Identity: its purpose and function within consumer residential property purchase decisions

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Identity: its purpose and function within consumer residential property purchase decisions

Melanie Thomas

A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

Southern Cross Business School

2013
Abstract

The purpose and function of identity in extant literature suggested that enquiry into self and functional congruity, within a high involvement consumer decision-making context such as the purchase of a house, would be significant and address evident research gaps. To date the emerging residential property literature has given limited attention to consumer decision-making processes. Furthermore, the self and functional congruity literature has focused on branded, low involvement and post purchase evaluation with no consideration of all four types of self-congruity or likely moderators such as knowledge and trust. Therefore the aim of this thesis was to:

Investigate relationships between functional and self-congruity within the context of consumer residential property purchase decisions.

This aim was investigated through addressing the following research questions:

RQ1 – What is the relationship between actual self-congruity, ideal self-congruity, actual social self-congruity and ideal social self-congruity and self-congruity during the residential property purchase decision?

RQ2 – What is the effect of self and functional congruity on residential property purchase intentions?

RQ3 - What is the effect of knowledge on functional and self-congruity during the residential property purchase decision-making process?
RQ4 - What is the effect of trust on functional and self-congruity during the residential property purchase decision-making process?

The research utilised quantitative primary data collection, surveying consumers currently in the market to purchase a new residential property. Using a two-step structural equation modelling approach the data was analysed using the AMOS software program. Subsequently, eleven hypotheses were accepted and three were rejected.

The results indicated that:

- Actual self-congruity, ideal self-congruity, actual social self-congruity and ideal social self-congruity all had positive relationships with self-congruity during residential property purchase decision-making.

- Self-congruity and functional congruity both had a direct relationship with intention to act, and self-congruity had an indirect relationship with intention to act through functional congruity.

- Ideal self-congruity had the strongest relationship with self-congruity. While the results indicated that knowledge had a relationship with functional congruity they also indicated that it had no significant relationship with self-congruity.

- Trust had a relationship with self-congruity however it had no significant relationship with functional congruity.
I certify that the work presented in this thesis is, to the best of my knowledge and belief, original, except as acknowledged in the text, and that the material has not been submitted, either in whole or in part, for a degree at this or any other university.

I acknowledge that I have read and understood the University's rules, requirements, procedures and policy relating to my higher degree research award and to my thesis. **I certify that I have complied** with the rules, requirements, procedures and policy of the University (as they may be from time to time).

Print Name:..............................................................................

Signature:...................................................................................

Date:............................................................................................
Acknowledgements

I would like to thank my whole family for always supporting me 100% in all my endeavors. In particular Bobby and my parents for their encouragement, assistance and humour which helped me get to this point.

Importantly, thanks to Professor Stephen Kelly my principle supervisor for being a fantastic supervisor and friend. Also, my thanks to the late Professor Alex Kouzmin for his role as my co-supervisor and Emeritus Professor Don Scott for being another fantastic co-supervisor with amazing turnaround and insight into my research project. My colleagues at Southern Cross University also need to be acknowledged in their role in getting me to this point, with their advice and suggestions throughout this PhD journey.
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Glossary


**Actual social self-congruity** - The match between the consumer’s product user image and their actual social-image (Johar & Sirgy, 1991).

**Functional Congruity** – The match between a consumer’s product image and their referent attributes (Sirgy, 1985; Sirgy & Johar, 1985; Varvolis & Sirgy, 1984).

**Housing** - buildings or other shelters in which people live, not limited only to houses but including all types of homes including apartments, units and duplexes (Australian Bureau of Statistics, 2010b).

**Housing careers** – the sequence of housing states defined in terms of tenure and the quality/price of the dwellings that households occupy while they go through parallel careers in the job market and through family life cycles (Clark, Deurloo, & Dieleman, 2003)

**Ideal self-congruity** - The match between the consumer’s product user image and their ideal self-image (Johar & Sirgy, 1991).

**Ideal social self-congruity** - The match between the consumer’s product user image and their ideal social-image (Johar & Sirgy, 1991).

**Intention to act** – intention to arrange an inspection of the property (Juster, 1966)
Knowledge – a consumer’s perceived knowledge of a specified product category as well as the confidence to make purchase decisions and give advice to others about the product class (Alba & Marmorstein, 1987).


Trust – One party’s belief that it’s needs will be fulfilled in the future by actions undertaken by the other party (E. Anderson & Weitz, 1989)
List of abbreviations used

ASC – Actual self-congruity

ASSC – Actual social self-congruity

FC – Functional congruity

ISC – Ideal self-congruity

ISSC – Ideal social self-congruity

ITA – Intention to act

SC – Self-congruity
Chapter 1 - Introduction

1.1 Introduction

This chapter provides background to the research, outlines gaps in the literature and presents the research aim, research questions and hypotheses. Justification for the research and the contributions to knowledge that the thesis will provide are then outlined, a summary of the methodology provided, the thesis structure outlined and key limitations and assumptions of the study presented.

1.2 Background to the research

According to a report by Flood and Baker (2010) the Australian housing market has experienced profound change. Thirty years ago housing markets in Australia were seen to be almost entirely driven by major life events including marriage, children and retirement (Beer, Gabriel, & Faulkner, 2006). There is now a growing awareness that Australian housing is increasingly shaped by other social, economic and labour market processes (Beer et al., 2006; Flood & Baker, 2010). On examination of extant literature on housing lifecycles in 2006, Beer et al. suggested three key drivers of change: demographic shifts, changes in the labour market and shifting consumption habits.

Demographic shifts relate predominately to delays in marriage and having children, which in the past were perceived as the main components driving housing careers
(Colic-Peisker & Johnson, 2012; Neutze & Kendig, 1991), therefore changes to these have had implications for housing decision-making. Shifts in Australia’s demography with respect to fertility and divorce rates, as well as life expectancy and levels of wellbeing in old age have caused additional changes to the way housing is consumed (Beer, Kearins, & Pieters, 2007; J. Fisher & Gervais, 2010; Flood & Baker, 2010). Changing attitudes around social roles, including the place of women within society, acceptance of alternative lifestyles and the visibility and presence of people with disabilities have expedited the changing nature of housing consumption (Beer et al., 2006). In a study by Colic-Peisker and Johnson (2012) it was suggested that Australia entered the 21st century with one of the highest divorce rates, one of the highest rates of residential mobility and the most ethnically diverse developed society.

In regards to changes in the labour market, Beer et al. (2006) referenced work Winter and Stone (1998) undertook in the late 1990s which suggested that changes in forms of employment – notably the growth of part time and casual work – have an increasing influence on key transitions through the labour market which therefore have implications for consumption. Australia entered the 21st century with one of the highest job mobility rates (Colic-Peisker & Johnson, 2012) and research from last year highlights the continuing effect of changes in the labour market on housing purchase (Clapham, Mackie, Orford, Buckley, & Thomas, 2012).

Giddens (1992) argued that these factors constitute an ‘opening out’ of social life in which individuals are more able to create their own lives by actively making choices. This is encapsulated by our fascination with ‘lifestyle’ - the desire to choose an individual identity, which leads to self-fulfilment. The more tradition loses its hold,
and the more daily life is reinvented, the more individuals are forced to negotiate lifestyle choices among a diversity of options (Giddens, 1992). The presence of a flexible labour market and the decline of solidifying institutions such as the traditional family is said to lead to an increasing ability of people to make their own lives by choosing their own identity and lifestyle (Clapham, 2006).

This brings us to Beer et al.’s (2006) final driver, shifting consumption patterns. Research by Beer and Faulker (2009) showed that consumption aspirations are an increasingly important component of individuals’ housing careers. The same report indicated that the single greatest motivation for changes in housing was consumption, and that households choose to move in order to occupy a better property or to live in a better location (Beer & Faulkner, 2009). Work by Clapham (Clapham, 2002, 2006; Clapham & Jacobs, 2004) suggested that increasingly individuals see the place in which they live as central to their sense of identity. Housing consumption decisions have subsequently become more important for many households (Beer et al., 2007). Attitudes to housing have changed for many people as housing has become a site of luxury consumption for some (Beer et al., 2007). The meaning attached to housing has also changed and for many households, housing is now part of the broader makeup of identity within Australian society (Beer et al., 2007).

Research by Beer et al. (2007) showed that housing is increasingly being used both as a location for, and object of, higher level consumption (Beer et al., 2007). While the consumption aspects of housing have always been significant (for example see N. C.
Saunders (1981) they have increasingly become more important drivers of housing lifecycles over the last few decades when compared with the past (Beer et al., 2007).

The importance of a search for identity through the construction of a lifestyle has important implications for housing (Clapham, 2006). Saunders (1990) argued that home ownership is an important source of this identity, but the impact on people’s perception of housing is wider than a focus on tenure alone.

