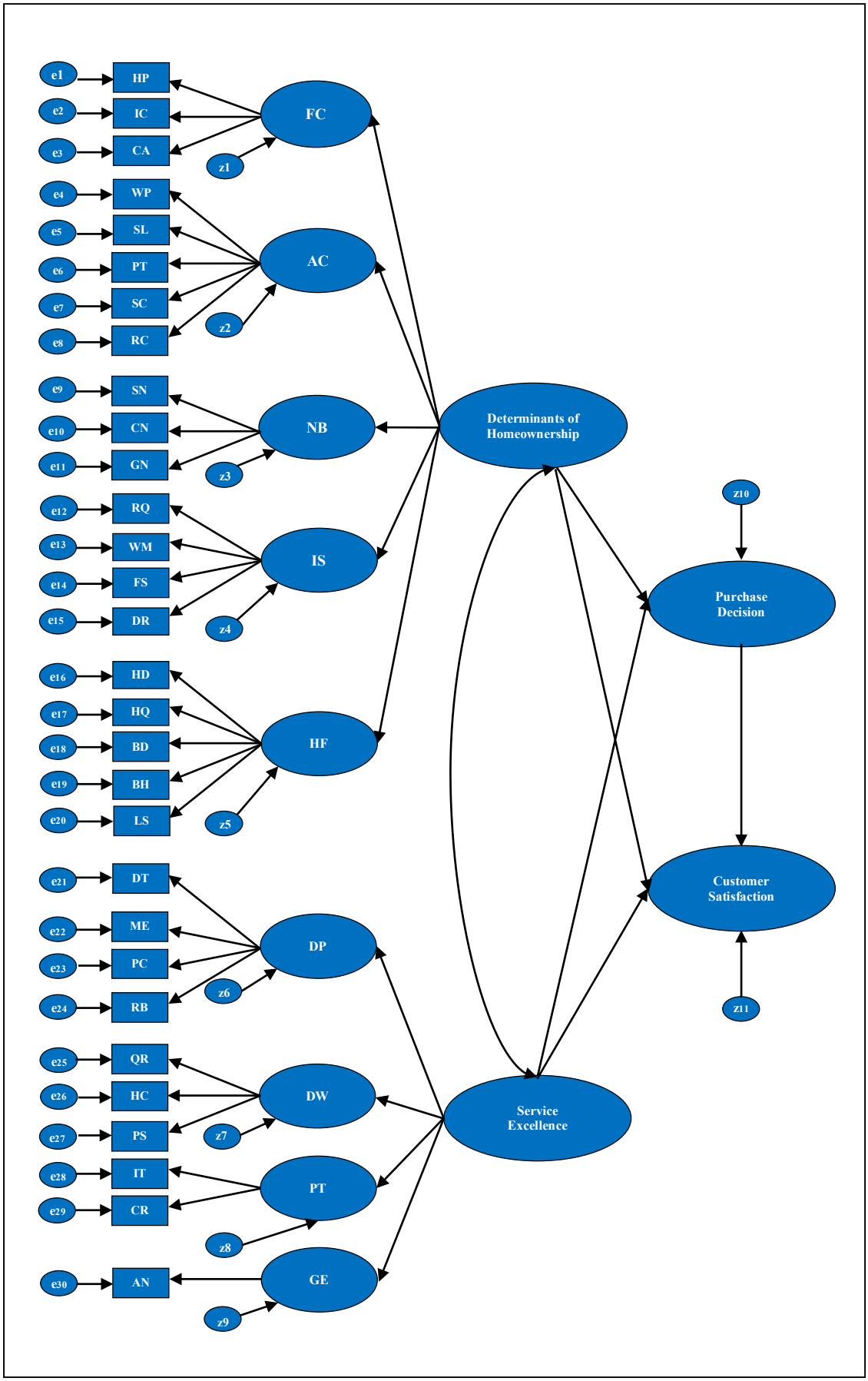

Figure 3.3 The Path Diagram of the Study
(Source: Author, developed for this research,2017)

3.4.3 Research Design Phase Two – Qualitative Study

During this phase, researcher tries to collect qualitative data and explain the statistical results by investigating participants interpretations in more depth (Tashakkori & Teddlie, 1998). The qualitative analysis was explored in depth the critical factors of the study based on the result of quantitative data analysis. The purpose of this study is to describe each constructs were significant or insignificant predictors of homeowner purchase decision and satisfaction.

3.4.3.1 Qualitative Data Collection

One method of collecting data is to interview respondents to gather information on the issues of interest. An interview is a conversation with a purpose between the interviewer and the respondent (Sekaran & Bougie, 2016). They argued that there are two main types of interactive interviews consists of face-to-face interviews and telephone interviews. A personal interview is a form of direct communication between the interviewer and the interviewee, in which the interviewer asks respondents questions face-to-face. It is a two-way conversation initiated by an interviewer to gather information from an interviewee (Bryman & Bell, 2015). The interviewer can control the topic and pattern of the discussion to confirm the accuracy of the feedback from respondents by clarifying respondents' doubts, asking for clarification or expanding on a specific response.

One of the most important advantages of face-to-face interviews is that deep and detailed information can be gathered. However, face-to-face interviews are expensive and time-consuming, so they are only suitable for research which focuses on a small sample. Another disadvantage of personal face-to-face interviews is that when asked sensitive questions, some persons may be reluctant to provide confidential information because the interviewees are not anonymous (Sekaran & Bougie, 2016).

Moreover, there are numerous ways to conduct interviews such as structured interview, semi-structured interview, and unstructured or in-depth interview (Saunders, et al., 2012). They argued that structured interview was used by using a group of questions that has been identified before the interview and conducted in questionnaire format. The interview was started by describing overview of the interview, the method of the interview, and the possible choices of the answer that can be chosen by the respondents.

The other method of interview is called as semi-structured interview. It provides more opportunities to examine thoroughly the issue of the study. During the interview, the interviewee could instruct the respondent to anticipate any misleading answer. In order to achieve the objective of the study, researcher develop research in the same context with quantitative study (Saunders et al., 2012).

Lastly, in-depth interview is described as an interview method where interviewer has an authority to conduct an interview from a general topic to a deeper topic related to the study (Saunders, et al., 2012). They argued that the interviewee has a chance to respond research questions freely. As the study focused on the critical factors of the homeownership attributes and service excellence attributes, in-depth interview is not suitable.

The most applicable interview method for this study was semi-structured interview because it enables the researcher to investigate the critical factors deeply. Researcher also has an ability to avoid any irrelevant comments and answers that were out of the interview context. In this study, the questions were created based on the development of research framework. It provides an opportunity for researcher to focus on accomplishing the research objectives.

3.4.3.2 Qualitative Data Analysis

The process of interview with each participants was audiotaped and transcribed (Creswell, 2013). The result of qualitative data collection was presented in a tabular format to show the respondents' opinions towards the quantitative findings. The purpose of tabular format is to organize the data simultaneously (Chua, 2012). Then, the method of data storage, coding, and theme development was conducted by using qualitative software.

3.4.6 Limitations of the Survey Research Method

Even though section 3.3.3 presented several advantages of the survey research method, some limitations also exist such as:

1. Poorly worded questions may lead to ambiguous responses, which cause some unclear data results.
2. The accuracy of responses is contingent on the willingness of participants to answer truthfully and completely. In order to resolve these problems the following measures were adopted (Sekaran & Bougie, 2016):

    - All the surveys were sent to a sample of Auckland's potential home owners who were recorded by Auckland Council in the last three years. All the respondents were chosen by employing a stratified random sampling procedure based on location of residence.
    - Ethical issues were considered carefully in this study. All the returned questionnaires were submitted voluntarily by participants, and the questionnaire design avoids potentially sensitive questions and gives the informants the choice of not answering any uncomfortable questions.

3.5 Ethical Considerations

One of the important considerations a researcher must attend to is the ethics of their research (Neuman, 2014). At the macro level, the fundamental principles for ethical protocols and application procedures within universities are (Burton & Steane, 2004):

- Informed consent
- Honesty
- No conflict of interest, the researcher must declare all possible conflicts of interest
- Privacy
- Non-maleficence.

Informed consent involves the researcher clearly explaining to the participants the research purpose, research process, research risks, research benefits and how the findings were used and reported. The documented agreements are written up in consent forms, which should be clear, fair and non-exploitative (Mertens & Ginsberg, 2009). In this research, the research purpose, procedure and how the findings were to be used and reported were clearly explained to participants at the beginning of the survey, using a covering letter.

Respondents were asked in a covering letter if they were willing to fill out the questionnaire. Data collection was limited to those willing to consent to participation. In fact, the research plan posed negligible risk to participants. The letter stated that the survey results would not be misused (Malhotra, 2010). The letter also stated that the findings of the research would be of benefit to housing builders/service suppliers who need a thorough understanding of homeowners' purchase choice criteria and their levels of satisfaction with housing attributes and performance, in order to provide the right products and services to homeowners.

Participation in research studies has been considered one part of their social obligation by citizens in many countries (Burton & Steane, 2004). The researcher should be honest and they must not coerce or trick anyone into participating in the research (Mertens & Ginsberg, 2009). In social research, the question of harm arises in the use of data rather than in the collection process (Malhotra, 2010). Based on responsibilities to participants, the researcher must ensure the right of participants to privacy and they should not be harmed. In this research, the prior questionnaire design avoids potentially sensitive questions, and all the returned completed questionnaires were entirely the voluntary work of the participants.

Conflicts of interest can negate the integrity of a decision or process (Neuman, 2014). In some research, the conflict of interest problem might compromise the research integrity as well as the safety of research subjects (Neuman, 2014). In this research, the integrity of the informed consent process was clearly demonstrated, and the findings of this research offer potential benefits to both homeowners and house builders.

The terms privacy and confidentiality are often used synonymously and are central ethical concerns in research. Informed consent from the participants was considered important, because gaining the participants' trust and cooperation is a necessary condition for the collection of relevant and accurate research data (Mertens & Ginsberg, 2009). The participants were not asked to give their name or any other identifying information and every respondent had the right to refuse to answer any question in the survey. Also, to protect residential house/service providers' reputations the researcher kept all personal information strictly confidential.

The researcher is obligated to avoid harming anyone in the process of their research, thus, non-maleficence is the key aspect of ethical considerations (Mertens & Ginsberg, 2009). Researchers need to respect the dignity of participants by honouring privacy, by being honest, by being mindful of the effects of findings and by trying to maximise possible benefits as much as humanly possible (Neuman, 2014).

The guidelines of the Auckland University of Technology Ethics Committee (AUTEC) were adopted for the survey questionnaire. The AUTEC considered and approved the research proposal associated with this research. Hence, the entire research process was scrutinised by an appropriate ethics authority. The research aimed to ensure adherence to all ethical considerations at the primary research stage.

A fundamental ethical consideration is that potential participants be made aware of the nature and purpose of the research. Each respondent was advised by covering letter of the purpose of the research, the topic and expected outcomes and distribution of the results. The covering letter outlined the voluntary nature of the survey, as well as the promise of confidentiality and anonymity. The Approval Number of this research by Auckland University of Technology Ethics Committee (AUTEC) was: **15/282**.

3.6 Summary

This study emphasizes on explanatory research and generate the conceptual framework to carry out the research systematically and explains the summary of the overall research. In order to clarifies the conceptual framework, there measurement techniques such as observation, questionnaires, and semi-structured interviews were adopted.

The main analysis of the study was conducting by using a quantitative research to explore relationships between constructs of housing attributes and service excellence attributes towards the homeowner's purchase decision and homeowner's satisfaction. The survey was a large sample and single time period design. A mail survey gathered self-reported perceptual judgements of homeowners in Auckland.

The analytical technique utilized in the study was Structural Equation Modelling (SEM). SEM provides information about a model's goodness-of-fit and also structural model. Then, AMOS was used to develop SEM to foresee the relationship among independent variable and dependent variable as described in the theoretical framework to accomplish the research objectives. The result of quantitative data analysis validated by using qualitative data analysis. By assessing the research hypotheses, it is hope that the implementation of service excellence contributes to the homeowner's satisfaction.

CHAPTER FOUR
QUANTITATIVE DATA ANALYSIS AND FINDINGS

4.1 Introduction

The purpose of this chapter is to clarify and discuss the implementation of service excellence in order to achieve the research objective of the study. The explanation of the study is started by a discussion of the quantitative study, then followed by a discussion of the qualitative study. The Sequential Explanatory Design was adopted for this study; quantitative data was used as the main analysis, supported by qualitative data. The quantitative data were gathered by a survey using questionnaires. Then, the results of the quantitative data analysis such as frequency distributions, descriptive analysis, and Structural Equation Modelling (SEM) were used to explain the objective of the study.

In addition, semi-structured interviews were conducted with homeowners to verify the quantitative results and identify the pattern of service excellence for the residential housing industry in New Zealand.

4.2 Descriptive Statistics

The first part of this section explains the demographic information, and descriptive statistics of each construct. The results of the SEM analysis are discussed in the following part.

4.2.1 Demographic Information

This section shows the respondents' gender, age, income, total houses owned by respondents, construction period and builder type.

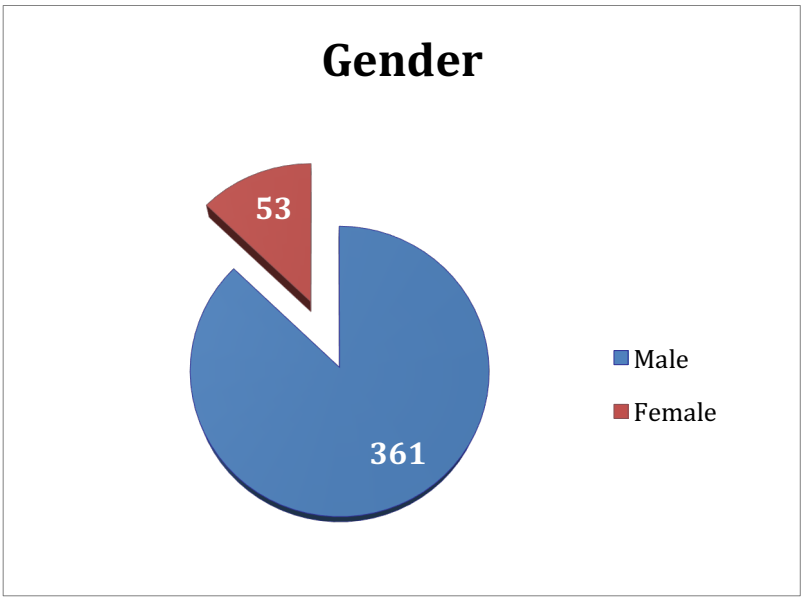

Figure 4.1 Gender of Respondents
(Source: developed for this research, 2017)

Figure 4.1 show 414 responses were received from 1,500 questionnaires distributed. 361 respondents were male (87.20%), while female respondents constituted 53 (12.80%), meaning male respondents were dominant for this study.

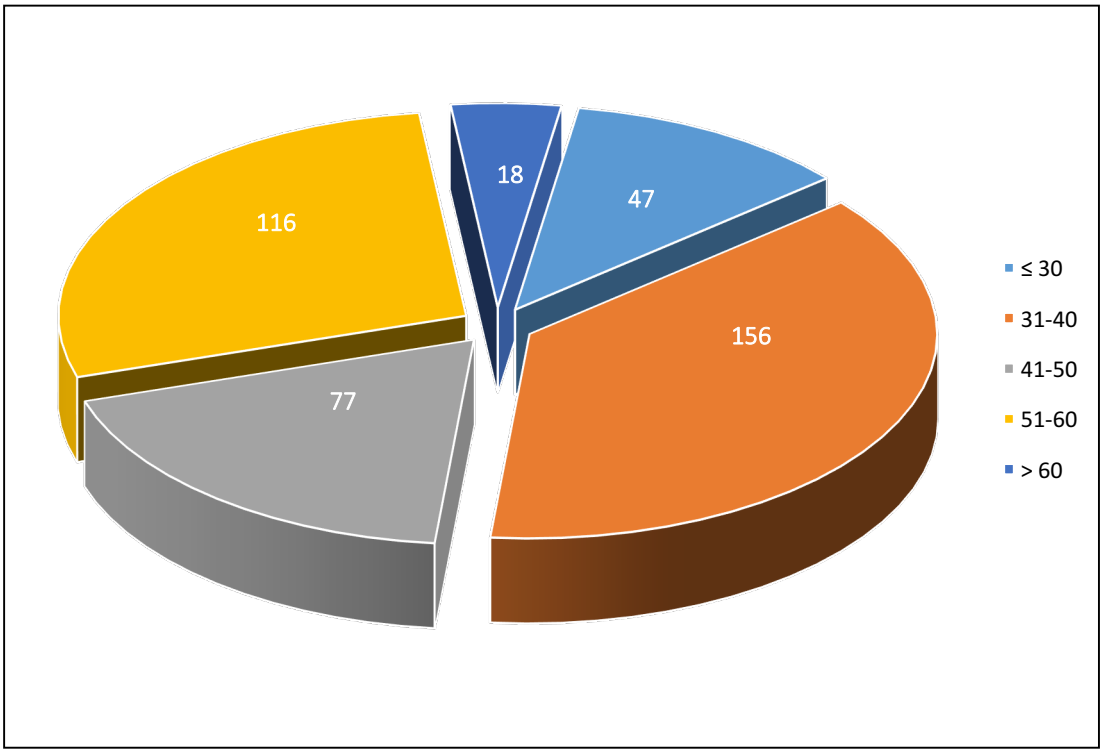

Figure 4.2 Age Group of Respondents
(Source: developed for this research, 2017)

As described in Figure 4.2, most respondents (156) were between 31 and 40 years old. 116 respondents were 51 to 60 years old. 77 respondents (18.60%) were 41 to 50 years old. 11.35% of the respondents were ≤ 30 years old and, lastly, there were only 18 homeowners (4.35%) more than 60 years old.

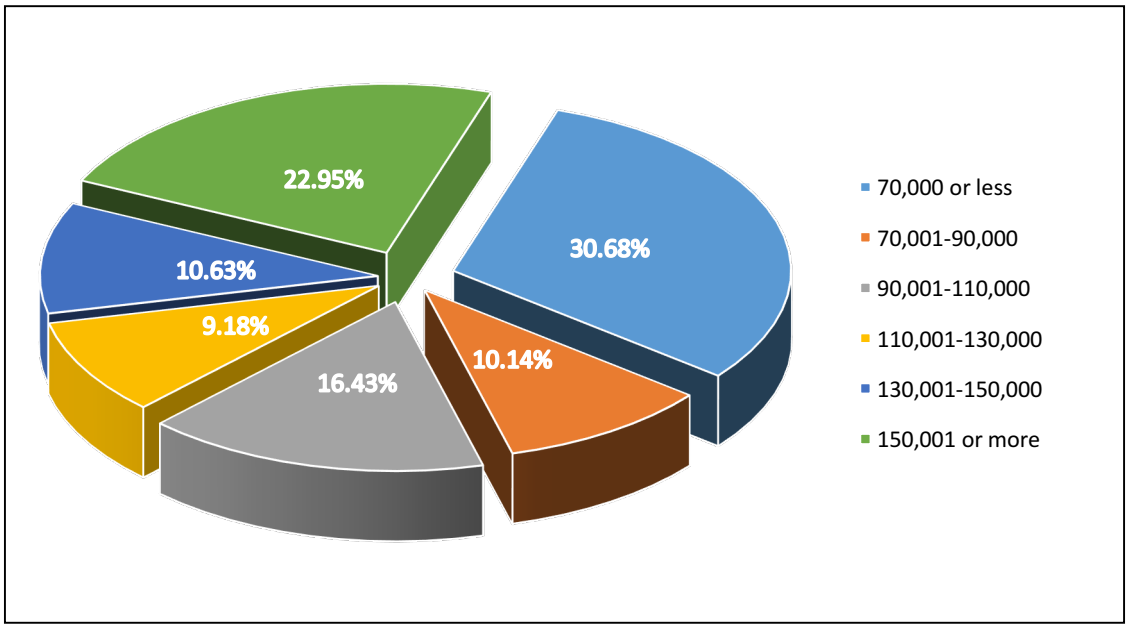

Figure 4.3 Group of Income of Respondents
(Source: developed for this research, 2017)

Figure 4.3 show 30.68% of respondents had incomes less than $70,000 per annum and 22.95% of respondents had incomes more than $150,000 per annum. The contribution of respondents in the income bracket between $90,001 and $110,000 per annum was 16.43%. The respondents in the income bracket between $130,001 and $150,000 per annum were 10.63% of total respondents. Hence, there were 10.14% respondents in the income bracket between $70,001 and $90,000 per annum and only 9.18% of respondents in the income bracket between $110,001 and $130,000 per annum.

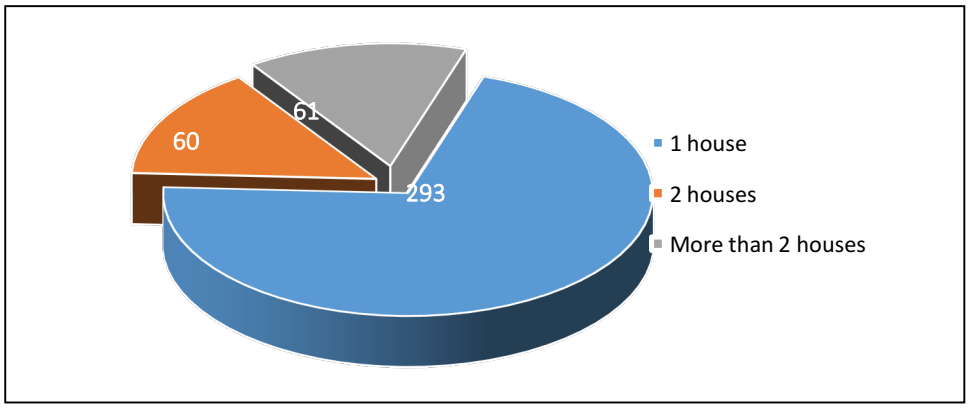

Figure 4.4 Houses owned by Respondents
(Source: developed for this research, 2017)

Figure 4.4 show 293 respondents (70.77%) had only one house, while 61 respondents (14.73%) had two houses and 60 respondents (14.49%) had two or more houses.

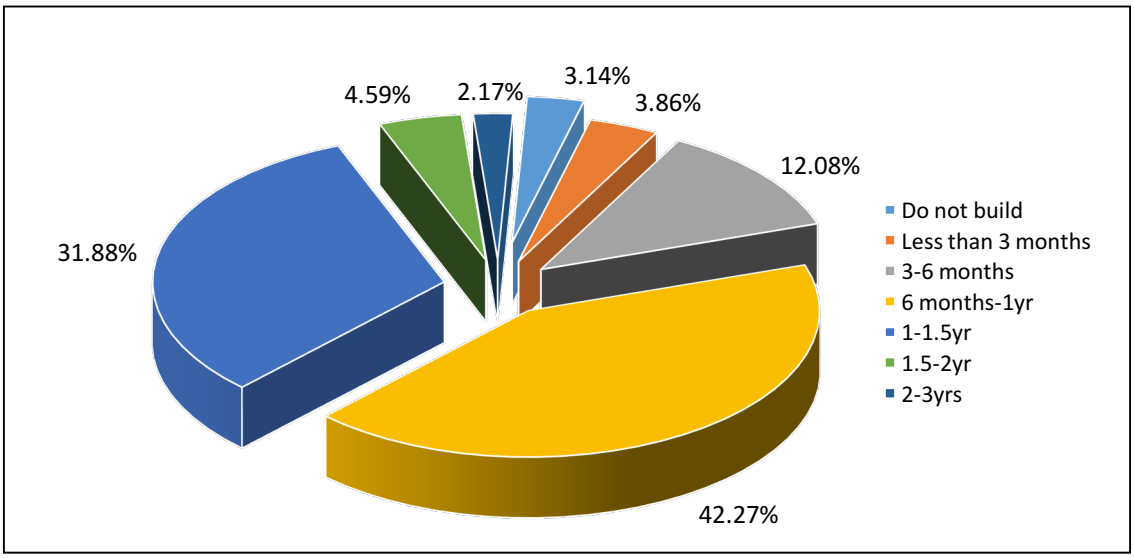

Figure 4.5 Period of Build a House
(Source: developed for this research, 2017)

Figure 4.5 show 13 respondents (3.14%) purchased without building a house. This means the majority of respondents (96.86%) of this study built a house. Most respondents had direct interaction with the house builder.

Figure 4.6. show 175 respondents (42.27%) built their house between six months and one year, 132 respondents (31.88%) between one year and one and a half years, 19 respondents (4.59%) between one and a half years and two years, 16 respondents (3.86%) less than three months and only nine respondents (2.17%) took between two and three years to build their house.

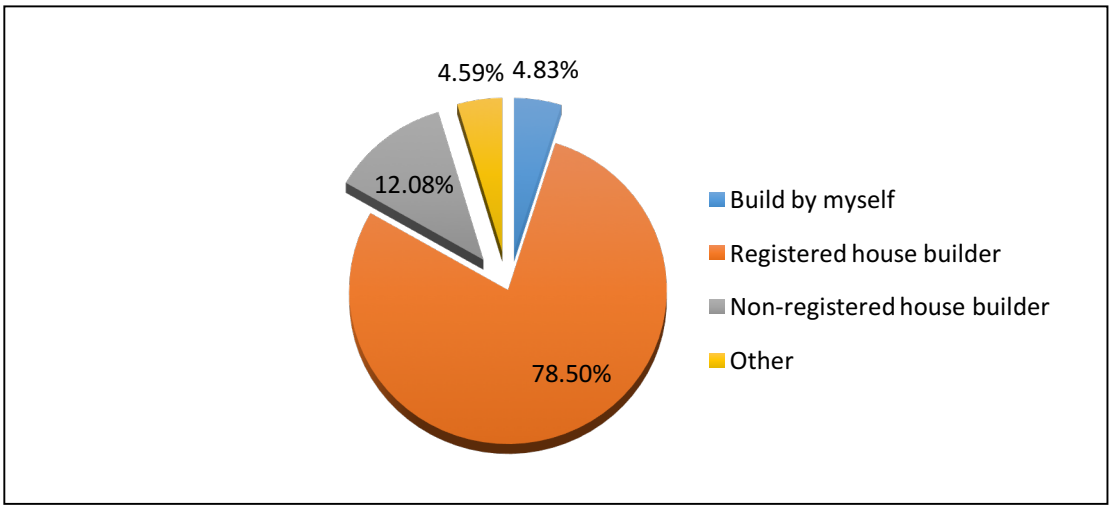

Figure 4.6 Builder Type
(Source: developed for this research, 2017)

As discussed in Figure 4.6, most (325) respondents (78.5%) built their house using a registered house builder. On the other hand, 50 respondents (12.08%) used a non-registered builder and only 20 respondents (4.59%) built their house themselves. It means, most respondents (90.58%) contracted a builder to build their house.

4.2.2 Determinants of Homeownership

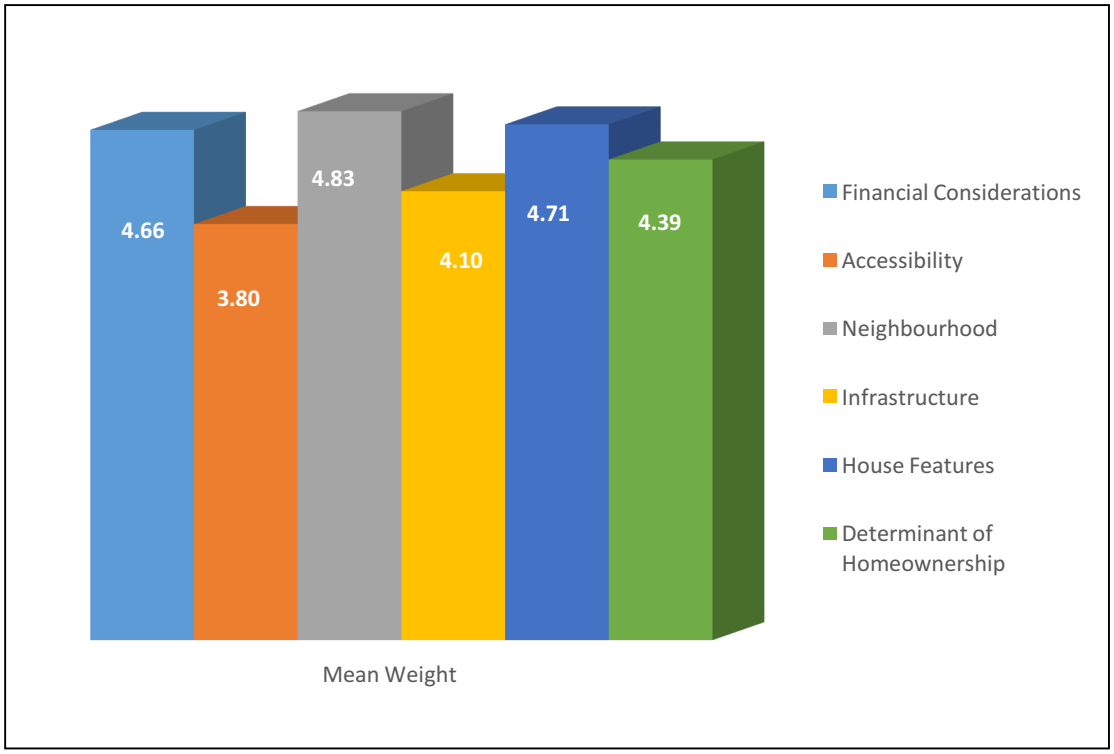

Figure 4.7 Determinants of Homeownership Attributes
(Source: developed for this research, 2017)

Table 4.1 Descriptive Statistic of Determinants of Homeownership

		Financial Considerations	Accessibility	Neighbourhood	Infrastructure	House Features	Determinants of Homeownership
N	Valid	414	414	414	414	414	414
	Missing	0	0	0	0	0	0
Mean		13.986	19.005	14.500	16.408	28.280	92.179
Mean Weight		4.662	3.801	4.833	4.102	4.713	4.390
Median		14.00	19.00	15.00	16.00	28.00	93.00
Mode		18	24	18	15	30	96
Std. Deviation		3.171	4.593	2.458	3.959	3.778	13.015
Minimum		4	5	6	4	15	61
Maximum		18	30	18	24	36	122
Sum		5790	7868	6003	6793	11708	38162

Source: Author (developed for this research, 2017)

Table 4.1 and Figure 4.7 show the neighbourhood was mostly appreciated by respondents as a key determinant factor when purchasing a house. This can be seen from the highest mean weight for neighbourhood (4.83). This was in line with a study by Tan which stated that a house or property located in a strategic neighborhood was more attractive and homeowners are willing to pay more for such a house with good-looking environmental qualities (Tan, 2011).

The mean weight for house features was 4.71, the second factor appreciated by the homeowner to purchase a house. The third factor was financial considerations with a mean weight of 4.66. The next attribute was infrastructure with a mean weight equal to 4.10. Hence, The least appreciated determinant factor to purchase a house was accessibility with a mean weight of 3.80.

4.2.2.1 Financial Considerations

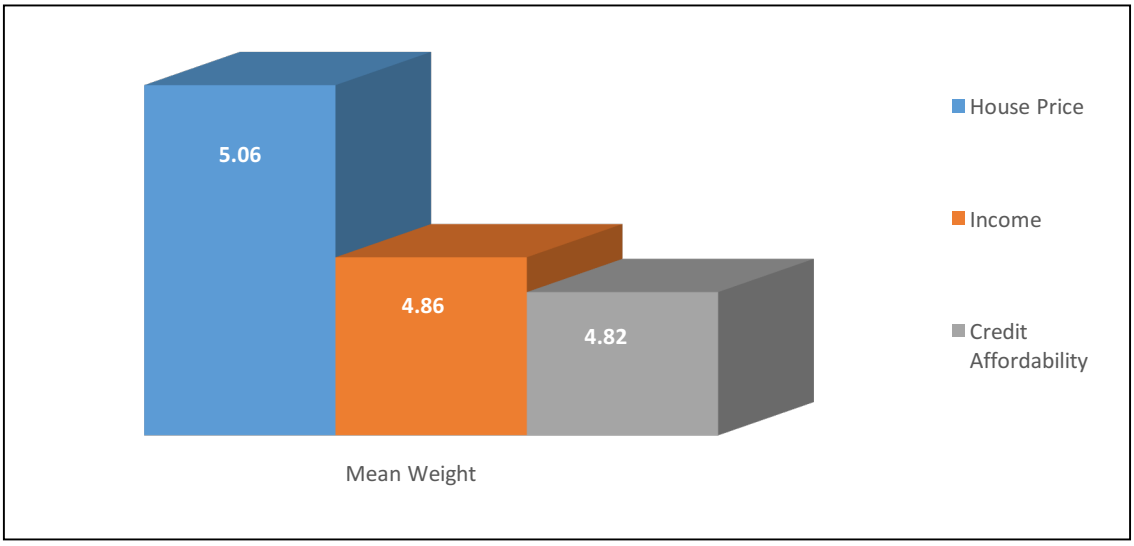

Figure 4.8 Financial Considerations Attributes
(Source: developed for this research, 2017)

Figure 4.8 shows the perception towards financial considerations which influenced house purchase decisions. The highest mean score for financial considerations was 5.06, which represented the house price. This means house price was recognized as the most appreciated of the financial considerations attributes when homeowners purchased a house. This was similar to a previous study, which mentioned that house price could be classified as the most important determinant of affordability of home ownership (Chen, et al., 2007).

Income can be categorized as the second financial consideration attribute appreciated by homeowners when purchasing a house, having a mean value score of 4.86. The least appreciated financial consideration attribute for homeowners purchasing a house was credit affordability with a mean value score of 4.86.

4.2.2.2 Accessibility

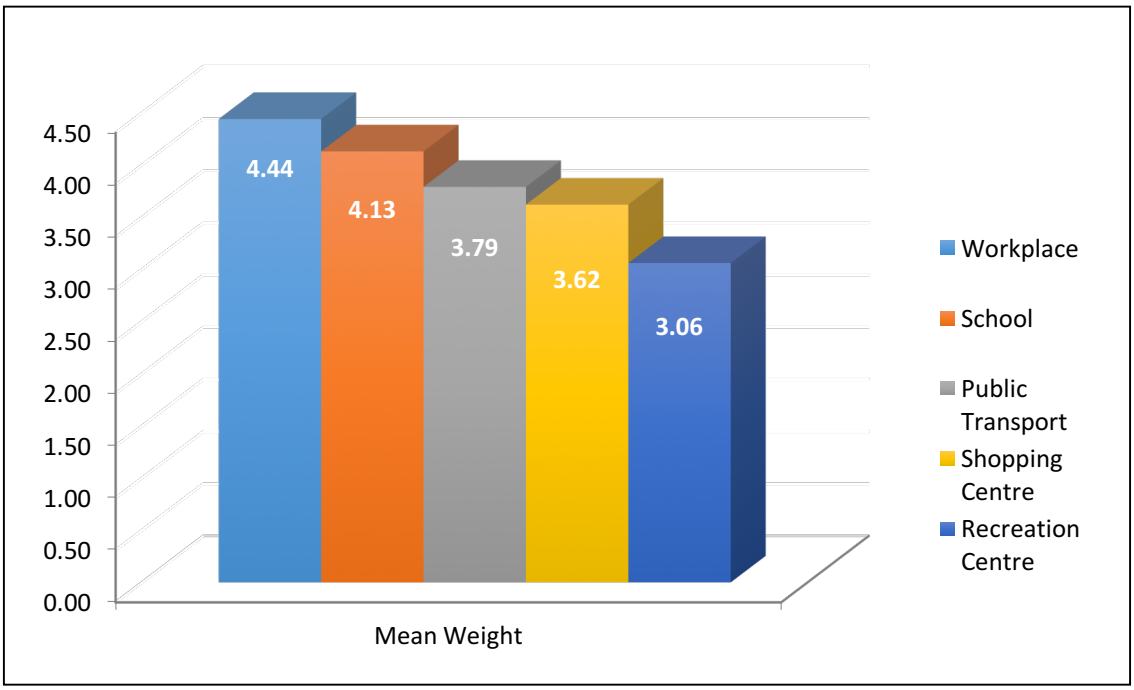

Figure 4.9 Accessibility Attributes
(Source: developed for this research, 2017)

Figure 4.9 shows the perceptions of accessibility which influence house purchase decisions. The highest mean score for accessibility was 4.44 concerning access to the workplace. This means access to the workplace was recognized as the most appreciated of the accessibility attributes for homeowners when purchasing a house. This was similar to a previous study, which showed that access to the workplace was very important for homeowners when purchasing a house (Findsen, 2005).

The second highest mean score for accessibility was 4.13 concerning access to schools, followed by access to public transport and a shopping centre with mean score values of 3.79 and 3.62 respectively. The lowest mean score for accessibility was 4.13 concerning access to a recreation centre. It means recreation centre access was least appreciated of the accessibility attributes for homeowners when purchasing a house.

4.2.2.3 Neighbourhood

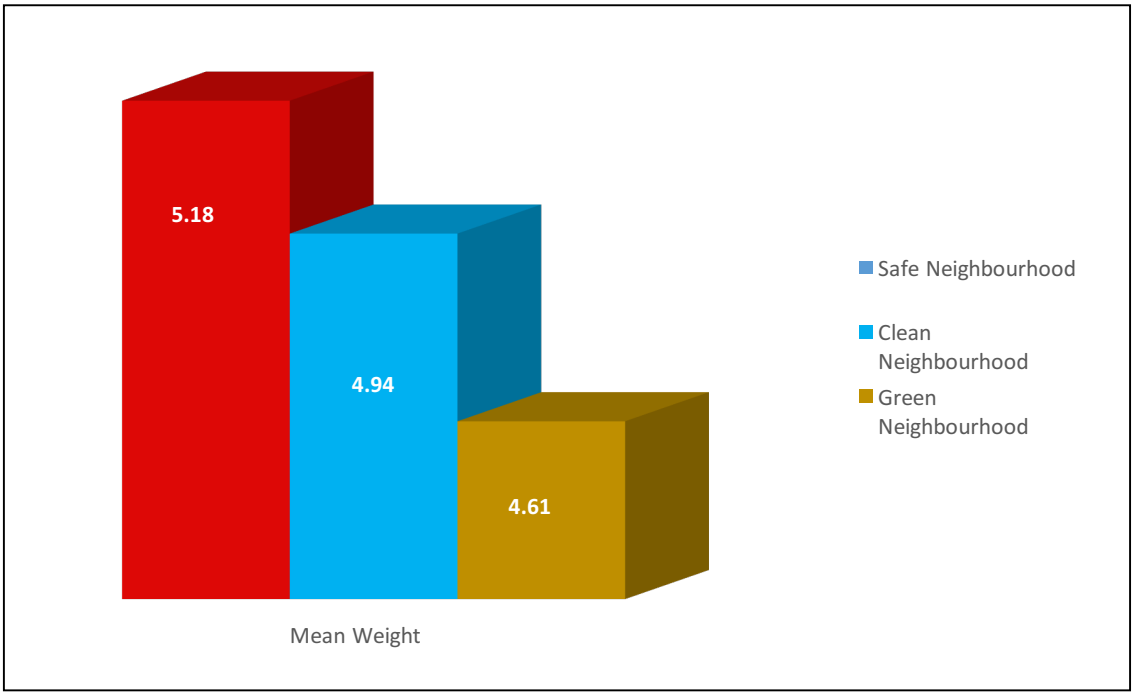

Figure 4.10 Neighbourhood Attributes
(Source: developed for this research, 2017)

Figure 4.10. shows the perception towards neighbourhood which influenced house purchase decisions. The highest mean score here was 5.18, concern for the safety of the location. So neighbourhood was recognized as the most appreciated neighbourhood attribute for homeowners when purchasing a house. This was similar to a previous study that mentioned that neighbourhood safety was an important standard in residential sorting (Gimpel & Hui, 2015).

Neighbourhood cleanliness was recognized next with a mean score of 4.94. The lowest mean score for neighbourhood was 4.61, which concerned green neighbourhood as the least important factor when purchasing a house.

4.2.2.4 Infrastructure

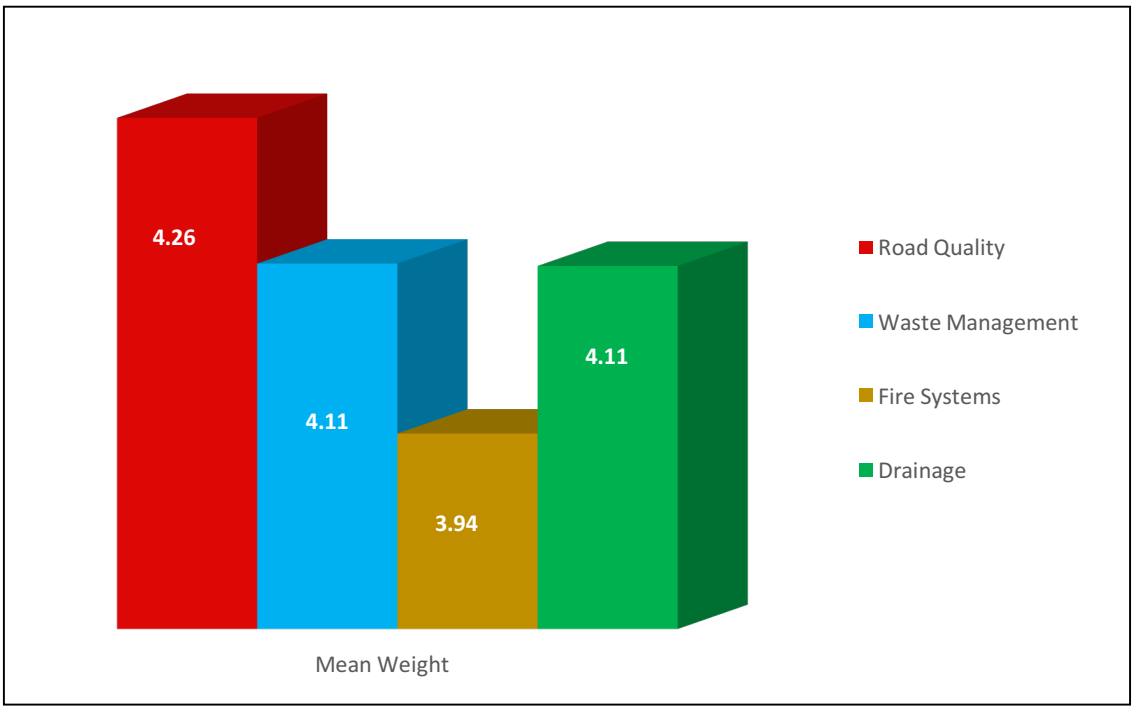

Figure 4.11 Infrastructure Attributes
(Source: developed for this research, 2017)

Road quality was the most appreciated of the infrastructure attributes for homeowners when purchasing a house with a mean weight score of 4.26, a similar result to a previous study which mentioned road quality as a basic need for local residents (Renigier-Biłozor, 2014). In addition, road quality can be categorized as one of the most important determinants of the house price (Ilechukwu, 2013).

Waste management and drainage were recognized next with a mean score of 4.11, and the least appreciated infrastructure attribute was fire systems (3.94). Fire systems was obviously not important to house purchasers.

4.2.2.5 House Features

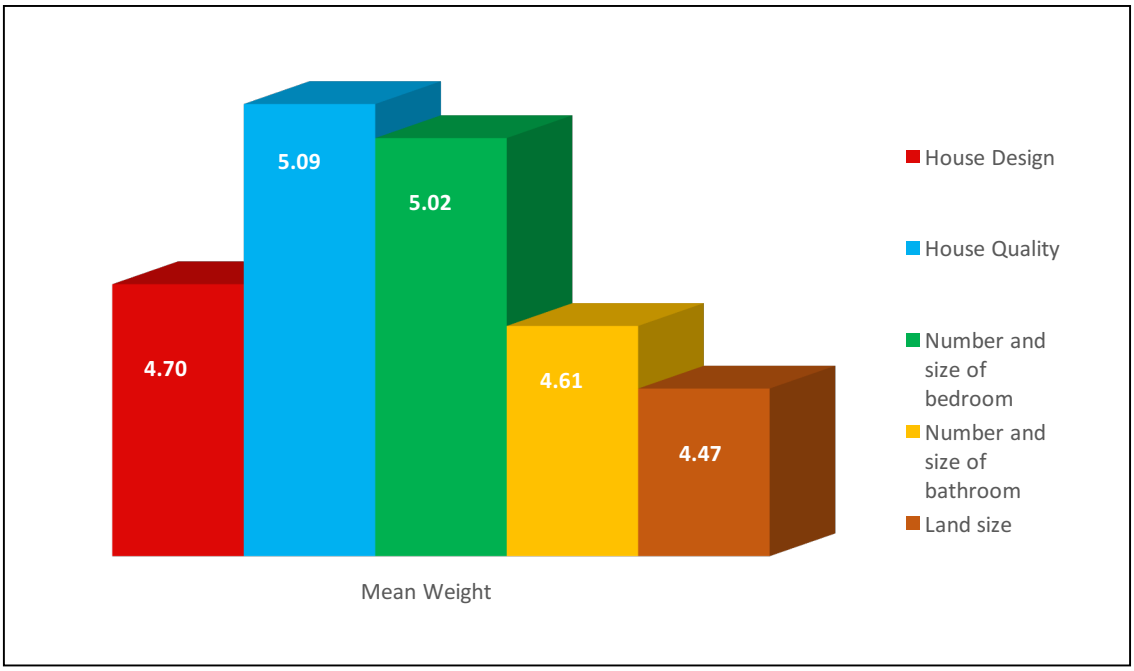

Figure 4.12 House Features Attributes
(Source: developed for this research, 2017)

House quality became the most appreciated house features attribute for homeowners when purchasing a house with a mean score of 5.09. These findings agreed with a previous study concerning quality of building having significant effects on consumers' purchase decisions (Opoku & Abdul Muhmin, 2010; Si, 2012). Number and size of bedrooms was next with a mean score of 5.02.

Mean score for house design was 4.70, so house design was less appreciated compared to house quality and bedroom features. In addition, number and size of bathrooms became the fourth attribute with a mean score of 4.61. Finally, land size was last with a mean score of 4.47. Land size was obviously not important to house purchasers for this study.

4.2.3 Service Excellence

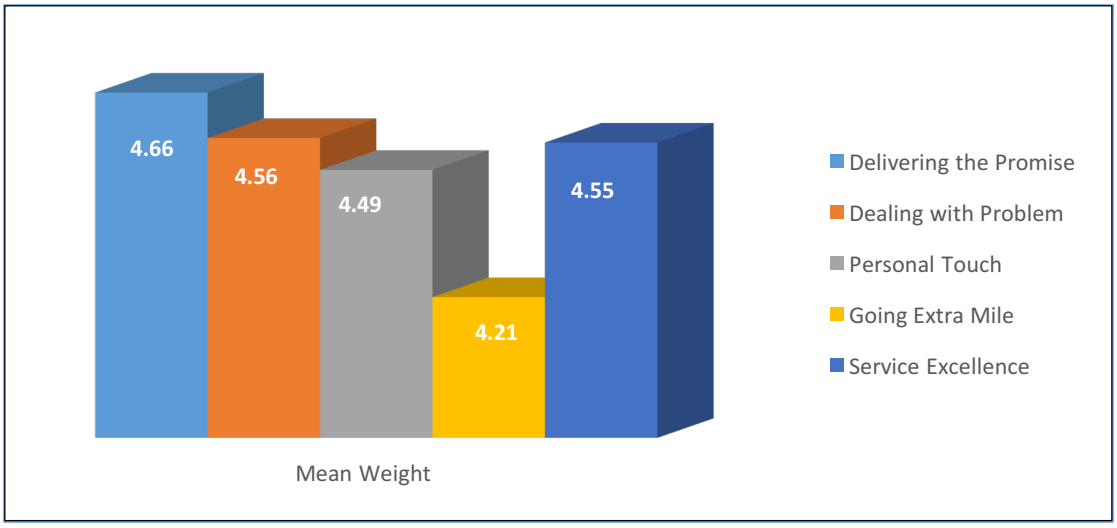

Figure 4.13 Service Excellence Attributes
(Source: developed for this research, 2017)

Table 4.2 Descriptive Statistic of Service Excellence

		Delivering the Promise	Dealing well with problem and queries	Providing the personal touch	GTEM	Service Excellence
N	414	414	414	414	414	414
	0	0	0	0	0	0
Mean		18.633	13.684	8.978	4.210	45.505
Mean Weight		4.658	4.561	4.489	4.210	4.551
Median		19.00	14.00	9.0000	4.00	46.00
Mode		24	12	10.00	4	50
Std. Deviation		4.036	2.996	2.00774	1.000	9.170
Minimum		4	3	2.00	1	10
Maximum		24	18	12.00	6	60
Sum		7714	5665	3717.00	1743	18839

Source: Author (developed for this research, 2017)

Delivering the promise (delivering what was promised) was described as the most appreciated service excellence attribute to determine house purchase decision reflected by the highest mean weight (4.66). Dealing well with problems and queries came next (4.56) followed by providing the personal touch (4.49). The least appreciated service excellence attribute was GTEM which had smallest mean weight score (4.21).

4.2.3.1 Delivering the Promise

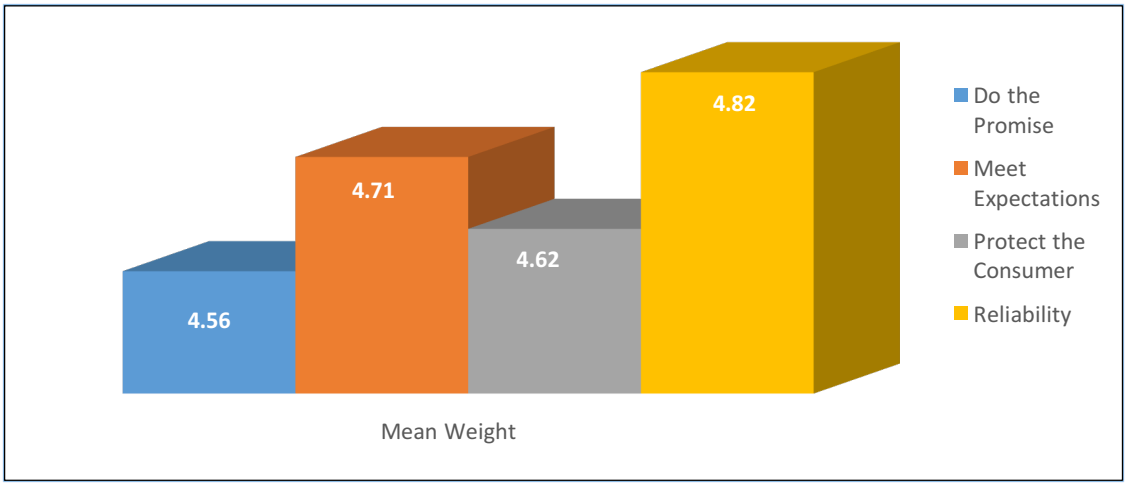

Figure 4.14 Delivering the Promise Attributes
(Source: developed for this research, 2017)

Reliability became the most appreciated attribute of delivering the promise as shown by the highest mean weight score (4.82). A mean weight score of 4.71, meant meet expectations became the second factor appreciated by homeowners when purchasing a house. Then, protect the consumer came third (4.62) and the least appreciated factor of delivering the promise was do the promise attribute (4.56).

4.2.3.2 Dealing Well with Problems

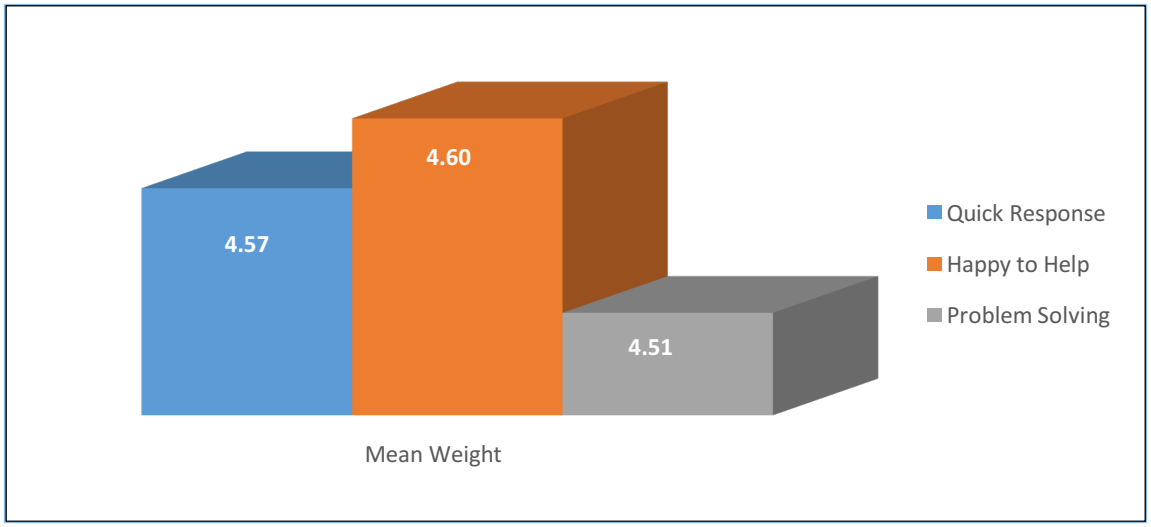

Figure 4.15 Dealing Well with Problems Attributes
(Source: developed for this research, 2017)

The willingness of the house builder to help was recognized as the most appreciated attribute of the dealing well with problems element when a homeowner purchases a house. This can be seen from the highest mean weight score of 4.60. A quick response from the builder was indicated as the second appreciated attribute with 4.57. The least appreciated attribute of dealing well with problem element was problem solving with 4.51.

4.2.3.3 Personal Touch

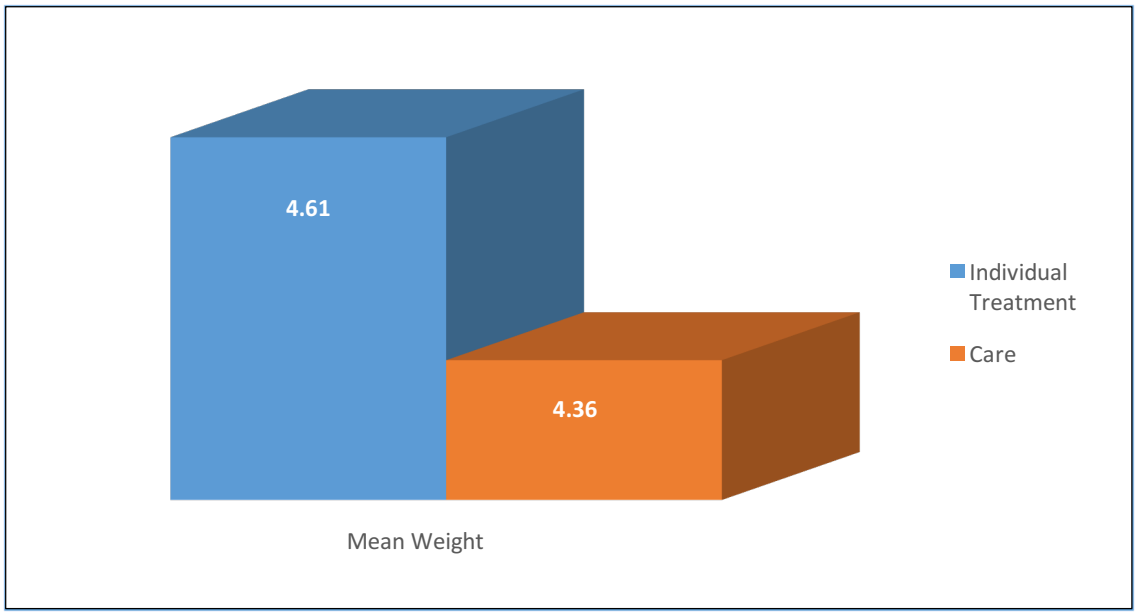

Figure 4.16 Personal Touch Attributes
(Source: developed for this research, 2017)

Individual treatment from the house builder became the most appreciated factor of the personal touch attribute when a homeowner purchases a house, with the highest mean weight score of 4.61. Care by the house builder became the least appreciated factor of the personal touch attribute with the lowest mean weight score of 4.36.

4.2.3.4 GTEM

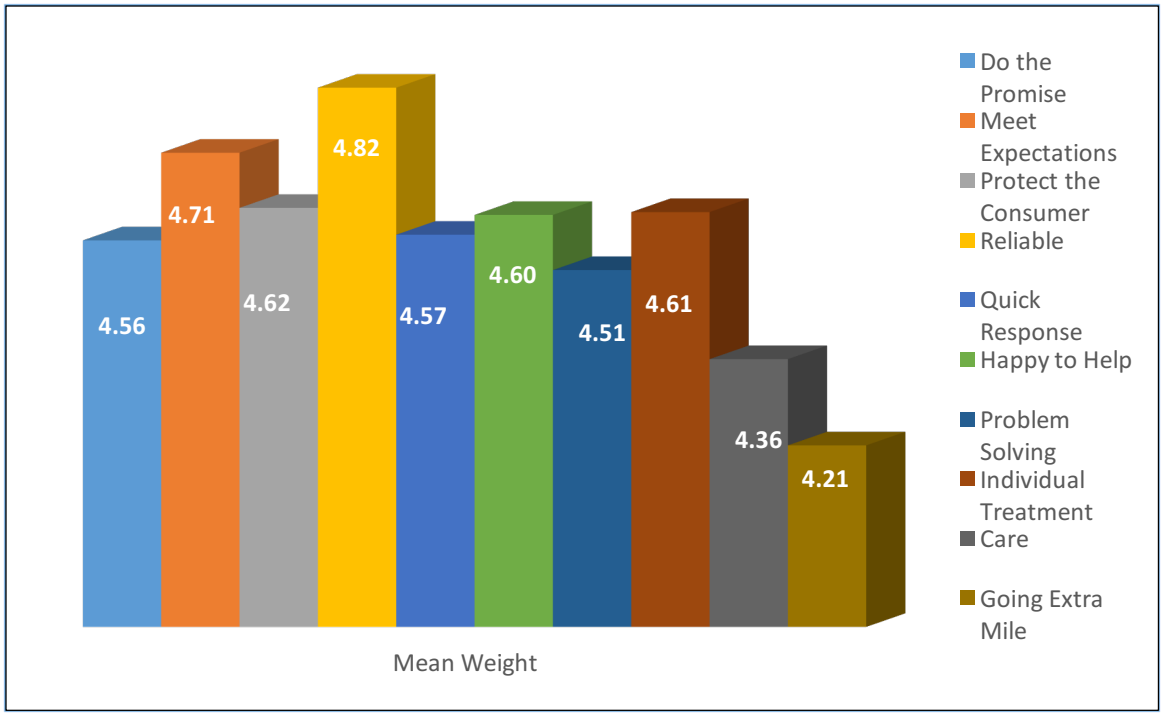

Figure 4.17 GTEM Attributes
(Source: developed for this research, 2017)

GTEM became the least appreciated factor in the service excellence element. This can be seen from its lowest mean weight score of 4.21. In other words, the builder's GTEM was not very appreciated by homeowners when they purchased a house.

4.2.4 Critical Factor of the Purchase Decision Attribute

The results as displayed in Table 4.3 show that homeowners are more concerned about the safe neighbourhood attribute of determinant of homeownership. It can increase their assurance when they purchase a house in a district they consider safe. On the other hand, homeowners are more concerned about the reliability attribute for service excellence from the house builder. It can increase their assurance and self-confidence toward the house builder.

26 attributes were identified by the homeowners as significant factors (i.e. having a mean score above 4.0) in determining a house purchase decision. In addition, there were four attributes recognized by the homeowners as very significant factors: house price with a mean score of 5.18, house quality with a mean score of 5.09, safe neighbourhood with a mean score of 5.06, number and size of bedrooms with a mean score of 5.02.

There were only four attributes identified by the homeowners as less significant factors in determining a house purchase decision: fire systems with a mean score of 3.94, ease of access to public transport with a mean score of 3.79, ease of access to shopping centre with a mean score of 3.62, and ease of access to recreation centre with a mean score of 3.06.

Table 4.3 House Purchase Decision Attributes

No	Purchase Decision Attributes	Mean	Std. Deviation	Rank
	Determinant of Homeownership			
1	House Price	5.18	0.96	1
2	House Quality	5.09	0.88	2
3	Safe Neighbourhood	5.06	1.21	3
4	Number and Size of Bedroom	5.02	0.89	4
5	Clean Neighbourhood	4.94	0.76	5
6	Income	4.86	1.12	6
7	Credit Affordability	4.82	1.15	7
8	House Design	4.70	0.75	8
9	Green Neighbourhood	4.61	1.07	9
10	Number and Size of Bathroom	4.61	0.86	9
11	Land Size	4.47	0.95	11
12	Ease of Access to Workplace	4.44	0.92	12
13	Road Quality	4.26	0.95	13
14	Ease of Access to School	4.13	1.26	14
15	Drainage	4.11	1.17	15
16	Waste Management	4.11	1.19	15
17	Fire Systems	3.94	1.26	16
18	Ease of Access to Public Transport	3.79	1.45	17
19	Ease of Access to Shopping	3.62	1.15	18

	Centre			
20	Ease of Access to Recreation Centre	3.06	1.19	19
Service Excellence				
21	Reliable	4.82	1.07	1
22	Meet Expectations	4,71	1.06	2
23	Protect the Consumer	4.62	1.15	3
24	Individual Treatment	4.61	0.99	4
25	Helping the Customer	4.60	1.05	5
26	Quick Response	4.57	1.18	6
27	Do what was promised	4.56	1.08	7
28	Problem Solving	4.51	1.03	8
29	Care	4.36	1.12	9
30	Anticipate needs	4.21	1.00	10

Source: Author (developed for this research, 2017)

The homeowners identified all the service excellence attributes as significant factors in determining house purchase decision. The most significant service excellence attribute was reliability with a mean score of 4.82. This was followed by meeting expectations with a mean score of 4.71, protecting the consumer with a mean score of 4.62, individual treatment with a mean score of 4.61, helping the customer with a mean score of 4.60, quick response with a mean score of 4.57, do what was promised with a mean score of 4.56, problem solving with a mean score of 4.51, care with a mean score of 4.36 and anticipating needs with a mean score of 4.21.

The t-test analysis was used to classify the 'important' and 'most important' attributes (Ekanayake & Ofori, 2004). It started by comparing the null hypothesis (H_0): $\mu_1 < \mu_0$ versus alternative hypothesis (H_1): $\mu_1 > \mu_0$, where μ_1 symbolizes the population mean and μ_0 symbolizes the critical rating (Wong & Li, 2006). The value of μ_0 for this study was defined as "4" because it showed "slightly agree", "mostly agree", and "completely agree" statements in the questionnaire. The null hypothesis (H_0) rejected when the observed t-values (t_0) are greater than the critical t-value (t_c). The formulation of t_0 and t_c can be seen as follows: (Wong & Li, 2006)

$$t_0 = \frac{\chi - \mu_0}{\sigma / \sqrt{\eta}}$$

$$t_c = t_{(\eta-1,\ \alpha)}$$

t_0 = observed t-values

χ = sample mean

μ_0 = critical rating

σ = standard deviation

η = sample size

t_c = critical t-value

η = sample size

η-1 = degree of freedom

α = significant level, 5%

The critical t-value (t_c) for this study was defined as $t_{(413,0.05)}$ = 1.984; this means the null hypothesis (H_0) where the attributes were "completely disagree", "mostly disagree", and "slightly disagree" was rejected and only the alternative hypothesis (H_1) was accepted.

Table 4.4 Critical Factor Attributes

No	Purchase Decision Attribute	Mean	Std. Deviation	Mean Rank	t-value
	Determinant of Homeownership				
1	House price	5.18	0.96	1	25.010
2	House quality	5.09	0.88	2	25.203
3	Safe Neighbourhood	5.06	1.21	3	17.825
4	Number and size of bedroom	5.02	0.89	4	23.319
5	Clean Neighbourhood	4.94	0.76	5	25.166
6	Income	4.86	1.12	6	15.624
7	Credit affordability	4.82	1.15	7	14.508
8	House design	4.70	0.75	8	18.991
9	Green Neighbourhood	4.61	1.07	9	11.600
10	Number and size of bathroom	4.61	0.86	10	14.432
11	Land size	4.47	0.95	12	10.066
12	Ease of access to workplace	4.44	0.92	13	9.731
13	Road quality	4.26	0.95	14	5.569
14	Ease of access to school	4.13	1.26	15	2.099
15	Drainage	4.11	1.17	16	1.913

16	Waste management	4.11	1.19	17	1.881
Service Excellence					
1	Reliable	4.82	1.07	1	15.593
2	Meet expectations	4,71	1.06	2	13.629
3	Protect the consumer	4.62	1.15	3	10.970
4	Individual treatment	4.61	0.99	4	12.537
5	Helping the customer	4.60	1.05	5	11.627
6	Quick response	4.57	1.18	6	9.829
7	Do what was promised	4.56	1.08	7	10.550
8	Problem solving	4.51	1.03	8	10.075
9	Care	4.36	1.12	9	6.540
10	Anticipate needs	4.21	1.00	10	4.273

Source: Author (developed for this research, 2017)

There were 26 out of 31 attributes which had a mean score higher than the mean score threshold, $\chi > \mu_{0,}$ where $\mu_{0\ is}$ equal to 4, consisting of 17 attributes of homeownership and 10 attributes of service excellence. The standard deviation shows the dispersion of each number of data from the mean score. A small standard deviation represents that the data points are closer to the mean of the data set. On the other hand, a greater standard deviation represents that the data points are spread out over a broader range of values. Furthermore, the t-value was used to determine critical factors by comparing the observed t-values (t_0) and the critical t-value (t_c).

As discussed earlier, the critical t-value (t_c) for this study was t_c or $t_{(413,\ 0.05)}$ equal to 1.984. Based on a threshold of $t_{c,}$ Table 4.4 shows there were 24 critical values for this study comprised of 14 critical values for determinants of homeownership and 10 critical values of service excellence. Critical values for determinants of homeownership were house price, house quality, safe neighbourhood, number and size of bedrooms, clean neighbourhood, income, credit affordability, house design, green neighbourhood, number and size of bathrooms, land size, ease of access to workplace, road quality and ease of access to school.

In addition, critical values for service excellence were reliable, meet expectations, protect the consumer, individual treatment, helping the customer, quick response, do what was promised, problem solving, care and anticipating needs. Then, it can be seen that safety became the most significant factor for determinant of homeownership, while reliable became the most significant factor for service excellence. These findings could be used for further investigation.

4.3 Structural Equation Modelling (SEM)

The discussion of SEM was started by an explanation of the Confirmatory Factor Analysis (CFA) followed by a discussion of the structural model. Both CFA and structural model analysis explored in the next section.

4.3.1 Confirmatory Factor Analysis (CFA)

The CFA Model for this study was comprised of 30 items used to investigate nine first constructs (FC, AC, NB, IS, HF, DP, DW, PT, GE) and two second constructs (determinant of homeownership and service excellence). Each item was observed to determine the relationships between each variable. CFA was also used to verify the hypotheses of the study. It was started by discussing Goodness of Fit Indices (GOF), reliability, validity and factor loadings.

4.3.1.1 Goodness of Fit (GOF) Indices

The model of this study as shown in Table 4.5 was accepted since $\chi 2$ equalled 2011.430, df equalled 479 and p equalled 0.000. The other absolute fit indices for this study were quite satisfactory with $\chi 2/df$ = 4.199, GFI = 0.777, AGFI = 0.739, and RMSEA = 0.088. Even though the relative $\chi 2/df$ was higher than 2, it was still accepted because it was less than the highest threshold (Tabachnick & Fidell, 2013). Based on the results of the AGFI analysis, it can be stated that the model predicts 73.9% of the variances and covariances in the survey data. Therefore, the RMSEA value was indicating a mediocre fit model for the study.

Incremental fit indices for this study were indicated by IFI, NFI, TLI, and CFI. The value of IFI was 0.853, which means the model was a satisfactory fit model (Hu & Bentler, 1999). NFI was indicated as a satisfactory fit model with a value equal to 0.816. Moreover, the other fit indices (TLI = 0.837 and CFI = 0.852) were indicating a satisfactory fit model.

Table 4.5 Goodness of Fit (GOF) Table

GOF Indices	Model Value	Recommended Level	Source
Absolute Fit Indices			
df	479		
$\chi 2$	2011.430		
P-Value	0.000	< 0.05	Barrett (2007)
$\chi 2$/df	4.199	2.0 – 5.0	Tabachnick & Fidell (2013)
GFI	0.777	> 0.9	Hooper *et al.* (2008)
AGFI	0.739	> 0.9	Tabachnick & Fidell (2013)
RMSEA	0.088	0.05 < value < 0.1	Kenny *et al.* (2015)
Incremental Fit Indices			
IFI	0.853	0.0 – 1.0	Hu & Bentler (1999)
NFI	0.816	0.0 – 1.0	Hu & Bentler (1999)
TLI	0.837	0.0 – 1.0	Hu & Bentler (1999)
CFI	0.852	0.0 – 1.0	Hu & Bentler (1999)
Parsimony Fit Indices			
PGFI	0.664	> 0.5	Mulaik *et al.* (1989)
PNFI	0.740	0.0 – 1.0	Trost *et al.* (2003)
PCFI	0.773	> 0.05	Lee *et al.* (2017)

Source: Author (developed for this research, 2017)

In addition, PGNFI, PNFI, and PCFI were categorized as parsimonious fit indices. PGFI was indicating the model as a good model since the value equalled 0.664, higher than 0.5 (Mulaik *et al.,* 1989). However, PNFI indicated the model for this study was a parsimonious fit as the value was equal to 0.740 (Trost *et al.,* 2003). PCFI indicated that the model for this study was a good model fit as the value was equal to 0.773, higher than 0.05 (Lee *et al.,* 2017). It can be summarized that the overall model of this study was a good model based on the analysis of the GOF indices.

4.3.1.2 Reliability and Validity Measurement

Reliability and validity for this study could be measured by considering the factor loading, Average Variance Extracted (AVE) and Composite Reliability (CR). Factor loading measures the relationship between each variable to foresee the indicators based on the latent variables (Tabachnick & Fidell, 2013). A factor loading with values ≥ 0.5 indicates adequate convergence among the variables in the construct. Table 4.6. shows there was a good relationship between each variable as the value of the factor loading was mostly greater than 0.5.

The measurement of AVE was based on the level of variance taken by constructs against the level of measurement error (Fornell & Larcker, 1981). The value of AVE is categorized as good when the value is 0.5, while a value of 0.7 or greater is very good. The formula of AVE can be seen as follows:

$$AVE = \frac{\sum \lambda_i^2}{\eta}$$

Where,

AVE = Average Variance Extracted

λ = Standardized factor loading

η = Number of items

Based on the calculation of factor loading data as seen in Table 4.6, it was found that the AVE value for determinant of homeownership equalled 0.577. This reflects the overall value of variance in the indicators accounted for by the latent construct was good because the value was above the threshold of 0.5. On the other side, the AVE value for service excellence was 0.817. This indicates the overall value of variance in the indicators accounted for by the latent construct was very good because the value was above the threshold of 0.7.

CR was used to make a comparison between factor loading and error variance of a construct (Alarcón & Sánchez, 2015:7). The cut off value of CR was 0.7 so greater was an acceptable value for CR. The calculation of CR used the following formula:

$$\text{AVE} = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + (\sum \delta_i)^2}$$

where,

CR = Composite Reliability

λ = Standardized factor loading

δ = Error Variance

Based on the calculation of factor loading data as seen in Table 4.6, it was found that the CR value for determinant of homeownership was equal to 0.969. This indicated an acceptable combination of factor loadings and error variance of the indicator construct because it was above the threshold of 0.7. On the other side, the CR value for service excellence was 1.033. This reflected an acceptable combination of factor loadings and error variance of the indicator construct, because it was above the threshold of 0.7.

In summary, the validity and reliability of each construct was acceptable as the value was greater than the minimum threshold. The overall measurement model can be seen in Figure 4.18.

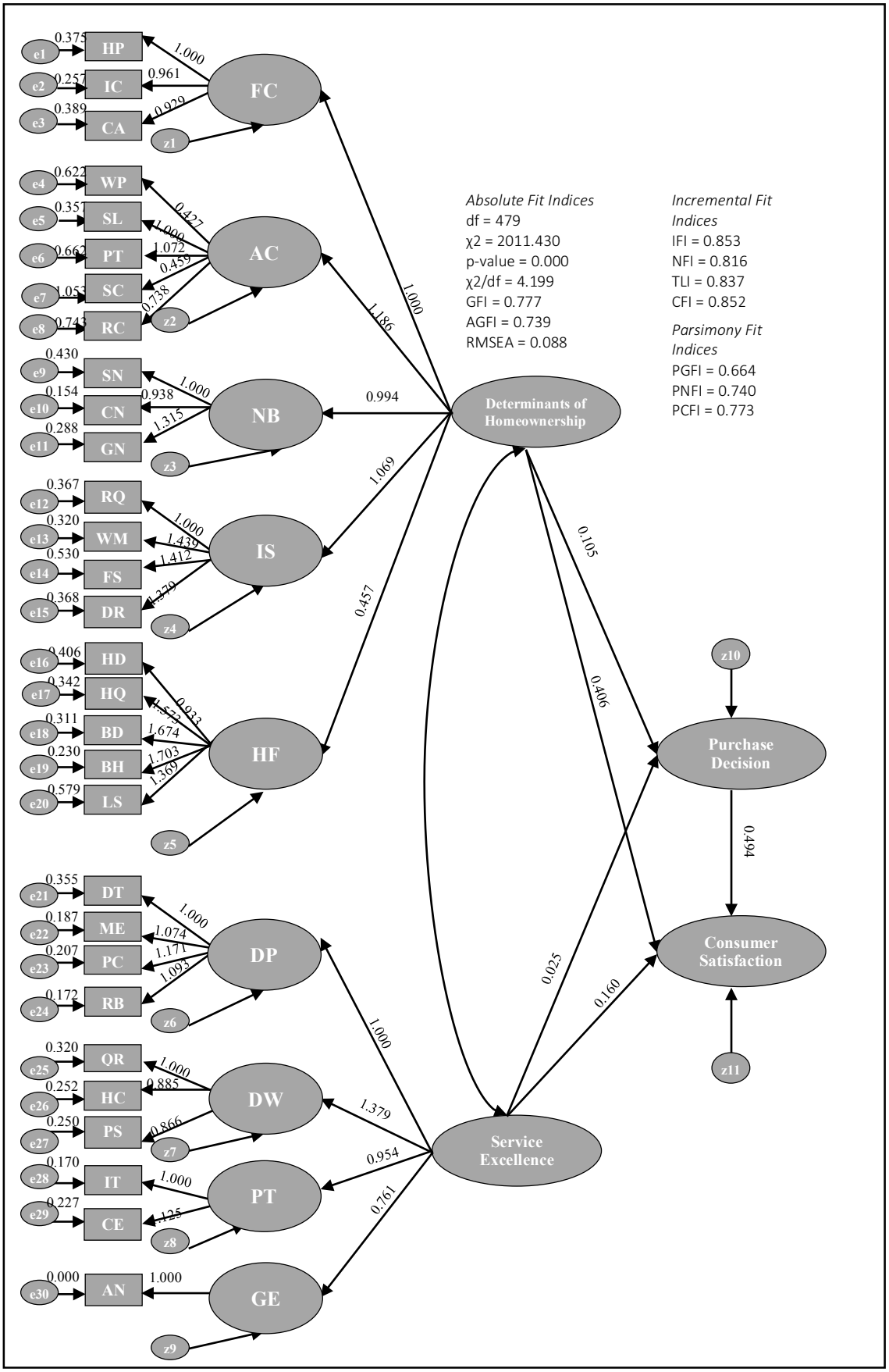

Figure 4.18 The Overall Measurement Model with Standardized Factor Loadings (Source: developed for this research, 2017)

4.3.2 Structural Model

Once the measurement model was validated, the next stage of SEM analysis was conducting the structural model. The purpose of the structural model is to explain the specific details of the relationship between the independent variables and the dependent variables. The structural model shows the overall model fit and significance of the hypothesized parameters.

There were five structural models examined based on the hypothesized parameters. The structural model for this study was comprised as follows:

1. The structural model which observed the relationship between the determinants of homeownership and purchase decision.
2. The structural model which observed the relationship between service excellence and purchase decision.
3. The structural model which observed the relationship between the determinants of homeownership and homeowner's satisfaction.
4. The structural model which observed the relationship between service excellence and homeowner's satisfaction.
5. The structural model which observed the relationship between the purchase decision and homeowner's satisfaction.

4.3.2.1. Structural Model 1

The first structural model of this study tested the regression effects of the determinants of homeownership and purchase decision as shown in Table 4.6. Based the statistical analysis, the R^2 value of the regression for the purchase decision was 0.134. This means that the R^2 value fulfilled the minimum threshold of 0.10 (Quaddus & Hofmeyer, 2007). It also can be said that the influence of the determinants of homeownership toward purchase decision was 13.4%.

Figure 4.18 shows that the determinant of homeownership was the most significant construct to determine homeowners' purchase decisions. This can be seen from the factor loading value of 0.105. On the other side, the factor loading value of service excellence was only 0.025. This means service excellence was less significant compared to the determinants of homeownership in determining the homeowners' purchase decisions. The significance of the hypothesized parameter result can be seen in the following table.

Table 4. 6 Regression Weights of the Hypothesized Parameter

Dependent Variable	Predictor	Estimate	S.E.	C.R.	P-value	Hypothesis Result
Purchase Decision	Determinants of Homeownership	0.322	0.021	5.071	0.000	H1 Supported
	Service Excellence	0.115	0.010	2.472	0.013	H2 Supported
Customer Satisfaction	Determinants of Homeownership	0.124	0.083	4.913	0.000	H3 Supported
	Service Excellence	0.184	0.038	4.167	0.000	H4 Supported
	Purchase Decision	0.124	0.192	2.568	0.010	H5 Supported

Source: Author (developed for this research, 2017)

As displayed in Table 4.6, the Critical Ratio (C.R.) of determinants of homeownership in foreseeing purchase decision was 5.071, while the value of p-value was 0.000. The threshold of C.R. was ≥ 1.98 so it can be categorized as significant, while the cut-off of p-value was ≤ 0.05 so it can also be categorized as significant. This means that the hypothesized parameter of H1 was supported. It can be concluded that the homeowner's purchase decision was positively influenced by determinants of homeownership constructs. This finding is consistent with the previous study which stated that determinants of homeownership positively influence homeowners' purchase decisions (Tan, 2008). In this study, the construct of the determinants of homeownership were financial consideration, accessibility, neighbourhood, infrastructure and house features.

Figure 4.19 shows that the factor loading for accessibility was 1.186, the highest factor loading for the determinants of the homeownership construct. It also can be said that accessibility became the most significant construct in determining homeownership.

This was consistent with a previous study conducted by Sean & Hong (2014) which stated that location accessibility was the most important factor in determining residential property investment decisions.

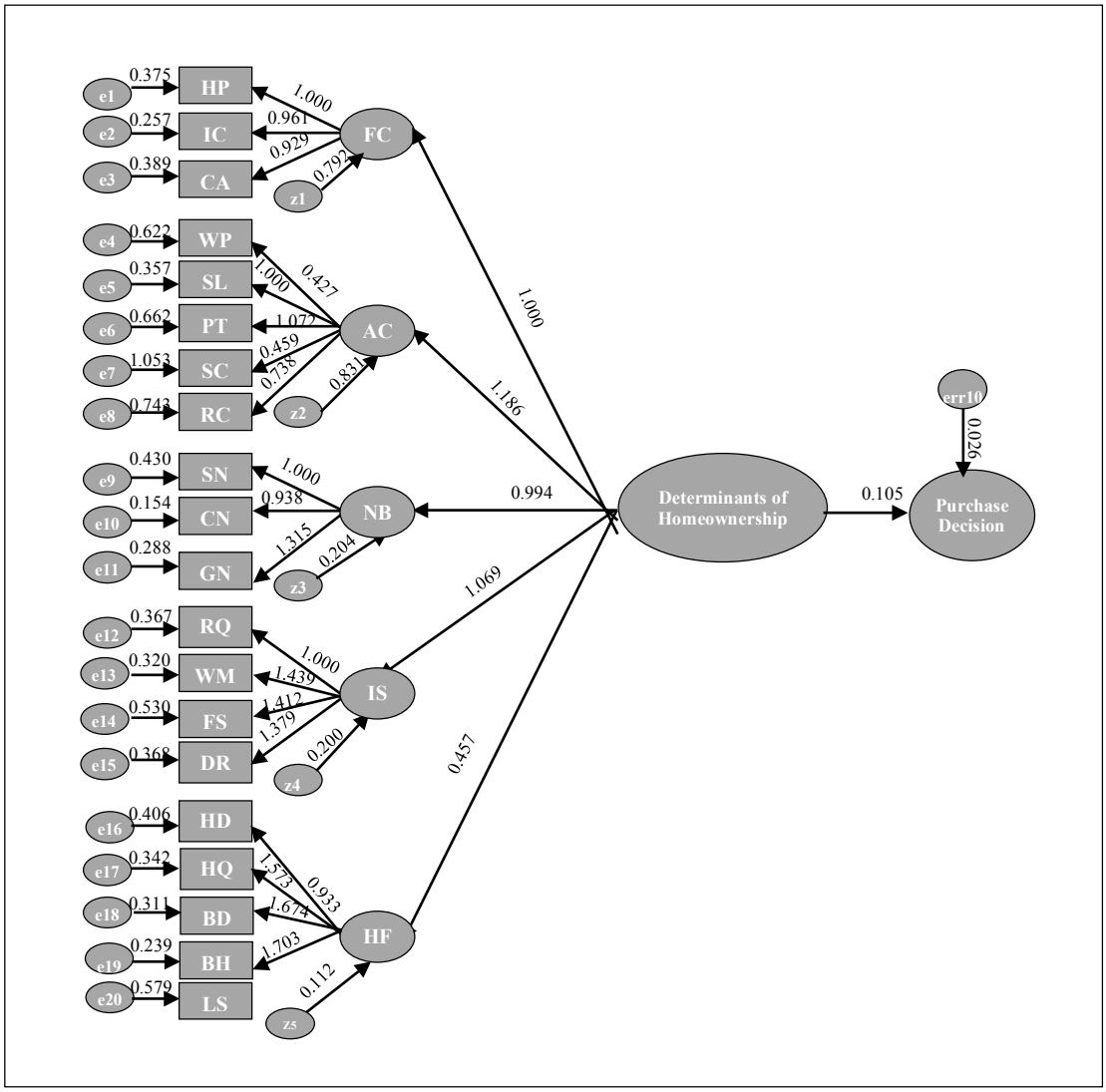

Figure 4.19 The Structural Model of the Hypothesis 1
(Source: developed for this research, 2017)

Infrastructure facilities became the second most significant construct in determining homeownership based on the second largest factor loading value of 1.069. This finding is consistent with a previous study conducted by Phang & Tan (2014) who found infrastructure facilities including road linkages, bus routes, motorcycle lanes, and inter-connected public transport systems were closely related with housing choice by homeowners.

Financial considerations (1.000) were the third construct in determining homeownership. This was consistent with a previous study conducted by Sean & Hong (2014), which stated that finance was an extremely important aspect when considering owning a house.

Neighbourhood (0.994) was considered as the fourth construct, agreeing with a previous study conducted by Tan (2011), which stated that households prefer to own a house located in a good neighbourhood.

Lastly, house features (0.457) were also considered as a construct in determining homeownership. This was consistent with the findings of Chia *et al.* (2016) who argued that house features have a significant positive relationship with the intention of owning a house.

4.3.2.2 Structural Model 2

The results presented in Table 4.6 and Figure 4.20 show that p-value = 0.013, C.R. = 2.472, and $\beta = 0.115$ for H2. The threshold of C.R. is ≥ 1.98 so it can be categorized as significant, while the cut-off of p-value is ≤ 0.05 so it can also be categorized as significant. It can be said that H2 was statistically significant and in the hypothesized direction. Thus, H2 which stated service excellence influences purchase decisions was supported.

As mentioned earlier, the C.R. and p-value of service excellence in determining the purchase decision were 2.472 and 0.013 respectively. This indicates that the probability of getting a critical ratio as large as 2.472 in absolute value is 0.013. Moreover, the standardized estimate of beta for H2 was 0.115, indicating a positive relationship. It can also be said when service excellence goes up by 1 standard deviation, purchase decision goes up by 0.115 standard deviations.

Statistically speaking, it can be seen that service excellence was a significant influence toward homeowners' purchase decisions. There were four constructs used to figure out service excellence: delivering what was promised, dealing well with the consumer, personal touch and GTEM.

Figure 4.20 shows that factor loading for dealing well with consumers was 1.379, the highest factor loading for the service excellence construct. It also can be said that dealing well with consumers became the most significant construct in determining service excellence. It agreed with Bacon & Pugh (2004) who consider that dealing well with problems was one activity to understand consumer behaviour and provide service excellence.

Delivering what was promised became the second most significant construct in determining service excellence (1.000). This finding was consistent with a previous study conducted by Saragih (2017) which found that delivering the promise was one of the critical factors for service excellence in the music recording studio industry in Indonesia.

The personal touch (0.954) was the third construct in determining service excellence, agreeing with Asree *et al.* (2010) who stated that providing a personal touch was a crucial element to support service delivery for customers.

GTEM (0.457) was defined as the least significant construct in determining the service excellence, it was not consistent with a previous study conducted by Wirtz & Heracleous (2016). They were stated that GTEM was considered as an important factor to achieve service excellence in airlines.