Housing is considered one of the fundamental symbols of self (Becker, 1977; Cooper, 1974; Devlin, 1994; Nasar, 1988, 1989; Pratt, 1982) and housing choice like other physical possessions conveys meaning about the owner to others (Klaufus, 2000; Lindstrom, 1997; Nasar, 1989). As a result, dwellings can be seen as an expression of identity (Clapham, 2010; Hauge & Kolstad, 2007). Two reports even suggest that identity expression is one of the essential aspects of home (Despres, 1991; Moore, 2000). Individuals and households are increasingly viewing the place in which they live as central to their sense of identity (Clapham, 2010, 2011; Clapham et al., 2012). Because the home conveys meaning to others, homeowners are motivated to protect their personal identities by choosing homes that match or enhance their identity (Rochberg-Halton, 1984; Sadella, Verschure, & Burroughs, 1987). In addition, people are motivated to ensure that their housing choice conforms to the norms of their reference groups (Becker, 1977; Klaufus, 2000; Niedenthal & Cantor, 1985). Given the general acceptance of the changing nature of housing consumption and the increasing importance of identity during that consumption the researcher sees an important area of enquiry. A review of the literature indicated a lack of research investigating housing decision-making (refer to section 2.2.1.6).
Chapter 1: Introduction

The researcher proposes the use of self and functional congruity theories to investigate housing decision-making. These are presented and discussed in chapter two and a summary is provided here.

1.2.1 Literature on self-congruity

Self-congruity theory proposed by Sirgy (1981) indicated that consumers attempt to preserve or enhance their self-image by selecting products with ‘images’ they believe are congruent with their own self-concept and avoid products that are not (Claiborne & Sirgy, 1990; Johar & Sirgy, 1991; N. D. Wright, Claiborne, & Sirgy, 1992). Self-congruity theory indicates that people use possessions as both a means of self-expression and a way of judging the people and situations they face. By choosing products with particular image associations individuals can communicate to others the type of person they are or want to be seen as, enhancing their self-image (Parker, 2009). Research has shown that individuals purchase products and services to create, foster and develop their identity (Elliot & Wattanasuwan, 1998; Piacentini & Mailer, 2004).

Self-concept is multidimensional and there are a variety of models that reflect the kinds of self-concept. These include actual self-image, ideal self-image, actual social self-image and ideal social self-image (Noble & Walker, 1997; Sirgy, 1982; Sirgy et al., 1997). Actual self-image is how consumers see themselves (Sirgy, Greskowiak, & Su, 2005). Ideal self-image is how consumers would like to see themselves (Sirgy et al., 2005). Actual social self-image is how consumers believe significant others, such as friends, relatives, associates and co-workers, see them (Noble & Walker, 1997). Ideal
social self-image is how consumers would like to be seen by significant others (Sirgy et al., 2005).

Just as self-concept is multidimensional, so too is the process of self-congruity. These processes are defined by four models; specifically:

a) actual self-congruity model (ASC),

b) ideal self-congruity model (ISC),

c) social self-congruity model (SSC) and

d) ideal social self-congruity model (ISSC).

Figure 1.2-1 displays the self-congruity model.
1.2.1.1 Actual self-congruity

The actual self-congruity model suggests that there is a match between the consumer's product-user image and their actual self-image and that this influences consumer behaviour (Johar & Sirgy, 1991). Rosenberg (1979) defined this tendency to act in ways consistent with one's personal identity as 'self-consistency motivation'.

1.2.1.2 Ideal self-congruity

The ideal self-congruity model suggests that the match between the consumer's product user image and their ideal self-image influences consumer behaviour (Johar & Sirgy, 1991). Sirgy (1987) indicated that the ideal self-motivates behaviour through the 'need for self-esteem'.

1.2.1.3 Actual social self-congruity

The actual social self-congruity model suggests that there is a match between the consumer's product user image and their actual social-image and that this influences consumer behaviour (Johar & Sirgy, 1991). The actual social self-image affects consumers' behaviour through the 'social consistency motive', (Johar & Sirgy, 1991; Sirgy et al., 2005; N. D. Wright et al., 1992).

1.2.1.4 Ideal social self-congruity

The ideal social self-congruity model suggests that there is a match between the consumer's product user image and their ideal social-image and that this influences consumer behaviour (Johar & Sirgy, 1991). According to Crowne and Mar lone (1964) the ideal-social self-image affects consumers' behaviour through the 'social approval
motivation, people are motivated to do things that will cause others to think highly of them (Johar & Sirgy, 1991; Sirgy et al., 2005; N. D. Wright et al., 1992).

1.2.2 Literature on functional congruity

Functional congruity theory proposes that consumer behaviour is directed at matching ‘product image’ with the consumer’s referent attributes (Sirgy, 1985; Sirgy & Johar, 1985; Varvolis & Sirgy, 1984). Product image refers to the functional attributes associated with a given product or service (Sirgy, 1983). Referent attributes are the consumer’s needs or ideal features and are used to evaluate the actual performance of the product (Johar & Sirgy, 1991). The greater the congruence between the consumer’s utilitarian beliefs about the product and their referent beliefs the greater the likelihood of a positive evaluation. The cognitive process that describes the functional congruity model is the expectancy value model. This model indicates that a disposition towards a course of action is a function of the desirability of the perceived consequences that might occur (Johar & Sirgy, 1991). Therefore the greater the congruence between the consumer’s beliefs about the product’s attributes and the consumer’s referent attributes the greater the likelihood of purchase. Put simply this means that consumers decide on whether to obtain products by comparing the functional attributes of a product with their ideal or desired product specifications (Kressman et al., 2006).

While there have been some recent attempts to investigate functional and self-congruity simultaneously there is still a number of gaps in the empirical testing, namely a lack of empirical research into self and functional congruity at different
stages of decision-making (rather than purchase and post-purchase), a lack of empirical research investigating the influence of self and functional congruity during high involvement purchases and a lack of empirical research investigating property purchase using self and functional congruity (see chapter 2 for full literature review on these research gaps).

1.2.3 Literature on information processing

During the literature review the influence of knowledge and trust on the decision-making process was raised. The full discussion can be found in chapter 2 and a summary now follows.

1.2.3.1 Literature on knowledge

It is argued that experienced buyers may evaluate a product based on utilitarian criteria more than symbolic criteria (Sirgy et al., 2005). This is because experienced buyers have the necessary knowledge and background enabling them to evaluate utilitarian attributes (Sirgy et al., 2005). Prior knowledge encourages information search by making it easier to process new information (Brucks, 1985). As the cognitive cost of using and obtaining information is reduced and the potential benefits of obtaining it increased, increased search is initiated (Brucks, 1985). Those without the necessary knowledge will be more likely to use a simple decision heuristic and evaluate the product based on symbolic attributes such as the product user image (Sirgy et al., 2005). Consumer's prior knowledge therefore plays an important role in determining the type of evaluation process undertaken (Sujan, 1985).
1.2.3.2 Literature on trust

Consumer behaviour is a complex process that involves risk to the consumer and consumers develop ways of reducing the vulnerability associated with purchases (Taylor, 1974). Trust, a willingness to rely on an exchange partner, can reduce the feelings of vulnerability associated with consumer behaviour (Gilliland & Bello, 2002; Moorman, Deshpande, & Zaltman, 1993). Trust has a strong impact on purchase decisions (Kim, Ferrin, & Rao, 2008; Sung & Campbell, 2007). A trusted partner is seen as possessing credibility and benevolence; they can be relied upon and are genuinely interested in the other’s welfare (Doney & Cannon, 1997). Therefore the consumer experiences a feeling of less risk and it is hence suggested that the consumer will be more likely to use a simple decision heuristic and evaluate the product based on symbolic attributes such as the product user image. If however the consumer does not assess a partner as trusting they expect increased risk and it is proposed that as the cost of not obtaining additional information is increased they are more likely to evaluate the utilitarian attributes. Trust is further discussed in chapter 3 with particular dialog on how trust operates within the context of residential property purchase and who the trust relationship is between. It will be shown that in the context of this research, trust will be measured between the consumer (potential purchaser) and the advertiser (the real estate agent).

1.2.4 The model

Figure 1.2-2 presents the conceptual model, developed from the review of extant literature and represents the model that is tested in this thesis.
1.3 Research aim and hypotheses

This section provides a summary of the research aim, the research questions and the associated hypotheses derived from the identification of gaps in the literature and the development of the conceptual model.

1.3.1 Research aim

The aim of this research was:

To investigate relationships between functional and self-congruity within the context of consumer residential property purchase decisions.
1.3.2 Research questions

In order to address the research aim, and therefore the gaps in the literature, the following research questions were developed:

RQ1 – What is the relationship between ASC, ISC, ASSC and ISSC and self-congruity (SC) during the residential property purchase decision?

RQ2 – What is the effect of self and functional congruity on residential property purchase intentions?

RQ3 - What is the effect of knowledge on functional and self-congruity during the residential property purchase decision-making process?

RQ4 - What is the effect of trust on functional and self-congruity during the residential property purchase decision-making process?

1.3.3 Research hypotheses

The following research hypotheses were developed to address the four research questions.