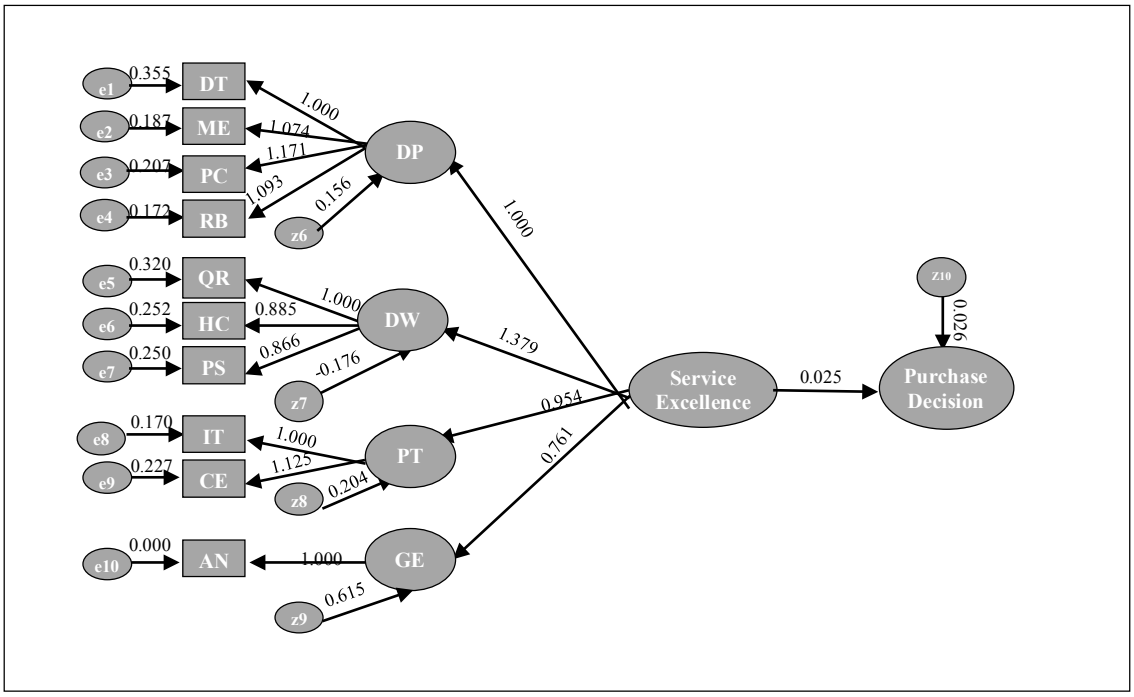

Figure 4.20 The Structural Model of the Hypothesis 2
(Source: developed for this research, 2017)

4.3.2.3 Structural Model 3

The results presented in Table 4.6 and Figure 4.21 show that p-value = 0.000, C.R. = 4.913, and β = 0.124 for H3. The threshold of C.R. was ≥ 1.98 while the cut-off of p-value was ≤ 0.05 so both can be categorized as significant. It can be said that H3 was statistically significant and in the hypothesized direction. Thus, H3 which stated the determinants of homeownership influence consumer satisfaction was supported. This finding was consistent with a previous study conducted by Coleman (2005) who argued that homeownership can contribute to a homeowner's life satisfaction.

Figure 4.18 shows that the determinants of homeownership were the most significant construct in determining homeowners' satisfaction. This can be seen from the factor loading value of 0.406. On the other side, the factor loading value of service excellence was only 0.160 meaning service excellence was less significant compared to the determinants of homeownership in determining homeowners' satisfaction.

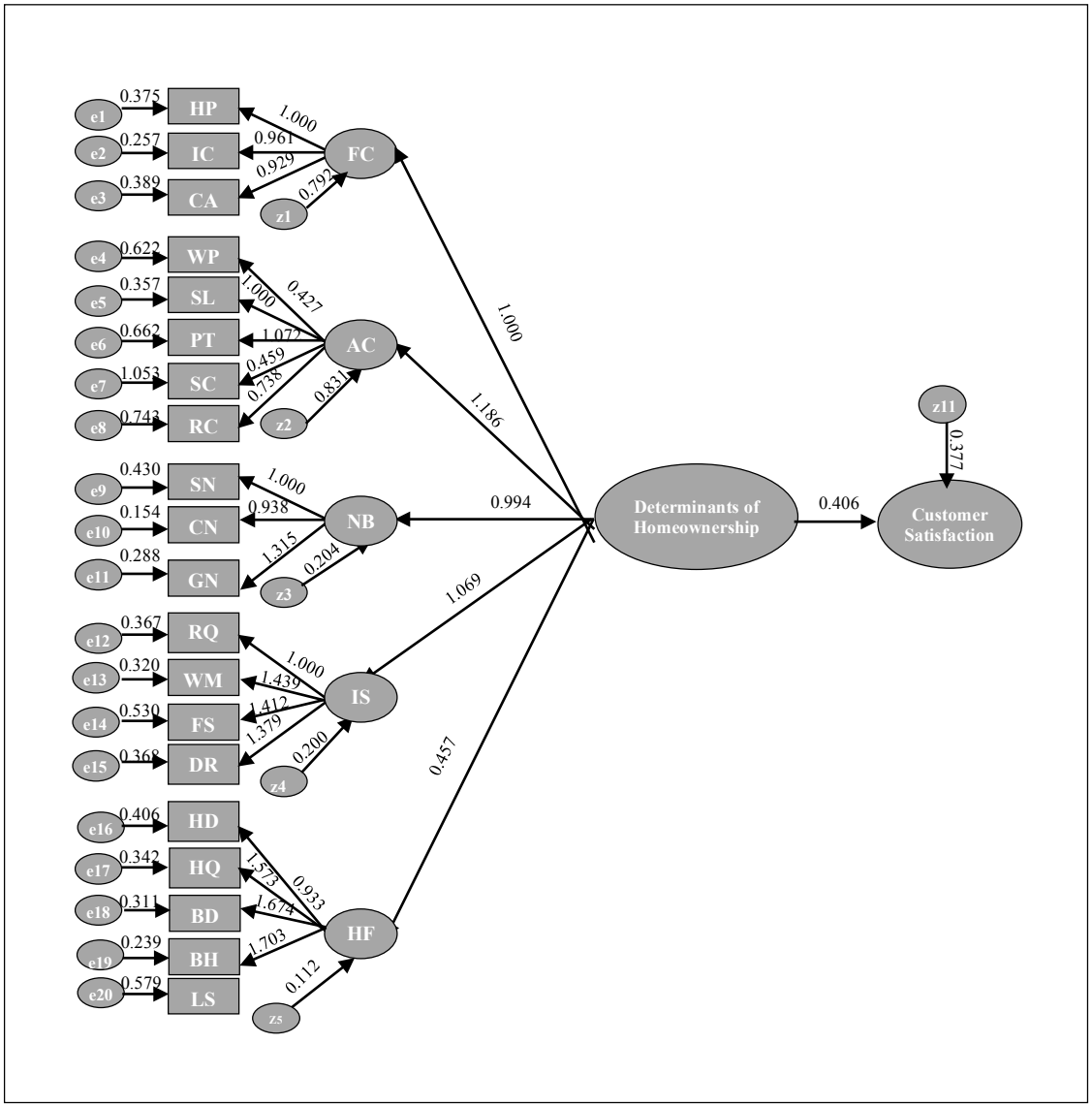

Figure 4.21 The Structural Model of the Hypothesis 3
(Source: developed for this research, 2017)

As mentioned earlier, the C.R. and p-value of determinants of homeownership in determining consumer satisfaction were 4.913 and 0.000 respectively. This indicated that the probability of getting a critical ratio as large as 4.913 in absolute value was zero. Moreover, the standardized estimate of beta for H3 was 0.124, indicating a positive relationship. It also can be said when the determinants of homeownership increase by 1 standard deviation, consumer satisfaction goes up by 0.124 standard deviations.

As discussed in Section 4.3.2.1, accessibility was the most significant construct in determining the determinants of homeownership. Accessibility was measured based on the following constructs: ease of access to the workplace, ease of access to schools, ease of access to public transport, ease of access to a shopping centre and ease of access to a recreation centre. Ease of access to public transport had the highest factor loading value of 1.072 so it was the most significant construct in determining the accessibility. This was consistent with a previous study conducted by Horák *et al.* (2014). They argued that access to public transport was extremely important to accessibility, so when access to public transport increased, the accessibility level increased.

Ease of access to schools (1.000) was second, consistent with a previous study conducted by Tan (2011) which stated that access to school was extremely important in determining the accessibility level.

The third significant construct in determining the accessibility was ease of access to a recreation centre (0.738). Then, ease of access a shopping centre (0.459) was fourth and ease of access to the workplace (0.427) was the least significant construct in determining accessibility.

On the other side, housing features (0.457) became the least significant construct in determining the determinants of homeownership. There were five constructs of house features: house design, house quality, number and size of bedrooms, number and size of bathrooms and land size. This means homeowners did not recognized house features an important value in determining the determinants of homeownership.

4.3.2.4 Structural Model 4

The results presented in Table 4.6 and Figure 4.22 show that p-value = 0.000, C.R. = 4.167, and $\beta = 0.184$ for H4. The threshold of C.R. ≥ 1.98 and it can be categorized as significant, while the cut-off of p-value ≤ 0.05 and it can be categorized as significant. It can be said that H4 was statistically significant and in the hypothesized direction.

Thus, H4 which stated service excellence influence purchase decision was supported. This finding was consistent with the previous research conducted by Liao (2014). He was argued that the perceived value of return on investment, service excellence, aesthetics and playfulness of customers would directly affect purchase intention.

As mentioned earlier, the C.R. and p-value of service excellence in determining the consumer satisfaction were 4.167 and 0.000. This indicated the probability of getting a critical ratio as large as 4.167 in absolute value was zero. Moreover, the standardized estimate of beta for H4 was 0.184, indicating a positive relationship. It can also be said when service excellence goes up by 1 standard deviation, consumer satisfaction goes up by 0.184 standard deviations.

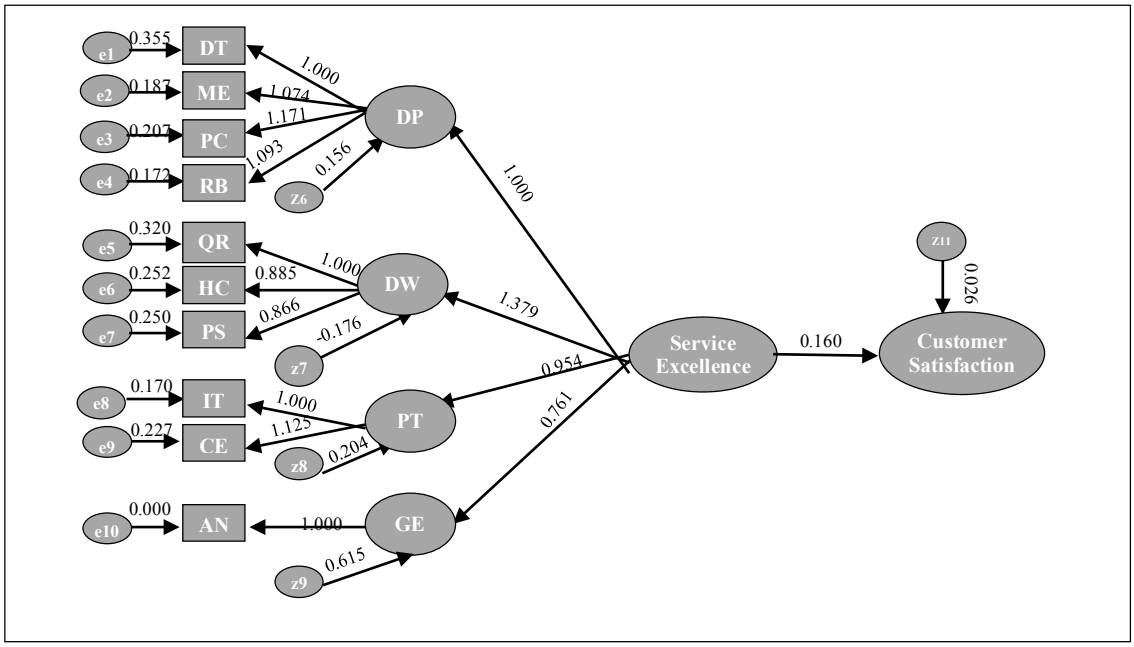

Figure 4.22 The Structural Model of the Hypothesis 4
(Source: developed for this research, 2017)

As discussed in the section 4.3.2.1, dealing well with consumers became the most significant construct in determining service excellence. Dealing well with consumers was measured based on the following constructs: quick response, helping the customer, and problem solving. Quick response had the highest factor loading value of 1.000. It also can be said that quick response from builder became the most significant construct in determining dealing well with consumers.

Helping the customer (0.885) became the second most significant construct in determining dealing well with consumers. Hence, problem solving (0.866) became the least significant construct in determining dealing well with consumers. On the other side, GTEM became the least significant construct in determining service excellence. This means homeowners did not recognize or anticipate GTEM from a house builder or developer as an important value to determine level of service excellence.

4.3.2.5 Structural Model 5

The results presented in Table 4.6 and Figure 4.23 show that p-value = 0.010, C.R. = 2.568, and $\beta = 0.124$ for H5. The threshold of C.R. was ≥ 1.98 so it can be categorized as significant, while the cut-off of p-value was ≤ 0.05 so it can also be categorized as significant. It can be said that H5 was statistically significant and in the hypothesized direction.

Thus, H5 which stated homeowners' purchase decisions influenced homeowners' satisfaction was supported. It was consistent with the previous study conducted by Khemchotigoon & Kaenmanee (2015) which found a positive relationship between consumer satisfaction and purchase intention in the future.

As mentioned earlier, the C.R. and p-value of purchase decision in determining the consumer satisfaction were 2.568 and 0.010 respectively. This indicated the probability of getting a critical ratio as large as 2.568 with an absolute value of 0.010. Moreover, the standardized estimate of beta for H5 was 0.124, indicating a positive relationship. It also can be said when service excellence goes up by 1 standard deviation, purchase decision goes up by 0.124 standard deviations.

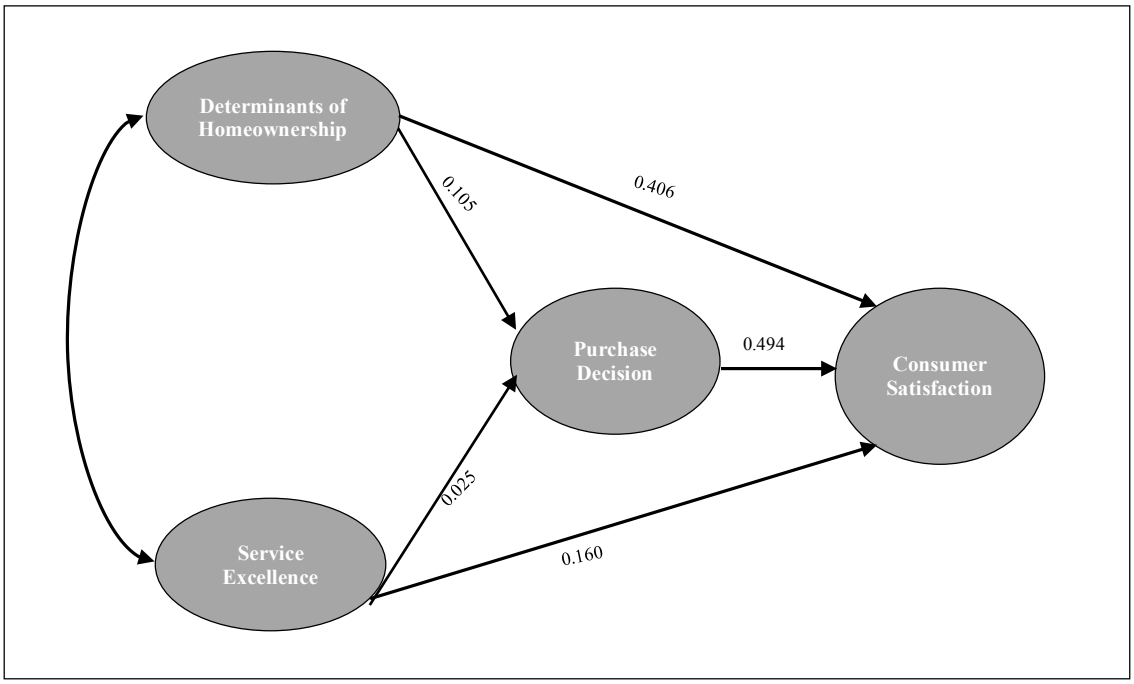

Figure 4.23 The Structural Model of the Hypothesis 5
(Source: developed for this research, 2017)

4.4 Summary

This chapter presented the results and findings of the quantitative data analysis. The findings answered the research questions and hypothesis proposed in this study. Based on the data analysis, all hypotheses were accepted which means determinants of homeownership and service excellence had a direct significant positive effect toward homeowners' purchase decisions and satisfaction.

The results of the quantitative data analysis also found critical factors of the study. There were 24 critical factors for this study: house price, income, credit affordability, ease of access to workplace, ease of access to school, safe neighbourhood, clean neighbourhood, green neighbourhood, road quality, house design, house quality, number and size of bedrooms, number and size of bathrooms, land size, fulfilling the promise, meeting consumers' expectations, protecting the consumer, reliability, quick response, helping the customer, problem solver, individual treatment, care and anticipating consumer needs.

After knowing the critical factors, the next phase of this study was to make data validation. The process of data validation is by using the qualitative study. Thus, semi-structured interviews were adopted to investigate in-depth information on each factor. The purpose of in-depth investigation is to formulate a strategic plan of the purchase decision and consumer satisfaction. It was discussed in the next chapter.

CHAPTER FIVE
QUALITATIVE DATA ANALYSIS AND FINDINGS

5.1 Introduction

The purpose of this chapter is to validate the quantitative findings in the previous section of this study. Thus, the qualitative data analysis was used to match the quantitative results with the research objectives. The quantitative results were constructed by demonstrating the structural models that were obtained from the Structural Equation Modelling (SEM). The findings of the quantitative data analysis were presented and validated by the homeowners by using semi-structured interviews. The main objective of the semi-structured interviews was to explore each potential factor in improving determinants of homeownership and service excellence for residential housing industries.

This section describes the process and findings of the interviews with homeowners. The discussion of the participant selection process is the first part of this chapter. Then, the interview procedures are described. Data analysis is then explained and the results of the analysis are highlighted at the end of the chapter.

5.2 Interview Procedures

The process of respondent selection was important to guarantee that the objectives of the interviews could be achieved. In this study, the selection process of respondents was based on their relevant experience with builders and their availability during the scheduled interview period. The respondents were gathered from the questionnaire in the first stage of data collection. The potential respondents were asked their availability to do interviews to validate the result of questionnaires data analysis. Hence, the potential respondents were contacted through email or phone. 15 respondents agreed to participate in interviews from January to April 2017. The respondents' backgrounds can be seen in the following table.

Table 5.1 Respondents' Backgrounds

Respondent	Respondent's Position	House Owned	Builder Type	Interview Method
H1	Government Officer	2	Registered House Builder	Face-to-face
H2	Chef	1	Registered House Builder	Face-to-face
H3	Construction Manager	1	Registered House Builder	Face-to-face
H4	Sales Manager	1	Registered House Builder	Face-to-face
H5	Chief Executive Officer	1	Registered House Builder	Face-to-face
H6	Teacher	2	Registered House Builder	Face-to-face
H7	Lecturer	2	Non-Registered House Builder	Face-to-face
H8	Construction Manager	1	Registered House Builder	Face-to-face
H9	Director	3	Registered House Builder	Face-to-face
H10	Consultant	2	Registered House Builder	Face-to-face
H11	Sales Manager	1	Registered House Builder	Face-to-face
H12	Business Owner	1	Registered House Builder	Face-to-face
H13	Builder	1	Registered House Builder	Face-to-face
H14	Business Owner	2	Registered House Builder	Face-to-face
H15	Builder	1	Registered House Builder	Face-to-face

Source: Author (developed for this research, 2017)

As explained in Table 5.1, most of the respondents used a registered house builder. This means that they were concerned with the qualification of the builder in order to get a better quality house. Most of the respondents had an important role in their organisations such as business owner, chief executive officer, director and manager. It was expected that the information and recommendations provided by the respondents would be suitable for this study.

The process of conducting the interviews was started by contacting the potential respondents to arrange the interview schedule and location. The respondents were contacted by e-mail or phone. There were several documents attached when conducting the interview with the respondents:

- Interview Participant Information Sheet
- Consent Form
- Ethics Approval by Auckland University of Technology Ethics Committee (AUTEC)
- List of questions for the interview

The face-to-face interviews with respondents were mostly conducted at their offices or workstations in Auckland, New Zealand. The researcher introduced himself to the interviewee and briefly explained the objectives of the interview before the interview session started. The researcher also verified the understanding of the respondents by asked them for the signed consent.

5.3 Interview Questions

The questions for the qualitative stage were designed based on the results in the quantitative stage. Based on the results of the critical value analysis in Section 4.2.4, there were 24 critical factors identified in this study. The main objective of the qualitative analysis was to explore and define an alternative solution for each critical factor. The interview session provided in-depth explanations from respondents. The interview questions related to the critical factors are contained in Appendix B-2.

The main objective of the interview questions was to attract respondents to share their suggestions and experiences about the activities that can be attributed towards each critical factor. In order to gain a deep understanding of a certain factor, there were some additional questions related to each critical factor. However, the interview questions could be changed when interviewee had more or less understanding of a certain factor. Hence, the results of the face-to-face interview used by the researcher to strengthen findings of the determinants of homeownership and service excellence.

5.4 Data Analysis

The main objective of the semi-structured interviews was to validate the quantitative results of this study. The respondents were informed about the critical factors of this study and the identification of critical factors was explained. Most of the respondents responded that the critical factors explained the main reason of the homeowner's purchase decision and satisfaction.

Most likely the critical factors was assist a developer to make a holistic evaluation of service excellence. In addition, critical factors also provide proper guidance for the developer in determining the priority factor of the homeowner's purchase decision. Hence, the findings of the semi-structured interview can be used to ease the decision-making process for homeowners. 15 respondents participated in the semi-structured interview, which are denoted as H1 – H15.

5.4.1 Data Validation of Financial Consideration

Most homeowners argue that the financial attribute is a critical factor when considering a purchase decision (Mohd Thas Thaker *et al.*, 2016). According to Reed & Mills (2007), there were several key areas regarding financial considerations such as mortgage interest rates, household income, house price and ability to obtain financing. Among those factors, house price became the most significant factor in determining a purchase decision (Mohd Thas Thaker *et al.*, 2016).

The majority of respondents mentioned the positive impact of financial consideration to the determinants of homeownership. It also can be said that the financial consideration was a crucial factor for determinants of homeownership in determining purchase decision and consumer satisfaction. There were three constructs of financial consideration recognized as critical values in this study: house price, income and credit affordability.

The findings of this study as shown in Figure 4.18 also show that house price was the most significant construct for determinants of homeownership in determining purchase decision and consumer satisfaction. It was similar to the findings of a previous study which stated that house price has a very strong influence on house purchase intention (Razak *et al.*, 2013). The other important remarks for financial consideration can be seen in Table 5.2

Table 5.2 Data Validation of Financial Consideration

No	Strategic Plan	Participants Comments
House Price		
1	Affordable Price	H3: Purchasing a residential house was a huge decision for me. I have spent a lot of time and money to buy a house. During the process of finding a house, I was searching for a house with a reasonable price. I am not wealthy so I cannot afford to buy an expensive house as purchasing an expensive house only burden me. H11: It is very crucial to buy an appropriate house which suits one's requirement, fits in the budget and serves the long term purpose. If a decision is not taken accurately with all the analytical research, buying a house can become a lot more complicated than it seems.

		H7: The process of finding a house has been hard and sometimes can take months. Due to the housing shortages experienced in Auckland due to the influx of immigrants, finding a house with an affordable price was challenging.
2	Availability	H4: Currently, buying a house with an affordable price in Auckland is hard. As house prices in Auckland have risen significantly, it was not easy to find a house in Auckland. Similar to any other goods and services, the house price depends on the availability. When there is enough houses in the market, I believe the house prices drop. H1: Since there are many people coming to live in Auckland, finding a house is getting more difficult and house prices rise each year. It was quite challenging for me to find a house because there was not enough choice within my budget. I think home builders should be able to provide enough houses in Auckland in order to meet the growing demand. H5: There was an over-demand for houses in Auckland which triggered the significant rise of house prices. As long as home builders are unable to meet the demand, I think house prices keep skyrocketing for a long time.
3	Government regulation	H2: It was quite easy for an investor buying property in New Zealand including Auckland, and anyone could do it. Most wealthy investors bought some property without asking for a lower price. This phenomenon triggered a rapid increase in house prices in Auckland. Therefore, there must be regulation from the government to prevent this situation.

Income		
1	Income allocation	H14: According to me, income is a very important sources to anticipate the volatility of the house price in Auckland. Since some portion of income is saved, there is a greater possibility to meet house price.
2	Needs Prioritization	H3: Buying a house was a huge decision for me and it was spending a lot of money. As I mentioned at the beginning of this interview, I was really wanted to buy a house but I didn't have enough cash for it. Then, I made a scale of priority of my life. This helped me to use my income for buying a house.
Credit Affordability		
1	Access to Finance	H13: Buying a property costs a lot of money and most buyers was taking out a loan from the bank. Ease of access to the financial institutions is extremely important for homeowners. Before asking for a mortgage, we have to know our own credit position. H6: Information about mortgage rates was important for applying for a credit loan. Normally we wish to obtain a very affordable credit scheme which offered the lowest mortgage rates.
2	Bank regulation	H12: Lowest mortgage rates are essential for saving thousands of dollars over the life of a loan. It was enable us to apply for a mortgage and help us to purchase a house. H1: Most of the time, I asked for the lowest down payment for purchasing a house. I made a comparison among banks offering affordable down payment schemes. An affordable down payment was required to determine my purchase decision.

Source: Author (developed for this research, 2017)

5.4.2 Data Validation of Accessibility

Based on the quantitative data analysis conducted in the previous chapter, accessibility was a most significant construct which influence determinant of homeownership. There were only two out of five constructs of accessibility recognized as a critical value in this study: ease of access to the workplace and to schools. This was similar to a previous study which mentioned access to workplace as either very important or extremely important (Findsen, 2005), while another study mentioned access to schools as either very important or extremely important (Khoo-Lattimore & Thyne, 2008).

Most interviewees believed that accessibility had a positive impact to the determinants of homeownership. It also can be said that accessibility was a crucial factor for determinants of homeownership in determining purchase decision and consumer satisfaction. Generally speaking, access to the workplace was considered as the most significant factor for determinants of homeownership in determining purchase decision and consumer satisfaction. The discussion of the accessibility can be seen in the following table.

Table 5.3 Data Validation of Accessibility

No	Strategic Plan	Participants Comments
Ease of access to workplace		
1	Affordable Public Transport	H8: When I bought a house, one of my main concerns was the availability of public transport. The reason was to ease me going to my office everyday. It was hard to live far away from my office because it was made me feel uncomfortable and stressful. H15: It was hard to find a house near my workplace as the price was very expensive. Then I was trying to buy a house which was near public transport options. Even though a bit far from the workplace, it was not a big problem as long as there was public transport available.

2	Transportation efficiency	H10: I think it would be better if daily transportation was managed precisely. It was help us to be more effective and efficient to do routines and save time and money.
3	Avoid unnecessary cost	H6: Easiness to access any transportation options enabled us to minimize our daily cost.
Ease of access to schools		
1	Community transport	H9: Accessibility from home to the school should be improved. One of the most efficient transportations is the transportation developed by the local community. It was ensure optimum usage of the public transport to the workplace.
2	Improving public transport	H3: The availability of smaller buses is beneficial for the local community. It was increase flexibility and mobility for the people in the area.

Source: Author (developed for this research, 2017)

5.4.3 Data Validation of Neighbourhood

Based on the results of the quantitative study conducted in the previous chapter, neighbourhood was defined as the fourth construct which significantly influenced determinant of homeownership. This finding was like the previous study which stated that consumers preferred a peaceful neighbourhood and scenic value as the most important factor in owning a house (Źróbek *et al.*, 2015). There were three individual constructs of neighbourhood recognized as critical values in this study: neighbourhood, clean neighbourhood and green neighbourhood.

Most interviewees believed that neighbourhood had a positive impact to the determinants of homeownership. It can also be said that the neighbourhood is a crucial factor for determinants of homeownership in determining purchase decision and consumer satisfaction. Generally speaking, green neighbourhood was considered as a most significant factor for determinants of homeownership in determining purchase decision and consumer satisfaction. The discussion of the neighbourhood can be seen in the following table.

Table 5.4 Data Validation of Neighbourhood

No	Strategic Plan	Participants Comments
Safe Neighbourhood		
1	Monitor the situations at the neighbourhood	H7: Based on my own experience, monitoring the situation of the neighbourhood helps to ensure the safety of the environment. It was one of my considerations when I bought my house.
2	Integrated safety system	H5: Ensuring the neighbourhood situation in determining the purchase decision was able help to guarantee a safe neighbourhood. I think safety is a reason why most people choose to get it at the time of purchase. H11: The availability of the safety system was provide a safe neighbourhood area. It was important in determining my purchase decision
Clean Neighbourhood		
1	Effective design for the environmental impact	H1: The house builders should have waste reduction plans on the building area. By using this plan, any potential waste can be easily identified and avoided. Proper planning is required by each homeowner when determining a purchase decision.

2	Clean neighbourhood management	H3: The neighbourhood should be planned properly in terms of a clean neighbourhood. The availability of rubbish removal was improving the clean neighbourhood. It provides pleasure for everyone who lives in such environment.
Green Neighbourhood		
1	Appropriate handling	H4: Appropriate waste handling and treatment methods are able to minimise waste generation. Any information concerning waste control in the living area is needed by everyone who lives in that environment. H12: Regular monitoring from the body corporate was able to help minimise waste generation. They know what action they can and should be taken to protect the environment from pollution.
2	Preventive plan	H14: House builders should have waste reduction plans to identify and avoid any potential waste generation. Suitable planning is required by everyone to ensure our living area. It is one of the critical factors in determining consumer satisfaction.
3	High fine	H2: The use of economic elements such as pollution fees are effective to eliminate waste generation. It was force anyone to protect their living area properly.

Source: Author (developed for this research, 2017)

5.4.4 Data Validation of Infrastructure Facilities

Infrastructure facilities can be categorized as a variable highly concerned with owning a house (Ariyawansa, 2010). This was similar to findings of this study, infrastructure facilities being defined as the second construct which significantly influenced determinant of homeownership. Road quality was the only construct of infrastructure facilities recognized as a critical value of this study. As discussed by bin Junaini (2012), homeowners were satisfied with the condition of the road in determining purchase decision. It means there was a positive relationship between road quality and homeownership.

Most interviewees believed that infrastructure facilities had a positive impact to the determinants of homeownership. It also can be said that the infrastructure facilities were the crucial factor for determinants of homeownership in determining purchase decision and consumer satisfaction. Generally speaking, road quality was considered as the most significant factor for determinants of homeownership in determining purchase decision and consumer satisfaction. The discussion of the infrastructure facilities can be seen in the following table.

Table 5.5 Data Validation of Infrastructure Facilities

No	Strategic Plan	Participants Comments
Road Quality		
1	Standardised road quality	H3: Standardisation of road quality is important to ensure the availability of road in the housing area.
2	Easy access	H10: The availability of good road conditions was greatly improve the access to the housing area.

Source: Author (developed for this research, 2017)

5.4.5 Data Validation of House Features

As discussed in the previous chapter, house features was a significant influence determinant of homeownership. This finding was consistent with a previous study conducted by Chia *et al.* (2016) which found that house features have a significant relationship with ownership intention. There were five constructs of house features recognized as critical values in this study: house design, house quality, number and size of bedrooms, number and size of bathrooms and land size. Most interviewees believed that house features had a positive impact to the determinants of homeownership. The discussion of the house features can be seen in the following table.

Table 5.6 Data Validation of House Features

No	Strategic Plan	Participants Comments
House Design		
1	Creative design	H8: As a homeowner, I would like developers to be able to produce a design that accommodates my requirements. Creativity from the developer cause a high standard of building and consumer satisfaction.
2	Interactive process	H6: The process of house design is the most critical task to be taken by the homeowner and house builder. Clear communication and flexibility are the key to create a successful design.
3	Optimum design	H15: The developer should be able to balance house design with cost effectiveness. This was give added value for us as homeowners.
4	Effective design	H13: Each action from the house builder should be in a proper sequence so that the construction process can be done effectively. It was ensure the construction process and can be done using optimum resources.

		H1: Effective design is the main factor to minimise construction costs. The house builder needs to have a good understanding of effective house design.
House Quality		
1	Proper planning	H2: The integration of house builder plans especially during construction stage was improving house quality.
2	Transparency in construction process	H7: By following the construction process of a house, it is possible for us to monitor and validate housing quality. It was enable us to terminate construction malpractices and ensure our requirements are met exactly.
3	Effective communication	H10: The communication between homeowner and house builder is very important during the construction process. Effective communication with the house builder is extremely required to get a good quality house.
4	Ensure quality	H4: Ensuring house quality in the construction process is our main goal. It was able to reduce or minimise defects and damages.
5	Competent builders	H11: Quality is the top priority because good quality increasing durability. Then, choosing an appropriate builder is crucial during the construction process, because an incompetent builder lead to the poor house quality.
Number and size of bedrooms		
1	Precise size and dimension	H6: The implementation of an effective floor plan was reducing unnecessary design. It was easy for the house builder to meet our needs or serve our requirements.

2	Efficient design	H1: Efficient design was meet our expectations and save construction time. Accordingly, the construction process require efficient design to anticipate higher cost.
3	Accommodate requirement	H9: The ability to meet consumer's requirements is vital for the house builder. Achieving a high-quality standard and meet consumer's requirements, enable consumer satisfaction.
Number and size of bathrooms		
1	Detailed floor plan	H12: Implementing the floor plan is crucial to meeting consumer's requirement.
2	Scale of priority	H5: When building a house, figuring out the priority necessities is very important for us. By classifying our needs, it was ease the process of creating a floor plan.
Land size		
1	Assess needs and resources	H3: Determining our needs is the first and most important stage when building a house. By doing thorough analysis, it was enable us to meet our needs effectively.

Source: Author (developed for this research, 2017)

5.4.6 Data Validation of Delivering the Promise

As discussed in the previous chapter, delivering the promise significantly influenced service excellence. This finding was consistent with a previous study conducted by Saragih (2017) which found that excellent service is essentially delivering promises and meeting expectations rather than exceeding them. There were four constructs of delivering the promise recognized as a critical value in this study: doing the promise, meeting expectations, protecting the customer and reliability.

Most interviewees believed that delivering the promise had a positive impact on service excellence. Therefore, delivering the promise was considered as the second most significant factor for service excellence in determining purchase decision and consumer satisfaction. The discussion of delivering the promise can be seen in the following table.

Table 5.7 Data Validation of Delivering the Promise

No	Strategic Plan	Participants Comments
Do what was promised		
1	Implement Just in Time (JIT)	H15: In my opinion, doing what is promised is extremely important for the house builder because it shows their commitment to deliver good quality and excellent value. The ability to deliver their promise able to improve consumer satisfaction.
2	Integrative system	H10: House builders should have an integrative system to minimise lack of coordination among them. It was ensure their ability to fulfil the consumer's needs and expectations.
3	Optimum effort	H7: House builders should deliver optimum performance for their customer. It was maximize their capability to deliver their promise to the customer.
Meet expectation		
1	Constructive communication	H1: Building an effective communication with the customer is extremely important to encourage a positive relationship. H6: Providing an opportunity for the customer to express their ideas is an effective way to meet customer's expectations.
2	Appointed personnel	H4: Appointed personnel can help the house builder to understand and meet customer's expectations.

3	Improve flexibility and adaptability	H9: An appropriate approach to the customer is crucial to find out customer needs. House builders should be more flexible and adaptable for improving customer's satisfaction.
Protect the customer		
1	Clear regulations	H12: As the customer does not have enough knowledge regarding the construction process, the house builder should provide a clear explanation about the whole procedure.
2	Simple procedure	H8: The process of building a house is a little bit complicated. We need guidance from the developer to do the whole process. Simplifying the procedure to ensure the building process.
Reliability		
1	Registered builders	H2: When building a house, I was verifying whether the builder registered and licensed. It was provide protection under the government regulation and protect the building from major defects.
2	Effective progress	H11: Regular progress reports from the builder are important for us because they enable us to monitor the construction process.

Source: Author (developed for this research, 2017)

5.4.7 Data Validation of Dealing well with Problems

As discussed in the previous chapter, dealing well with problems was a most significant construct influencing service excellence. There were three constructs of dealing well with problems recognized as a critical value in this study: quick response, helping the customer and problem solving.

Most interviewees believed that dealing well with problems had a positive impact on service excellence. Therefore, dealing well with problems was considered as a most significant factor for service excellence in determining purchase decision and consumer satisfaction. The discussion of dealing well with problems can be seen in the following table.

Table 5.8 Data Validation of Dealing well with Problem

No	Strategic Plan	Participants Comments
Quick response		
1	Adopt effective response	H3: An effective response from builders was able to reduce unwanted defects. It was ensure the quality level of the building. H9: As a customer, I feel more safety and comfort when builders provide a quick response.
2	Systematic construction system	H6: It is important to make sure that any communication system from the builder does not lead to a late response. As a homeowner I need certainty when facing improper conditions.
3	Strengthening communication	H11: A better communication level between builder and homeowner helps to reduce the number of problems during the construction process. H7: Conducting periodic meetings is critical in solving any problems during construction phase. It is extremely important to solve any issue immediately.
4	Enlarge accessibility	H4: During the construction phase, accessibility to the builders should be improved. It was ensure the ability to respond to any issues or problems quickly.

Helping customer		
1	Assign point of contact	H2: However, the communication process between builder and homeowner should be improved. It was minimize miscommunication on the construction process.
2	Understanding customer needs	H5: However, understanding and identifying customer needs is a complex process. It was ensure the customer's issues or problems can be solved quickly.
3	Competent builders	H1: Any construction project including a housing project is easier if conducted by a certified person. They have sufficient knowledge on how to do their job properly. It was help customers to minimize any potential defects that might arise in the future.
Problem solving		
1	Provide warranty	H13: It is important for the builder provide a housing warranty to cover critical structural defects in the property. It was guarantee our house quality and safety.
2	Effective building process	H4: An effective construction process is the main concern to minimise any potential issues or problems. It was help the builder reduce any potential maintenance costs.
3	Standard operating procedure	H9: The builder should provide appropriate procedures to anticipate any potential problem. It is easier for builder to make early diagnosis and treatment.

Source: Author (developed for this research, 2017)

5.4.8 Data Validation of Providing a Personal Touch

As discussed in the previous chapter, providing a personal touch significantly influenced service excellence. This finding was consistent with a previous study conducted by Sari *et al.* (2016) which found that providing a personal touch was extremely significant in determining service excellence. There were two constructs of providing personal touch recognized as the critical value of this study: individual treatment and care.

Most interviewees believed that providing a personal touch had a positive impact om the service excellence. Therefore, providing a personal touch was considered as the third most significant factor for service excellence in determining purchase decision and consumer satisfaction. The discussion of providing personal touch can be seen in the following table.

Table 5.9 Data Validation of Providing Personal Touch

No	Strategic Plan	Participants Comments
Individual Treatment		
1	Using personal approach	H7: A more personal approach needs to be adopted to strengthen the relationship with the homeowner. The characteristics of homeowners need to be considered to improve personal trust.
2	Effective treatment	H2: Builders should select appropriate treatment for their customers to meet their expectations. These treatments are helping in achieving customer's goals.
3	Enhance customer satisfaction	H10: Builders should develop a comfortable environment for the customer. If the builder is able to listen to the customer carefully, it was provide a better image and increase the customer's trust.

Care		
1	Consistent monitoring	H5: If the building quality is assured, any potential defects and damages can be reduced. Regular monitoring of builders help to minimise maintenance costs for homeowner.
2	Provide detail information	H9: Sufficient information about construction progress and building quality can improve transparency and trust with the customer. It was helping me as a customer feel more secure.
3	Regular contact	H6: Frequent contact from builder to customer was able to identify any issues or problems. Early problem detection is one of the most critical characteristics in determining accurate solutions.

Source: Author (developed for this research, 2017)

5.4.9 Data Validation of GTEM

As discussed in the previous chapter, GTEM was the least significant factor in influencing service excellence. This finding was consistent with a previous study conducted by Sari *et al.* (2016) which found that GTEM was least significant in determining service excellence. Anticipating consumer needs was the only construct for GTEM.

Most interviewees believed that GTEM had a positive impact on service excellence. Therefore, GTEM was considered the least significant factor for service excellence in determining purchase decision and consumer satisfaction. The discussion of GTEM can be seen in the following table.

Table 5.10 Data Validation of GTEM

No	Strategic Plan	Participants Comments
Anticipate Consumer's Needs		
1	Accurate forecasting	H4: The builder should have an accurate strategy to foresee any potential demand from the customer. Appropriate treatment was able to ensure customer satisfaction.
2	Clear strategic plan	H11: Consumer's needs and requirements change over time. The builder should be able to anticipate the changes. However, flexibility and responsiveness are extremely needed by the builder to respond to dynamic situations.
3	Routine review	H1: Regular verification of consumer's needs and requirements are crucial to anticipate dynamic changes. It was help builders create an appropriate treatment for the homeowner.

Source: Author (*developed for this research,* 2017)

5.5 Summary

This chapter presents the outcomes of data analysis gained from the semi-structured interviews. The semi-structured interviews obtained respondents' perceptions that are useful for the design of housing purchase decision making. The respondents provided remarks based on the critical factors of the determinants of homeownership and service excellence. The critical factors were investigated and validated by the quantitative data analysis before further investigation in the qualitative data analysis stage.

The respondents' insight and points of view were important to create strategic plans in determining a housing purchase decision. Their understanding toward each critical factor was crucial to determine the strategic plan. The main findings from the interview sessions can be seen in Table 5.11.

Table 5.11 Findings of Strategic Plan

No	Purchase Decision Factors	Strategic Plan
1	House price	• Affordable price • Availability • Government regulation
2	Income	• Income allocation • Needs prioritization
3	Credit affordability	• Access to finance • Bank regulation
4	Ease of access to workplace	• Affordable public transport • Transportation efficiency • Avoid unnecessary cost
5	Ease of access to schools	• Community transport • Improving public transport
6	Safe Neighbourhood	• Monitor the situations at the neighbourhood • Integrated safety system
7	Clean Neighbourhood	• Effective design for the environmental impact • Clean neighbourhood management
8	Green Neighbourhood	• Appropriate handling • Preventive plan • High fine
9	Road quality	• Standardised road quality • Easy access
10	House design	• Creative design • Interactive process • Optimum design • Effective design
11	House quality	• Proper planning • Transparency in construction process • Effective communication • Ensure quality • Competent builders

12	Number and size of bedrooms	• Precise size and dimension • Efficient design • Accommodate requirement
13	Number and size of bathrooms	• Detailed floor plan • Scale of priority
14	Land size	• Assess needs and resources
15	Do what is promised	• Implement Just in Time (JIT) • Integrative system • Optimum effort
16	Meet expectations	• Constructive communication • Appointed personnel • Improve flexibility and adaptability
17	Protect the customer	• Clear regulations • Simple procedure
18	Reliability	• Registered builders • Effective progress
19	Quick response	• Adopt effective response • Systematic construction system • Strengthening communication • Enlarge accessibility
20	Helping the customer	• Assign point of contact • Understanding customer needs • Competent builders
21	Problem solver	• Provide warranty • Effective building process • Standard operating procedure
22	Individual treatment	• Using personal approach • Effective treatment • Enhance customer satisfaction
23	Care	• Consistent monitoring • Provide detail information • Regular contact

24	Anticipate customer needs	• Accurate forecasting • Clear strategic plan • Routine review

Source: Author (developed for this research, 2017)

CHAPTER SIX
DISCUSSION AND FINDINGS

6.1 Introduction

This chapter explains the results and findings of the data analysis presented in Chapter 4 for quantitative data analysis and Chapter 5 for qualitative data analysis. The final discussions of the research findings are integrated with the findings from the literature review and previous studies. A combination of questionnaire surveys and semi-structured interviews was used for developing recommendations of homeowners' purchase decisions in this study. Afterward, each critical factor identified from the previous quantitative and qualitative data analysis was explained thoroughly.

6.2 Conceptual Model of Purchase Decision Factor

The results of the quantitative study shows there were 24 critical factors which influence homeowners' purchase decisions. It contained 14 critical factors from determinants of homeownership and 10 critical factors from service excellence. The critical factors as discussed in the quantitative study were validated by using semi-structured interviews at the qualitative data analysis stage.