H1A - Actual self-congruity has a relationship with self-congruity

H1B - Ideal self-congruity has a relationship with self-congruity

H1C - Actual social self-congruity has a relationship with self-congruity

H1D - Ideal social self-congruity has a relationship with self-congruity
H1E – Ideal self-congruity (ISC) has a stronger relationship with self-congruity than actual self-congruity (ASC)

H1F - Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than actual social self-congruity (ASSC)

H1G – Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than ideal self-congruity (ISC)

H2A - Self-congruity has a relationship with intention to act

H2B - Functional congruity has a relationship with intention to act

H3A – Knowledge has a relationship with FC

H3B – Knowledge has a relationship with SC

H4A - Trust has a relationship with FC

H4B - Trust has a relationship with SC

1.4 Justification for the research

The previous section introduced the research questions and associated hypotheses that emerged from the review of literature. The purpose of the following sections is to demonstrate the contributions being made to knowledge from this study. This will be done in two parts, the academic and the applied significance of the research.
1.4.1 Academic significance of the research problem

This research will provide theoretical contributions covering seven gaps in the literature. A summary of these research gaps is now provided and these are discussed in detail in chapter 2.

1. There is limited empirical research investigating the relationship of ASC, ISC, ASSC and ASSC with SC and consumer behaviour. As will be outlined in the literature review, conceptual works discussing the role of ASC, ISC, ISSC and ASSC are numerous however empirical works are limited. This research by investigating all four types of SC concurrently will provide an expansion of the literature on SC. Research question 1 addresses this gap.

2. There is limited empirical research on integrating self-congruity and functional congruity. Despite the array of conceptual works, the number of empirical studies on the integrated self and functional congruity model is limited. This research extends those that have been undertaken, expanding the self and functional congruity model to include intention to act, knowledge, trust and specifically property purchase. Research question 2 addresses this gap in knowledge.

3. There is limited empirical research on the relationship between knowledge and self and functional congruity’s relationship with consumer behaviour. The inclusion of knowledge into the model provides a contribution to our understanding of knowledge’s relationship with self and functional congruity,
of which there is currently limited empirical results. This gap will be addressed through research question 3.

4. There is a lack of empirical research on the relationship between trust and self and functional congruity’s relationship with consumer behaviour. The inclusion of trust into the model provides an extension of our knowledge of the relationship between trust and self and functional congruity, in an area where there is a lack of empirical research. This gap will be addressed by research question 4.

5. There is a lack of empirical research using intentions during alternative stages of the decision-making process. This research will investigate the intention to act after consumers assess a product in their evoked set, therefore providing new knowledge on self and functional congruity as testing these theories at this stage of decision-making was not found to have occurred in past studies. The results from all four research questions will provide an extension of knowledge for this gap.

6. There is a lack of empirical research on property purchase decision-making. As this research was conducted on property purchase decision-making it provides a unique area of contribution by using consumer behaviour models in an area that in the past has had very little application of marketing theories. The results from all four research questions will provide us with knowledge of property decision-making.

7. There is a lack of empirical research on self and functional congruity during the decision-making process of high involvement purchases. Researchers have
shown that product involvement significantly affects consumer decision-making (Suh & Yi, 2006; Warrington & Shim, 2000). In high involvement
decisions individuals usually dedicate more attention and effort to the
decision problem (Xue, 2008). Previous research on self and functional
congruity theories has not traditionally been investigated from a high
involvement perspective, therefore a gap in the literature exists. The results
from all four research questions will address this research gap.

A summary table of the research gaps and the research questions that address each
one is presented in section 3.3.

1.4.2 Practical significance of the research problem

As discussed in the background to this research, the housing market is experiencing
profound change (Flood & Baker, 2010). Research by Beer et al. (2007) showed that
housing is increasingly being used both as a location for, and object of, higher level
consumption (Beer et al., 2007). While the consumption aspects of housing have
always been significant (see, for example, (N. C. Saunders, 1981) they have become a
more important driver of housing lifecycles over the last decades when compared
with the past (Beer et al., 2007).

The importance of a search for identity through the construction of a lifestyle has
important implications for housing (Clapham, 2006). Saunders (1990) argued that
home ownership is an important source of this identity, but the impact on people's
perception of housing is wider than a focus on tenure alone. 'Knowing why and how
people consume products helps marketers understand how to improve existing
products, what types of products are needed in the market place and how to attract consumers to buy their products (Blackwell, D’Souza, Taghian, Miniard, & Engel, 2006, p. 8). Therefore the results of this research provide those associated with the design, building and selling of residential property useful information in a number of areas.

The building and construction industry could use this information to design and build houses that encapsulate both functional and symbolic attributes of importance to property purchasers. By doing so a premium price could be sought from products that meet all of a consumer’s needs rather than only one component.

Real estate agencies could potentially use this information to better understand their customers and provide customer service to a higher standard by understanding completely what the consumers want rather than focusing on only one side of the story (e.g. functional). By understanding that amount of knowledge effects consumer decision-making process, agents can tweak their sales pitches to present those attributes that are most important to the consumers.

Consumers who are looking to renovate their property for future sale can use this information to better understand what the future buyers will be looking for when purchasing. In the same way investors who are looking for capital gains growth could think about the future buyer of a property when making their own decision on which property to purchase. By thinking about the potential residential buyers’ decision-making process the investor can purchase property that will be evaluated positively by future consumers and therefore the investor can gain a price premium.
Lastly those consumers who are struggling to find the right property and cannot put into words what it is that is not right about a property can use this information to better understand themselves as consumers. By understanding themselves as consumers, they can make better decisions and buy more wisely (Blackwell et al., 2006).

1.5 Methodology

The methodology undertaken in this study consisted quantitative data collected via an online survey. Structural equation modelling was the measurement approach used to conduct the study and the application of structural equation modelling was done with the statistical programs SPSS 20 and AMOS 20. This measurement approach is outlined in section 4.3.3 and consists of six stages:

1.5.1 Stage 1: Defining individual constructs

During this stage each individual construct is defined and operationalised. Each of the scales used in this study were defined and operationalised from previous research studies.

1.5.2 Stage 2: Developing the measurement models

Having developed the individual constructs each latent construct to be included in the model is identified and the measured indicator variables are assigned to latent constructs.
1.5.3  **Stage 3: Designing a study to produce empirical results**

This stage ensures that empirical results will be a result of the study. To do this, the impact and remedies for missing data are discussed and the impact of sample size is taken into consideration. This section also discusses the computer programs used to complete the analysis.

1.5.4  **Stage 4: Assessing measurement models validities**

This stage assesses the measurement model validities. This is done by first establishing acceptable levels of goodness-of-fit indices for the measurement model and the testing for construct validity.

1.5.5  **Stage 5: Specifying the structural model**

Stage 5 involves specifying the structural model by assigning relationship from one construct to another based on the proposed theoretical model (Hair, Black, Babin, & Anderson, 2010). In this stage the structural model is specified based on the theory discussed in chapter 2 and 3.

1.5.6  **Stage 6: Assessing the fit of the overall structural model**

The final stage involves assessing the fit of the overall structural model and the corresponding hypothesized theoretical relationships.

Stage 1 to 3 are outlined in chapter 4 and stage 4 to 6 will be conducted in chapter 5. The following section outlines the complete thesis.
1.6  Findings

This research addressed the aim of the study and a number of findings were developed. The findings are discussed in detail in chapter 6 and a summary is provided here in relation to each research question.

1.6.1.1 Summary of research question 1 findings

Hypotheses H1A, H1B, H1C, H1D, H1E, H1F and H1G addressed research question 1. In summary research question 1 found:

- Actual self-congruity has a relationship with self-congruity during residential property decision-making.
- Actual self-congruity has a relationship with self-congruity during the evaluation of alternatives
- Ideal self-congruity has a relationship with self-congruity during residential property decision-making
- Ideal self-congruity has a relationship with self-congruity during the evaluation of alternatives
- Actual social self-congruity has a relationship with self-congruity during residential property decision-making
- Actual social self-congruity has a relationship with self-congruity during the evaluation of alternatives
- Ideal social self-congruity has a relationship with self-congruity during residential property decision-making
• Ideal social self-congruity has a relationship with self-congruity during the evaluation of alternatives

• Ideal self-congruity has a stronger relationship with self-congruity than actual self-congruity during residential property decision-making

• Ideal social self-congruity has a stronger relationship with self-congruity than actual social self-congruity during residential property decision-making

• Ideal self-congruity and ideal social self-congruity have equally the strongest relationships with self-congruity during residential property decision-making

1.6.1.2 Summary of research question 2 findings

Hypotheses H2A and H2B addressed research question 2 and found that:

• Self-congruity has a direct and indirect relationship with intention to act during residential property decision-making

• Self-congruity has a direct and indirect relationship with intention to act during the evaluation of alternatives

• Functional congruity has a relationship with intention to act during residential property decision-making

• Functional congruity has a relationship with intention to act during the evaluation of alternatives

1.6.1.3 Summary of research question 3 findings

The results from hypotheses H3A and H3B addressed research question 3. In summary this research question has found:
• Knowledge has a relationship with functional congruity during residential property decision-making

• Knowledge has a relationship with functional congruity during high involvement purchases

• Knowledge has a relationship with functional congruity during the evaluation of alternatives

• Knowledge does not have a relationship with self-congruity during residential property decision-making

• Knowledge does not have a relationship with self-congruity during high involvement purchases

• Knowledge does not have a relationship with self-congruity during the evaluation of alternatives

1.6.1.4 Summary of research question 4 findings

The results of hypotheses H4A and H4B addressed research question 4. In summary this research question found that:

• Trust has a relationship with self-congruity during residential property decision-making

• Trust has a relationship with self-congruity during high involvement purchases

• Trust has a relationship with self-congruity during the evaluation of alternatives
• Trust does not have a relationship with functional congruity during residential property decision-making

• Trust does not have a relationship with functional congruity during high involvement purchases

• Trust does not have a relationship with functional congruity during the evaluation of alternatives

1.7 Delimitations and key assumptions

There are a number of delimitations of this research, which should be recognised and taken into account when interpreting these findings. These are listed below.

1. The cross-sectional research design meant that the data collected was from one point in time. Due to the nature of the decision-making process and the particular stage of consumer decision-making studies in this research this is a boundary to the research rather than a bias to the study. Time is assumed to have a minimal effect on the research but must be acknowledged.

2. The choice of construct indicators was made according to an examination of consumer behaviour literature and the scales haven't previously been used in the context of property research. The multi-item indicators used in the research were validated using accepted SEM procedures (see Chapter 5) to reduce the impact, however it is possible that there may be other influential elements that have not been identified.
3. Structural equation modelling only allows disconfirmation of a model and
   does not provide proof of causality nor superiority of the tested model over
   other possible non-nested alternative models (J. C. Anderson & Gerbing,
   1988). Therefore while this research shows that the research model is
   theoretically sound and of satisfactory fit, the researcher acknowledges that
   other models may provide an equal or better fit to the data.

4. The researcher acknowledges that there are different aspects of knowledge.
   The results of this study and the conclusions made must therefore be taken
   within the bounds of the definition and operationalisation of the knowledge
   construct used in this study.

5. Similarly the researcher acknowledges that there are different aspects of trust.
   Additionally trust develops as consumers pass through the decision making
   process. Therefore the results and conclusions made must be taken within the
   bounds of the definition and operationalization of the trust construct used in
   this study.

1.8 Outline of the thesis

This thesis is comprised of 7 chapters. This first chapter has provided an introduction
   to and overview of the research. Chapter 2 will present the literature review that was
   undertaken on self and functional congruity. Chapter 3 will discuss the literature on
   information processing and the development of the research questions and
   hypotheses. Chapter 4 outlines the research model – the framework and design of the
   study will be shown, the defining of the individual constructs and the development
and specification of the measurement models will be shown before a discussion on
how the study was designed to conduct empirical tests. Chapter 5 will outline the
data cleaning and Chapter 6 will present the data analysis and results. This includes
the assessment of the measurement model’s validities, assessing the measurement
model fit and testing the hypotheses. The final chapter will discuss the results and
provide a conclusion to the research. This thesis research is multidisciplinary and
where necessary information will be repeated in order to enhance its readability
when dealing with different disciplinary aspects.

1.9 Summary

This chapter provided an introduction to this thesis. A background to the research
project was provided along with the research aim and associated hypotheses. A
summary of the justifications for the research was given and the outline of the thesis
was presented. Lastly the delimitations and key assumptions of the study were
outlined. The following chapter will now present the literature review undertaken at
the commencement of this project.
Chapter 2 – Consumer behaviour and congruity literature

2.1 Introduction

This chapter provides a review of the literature relevant to addressing the research aim; to investigate relationships between functional and self-congruity within the context of consumer residential property purchase decisions. The review begins by exploring consumer decision-making. This leads the review into the area of Sirgy’s (1981) self and functional congruity theories in order to understand both symbolic and functional decision-making. Housing is then explored and the appropriateness of self and functional congruity theories as a theoretical framework for understanding consumer housing purchase intentions is discussed.

2.2 Consumer behaviour

Consumer behaviour is defined by Engel, Blackwell, and Miniard (1995) as those actions directly involved in obtaining, consuming, and disposing of products and services, including the decision-making processes that precede and follow these actions. This definition is similar to others in the literature. For example Belch and Belch (2004, p. 105) defined consumer behaviour as ‘...the process and activities people engage in when searching for, selecting, purchasing, using, evaluating, and disposing of products and services so as to satisfy their needs and desires.’ This
definition extends that of Engel, Blackwell and Miniard by including ‘why’ to the definition. The definition by Schiffman, O’Cass, Paladino, D’Alessandro, and Bednall (2011, p. 3) is very similar to Belch and Belch’s, ‘...the behaviour that consumers display in searching for, purchasing, using, evaluating and disposing of the products and services that they expect will satisfy their needs’. Tu (2011, p. 9838), who undertook a study of influential authors and works in consumer behaviour research, provides the simple definition ‘consumer behaviour is the study of when, why, how and where people do or do not buy products’.

According to Schiffman, Bednall, O’Cass, Paladino, and Kanuk (2005) the study of consumer behaviour as a separate marketing discipline began when marketers began to question economic theory as the most successful predictor of consumers and consumer behaviour. Schiffman et al. (2005) state that consumer behaviour is interdisciplinary and embraces numerous concepts and models derived from diverse areas such as psychology, sociology, social psychology, cultural anthropology and economics. Thus according to Schiffman et al. (2005), despite the relatively new nature of the consumer behaviour discipline it has foundations in scientific thought and evidence that has emerged from years of research by academics specialising in the study of human behaviour.

The decision-making process and the behaviour of individuals and groups as consumers has long been questioned, studied and theorised. For example Gossen’s (1854) economic approach to consumer behaviour assumed that an individual attempts to maximise utility (or enjoyment/satisfaction). Another seminal work is Veblen’s (1899) paper on conspicuous consumption. Modern consumer theory
investigates experiences, motivations and reasons why people buy things and why
different groups of consumers buy different things (Gram-Hanssen & Bech-Danielsen,
2004). Tu (2011) undertook factor analysis on articles published between 1999 and
2008 and came up with four factors that the top 30 lead authors had addressed.

1. The first factor ‘identified interactive, home shopping, electronic marketplace
   and hypermedia computer mediated environments’ as the focus of research.
   Tu (2011) referenced research by Alba et al. (1997); Donovan, Rossiter,
   Marcooly, and Nesdale (1994); Hoffman and Novak (1996); Novak, Hoffman,
   and Yung (2000) for this factor.

2. The second factor was identified as research pertaining to ‘consumption,
   brand personality and consumption buying’, here Tu (2011) referenced
   research by Richins and Dawson (1992); Fournier (1998); Holbrook and
   Hirschman (1982); O’Guinn and Faber (1989); Hoch and Loewenstein (1991);
   Raju (1980).

3. Factor three was identified as ‘prospect theory, social judgement and
   behaviour, choice and subliminal-influences’. Tu (2011) referenced Huber,
   Payne and Puto (1982); Kahneman and Tversky (1979); Simonson and

4. The final factor Tu (2011) identified as ‘SEM, technology acceptance model,
   service quality, consumer ethnocentrism, satisfaction and market research’.
   Tu (2011) referenced Bagozzi and Yi (1988); Garbarino and Johnson (1999);
   F. D. Davis, Bagozzi, and Warshaw (1989); Donovan et al. (1994); Shimp and
   Sharma (1987), and Baron and Kenny (1986) for factor four.
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According to Du Plessis, Rousseau, and Blem (1991), consumer decision-making reflects the behaviour patterns of consumers, that precede, determine and follow the decision-making process for the acquisition of need satisfying products, ideas or service. Radder, Li, and Pietersen (2006) state that consumer decision-making is a complex process that significantly influences shopping behaviour. This is because consumer behaviour involves risk, since according to Bauer (1960), any action that a consumer does or does not take will result in consequences which he or she views with some amount of uncertainty. Consumers develop ways of reducing risk by searching for information that enables them to act with a degree of confidence (Bauer, 1960). Consumer decision-making models depict how consumers go about this information search and make purchase decisions.

2.2.1 Consumer decision-making

According to a meta analysis undertaken by Erasmus, Boshoff, and Rousseau (2001), the discipline of consumer decision-making developed a number of models in the 1960's and 1970's but by 1978 the popularity of such model building had decreased. Thus, Erasmus et al. (2001) indicate that despite the theoretical advances in understanding consumer decision-making, the consumer decision-making models that are still used today reflect the consumer decision process in terms of the rational approach understood by the limited theoretical development of the time. Sciffman et al. (2008) suggest that in a marketing context this implies that consumers undertake the decision-making process based totally on objective functional attributes and criteria. Those models that do take into consideration ‘emotional motives’ imply the
decision-making process is based on personal and subjective criteria. The assumption underlying this distinction is that subjective or emotional criteria do not maximise utility or satisfaction (Sciffman et al., 2008). However the assessment of satisfaction is a very personal and unique process based on the individual's own need structure and what may seem as irrational to an outside observer may be perfectly rational in the context of the consumer's own psychological field (Sciffman et al., 2008).

Ratchford and Vaughn (1989) raised concern that in the design of traditional consumer decision-making models the role and importance of external factors are overemphasised and emotional aspects were neglected or minimised.