Most of the respondents of the semi-structured interviews agreed that the critical factors from the nine categories provided in this study were fundamental for determining homeowners' purchase decisions. The 24 critical factors were used to formulate appropriate aspects of homeowners' purchase decisions. Each factor helps homeowners to create a suitable decision based on determinants of homeownership and service excellence from the house builder. There was no single factor which predominantly influenced homeowners' purchase decisions. Therefore, homeowners' purchase decisions were based on a combination of several purchase decision factors. Figure 6.1 demonstrates the conceptual model of purchase decision factors which influence homeowners' purchase decisions.

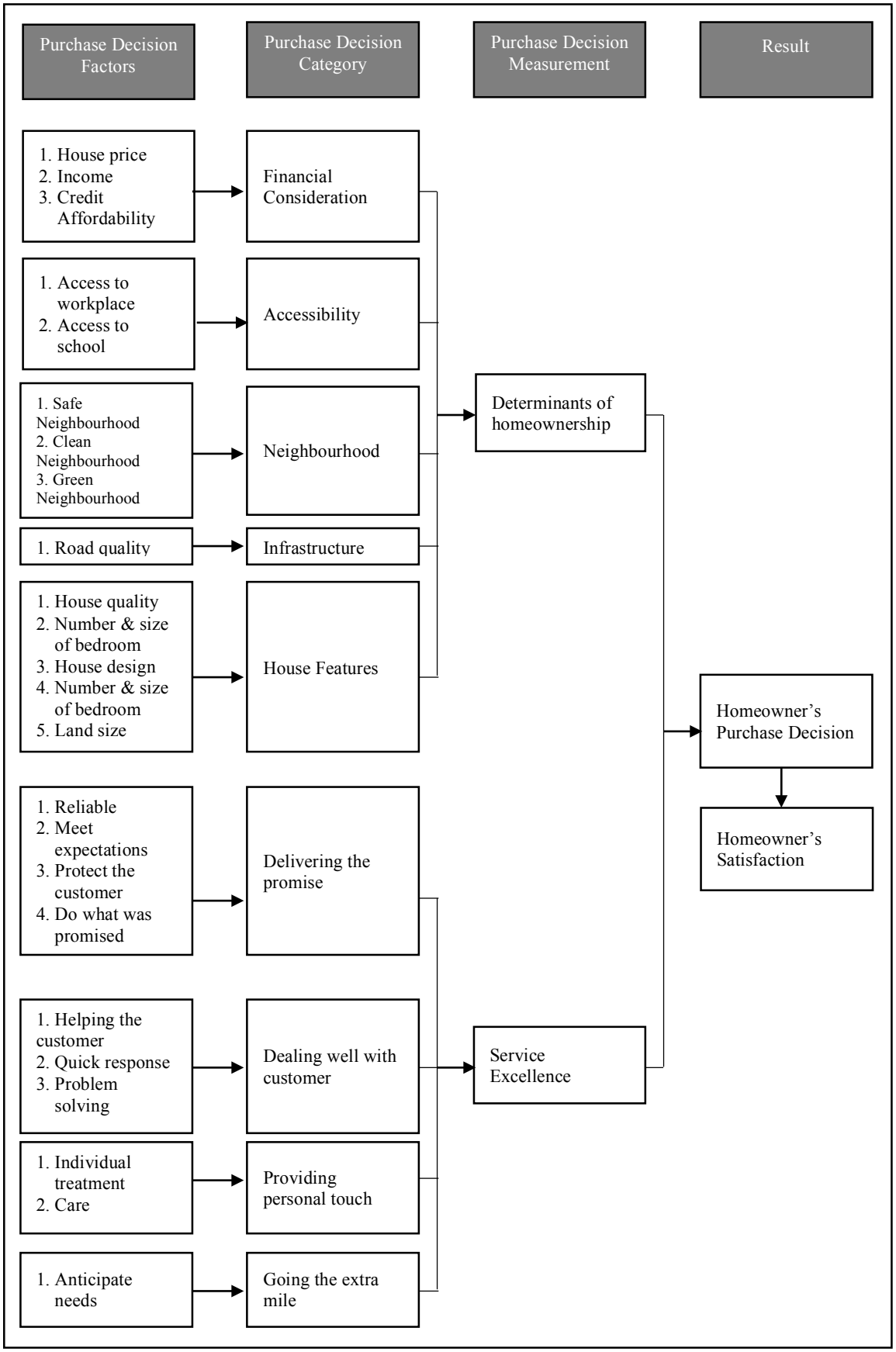

Figure 6.1 Conceptual Model of Homeowner's Purchase Decision (Source: developed for this research, 2017)

6.2.1 Determinants of Homeownership

The foremost objective of this study was to overcome the property over-demand issue in New Zealand as a country and Auckland specifically. One of the main issues is the ability of homeowner to purchase a house. There are several determinants used to determine homeowners' purchase decisions in this study, including financial considerations, location accessibility, neighbourhood situation, infrastructure facilities and housing characteristics or features.

Based on the results of the quantitative and qualitative data analysis in the previous chapter, most respondents agreed that all determinants of homeownership (financial considerations, location accessibility, neighbourhood situation, infrastructure facilities and housing features) are important constructs in determining homeownership. The combination of different constructs is chosen by the homeowner based on their own motivation. During the process to determine a homeowner's purchase decision, each homeowner was find a favourable combination of what was appropriate to them and what was the expected reward from their choice.

As presented in Figure 6.1, there are several purchase decision factors recognized by homeowners as their determinants of homeownership. House price, income and credit affordability were recognized as the determinant factors of financial consideration. Then, access to the workplace and school were recognized as the determinant factors of location accessibility. Moreover, safe neighbourhood, clean neighbourhood and neighbourhood were recognized as the determinant factors of the neighbourhood situation; while road quality was the only factor from infrastructure facilities recognized as the determinant factor. Lastly house quality, number and size of bedrooms, house design, number and size of bathrooms, and land size were recognized by the homeowner as the determinant factor of purchase decision.

The discussion of each purchase decision factor which influenced homeowners' purchase decisions is presented in the next section.

6.2.1.1 Financial Considerations

As discussed in Section 4.3.2.1, the results of this study show financial considerations were extremely important to determine a homeowner's purchase decision. This was consistent with a previous study conducted by Sean and Hong (2014) which stated that financial factors do affect property buyers in making their purchase decision. Other studies showed that financial factors account for almost 30% of the decisions of homeowners when purchasing a house (Reed & Mills, 2007).

6.2.1.1.1 House Price

Housing prices in New Zealand have increased over the past few years. According to the Reserve Bank of New Zealand (2016), the average price of houses in New Zealand increased from 6.3% to 13.9% in the years between 2012 and 2016. The highest increase of house prices in New Zealand was 13.9% by the end of 2016. Therefore, Auckland has become the city which has the highest increase of house prices in New Zealand. The increase of house prices in Auckland between 2012 and 2016 was higher than the increase of the national house price (Reserve Bank of New Zealand, 2016). The increase of house prices in Auckland in 2015 was 16.10%, the highest increase of house prices in Auckland between 2012 and 2016 (Reserve Bank of New Zealand, 2016).

Based on the current situation in New Zealand and specifically for Auckland, house price is the extremely important for each homeowner. Among the other factors of financial considerations, house price was considered as the most important factor for this study. Most respondents believed that house price plays an important role in determining a homeowner's purchase decision. This was consistent with a previous study conducted by Razak *et al.* (2013) which confirmed that house price has a very powerful influence on homeowners' purchase decisions.

Based on the discussion with homeowners during the qualitative stage, it was confirmed that house prices in Auckland were unaffordable. This finding was consistent with findings of a previous study which put Auckland as the fourth least-affordable housing market in the world with a median multiple of 10.0 (Cox *et al.*, 2017). It can also be said that the average house price in Auckland is ten times larger than the average income.

In order to anticipate the worse house price in Auckland, all stakeholders in the residential house industry should create a preventive plan. The Government of New Zealand, as one of the stakeholders, should generate immediate regulations to stop the increase of house prices. The implementation of debt-to-income restrictions can be used as an anticipative action to prevent the increase of house prices. Furthermore, improving housing availability can be used as an action to reduce the imbalance between housing demand and supply. This can be achieved through collaboration between house builders and the Government. If the Government is able to provide sufficient land area for residential housing, it would be easy for a house builder to build a house. Then, it is easier for homeowners to determine their purchase decisions, especially for first time homeowners.

6.2.1.1.2 Income

Purchasing a house is the biggest purchase activity for most New Zealanders, and the cost of buying a house takes a large share of each household income. Most first-time buyers pay a much higher percentage of their income on house payments than they should (Cox *et al.*, 2017). According to a Demographia survey (2017), the median house price in Auckland was $830,800, while the median income in Auckland was $83,000. It can be said that Auckland's house price to income ratio stood at 10, it was considered as severely unaffordable. The extreme of house prices in Auckland indicates a crisis situation in Auckland.

The crisis situation in Auckland creates difficulties for most New Zealanders wanting to buy a house. These phenomena are similar with the results of the quantitative and qualitative analysis in this study, where most respondents mentioned that they spent a large portion of their income buying a house.

According to the respondents, income plays an important role in determining a homeowner's purchase decision. This finding was consistent with a previous study which stated that a rise in income directly increases homeowners' purchasing power and also the demand for housing (Mohd Thas Thaker *et al.*, 2016). Most respondents agreed that the amount of income plays a significant role in determining homeowners' purchase decisions. It was consistent with a previous finding that income could positively influence homeowners' purchase decisions (Gan *et al.*, 2013).

6.2.1.1.3 Credit Affordability

Therefore, access to finance plays a significant role in determining homeowners' purchase decisions. For most homeowners, purchasing a residential property is a huge decision and costs a lot of money. Most homeowners was asking for a loan from a bank and paying the bank for years. One requirement for taking out a loan from a bank is sufficient income. This finding is consistent with a previous study which mentioned that homeowners with better incomes can access housing loans much easier (Huang & Clark, 2002).

The results of the quantitative and qualitative study in Chapters 4 and 5 stated that ease of accessing credit was an extremely important influence on homeowners' purchase decisions. This finding was consistent with a previous study which found a clear access to housing loans positively affects house purchase decisions (Gan *et al.*, 2013). However, most people with higher incomes can more easily access housing loans compared to people with lower incomes (Dell'Ariccia *et al.*, 2008)

6.2.1.2 Location Accessibility

According to the quantitative and qualitative results of this study, location accessibility can be described as the most important attribute from the determinant of homeownership to determine homeowners' purchase decisions. As shown in Figure 4.18, based on the factor loading criteria (1.186) location accessibility was the most significant attribute for determinants of homeownership. This finding is consistent with a previous study by Zeng (2013), who mentioned that location accessibility positively influences housing purchase decisions.

6.2.1.2.1 Access to Workplace

Most respondents of this study agree that access to the workplace became the most important attribute of location accessibility to determine a homeowner's purchase decision. This can be seen from Table 4.4 in Chapter 4 which stated that access to the workplace has the highest critical value score for the location accessibility factor. The main reason was to manage daily transportation costs. If homeowners purchase a house near their workplace, they were not spend so much money on transportation.

This finding is consistent with a previous study which mentioned that access to the workplace was an important consideration for homeowners (Razak *et al.*, 2013). Another study conducted in Auckland also declared that accessibility to the workplace was either very important or extremely important in determining homeowners' purchase decisions (Findsen, 2005). This means access to the workplace was considered as the important factor for a homeowner wanting to purchase a new house.

6.2.1.2.2 Access to School

Based on the critical factor score discussed in Table 4.4 access to school became the second most important attribute of location accessibility. The main reason for homeowners considering access to school as an important factor to determine homeowners' purchase decisions was time efficiency. Most respondents agreed finding a house near a school was important. It means they were spend less time transporting children.

This finding is consistent with a previous study which mentioned that access to school was considered as an important consideration for homeowners (Lan & Thi, 2011). Another study also found that distance between home and school affected homeowners' purchase decisions (Opoku & Abdul-Muhmin, 2010). It can be concluded that based on the results of this study, distance to school was considered by homeowners in Auckland as an important factor determining purchase decisions. It means people who want to purchase a house should be aware of school locations, especially for homeowners who have children of school age.

6.2.1.3 Neighbourhood

Based on the quantitative and qualitative results of this study as described in Chapters 4 and 5, neighbourhood can be described as an important attribute from the determinant of homeownership. This finding was consistent with a previous study which declared that neighbourhood quality highly influenced homeowners' purchase decisions (Gabriel & Rosenthal, 1989).

This study also supported the findings of this study which stated the environment made a positive impact on house purchase decisions. This means neighbourhood was considered as an important attribute to determine a homeowner's purchase decision. Moreover, as described in Table 4.4 there were three attributes which make a positive impact on house purchase decisions: safe neighbourhood, clean neighbourhood and green neighbourhood.

6.2.1.3.1 Safe Neighbourhood

Based on the critical factor score discussed in Table 4.4, a safe neighbourhood became the most important attribute of neighbourhood. Moreover, a safe neighbourhood was described as an attribute with the highest critical value score. This means a safe neighbourhood was considered as the most important of neighbourhood attributes which make a positive impact on house purchase decisions. Most respondents of this study agreed a safe neighbourhood was extremely important in determining house purchase decisions. This finding was consistent with a previous study which mentioned a safe neighbourhood as one of the good investment criteria which make a positive impact on house purchase decisions (Branigan & Brugha, 2013).

The results of the qualitative data show that respondents wanted to purchase a house which provided a safe neighbourhood. It was crucial for homeowners because they expected to stay for a long period when purchasing a house. A safe neighbourhood provides a safe feeling for each homeowner and their family. When people were living in a safe neighbourhood, it was improve their living quality. This finding was consistent with a previous study which stated that a safe living environment concept was extremely important in determining house purchase decisions (Abdul Ghani & Lee, 2015).

6.2.1.3.2 Clean Neighbourhood

Based on the critical factor score discussed in Table 4.4 and the data validation in Chapter 5, a clean neighbourhood became the second most important attribute of neighbourhood. This means a clean neighbourhood was considered as one of the neighbourhood attributes which made a positive impact on house purchase decisions. Most of respondents of this study were concerned with a clean neighbourhood when purchasing a house. This finding was consistent with a previous study which mentioned that a clean neighbourhood was considered as an important factor for homeowners (Opoku & Abdul-Muhmin, 2010). Previously, it was also confirmed that a clean neighbourhood had a big influence on prospective homeowners (Dokmeci *et al.*, 1996).

On a general note, homeowners in this study preferred to buy a house in a clean neighbourhood. By having a house in a clean neighbourhood, the homeowners in this study felt satisfied with their living conditions. The findings of the study suggest that the supply of housing should be concerned with clean neighbourhoods. It means that the house builder should be aware the importance of a clean neighbourhood when designing houses and neighbourhoods. In order to fulfil consumer expectations, the house builder should be able to offer maximum flexibility and choice concerning these attributes.

6.2.1.3.3 Green Neighbourhood

As discussed in the previous chapter, a green neighbourhood was a critical factor for neighbourhood. It means a green neighbourhood was considered as one of the neighbourhood attributes which make a positive impact on house purchase decisions. Most respondents of this study were concerned with a green neighbourhood when purchasing a house. This finding was consistent with a previous study which found that house buyers were willing to pay more to live in a neighbourhood with suitable green space, such as a park or garden (Tan, 2011). Most recently, another study argued that a green environment plays an important role for homeowners to determine their purchase decision (Abdul Ghani & Lee, 2015).

Homeowner awareness toward a green environment increases from time to time, including homeowners in Auckland. It can be seen based on the results of the questionnaire and semi-structured interviews in the previous chapter. Most respondents agreed that a green neighbourhood was an important attribute for neighbourhoods. Due to the growing demand and preferences of homeowners for a green neighbourhood, house builders should be aware when developing and designing residential property in Auckland. House builders should be able to provide green neighbourhood facilities such as lakes, waterways or greeneries when developing residential property. By providing those facilities, house builders were able meet customer expectations.

6.2.1.4 Infrastructure Facilities

According to the quantitative analysis as described in Figure 4.18, infrastructure facilities make a positive contribution to determinants of homeownership. Moreover, the results of the semi-structured interviews in Chapter 5 also showed that infrastructure facilities were important to homeowners when purchasing a house. The existence of infrastructure facilities ease movement for the homeowner. This finding was consistent with a previous study which argued that infrastructure facilities are highly desired when purchasing a house (Ariyawansa, 2010).

6.2.1.4.1 Road Quality

Based on the questionnaire data analysis and semi-structured interviews in the previous chapter, road quality was the only infrastructure facilities attribute which made a positive impact on house purchase decisions. This means when residential areas provide infrastructure facilities such as good road conditions, it was influencing a homeowner's purchase decision. This was consistent with a previous study which stated that people to purchase a house when roads are of better quality (Randeniya *et al.*, 2017).

The outcome of this study led to the finding that homeowners were willing to purchase a house which had good roads nearby. It also can be said that the road quality attribute of a housing property is a crucial element when a house builder is developing a residential area. House builders should provide good roads when designing and developing residential property. By providing those facilities, it was easier to sell the homes. If there are sufficient infrastructure facilities such as good quality roads, people are more willing to purchase a house.

6.2.1.5 House Features

The last attribute for determinants of homeownership for this study was house features. As discussed in the previous chapter, house features were described as one attribute from the determinants of homeownership which made a positive impact on house purchase decisions. Most respondents of this study agreed that house features were important when purchasing a house. This was consistent with a previous study which indicated that house features have significantly positive relationships with house purchase decisions (Chia *et al.*, 2016).

6.2.1.5.1 House Quality

House quality was considered as the most critical factor which influenced house features for this study. This means house quality was considered by homeowners as the most important attribute for house features in determining house purchase decisions. Most respondents in this study try to ensure house quality before making a purchase decision. This finding was consistent with a previous study which showed that house quality was the most important factor for homeowners when determining their purchase decision (Kaynak & Meidan, 1980).

Based on the results of this study, house builders in Auckland should fully emphasize house quality while selling their houses. This means a house builder should create specifications which explain the quality of their house. By giving a clear explanation of quality, the homeowner was able to understand which house quality relates to their needs. Fulfilling consumer's needs is extremely important for house builders. It was able to develop trust and credibility for their consumer.

6.2.1.5.2 Number and Size of Bedrooms

The number and size of bedrooms was considered as one of the critical factors influencing house features, playing an important role in determining a house purchase decision. Most respondents of this study considered the number of bedrooms as an important attribute when purchasing a house. They were choosing the number of bedrooms based on the size of their family. This finding was consistent with a previous study which showed the importance of the number and size of bedrooms in determining a homeowner's purchase decision (Opoku & Abdul-Muhmin, 2010).

House builders in Auckland should improve their understanding about the actual housing attribute needs of consumers in Auckland. Moreover, house builders should be able to create better decisions when designing and developing residential housing in Auckland. Through knowing the most appropriate housing attributes as discussed by this study, house builders was able to deliver appropriate solutions for each consumer. By filling consumer's needs, they were improving consumer satisfaction. It was increasing the house builder's reputation and credibility.

6.2.1.5.3 House Design

House design was considered a critical factor influencing house features. This means house design plays an important role in determining house purchase decisions. Most respondents of this study considered house design as an important attribute when purchasing a house. Homeowners usually create the design for their house based on their own needs, and start the building process when they are satisfied with the design. This finding was consistent with a previous study which recognized house design as a moderately influential determinant in housing purchases (Ariyawansa, 2010).

Understanding consumer needs is crucial for every house builder. House design is a critical factor in determining house purchase decisions in this study. It means the house builder should provide the best suggestions to create good design for homeowners. Intensive communication between house builder and homeowner is needed to create better understanding. By understanding consumer needs regarding house design, the house builder was able to provide the best solution for the homeowner and fulfil their needs.

6.2.1.5.4 Number and Size of Bathrooms

The number and size of bathrooms was considered as a critical factor which influenced house features. Most respondents of this study considered the number of bathrooms as an important attribute before purchasing a house. This finding was consistent with a previous study which concerned the importance of the number and size of bathrooms in determining homeowners' purchase decisions (Si, 2012).

A better knowledge of homeowner decision making was able to lead better prediction of decision making for the house builder. It creates a general picture about consumer needs when developing a residential property. As discussed earlier, number and size of bathrooms was defined as an attribute of house features which significantly influenced homeowners' purchase decisions. Understanding homeowner's requirements regarding bathrooms was creating a greater possibility of a house purchase decision. This study thus gives practical implications for house builders or developers to decide suitable strategies to attract consumers with specific requirements.

6.2.1.5.5 Land Size

The other attribute which significantly influenced house features in this study was land size. Most respondents in this study were concerned about land size before making a decision to purchase or build a house. They chose land size based on their allocated budget, this being the main reason land size significantly influenced their purchase decisions. This finding was consistent with a previous study which indicated land size as an attribute when purchasing a home (Levy & Lee, 2004).

6.2.2 Service Excellence

Based on the results of the questionnaire and semi-structured interviews in the previous chapter, it can be seen that service excellence was extremely important in influencing homeowners' purchase decisions. Most respondents in this study agreed that service excellence from the house builder was crucial in determining their purchase decision. Moreover, most customers have the intention to make a comparison between the perceived service with the expected service. When the customer felt the perceived service was below their expectation, they would be dissatisfied. On the other hand, the customer was satisfied when perceived service equals or exceeds their expectations (Kotler & Keller, 2012).

6.2.2.1 Delivering the Promise

As explained in Figure 4.18, delivering the promise was the most important attribute which made a positive contribution toward service excellence. Most respondents agreed that the house builder should be able to deliver their promise. By delivering the promise, the house builder was able to provide better service to the homeowner. Better service from a house builder was important to determine homeowner's satisfaction and purchase decision. This finding was consistent with a previous study which stated that the availability of service mix in the retail industry was able to deliver a superior customer experience which results in higher customer satisfaction and purchase decisions (Kamaladevi, 2010).

6.2.2.1.1 Reliable Service

Reliable service was considered as the most critical factor of delivering the promise. It also can be said that providing reliable service was positively correlated with the availability to deliver the promise. In this study, most respondents believed that reliable service from a house builder was extremely important. Based on the results of the semi-structured interviews, the ability of the house builder to deliver on time building progress can be described as a reliable service for the homeowner.

Consequently, the ability of the house builder to provide reliable service was able to create customer satisfaction and determine purchase decisions. This finding was consistent with a previous study which found that internet purchasers tend to purchase in the online shop which provides reliable service (Reichheld & Schefter, 2000). Moreover, it was also consistent with a previous study in the online shopping industry which stated that reliability of service was an important attribute of quality of online services that contributed to overall customer satisfaction (Kim *et al.*, 2009).

6.2.2.1.2 Meeting Expectations

Meeting expectations was considered a critical factor for service excellence which positively influences purchase decisions and consumer satisfaction. Most respondents of this study agreed that most house builders in Auckland met their expectations. The ability of a house builder to meet consumer expectations influencing homeowner's satisfaction and purchase decisions. This finding was consistent with a previous study which found that if performance was in line with, or exceeded expectations, the customer was satisfied or very satisfied (Gaffar & Atrisia, 2015). Another study confirmed that meeting expectations led to repetitive purchasing behaviours (Zhen, 2016).

Each homeowner has different expectations when purchasing or building a house. In order to meet customers' expectations, house builders should have greater flexibility to respond to customers' needs. House builders should be able to develop a personal relationship with their customer to find out their expectations. By developing an intensive relationship with the homeowner, the house builder was able to understand each homeowner's needs and meet their expectations. In other industries like the hospital industry, understanding customers' needs also ensures customer satisfaction by meeting customer's expectations (Leonard, 2017).

6.2.2.1.3 Protect the Customer

Protecting the customer during the building development process was crucial for each homeowner. Most of the respondents in this study did not have enough knowledge regarding the construction process. House builders should provide clear explanations about the whole building construction process. By providing this, the homeowner feels protected by the house builder it was creating a positive contribution toward the homeowner's satisfaction and purchase decision. This finding was consistent with a previous study in the service industry like online shopping which showed that retailers' performance influenced purchase decision (Liao *et al.*, 2017). Moreover, the ability to protect customers in the telecommunication industry in Sri Lanka improved customers' satisfaction levels (Karunanithy & Rasanayagam, 2013).

6.2.2.1.4 Do what was Promised

Based on the questionnaire and semi-structured interview study in the previous chapter, doing what was promised by the house builder was recognized as a critical factor which created a positive relationship between service excellence and the homeowner's satisfaction and their purchase decision. Most respondents in thus study agreed that the house builder should be able to do what they promised. At the beginning stage of the building construction process, the house builder promises to deliver a good quality house. If house builder makes this commitment, they should do what was promised.

It was enhance the homeowner's satisfaction and determine the homeowner's purchase decision. This finding was consistent with a previous study which found that productivity in programming delivered what was promised in order to ensure the customer satisfaction (Oliveira *et al.*, 2016). When the homeowner is satisfied with the house builder, the homeowner believe their house builder. Believing the service provider was improving the homeowner's purchase decision. This finding was consistent with a previous study concerned with the ability to do what was promised improving the customer's purchase decision (Staisch, 2007).

6.2.2.2 Dealing Well with Problems

The ability of the house builder to deal with problems was a critical factor for this study. Most respondents agreed that the house builder should be able provide a better solution for the homeowner when problems arise during the construction process. It was create a positive influence of service excellence toward homeowner's satisfaction and purchase decision. Moreover, this finding was consistent with the finding of a previous study which found that the ability to manage complaints well and recover customers should be the cornerstone of customer satisfaction (Tax & Brown, 1998). Therefore, the ability to deal well with problems and queries was creating customer loyalty and trigger a customer's purchase decision (Getty & Thompson, 1995).

6.2.2.2.1 Helping Customers

According to the results of the questionnaire survey and semi-structured interviews, helping customers was recognized as a critical factor to dealing well with problems. Helping customers makes a positive contribution to determine the level of service excellence from the house builder. Then, the ability to help customer has a correlation to determining homeowner's satisfaction and purchase decision.

This finding was relevant to a previous study which stated that by helping customers to reach a goal of buying faster and easier creates higher customer satisfaction (Paškevicius & Damaševicius, 2016). This finding was also consistent with a previous study about helping customers reach a profitable purchase decision (Ekakitie-Emonena, 2012).

Intensive communication between house builder and homeowner is needed to create better understanding. It was easier for the house builder to help the homeowner when there was a problem in the building construction process. The communication process can be developed using email, phone or direct communication. Effective communication is useful to help a customer and provide better service to them.

6.2.2.2.2 Quick Response

The other critical factor of dealing well with problems was a quick response from the house builder. Most respondents in this study confirmed that a quick response was needed by homeowner. The ability of the house builder to respond quickly creates a higher possibility to solve consumer's problems quickly and create the homeowner's satisfaction and purchase decision. This finding was consistent with a previous study within a travel context which found that quick response of a travel website has a positive effect on customer satisfaction and online purchasing (Abou-Shouk & Khalifa, 2017).

Moreover, quick response is related to the willingness of the house builder to help customers to provide a fast service when they encounter a problem. This means house builders in Auckland should have the willingness and speed to make an initial response to consumer's enquiries. From the perspective of the homeowner, the quality of a quick response affects the service quality the customer perceives. Better service quality from the house builder creates higher customer satisfaction and customer loyalty. Accommodating the needs of customers creates value and wins customer patronage. It can be concluded that a quick response is important to develop successful business for the house builder.

6.2.2.2.3 Problem Solving

The other critical factor of the dealing well with problems attribute for this study is problem solving. Most respondents agreed that the ability of the house builder to deliver problem solving positively influenced the level of service excellence toward homeowner's satisfaction and purchase decision. This finding was consistent with a previous study which found that the ability of the service provider to solve problems influenced customer satisfaction (Bitner *et al.*, 1990). Furthermore, the results of this study were also consistent with a previous study which found that every purchase decision takes off from the initial problem solving desire that follows needs' recognition (Ojo & Adebayo, 2017).

6.2.2.3 Providing a Personal Touch

Based on the results of the questionnaire and semi-structured interview analysis, providing a personal touch was one of the important factors positively influencing service excellence. Most of respondents of this study agreed that the house builder should be able develop a personal relationship with the homeowner in order to increase customer satisfaction and determine the customer's purchase decision. The positive relationship between providing a personal touch and customer satisfaction was consistent with a previous study which stated that overall responsiveness and behavioural attributes including providing a personal touch accounted for better customer satisfaction (Khan & Chouksey, 2012). The finding was also consistent with a previous study which mentioned that a service provider providing a personal touch in a buying-selling situation developed a creative solution in purchase decision making (Blythe & Zimmerman, 2005).

6.2.2.3.1 Individual Treatment

Individual treatment was recognized as the most critical factor of the providing a personal touch attribute. Most respondents in this study agreed that individual treatment positively influenced service excellence. The ability of the house builder to provide individual treatment with the homeowner able to create customer satisfaction and help to determine the homeowner's purchase decision. This finding was consistent with a previous study which found that individual treatment was a key component to obtaining customer satisfaction in every service-oriented business (Blocker *et al.*, 2011). In addition, the finding was consistent with a previous study which stated that the study of individual treatment like the mixture of wants, needs and drives within the individual helps to influence purchase decisions (De Mooij, 2013).

Based on the findings of this study, it also can be said that individual treatment was extremely important. The process of creating individual treatment can be seen as implementing segmentation strategy for house builder. By segmenting their market means the house builder knowing their customer precisely, giving them exactly what they want, and building a strong relationship. The segmentation strategy for each house builder implies an individual treatment for each customer. Even though each homeowner requires individual communication, some similar segmentation methods can be used for communication with several customers. It can be concluded that segmenting customers is extremely important to develop individual treatment with each customer.

6.2.2.3.2 Care

The other critical factor of the providing a personal touch attribute for this study was care to the customer. Care was extremely important for creating a positive relationship of providing a personal touch toward service excellence. It also can be said that house builders should care for their customer in order to create customer satisfaction and determine the homeowner's purchase decision. This finding was consistent with a previous study which stated that care of the customer was a crucial predictor of customer satisfaction (Santouridis & Veraki, 2017).

Based on the results of previous studies, it can be suggested to house builders in Auckland to make regular contact with their customers. It is one of the care treatments for each homeowner as a customer. Creating regular contact with customers able to identify any issues in the building development process. Furthermore, regular contact with customers able to determine accurate solutions and minimize any potential complaints.

6.2.2.4 GTEM

GTEM was considered as an attribute which positively influenced service for this study. GTEM was an important factor which determined customer satisfaction and the homeowner's purchase decision. Most respondents of this study agreed that GTEM was needed by house builders to provide better service for their customers. By implementing GTEM, the house builder able to have a future plan to anticipate changes of customer expectations. This finding was consistent with a previous study which concerned GTEM as one crucial factor used by Ritz-Carlton for satisfying their guests (Bacon & Pugh, 2004). A recent study was also concerned with the statement of GTEM and "I do more than what is required" indicates great satisfaction (Frost, 2017). In addition, this finding was also consistent with a previous study which stated that GTEM is one attribute of relationship proneness which influences purchase decision at the same shop (De Wulf *et al.*, 2001).

6.2.2.4.1 Anticipate Customers' Needs

Most respondents of this study agreed that anticipating customer's needs is important because each customer has different needs. The results of the questionnaire survey and semi-structured interviews showed that anticipating customers' needs was a critical factor for GTEM. It means anticipating customers' needs makes a positive contribution toward GTEM, influencing customer's satisfaction and purchase decisions. This finding was consistent with a previous study which showed that it was important to recognize and anticipate customer's needs to be able to satisfy them (Amoako *et al.*, 2012).

The results of this study show the importance of anticipating customer needs. This means house builders in Auckland should be able to know all customer needs and provide an alternative solution for each customer. Providing for individual tastes and preferences for each customer able to enhance customer satisfaction, create customer loyalty and create more business opportunity for the house builder. Thus, this study able to help house builders or developers to develop different alternative marketing strategies for different types of customer.

6.3 Summary

This study has illustrated the ability of the determinants of homeownership to explain the intention to purchase a house. It has shown that the intention to purchase a house is influenced by financial considerations, accessibility, neighbourhood, infrastructure facilities, and house features. House builders should formulate strategic policy to reduce costs of housing and improve the efficiency of the housing delivery system. The ability of the house builder to create an effective pricing plan was able to help the homeowner to purchase a house. House quality was also recognized as a critical factor used by homeowners to make purchase decisions. Better house quality provides higher credibility for house builders and enhance customer satisfaction.

House builders in Auckland should gain a better understanding about the housing needs of customers in the Auckland housing market and be able to modify their housing products in order to satisfy homeowner's needs. Moreover, house builders in Auckland should be able to create better understanding in designing and managing their customers. The ability to meet the requirements of the homeowner is crucial for house builders through knowing the most appropriate housing attributes as suggested by this study. In addition, the implementation of this study was able to provide greater satisfaction for homeowners with their house purchase decisions and consequently house builders should create more profit through an optimum pricing scheme and faster business turnover.

CHAPTER SEVEN
CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

This chapter presents the conclusions of the study focusing on the findings which address the research objective. There are seven chapters organized for this thesis. Chapter 1 defined background of the study, research problem and research objective. Chapter 2 discussed the related literature review used for this study. Discussion of appropriate research design was described in Chapter 3. The results of the questionnaire survey were presented in Chapter 4. This was followed by a discussion of semi-structured interview analysis in Chapter 5. The findings and discussions of the questionnaire survey and semi-structured interview analysis were presented in Chapter 6. The final conclusions, recommendations, the contribution of knowledge and limitations of the research were discussed in Chapter 7.

7.2 Research Objectives

The main aim of this study was to measure the relationship of homeownership and service attributes toward purchase decisions and customer satisfaction, then determine the main attribute which influenced purchase decision. It started by assessing the literature that focused on the residential housing industry. In order to gather information on these circumstances, data from a questionnaire survey and semi-structured interviews were collected. Then, analysis of the questionnaire survey was conducting by using SPSS and AMOS. The results of the quantitative data analysis were validated by semi-structured interviews with homeowners.

7.2.1 Conclusions on Objective 1

The first objective of this study was *"to define the relationship between determinants of homeownership and service excellence toward a homeowner's purchase decision and post-purchase satisfaction".* As discussed in Chapter 4, determinants of homeownership positively influence homeowners to purchase residential housing in Auckland. Most respondents in this study agreed that determinants of homeownership are important factors to determine the purchase decision. This finding is consistent with many previous studies on residential property. There were several studies which suggested the importance of determinants of homeownership when homeowners purchase a house (Hood, 1999; Lauridsen & Skak, 2007; Tan, 2008; Ying & Chen, 2013; Sean & Hong, 2014). Since purchasing a house is the largest spend in most households, the understanding of determinants of homeownership attributes are crucial for each homeowner when to determining a house purchase decision.

In addition, it was found that service excellence had a positive relationship toward the homeowner's purchase decision. This study is the first comprehensive investigation of the relationship between service excellence and the homeowners' purchase decisions in New Zealand. A previous study mostly investigated actual service quality received by homeowners which was compared to their expectations but no previous study has examined service excellence for the homeowner. Most homeowners expect better service quality from house builders when making purchase decisions (Polat & Donmez, 2010; Forsythe, 2012; Sommerville *et al.*, 2012; Zeng, 2013; Sunindijo *et al.*, 2014).

Within the context of the New Zealand housing industry, the measurement of determinants of homeownership and service excellence as the main factors to determine housing purchase decisions is new knowledge. This means house builders or developers should be considering each factor for determinants of homeownership like financial considerations, location accessibility, neighbourhood, infrastructure facilities and house features in order to attract homeowners' purchase decisions. A proper feasibility study regarding each factor of determinants of homeownership is extremely important for house builders or developers when building and selling a house.

In addition, every single factor of service excellence like delivering the promise, dealing well with problems, providing personal touch and GTEM should be considered by house builders or developers when building and selling a house to their customer. By providing an appropriate service to the customer, it was easy for house builders or developers to influence homeowners' purchase decisions. When each factor of service excellence is able to satisfy the homeowner's expectation, a quick decision was made by the homeowner to purchase a house. Consequently, it is easy for house builders or developers to run their businesses and maximize their organization's income.

As discussed in Section 4.3.2.3, customer satisfaction is positively influenced by the determinants of homeownership. This comprehensive research is the first study which measures the relationship between the determinants of homeownership and customer satisfaction in New Zealand. A previous study found that housing attributes like environment, aesthetics, exterior design and space positively influenced customer satisfaction (Zeng, 2013). The most critical factors for determinant of homeownership which satisfied customer satisfaction for this study were house price, house quality, a safe neighbourhood and number and size of bedrooms.

This study found that house price, house quality, a safe neighbourhood and number and size of bedrooms were critical factors for determinants of homeownership which enhanced customer satisfaction. This means house builders in Auckland should be concerned with house price, house quality, a safe neighbourhood and number and size of bedrooms when implementing their marketing strategy. By providing a feasible house price, house quality, a safe neighbourhood, and required numbers and size of bedrooms; a house builder was able to meet or exceed customer satisfaction. Hence, this was able to create customer loyalty and consequently optimize business opportunity for house builders.

The findings of this study should help construction companies to understand customer needs in order to improve their satisfaction level. Providing a better satisfaction level for customers able to enhance customer loyalty and positive word of mouth. The results of this study also show that service excellence provided by the house builder influences customer satisfaction. Improving the quality of service excellence is extremely important for house builders in order to enhance customer satisfaction. The findings of this study are consistent with previous research which found that there was a strong relationship between service quality from the house builder and homeowner's satisfaction (Nahmens & Ikuma, 2009; Hui & Zheng, 2010; Zadkarim & Emari, 2011; Kaiman & Zani, 2013; Sweis *et al.*, 2013).

As discussed earlier, service excellence provided by the house builder was able to enhance customer satisfaction. This finding can be seen as new knowledge to the housing industry in New Zealand, since the previous study evaluated customer satisfaction by using service quality factors consisting of intangibles: reliability, responsiveness, assurance and empathy. In order to create customer satisfaction, house builders should be able to deliver the promise, deal well with problems, provide a personal touch, and GTEM.

Satisfactory performance of the house builder leads to retaining a pleasant relationship with the homeowner. It means homeowner satisfaction is dependent on the construction process conducted by the house builder. When homeowners are satisfied with services provided by the house builder, a business opportunity is available for the house builder. It can be concluded that sustainable service excellence is extremely important for house builders to maximize their income by influencing homeowner's satisfaction.

7.2.2 Conclusions on Objective 2

The second objective of this study was *"to determine the critical factors for determinants of homeownership and service excellence in determining a homeowner's purchase decision"*. As discussed in Section 4.2.4, there were 14 critical factors of determinants of homeownership: house price, house quality, a safe neighbourhood, number and size of bedrooms, a clean neighbourhood, income, credit affordability, house design, a non-polluted neighbourhood, number and size of bathrooms, land size, access to the workplace, road quality and access to school.

Among those factors, house price became the most critical for this study. This finding is consistent with a previous study which categorized house price in Auckland as severely unaffordable (Cox & Pavletich, 2017). Since house prices in Auckland are between 10 and 12 times the average household income, many people in Auckland are unable to purchase a house. House builders in Auckland should have greater awareness and anticipation regarding house prices when creating a marketing strategy. House builders should also have concerns regarding the other critical factors of determinants of homeownership from this study. This means each critical factor of this study should be determined as an important component when selling a house. Hence, the finding of fourteen critical factors for determinants of homeownership to determine purchase decisions is new knowledge to the housing industry, especially in New Zealand.

In addition, there were 10 critical factors of service excellence which influenced customer's purchase decisions: reliable service, meeting expectations, protecting the customer, individual treatment, helping the customer, quick response, doing what was promised, problem solving, care and anticipating needs. Reliable service from the house builder became the most critical factor of service excellence when determining purchase decision. It is consistent with a previous study conducted in the USA which mentioned that focus on reliable service was important to determine house buyer purchase decision (Nahmens & Ikuma, 2009).

The measurement of reliable service by using the service excellence concept to determine house purchase decisions is also new knowledge to the housing industry. The previous study measured reliable service to determine house purchase decisions by using the service quality concept. The implementation of reliable service and the other critical factors of service excellence help house builders to understand service requirements of the customer. Then, it was satisfying homeowner's expectation and ease the homeowner's purchase decision. It can be concluded that sustainable service excellence from the house builder had a direct impact on improvement of their business performance.

7.2.3 Conclusions on Objective 3

The third objective of this study was *"to identify the level of service excellence provided by house builders which influence homeowners' post-purchase satisfaction".* As explained in Chapter 4, customer satisfaction positively influences homeowners in determining their purchase decision. Most respondents of this study agreed that their satisfaction toward house builders or developers led to enhancing their purchase decision. This finding was consistent with a previous study in other countries like Indonesia and Australia which found that customer satisfaction significantly affected house buyer purchase decision (Anis *et al.*, 2014; Eldejany, 2016). Based on the results of this study, it is highly recommended that house builders in Auckland consider the importance of customer satisfaction in order to increase customer numbers.

The findings of this study about determinants of homeownership and service excellence being important factors of customer satisfaction in determining customer purchase decisions can be defined as new knowledge to the housing industry in New Zealand. House builders in Auckland should be concerned with each critical factor for determinants of homeownership and service excellence. By optimizing each critical factor, the house builder was able to enhance customer satisfaction. When house builders are able to satisfy homeowners' expectations, it is easy for homeowners to make their purchase decisions. It was able to maximize business performance for house builders or developers. It means by providing appropriate determinants of homeownership and continuous service excellence, construction companies in Auckland able to create a better competitive advantage.

7.3 Research Contributions

This study mainly focused on the existence of service excellence from construction companies to improve customer satisfaction leading to a competitive advantage for the residential housing industry. The comprehensive study of service excellence for the residential housing industry makes it possible for this research to contribute to the academic and industrial sectors, and homeowners.

7.3.1 Contributions to the Academic Sector

This study contributes to the knowledge of the consumer decision-making process in the residential housing industry. There have not been any scientific studies which identify both determinants of homeownership and service excellence as an instrument that influences homeowners' purchase decisions in New Zealand. It can be confirmed that this study is the only known research which observes the relationship between determinants of homeownership and service excellence toward customers' purchase decisions and customer satisfaction for the New Zealand market.

It can be said that the findings of this study are new knowledge to the academic sector, especially in evaluating the consumer decision-making process for the housing industry in New Zealand. The previous study was focused on the dimension of service quality when evaluating the consumer decision-making process for the housing industry, while this study is concerned with the measurement of service excellence. It can be said that the results of this study are significant to fill the gap in the knowledge of the consumer purchase decision process in the residential housing industry. It is useful for the academic sector as a guidance when evaluating sustainable service solutions for the consumer decision-making process.

In addition, this study also contributes new knowledge for the academic sector when evaluating the consumer decision-making process in the housing industry based on the determinants of homeownership. There were many studies which discussed the determinants of homeownership as an important factor in determining house purchase decisions. Therefore, the combination of financial considerations, location accessibility, neighbourhood, infrastructure facilities and house features as important factors for determinants of homeownership in determining homeowners' purchase decisions can be

seen as new knowledge for the consumer decision-making process in the housing industry.

7.3.2 Contributions to the Industrial Sector

The findings of this study propose the critical factors for determinants of homeownership and service excellence to determine customer purchase decision. The identification of critical factors helps to enhance awareness among industry players about the importance of determinants of homeownership and service excellence for the residential housing industry. It was able to create better understanding for construction companies in New Zealand toward customer's needs when determining purchase decisions.

The ability to understand key factors which influence customer's purchase decisions and fulfil or exceed customer's expectation is important to ensure the success of business activity. Hence, the fourteen critical factors from determinants of homeownership and ten critical factors from service excellence can be used as the key success factors for residential housing market in Auckland. The house builder should implement each critical factor found in this study. It means the house builder should not only focus on house price and house quality to influence the homeowner's purchase decision. The other critical factors from determinants of homeownership that should get attention from the house builder are safe neighbourhood, number and size of bedrooms, clean neighbourhood, income, credit affordability, house design, green neighbourhood, number and size of bathrooms, land size, ease of access to workplace, road quality, and ease of access to schools.