It is therefore suggested that consumers, while having a bounded rational orientation, will utilise both functional and symbolic attributes in the decision-making process. Bettman (1993) suggests that to understand consumer decision-making behaviour we must not only focus on what products do but also what they mean to consumers.

Erasmus et al. (2001) undertook a literature review of consumer decision-making models and suggested that rather than generalising the complex decision-making process, more context and product specific research should be undertaken to provide new insights and contributions to consumer decision-making theory.

Researchers have described two contrasting streams of consumer decision-making, the rational, information processing problem solver and the experiential, hedonic decision maker (Lofman, 1991). It is important to note that it has been suggested that these two ‘types’ of decision-making are not necessarily in opposition. Exploratory
research by Lofman (1991) indicated that with hedonic consumption the consumer links the product with both functional and psychological needs. They suggest that this is done through structured thought and logical reasoning (Lofman, 1991).

Edwards’ early utility maximisation theory indicates that the goal of human action is to seek pleasure and avoid pain (1954). Edwards (1954) therefore suggests the goal of action is to seek the maximum utility. Edwards (1954) goes on to indicate that this is the basic essence of utility theory of choice. Bettman (1993) stated that the two major goals of decision-making are to make a good decision and to conserve cognitive effort. The following consumer decision-making processes are founded in this premise.

2.2.1.1 Consumer decision-making process

‘Consumer decision-making models provide broad, organised structures that reflect the basic process of consumer decision-making from certain view points and within certain context’ (Walters, 1978, p. 42). The consumer decision-making process is a series of sequential and repetitive psychological and psychical activities, ranging from problem recognition to post purchase behaviour (Brijball, 2003). Consumers undertake purchases in response to a recognised need (P. Solomon, 2004). This multi staged and complex model, with several factors triggering problem recognition before a sequence of actions are performed to reach a satisfying outcome, is supported in many works (Cox, Granbois, & Summers, 1983; Erasmus et al., 2001; Harrel, 1990.).
It is agreed that consumers proceed through a number of stages in the decision making process, however there is little consensus on the number of stages (Lee & Marshall, 1998). Studies have indicated three (e.g. H. L. Davis and Rigaux (1974)), four (e.g. Moschis and Mitchell (1986)), five (e.g. Howard and Sheth (1969)) and even nine stages (e.g. Woodside and Motes (1979)).

The ‘Consumer Decision Process’ model (refer to Blackwell, Miniard, and Engel (2001)) is the most often cited multistage ‘grand’ consumer decision-making model and for this reason was chosen. The ‘Consumer Decision Process’ model was first published in 1986 and has been regularly updated since. Consumer decision-making is seen as a problem-solving task involving five steps; need recognition, search, evaluation, purchase and post purchase evaluation. Figure 2.2-1 shows these five steps graphically. An alternative well known consumer decision-making model is the Howard and Sheth model (1969), which is very similar to the ‘Consumer Decision Process’ model however it is used primarily as a frame of reference for hypotheses rather than as predictors of specific behaviour (refer to Dubois (2000)).
Despite the lack of consensus of the specific number of stages the majority of models indicate an evaluation of alternatives stage. Ultimately the likelihood of a product being purchased depends on whether it is evaluated favourably by consumers (Blackwell et al., 2006). In deciding which products and brands to buy, consumers will rely heavily on their evaluations of the alternatives available for choice (Blackwell et al., 2006). Alternatives disliked by the consumer are quickly rejected, if not ignored completely (Blackwell et al., 2006). Whereas liked alternatives may be considered and compared with the ones receiving the most positive evaluation being chosen (Blackwell et al., 2006). Figure 2.2-2 shows this graphically.

Figure 2.2-1 - Consumer decision-making process obtained from (Quester et al., 2007)

Note: Dotted lines represent the potential for a step back.
Due to the global/holistic measurement approach used in the thesis, only a succinct discussion of the rules is provided (see section 4.4.2.6). The following discussion explores two ways in which consumers evaluate products, by symbolic and utilitarian aspects.

2.2.1.2 Symbolic consumption

The importance of examining symbolic consumption can be emphasised through Belk's (1988, p. 139) opening sentence, in his seminal paper ‘Possessions and the Extended Self’, ‘...we cannot hope to understand consumer behaviour without first gaining some understanding of the meanings that consumers attach to possessions’. James laid the foundations for this modern conception of self in the 1980 book ‘The
Principles of Psychology'. James (1890) postulated that possessions are viewed as part of the self. Prelinger (1959) tested and provided empirical support for James’ proposed link between possessions and self. Belk (1988) provided additional evidence for a relationship between possessions and the self through theoretical foundations sourced from literature in a broad range of disciplines including psychology, consumer research, psychoanalytic theory, material and popular culture studies, feminist studies, history, medicine, anthropology and sociology. Utilising this theoretical foundation, Belk (1988) provided evidence based on a number of perspectives. These perspectives included self-perception research, loss of possessions research and anthropologist studies and will be discussed in the following paragraphs.

Self-perception research suggests that objects over which we are able to exercise power become viewed as part of ‘self’ (McClelland, 1951). The greater the control we possess the closer the object becomes aligned to one’s ‘self’ (McClelland, 1951). This principle led McClelland to propose a categorical hierarchy of the most to least closely self-aligned objects. The hierarchy was (1) me, my ‘free will’, (2) my body, my conscience, (3) my belongings, (4) my friends, and (5) strangers, (6) physical universe (McClelland, 1951). Research by Prelinger (1959) supported the ordering of objects in a ‘power’ hierarchy.

Belk (1988) utilised the literature on loss of possessions to provide evidence that possession are viewed as part of self. Belk (1988) showed that research indicated that the unintentional loss of possessions brings about a diminished sense of self. This loss of self as a result of loss of possession indicated that possessions were part
of self before the loss. Specific evidence from McLeod (1984) found those who lost possessions went through a process of grief similar to that of losing a loved one; moving from denial to anger, to depression, and finally to acceptance. Belk (1988, p. 143) stated that ‘...what is mourned here is the loss of self’. ‘Material property is, so to speak, an extension of the ego, and an interference with our property, for this reason, felt to be a violation of the person’ (Simmel, 1950, p. 322).

Lastly Belk argued that the fact that anthropologists assume that possessions tells us about their owners, is itself evidence that we see possessions as symbols of self (Belk, 1988).

In 1959 Levy (p. 118) published a seminal paper with the suggestion that ‘...people buy things not only for what they can do, but also for what they mean’ and that ‘...the consumer is not as functionally oriented as he used to be’. Since Levy’s paper there has been much discussion, development and testing of this statement in the consumer behaviour and decision-making streams of research. Building on the research between the self and possession research has shown that possession can be used to satisfy psychological needs (Escalas & Bettman, 2005). For example Kleine, Kleine III, and Allen (1995), found that individuals use different attachment types to narrate different facets of identity. Other research has shown that possessions can serve a social purpose of reflecting ties to one’s family, community and cultural groups (Muniz Jr & O'Guinn, 2001).

Wattansuwan stated that we do not consume products, activities or beliefs only to satisfy our functional needs but also to carry out self-creation (2005). Clammer
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(1992, p. 223) suggested that “...shopping is not merely the acquisition of things it's the buying of identity”. There is satisfactory evidence that possessions are viewed as part of the self and that because of this the symbolic meaning of products and services influences buyer's decision-making process. The extent and way this is done has been researched in a variety of ways.

For example Belk, Bahn and Mayer (1982) undertook research looking at the encoding and decoding of consumption meaning. In particular they compared gender, age and social class to assess developmental trends in encoding and decoding consumption meaning. Recent research by Gao, Wheeler and Shiv (2009) looked at the 'shaken self' and provided empirical research from three studies that showed that a temporary doubt in a consumer's self view can increase their propensity to choose self-view-bolstering products. Ball and Tasaki (1992) undertook research into attachment and identity and found that objects that are typically closely associated with identity had higher mean attachment levels, these included homes, cars, hobby items and personal jewellery. Research by Piacentini and Mailer (2004) looked at how teenagers use the symbolic properties of clothing and brands. Piacentini and Mailer's (2004) research into young peoples clothing choices found that individuals use products and brands as materials with which to cultivate and preserve their identities. Research suggests that consumer goods are capable of serving consumers in this way because of the symbolic meaning that is embedded in them (M. R. Solomon, 1983).

The impact of the symbolic meaning of a product hinges on the congruence between the product symbolism and the consumers' self-image (Zinkhan & Hong, 1991). The
notion that people engage in behaviour that maintains or enhances their self-concept is based on Roger's (1951) self-theory. Self-theory posits that an individual's behaviours will be directed towards the protection and enhancement of his or her self-concept (Kwak & Kang, 2009). Products, as symbols, will only be used if they reinforce or enhance the consumer's self-concept (Dobni & Zinkhan, 1990). Therefore the symbolic purchasing behaviour should be studied within the context of the buyer's self-concept. Thompson (1995) described the self-concept as a 'symbolic project' that is actively constructed and preserved through symbolic consumption behaviour. Self-congruity theory indicates that people use possessions as both a means of self-expression and a way of judging the people and situations they face. Research has shown that individuals purchase products and services to create, foster and develop their identity (Elliot & Wattanasuwan, 1998; Piacentini & Mailer, 2004).

2.2.1.3 Self-congruity theory

Self-congruity theory proposes that consumer behaviour is directed at matching the buyer’s self-concept with the product user image (Sirgy, 1982; Sirgy et al., 1997). The product user image is an image of the stereotypical user of the product (Bosnjak & Rudolph, 2008). Alternatively the product user image can be explained as the symbolic attributes associated with a given product. Products, suppliers and services have an image that is determined not only by the physical characteristics of the object’s packaging, advertising and price but also stereotypes of the typical users (Grubb & Grathwohl, 1967; S. J. Levy, 1959). While the term self-concept has been long considered from various perspectives, the consumer behaviour domain defines it as the totality of the individual’s thoughts and feelings in reference to themselves as
an object (Rosenberg, 1979). In the most basic sense the self-concept is the way in which one perceives themselves (Grubb & Grathwohl, 1967).

Self-congruity theory proposed by Sirgy (1981) indicated that consumers attempt to preserve or enhance their self-image by selecting products with ‘images’ they believe are congruent with their own self-concept and avoid products that are not (Claiborne & Sirgy, 1990; Johar & Sirgy, 1991; N. D. Wright et al., 1992). By choosing products with particular image associations individuals can communicate to others the type of person they are or want to been seen as, enhancing their self-image (Parker, 2009). Grubb and Grathwohl (1967) used the theory of individual self-enhancement (Rogers, 1951) as a basis for the argument that individual’s behaviour is directed towards protecting and enhancing their self-concept.

Self-concept refers to self related prototypes or self-schemata (Zinkhan & Hong, 1991). Self-schema denotes a knowledge structure made up of conceptually related information about oneself (Zinkhan & Hong, 1991). Self-schemas contain verbal information as well as images, representations and feelings (Zinkhan & Hong, 1991). As an individual grows up the components that make up the self-schema are described in increased detail and the schema is constantly developing and changing as components and perceptions of one’s life are integrated into it.

Self-concept is multidimensional and there are a variety of models that reflect the kinds of self-concept dimensions and these include actual self-image, ideal self-image, actual social self-image and ideal social self-image (Noble & Walker, 1997; Sirgy, 1982; Sirgy et al., 1997). Actual self-image is how consumers see themselves (Sirgy et
al., 2005). Ideal self-image is how consumers would like to see themselves (Sirgy et al., 2005). Actual social self-image is how consumers believe significant others, such as friends, relatives, associates and co-workers, see them (Noble & Walker, 1997). Ideal social self-image is how consumers would like to be seen by significant others (Sirgy et al., 2005).

As self-concept is multidimensional, so too is the process of self-congruity. These processes are defined by the models: actual self-congruity model (ASC), the ideal self-congruity model (ISC), the actual social self-congruity model (ASSC) and the ideal social self-congruity model (ISSC). Figure 2.2-3 displays a diagram of the self-congruity model.

![Figure 2.2-3 - Model of Self-congruity as developed from the literature](image-url)
A review of the literature on ASC, ISC, ASSC and ISSC highlights the limited number of empirical studies that investigate the four types of self-congruity at the same time. A discussion of that literature follows.

2.2.3.1 Actual self-congruity

The actual self-congruity model suggests that there is a match between the consumer’s product-user image and their actual self-image and that this influences consumer behaviour (Johar & Sirgy, 1991). Rosenberg (1979) defined this tendency to act in ways consistent with one’s personal identity as ‘self-consistency motivation’. Actual self-congruity is the most widely tested of the self-congruity models. A discussion of the previous studies will now be undertaken.

Grubb and Grathwohl (1967) undertook foundational theoretical research into consumer behaviour and the actual self-concept. They indicated that self-congruity could serve as a foundation for understanding and predicting consumer behaviour, and particularly emphasised its use to guide research and decision making (Grubb & Grathwohl, 1967). Sirgy et al. (1997) developed a new method of measuring self-congruity. While the focus of the study was on the measurement of self-congruity, the results of the studies indicated self-congruity as a predictor of a range of consumer behaviours (brand preference, product preference, brand attitude, program choice and satisfaction) (Sirgy et al., 1997). Heath and Scott (1998) investigated the motor vehicle market and found that the theory is not suited to products that are similar in terms of their symbolic imagery.
More recently Jamal and Al-Marri (2007) investigated the impact of actual self-congruity and brand preference on brands. They found a strong relationship between self-congruity and brand satisfaction. Chebat, Sirgy, and St-James (2006) used actual self-congruity theory to explain the transfer of images from malls to stores. Sirgy, Lee, Johar, and Tidwell (2008) looked at the effect actual self-congruity with sponsorship has on brand loyalty. They found that self-congruity has a positive influence on brand loyalty and that the relationship is moderated by customer awareness and involvement (Sirgy et al., 2008). Ibrahim and Najjar (2008) showed that actual self-image congruity has a positive influence on attitudes.

The conclusion of this literature review is that actual self-congruity has an impact on consumer behaviour. This impact is situational and as shown in the literature review, while the results of these studies are consistent in their underlying theory, that self-congruity influences consumer behaviour, the situational effects need additional empirical study. Therefore given self-congruity has not been empirically tested on housing purchases in particular and with limited research on high involvement purchases and actual self-congruity the author indicates this as a gap in the literature. Additionally the research noted a gap in studies that evaluated alternative stages of the decision-making process (refer to section 2.2.1.1 on the consumer decision-making process for an overview of the stages). Traditionally actual self-congruity theory has been investigated in relation to purchase and post purchase stages (store and product selection, and satisfaction for example). However ultimately the likelihood of a product being purchased depends on whether it is evaluated by the consumer as being satisfactory (Blackwell et al., 2006). Therefore despite the
influence of evaluation of alternatives this area has been neglected in actual self-congruity research and the research raises this as an additional gap in the actual self-congruity literature.

2.2.1.3.2 Ideal self-congruity

The ideal self-congruity model suggests that the match between the consumer's product user image and their ideal self-image influences consumer behaviour (Johar & Sirgy, 1991). Sirgy (1987) indicated that the ideal self motivates behaviour through the 'need for self esteem'. Similarly to actual self-congruity, the ideal self-congruity model has been tested in a variety of situations and with various dependent variables. These will now be discussed.

Dolich (1969) investigated the congruence relationship between actual and ideal self-images and brands. Additionally Dolich investigated privately and socially consumed products and found that there is great congruity between actual and ideal self adnt he product user image for preferred product images than least preferred product images. Malhotra (1981) developed and tested a scale to better capture the self concept using actual, ideal and actual social self concepts. Sirgy and Danes (1982) tested a number of actual and ideal self-congruity models and while the focus of the article was on the measurement of self-congruity it still showed that actual and ideal self congruity have a relationship with purchase intention. Sirgy (1985) undertook research on using actual and ideal self-congruity to predict purchase motivation. He found that actual and ideal self-congruity are additive. Quester, Karunaratna, and Goh (2000) undertook a cross cultural study looking at actual and ideal self-congruity and
product evaluation in Malaysia and Australia. They found that self-congruity plays a part in product evaluation and that the correlation differs between cultures (Quester et al., 2000).

Litvin and Kar (2004) researched the moderating effect of individualism and collectivism on actual and ideal self-congruity with a tourism application. Litvin and Kar (2004) found that ideal self-congruity was positively correlated with destination satisfaction. Kressman et al. (2006) studied the direct and indirect effects of actual and ideal self-congruity on brand loyalty. The findings support a direct and biasing (in direct) effect of self-congruity on brand loyalty (Kressman et al., 2006). Beerli, Meneses, and Gil (2007) investigated the function of actual and ideal self-congruity in destination choice finding the greater the congruity between destination image and ideal and actual self the greater the tendency for the tourist to visit. Ibrahim and Najjar (2008) assessed the effects of both actual and ideal self-congruity on consumers attitudes and behavioural intentions in the retail environment. They found that ideal self-congruity had a stronger direct effect on attitudes than actual self-congruity did (Ibrahim & Najjar, 2008). As with actual self-congruity, ideal self-congruity has been shown to influence consumer behaviour, however, given the limited application to high involvement products and in particular to property purchase the researcher raises it as a gap in the literature.

Similarly to actual self-congruity the ideal self-congruity model has not been investigated during alternative stages of decision-making. The researcher raised the need for research in the evaluation of alternatives stage due to the fact that this evaluation by consumers will indicate the likelihood of a product or service being
purchased (Blackwell et al., 2006). Therefore the exploration of ideal self-congruity during the evaluation of alternatives stage is raised as a research gap.

### 2.2.1.3.3 Actual social self-congruity

The actual social self-congruity model suggests that there is a match between the consumer's product user image and their actual social self-image and this match or mismatch influences consumer behaviour (Johar & Sirgy, 1991). The actual social self-image affects consumers' behaviour through the ‘social consistency motive’, (Johar & Sirgy, 1991; Sirgy et al., 2005; N. D. Wright et al., 1992). Malhotra (1981) developed and tested scales to measure actual, ideal and actual social self concepts and product concept.