Other critical factors that should get priority from house builders are service excellence attributes. Based on the results of this study, there are ten critical factors from service excellence attributes: reliable, meet expectations, protect the customer, individual treatment, helping the customer, quick response, do what was promised, problem solving, care, and anticipate customer's needs. The appropriate implementation of each critical factor of this study would enable house builders meet or exceed customer's expectations and influence customer's purchase decisions.

The findings of this study have created new knowledge to the housing industry in New Zealand, especially in the sustainable service solutions for house builders and developers. Previously, many construction companies, including house builders and developers were only concerned with sustainable product development rather than sustainable service solutions. Now, many industrial sectors including the housing industry not only focus on product quality, but they start to focus on service solutions. The company which provides both sustainable product quality and sustainable service solutions had bigger competitive advantage than their competitors. It means, the findings of this study related to the service excellence can be used as a guideline for each player in the residential housing industry to gain a competitive advantage and win over the competition.

7.3.3 Contributions to Homeowners

The house builder's business success depends on their understanding of critical factors which influence consumer's purchase decisions. House builders or developers in Auckland should be aware of the critical factors which determine homeowners' purchase decisions. There are 14 critical factors for determinants of homeownership and 10 critical factors for service excellence in the Auckland residential housing market.

In the context of the housing industry, the findings of this study are new knowledge of the consumer decision-making process in New Zealand. This study explains each factor that can be used by customers to evaluate their purchase decisions. Then it can be used as a guideline for homeowners when determining their purchase decision. By implementing the results of this study, it is easier for homeowners to find house builders or developers who are capable of meeting or exceeding their expectations. In addition, it may enable homeowners to identify more information for determining their purchase decisions. Thus, homeowners are able to get their ideal house and they are satisfied with their decision.

7.4 Limitations of the Research

This research was conducted in Auckland to achieve the research objective by predicting customer expectation and investigating service delivery from builders. The process of this study was started by collecting data through questionnaires. The quantitative data was analysed by using an SEM Model. Then, it was validated with homeowners by using semi-structured interviews. However, there were the following limitations:

1. This research only involved and focused on participation from homeowners of new-build houses in Auckland. The research did not investigate purchase decisions of homeowners outside of Auckland or homeowners of second-hand houses. This study did not consider homeowners from that broader category because of limitations in funding.

2. This research focused on the evaluation of alternative housing purchase factors and the final purchase decision, and assessed customers' perceptions of post-purchase satisfaction. Originally, the total purchase decision-making process including five stages: problem recognition, search for information, evaluation of alternatives, purchase decision and post-purchase decision behaviour (Quester *et al.*, 2014). This study was constrained by a lack of time, thus the other stages of the consumer decision process were not able to be considered.

3. This study was mainly concerned with the housing and service attributes. Other factors like demographic components was not considered in this study. There were previous studies which recognized demographic factors as important components in determining homeowners' purchase decisions. Even though considering more evaluation factors would have created a more accurate outcome, it could not be implemented because of lack of resources, time and budget. This limitation is consistent with a previous study which found that most doctoral dissertations are often constrained by a lack of time, funding and resources (Sekaran & Bougie, 2016).

7.5 Recommendations for Future Research

This study provides more opportunities for exploring the consumer decision-making process in the residential housing industry. Several recommendations which can be implemented for future research are as follows:

1. It would be valuable to investigate the consumer decision-making process in the broader market in New Zealand or markets in other developed countries like Australia, the UK, the US, or other developed countries. The implementation of this study in broader markets is to ensure its applicability for other developed countries.

2. The outcomes of this study provide opportunities to enhance customer satisfaction at purchase decision and post-purchase decision stage. The future stage could improve an investigation into how service excellence influences customer satisfaction from the whole consumer decision making process. The research which evaluated the whole consumer decision process would be able to provide an extensive outcome for the residential housing industry.

3. Further research should consider more comprehensive evaluation factors when determining the consumer decision-making process. The wider adoption of related factors in determining purchase decision would provide a more holistic approach in assessing the consumer decision-making process in the residential housing industry.

4. This study found that homeowners' purchase decisions were significantly influenced by service excellence. This finding can be implemented in the Auckland residential housing market. Thus, further research should be able to investigate in other cities in New Zealand. It would provide more beneficial suggestions for all homeowners with different characteristics in all cities in New Zealand.

7.6 Summary

This study investigated the consumer decision-making process for homeowners of residential housing in Auckland, New Zealand. The results of this study explain critical factors which are considered when determining house purchase decisions. The existence of determinants of homeownership is important in the evaluation of the alternatives stage of the homeowner's purchase decision. The presence of service excellence plays a key role in homeowner's satisfaction level. It is assumed that the results of this study was providing some valuable information for homeowners, house builders, developers, Government and researchers. The outcome of this study can be used as a guide for future reference on the study of the residential housing industry.

There is a lack of research examining the importance of determinants of homeownership and service excellence attributes in the residential housing industry. The model developed in this research addresses this gap by capturing determinants of homeownership and service excellence attributes that influence a homeowner's purchase decision. This study also assesses the influence of customer satisfaction toward the consumer decision-making process. In order to achieve this objective, the study employed a mixed method research approach comprising questionnaire surveys and research validation with semi-structure interviews with homeowners. The beneficiaries of this study were homeowners, house builders, policy regulators, the industrial sector as well as the academic sector.

This study was helping customers to know what influences them in determining purchase decisions. It was help house builders or developers to create better strategies in order to meet or exceed customers' expectations. In addition, it was also help Government to develop procedures and regulations for current and future plans.

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APPENDIX A-1

AUTEC Secretariat

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26 August 2015

John Tookey
Faculty of Design and Creative Technologies

Dear John

Ethics Application: **15/282 Developing world class service excellence for the New Zealand house building industry: A study of Auckland residential housing.**

Thank you for submitting your application for ethical review. I am pleased to confirm that the Auckland University of Technology Ethics Committee (AUTEC) has approved your ethics application for three years until 24 August 2018.

AUTEC suggests that the documents going to participants should be reviewed for spelling.

As part of the ethics approval process, you are required to submit the following to AUTEC:

- A brief annual progress report using form EA2, which is available online through http://www.aut.ac.nz/researchethics. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 24 August 2018;
- A brief report on the status of the project using form EA3, which is available online through http://www.aut.ac.nz/researchethics. This report is to be submitted either when the approval expires on 24 August 2018 or on completion of the project;

It is a condition of approval that AUTEC is notified of any adverse events or if the research does not commence. AUTEC approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

AUTEC grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to obtain this.

To enable us to provide you with efficient service, we ask that you use the application number and study title in all correspondence with us. If you have any enquiries about this application, or anything else, please do contact us at ethics@aut.ac.nz.

All the very best with your research,

Kate O'Connor
Executive Secretary
Auckland University of Technology Ethics Committee

Cc: Radyan Dananjoyo raydyan.dananjoyo@aut.ac.nz;Thomas Neitzert

APPENDIX A-2

Participant Information Sheet

AUT
TE WĀNANGA ARONUI O TĀMAKI MAKAU RAU

Date Information Sheet Produced:

30 January 2017

Project Title

Developing World Class Service Excellence for the New Zealand House Building Industry: A Study of Auckland Residential Housing

An Invitation

I am Radyan Dananjoyo and I am a doctoral student at Dept. Built Environment Engineering, School of Engineering, Faculty of Design and Creative Technologies, Auckland University of Technology (AUT), New Zealand. In order to complete my PhD, I am preparing research examining how housing affordability attributes and the level of service excellence influence homeowner buying decision in New Zealand. The outcome of this survey will improve service excellence provision from house builder and help homeowner to determine house buying decision.

I am inviting you to participate in this research study by completing the attached surveys. There is no compensation for responding and your participation in this survey is voluntary. Returned questionnaire is considered to be consent to participate.

If you have finished fill in all questionnaires please returned in the stamped self-addressed envelope attached.

What is the purpose of this research?

The purpose of this study is to investigate level of service excellence for house building industry in New Zealand. There are several objectives formulated for this study:

1. To determine level of service excellence provided by house builder and assist homeowner who want to buy a new house.
2. To propose upgraded structure for current service excellence provided by house builder.

How was I identified and why am I being invited to participate in this research?

In order to participate in this research, you have been selected randomly based on a homeowner database in Auckland. The collection of new homeowner database gathered through the Council.

What will happen in this research?

The result of data collection and analysis will determine the level of service excellence provided by house builder and determine housing affordability attribute that influence homeowner buying decision. Then it will be published in academic conferences and journals.

What are the discomforts and risks?

There is no potential discomfort or embarrassment effect for respondent during the implementation of this study. All personal data related to respondents will kept secured and confidential without any publication in the findings of the study.

How will these discomforts and risks be alleviated?

The information that I search for is definitely anonymous as no questions related to your name and address on the questionnaire. The purpose is to keep no issues of discomfort and risks related to privacy and confidentiality. It is impossible to identify your response for further publication of this study.

What are the benefits?

There are several benefits gathered from this study, include:

1. Identification level of service excellence within house building industry.
2. Broaden homeowner knowledge toward level of service excellence and the importance of housing affordability attributes.

APPENDIX A-2

3. Upgraded level of service excellence from house builder.

The result of this study is also as partial fulfilment of a PhD degree to the researcher.

How will my privacy be protected?

There is no intention from this research to find out personal identity from all questionnaire respondents and the research keep the questionnaire is anonymous.

What are the costs of participating in this research?

The only cost contributed by respondent for this research is providing your valuable time to fill in the questionnaire. The questionnaire can be completed during 10 – 15 minutes.

What opportunity do I have to consider this invitation?

In order to consider this invitation you can take a several days. For further information regarding this research, please contact Radyan Dananjoyo at 0226327872 or email at radyan.dananjoyo@aut.ac.nz.

How do I agree to participate in this research?

If you have willingness to participate in this research, please answer the entire questionnaire. The completion of questionnaire can be declared as your consent.

Will I receive feedback on the results of this research?

- Homeowner can find out summary of findings through a Uniform Resource Locator (URL) or web address that will be provided by the primary researcher.
- A summary of findings for house builder will be send by email.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Professor John Tookey, Dept. Built Environment Engineering, School of Engineering, Auckland University of Technology. Phone (09) 921 9512, email: john.tookey@aut.ac.nz.

and Professor Thomas Neitzert, Dept. of Engineering Mechanic and Production Technology, School of Engineering, Auckland University of Technology. Phone (09) 921 9258, email: tneitzert@aut.ac.nz.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, Kate O'Connor, *ethics@aut.ac.nz* , 921 9999 ext 6038.

Whom do I contact for further information about this research?

Researcher Contact Details:

Radyan Dananjoyo, Dept. Built Environment Engineering, School of Engineering, Auckland University of Technology. Phone 0226327872, email: radyan.dananjoyo@yaut.ac.nz.

Project Supervisor Contact Details:

Professor John Tookey, Dept. Built Environment Engineering, School of Engineering, Auckland University of Technology. Phone (09) 921 9512, email: john.tookey@aut.ac.nz.

Professor Thomas Neitzert, Dept. of Engineering Mechanic and Production Technology, School of Engineering, Auckland University of Technology. Phone (09) 921 9258, email: tneitzert@aut.ac.nz.

Approved by the Auckland University of Technology Ethics Committee on 26 August 2015, AUTEC Reference number 15/282.

APPENDIX A-3

AUT UNIVERSITY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Consent Form

Project title: ***Developing World Class Service Excellence for the New Zealand House Building Industry: A Study of Auckland Residential Housing***

Project Supervisor: ***Professor John E Tookey***

Researcher: ***Radyan Dananjoyo***

- O I have read and understood the information provided about this research project in the Information Sheet.
- O I have had an opportunity to ask questions and to have them answered.
- O I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
- O I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.
- O If I withdraw, I understand that all relevant information including tapes and transcripts, or parts thereof, will be destroyed.
- O I agree to take part in this research.
- O I wish to receive a copy of the report from the research (please tick one): YesO NoO

Participant's signature: .....

Participant's name: .....

Participant's Contact Details (if appropriate):

.....

.....

.....

.....

Date:

***Approved by the Auckland University of Technology Ethics Committee on* 26 August 2015 *AUTEC Reference number* 15/282**

Note: The Participant should retain a copy of this form.

2 July 2015 page 1 of 1 This version was last edited in July 2015

APPENDIX B-1

Homeowner Questionnaire

Developing World Class Service Excellence for the New Zealand House Building Industry – a study of Auckland Residential Housing

I. Introduction

This questionnaire consists of two sections: (1) Background information; (2) homeowner perception toward housing affordability attributes and service excellence from house builder. To answer each question, please circle the appropriate number to show your response. Please answer all these questions.

II. Section 1 – Background Information

1. What is your gender? (Please circle your answer)
   a) Male b) Female

2. How old are you? (Please circle your answer)
   a) ≤ 30 d) 51 – 60
   b) 31 – 40 e) > 60
   c) 41 – 50

3. What is your family's total income per year (NZD)? (Please circle your answer)
   d) 70,000 or less d) 110,001 – 130,000
   e) 70,001 – 90,000 e) 130,001 – 150,000
   f) 90,001 – 110,000 f) 150,001 or more

4. How many houses do you have? (Please circle your answer)
   a) One c) More than two
   b) Two

5. How long did you need to build your present house? (Please circle your answer)
   a) Less than 3 months d) 1 year – 1.5 years
   b) 3 – 6 months e) 1.5 – 2 years
   c) 6 months – 1 year f) More than 2 years

6. Who build your present house? (Please circle your answer)
   a) Build by myself c) Non-registered house builder
   b) Registered house builder d) Other, please mention……

III. Section 2 – Homeowner Opinion

Please circle the answer for the following questions that best applies to you.

Completely Disagree	Mostly Disagree	Slightly Disagree	Slightly Agree	Mostly Agree	Completely Agree
1	2	3	4	5	6

Financial considerations

1	House price is the dominant factor when you make a purchase	1	2	3	4	5	6
2	Income is the dominant factor when you make a purchase	1	2	3	4	5	6
3	Credit affordability is the dominant factor when you make a purchase	1	2	3	4	5	6

Accessibility

1	Easiness to access the workplace is the dominant factor when you make a purchase	1	2	3	4	5	6
2	Easiness to access the school is the dominant factor when you make a purchase	1	2	3	4	5	6
3	Easiness to access the public transport is the dominant factor when you make a purchase	1	2	3	4	5	6
4	Easiness to access the Shopping Centre is the dominant factor when you make a purchase	1	2	3	4	5	6
5	Easiness to access the Recreation Centre is the dominant factor when you make a purchase	1	2	3	4	5	6

Neighborhood

1	Safe neighbourhood is the dominant factor when you make a purchase	1	2	3	4	5	6
2	Clean neighbourhood is the dominant factor when you make a purchase	1	2	3	4	5	6
3	Green neighbourhood is the dominant factor when you make a purchase	1	2	3	4	5	6

Infrastructure

1	Road quality is the dominant factor when you make a purchase	1	2	3	4	5	6
2	The availability of waste management is the dominant factor when you make a purchase	1	2	3	4	5	6
3	The availability of fire systems is the dominant factor when you make a purchase	1	2	3	4	5	6
4	Drainage is the dominant factor when you make a purchase	1	2	3	4	5	6

House Features

1	Housing design is the dominant factor when you make a purchase	1	2	3	4	5	6
2	Quality of housing material is the dominant factor when you make a purchase	1	2	3	4	5	6
3	Number and size of bedroom is the dominant factor when you make a purchase	1	2	3	4	5	6
4	Number and size of bathroom is the dominant factor when you make a purchase	1	2	3	4	5	6
5	Land size is the dominant factor when you make a purchase	1	2	3	4	5	6

Service Excellence

1	House builder do what they say when you make a purchase	1	2	3	4	5	6
2	House builder meet expectations when you make a purchase	1	2	3	4	5	6
3	House builder don't let you down when you make a purchase	1	2	3	4	5	6
4	House builder reliable when you make a purchase	1	2	3	4	5	6
5	When it goes wrong house builder sort it out when you make a purchase	1	2	3	4	5	6
6	House builder were happy and willing to sort it out when you make a purchase	1	2	3	4	5	6
7	House builder know what to do if there is a problem when you make a purchase	1	2	3	4	5	6
8	House builder treat you like an individual when you make a purchase	1	2	3	4	5	6
9	House builder care about you like an individual when you make a purchase	1	2	3	4	5	6
10	House builder anticipated your needs when you make a purchase	1	2	3	4	5	6

Customer Satisfaction

1. The level of satisfaction with the purchase decision is
   a) Very unsatisfied
   b) Somewhat unsatisfied
   c) Somewhat satisfied
   d) Very satisfied

If you have any concerns regarding service excellence for residential housing, please feel free to add any comments.

THANK YOU FOR YOUR PRECIOUS TIME

APPENDIX B-2

No.	Interview Questions
Financial Considerations	
1	Do you think the house price is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
2	Do you think income is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
3	Do you think credit affordability is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
Accessibility	
1	Do you think ease of workplace access is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
2	Do you think ease of school access is important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
Neighbourhood	
1	Do you think a safe neighbourhood is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
2	Do you think a clean neighbourhood is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?

3	Do you think a green neighbourhood is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
Infrastructure Facilities	
1	Do you think access to road quality is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
House Features	
1	Do you think house design is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
2	Do you think house quality is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
3	Do you think number and size of bedrooms is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
4	Do you think number and size of bathrooms is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
5	Do you think land size is an important factor for determinants of homeownership in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
Delivering the Promise	
1	Do you think doing the promise is an important factor for service excellence in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?

2	Do you think meeting the consumer expectation is an important factor for service excellence in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
3	Do you think protecting the consumer is an important factor for service excellence in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
4	Do you think reliability is an important factor for service excellence in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
Dealing well with the problem	
1	Do you think a quick response is an important factor for service excellence in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
2	Do you think easy to help consumers is an important factor for service excellence in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
3	Do you think problem solving is an important factor for service excellence in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
Providing personal touch	
1	Do you think individual treatment to consumers is an important factor for service excellence in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?
2	Do you think care to consumers is an important factor for service excellence in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?

GTEM	
1	Do you think anticipating consumer needs is an important factor for service excellence in determining purchase decision and consumer satisfaction? If yes, in what way(s)? If no, why not?

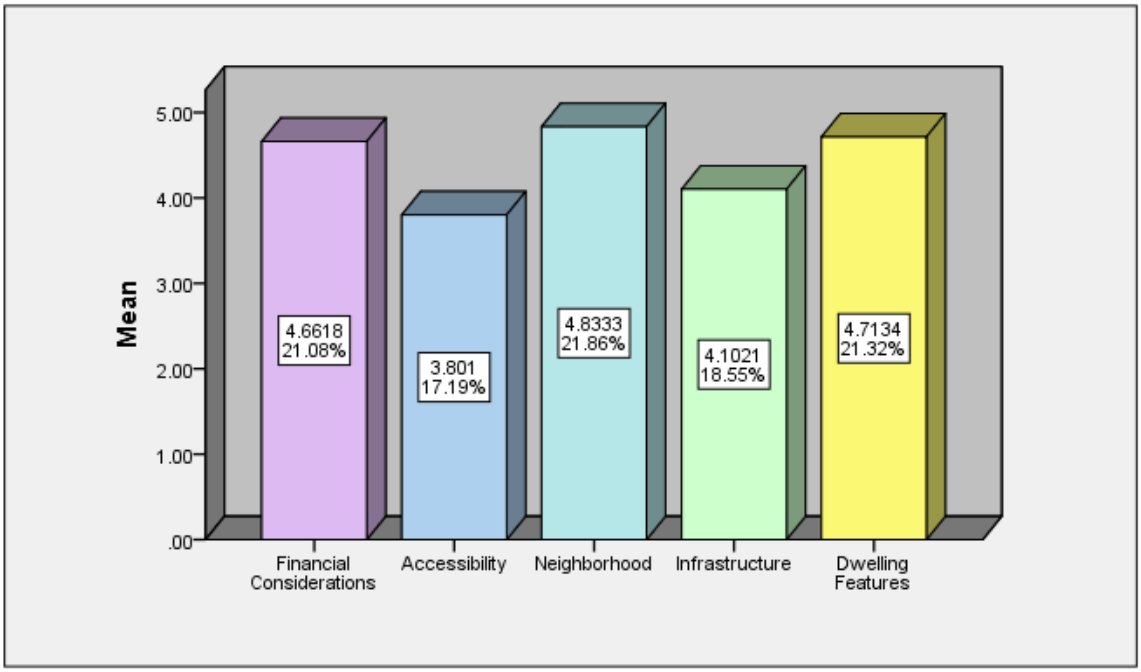
APPENDIX C-1

Statistics

		Financial Considerations	Accessibility	Neighborhood	Infrastructure
N	Valid	414	414	414	414
	Missing	0	0	0	0
Mean		13.986	19.005	14.500	16.408
Mean Weight		4.662	3.801	4.833	4.102
Median		14.00	19.00	15.00	16.00
Mode		18	24	18	15
Std. Deviation		3.171	4.593	2.458	3.959
Minimum		4	5	6	4
Maximum		18	30	18	24
Sum		5790	7868	6003	6793

Statistics

		House Features	The Determinants Of Homeownership
N	Valid	414	414
	Missing	0	0
Mean		28.280	92.179
Mean Weight		4.713	4.390
Median		28.00	93.00
Mode		30	96
Std. Deviation		3.778	13.015
Minimum		15	61
Maximum		36	122
Sum		11708	38162


Mean
5.00
4.00
3.00
2.00
1.00
.00
4.6618
21.08%
3.801
17.19%
4.8333
21.86%
4.1021
18.55%
4.7134
21.32%
Financial Considerations
Accessibility
Neighborhood
Infrastructure
Dwelling Features

Financial Considerations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Low (3 - 6)	4	1.0	1.0	1.0
	Low (> 6 - 9)	26	6.3	6.3	7.2
	Medium (> 9 - 12)	115	27.8	27.8	35.0
	High (> 12 - 15)	130	31.4	31.4	66.4
	Very High (> 15 - 18)	139	33.6	33.6	100.0
	Total	414	100.0	100.0	

Accessibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Low (5 - 10)	16	3.9	3.9	3.9
	Low (> 10 - 15)	80	19.3	19.3	23.2
	Medium (> 15 - 20)	156	37.7	37.7	60.9
	High (> 20 - 25)	149	36.0	36.0	96.9
	Very High (> 25 - 30)	13	3.1	3.1	100.0
	Total	414	100.0	100.0	

Neighbourhood

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Low (3 - 6)	1	.2	.2	.2
	Low (> 6 - 9)	2	.5	.5	.7
	Medium (> 9 - 12)	107	25.8	25.8	26.6
	High (> 12 - 15)	144	34.8	34.8	61.4
	Very High (> 15 - 18)	160	38.6	38.6	100.0
	Total	414	100.0	100.0	

Infrastructure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Low (4 - 8)	8	1.9	1.9	1.9
	Low (> 8 - 12)	58	14.0	14.0	15.9
	Medium (> 12 - 16)	168	40.6	40.6	56.5
	High (> 16 - 20)	120	29.0	29.0	85.5
	Very High (> 20 - 24)	60	14.5	14.5	100.0
	Total	414	100.0	100.0	

House Features

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low (> 12 - 18)	2	.5	.5	.5
	Medium (> 18 - 24)	80	19.3	19.3	19.8
	High (> 24 - 30)	220	53.1	53.1	72.9
	Very High (> 30 - 36)	112	27.1	27.1	100.0
	Total	414	100.0	100.0	

The Determinants Of Homeownership

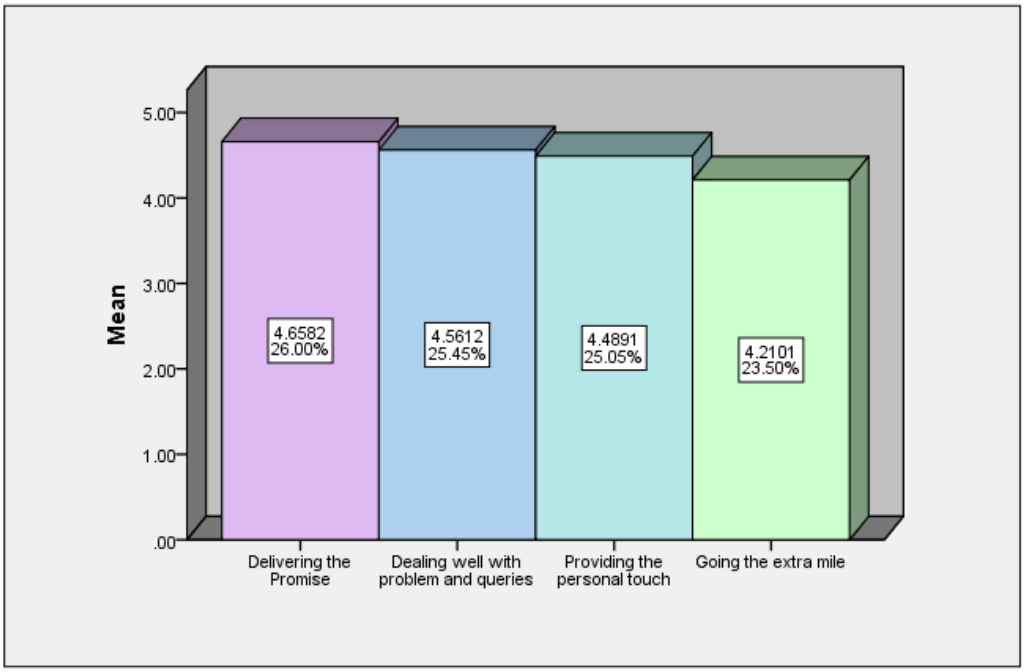
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low (> 42 - 63)	3	.7	.7	.7
	Medium (> 63 - 84)	99	23.9	23.9	24.6
	High (> 84 - 105)	236	57.0	57.0	81.6
	Very High (> 105 - 126)	76	18.4	18.4	100.0
	Total	414	100.0	100.0	

Statistics

		Delivering the Promise	Dealing well with problem and queries	Providing the personal touch
N	Valid	414	414	414
	Missing	0	0	0
Mean		18.633	13.684	8.978
Mean Weight		4.658	4.561	4.489
Median		19.00	14.00	9.0000
Mode		24	12	10.00
Std. Deviation		4.036	2.996	2.00774
Minimum		4	3	2.00
Maximum		24	18	12.00
Sum		7714	5665	3717.00

Statistics

		Going the extra mile	Service Excellence
N	Valid	414	414
	Missing	0	0
Mean		4.210	45.505
Mean Weight		4.210	4.551
Median		4.00	46.00
Mode		4	50
Std. Deviation		1.000	9.170
Minimum		1	10
Maximum		6	60
Sum		1743	18839


Mean
5.00
4.00
3.00
2.00
1.00
.00
4.6582
26.00%
4.5612
25.45%
4.4891
25.05%
4.2101
23.50%
Delivering the Promise
Dealing well with problem and queries
Providing the personal touch
Going the extra mile

Delivering the Promise

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Low (4 - 8)	2	.5	.5	.5
	Low (> 8 - 12)	16	3.9	3.9	4.3
	Medium (> 12 - 16)	142	34.3	34.3	38.6
	High (> 16 - 20)	89	21.5	21.5	60.1
	Very High (> 20 - 24)	165	39.9	39.9	100.0
	Total	414	100.0	100.0	

Dealing well with problem and queries

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Low (3 - 6)	7	1.7	1.7	1.7
	Low (> 6 - 9)	13	3.1	3.1	4.8
	Medium (> 9 - 12)	151	36.5	36.5	41.3
	High (> 12 - 15)	127	30.7	30.7	72.0
	Very High (> 15 - 18)	116	28.0	28.0	100.0
	Total	414	100.0	100.0	

Providing the personal touch

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Low (2 - 4)	6	1.4	1.4	1.4
	Low (> 4 - 6)	47	11.4	11.4	12.8
	Medium (> 6 - 8)	120	29.0	29.0	41.8
	High (> 8 - 10)	156	37.7	37.7	79.5
	Very High (> 10 - 12)	85	20.5	20.5	100.0
	Total	414	100.0	100.0	

Going the extra mile

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Low (1 - 2)	19	4.6	4.6	4.6
	Low (> 2 - 3)	61	14.7	14.7	19.3
	Medium (> 3 - 4)	190	45.9	45.9	65.2
	High (> 4 - 5)	99	23.9	23.9	89.1
	Very High (> 5 - 6)	45	10.9	10.9	100.0
	Total	414	100.0	100.0	

Service Excellence

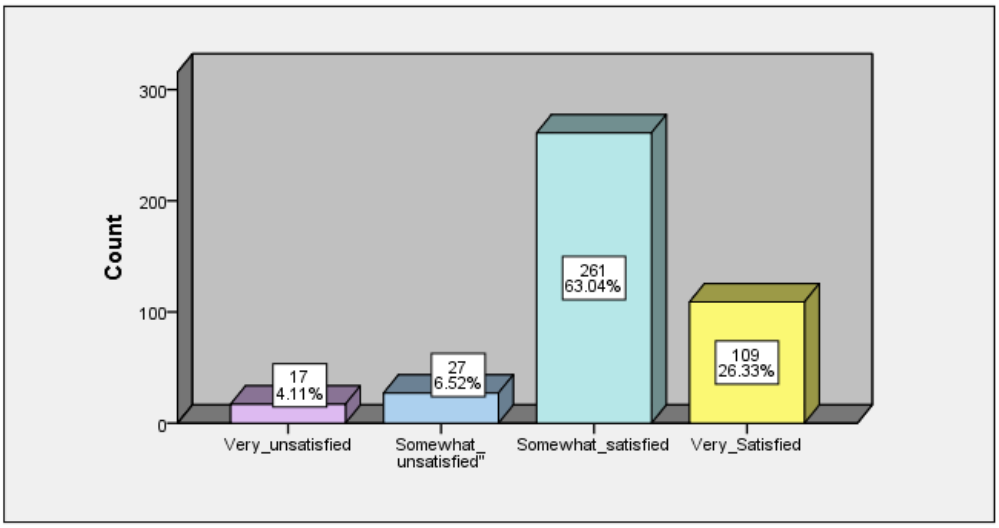
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Low (10 - 20)	2	.5	.5	.5
	Low (> 20 - 30)	13	3.1	3.1	3.6
	Medium (> 30 - 40)	135	32.6	32.6	36.2
	High (> 40 - 50)	127	30.7	30.7	66.9
	Very High (> 50 - 60)	137	33.1	33.1	100.0
	Total	414	100.0	100.0	

Statistics

		Purchase Decision	Customer Satisfaction
N	Valid	414	414
	Missing	0	0
Mean		.97	3.12
Median		1.00	3.00
Mode		1	3
Std. Deviation		.175	.693
Minimum		0	1
Maximum		1	4
Sum		401	1290

Customer Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very_unsatisfied	17	4.1	4.1	4.1
	Somewhat_unsatisfied"	27	6.5	6.5	10.6
	Somewhat_satisfied	261	63.0	63.0	73.7
	Very_Satisfied	109	26.3	26.3	100.0
	Total	414	100.0	100.0	


Count
300
200
100
0
17
4.11%
27
6.52%
261
63.04%
109
26.33%
Very_unsatisfied
Somewhat_
unsatisfied"
Somewhat_satisfied
Very_Satisfied

Amos
by James L. Arbuckle
Version 21

Your model contains the following variables

x152	observed	endogenous
x151	observed	endogenous
x153	observed	endogenous
x154	observed	endogenous
x155	observed	endogenous
x156	observed	endogenous
x113	observed	endogenous
x112	observed	endogenous
x111	observed	endogenous
x124	observed	endogenous
x123	observed	endogenous
x122	observed	endogenous
x121	observed	endogenous
x125	observed	endogenous
x133	observed	endogenous
x132	observed	endogenous
x131	observed	endogenous
x144	observed	endogenous
x143	observed	endogenous
x142	observed	endogenous
x141	observed	endogenous
x214	observed	endogenous
x213	observed	endogenous
x212	observed	endogenous
x211	observed	endogenous
x223	observed	endogenous
x222	observed	endogenous
x221	observed	endogenous
x232	observed	endogenous
x231	observed	endogenous
x241	observed	endogenous
y1	observed	endogenous
y2	observed	endogenous

DwelF	unobserved	endogenous
Neighbor	unobserved	endogenous
Acbility	unobserved	endogenous
FinCon	unobserved	endogenous
Infras	unobserved	endogenous
Provid	unobserved	endogenous
DealWell	unobserved	endogenous
DelProm	unobserved	endogenous
GoingEx	unobserved	endogenous
Purchase	unobserved	endogenous
CustSat	unobserved	endogenous

e17	unobserved exogenous
e16	unobserved exogenous
e18	unobserved exogenous
e19	unobserved exogenous
e20	unobserved exogenous
e21	unobserved exogenous
e3	unobserved exogenous
e2	unobserved exogenous
e1	unobserved exogenous
e7	unobserved exogenous
e6	unobserved exogenous
e5	unobserved exogenous
e4	unobserved exogenous
e8	unobserved exogenous
e11	unobserved exogenous
e10	unobserved exogenous
e9	unobserved exogenous
e15	unobserved exogenous
e14	unobserved exogenous
e13	unobserved exogenous
e12	unobserved exogenous
DetOfHom	unobserved exogenous
e25	unobserved exogenous
e24	unobserved exogenous
e23	unobserved exogenous
e22	unobserved exogenous
e28	unobserved exogenous
e27	unobserved exogenous
e26	unobserved exogenous
e30	unobserved exogenous
e29	unobserved exogenous
e31	unobserved exogenous
e32	unobserved exogenous
e33	unobserved exogenous
ServExc	unobserved exogenous
err10	unobserved exogenous
err11	unobserved exogenous
err1	unobserved exogenous
err3	unobserved exogenous
err4	unobserved exogenous
err6	unobserved exogenous
err7	unobserved exogenous
err8	unobserved exogenous
err9	unobserved exogenous
err5	unobserved exogenous
err2	unobserved exogenous

Number of variables in your model: 90
Number of observed variables: 33
Number of unobserved variables: 57
Number of exogenous variables: 46
Number of endogenous variables: 44

Summary of Parameters

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed:	57	0	3	0	0	60
Labeled:	0	0	0	0	0	0
Unlabeled:	34	5	43	0	0	82
Total:	91	5	46	0	0	142

NOTE:
The model is recursive.

Assessment of normality

	min	max	skew	c.r.	kurtosis	c.r.
y2	1.000	4.000	-0.900	-7.477	1.724	7.159
y1	0.000	1.000	-5.374	-44.639	26.879	111.635
x241	1.000	6.000	-0.182	-1.513	0.237	0.985
x231	1.000	6.000	-0.364	-3.025	-0.170	-0.705
x232	1.000	6.000	-0.346	-2.872	-0.555	-2.307
x221	1.000	6.000	-0.361	-2.999	-0.651	-2.705
x222	1.000	6.000	-0.346	-2.872	-0.358	-1.488
x223	1.000	6.000	-0.340	-2.820	-0.295	-1.224
x211	1.000	6.000	-0.368	-3.056	-0.143	-0.592
x212	1.000	6.000	-0.354	-2.939	-0.773	-3.212
x213	1.000	6.000	-0.358	-2.976	-0.770	-3.199
x214	1.000	6.000	-0.346	-2.876	-0.557	-2.315
x141	1.000	6.000	-0.364	-3.027	-0.155	-0.644
x142	1.000	6.000	-0.375	-3.113	-0.402	-1.671
x143	1.000	6.000	-0.351	-2.915	-0.433	-1.799
x144	1.000	6.000	-0.370	-3.071	-0.495	-2.057
x131	1.000	6.000	-0.353	-2.933	-0.718	-2.981
x132	2.000	6.000	-0.281	-2.331	-0.045	-0.188
x133	1.000	6.000	-0.346	-2.871	-0.447	-1.858
x125	1.000	6.000	0.026	0.213	-0.348	-1.447
x121	1.000	6.000	-0.332	-2.758	0.658	2.732
x122	1.000	6.000	-0.367	-3.045	-0.754	-3.131
x123	1.000	6.000	-0.377	-3.130	-0.762	-3.165
x124	1.000	6.000	-0.184	-1.530	-0.081	-0.336
x111	1.000	6.000	-0.366	-3.042	-0.680	-2.824
x112	1.000	6.000	-0.352	-2.927	-0.244	-1.013
x113	1.000	6.000	-0.375	-3.114	-0.702	-2.916
x156	1.000	6.000	-0.296	-2.459	-0.096	-0.398
x155	2.000	6.000	-0.286	-2.374	0.128	0.533
x154	1.000	6.000	-0.356	-2.956	-0.346	-1.437
x153	2.000	6.000	-0.359	-2.985	-0.396	-1.644
x151	3.000	6.000	0.214	1.776	-0.650	-2.698
x152	3.000	6.000	-0.044	-0.363	-0.668	-2.773
Multivariate				151.079	31.979	

Observations farthest from the centroid (Mahalanobis distance)

Observation number	Mahalanobis d-squared	p1	p2
4	112.288	0.000	0.000
309	100.484	0.000	0.000
295	94.202	0.000	0.000
67	92.980	0.000	0.000
66	88.049	0.000	0.000
352	81.140	0.000	0.000
47	79.172	0.000	0.000
55	78.562	0.000	0.000
360	77.888	0.000	0.000
228	72.272	0.000	0.000
77	70.916	0.000	0.000
247	70.602	0.000	0.000
1	69.295	0.000	0.000
289	65.250	0.001	0.000
366	64.477	0.001	0.000
255	64.084	0.001	0.000
59	63.076	0.001	0.000
34	62.567	0.001	0.000
119	61.763	0.002	0.000
68	61.318	0.002	0.000
2	61.007	0.002	0.000
306	60.808	0.002	0.000
391	60.729	0.002	0.000
172	59.631	0.003	0.000
313	59.193	0.003	0.000
192	58.490	0.004	0.000
113	58.007	0.005	0.000
362	57.496	0.005	0.000
61	56.215	0.007	0.000
84	55.222	0.009	0.000
400	53.892	0.012	0.000
153	53.620	0.013	0.000
60	52.695	0.016	0.000
48	52.482	0.017	0.000
95	51.934	0.019	0.000
7	51.311	0.022	0.000
256	51.235	0.022	0.000
227	51.059	0.023	0.000
46	50.940	0.024	0.000
182	50.858	0.024	0.000
287	50.826	0.024	0.000
331	50.667	0.025	0.000
26	50.139	0.028	0.000
303	50.069	0.029	0.000
368	49.784	0.031	0.000
244	49.589	0.032	0.000
30	49.329	0.034	0.000
200	49.261	0.034	0.000
383	48.920	0.037	0.000
177	48.773	0.038	0.000
24	48.369	0.041	0.000
112	47.801	0.046	0.000
330	47.623	0.048	0.000
399	47.001	0.054	0.000
235	46.948	0.055	0.000

220	46.564	0.059	0.000
374	46.380	0.061	0.000
191	45.953	0.066	0.000
185	45.550	0.072	0.000
118	45.540	0.072	0.000
392	45.477	0.073	0.000
211	45.314	0.075	0.000
363	45.289	0.075	0.000
6	45.213	0.076	0.000
388	44.976	0.080	0.000
224	44.885	0.081	0.000
272	44.504	0.087	0.000
308	44.331	0.090	0.000
393	44.123	0.093	0.000
343	43.872	0.098	0.000
203	43.429	0.106	0.000
337	43.272	0.109	0.000
140	42.670	0.121	0.001
44	42.467	0.125	0.001
296	42.357	0.127	0.001
17	42.332	0.128	0.001
240	42.276	0.129	0.001
90	42.220	0.130	0.001
91	42.189	0.131	0.000
106	41.995	0.136	0.001
404	41.840	0.139	0.001
109	41.810	0.140	0.001
225	41.795	0.140	0.000
266	41.281	0.153	0.004
221	41.249	0.153	0.003
3	41.207	0.154	0.002
19	41.100	0.157	0.003
262	41.062	0.158	0.002
201	40.954	0.161	0.002
168	40.743	0.167	0.004
115	40.674	0.168	0.004
15	40.645	0.169	0.003
315	40.638	0.169	0.002
263	40.596	0.170	0.002
250	40.247	0.180	0.007
171	40.184	0.182	0.006
241	40.159	0.183	0.005
176	39.920	0.190	0.010
8	39.857	0.191	0.009
31	39.767	0.194	0.010

Sample size: 414

Sample Covariances

	y2	y1	x241	x231	x232	x221	x222
y2	0.479						
y1	0.033	0.030					
x241	0.208	0.024	0.997				
x231	0.234	0.031	0.638	0.972			
x232	0.261	0.043	0.681	0.903	1.243		
x221	0.209	0.035	0.598	0.754	0.917	1.395	
x222	0.230	0.036	0.687	0.845	0.835	0.902	1.094
x223	0.233	0.040	0.627	0.753	0.920	0.953	0.849
x211	0.203	0.042	0.527	0.574	0.665	0.987	0.722
x212	0.215	0.034	0.575	0.640	0.728	1.060	0.827
x213	0.208	0.030	0.575	0.732	0.785	1.119	0.936
x214	0.241	0.045	0.569	0.663	0.726	1.060	0.844
x141	0.159	0.042	0.288	0.171	0.173	0.108	0.220
x142	0.228	0.062	0.399	0.298	0.400	0.257	0.291
x143	0.248	0.052	0.379	0.199	0.285	-0.031	0.119
x144	0.202	0.044	0.474	0.332	0.481	0.343	0.367
x131	0.150	0.035	0.244	0.117	0.295	0.004	0.078
x132	0.107	0.029	0.258	0.086	0.111	-0.006	0.097
x133	0.185	0.046	0.408	0.126	0.175	-0.112	0.075
x125	0.182	0.031	0.198	0.141	0.225	0.085	0.161
x121	0.109	0.023	0.078	0.074	0.125	0.037	0.114
x122	0.230	0.036	0.220	0.212	0.296	0.117	0.235
x123	0.195	0.035	0.241	0.187	0.225	0.054	0.220
x124	0.148	0.029	0.180	0.094	0.140	0.074	0.118
x111	0.112	0.010	0.149	0.163	0.210	-0.043	0.231
x112	0.088	0.017	0.210	0.223	0.227	0.043	0.253
x113	0.156	0.019	0.257	0.241	0.305	0.144	0.336
x156	0.112	0.023	0.327	0.213	0.161	0.154	0.217
x155	0.137	0.024	0.248	0.228	0.215	0.136	0.212
x154	0.135	0.028	0.211	0.199	0.272	0.053	0.129
x153	0.166	0.025	0.290	0.288	0.342	0.298	0.297
x151	0.084	0.024	0.205	0.223	0.256	0.257	0.234
x152	0.146	0.028	0.307	0.300	0.348	0.140	0.272

	x223	x211	x212	x213	x214	x141	x142
x223	1.057						
x211	0.765	1.169					
x212	0.815	0.898	1.127				
x213	0.856	0.938	1.022	1.323			
x214	0.829	0.891	0.939	1.056	1.144		
x141	0.130	0.162	0.229	0.227	0.166	0.896	
x142	0.336	0.306	0.310	0.277	0.335	0.715	1.415
x143	0.078	0.079	0.069	0.029	0.069	0.796	1.026
x144	0.280	0.318	0.338	0.349	0.355	0.541	1.093
x131	0.236	0.064	0.041	0.026	0.028	0.361	0.537
x132	0.140	0.058	0.035	0.058	0.090	0.357	0.510
x133	0.099	0.039	0.005	0.026	0.014	0.581	0.740
x125	0.137	0.040	0.093	0.093	0.095	0.299	0.426
x121	0.085	0.002	0.066	0.025	0.023	0.183	0.252
x122	0.189	0.111	0.168	0.116	0.106	0.364	0.501
x123	0.154	0.084	0.153	0.149	0.104	0.374	0.591
x124	0.118	0.022	0.118	0.074	0.080	0.295	0.411
x111	0.091	-0.015	-0.006	0.056	-0.012	0.223	0.324
x112	0.138	0.033	0.093	0.137	0.074	0.303	0.341
x113	0.213	0.080	0.164	0.199	0.097	0.380	0.404
x156	0.200	0.183	0.172	0.095	0.146	0.146	0.270
x155	0.257	0.200	0.115	0.123	0.140	0.158	0.278
x154	0.209	0.106	0.118	0.077	0.055	0.133	0.301
x153	0.393	0.293	0.240	0.240	0.264	0.178	0.379
x151	0.313	0.281	0.238	0.243	0.222	0.120	0.322
x152	0.207	0.056	0.138	0.173	0.122	0.318	0.350

	x143	x144	x131	x132	x133	x125	x121
x143	1.583						
x144	1.013	1.374					
x131	0.513	0.377	0.918				
x132	0.440	0.346	0.461	0.583			
x133	0.769	0.561	0.634	0.603	1.131		
x125	0.364	0.305	0.237	0.190	0.240	1.417	
x121	0.167	0.162	0.181	0.105	0.126	0.286	0.847
x122	0.423	0.381	0.309	0.230	0.258	0.918	0.564
x123	0.516	0.454	0.306	0.280	0.400	0.999	0.553
x124	0.381	0.283	0.255	0.207	0.249	0.798	0.325
x111	0.417	0.297	0.253	0.170	0.306	0.481	0.248
x112	0.386	0.281	0.221	0.208	0.304	0.413	0.239
x113	0.479	0.344	0.328	0.244	0.382	0.473	0.240
x156	0.230	0.176	0.129	0.202	0.142	0.209	0.083
x155	0.226	0.179	0.151	0.231	0.246	0.245	0.120
x154	0.241	0.203	0.260	0.221	0.254	0.303	0.192
x153	0.238	0.349	0.228	0.220	0.165	0.277	0.170
x151	0.130	0.198	0.155	0.106	0.081	0.182	0.114
x152	0.404	0.291	0.201	0.160	0.284	0.330	0.134

	x122	x123	x124	x111	x112	x113	x156
x122	1.593						
x123	1.319	2.082					
x124	0.496	0.640	1.314				
x111	0.545	0.601	0.274	1.455			
x112	0.516	0.539	0.247	1.048	1.253		
x113	0.535	0.563	0.371	0.996	0.957	1.322	
x156	0.221	0.239	0.214	0.196	0.202	0.248	0.902
x155	0.272	0.320	0.228	0.252	0.232	0.272	0.418
x154	0.360	0.381	0.266	0.332	0.311	0.345	0.413
x153	0.354	0.360	0.174	0.334	0.269	0.314	0.356
x151	0.240	0.272	0.153	0.106	0.126	0.160	0.176
x152	0.299	0.331	0.267	0.360	0.323	0.379	0.221

	x155	x154	x153	x151	x152
x155	0.730				
x154	0.503	0.794			
x153	0.462	0.434	0.769		
x151	0.263	0.256	0.298	0.556	
x152	0.302	0.418	0.203	0.146	0.744