Murphy, Benckendorff and Moscardo (2007) undertook empirical research investigated destination branding, satisfaction, motives and product choice within the actual, ideal, actual social and ideal social self-concepts. Their empirical study found that perceived (actual) social self-congruity with a destination may be linked to motivation and brand personality perceptions (Murphy et al., 2007). Ibrahim and Najjar (2007) also looked at the four types of self-concept however in the context of the retail environment finding actual social self-image to have the largest test contribution to customer satisfaction. Sirgy and Samli (1985) investigated social self-congruity in the context of store brand loyalty, they found actual social self-congruity to not have a significant relationship with store image evaluation.

While the number of theoretical papers on actual social self-congruity is numerous (e.g. Hughes & Guerrero, 1971; Johar & Sirgy, 1991; Phau & Lau, 2000; Sirgy, 1985;
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Sirgy, Grewal, & Mangleburg, (2000)) the empirical testing has been limited. For this reason the researcher highlights this gap and the need for empirical testing. In addition, due to the impact the evaluation of alternatives had on consumer behaviour, the researcher highlights the need for research in this area and its current absence. The impact of the evaluation of alternatives was discussed in section 2.2.1.1.

During the literature review it was also noted that actual social self-congruity literature has not investigated the theoretical implications of high-involvement purchases. The degree of consumer involvement is a key factor in shaping the type of decision-making process that consumers follow (Blackwell et al., 2006), therefore it is highlighted as an important phenomenon to study and is raised as a gap in the literature.

2.2.1.3.4  Ideal social self-congruity

The ideal social self-congruity model suggests that there is a match between the consumer's product user image and their ideal social self-image that influences consumer behaviour (Johar & Sirgy, 1991). According to Crowne and Marlone (1964) the ideal-social self-image affects consumers’ behaviour through the ‘social approval motive’, people are motivated to do things that will cause others to think highly of them (Johar & Sirgy, 1991; Sirgy et al., 2005; N. D. Wright et al., 1992). Studies on ideal social self-congruity are even more limited than the previously discussed actual social self-congruity.

A number of studies outlined in the previous section also investigated ideal social self-congruity. For example research by Murphy et al. (2007) on destination branding
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and self-congruity showing ideal social self-congruity with a destination may be linked with motivation and brand personality perceptions and Ibrahim and Najjar’s (2007) retail outlet and self-congruity research showing ideal social self-congruity has a contribution to customer satisfaction. Research by Sirgy and Samli (1985) showed that ideal social self-congruity has a significant relationship with store image evaluation.

Barone, Shimp, and Sprott (1999) undertook specific research into ideal social self-congruity effects with product ownership as a moderator. They found product ownership has a relationship with self-congruity. They indicate the relationship being due to the cognitive effort required to evaluated beign high therefore adequate motivation is required to undertake the evaluation (Barone et al., 1999). They conclude with a call for additional research into this area (Barone et al., 1999). Again the previously indicated theoretical studies outlined under the actual social self-congruity section covered ideal social self-congruity in their hypothesis.

While the limited studies on ideal social self-congruity show that it has an impact on consumer behaviour this is a gap that needs closing with additional empirical study on ideal social self-congruity in general. In addition the lack of research into situational influences raise research gaps. As discussed for the other three types of self-congruity, there is a gap in research on ideal social self-congruity that investigates alternative stages of the decision-making process and this is emphasised as a specific research gap. Additionally the investigation of ideal social self-congruity for high-involvement products was not found in the literature and is raised as a gap
in the literature due to involvement being a key element in influencing consumer
decision-making (Blackwell et al., 2006).

2.2.1.3.5 **Strength of relationship with self-congruity**

During the review of the literature the researcher noticed that the relative strength of
the four components of self-congruity were not extensively analysed or discussed. In
eyear research Baughman and Welsh (1962) indicated that while (actual) self-concept
and ideal self-concept overlap to a large extent for most people, in specific
circumstances one or the other could be the major motivator of behavior. Grubb and
Grathwohl (1967) called for additional research into specific consumer decision
situations to determine the extent each type of self-concept influences decision-
making. There has been some headway into empirical research into this area
however it is limited.

Ross (1971) and Sirgy (1980) indicated that product preference is more affected by
the ideal self than actual self. However Dolich’s research in 1969 showed that actual
and ideal self had the same level of congruity with the product image. Research by
Graeff (1996) had results that proved conspicuous products are more influenced by
ideal self-congruity than actual self-congruity, whereas privately consumed products
had the same effect by both actual and ideal self-congruity. A study by Quester et al.
(2000) showed that culture influences the use of actual versus ideal self-concept
during the evaluation of a product. The variation in results from previous studies
could be explained by Quester et al.’s (2000) explanation that symbolic products are
more likely to be dominated by ideal self-image and tangible products will motivate
consumers through their actual self-image. Ibrahim and Najjar (2007) investigated all four types of self-congruity and the empirical results suggested (actual) social self-congruity had the strongest relationship with consumers retail patronage.

If we refer back to Levy's (1959, p. 118) statement ‘... people buy things not only for what they can do, but also for what they mean’, it can be seen that the discussion so far has only focused on the second half of this statement – symbolic consumption. A review of the literature indicates that there is a lack of research that investigates both symbolic and utilitarian (or functional consumption) simultaneously. The researcher therefore presents functional congruity as a means of testing the relationship between property and symbolic and functional decision-making.

2.2.1.4 Functional congruity

Functional congruity theory proposes that consumer behaviour is directed at matching ‘product image’ with the consumer's referent attributes (Sirgy, 1985; Sirgy & Johar, 1985; Varvolis & Sirgy, 1984). Product image refers to the functional attributes associated with a given product or service (Sirgy, 1983). Referent attributes are the consumers needs or ideal features and are used to evaluate the actual performance of the product (Johar & Sirgy, 1991). The greater the congruence between the audience's utilitarian beliefs about the product and their referent beliefs the greater the likelihood of a positive evaluation.

The cognitive process that describes the functional congruity model is the expectancy value model. This model indicates that a disposition towards a course of action is a function of the desirability of the perceived consequences that might occur (Johar &
Sirgy, 1991). Therefore the greater the congruence between the consumer's beliefs about the products attributes and the consumer's referent attributes the greater the likelihood of purchase. Put simply this means that consumers decide on whether to obtain products by comparing the functional attributes of a product with their ideal or desired product specifications (Kressman et al., 2006).

While there have been some recent attempts to simultaneously investigate functional and self-congruity there are still a number of gaps in the empirical testing, namely a lack of empirical research into self and functional congruity at different stages of decision-making other than purchase and post-purchase and a lack of empirical research investigating property purchase using self and functional congruity.

2.2.1.5 Involvement

After consumers have decided on those alternatives that will be given consideration they undertake evaluation of those alternatives. The author has just presented self and functional congruity theories as appropriate frameworks to study this from. The amount of effort a consumer will use to evaluate the alternatives is dependent on a number of situations influences. One of these is the level of product involvement. Product involvement is generally defined as the personal relevance of the object based on inherent needs, values and interests (Zaichkowsky, 1985).

Researchers have shown that product involvement significantly affects consumer decision-making (Suh & Yi, 2006; Warrington & Shim, 2000). In high involvement decisions individuals usually dedicate more attention and effort to the decision problem (Xue, 2008). Previous research on self and functional congruity theories has
not traditionally been investigated from a high involvement perspective. For example while Heath and Scott (1998) investigated motor vehicles, which are high involvement purchases, they only investigated self-congruity. Therefore given the previous research indicating its effect on consumer decision-making and the lack of empirical research investigating the effect of self and functional congruity on high involvement purchases, the researcher raises this as a gap in the literature.

2.2.1.6 The housing market

Australian home ownership has been stable at around 70% over the last three quadrennial censuses (Australian Bureau of Statistics, 2010a). A home owner is defined by the Australian Bureau of Statistics as a person who lives in a house that they own or are paying off through a mortgage (Australian Bureau of Statistics, 2010b). The majority of Australians report homeownership as part of their broader life plan (Beer & Faulkner, 2009). The level of residential property ownership in Australian is similar to that of the United States, Canada and New Zealand (L. M. Fisher & Jaffe, 2003). Variation in levels of homeownership is generally a function of supply and demand and is impacted by social, political, legal and cultural variables (L. M. Fisher & Jaffe, 2003).

Housing satisfies the essential needs of people for shelter, security and privacy (Australian Bureau of Statistics, 2012). Since a residential property is continually consumed, it pays an important role in determining quality of life (Houston & Sudman, 1977). Indeed, the United Nations Declaration of Human Rights states that access to affordable housing is a fundamental human right (Assembly, 1948). The
Australian government suggests that housing is an important component of individual wellbeing (Australian Bureau of Statistics, 2012). Through its relationships with investment levels, interest rates, building activity and employment, housing also has a great significance in the national economy (Australian Bureau of Statistics, 2012). The predominance of separate, free-standing houses situated on 'quarter-acre blocks' has historically been a feature of Australian urban development (Australian Bureau of Statistics, 2012). More recently, governments have moved to promote higher housing density in order to provide greater choice of housing types and to make better use of existing infrastructure (Australian Bureau of Statistics, 2012).