Eigenvalues of Sample Covariances

2.297e-002	7.626e-002	1.009e-001	1.190e-001	1.313e-001	1.379e-001
1.450e-001	1.776e-001	2.001e-001	2.125e-001	2.490e-001	2.585e-001
2.808e-001	3.084e-001	3.300e-001	3.453e-001	3.640e-001	3.790e-001
4.308e-001	4.522e-001	4.801e-001	5.780e-001	6.129e-001	7.115e-001
7.973e-001	9.526e-001	1.078e+000	1.153e+000	1.661e+000	2.231e+000
3.041e+000	6.534e+000	1.116e+001			

Condition number of Sample Covariances = 4.855847e+002

Sample Correlations

	y2	y1	x241	x231	x232	x221	x222
y2	1.000						
y1	0.270	1.000					
x241	0.300	0.135	1.000				
x231	0.342	0.181	0.648	1.000			
x232	0.339	0.221	0.612	0.821	1.000		
x221	0.256	0.169	0.507	0.648	0.697	1.000	
x222	0.317	0.197	0.658	0.819	0.716	0.730	1.000
x223	0.328	0.224	0.611	0.742	0.803	0.785	0.790
x211	0.271	0.221	0.488	0.539	0.552	0.773	0.638
x212	0.292	0.182	0.542	0.611	0.615	0.846	0.745
x213	0.261	0.148	0.501	0.646	0.612	0.823	0.777
x214	0.325	0.241	0.533	0.629	0.609	0.839	0.754
x141	0.242	0.252	0.304	0.183	0.164	0.096	0.222
x142	0.277	0.297	0.336	0.254	0.302	0.183	0.234
x143	0.285	0.237	0.302	0.161	0.203	-0.021	0.091
x144	0.248	0.213	0.405	0.287	0.368	0.248	0.299
x131	0.226	0.208	0.255	0.124	0.276	0.004	0.078
x132	0.202	0.220	0.338	0.114	0.131	-0.007	0.122
x133	0.251	0.247	0.384	0.120	0.148	-0.089	0.068
x125	0.220	0.148	0.167	0.120	0.170	0.061	0.129
x121	0.170	0.145	0.084	0.081	0.122	0.034	0.118
x122	0.264	0.165	0.175	0.170	0.210	0.078	0.178
x123	0.195	0.140	0.168	0.131	0.140	0.032	0.145
x124	0.187	0.145	0.157	0.083	0.109	0.055	0.099
x111	0.135	0.046	0.124	0.137	0.157	-0.030	0.183
x112	0.113	0.088	0.188	0.202	0.182	0.032	0.216
x113	0.197	0.093	0.224	0.213	0.238	0.106	0.279
x156	0.170	0.140	0.345	0.227	0.152	0.138	0.219
x155	0.231	0.162	0.291	0.271	0.226	0.135	0.237
x154	0.218	0.183	0.237	0.226	0.274	0.050	0.138
x153	0.273	0.166	0.331	0.333	0.350	0.288	0.324
x151	0.163	0.186	0.275	0.303	0.308	0.292	0.300
x152	0.245	0.188	0.357	0.353	0.362	0.137	0.301

	x223	x211	x212	x213	x214	x141	x142
x223	1.000						
x211	0.688	1.000					
x212	0.747	0.782	1.000				
x213	0.724	0.754	0.837	1.000			
x214	0.754	0.771	0.827	0.858	1.000		
x141	0.134	0.159	0.228	0.209	0.164	1.000	
x142	0.275	0.238	0.246	0.202	0.263	0.635	1.000
x143	0.060	0.058	0.052	0.020	0.051	0.668	0.685
x144	0.232	0.251	0.272	0.259	0.283	0.487	0.784
x131	0.240	0.062	0.041	0.023	0.027	0.398	0.471
x132	0.178	0.071	0.044	0.067	0.110	0.494	0.562
x133	0.091	0.034	0.005	0.021	0.012	0.577	0.585
x125	0.112	0.031	0.073	0.068	0.075	0.266	0.301
x121	0.090	0.002	0.068	0.023	0.024	0.210	0.230
x122	0.146	0.081	0.125	0.080	0.079	0.305	0.334
x123	0.104	0.054	0.100	0.090	0.068	0.274	0.344
x124	0.101	0.018	0.097	0.056	0.065	0.272	0.301
x111	0.073	-0.012	-0.005	0.040	-0.009	0.196	0.226
x112	0.120	0.027	0.079	0.107	0.062	0.286	0.256
x113	0.180	0.065	0.134	0.151	0.079	0.349	0.296
x156	0.205	0.178	0.171	0.087	0.144	0.162	0.239
x155	0.293	0.216	0.127	0.125	0.153	0.195	0.274
x154	0.228	0.110	0.125	0.075	0.058	0.158	0.284
x153	0.436	0.309	0.258	0.238	0.281	0.214	0.363
x151	0.409	0.348	0.301	0.283	0.279	0.170	0.363
x152	0.233	0.060	0.151	0.174	0.132	0.390	0.342

	x143	x144	x131	x132	x133	x125	x121
x143	1.000						
x144	0.687	1.000					
x131	0.425	0.335	1.000				
x132	0.458	0.387	0.630	1.000			
x133	0.575	0.450	0.622	0.742	1.000		
x125	0.243	0.219	0.208	0.209	0.190	1.000	
x121	0.144	0.150	0.205	0.150	0.129	0.261	1.000
x122	0.267	0.257	0.256	0.239	0.192	0.611	0.486
x123	0.284	0.268	0.221	0.254	0.260	0.581	0.416
x124	0.264	0.210	0.232	0.236	0.204	0.585	0.308
x111	0.275	0.210	0.219	0.185	0.239	0.335	0.224
x112	0.274	0.214	0.206	0.243	0.255	0.310	0.232
x113	0.331	0.255	0.298	0.278	0.312	0.346	0.227
x156	0.192	0.158	0.141	0.279	0.140	0.185	0.095
x155	0.210	0.179	0.185	0.354	0.271	0.241	0.153
x154	0.215	0.194	0.305	0.325	0.268	0.286	0.234
x153	0.216	0.339	0.271	0.328	0.176	0.266	0.210
x151	0.138	0.227	0.217	0.186	0.102	0.205	0.166
x152	0.372	0.288	0.243	0.242	0.310	0.322	0.169

	x122	x123	x124	x111	x112	x113	x156
x122	1.000						
x123	0.724	1.000					
x124	0.343	0.387	1.000				
x111	0.358	0.345	0.198	1.000			
x112	0.365	0.334	0.193	0.777	1.000		
x113	0.369	0.339	0.282	0.718	0.744	1.000	
x156	0.184	0.174	0.197	0.171	0.190	0.227	1.000
x155	0.252	0.260	0.233	0.244	0.243	0.276	0.515
x154	0.320	0.296	0.261	0.309	0.312	0.336	0.488
x153	0.319	0.285	0.174	0.316	0.274	0.312	0.428
x151	0.255	0.253	0.179	0.118	0.150	0.187	0.249
x152	0.275	0.266	0.270	0.346	0.334	0.382	0.270

	x155	x154	x153	x151	x152
x155	1.000				
x154	0.661	1.000			
x153	0.616	0.555	1.000		
x151	0.413	0.385	0.456	1.000	
x152	0.410	0.544	0.268	0.227	1.000

Eigenvalues of Sample Correlations

6.762e-002 9.017e-002 9.491e-002 1.231e-001 1.277e-001 1.466e-001
1.710e-001 1.853e-001 2.004e-001 2.205e-001 2.279e-001 2.445e-001
2.696e-001 2.882e-001 3.040e-001 3.501e-001 3.632e-001 4.409e-001
4.913e-001 5.516e-001 6.505e-001 6.762e-001 7.412e-001 7.874e-001
8.827e-001 9.447e-001 1.024e+000 1.047e+000 1.637e+000 1.855e+000
2.433e+000 5.320e+000 1.004e+001

Condition number of Sample Correlations = 1.485066e+002

Determinant of sample covariance matrix = 6.6841e-013

Model: Default model

Computation of degrees of freedom

```
Number of distinct sample moments:  561
Number of distinct parameters to be estimated:   82
                    -------------------------
                    Degrees of freedom:  479

 0e 20 0.0e+000 -7.9777e-001  1.00e+004   1.10064249356e+004    0 1.00e+004
 1e*26 0.0e+000 -2.9483e-001  4.21e+000   6.56895706065e+003   20 4.10e-001
 2e 20 0.0e+000 -2.9074e-001  5.68e-001   5.73048284424e+003    7 9.26e-001
 3e 11 0.0e+000 -3.2947e-001  9.50e-001   4.44471505561e+003    5 9.53e-001
 4e* 5 0.0e+000 -6.4982e-001  1.05e+000   3.38590866097e+003    5 8.02e-001
 5e* 1 0.0e+000 -8.5372e-004  7.33e-001   2.69585850613e+003    5 8.97e-001
 6e  0 7.0e+003  0.0000e+000  7.79e-001   2.30849094075e+003    5 9.02e-001
 7e  0 1.5e+003  0.0000e+000  8.06e-001   2.20672186964e+003    4 0.00e+000
 8e  0 9.1e+002  0.0000e+000  6.44e-001   2.08597056394e+003    2 0.00e+000
 9e  0 1.3e+003  0.0000e+000  6.03e-001   2.02390129083e+003    1 1.16e+000
10e  0 1.9e+003  0.0000e+000  4.63e-001   2.01342127774e+003    1 1.15e+000
11e  0 3.2e+003  0.0000e+000  2.58e-001   2.01156809630e+003    1 1.13e+000
12e  0 3.8e+003  0.0000e+000  9.97e-002   2.01143127480e+003    1 1.06e+000
13e  0 3.9e+003  0.0000e+000  1.06e-002   2.01142970442e+003    1 1.01e+000
14e  0 3.9e+003  0.0000e+000  1.72e-004   2.01142970413e+003    1 1.00e+000


Minimum was achieved

Chi-square = 2011.430
Degrees of freedom = 479
Probability level = 0.000
```

Maximum Likelihood Estimates

Regression Weights:	Estimate	S.E.	C.R.	P
Purchase <---- DetOfHom	0.105	0.021	5.071	0.000
Purchase <----- ServExc	0.025	0.010	2.472	0.013
Neighbor <---- DetOfHom	0.994	0.128	7.770	0.000
Acbility <---- DetOfHom	1.186	0.165	7.185	0.000
FinCon <------ DetOfHom	1.000			
Infras <------ DetOfHom	1.069	0.134	7.994	0.000
DwelF <------- DetOfHom	0.457	0.076	6.005	0.000
CustSat <----- Purchase	0.494	0.192	2.568	0.010
DelProm <------ ServExc	1.000			
DealWell <----- ServExc	1.379	0.066	20.800	0.000
Provid <------- ServExc	0.954	0.053	18.008	0.000
GoingEx <------ ServExc	0.761	0.056	13.697	0.000
CustSat <----- DetOfHom	0.406	0.083	4.913	0.000
CustSat <------ ServExc	0.160	0.038	4.167	0.000
x152 <----------- DwelF	1.000			
x151 <----------- DwelF	0.933	0.124	7.540	0.000
x153 <----------- DwelF	1.573	0.175	9.005	0.000
x154 <----------- DwelF	1.674	0.159	10.556	0.000
x155 <----------- DwelF	1.703	0.183	9.310	0.000
x156 <----------- DwelF	1.369	0.168	8.151	0.000
x131 <-------- Neighbor	1.000			
x132 <-------- Neighbor	0.938	0.058	16.268	0.000
x133 <-------- Neighbor	1.315	0.081	16.326	0.000
x231 <---------- Provid	1.000			
x222 <-------- DealWell	0.885	0.034	26.134	0.000
x223 <-------- DealWell	0.866	0.033	25.905	0.000
x221 <-------- DealWell	1.000			
x211 <--------- DelProm	1.000			
x212 <--------- DelProm	1.074	0.043	24.822	0.000
x213 <--------- DelProm	1.171	0.047	25.098	0.000
x214 <--------- DelProm	1.093	0.043	25.267	0.000
x232 <---------- Provid	1.125	0.040	27.991	0.000
x241 <--------- GoingEx	1.000			
x144 <---------- Infras	1.379	0.092	15.019	0.000
x143 <---------- Infras	1.412	0.083	17.035	0.000
x142 <---------- Infras	1.439	0.078	18.386	0.000
x141 <---------- Infras	1.000			
x125 <-------- Acbility	0.738	0.049	15.031	0.000
x124 <-------- Acbility	0.459	0.052	8.881	0.000
x123 <-------- Acbility	1.072	0.058	18.435	0.000
x121 <-------- Acbility	0.427	0.040	10.589	0.000
x122 <-------- Acbility	1.000			
x113 <---------- FinCon	0.929	0.045	20.869	0.000
x112 <---------- FinCon	0.961	0.043	22.290	0.000
x111 <---------- FinCon	1.000			
y1 <---------- Purchase	1.000			
y2 <----------- CustSat	1.000			

Standardized Regression Weights: Estimate

Purchase <---- DetOfHom	0.322
Purchase <----- ServExc	0.115
Neighbor <---- DetOfHom	0.763
Acbility <---- DetOfHom	0.572
FinCon <------ DetOfHom	0.516
Infras <------ DetOfHom	0.788
DwelF <------- DetOfHom	0.590
CustSat <----- Purchase	0.124
DelProm <------ ServExc	0.899
DealWell <----- ServExc	1.079
Provid <------- ServExc	0.864
GoingEx <------ ServExc	0.619
CustSat <----- DetOfHom	0.314
CustSat <------ ServExc	0.188
x152 <---------- DwelF	0.482
x151 <---------- DwelF	0.520
x153 <---------- DwelF	0.745
x154 <---------- DwelF	0.780
x155 <---------- DwelF	0.828
x156 <---------- DwelF	0.598
x131 <-------- Neighbor	0.729
x132 <-------- Neighbor	0.858
x133 <-------- Neighbor	0.863
x231 <---------- Provid	0.909
x222 <-------- DealWell	0.877
x223 <-------- DealWell	0.874
x221 <-------- DealWell	0.878
x211 <--------- DelProm	0.835
x212 <--------- DelProm	0.913
x213 <--------- DelProm	0.919
x214 <--------- DelProm	0.922
x232 <---------- Provid	0.904
x241 <--------- GoingEx	1.000
x144 <---------- Infras	0.856
x143 <---------- Infras	0.816
x142 <---------- Infras	0.880
x141 <---------- Infras	0.768
x125 <-------- Acbility	0.689
x124 <-------- Acbility	0.445
x123 <-------- Acbility	0.826
x121 <-------- Acbility	0.516
x122 <-------- Acbility	0.881
x113 <---------- FinCon	0.840
x112 <---------- FinCon	0.892
x111 <---------- FinCon	0.862
y1 <---------- Purchase	1.000
y2 <---------- CustSat	1.000

Covariances:	Estimate	S.E.	C.R.	Label
DetOfHom <----> ServExc	0.104	0.027	3.918	par-35
err8 <----------> err9	0.144	0.022	6.412	par-36
e7 <----------> e8	0.379	0.053	7.214	par-37
e15 <----------> e12	-0.189	0.025	-7.418	par-38
e17 <----------> e19	0.130	0.027	4.874	par-39

Correlations:	Estimate
DetOfHom <----> ServExc	0.239
err8 <----------> err9	0.406
e7 <----------> e8	0.428
e15 <----------> e12	-0.514
e17 <----------> e19	0.307

Variances:	Estimate	S.E.	C.R.	Label
DetOfHom	0.288	0.063	4.578	par-40
ServExc	0.658	0.072	9.172	par-41
err10	0.026	0.002	13.915	par-42
err11	0.377	0.027	13.920	par-43
err1	0.792	0.082	9.702	par-44
err3	0.204	0.033	6.228	par-45
err4	0.200	0.032	6.276	par-46
err6	0.156	0.020	8.002	par-47
err7	-0.176	0.021	-8.344	par-48
err8	0.204	0.024	8.581	par-49
err9	0.615	0.042	14.689	par-50
err5	0.112	0.024	4.600	par-51
err2	0.831	0.091	9.164	par-52
e31	0.000			
e32	0.000			
e33	0.000			
e17	0.571	0.042	13.492	par-53
e16	0.406	0.030	13.517	par-54
e18	0.342	0.030	11.408	par-55
e19	0.311	0.029	10.623	par-56
e20	0.230	0.025	9.178	par-57
e21	0.579	0.044	13.077	par-58
e3	0.389	0.038	10.369	par-59
e2	0.257	0.033	7.864	par-60
e1	0.375	0.040	9.456	par-61
e7	1.053	0.076	13.817	par-62
e6	0.662	0.071	9.311	par-63
e5	0.357	0.052	6.840	par-64
e4	0.622	0.046	13.632	par-65
e8	0.743	0.060	12.454	par-66
e11	0.288	0.035	8.200	par-67
e10	0.154	0.018	8.455	par-68
e9	0.430	0.035	12.128	par-69
e15	0.368	0.038	9.610	par-70
e14	0.530	0.044	12.118	par-71
e13	0.320	0.032	10.013	par-72
e12	0.367	0.032	11.495	par-73
e25	0.172	0.016	10.944	par-74
e24	0.207	0.019	11.107	par-75
e23	0.187	0.017	11.346	par-76
e22	0.355	0.027	13.009	par-77
e28	0.250	0.019	13.029	par-78
e27	0.252	0.019	12.957	par-79
e26	0.320	0.025	12.946	par-80
e30	0.227	0.024	9.270	par-81
e29	0.170	0.019	8.978	par-82

Squared Multiple Correlations: Estimate

Purchase	0.134
CustSat	0.214
GoingEx	0.383
DelProm	0.808
DealWell	1.164
Provid	0.746
Infras	0.621
FinCon	0.266
Acbility	0.327
Neighbor	0.582
DwelF	0.349
y2	1.000
y1	1.000
x241	1.000
x231	0.825
x232	0.818
x221	0.771
x222	0.770
x223	0.764
x211	0.697
x212	0.834
x213	0.844
x214	0.850
x141	0.590
x142	0.774
x143	0.666
x144	0.732
x131	0.531
x132	0.736
x133	0.746
x125	0.475
x121	0.266
x122	0.776
x123	0.682
x124	0.198
x111	0.742
x112	0.795
x113	0.706
x156	0.358
x155	0.685
x154	0.608
x153	0.555
x151	0.270
x152	0.232

Implied Covariances

	y2	y1	x241	x231	x232	x221	x222
y2	0.479						
y1	0.033	0.030					
x241	0.123	0.021	0.997				
x231	0.154	0.026	0.622	0.972			
x232	0.173	0.029	0.700	0.903	1.243		
x221	0.222	0.037	0.691	0.865	0.974	1.395	
x222	0.197	0.033	0.611	0.766	0.862	0.952	1.094
x223	0.192	0.032	0.598	0.750	0.843	0.931	0.824
x211	0.161	0.027	0.501	0.628	0.706	0.907	0.803
x212	0.173	0.029	0.538	0.674	0.758	0.974	0.863
x213	0.189	0.032	0.587	0.735	0.827	1.062	0.940
x214	0.176	0.030	0.547	0.686	0.772	0.991	0.877
x141	0.160	0.035	0.085	0.106	0.119	0.153	0.135
x142	0.230	0.050	0.122	0.152	0.171	0.220	0.195
x143	0.226	0.049	0.119	0.149	0.168	0.216	0.191
x144	0.220	0.048	0.117	0.146	0.164	0.211	0.187
x131	0.149	0.032	0.079	0.098	0.111	0.142	0.126
x132	0.139	0.030	0.074	0.092	0.104	0.133	0.118
x133	0.195	0.043	0.103	0.130	0.146	0.187	0.166
x125	0.131	0.029	0.069	0.087	0.098	0.125	0.111
x121	0.076	0.017	0.040	0.050	0.057	0.073	0.064
x122	0.177	0.039	0.094	0.118	0.132	0.170	0.150
x123	0.190	0.042	0.101	0.126	0.142	0.182	0.161
x124	0.081	0.018	0.043	0.054	0.061	0.078	0.069
x111	0.149	0.033	0.079	0.099	0.111	0.143	0.127
x112	0.144	0.031	0.076	0.095	0.107	0.138	0.122
x113	0.139	0.030	0.074	0.092	0.104	0.133	0.118
x156	0.094	0.020	0.049	0.062	0.070	0.090	0.079
x155	0.116	0.025	0.062	0.077	0.087	0.112	0.099
x154	0.114	0.025	0.061	0.076	0.085	0.110	0.097
x153	0.108	0.023	0.057	0.071	0.080	0.103	0.091
x151	0.064	0.014	0.034	0.042	0.048	0.061	0.054
x152	0.068	0.015	0.036	0.045	0.051	0.065	0.058

	x223	x211	x212	x213	x214	x141	x142
x223	1.057						
x211	0.786	1.169					
x212	0.844	0.875	1.127				
x213	0.920	0.954	1.024	1.323			
x214	0.859	0.890	0.956	1.042	1.144		
x141	0.133	0.111	0.119	0.130	0.121	0.896	
x142	0.191	0.160	0.172	0.187	0.175	0.761	1.415
x143	0.187	0.157	0.168	0.184	0.171	0.747	1.074
x144	0.183	0.153	0.164	0.179	0.167	0.541	1.049
x131	0.123	0.103	0.111	0.121	0.113	0.306	0.440
x132	0.116	0.097	0.104	0.113	0.106	0.287	0.412
x133	0.162	0.136	0.146	0.159	0.148	0.402	0.578
x125	0.109	0.091	0.098	0.107	0.099	0.269	0.387
x121	0.063	0.053	0.057	0.062	0.058	0.156	0.224
x122	0.147	0.123	0.132	0.144	0.135	0.365	0.525
x123	0.158	0.132	0.142	0.155	0.144	0.391	0.562
x124	0.068	0.057	0.061	0.066	0.062	0.167	0.241
x111	0.124	0.104	0.112	0.122	0.114	0.307	0.442
x112	0.119	0.100	0.107	0.117	0.109	0.295	0.425
x113	0.115	0.097	0.104	0.113	0.105	0.286	0.411
x156	0.078	0.065	0.070	0.076	0.071	0.192	0.277
x155	0.097	0.081	0.087	0.095	0.088	0.239	0.344
x154	0.095	0.080	0.085	0.093	0.087	0.235	0.339
x153	0.089	0.075	0.080	0.087	0.082	0.221	0.318
x151	0.053	0.044	0.048	0.052	0.048	0.131	0.189
x152	0.057	0.047	0.051	0.056	0.052	0.141	0.202

	x143	x144	x131	x132	x133	x125	x121
x143	1.583						
x144	1.030	1.374					
x131	0.431	0.421	0.918				
x132	0.404	0.395	0.457	0.583			
x133	0.567	0.554	0.642	0.602	1.131		
x125	0.380	0.371	0.250	0.235	0.329	1.417	
x121	0.220	0.215	0.145	0.136	0.191	0.390	0.847
x122	0.515	0.503	0.339	0.318	0.446	0.912	0.528
x123	0.552	0.539	0.364	0.341	0.478	0.978	0.566
x124	0.236	0.231	0.156	0.146	0.205	0.798	0.242
x111	0.434	0.424	0.286	0.268	0.376	0.252	0.146
x112	0.417	0.407	0.275	0.258	0.361	0.242	0.140
x113	0.403	0.394	0.266	0.249	0.349	0.234	0.136
x156	0.272	0.265	0.179	0.168	0.235	0.158	0.091
x155	0.338	0.330	0.223	0.209	0.293	0.196	0.114
x154	0.332	0.325	0.219	0.205	0.288	0.193	0.112
x153	0.312	0.305	0.206	0.193	0.270	0.181	0.105
x151	0.185	0.181	0.122	0.114	0.160	0.107	0.062
x152	0.198	0.194	0.131	0.123	0.172	0.115	0.067

	x122	x123	x124	x111	x112	x113	x156
x122	1.593						
x123	1.325	2.082					
x124	0.567	0.608	1.314				
x111	0.341	0.366	0.157	1.455			
x112	0.328	0.351	0.150	1.037	1.253		
x113	0.317	0.340	0.146	1.004	0.964	1.322	
x156	0.213	0.229	0.098	0.180	0.173	0.167	0.902
x155	0.266	0.285	0.122	0.224	0.215	0.208	0.402
x154	0.261	0.280	0.120	0.220	0.212	0.205	0.395
x153	0.245	0.263	0.113	0.207	0.199	0.192	0.371
x151	0.146	0.156	0.067	0.123	0.118	0.114	0.220
x152	0.156	0.167	0.072	0.132	0.126	0.122	0.236

	x155	x154	x153	x151	x152
x155	0.730				
x154	0.492	0.794			
x153	0.462	0.454	0.769		
x151	0.274	0.269	0.253	0.556	
x152	0.294	0.418	0.271	0.161	0.744

Implied Correlations

	y2	y1	x241	x231	x232	x221	x222
y2	1.000						
y1	0.270	1.000					
x241	0.177	0.119	1.000				
x231	0.225	0.151	0.632	1.000			
x232	0.224	0.150	0.629	0.821	1.000		
x221	0.272	0.182	0.586	0.743	0.740	1.000	
x222	0.271	0.182	0.585	0.743	0.739	0.770	1.000
x223	0.270	0.181	0.583	0.740	0.736	0.767	0.767
x211	0.215	0.144	0.464	0.589	0.586	0.710	0.710
x212	0.235	0.158	0.508	0.644	0.641	0.777	0.777
x213	0.237	0.159	0.511	0.648	0.645	0.782	0.782
x214	0.238	0.159	0.513	0.650	0.647	0.785	0.784
x141	0.244	0.211	0.089	0.113	0.113	0.137	0.137
x142	0.279	0.242	0.102	0.130	0.129	0.157	0.157
x143	0.259	0.224	0.095	0.120	0.120	0.145	0.145
x144	0.272	0.235	0.100	0.126	0.126	0.153	0.152
x131	0.224	0.194	0.082	0.104	0.104	0.126	0.126
x132	0.264	0.229	0.097	0.123	0.122	0.148	0.148
x133	0.265	0.230	0.097	0.123	0.123	0.149	0.149
x125	0.159	0.138	0.058	0.074	0.074	0.089	0.089
x121	0.119	0.103	0.044	0.055	0.055	0.067	0.067
x122	0.203	0.176	0.074	0.094	0.094	0.114	0.114
x123	0.190	0.165	0.070	0.089	0.088	0.107	0.107
x124	0.103	0.089	0.038	0.048	0.047	0.058	0.058
x111	0.179	0.155	0.066	0.083	0.083	0.101	0.100
x112	0.185	0.161	0.068	0.086	0.086	0.104	0.104
x113	0.175	0.151	0.064	0.081	0.081	0.098	0.098
x156	0.142	0.123	0.052	0.066	0.066	0.080	0.080
x155	0.197	0.171	0.072	0.092	0.091	0.111	0.110
x154	0.185	0.161	0.068	0.086	0.086	0.104	0.104
x153	0.177	0.154	0.065	0.082	0.082	0.099	0.099
x151	0.124	0.107	0.045	0.057	0.057	0.069	0.069
x152	0.114	0.099	0.042	0.053	0.053	0.064	0.064

	x223	x211	x212	x213	x214	x141	x142
x223	1.000						
x211	0.707	1.000					
x212	0.774	0.762	1.000				
x213	0.778	0.767	0.839	1.000			
x214	0.781	0.769	0.842	0.847	1.000		
x141	0.136	0.108	0.119	0.119	0.120	1.000	
x142	0.156	0.124	0.136	0.137	0.137	0.676	1.000
x143	0.145	0.115	0.126	0.127	0.127	0.627	0.718
x144	0.152	0.121	0.132	0.133	0.133	0.487	0.753
x131	0.125	0.100	0.109	0.110	0.110	0.337	0.386
x132	0.147	0.117	0.128	0.129	0.130	0.397	0.454
x133	0.148	0.118	0.129	0.130	0.130	0.399	0.457
x125	0.089	0.071	0.077	0.078	0.078	0.239	0.274
x121	0.066	0.053	0.058	0.058	0.058	0.179	0.205
x122	0.113	0.090	0.099	0.099	0.100	0.305	0.349
x123	0.106	0.085	0.093	0.093	0.094	0.286	0.328
x124	0.057	0.046	0.050	0.050	0.050	0.154	0.177
x111	0.100	0.080	0.087	0.088	0.088	0.269	0.308
x112	0.104	0.082	0.090	0.091	0.091	0.279	0.319
x113	0.098	0.078	0.085	0.085	0.086	0.263	0.301
x156	0.080	0.063	0.069	0.070	0.070	0.214	0.245
x155	0.110	0.088	0.096	0.096	0.097	0.296	0.339
x154	0.104	0.083	0.090	0.091	0.091	0.279	0.319
x153	0.099	0.079	0.086	0.087	0.087	0.266	0.305
x151	0.069	0.055	0.060	0.061	0.061	0.186	0.213
x152	0.064	0.051	0.056	0.056	0.056	0.172	0.197

	x143	x144	x131	x132	x133	x125	x121
x143	1.000						
x144	0.698	1.000					
x131	0.358	0.375	1.000				
x132	0.421	0.442	0.625	1.000			
x133	0.424	0.444	0.629	0.741	1.000		
x125	0.254	0.266	0.219	0.258	0.260	1.000	
x121	0.190	0.199	0.164	0.193	0.195	0.356	1.000
x122	0.324	0.340	0.280	0.330	0.332	0.607	0.455
x123	0.304	0.319	0.263	0.309	0.311	0.569	0.426
x124	0.164	0.172	0.142	0.167	0.168	0.585	0.230
x111	0.286	0.300	0.247	0.291	0.293	0.175	0.131
x112	0.296	0.310	0.256	0.301	0.303	0.182	0.136
x113	0.279	0.292	0.241	0.284	0.286	0.171	0.128
x156	0.227	0.238	0.197	0.231	0.233	0.139	0.104
x155	0.314	0.330	0.272	0.320	0.322	0.193	0.144
x154	0.296	0.311	0.256	0.302	0.304	0.182	0.136
x153	0.283	0.297	0.245	0.288	0.290	0.174	0.130
x151	0.197	0.207	0.171	0.201	0.202	0.121	0.091
x152	0.183	0.192	0.158	0.186	0.187	0.112	0.084

	x122	x123	x124	x111	x112	x113	x156
x122	1.000						
x123	0.727	1.000					
x124	0.392	0.368	1.000				
x111	0.224	0.210	0.113	1.000			
x112	0.232	0.218	0.117	0.768	1.000		
x113	0.219	0.205	0.110	0.724	0.749	1.000	
x156	0.178	0.167	0.090	0.157	0.163	0.153	1.000
x155	0.246	0.231	0.125	0.217	0.225	0.212	0.495
x154	0.232	0.218	0.117	0.205	0.212	0.200	0.467
x153	0.222	0.208	0.112	0.196	0.202	0.191	0.446
x151	0.155	0.145	0.078	0.136	0.141	0.133	0.311
x152	0.143	0.134	0.072	0.126	0.131	0.123	0.288

	x155	x154	x153	x151	x152
x155	1.000				
x154	0.646	1.000			
x153	0.617	0.581	1.000		
x151	0.430	0.405	0.387	1.000	
x152	0.399	0.544	0.359	0.250	1.000

Factor Score Weights

	y2	y1	x241	x231	x232	x221	x222
ServExc	-0.025	-0.044	-0.029	-0.085	-0.072	0.380	0.427
DetOfHom	0.063	0.203	-0.001	-0.002	-0.001	0.007	0.008
Purchase	-0.000	1.000	0.000	0.000	-0.000	-0.000	0.000
CustSat	1.000	-0.000	-0.000	-0.000	-0.000	0.000	0.000
GoingEx	-0.000	-0.000	1.000	0.000	0.000	-0.000	-0.000
DelProm	-0.005	-0.010	-0.006	-0.019	-0.016	0.084	0.094
DealWell	0.054	0.097	0.065	0.188	0.158	0.041	0.046
Provid	-0.006	-0.011	0.072	0.317	0.267	0.100	0.112
Infras	0.011	0.035	-0.000	-0.000	-0.000	0.001	0.001
FinCon	0.008	0.026	-0.000	-0.000	-0.000	0.001	0.001
Acbility	0.013	0.043	-0.000	-0.000	-0.000	0.001	0.002
Neighbor	0.016	0.052	-0.000	-0.000	-0.000	0.002	0.002
DwelF	0.006	0.019	-0.000	-0.000	-0.000	0.001	0.001

	x223	x211	x212	x213	x214	x141	x142
ServExc	0.422	-0.034	-0.070	-0.069	-0.078	-0.001	-0.001
DetOfHom	0.008	-0.001	-0.001	-0.001	-0.001	0.064	0.046
Purchase	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000
CustSat	-0.000	-0.000	0.000	0.000	-0.000	-0.000	0.000
GoingEx	-0.000	0.000	0.000	0.000	0.000	-0.000	-0.000
DelProm	0.093	0.090	0.183	0.180	0.203	-0.000	-0.000
DealWell	0.046	0.076	0.154	0.152	0.171	0.002	0.002
Provid	0.111	-0.009	-0.018	-0.018	-0.020	-0.000	-0.000
Infras	0.001	-0.000	-0.000	-0.000	-0.000	0.214	0.152
FinCon	0.001	-0.000	-0.000	-0.000	-0.000	0.008	0.006
Acbility	0.002	-0.000	-0.000	-0.000	-0.000	0.013	0.010
Neighbor	0.002	-0.000	-0.000	-0.000	-0.000	0.016	0.012
DwelF	0.001	-0.000	-0.000	-0.000	-0.000	0.006	0.004

	x143	x144	x131	x132	x133	x125	x121
ServExc	-0.000	-0.001	-0.001	-0.002	-0.001	-0.000	-0.000
DetOfHom	0.027	0.071	0.035	0.093	0.070	0.012	0.009
Purchase	-0.000	-0.000	0.000	-0.000	0.000	0.000	-0.000
CustSat	0.000	0.000	-0.000	0.000	-0.000	-0.000	-0.000
GoingEx	-0.000	-0.000	-0.000	0.000	-0.000	-0.000	-0.000
DelProm	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
DealWell	0.001	0.003	0.001	0.004	0.003	0.000	0.000
Provid	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
Infras	0.090	0.236	0.006	0.016	0.012	0.002	0.001
FinCon	0.003	0.009	0.005	0.012	0.009	0.002	0.001
Acbility	0.006	0.015	0.007	0.020	0.015	0.142	0.103
Neighbor	0.007	0.018	0.132	0.346	0.259	0.003	0.002
DwelF	0.003	0.007	0.003	0.009	0.007	0.001	0.001

	x122	x123	x124	x111	x112	x113	x156
ServExc	-0.001	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
DetOfHom	0.035	0.020	0.001	0.020	0.029	0.018	0.013
Purchase	0.000	-0.000	-0.000	0.000	-0.000	0.000	0.000
CustSat	-0.000	-0.000	-0.000	0.000	0.000	-0.000	-0.000
GoingEx	-0.000	-0.000	-0.000	0.000	-0.000	-0.000	-0.000
DelProm	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
DealWell	0.001	0.001	0.000	0.001	0.001	0.001	0.000
Provid	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
Infras	0.006	0.003	0.000	0.003	0.005	0.003	0.002
FinCon	0.005	0.003	0.000	0.276	0.388	0.247	0.002
Acbility	0.421	0.243	0.014	0.004	0.006	0.004	0.003
Neighbor	0.009	0.005	0.000	0.005	0.007	0.005	0.003
DwelF	0.003	0.002	0.000	0.002	0.003	0.002	0.056

	x155	x154	x153	x151	x152
ServExc	-0.001	-0.000	-0.000	-0.000	-0.000
DetOfHom	0.041	0.029	0.026	0.013	0.003
Purchase	0.000	-0.000	-0.000	-0.000	0.000
CustSat	0.000	-0.000	-0.000	-0.000	0.000
GoingEx	0.000	0.000	-0.000	-0.000	-0.000
DelProm	-0.000	-0.000	-0.000	-0.000	-0.000
DealWell	0.002	0.001	0.001	0.000	0.000
Provid	-0.000	-0.000	-0.000	-0.000	-0.000
Infras	0.007	0.005	0.004	0.002	0.001
FinCon	0.005	0.004	0.003	0.002	0.000
Acbility	0.009	0.006	0.005	0.003	0.001
Neighbor	0.011	0.007	0.007	0.003	0.001
DwelF	0.175	0.121	0.108	0.054	0.014

Total Effects

	ServExc	DetOfHom	Purchase	DelProm	DealWell	Provid	Infras
Purchase	0.025	0.105	0.000	0.000	0.000	0.000	0.000
CustSat	0.173	0.457	0.494	0.000	0.000	0.000	0.000
GoingEx	0.761	0.000	0.000	0.000	0.000	0.000	0.000
DelProm	1.000	0.000	0.000	0.000	0.000	0.000	0.000
DealWell	1.379	0.000	0.000	0.000	0.000	0.000	0.000
Provid	0.954	0.000	0.000	0.000	0.000	0.000	0.000
Infras	0.000	1.069	0.000	0.000	0.000	0.000	0.000
FinCon	0.000	1.000	0.000	0.000	0.000	0.000	0.000
Acbility	0.000	1.186	0.000	0.000	0.000	0.000	0.000
Neighbor	0.000	0.994	0.000	0.000	0.000	0.000	0.000
DwelF	0.000	0.457	0.000	0.000	0.000	0.000	0.000
y2	0.173	0.457	0.494	0.000	0.000	0.000	0.000
y1	0.025	0.105	1.000	0.000	0.000	0.000	0.000
x241	0.761	0.000	0.000	0.000	0.000	0.000	0.000
x231	0.954	0.000	0.000	0.000	0.000	1.000	0.000
x232	1.073	0.000	0.000	0.000	0.000	1.125	0.000
x221	1.379	0.000	0.000	0.000	1.000	0.000	0.000
x222	1.220	0.000	0.000	0.000	0.885	0.000	0.000
x223	1.194	0.000	0.000	0.000	0.866	0.000	0.000
x211	1.000	0.000	0.000	1.000	0.000	0.000	0.000
x212	1.074	0.000	0.000	1.074	0.000	0.000	0.000
x213	1.171	0.000	0.000	1.171	0.000	0.000	0.000
x214	1.093	0.000	0.000	1.093	0.000	0.000	0.000
x141	0.000	1.069	0.000	0.000	0.000	0.000	1.000
x142	0.000	1.537	0.000	0.000	0.000	0.000	1.439
x143	0.000	1.508	0.000	0.000	0.000	0.000	1.412
x144	0.000	1.474	0.000	0.000	0.000	0.000	1.379
x131	0.000	0.994	0.000	0.000	0.000	0.000	0.000
x132	0.000	0.932	0.000	0.000	0.000	0.000	0.000
x133	0.000	1.307	0.000	0.000	0.000	0.000	0.000
x125	0.000	0.876	0.000	0.000	0.000	0.000	0.000
x121	0.000	0.507	0.000	0.000	0.000	0.000	0.000
x122	0.000	1.186	0.000	0.000	0.000	0.000	0.000
x123	0.000	1.271	0.000	0.000	0.000	0.000	0.000
x124	0.000	0.544	0.000	0.000	0.000	0.000	0.000
x111	0.000	1.000	0.000	0.000	0.000	0.000	0.000
x112	0.000	0.961	0.000	0.000	0.000	0.000	0.000
x113	0.000	0.929	0.000	0.000	0.000	0.000	0.000
x156	0.000	0.626	0.000	0.000	0.000	0.000	0.000
x155	0.000	0.779	0.000	0.000	0.000	0.000	0.000
x154	0.000	0.765	0.000	0.000	0.000	0.000	0.000
x153	0.000	0.719	0.000	0.000	0.000	0.000	0.000
x151	0.000	0.426	0.000	0.000	0.000	0.000	0.000
x152	0.000	0.457	0.000	0.000	0.000	0.000	0.000

	FinCon	Acbility	Neighbor	DwelF
Purchase	0.000	0.000	0.000	0.000
CustSat	0.000	0.000	0.000	0.000
GoingEx	0.000	0.000	0.000	0.000
DelProm	0.000	0.000	0.000	0.000
DealWell	0.000	0.000	0.000	0.000
Provid	0.000	0.000	0.000	0.000
Infras	0.000	0.000	0.000	0.000
FinCon	0.000	0.000	0.000	0.000
Acbility	0.000	0.000	0.000	0.000
Neighbor	0.000	0.000	0.000	0.000
DwelF	0.000	0.000	0.000	0.000
y2	0.000	0.000	0.000	0.000
y1	0.000	0.000	0.000	0.000
x241	0.000	0.000	0.000	0.000
x231	0.000	0.000	0.000	0.000
x232	0.000	0.000	0.000	0.000
x221	0.000	0.000	0.000	0.000
x222	0.000	0.000	0.000	0.000
x223	0.000	0.000	0.000	0.000
x211	0.000	0.000	0.000	0.000
x212	0.000	0.000	0.000	0.000
x213	0.000	0.000	0.000	0.000
x214	0.000	0.000	0.000	0.000
x141	0.000	0.000	0.000	0.000
x142	0.000	0.000	0.000	0.000
x143	0.000	0.000	0.000	0.000
x144	0.000	0.000	0.000	0.000
x131	0.000	0.000	1.000	0.000
x132	0.000	0.000	0.938	0.000
x133	0.000	0.000	1.315	0.000
x125	0.000	0.738	0.000	0.000
x121	0.000	0.427	0.000	0.000
x122	0.000	1.000	0.000	0.000
x123	0.000	1.072	0.000	0.000
x124	0.000	0.459	0.000	0.000
x111	1.000	0.000	0.000	0.000
x112	0.961	0.000	0.000	0.000
x113	0.929	0.000	0.000	0.000
x156	0.000	0.000	0.000	1.369
x155	0.000	0.000	0.000	1.703
x154	0.000	0.000	0.000	1.674
x153	0.000	0.000	0.000	1.573
x151	0.000	0.000	0.000	0.933
x152	0.000	0.000	0.000	1.000

Standardized Total Effects

	ServExc	DetOfHom	Purchase	DelProm	DealWell	Provid	Infras
Purchase	0.115	0.322	0.000	0.000	0.000	0.000	0.000
CustSat	0.202	0.354	0.124	0.000	0.000	0.000	0.000
GoingEx	0.619	0.000	0.000	0.000	0.000	0.000	0.000
DelProm	0.899	0.000	0.000	0.000	0.000	0.000	0.000
DealWell	1.079	0.000	0.000	0.000	0.000	0.000	0.000
Provid	0.864	0.000	0.000	0.000	0.000	0.000	0.000
Infras	0.000	0.788	0.000	0.000	0.000	0.000	0.000
FinCon	0.000	0.516	0.000	0.000	0.000	0.000	0.000
Acbility	0.000	0.572	0.000	0.000	0.000	0.000	0.000
Neighbor	0.000	0.763	0.000	0.000	0.000	0.000	0.000
DwelF	0.000	0.590	0.000	0.000	0.000	0.000	0.000
y2	0.202	0.354	0.124	0.000	0.000	0.000	0.000
y1	0.115	0.322	1.000	0.000	0.000	0.000	0.000
x241	0.619	0.000	0.000	0.000	0.000	0.000	0.000
x231	0.785	0.000	0.000	0.000	0.000	0.909	0.000
x232	0.781	0.000	0.000	0.000	0.000	0.904	0.000
x221	0.947	0.000	0.000	0.000	0.878	0.000	0.000
x222	0.946	0.000	0.000	0.000	0.877	0.000	0.000
x223	0.943	0.000	0.000	0.000	0.874	0.000	0.000
x211	0.750	0.000	0.000	0.835	0.000	0.000	0.000
x212	0.821	0.000	0.000	0.913	0.000	0.000	0.000
x213	0.826	0.000	0.000	0.919	0.000	0.000	0.000
x214	0.829	0.000	0.000	0.922	0.000	0.000	0.000
x141	0.000	0.606	0.000	0.000	0.000	0.000	0.768
x142	0.000	0.693	0.000	0.000	0.000	0.000	0.880
x143	0.000	0.643	0.000	0.000	0.000	0.000	0.816
x144	0.000	0.675	0.000	0.000	0.000	0.000	0.856
x131	0.000	0.556	0.000	0.000	0.000	0.000	0.000
x132	0.000	0.655	0.000	0.000	0.000	0.000	0.000
x133	0.000	0.659	0.000	0.000	0.000	0.000	0.000
x125	0.000	0.395	0.000	0.000	0.000	0.000	0.000
x121	0.000	0.295	0.000	0.000	0.000	0.000	0.000
x122	0.000	0.504	0.000	0.000	0.000	0.000	0.000
x123	0.000	0.473	0.000	0.000	0.000	0.000	0.000
x124	0.000	0.255	0.000	0.000	0.000	0.000	0.000
x111	0.000	0.445	0.000	0.000	0.000	0.000	0.000
x112	0.000	0.460	0.000	0.000	0.000	0.000	0.000
x113	0.000	0.434	0.000	0.000	0.000	0.000	0.000
x156	0.000	0.353	0.000	0.000	0.000	0.000	0.000
x155	0.000	0.489	0.000	0.000	0.000	0.000	0.000
x154	0.000	0.461	0.000	0.000	0.000	0.000	0.000
x153	0.000	0.440	0.000	0.000	0.000	0.000	0.000
x151	0.000	0.307	0.000	0.000	0.000	0.000	0.000
x152	0.000	0.284	0.000	0.000	0.000	0.000	0.000

	FinCon	Acbility	Neighbor	DwelF
Purchase	0.000	0.000	0.000	0.000
CustSat	0.000	0.000	0.000	0.000
GoingEx	0.000	0.000	0.000	0.000
DelProm	0.000	0.000	0.000	0.000
DealWell	0.000	0.000	0.000	0.000
Provid	0.000	0.000	0.000	0.000
Infras	0.000	0.000	0.000	0.000
FinCon	0.000	0.000	0.000	0.000
Acbility	0.000	0.000	0.000	0.000
Neighbor	0.000	0.000	0.000	0.000
DwelF	0.000	0.000	0.000	0.000
y2	0.000	0.000	0.000	0.000
y1	0.000	0.000	0.000	0.000
x241	0.000	0.000	0.000	0.000
x231	0.000	0.000	0.000	0.000
x232	0.000	0.000	0.000	0.000
x221	0.000	0.000	0.000	0.000
x222	0.000	0.000	0.000	0.000
x223	0.000	0.000	0.000	0.000
x211	0.000	0.000	0.000	0.000
x212	0.000	0.000	0.000	0.000
x213	0.000	0.000	0.000	0.000
x214	0.000	0.000	0.000	0.000
x141	0.000	0.000	0.000	0.000
x142	0.000	0.000	0.000	0.000
x143	0.000	0.000	0.000	0.000
x144	0.000	0.000	0.000	0.000
x131	0.000	0.000	0.729	0.000
x132	0.000	0.000	0.858	0.000
x133	0.000	0.000	0.863	0.000
x125	0.000	0.689	0.000	0.000
x121	0.000	0.516	0.000	0.000
x122	0.000	0.881	0.000	0.000
x123	0.000	0.826	0.000	0.000
x124	0.000	0.445	0.000	0.000
x111	0.862	0.000	0.000	0.000
x112	0.892	0.000	0.000	0.000
x113	0.840	0.000	0.000	0.000
x156	0.000	0.000	0.000	0.598
x155	0.000	0.000	0.000	0.828
x154	0.000	0.000	0.000	0.780
x153	0.000	0.000	0.000	0.745
x151	0.000	0.000	0.000	0.520
x152	0.000	0.000	0.000	0.482

Direct Effects

	ServExc	DetOfHom	Purchase	DelProm	DealWell	Provid	Infras
Purchase	0.025	0.105	0.000	0.000	0.000	0.000	0.000
CustSat	0.160	0.406	0.494	0.000	0.000	0.000	0.000
GoingEx	0.761	0.000	0.000	0.000	0.000	0.000	0.000
DelProm	1.000	0.000	0.000	0.000	0.000	0.000	0.000
DealWell	1.379	0.000	0.000	0.000	0.000	0.000	0.000
Provid	0.954	0.000	0.000	0.000	0.000	0.000	0.000
Infras	0.000	1.069	0.000	0.000	0.000	0.000	0.000
FinCon	0.000	1.000	0.000	0.000	0.000	0.000	0.000
Acbility	0.000	1.186	0.000	0.000	0.000	0.000	0.000
Neighbor	0.000	0.994	0.000	0.000	0.000	0.000	0.000
DwelF	0.000	0.457	0.000	0.000	0.000	0.000	0.000
y2	0.000	0.000	0.000	0.000	0.000	0.000	0.000
y1	0.000	0.000	1.000	0.000	0.000	0.000	0.000
x241	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x231	0.000	0.000	0.000	0.000	0.000	1.000	0.000
x232	0.000	0.000	0.000	0.000	0.000	1.125	0.000
x221	0.000	0.000	0.000	0.000	1.000	0.000	0.000
x222	0.000	0.000	0.000	0.000	0.885	0.000	0.000
x223	0.000	0.000	0.000	0.000	0.866	0.000	0.000
x211	0.000	0.000	0.000	1.000	0.000	0.000	0.000
x212	0.000	0.000	0.000	1.074	0.000	0.000	0.000
x213	0.000	0.000	0.000	1.171	0.000	0.000	0.000
x214	0.000	0.000	0.000	1.093	0.000	0.000	0.000
x141	0.000	0.000	0.000	0.000	0.000	0.000	1.000
x142	0.000	0.000	0.000	0.000	0.000	0.000	1.439
x143	0.000	0.000	0.000	0.000	0.000	0.000	1.412
x144	0.000	0.000	0.000	0.000	0.000	0.000	1.379
x131	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x132	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x133	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x125	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x121	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x122	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x123	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x124	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x111	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x112	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x113	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x156	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x155	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x154	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x153	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x151	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x152	0.000	0.000	0.000	0.000	0.000	0.000	0.000

	FinCon	Acbility	Neighbor	DwelF
Purchase	0.000	0.000	0.000	0.000
CustSat	0.000	0.000	0.000	0.000
GoingEx	0.000	0.000	0.000	0.000
DelProm	0.000	0.000	0.000	0.000
DealWell	0.000	0.000	0.000	0.000
Provid	0.000	0.000	0.000	0.000
Infras	0.000	0.000	0.000	0.000
FinCon	0.000	0.000	0.000	0.000
Acbility	0.000	0.000	0.000	0.000
Neighbor	0.000	0.000	0.000	0.000
DwelF	0.000	0.000	0.000	0.000
y2	0.000	0.000	0.000	0.000
y1	0.000	0.000	0.000	0.000
x241	0.000	0.000	0.000	0.000
x231	0.000	0.000	0.000	0.000
x232	0.000	0.000	0.000	0.000
x221	0.000	0.000	0.000	0.000
x222	0.000	0.000	0.000	0.000
x223	0.000	0.000	0.000	0.000
x211	0.000	0.000	0.000	0.000
x212	0.000	0.000	0.000	0.000
x213	0.000	0.000	0.000	0.000
x214	0.000	0.000	0.000	0.000
x141	0.000	0.000	0.000	0.000
x142	0.000	0.000	0.000	0.000
x143	0.000	0.000	0.000	0.000
x144	0.000	0.000	0.000	0.000
x131	0.000	0.000	1.000	0.000
x132	0.000	0.000	0.938	0.000
x133	0.000	0.000	1.315	0.000
x125	0.000	0.738	0.000	0.000
x121	0.000	0.427	0.000	0.000
x122	0.000	1.000	0.000	0.000
x123	0.000	1.072	0.000	0.000
x124	0.000	0.459	0.000	0.000
x111	1.000	0.000	0.000	0.000
x112	0.961	0.000	0.000	0.000
x113	0.929	0.000	0.000	0.000
x156	0.000	0.000	0.000	1.369
x155	0.000	0.000	0.000	1.703
x154	0.000	0.000	0.000	1.674
x153	0.000	0.000	0.000	1.573
x151	0.000	0.000	0.000	0.933
x152	0.000	0.000	0.000	1.000

Standardized Direct Effects

	ServExc	DetOfHom	Purchase	DelProm	DealWell	Provid	Infras
Purchase	0.115	0.322	0.000	0.000	0.000	0.000	0.000
CustSat	0.188	0.314	0.124	0.000	0.000	0.000	0.000
GoingEx	0.619	0.000	0.000	0.000	0.000	0.000	0.000
DelProm	0.899	0.000	0.000	0.000	0.000	0.000	0.000
DealWell	1.079	0.000	0.000	0.000	0.000	0.000	0.000
Provid	0.864	0.000	0.000	0.000	0.000	0.000	0.000
Infras	0.000	0.788	0.000	0.000	0.000	0.000	0.000
FinCon	0.000	0.516	0.000	0.000	0.000	0.000	0.000
Acbility	0.000	0.572	0.000	0.000	0.000	0.000	0.000
Neighbor	0.000	0.763	0.000	0.000	0.000	0.000	0.000
DwelF	0.000	0.590	0.000	0.000	0.000	0.000	0.000
y2	0.000	0.000	0.000	0.000	0.000	0.000	0.000
y1	0.000	0.000	1.000	0.000	0.000	0.000	0.000
x241	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x231	0.000	0.000	0.000	0.000	0.000	0.909	0.000
x232	0.000	0.000	0.000	0.000	0.000	0.904	0.000
x221	0.000	0.000	0.000	0.000	0.878	0.000	0.000
x222	0.000	0.000	0.000	0.000	0.877	0.000	0.000
x223	0.000	0.000	0.000	0.000	0.874	0.000	0.000
x211	0.000	0.000	0.000	0.835	0.000	0.000	0.000
x212	0.000	0.000	0.000	0.913	0.000	0.000	0.000
x213	0.000	0.000	0.000	0.919	0.000	0.000	0.000
x214	0.000	0.000	0.000	0.922	0.000	0.000	0.000
x141	0.000	0.000	0.000	0.000	0.000	0.000	0.768
x142	0.000	0.000	0.000	0.000	0.000	0.000	0.880
x143	0.000	0.000	0.000	0.000	0.000	0.000	0.816
x144	0.000	0.000	0.000	0.000	0.000	0.000	0.856
x131	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x132	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x133	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x125	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x121	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x122	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x123	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x124	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x111	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x112	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x113	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x156	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x155	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x154	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x153	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x151	0.000	0.000	0.000	0.000	0.000	0.000	0.000
x152	0.000	0.000	0.000	0.000	0.000	0.000	0.000

	FinCon	Acbility	Neighbor	DwelF
Purchase	0.000	0.000	0.000	0.000
CustSat	0.000	0.000	0.000	0.000
GoingEx	0.000	0.000	0.000	0.000
DelProm	0.000	0.000	0.000	0.000
DealWell	0.000	0.000	0.000	0.000
Provid	0.000	0.000	0.000	0.000
Infras	0.000	0.000	0.000	0.000
FinCon	0.000	0.000	0.000	0.000
Acbility	0.000	0.000	0.000	0.000
Neighbor	0.000	0.000	0.000	0.000
DwelF	0.000	0.000	0.000	0.000
y2	0.000	0.000	0.000	0.000
y1	0.000	0.000	0.000	0.000
x241	0.000	0.000	0.000	0.000
x231	0.000	0.000	0.000	0.000
x232	0.000	0.000	0.000	0.000
x221	0.000	0.000	0.000	0.000
x222	0.000	0.000	0.000	0.000
x223	0.000	0.000	0.000	0.000
x211	0.000	0.000	0.000	0.000
x212	0.000	0.000	0.000	0.000
x213	0.000	0.000	0.000	0.000
x214	0.000	0.000	0.000	0.000
x141	0.000	0.000	0.000	0.000
x142	0.000	0.000	0.000	0.000
x143	0.000	0.000	0.000	0.000
x144	0.000	0.000	0.000	0.000
x131	0.000	0.000	0.729	0.000
x132	0.000	0.000	0.858	0.000
x133	0.000	0.000	0.863	0.000
x125	0.000	0.689	0.000	0.000
x121	0.000	0.516	0.000	0.000
x122	0.000	0.881	0.000	0.000
x123	0.000	0.826	0.000	0.000
x124	0.000	0.445	0.000	0.000
x111	0.862	0.000	0.000	0.000
x112	0.892	0.000	0.000	0.000
x113	0.840	0.000	0.000	0.000
x156	0.000	0.000	0.000	0.598
x155	0.000	0.000	0.000	0.828
x154	0.000	0.000	0.000	0.780
x153	0.000	0.000	0.000	0.745
x151	0.000	0.000	0.000	0.520
x152	0.000	0.000	0.000	0.482

Indirect Effects

	ServExc	DetOfHom	Purchase	DelProm	DealWell	Provid	Infras
Purchase	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CustSat	0.012	0.052	0.000	0.000	0.000	0.000	0.000
GoingEx	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DelProm	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DealWell	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Provid	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Infras	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FinCon	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Acbility	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Neighbor	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DwelF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
y2	0.173	0.457	0.494	0.000	0.000	0.000	0.000
y1	0.025	0.105	0.000	0.000	0.000	0.000	0.000
x241	0.761	0.000	0.000	0.000	0.000	0.000	0.000
x231	0.954	0.000	0.000	0.000	0.000	0.000	0.000
x232	1.073	0.000	0.000	0.000	0.000	0.000	0.000
x221	1.379	0.000	0.000	0.000	0.000	0.000	0.000
x222	1.220	0.000	0.000	0.000	0.000	0.000	0.000
x223	1.194	0.000	0.000	0.000	0.000	0.000	0.000
x211	1.000	0.000	0.000	0.000	0.000	0.000	0.000
x212	1.074	0.000	0.000	0.000	0.000	0.000	0.000
x213	1.171	0.000	0.000	0.000	0.000	0.000	0.000
x214	1.093	0.000	0.000	0.000	0.000	0.000	0.000
x141	0.000	1.069	0.000	0.000	0.000	0.000	0.000
x142	0.000	1.537	0.000	0.000	0.000	0.000	0.000
x143	0.000	1.508	0.000	0.000	0.000	0.000	0.000
x144	0.000	1.474	0.000	0.000	0.000	0.000	0.000
x131	0.000	0.994	0.000	0.000	0.000	0.000	0.000
x132	0.000	0.932	0.000	0.000	0.000	0.000	0.000
x133	0.000	1.307	0.000	0.000	0.000	0.000	0.000
x125	0.000	0.876	0.000	0.000	0.000	0.000	0.000
x121	0.000	0.507	0.000	0.000	0.000	0.000	0.000
x122	0.000	1.186	0.000	0.000	0.000	0.000	0.000
x123	0.000	1.271	0.000	0.000	0.000	0.000	0.000
x124	0.000	0.544	0.000	0.000	0.000	0.000	0.000
x111	0.000	1.000	0.000	0.000	0.000	0.000	0.000
x112	0.000	0.961	0.000	0.000	0.000	0.000	0.000
x113	0.000	0.929	0.000	0.000	0.000	0.000	0.000
x156	0.000	0.626	0.000	0.000	0.000	0.000	0.000
x155	0.000	0.779	0.000	0.000	0.000	0.000	0.000
x154	0.000	0.765	0.000	0.000	0.000	0.000	0.000
x153	0.000	0.719	0.000	0.000	0.000	0.000	0.000
x151	0.000	0.426	0.000	0.000	0.000	0.000	0.000
x152	0.000	0.457	0.000	0.000	0.000	0.000	0.000

	FinCon	Acbility	Neighbor	DwelF
Purchase	0.000	0.000	0.000	0.000
CustSat	0.000	0.000	0.000	0.000
GoingEx	0.000	0.000	0.000	0.000
DelProm	0.000	0.000	0.000	0.000
DealWell	0.000	0.000	0.000	0.000
Provid	0.000	0.000	0.000	0.000
Infras	0.000	0.000	0.000	0.000
FinCon	0.000	0.000	0.000	0.000
Acbility	0.000	0.000	0.000	0.000
Neighbor	0.000	0.000	0.000	0.000
DwelF	0.000	0.000	0.000	0.000
y2	0.000	0.000	0.000	0.000
y1	0.000	0.000	0.000	0.000
x241	0.000	0.000	0.000	0.000
x231	0.000	0.000	0.000	0.000
x232	0.000	0.000	0.000	0.000
x221	0.000	0.000	0.000	0.000
x222	0.000	0.000	0.000	0.000
x223	0.000	0.000	0.000	0.000
x211	0.000	0.000	0.000	0.000
x212	0.000	0.000	0.000	0.000
x213	0.000	0.000	0.000	0.000
x214	0.000	0.000	0.000	0.000
x141	0.000	0.000	0.000	0.000
x142	0.000	0.000	0.000	0.000
x143	0.000	0.000	0.000	0.000
x144	0.000	0.000	0.000	0.000
x131	0.000	0.000	0.000	0.000
x132	0.000	0.000	0.000	0.000
x133	0.000	0.000	0.000	0.000
x125	0.000	0.000	0.000	0.000
x121	0.000	0.000	0.000	0.000
x122	0.000	0.000	0.000	0.000
x123	0.000	0.000	0.000	0.000
x124	0.000	0.000	0.000	0.000
x111	0.000	0.000	0.000	0.000
x112	0.000	0.000	0.000	0.000
x113	0.000	0.000	0.000	0.000
x156	0.000	0.000	0.000	0.000
x155	0.000	0.000	0.000	0.000
x154	0.000	0.000	0.000	0.000
x153	0.000	0.000	0.000	0.000
x151	0.000	0.000	0.000	0.000
x152	0.000	0.000	0.000	0.000

Standardized Indirect Effects

	ServExc	DetOfHom	Purchase	DelProm	DealWell	Provid	Infras
Purchase	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CustSat	0.014	0.040	0.000	0.000	0.000	0.000	0.000
GoingEx	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DelProm	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DealWell	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Provid	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Infras	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FinCon	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Acbility	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Neighbor	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DwelF	0.000	0.000	0.000	0.000	0.000	0.000	0.000
y2	0.202	0.354	0.124	0.000	0.000	0.000	0.000
y1	0.115	0.322	0.000	0.000	0.000	0.000	0.000
x241	0.619	0.000	0.000	0.000	0.000	0.000	0.000
x231	0.785	0.000	0.000	0.000	0.000	0.000	0.000
x232	0.781	0.000	0.000	0.000	0.000	0.000	0.000
x221	0.947	0.000	0.000	0.000	0.000	0.000	0.000
x222	0.946	0.000	0.000	0.000	0.000	0.000	0.000
x223	0.943	0.000	0.000	0.000	0.000	0.000	0.000
x211	0.750	0.000	0.000	0.000	0.000	0.000	0.000
x212	0.821	0.000	0.000	0.000	0.000	0.000	0.000
x213	0.826	0.000	0.000	0.000	0.000	0.000	0.000
x214	0.829	0.000	0.000	0.000	0.000	0.000	0.000
x141	0.000	0.606	0.000	0.000	0.000	0.000	0.000
x142	0.000	0.693	0.000	0.000	0.000	0.000	0.000
x143	0.000	0.643	0.000	0.000	0.000	0.000	0.000
x144	0.000	0.675	0.000	0.000	0.000	0.000	0.000
x131	0.000	0.556	0.000	0.000	0.000	0.000	0.000
x132	0.000	0.655	0.000	0.000	0.000	0.000	0.000
x133	0.000	0.659	0.000	0.000	0.000	0.000	0.000
x125	0.000	0.395	0.000	0.000	0.000	0.000	0.000
x121	0.000	0.295	0.000	0.000	0.000	0.000	0.000
x122	0.000	0.504	0.000	0.000	0.000	0.000	0.000
x123	0.000	0.473	0.000	0.000	0.000	0.000	0.000
x124	0.000	0.255	0.000	0.000	0.000	0.000	0.000
x111	0.000	0.445	0.000	0.000	0.000	0.000	0.000
x112	0.000	0.460	0.000	0.000	0.000	0.000	0.000
x113	0.000	0.434	0.000	0.000	0.000	0.000	0.000
x156	0.000	0.353	0.000	0.000	0.000	0.000	0.000
x155	0.000	0.489	0.000	0.000	0.000	0.000	0.000
x154	0.000	0.461	0.000	0.000	0.000	0.000	0.000
x153	0.000	0.440	0.000	0.000	0.000	0.000	0.000
x151	0.000	0.307	0.000	0.000	0.000	0.000	0.000
x152	0.000	0.284	0.000	0.000	0.000	0.000	0.000

	FinCon	Acbility	Neighbor	DwelF
Purchase	0.000	0.000	0.000	0.000
CustSat	0.000	0.000	0.000	0.000
GoingEx	0.000	0.000	0.000	0.000
DelProm	0.000	0.000	0.000	0.000
DealWell	0.000	0.000	0.000	0.000
Provid	0.000	0.000	0.000	0.000
Infras	0.000	0.000	0.000	0.000
FinCon	0.000	0.000	0.000	0.000
Acbility	0.000	0.000	0.000	0.000
Neighbor	0.000	0.000	0.000	0.000
DwelF	0.000	0.000	0.000	0.000
y2	0.000	0.000	0.000	0.000
y1	0.000	0.000	0.000	0.000
x241	0.000	0.000	0.000	0.000
x231	0.000	0.000	0.000	0.000
x232	0.000	0.000	0.000	0.000
x221	0.000	0.000	0.000	0.000
x222	0.000	0.000	0.000	0.000
x223	0.000	0.000	0.000	0.000
x211	0.000	0.000	0.000	0.000
x212	0.000	0.000	0.000	0.000
x213	0.000	0.000	0.000	0.000
x214	0.000	0.000	0.000	0.000
x141	0.000	0.000	0.000	0.000
x142	0.000	0.000	0.000	0.000
x143	0.000	0.000	0.000	0.000
x144	0.000	0.000	0.000	0.000
x131	0.000	0.000	0.000	0.000
x132	0.000	0.000	0.000	0.000
x133	0.000	0.000	0.000	0.000
x125	0.000	0.000	0.000	0.000
x121	0.000	0.000	0.000	0.000
x122	0.000	0.000	0.000	0.000
x123	0.000	0.000	0.000	0.000
x124	0.000	0.000	0.000	0.000
x111	0.000	0.000	0.000	0.000
x112	0.000	0.000	0.000	0.000
x113	0.000	0.000	0.000	0.000
x156	0.000	0.000	0.000	0.000
x155	0.000	0.000	0.000	0.000
x154	0.000	0.000	0.000	0.000
x153	0.000	0.000	0.000	0.000
x151	0.000	0.000	0.000	0.000
x152	0.000	0.000	0.000	0.000

Summary of models

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	2011.430	479	0.000	4.199
Saturated model	561	0.000	0		
Independence model	33	10908.144	528	0.000	20.659

Model	RMR	GFI	AGFI	PGFI
Default model	0.100	0.777	0.739	0.664
Saturated model	0.000	1.000		
Independence model	0.363	0.222	0.173	0.209

Model	DELTA1 NFI	RHO1 RFI	DELTA2 IFI	RHO2 TLI	CFI
Default model	0.816	0.797	0.853	0.837	0.852
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.907	0.740	0.773
Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	1532.430	1397.661	1674.704
Saturated model	0.000	0.000	0.000
Independence model	10380.144	10043.943	10722.728

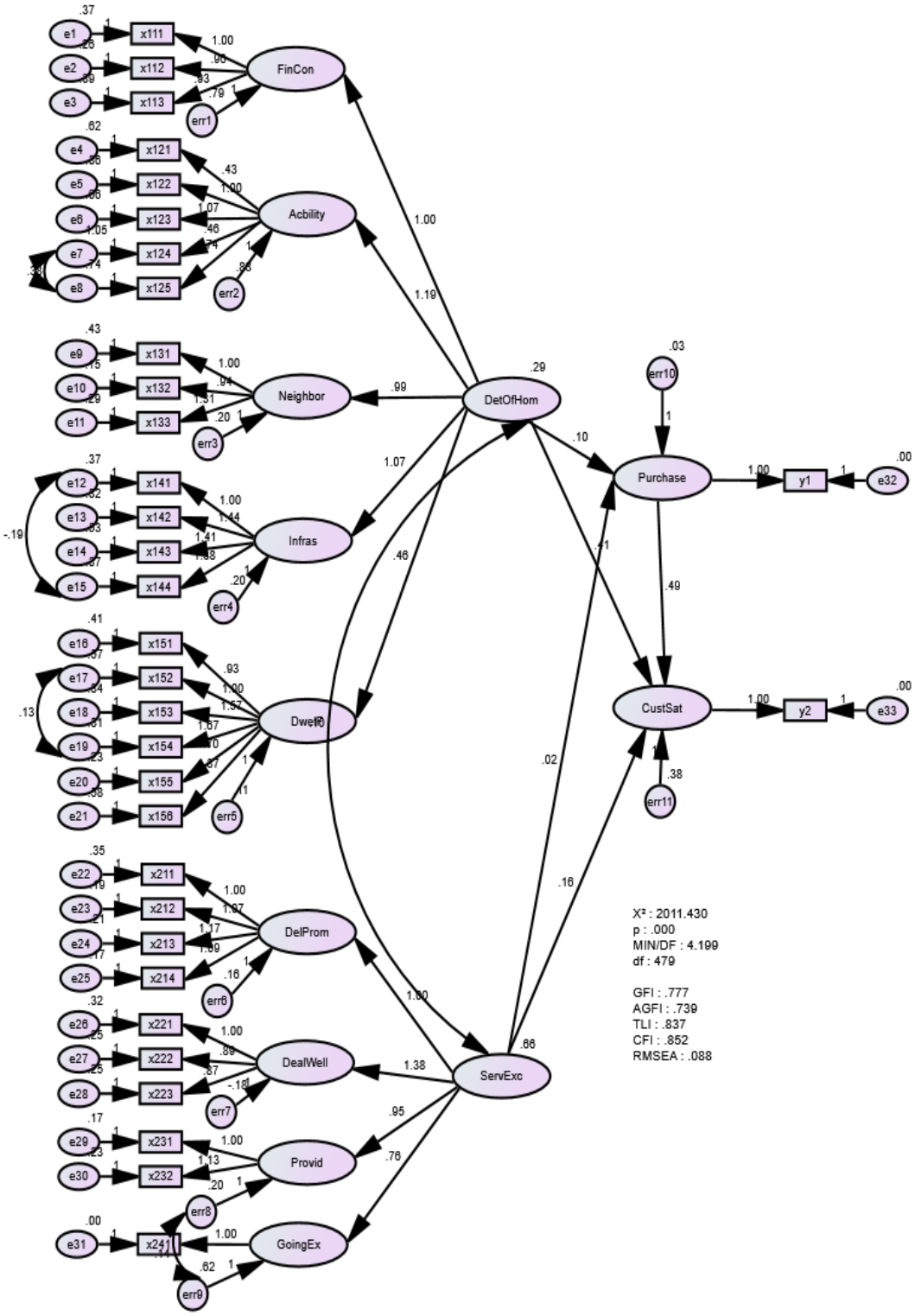
Model	FMIN	F0	LO 90	HI 90
Default model	4.870	3.710	3.384	4.055
Saturated model	0.000	0.000	0.000	0.000
Independence model	26.412	25.134	24.319	25.963

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.088	0.084	0.092	0.000
Independence model	0.218	0.215	0.222	0.000

Model	AIC	BCC	BIC	CAIC
Default model	2175.430	2190.142	2792.264	2587.551
Saturated model	1122.000	1222.654	5342.052	3941.511
Independence model	10974.144	10980.064	11222.382	11139.997

Model	ECVI	LO 90	HI 90	MECVI
Default model	5.267	4.941	5.612	5.303
Saturated model	2.717	2.717	2.717	2.960
Independence model	26.572	25.758	27.401	26.586

Model	HOELTER .05	HOELTER .01
Default model	110	114
Independence model	23	23


FinCon
Acbility
Neighbor
Infras
Dwell
DelProm
DealWell
Provid
GoingEx
DetOfHom
ServExc
Purchase
CustSat
y1
y2
X² : 2011.430
p : .000
MIN/DF : 4.199
df : 479
GFI : .777
AGFI : .739
TLI : .837
CFI : .852
RMSEA : .088

APPENDIX C-2

House Price	
Respondents	Comments
H1	Since there are many people coming to live in Auckland, finding a house is getting more difficult and house prices rise each year. It was quite challenging for me to find a house because there was not enough choice within my budget. I think home builders should be able to provide enough houses in Auckland in order to meet the growing demand.
H2	It was quite easy for an investor buying property in New Zealand including Auckland, and anyone could do it. Most wealthy investors bought some property without asking for a lower price. This phenomenon triggered a rapid increase in house prices in Auckland. Therefore, there must be regulation from the government to prevent this situation.
H3	Purchasing a residential house was a huge decision for me. I have spent a lot of time and money to buy a house. During the process of finding a house, I was searching for a house with a reasonable price. I am not wealthy so I cannot afford to buy an expensive house as purchasing an expensive house will only burden me.
H4	Currently, buying a house with an affordable price in Auckland is hard. As house prices in Auckland have risen significantly, it was not easy to find a house in Auckland. Similar to any other goods and services, the house price depends on the availability. When there is enough houses in the market, I believe the house prices will drop.
H5	There was an over-demand for houses in Auckland which triggered the significant rise of house prices. As long as home builders are unable to meet the demand, I think house prices will keep skyrocketing for a long time.

H6	When I bought a house, the house price was considered as the most important factor. I will find a house with a reasonable price and great value. The house builder should be able to provide a house at a reasonable price for their customer.
H7	The process of finding a house has been hard and sometimes can take months. Due to the housing shortages experienced in Auckland due to the influx of immigrants, finding a house with an affordable price was challenging.
H8	Price is important for me, but the quality of the house was a much more important factor when I bought a house. It is impossible to get a cheap price to buy a house with the good quality and great location.
H9	I understand that house prices are skyrocketing every year because of the high demand. The situation makes it difficult to buy a proper house. I am expecting to buy a house with a reasonable price.
H10	House price is the most important factor when deciding to buy a house. I compared house prices from several house builders. I chose a house builder who provided the best price.
H11	It is very crucial to buy an appropriate house which suits one's requirement, fits in the budget and serves the long term purpose. If a decision is not taken accurately with all the analytical research, buying a house can become a lot more complicated than it seems.
	I can't afford to buy a house with high prices because I don't have

H12	enough money. If the house price still too high, I prefer to rent a house in Auckland or buy a house outside Auckland. In order to lower the house price, all stakeholders such as house builders and government should be able to create an appropriate strategy to provide an affordable price.
H13	I spent almost one year buying a house at a reasonable price. It was really painful for me and my family when searching for a house. Almost all house builders sell their house at a high price compared to last two year's price.
H14	I bought this house after selling my first house outside Auckland and I only got a smaller house with the same amount of money. I believe an affordable house price is important for all homeowners, because most homeowners are unable to afford an expensive house price.
H15	I am happy to buy a house in a good location because the price will improve in a short period. I don't mind buying a house at a high price as long as it is located in a strategic area.

Income	
Respondents	Comments
H1	I needed to combine incomes with my wife when I bought a house. It took a long time for us to purchase a house with our income. It was almost impossible to purchase a house with my own income.
H2	An adequate income was extremely important for me to purchase a house. It was difficult for me to purchase a house since the house price had increased higher than the increasing of income. I was able to buy this house after saving some of my income for five years.
H3	Buying a house was a huge decision for me and it was spending a lot of money. As I mentioned at the beginning of this interview, I was really wanted to buy a house but I didn't have enough cash for it. Then, I made a scale of priority of my life. This helped me to use my income for buying a house.
H4	I do agree that income should be considered as the critical factor when purchasing a house. I believe that people with low incomes should be able to buy a house. We need to work hard and save some of our money to purchase a house.
H5	When I bought a house, I did some personal calculations based on my current income when I wanted to purchase a house. Based on my own calculation, I didn't have enough money to buy a house. Then I explored many options such as working a bit longer, finding ways to earn extra money, finding ways to reduce expenses, or moving to a lower cost area. All of these actions indicate the importance of income when purchasing a house.
H6	

H7	I had a long-term plan prior to my decision to buy a house. I was counting my own savings and income, then saw if both savings and income would be enough to meet my objective to buy a house.
H8	Currently in New Zealand, especially Auckland, we are facing a financial and real estate market where for half of us it is not viable to purchase a house. On a personal basis, I plan on purchasing a house based on my current income. I will not be spending more than 30% of my income to pay the house mortgage. It means proper income allocation will help us to buy a house.
H9	I've been self-employed for more than five years, but my income has been so sporadic that it was difficult for me when deciding to buy a house. I made a plan to buy a house but wait a bit longer to make sure we have a stable income**.**
H10	Knowing our purchasing criteria is a vital step for me in determining the house purchase decision. I was taking the time to clarify my ideal house and compare with our income position. I made a purchase decision for a sound financial investment.
H11	I am considering buying a house but it is hard work and stressful. It was difficult to buy a house because house prices increase higher than my income. A stable and high income was a crucial factor for me when purchasing a house.
H12	For me it's always better to buy our own house because buying a house in Auckland is a good investment. In order to achieve our objective to buy a house, we have to determine our own capability. Enough income is absolutely important when deciding to buy a house because we cannot afford house prices in Auckland with a low income.

H13	We all know that prices of most houses in Auckland are increasing in value every year. It was almost impossible for people who only have a low income to buy a house. It means an adequate income is important to buy a house.
H14	Buying a house is a long term commitment for me. I know buying a house isn't an easy decision to make, but buying a house provide benefit my finances in the future. I was allocating some amount of my income to purchase a house. I believe purchasing a house is a good investment for me and my family.
H15	According to me, income is a very important sources to anticipate the volatility of the house price in Auckland. Since some portion of income is saved, there is a greater possibility to meet house price.
	Buying a house is a major financial decision for me because it needs a large portion of my income. I believe without having sufficient income I will unable to buy a house in Auckland.

Credit Affordability	
Respondents	Comments
H1	Most of the time, I asked for the lowest down payment for purchasing a house. I made a comparison among banks offering affordable down payment schemes. An affordable down payment was required to determine my purchase decision.
H2	I was unable to purchase a house by using cash money. I needed to get a mortgage from a bank when purchasing a house. It was extremely important to get access to the bank when I bought a house.
H3	When I bought a house, I was trying to find a mortgage from a bank. I found a bank who gave the easiest requirement to get a mortgage. The availability of credit from the bank was important to purchase a house.
H4	Purchasing a house was a big decision for me. I made a detailed plan before I made the decision to buy a house. I was assessing and preparing my income to get a mortgage from the bank. I would not have been able to purchase a house without getting a mortgage from bank.
H5	I was trying to get a mortgage when I bought my house and it was a difficult decision to make the house purchase. I spent a long time when purchasing a house and asking for a mortgage from the bank.
H6	Information about mortgage rates was important for applying for a credit loan. Normally we wish to obtain a very affordable credit scheme which offered the lowest mortgage rates.
H7	Since I bought this house, I spend more than 30% of my income to pay the housing mortgage. Even though I was struggling to pay the mortgage, it helped me to own a home of my own.

H8	Getting a mortgage was a crucial factor for me when I bought a house. It was difficult to get mortgage approval from the bank. I was trying to fulfil all requirements to get mortgage from the bank.
H9	In order to achieve my objective to buy a house, I was trying to get a mortgage from the bank. Taking out a mortgage was likely to be the biggest financial commitment for me. I was trying to find out the best rates, so I'd benefit from lower monthly payments.
H10	For me, it's impossible to buy a house without getting a home loan from the bank. So, a home loan is important for me to buy a house. Even though I had enough income to pay the home loan, I prefer to find a home loan with the lowest weekly payment.
H11	I was trying to find a mortgage when purchasing a house. The process of mortgage application was a bit complicated but it is still possible to get one. When applying for a home loan, I was concerned about the interest rate. I prefer to find a mortgage with the lowest interest rate.
H12	Lowest mortgage rates are essential for saving thousands of dollars over the life of a loan. It will enable us to apply for a mortgage and help us to purchase a house.
H13	Buying a property costs a lot of money and most buyers was taking out a loan from the bank. Ease of access to the financial institutions is extremely important for homeowners. Before asking for a mortgage, we have to know our own credit position.
H14	There were many things to consider when I was looking to buy a house, including how to repay it. Getting a home loan was the best solution for me because I only had money for the down payment. I was trying hard to get a mortgage from the bank in order to pay for my house.

H15	Houses in New Zealand are more expensive now than ever before, especially in growth areas such as Auckland. It is almost impossible for me to be able to afford my dream home right away. When I was looking to buy a house, I went to a bank to get a home loan. Mortgage is crucial factor for me to buy a house.

Ease of Access to Workplace	
Respondents	Comments
H1	When purchasing a house, I was considering the house location as an important factor. Specifically, the ease of access to my workplace is extremely important for me.
H2	I am working more than 40 hours per week and I spend most of the time in my office. I should find a house close by my office.
H3	The location of the house plays an important role for me. I can't live far away from my office because I need to go to my office frequently so, I was trying to find a house nearby my office.
H4	There were several factors considered when I bought a house. The most important factor was the ease of access to my office. I chose a house which was close to the motorway, as it was easier for me to go to my office.
H5	Even though the location of my house was relatively far from my office, it was not a big deal. My house is near park and ride facilities, so I only need go to the bus station, park my car and go to my office using the bus.
H6	Easiness to access any transportation options enabled us to minimize our daily cost.

H7	Buying a home can be a long and complex process, but deciding what we are looking for in a property make it's easier. For me, I need to find a house which has easy access to the motorway. It will help me to get easy access to my office.
H8	When I bought a house, one of my main concerns was the availability of public transport. The reason was to ease me going to my office everyday. It was hard to live far away from my office because it was made me feel uncomfortable and stressful.
H9	Purchasing a house can be both one of the most exciting and biggest financial commitments in my life. I need to find a house which is able to fulfil my objective, and ease of access to my workplace was considered as one important factor.
H10	I think it would be better if daily transportation was managed precisely. It will help us to be more effective and efficient to do routines and save time and money.
H11	When I wanted to purchase a house, I was considering several alternatives as important factors of the house purchase decision. Access to my workplace was one of the important factors in deciding my purchase decision.

H12	I think access to my workplace was not really an important factor when I was purchasing a house because I had a vehicle for our mobility. I thought the house price was a more important factor when I bought a house.
H13	Most of the time, I work at home. It means ease of access to my workplace was not considered as an important factor when I bought a house.
H14	There were several factors influencing my housing purchase decision. Ease of access to my workplace was one important factor when I bought a house.
H15	It was hard to find a house near my workplace as the price was very expensive. Then I was trying to buy a house which was near public transport options. Even though a bit far from the workplace, it was not a big problem as long as there was public transport available.

Ease of Access to Schools	
Respondents	Comments
H1	Deciding to purchase a home is a big step for me. As a house is my biggest asset, purchasing a house is an important investment for us and I needed to make a proper assessment. However, ease of access to school was a less important factor for us when purchasing a house.
H2	Purchasing a house is one of the most basic needs and a very important life goal for me. There were many dimensions to the decision of purchasing a house, but ease of access to school was not the main concern for me. Mainly, I was focused on the house price.
H3	The availability of smaller buses will be beneficial for the local community. It will increase flexibility and mobility for the people in the area.
H4	Buying a home is a big financial commitment for me, so it's crucial to know each factor which influenced my purchase decision. In this case, I do agree that ease of access to school was one important factor to determine the house purchase decision.
H5	I was struggling with how to buy a house, and what is the thing that I need to be concerned about. There were several factors considered when purchasing a house. Ease of access was one important factor for me.

H6	Purchasing a house is the biggest investment that I've ever make in my lifetime so, I want to have as much time to prepare for this huge moment as possible. I have spent most of my time assessing each factor related to my house. I was considering location as one important factor in choosing a suitable house for my family, including the location of the school.
H7	When purchasing a house, it is important for me to understand each factor which influences the value of the house. I believe a house which has a great location has great value in the future. Great location of the house which has easy access to my workplace and school were important for me.
H8	Purchasing property in current market conditions is difficult and we should have an appropriate strategy to choose a house. Several factors were evaluated when purchasing a house, including the accessibility factor. Ease of access to school was considered as an important factor when I decided to purchase a house.
H9	Accessibility from home to the school should be improved. One of the most efficient transportations is the transportation developed by the local community. This will ensure optimum usage of the public transport to the workplace.
H10	The first thing to consider when thinking about purchasing a house was the affordable price for me. I did not recognize the accessibility factor, including ease of access to school as an important factor when purchasing a house.

H11	Purchasing a house is not like buying a couch or a new dining room set. If we make the wrong choice, it's not as easy to correct. In order to make an appropriate choice, I need to evaluate each important factor. Beside the house price, I considered accessibility also an important factor. Ease of access to the workplace and school were important when purchasing a house.
H12	Purchasing a house is a complicated process and also the biggest financial investment of my life. It means I need to evaluate each factor carefully and thoroughly. There were several factors considered as important factors when purchasing my house, including ease of access to school.
H13	The decision to buy a home is important, but the way to determine those decisions are much more important. There were several factors important for me when determining the purchase decision, including the ability to pay, timing, and also ease of access to the workplace and school.
H14	For me, purchasing a house is a complex process, with many steps, costs, and decisions along the way. The most important step for me is to evaluate my actual income before make a purchase decision. Accessibility, including ease of access to school was less important for me because I only live with my wife.
H15	Purchasing a house was an important decision for me and family. It cost a large portion of my savings and income to buy a house. I considered several factors before making a decision to buy a house, and ease of access to school was one important factor for me.

Safe Neighbourhood	
Respondents	Comments
H1	As purchasing a house is among the biggest decisions in my life span, it is vital to be fully conscious of what things to search for when purchasing a house. I will love to remain in a house which will be safe for me and my family. It was my first priority when purchasing a house.
H2	When I decide to buy a home, I will conduct some research before choosing a house which satisfy me. Actually, I would like to find a house with a great location and safe neighbourhood because it will provide great value for me and my family.
H3	When I had a plan to purchase a house, I had to consider specific things before buying one. My first consideration was the affordable house price, then I was looking for a house with a good neighbourhood. A good neighbourhood which offered safety was considered as an important factor when purchasing a house.
H4	Buying a home is an enormous step in my lifestyle, and obviously I would like it to be ideal. Having a home is a dream for me and my family because it provides an awareness of security. Thus, I will try to find out a house in a great neighbourhood and affordable price.
H5	Ensuring the neighbourhood situation in determining the purchase decision will help to guarantee a safe neighbourhood. I think safety is a reason why most people choose to get it at the time of purchase.

H6	When I buy a property, the first thing I want to do is to evaluate the most affordable house for me. I will try to find a property in a good location and which has a safe neighbourhood. Those factors are important for me because I will live in that property for a long period of time. It means ease of access to school is less important for me.
H7	Based on my own experience, monitoring the situation of the neighbourhood helps to ensure the safety of the environment. It was one of my considerations when I bought my house.
H8	Purchasing a house is a big step and commitment for me, because it will take a large portion of my income. In order to make an appropriate decision, I was evaluating several factors which provide greatest benefit. Basically, I prefer to buy a house in a great location which offers a safe neighbourhood.
H9	Purchasing a house is challenging and there are numerous things to think about beforehand, such as price, property insurance, and financing. More than that, I was also considering a good neighbourhood as an important factor when purchasing a house. Based on my knowledge and experience, a good neighbourhood offers a safe neighbourhood.
H10	Purchasing and building a dream home needs detailed planning to anticipate numerous issues that can arise at any point. However, choosing a house located in a safe neighbourhood was considered as part of my anticipative plan to provide the best values for my family.

H11	The availability of the safety system will provide a safe neighbourhood area. It was important in determining my purchase decision.
H12	If I bought a property, I would need to be certain that the property was located in a great zone. I assume that a house located in proper zone has a great value and offers a safe neighbourhood. Those factors are important for me and my family.
H13	Purchasing a house is not exactly a walk in the park, and there are many factors to consider. According to my opinion, the most important factor is knowing whether we are emotionally and financially ready. Even though a safe neighbourhood is also crucial, it's less important for me.
H14	Before choosing a property, I should have an idea of the attributes I want and need such as location, size, type, and neighbourhood. When I bought this property, location was more important than neighbourhood because I assumed a good location will automatically create a good neighbourhood. If the property meets most of my criteria, I'll be satisfied with my purchase decision.
H15	One of the reasons for purchasing a house is to provide a better life for my family. In order to find a better place for my family, I will try to buy a house in a safe neighbourhood. This means a safe neighbourhood was considered as an important factor when I bought a house.

Clean Neighbourhood	
Respondents	Comments
H1	The house builders should have waste reduction plans on the building area. By using this plan, any potential waste can be easily identified and avoided. Proper planning is required by each homeowner when determining a purchase decision.
H2	I agree that a clean neighbourhood is one important factor when purchasing a house. When I bought a house, I was searching for a house in a good location with a clean environment because I can't let my children live in a bad neighbourhood.
H3	The neighbourhood should be planned properly in terms of a clean neighbourhood. The availability of rubbish removal will improve the clean neighbourhood. It will provide pleasure for everyone who lives in such environment.
H4	Living in a clean environment is one of my aspirations because it will create a healthy living condition. It was the reason why I was searching for a house in a great location with a clean environment. So, I do agree that a clean neighbourhood is considered as one critical factor to determine a house purchase decision.
H5	Each family has its own specific criteria when purchasing a house. For me and my family, a clean neighbourhood was considered as one important factor when purchasing a house because it will make us secure and comfortable.

H6	I do agree that a clean neighbourhood is one important factor when purchasing a house because it will create better living conditions and also provide added value for our house.
H7	I considered a clean location as one important factor when purchasing a house. I believe living in a clean environment will provide better healthy conditions for our family.
H8	There were several factors considered when I bought a house for my family and a clean neighbourhood was one of them. By choosing a house in a good condition and located in a clean environment, our needs were satisfied.
H9	I agree that a clean neighbourhood is one important factor when purchasing a house because living in a clean environment will secure my life.
H10	A clean neighbourhood was considered as less priority when I bought a house. As long as our house is kept clean, it was enough for me. I thought the quality and price of the house were important factors when purchasing a house.
H11	Providing the best house for my family was the major priority for me, because we will live in the house for a long time. In order to find the best house for our family, I was considering several factors when purchasing a house. A clean neighbourhood was considered as one important factor when I bought a house.

H12	I agree that a clean neighbourhood is one important factor when purchasing a house because it will provide pleasure for my family. It will also provide better value for our house in the future.
H13	Purchasing a house was my biggest investment decision, so I should try to find the best house for me. Several factors were considered important when purchasing a house, and a clean neighbourhood was one of those important factors.
H14	I was trying to find the most appropriate house when I bought a house because I will spend most of the time in my house. I had to assess many factors before purchasing a house. One important factor assessed was a clean neighbourhood because living in a good location with a clean environment will create feelings of comfort and harmony for our family.
H15	When I bought a house, I was evaluating every important aspect. One of the important aspects was a clean neighbourhood because it will create better living condition for my family. It means, I do agree that a clean neighbourhood is one important factor when purchasing a house.

Green Neighbourhood	
Respondents	Comments
H1	Purchasing a house was a big decision for me, I was considering several factors when purchasing a house. One important factor was the availability of waste management in the neighbourhood area because it will create healthy living conditions. So, I do agree that a green neighbourhood is one important factor when purchasing a house.
H2	The use of economic elements such as pollution fees are effective to eliminate waste generation. It will force anyone to protect their living area properly.
H3	I agree that a green neighbourhood is one important factor when purchasing a house because it will help us to protect our environment.
H4	Appropriate waste handling and treatment methods are able to minimise waste generation. Any information concerning waste control in the living area is needed by everyone who lives in that environment.
H5	I was concerned about the healthy environment when purchasing a house because a healthy environment makes our life more convenient. It means I agree that a green neighbourhood is one important factor when purchasing a house.

H6	When I bought a house, I was trying to find a house in a great location and providing a healthy environment. It was one important factor for me because we were living in that area for long period of time.
H7	I was considering a location with a green neighbourhood as one important factor when purchasing a house. I will not buy a house which is located in a bad environment and without proper waste management.
H8	If I bought a house, I would like to find a house located in a great environment, including the availability of waste management. I assume that a house located in a positive neighbourhood has a great value and offers healthy living conditions for my family. Those factors are important for me and my family.
H9	I agree that a green neighbourhood is one important factor when purchasing a house. A house located in a great location and with less pollutants has a great economic value. It will provide a comfortable feeling for me and my family.
H10	Living in a less polluted area is important for our quality of life. It will make me more comfortable and less stressful. So, I agree that a green neighbourhood is one important factor when purchasing a house.

H11	I was considered a clean neighbourhood with less pollution as one important factor when purchasing a house. I believe living in a clean environment will provide many advantages for our life.
H12	Regular monitoring from the body corporate will help in minimising waste generation. They know what action they can and should be taken to protect the environment from pollution.
H13	I believe choosing a property located in a great location without any pollution is important for me when purchasing a house. It will offer added value for our house and provide better living quality for my family
H14	House builders should have waste reduction plans to identify and avoid any potential waste generation. Suitable planning is required by everyone to ensure our living area. It is one of the critical factors in determining consumer satisfaction.
H15	Purchasing a house is the biggest decision in my life, and it means I will try to find a house providing the best value for me. In this case, I agree that purchasing a house in a good location and less polluted environment is vital to influence my purchase decision. I will love to stay in a house located in a great environment because it offers a great living condition.

Road Quality	
Respondents	Comments
H1	I agree that road quality is one important factor when purchasing a house because it will provide great economical value. It will also make our mobility easier.
H2	I consider road quality as one important factor when purchasing a house. I believe having a house which is supported by good infrastructure facilities offers greater added value for our family.
H3	Standardisation of road quality is important to ensure the availability of road in the housing area.
H4	When I bought a house, I was searching for a house in a great location with infrastructure facilities. The availability of good road quality is important for me because it will provide better access and value.
H5	The availability of good road quality as one the of infrastructure facilities important for me because it will be easier for our mobility. It means I agree that road quality is an important factor when purchasing a house.
H6	Finding the best house for my family was the main priority for me, because we will live in the house for a long time. In order to find the best house for our family, I was searching for a house in a great location with infrastructure facilities. I believe by choosing a house in a good location will ease our mobility.

H7	I think the availability of good infrastructure facilities, especially good road quality, is important for us because it is easy for us to do all of our activities. So, I agree that road quality is one important factor when purchasing a house.
H8	I understand that purchasing a house is not an easy decision because we have to evaluate many factors before made a decision. For me, the availability of good road quality is not my major priority because most areas in Auckland already have good quality roads.
H9	There are several factors that should be considered before buying a house. I agree that purchasing a property located in a strategic location with great infrastructure facilities is important because it will improve the value of our house.
H10	The availability of good road conditions will greatly improve the access to the housing area.
H11	Before purchasing a house, I was searching for a house in a great location with complete infrastructure facilities including good road quality. It will helps me to provide the best living situation for my family.
H12	The existence of great infrastructure facilities such as good road quality was important for me when I was deciding to buy a house. This factor was crucial for me because it will make our activity easier and provide greater added value for our house.

H13	My main reason for purchasing a house is providing better life conditions for my family. I believe my goal was achieved when I bought a house in a great location with supportive infrastructure facilities. It means road quality as one of the infrastructure facilities is an important factor when I buy a house.
H14	An ideal house is a combination of several factors. I agree that road quality was one of important factor when evaluating my purchase decision because the availability of good road quality will ease our activity.
H15	When I had the intention to buy a house, I was evaluating several factors. At that time, I thought road quality was less important because it will not give added value for my house.

House Design	
Respondents	Comments
H1	Effective design is the main factor to minimise construction costs. The house builder needs to have a good understanding of effective house design.
H2	Before purchasing a house, I evaluated several factors. I believe house design was one important factor when evaluating my purchase decision because I could not stay in one house when I felt the design is improper.
H3	I agree that house design is considered as one important factor when purchasing a house because a good design will satisfy me.
H4	When I bought a house, I saw house design first. If the design of the house is suitable to my needs, I will try to buy that house. For me, house design was one important factor when purchasing a house.
H5	I consider house design as one important factor when purchasing a house. I believe a house with great design will provide more added value in the future.
H6	The process of house design is the most critical task to be taken by the homeowner and house builder. Clear communication and flexibility are the key to create a successful design.

H7	I love having a house with a design which suits my personality. I will feel comfort staying at home when the design is similar to my passion.
H8	As a homeowner, I would like developers to be able to produce a design that accommodates my requirements. Creativity from the developer will cause a high standard of building and consumer satisfaction.
H9	A house having great design and quality provides bigger economic value in the future. It was easy for me if I want to sell my house. It was one of the reason for the importance of house design when purchasing a house.
H10	I was discussing with my wife about house design when purchasing a house. The availability of an appropriate house design which accommodates our desire was important because it will make us more comfortable staying in the house.
H11	I will try to make a suitable house design when I buy a house because I will spend most of the time in my house. It was more useful for me when having an appropriate design when purchasing a house.

H12	I had to assess every factor before purchasing a house. One important factor assessed before purchasing a house was house design because living in a house with appropriate design will create feelings of comfort and harmony for our family.
H13	Each action from the house builder should be in a proper sequence so that the construction process can be done effectively. It will ensure the construction process can be done using optimum resources.
H14	I believe house design is considered as one important factor when purchasing a house. I cannot stay in a house with a messy design.
H15	The developer should be able to balance house design with cost effectiveness. This will give added value for us as homeowners.

House Quality	
Respondents	Comments
H1	I was considering house quality as one important factor when purchasing a house because buying a house with bad quality would be risky for us.
H2	The integration of house builder plans especially during construction stage will improve house quality.
H3	I would ensure the quality of the house before purchasing a house because we will be living in our house for a long time. By having a good quality house, we will not have big maintenance costs in the future.
H4	Ensuring house quality in the construction process is our main goal. It will be able to reduce or minimise defects and damages.
H5	I agree that house quality is one crucial factor when purchasing a house because it will provide added value in the future.
H6	I believe that purchasing a house with a good quality provides many benefits for us. It was the main reason that house quality can be described as one important factor when purchasing a house.

H7	By following the construction process of a house, it is possible for us to monitor and validate housing quality. This will enable us to terminate construction malpractices and ensure our requirements are met exactly.
H8	Choosing an appropriate house with a good quality was extremely important for me because it will provide high value in the future.
H9	Purchasing a house with a good quality was important for me because it will create safe feelings for me.
H10	The communication between homeowner and house builder is very important during the construction process. Effective communication with the house builder is extremely required to get a good quality house.
H11	Quality is the top priority because good quality will increase durability. Then, choosing an appropriate builder is crucial during the construction process, because an incompetent builder will bring about poor house quality.
H12	If I bought a house, I would need to be certain that the property had a great quality. I believe a house with great quality was long lasting and have less maintenance cost in the future.

H13	Finding the best house for my family was the main priority for me, because it will provide a great living environment. House quality was considered as the main factor when purchasing a house.
H14	In order to find the best house for my family, I was trying to find a property with good quality. Having a good quality house will create safe feelings for us.
H15	When I bought a house, I spent more than a year dingo research about the quality of the house. It was important for me because a house with great quality will give me better value in the future.

Number and size of bedrooms	
Respondents	Comments
H1	Efficient design will meet our expectations and save construction time. Accordingly, the construction process will require efficient design to anticipate higher cost.
H2	I agree that number and size of bedrooms is one important factor when purchasing a house. It was important for me because I have three kids and each of them should have their own room.
H3	When I was building my house, I made only two bedrooms because I don't have any kids. It will costly for us having more than two bedrooms. So, I do agree that the number and size of bedrooms was one important factor when purchasing a house.
H4	I believe that having a house which accommodates our needs is important, including our needs about bedrooms. I want to make our family comfortable, so I should provide appropriate bedrooms for them.
H5	Based on the scale of priority, number and size of bedrooms are important for me when purchasing a house because it's impossible gave one bedroom for more than one person.
H6	The implementation of an effective floor plan will reduce unnecessary design. It will be easy for the house builder to meet our needs or serve our requirements.

H7	I have a small family with three kids and each of them has their own privacy. It was the main reason why the number and size of bedrooms was important when purchasing a house.
H8	I think the availability of bedrooms for each people in my family was crucial because they can do their own activity in their room. So, I do agree that the number and size of bedrooms are important when purchasing a house.
H9	The ability to meet consumer's requirements is vital for the house builder. Achieving a high-quality standard and meet consumer's requirements, will enable consumer satisfaction.
H10	The number and size of bedrooms are important because each member of my family should have their own room.
H11	When I decided to buy a property, I conducted evaluation of several factors related to the house. One of the main elements was the number and size of bedrooms because by providing appropriate bedrooms will create better living conditions.
H12	The availability of bedrooms is closely related with the number of family members. Each family member needs their own bedroom for their privacy. So, I agree that the number and size of bedrooms are crucial factors when purchasing a house.

H13	When searching for a house, I was trying to provide the best property for my family. Each member of our family needs their own bedroom for sleeping and studying. This means the number and size of bedrooms are important when purchasing a house.
H14	Purchasing a property should accommodate each family member's needs. In this case, my daughter asked me for her own bedroom. It was the main reason for the importance of the number and size of bedrooms when purchasing a property.
H15	Providing a house with complete facilities is my dream because it will make all of my family members happy. I thought providing one bedroom for each of my family members would make them happy. So, I agree that the number and size of bedrooms are important factors when purchasing a house.

Number and size of bathrooms	
Respondents	Comments
H1	I agree that the number and size of bathrooms are considered as important elements when purchasing a house.
H2	Even though bathrooms are important, but I think it's less priority factor for me. As long as there is one bathroom is enough for me.
H3	When I bought a house, I was trying to find a property with complete and appropriate facilities including bathrooms. It will create comfortable feelings for all family members. So, the availability of bathrooms was considered as one of the important factors when purchasing a house.
H4	The availability of bathrooms is important for my family because it's a mandatory facility for each house. So, I agree that the number and size of bathrooms are the important factors when purchasing a house.
H5	When building a house, figuring out the priority necessities is very important for us. By classifying our needs, it will ease the process of creating a floor plan.
H6	At least we need to use one bathroom for our family because every day we need bathrooms. It means the number and size of bathrooms are important factors when purchasing a house.
H7	I believe that the availability of a bathroom is crucial for my family because we cannot live without family.

H8	Providing the best house for my family was the main priority for me, because we will live in this house for a long time. In order to provide the best house for our family, I have to buy a house which provides complete facilities including bathrooms.
H9	Choosing an appropriate house for my family in Auckland was a hard job. However, finding a property with complete facilities was crucial for me. One important facility is the availability of a proper bathroom.
H10	In order to find an appropriate property for my family, I should find a property with complete facilities. I think a bathroom is considered as mandatory facilities for each house. Then, I agree that the number and size of bathrooms is considered as one important factor when purchasing a house.
H11	Currently, purchasing property with appropriate facilities is difficult. Providing a house with vital facilities is important because it will make our family feel comfortable at home.
H12	Implementing the floor plan is crucial to meeting consumer's requirement.
H13	When I bought a house, I was evaluating several factors before purchasing a house, including the number and size of bathrooms because it was one of the vital elements of the house.

H14	I was trying to find out the most appropriate house when I bought a house because I will spend most of the time in my house. According to me, several factors needed to be considered when purchasing a house including the number and size of bathrooms because it was one of the vital elements of the house.
H15	I think the availability of bathrooms is important because it is one of crucial companent for a house. Then, I do agree that the number and size of bathrooms are important when purchasing a house.

Land Size	
Respondents	Comments
H1	Purchasing a house with a big yard was one of my passions. So, I agree that land size can be described as one important factor when purchasing a house.
H2	I agree that land size can be described as one important factor when purchasing a house because living in a house without no extra land was not convenient for me.
H3	Determining our needs is the first and most important stage when building a house. By doing thorough analysis, it will enable us to meet our needs effectively.
H4	Choosing an appropriate house with a large size of land was extremely important for me because it will provide high value in the future.
H5	Before purchasing a house, I was searching for a house which has extra land because it will be great for my kids to play. So, I agree that land size can be described as one important factor when purchasing a house.
H6	I was concerned with the land size when purchasing a house because it will provide better living conditions. The availability of extra land can be used for our activities such as small gatherings with my friends.

H7	One important factor when purchasing a house is the size of land because I can use it for gardening and other activities. It was the reason that land size was considered as an important factor when purchasing a house.
H8	I agree that land size is described as one important factor when purchasing a house because it is related to the house price. So, I prefer to find a house with an appropriate land size which is suitable to my purchasing ability.
H9	I think the availability of enough land size is one of my priorities when purchasing a house because it will provide better living conditions for us.
H10	I agree that land size is one important factor when purchasing a house because purchasing a house with large land size will give us added value in the future.
H11	When I buy a property, I would like to find a property with enough space but with an affordable price. So, the availability of appropriate land size is important for me when I buy a house.
H12	I want to buy a house with enough space for my kid's activities. This means, I will consider land size as one important factor when purchasing a house.

H13	I think land size is less important for me when purchasing a house. I cannot afford to buy a house with large land size because it will cost me a lot of money.
H14	I agree that land size can be described one important factor when purchasing a house because it will have an impact on the house price. I cannot afford to buy a house with an expensive price. Even though a property doesn't have big land size, it's not a big problem for me as long as the price still affordable.
H15	Purchasing a house should involve considering the availability of several factors. In this case, I agree that size was one important factor when evaluating my purchase decision because the availability of enough space will ease our activity.

Do what was promised	
Respondents	Comments
H1	I agree that the ability of house builders to do what was promised can be described as a crucial factor to deliver better services to the customer. It was one of my criteria when purchasing and building a house.
H2	When I bought a property, I was considering the ability of house builder to deliver their promise as a critical factor.
H3	I was searching for a house builder who was able to provide good quality of service when purchasing and building a house. The ability to keep their promise was important for me because it will make me get my dream house similar with my own requirements.
H4	I believe that the ability of house builder to do what was promised will fulfil my needs and I will purchase a house when fulfilling my needs. So, I agree that the ability of the house builder to do what was promised can be categorized as one important factor when purchasing a house.
H5	Based on the scale of priorities, the ability of house builder to do what was promised can be described as one important factor when purchasing a house because I will get what I want and that will satisfy me.

H6	One important criteria when searching for a house builder is the ability to do what was promised. I believe that the house builder who is able to do what was promised will provide all components as required. It was the main reason that the ability to do what was promised was one important factor when purchasing a house.
H7	House builders should deliver optimum performance for their customer. It will maximize their capability to deliver their promise to the customer.
H8	Purchasing a house is one of my big dreams, so I will try to find the best house builder who can accommodate my dream. It means the ability of house builder to do what was promised can be described as one important factor when purchasing a house.
H9	I cannot afford to buy a house from an incredible house builder who is unable to keep their word. This means I agree that the ability of house builder to do what was promised can be described as one important factor when purchasing a house.
H10	House builders should have an integrative system to minimise lack of coordination among them. It will ensure their ability to fulfil the consumer's needs and expectations.

H11	As purchasing a house is one of my big decisions, I have to ensure that I will get the best house for my family. I believe that a good house is a house that is able to accommodate my family's needs. It can only achieved by finding a house builder who is able to do what was promised. So, I agree that the ability of house builder to do what was promised can be described as one important factor when purchasing a house.
H12	Based on my previous experience, a house builder who is able to do what was promised will accommodate all of my needs. It was important for me when deciding to buy a property.
H13	I believe service quality delivered by a house builder including do what was promised was able to fulfil my needs. Then, I try to find a house builder who has the capability to do what was promised before making a purchase decision.
H14	There were several factors when determining house purchase decision, including evaluating the service quality from the developer. The ability of a developer to deliver great service will strengthen my intentions to buy a house because I'll feel safer purchasing a house from a credible developer.
H15	In my opinion, doing what is promised is extremely important for the house builder because it shows their commitment to deliver good quality and excellent value. The ability to deliver their promise able to improve consumer satisfaction.

Meet Expectations	
Respondents	Comments
H1	Building an effective communication with the customer is extremely important to encourage a positive relationship.
H2	Purchasing a house is a complex decision for me because I'm expecting to buy an appropriate property which will fulfil my needs. Then, I believe the ability of a house builder to fulfil my needs is an important factor when purchasing a house.
H3	I was trying to find out the best house builder who can accommodate my needs because I cannot afford to buy a house which is unable to fulfil my needs. So, I agree that the ability of a house builder to meet my expectations is an important factor when purchasing a house.
H4	Appointed personnel can help the house builder to understand and meet customer's expectations.
H5	The most appropriate house for me is a house which is able to fulfil my needs. I believe it can be done by a credible house builder who has the capability to meet customer's expectations.
H6	Providing an opportunity for the customer to express their ideas is an effective way to meet customer's expectations.

H7	I agree that the ability of a house builder to meet my expectations is an important factor when purchasing a house because I will get everything I need from my house.
H8	I'm concerned with the level of services provided by the house builder including meet customer expectations because it is related to their ability to fulfil all my needs.
H9	An appropriate approach to the customer is crucial to find out customer needs. House builders should be more flexible and adaptable for improving customer's satisfaction.
H10	Purchasing a property to fulfil all of our needs is not easy and I have to find an appropriate house builder who has great capability to fulfil my needs. It was the main reason that delivering the promise can be categorized as an important factor when purchasing a house.
H11	Providing the best house for my family was the main priority for me, because it will provide better living conditions. This can be achieved when finding a house builder who has the ability to deliver their promise.
H12	I have to buy a house which accommodates all of my families' needs. In order to provide those needs, I found an appropriate house builder who has the ability to deliver their promise because they were able to meet my expectations.

H13	The ability of a house builder to deliver their promise will fulfil my needs and meet my expectations. Then, I was considering this criterion as one important factor when purchasing a house.
H14	Currently, choosing an appropriate house builder is one of my priorities before purchasing a house. I believe the house builder who has ability to deliver their promise will meet my expectations.
H15	When I bought a house, I was assessing the performance of house builders. If a house builder is able to meet my expectations, they will fulfil my needs. So, I agree that meeting expectations can be described as one important factor when purchasing a house.

Protect the Customer	
Respondents	Comments
H1	When purchasing a house, I need assurance from the house builder that the process will build a house similar to my requirements. So, I agree that the ability of the house builder to protect the customer is defined as one important factor when purchasing a house.
H2	Purchasing a house is my biggest investment in my life, then I need to ensure that it will work effectively. I agree that the ability of a house builder to protect the customer as one important factor when purchasing a house.
H3	I agree that the ability of the house builder to protect the customer as one important factor when purchasing a house because I need security for my investment.
H4	I cannot afford to buy a house when there is no guarantee from the house builder because guarantee is one protection from the house builder. It was considered as one important factor when I bought a house.
H5	The availability of customer's protection from the house builder was extremely important when I bought a house because it provided safety for me.
H6	I agree that evaluating the customer's protection is one important factor when purchasing a house because it will provide certainty for us.

H7	Based on my previous experience, the availability of protection for our house was extremely needed because it will help to strengthen our secure feelings.
H8	The process of building a house is a little bit complicated. We need guidance from the developer to do the whole process. Simplifying the procedure will ensure the building process.
H9	Actually, there are several factors needing to be evaluated when purchasing a house because I want to ensure that I do not want to waste my money. One important factor for me is evaluating the availability of customer protection.
H10	The protection of my house is considered as one important factor when purchasing a house because I want to provide safety for my family.
H11	When I bought a house, I was assessing the existence of a warranty provided by the house builder. It was important for me because I wanted to have a preventive plan for my investment activity.
H12	As the customer does not have enough knowledge regarding the construction process, the house builder should provide a clear explanation about the whole procedure.

H13	I think the ability of a house builder to provide protection for the customer was one important factor when I bought a house because it will give me more added value.
H14	In order to provide the best house for my family, I was searching for a house builder who was able to provide a guarantee for our house. It will improve the value of our house and create better living conditions.
H15	I agree that providing customer protection is one important factor when purchasing a house as it will enhance our safety feelings.

Reliability	
Respondents	Comments
H1	The availability of a reliable house builder will fulfil my needs and meet my expectations. Then, I was considering this criterion as one important factor when purchasing a house.
H2	When building a house, I will verify whether the builder is registered and licensed. It will provide protection under the government regulation and protect the building from major defects.
H3	I was trying to find out the best and reliable house builder who can accommodate my needs because I cannot afford to buy a house which is unable to fulfil my needs. So, I agree that the availability of a reliable house builder to meet my expectations is an important factor when purchasing a house.
H4	When I bought a house, I was assessing the performance and reliability of house builders. If a house builder is able to meet my expectations, they will fulfil my needs. So, I agree that reliability of house builders can be described as one important factor when purchasing a house.
H5	I was searching for a house builder who was reliable when purchasing and building a house. The reliable house builder was important for me because it will make me get my dream house similar with my own requirements.

H6	Choosing an appropriate and reliable house builder is one of my priorities before purchasing a house. I believe a reliable house builder who has ability to deliver their promise will meet my expectations.
H7	I believe service quality delivered by a reliable house builder was able to fulfil my needs. Then, I will try to find a reliable house builder before making a purchase decision.
H8	Purchasing a house is a complex decision for me because I'm expecting to buy an appropriate property which will fulfil my needs. Then, I believe the availability of a reliable house builder who fulfil my needs is an important factor when purchasing a house.
H9	Purchasing a house is one of my big dreams, so I will try to find a reliable house builder who can accommodate my dream. It means the availability of a reliable house builder to can be defined as one important factor when purchasing a house.
H10	I agree that the availability of a reliable house builder as one important factor when purchasing a house because I need security for my investment.
H11	Regular progress reports from the builder are important for us because they enable us to monitor the construction process.

H12	Based on my previous experience, the availability of a reliable house builder will accommodate all of my needs. It was important for me when deciding to buy a property.
H13	The availability of a reliable house builder was extremely important when I bought a house because it provided safety for me.
H14	The most appropriate house for me is a house which is able to fulfil my needs. I believe it can be done by a reliable house builder who has the capability to meet customer's expectations.
H15	Based on the scale of priorities, the availability of a reliable house builder can be described as one important factor when purchasing a house because I will get what I want and that will satisfy me.

Quick Response	
Respondents	Comments
H1	When purchasing a house, I need a quick response from the house builder in order to meet my requirements. So, I agree that a quick response from the house builder is described as one important factor when purchasing a house.
H2	I have to buy a house which accommodates all of my families' needs. In order to provide those needs, I will find an appropriate house builder who can make a quick response because it will be able to meet my expectations.
H3	An effective response from builders is able to reduce unwanted defects. This will ensure the quality level of the building.
H4	During the construction phase, accessibility to the builders should be improved. This will ensure the ability to respond to any issues or problems quickly.
H5	I think the ability of a house builder to provide a quick response for the customer was one important factor when I bought a house because it will satisfy me.
H6	It is important to make sure that any communication system from the builder does not lead to a late response. As a homeowner I need certainty when facing improper conditions.

H7	Conducting periodic meetings is critical in solving any problems during construction phase. It is extremely important to solve any issue immediately.
H8	I agree that a quick response from the house builder is one important factor when purchasing a house because it will provide certainty for us.
H9	As a customer, I feel more safety and comfort when builders provide a quick response.
H10	The ability of a house builder to provide a quick response will fulfil my needs and meet my expectations. Then, I was considering this criterion as one important factor when purchasing a house.
H11	A better communication level between builder and homeowner helps to reduce the number of problems during the construction process.
H12	Purchasing a property to fulfil all of our needs is not easy and I have to find an appropriate house builder who has great response to fulfil my needs. It was the main reason that quick response can be defined as an important factor when purchasing a house.
H13	I cannot afford to buy a house when there is no certainty from the house builder because certainty to response is one protection from the house builder. It was considered as one important factor when I bought a house.

H14	I was searching for a house builder who was provide quick response when purchasing and building a house. The availability of a house builder to make a quick response was important for me because it will make me felt comfort.
H15	Providing the best house for my family was the main priority for me, because it will provide better living conditions. This can be achieved when finding a house builder who has the ability to response my requirements.

Helping Customer	
Respondents	Comments
H1	Any construction project including a housing project will be easier if conducted by a certified person. They have sufficient knowledge on how to do their job properly. It will help customers to minimize any potential defects that might arise in the future.
H2	However, the communication process between builder and homeowner should be improved. This will minimize miscommunication on the construction process.
H3	Purchasing a house is a complex decision for me because I'm expecting to buy an appropriate property which will fulfil my needs. Then, I believe the ability of a house builder helps me to fulfil my needs is an important factor when purchasing a house.
H4	I agree that the ability of the house builder to help the customer as one important factor when purchasing a house because I need assistance when building a house.
H5	However, understanding and identifying customer needs is a complex process. This will ensure the customer's issues or problems can be solved quickly.
H6	I believe the ability of the house builder to help customer will be able to fulfil my needs. Then, I will try to find a great house builder who has willingness to help fulfilling customer needs before making a purchase decision.

H7	I was searching for a house builder who was able to provide good quality of service when purchasing and building a house. The ability to help the customer was important for me because it will make me get my dream house similar with my own requirements.
H8	One important criteria when searching for a house builder is the ability to help the customer. I believe that the house builder who is able to help the customer will provide all components as required. It was the main reason that helping customer was one important factor when purchasing a house.
H9	When purchasing a house, I need assurance from the house builder that the process will build a house similar to my requirements. So, I agree that the ability of the house builder to help the customer is defined as one important factor when purchasing a house.
H10	There were several factors when determining house purchase decision, including evaluating the service quality from the developer. The ability of a developer to deliver great service by helping customer will strengthen my intentions to buy a house because I'll feel safer purchasing a house from a great developer.
H11	Based on the scale of priorities, the ability of house builder to help the customer can be described as one important factor when purchasing a house because I will get what I want and that will satisfy me.

H12	The most appropriate house for me is a house which is able to satisfy my needs. I believe it can be done by a great house builder who has the capability to help the customer in order to meet customer's expectations.
H13	I'm concerned with the level of services provided by the house builder including their ability to help customer because it was related to their ability to satisfy all my needs.
H14	As purchasing a house is one of my big decisions, I have to ensure that I will get the best house for my family. It can only achieved by finding a house builder who is able to help the customer fulfilling their needs. So, I agree that the ability of house builder to help customer can be described as one important factor when purchasing a house.
H15	I agree that helping customer can be described one important factor when purchasing a house because it will have an impact on the customer's satisfaction. Then, I strongly agree that the ability of house builder to help customer can be described as one important factor when purchasing a house.

Problem Solving	
Respondents	Comments
H1	Selecting an appropriate house builder is one of my priorities before purchasing a house. I believe the house builder who has ability to solve the problem immediately will meet my expectations.
H2	The availability of a house builder who has capability to solve the problem immediately was extremely important when I bought a house because it provided safety for me.
H3	I believe service quality delivered by a great house builder will be able to fulfil my needs. Then, I will try to find a great house builder who has solution oriented before making a purchase decision. It means I absolutely agree that the ability of house builder to solve customer's problem can be described as one important factor when purchasing a house.
H4	An effective construction process is the main concern to minimise any potential issues or problems. This will help the builder reduce any potential maintenance costs.
H5	In order to provide the best house for my family, I was searching for a house builder who was able to provide a great solution to solve the problem. It will improve the level of customer's satisfaction.

H6	Purchasing a house is a complex decision for me because I'm expecting to buy an appropriate property which will fulfil my needs. Then, I believe the availability of a great house builder who has solution oriented in order fulfil my needs is an important factor when purchasing a house.
H7	The ability of a house builder to provide a proper solution to solve a problem will fulfil my needs and meet my expectations. Then, I was considering problem solving as one important factor when purchasing a house.
H8	I cannot afford to buy a house when the house builder unable to solve the problem quickly because their ability to provide a solution is one protection from the house builder. It was considered as one important factor when I bought a house.
H9	The builder should provide appropriate procedures to anticipate any potential problem. It was easier for builder to make early diagnosis and treatment.
H10	I believe service quality delivered by a house builder including their ability to solve the problem was able to fulfil my needs. Then, I found a house builder who has capability to solve the problem before making a purchase decision.
H11	I think the ability of a house builder to provide a solution in order to solve customer's problem was one important factor when I bought a house because it will give me a safety feelings.

H12	I was searching for a house builder who was capable to solve customer's problem when purchasing and building a house. It was important for me because it will make me get my dream house similar with my own requirements.
H13	It is important for the builder provide a housing warranty to cover critical structural defects in the property. It will guarantee our house quality and safety.
H14	The most appropriate house for me is a house which is able to fulfil my needs. I believe it can be done by a skilled house builder who has the competency to solve customer's problems and deliver customer's expectations.
H15	Actually, there are several factors needing to be evaluated when purchasing a house because I want to ensure that I do not want to waste my money. One important factor for me is ensuring the availability of a qualified house builder who has ability to provide solution to solve customer's problem.

Individual Treatment	
Respondents	Comments
H1	There were several factors when determining house purchase decision, including evaluating the service quality from the developer. The ability of a developer to provide individual treatment as port of their service will strengthen my intentions to buy a house because I'll feel safer purchasing a house from a trustworthy developer.
H2	Builders should select appropriate treatment for their customers to meet their expectations. These treatments are helping in achieving customer's goals.
H3	Based on my previous experience, a house builder who is able to provide individual treatment will accommodate all of my needs. It was important for me when deciding to buy a property.
H4	I agree that the ability of a house builder to provide individual treatment is an important factor when purchasing a house because I will get everything I need from my house.
H5	I was searching for a house builder who was able to provide individual treatment when purchasing and building a house. It was important for me because it will make me get my dream house similar with my own requirements.
H6	The availability of a house builder who has ability to provide individual treatment was strongly important when I bought a house because it provided safety for me.

H7	A more personal approach needs to be adopted to strengthen the relationship with the homeowner. The characteristics of homeowners need to be considered to improve personal trust.
H8	Based on the scale of priorities, the ability of house builder to provide individual treatment can be described as one important factor when purchasing a house because I will get what I want and that will satisfy me.
H9	I believe service quality delivered by a house builder including provide individual treatment was able to fulfil my needs. Then, I will try to find a house builder who has the capability to provide individual treatment before making a purchase decision.
H10	Builders should develop a comfortable environment for the customer. If the builder is able to listen to the customer carefully, it will provide a better image and increase the customer's trust.
H11	One important criteria when searching for a house builder is the ability to provide individual treatment. I believe that the house builder who is able to provide individual treatment will fulfil all requirements as required. It was the main reason that providing individual treatment was one important factor when purchasing a house.

H12	When I bought a house, I was assessing the performance of house builders. If a house builder is able to offer individual treatment, they will fulfil my needs. So, I agree that providing individual treatment can be described as one important factor when purchasing a house.
H13	I think the ability of a house builder to provide an individual treatment for the customer was one important factor when I bought a house because it will fulfil my needs.
H14	Providing the best house for my family was the main priority for me, because it will provide better living conditions. This can be achieved when finding a house builder who has the ability to provide individual treatment to fulfil my requirements.
H15	The most appropriate house for me is a house which is able to satisfy my needs. I believe it can be done by a great house builder who has strong intentions to do individual treatments in order to meet customer's expectations.

Care	
Respondents	Comments
H1	I have to buy a house which accommodates all of my families' needs. In order to provide those needs, I will find an appropriate house builder who cares to the customer and able to meet customer's expectation.
H2	The ability of a house builder to maintain relationship or care with customer will meet my expectations. Then, I was considering maintain relationship or care with customer as one important factor when purchasing a house.
H3	Based on the scale of priorities, the ability of a reliable house builder to make a clear guidance care to customer's requirements can be described as one important factor when purchasing a house because I will get what I want and that will satisfy me.
H4	I believe service quality delivered by a house builder including provide detailed attention to ensure all customer's requirement delivered precisely is important. Then, I will try to find a house builder who has capability to provide detailed attention in order to satisfy my needs.
H5	If the building quality is assured, any potential defects and damages can be reduced. Regular monitoring of builders will help to minimise maintenance costs for homeowner.

H6	Frequent contact from builder to customer will help to identify any issues or problems. Early problem detection is one of the most critical characteristics in determining accurate solutions.
H7	Appoint an appropriate house builder is one of my priorities before purchasing a house. I believe the house builder who has ability to provide clear guidance will meet my expectations.
H8	There are several factors needing to be evaluated when purchasing a house because I want to ensure that I will get what I need. One important factor for me is ensuring the availability of a qualified house builder who has ability to provide more attention to meet customer's expectations.
H9	Sufficient information about construction progress and building quality can improve transparency and trust with the customer. It will help me as a customer feel more secure.
H10	I agree that the availability of great attention or care from a house builder is one important factor when purchasing a house because it will fulfil my needs.
H11	I was exploring for a house builder who has ability to provide detailed attention or care to the customer when purchasing and building a house. It was important for me because it will meet my requirements of an ideal house.

H12	I am considering the ability of house builder to offer detailed attention or care towards customer's requirements are important because it will fulfilling all my expectations.
H13	When purchasing a house, I need more explanation from the house builder that the process of building a house similar to my requirements. So, I agree that care to the customer is defined as one important factor when purchasing a house.
H14	I was trying to find out the credible house builder who can accommodate my needs because I cannot afford to buy a house which is unable to fulfil my needs. Then, I agree that the availability of a credible house builder who cares to the customer is an important factor when purchasing a house.
H15	I think the ability of a house builder to provide detailed attention or care to the customer was one important factor when I bought a house because it will meet my expectations.

Anticipate Consumer's Needs	
Respondents	Comments
H1	Regular verification of consumer's needs and requirements are crucial to anticipate dynamic changes. It will help builders create an appropriate treatment for the homeowner.
H2	I think the ability of a house builder to anticipate consumer's needs was one important factor when I bought a house because it will meet my expectations.
H3	I believe the ability of the house builder to anticipate consumer's needs will be able to meet my expectations. Then, I will try to find a credible house builder who has ability to anticipate consumer's needs before making a purchase decision.
H4	The builder should have an accurate strategy to foresee any potential demand from the customer. Appropriate treatment will ensure customer satisfaction.
H5	The most suitable house for me is a house which is able to satisfy my needs. I believe it can be done by a credible house builder who has ability to anticipate customer's needs and deliver customer's expectations.
H6	The ability of a house builder to anticipate customer's needs will meet my expectations. Then, I reckon anticipate customer's needs as one important factor when purchasing a house.

H7	I agree that the ability of house builder to anticipate customer's needs is one important factor when purchasing a house because it will satisfy us.
H8	Giving the best house for my family was the most important consideration for me, because it will provide better living conditions. This can be achieved when finding a house builder who has the ability to anticipate customer's needs.
H9	The most important criteria when searching for a house builder is the ability to anticipate customer's needs. I believe that the house builder who is able to anticipate customer's needs will fulfil my requirements. It was the main reason that anticipating customer's needs was one important factor when purchasing a house.
H10	The availability of a house builder who has ability to anticipate customer's needs was extremely important when I bought a house because it will meet my expectations.
H11	Consumer's needs and requirements change over time. The builder should be able to anticipate the changes. However, flexibility and responsiveness are extremely needed by the builder to respond to dynamic situations.
H12	Appointing an appropriate house builder is one of my priorities before purchasing a house. I believe the house builder who has ability to anticipate customer's needs will meet my expectations.

H13	I was looking for a house builder who was able to anticipate customer's needs when purchasing and building a house. It was important for me because it will make me get my ideal house and meet my expectations.
H14	When I bought a house, I was evaluating the performance of house builders. If a house builder is able to anticipate customer's needs, they will satisfy my needs. So, I agree that anticipating customer's needs can be defined as one important factor when purchasing a house.
H15	Purchasing and building the best house for my family was the main priority for me, because it will satisfy my family. This can be achieved when appointing a house builder who has the ability to anticipate customer's needs.