Real estate agents are the gateway to the majority of residential properties and act in partnership with the property sellers (Bridge, 2001). Real estate agents are defined by the Australian government as a person authorised to act on behalf of another person in the sale, purchase, letting or management of property (Planning NSW, 2010). Real estate agents advertise through newspapers and primarily on property websites (Planning NSW, 2010). Research by The National Association of Realtors and Google (2013) found that 90% of home buyers search online during their residential property purchase. They also show that 75% of senior buyers go online during the search for a residential property (The National Association of Realtors & Google, 2013). The advertisements on the property websites and in newspapers contain photographs and a summary of the key features of the property (REA Group, 2013). Consumers view the advertisements and make a judgment of the property. In the event of a positive evaluation the customer contacts the agent to inspect the property through a private viewing or an open home. Research by Anglin (1997)
showed that a buyer will take an average of ten weeks to find a house and during that
time inspect around sixteen houses.

Residential property in Australia is predominately purchased through private treaty
or auction (Planning NSW, 2010). Private treaty is when a property is purchased
through a real estate agent by private negotiation (Planning NSW, 2010). An auction
is a public sale in which a property is sold to the highest bidder (Planning NSW,
2010). Findsen (2005) suggests that real estate agents have become more
sophisticated and competitive as a results of various demands within the housing
market. For most Australians, buying a home involves raising a deposit and then
borrowing a substantial amount of money from a bank or other lending institution,
which then holds a mortgage on the property (Australian Bureau of Statistics, 2012).
The amount borrowed is influenced by a number of factors including the price of the
property, the amount of the deposit, the policy of lenders regarding borrowing limits
and the ability of the borrower to repay the loan (Australian Bureau of Statistics,
2012).

Flood and Baker (2010) report the following trends in Australian over the past
decade; accelerated ageing population, decline in household formation rates,
steadying in average household size, growth in defacto relationships, change and
stabilisation in household type and geographical diffusion. Beer and Faulkner (2009)
reported that, as a result of these societal changes, housing careers have become
more diverse and there is less conformity in the housing careers. Research by Khoo-
Lattimore and Thyne (2008) showed that functional attributes no longer solely drive
consumers’ residential property decisions.
In traditional housing studies, economic and demographic factors are regarded as the most important determinates of residential choice (Karsten, 2007). A residential decision was considered to be a function of the price a household can afford and the size of the family (Karsten, 2007). However Clapham (2005) argues that this scientific tradition isolates housing from the wider context of life. Housing and ‘home’ appear to mean something different compared with the past due to changes within society and within the expectations of individuals (Beer, 2007). Demographic processes including marriage, arrival of children and retirement were seen as almost entirely determinative of housing decisions in the 80’s and 90’s (Beer et al., 2007). However today individuals are increasingly seeing the place in which they live as central to their sense of identity (Beer et al., 2007; Clapham, 2010).

Discussions and research into housing and identity are not recent developments. P. Saunders (1984, 1986) proposed that home ownership offers individuals a means through which they can attain a sense of ‘ontological’ security. With ontological security defined as a sense of confidence and trust in the world as it appears to be (Dupuis & Thorns, 1998). Dowling and Mee (2007, p. 1) support this view stating a ‘home is a place of belonging, intimacy, security, relationship and selfhood’. There are a number of studies that provide evidence of a link between residential property and identity. Research by Twigger-Ross and Uzzell (1996) for example showed that residential properties are used in the maintenance of continuity of self and to create, symbolise and establish new selves.

Researchers have even started to show the link between individual identity and suburb identity and how they play an important role in determining neighbourhood
choice (D. S. Levy & Lee, 2011). Fleury-Bahi, Félonneau, and Marchand (2008) for example undertook research that showed an individual’s sense of identification with their neighbourhood interacts with the social aspects of satisfaction. Other research has shown that residential processes are important in forming or expressing social identity in many households who had migrated to the suburbs (McGarrigle & Kearns, 2009).

2.2.1.7 Housing and consumer behavior

Khoo-Lattimore and Thyne (2008, p. 81) indicate that housing is a unique product because ‘…each residential unit is characterised by a combination of unique attributes including its neighbourhood, transport and community amenities, structural design and its accessibility to work, schools, leisure and entertainment.’.

Research into housing from a consumer behaviour perspective is limited, with much research into housing investigating supply and demand from a macro level. Studies of housing affordability, planning, governance, policy and supply dominate the published research (examples Beer et al. (2007); Clapham (2006); Easthope and Randolph (2009)). Housing research suggests that consumer behaviour is an important component of the purchase of property. Beer et al. (2007) indicated that shifting consumption patterns are influencing housing careers (housing tenure) in their study. Coolen, Kempen and Ozaki’s (2002) paper discussed experiences and the meaning of dwellings. Easthope (2004) wrote a paper on place, home and identity and Dunn’s (2006) paper looked at the meaning of dwellings and the meaning of home. A study by Dowling and Mee (2007) looked at home and homemaking and at
the house as a home. Recent research into Generation Y by Bruce and Kelly (2013) showed that housing is a medium for the group to express and create their identity. Indeed a report by Beer and Faulkner (2009) suggested that the single greatest motivation for movement through the housing market is consumption.

Despite this research indicating a link between housing and consumption, research on property decision-making is very limited. While some researchers have started to investigate consumer decision-making the research is often one sided and continues in the tradition of housing research with economic and macro theories. This literature will now be discussed.

Lindberg, Garling and Montgomery (1989) made early contributions to research into property consumer decision-making by examining consumer’ belief-value structure however they only looked at functional influences. In 2006, Hartig published a paper that looked at the meaning of 'home' but only used functional items for the base of the study. A conference paper by Susilawati and Anunu (2001) is another example of research focusing only on the functional aspects of consumption.

Amongst the research focusing on the functional and rational nature of housing are a few pieces of research making headway into research from a consumer behaviour perspective. Gibler and Nelson (1998) presented the need for non-functional research into housing in their conference paper. Collen and Hoekstra (2001) undertook an exploratory study investigating the values that are determinates of preferences for housing during choice. Levy, Murphy and Lee (2008) investigated the role of emotional and contextual factors and showed that both real estate agents and
buyers believed them to influence the decision to purchase. Recent research by Brandstetter (2011) combined the examination of housing attributes and behavioural attitudes however the focus was more on mobility, tenure type and environmental influences than the influence of individual characteristics. Gram-Hanssen and Bech-Danielsen’s (2004) study used consumption theory (why people buy) to investigate aesthetics, home decoration and furbishing, and where people live. This review of the literature by the researcher has therefore highlighted the limitation of previous research. In particular no empirical studies investigating property decision-making from individual influences were found and therefore the researcher raises this as a gap in the literature (research gap #6). In this thesis, the purchase of residential property and home ownership is undertaken from a specific perspective which builds upon the limited number of studies investigating property decision-making from individual influences and from a consumer behaviour perspective. It is notable that this perspective is informed by an extensive literature base that examines issues relating to the purchase of residential property and home ownership from a range of other perspectives (Latham, 2003; Munro, 1995; Proshansky, Fabian, & Kaminoff, 1983; Thorns, 2004).
2.3 Summary

This chapter provided an overview of the literature on consumer behaviour, consumer decision-making and self and functional congruity theories. The chapter highlighted the need for research into the four types of self-congruity theory and their relative strengths, as well as the need to investigate the combined self and functional congruity theory. During this review five specific gaps in literature were identified:

RG1. There is limited empirical research investigating the relationship of actual self-congruity, ideal self-congruity, actual social self-congruity and ideal social self-congruity with self-congruity and consumer behaviour.

RG2. There is limited empirical research on integrating self-congruity and functional congruity.

RG5. There is a lack of empirical research using intentions during alternative stages of the decision-making process.

RG6. There is a lack of empirical research on property purchase decision-making.

RG7. There is a lack of empirical research on self and functional congruity during the decision-making process of high involvement purchases.

The following chapter investigates information search and processing and highlights two additional research gaps (RG3 and RG4).
Chapter 3 - Information search and processing

3.1 Introduction

This chapter extends the literature review by providing a review of information processing literature and identifies the importance of trust and knowledge during the consumer decision-making process.

3.2 Information search and processing

In our discussion of consumer behaviour we stipulated that the ‘Consumer Decision Process’ model (refer to Blackwell et al. 2001) was the most appropriate for this study. Therefore consumer decision making was shown to consist of five steps; need recognition, search, evaluation, purchase and post purchase evaluation (Quester et al., 2007). It was also shown that ultimately the likelihood of a product being purchased depends on whether it is evaluated favourably by the consumer (Blackwell et al., 2006). This requires the gathering and processing of information. There is much empirical support indicating the link between knowledge and information processing (Chi, Glaser, & Rees, 1981; Larkin, McDermott, Simon, & Simon, 1980; Simon & Chase, 1973).
Chapter 3: Information search and processing

The information perspective emphasises that consumers have limitations in their capacity to process information (Hansen, 2005). These limitations include limited working memory and limited computational capabilities (Bettman, Johnson, & Payne, 1998). Consumer attention and comprehension processes are strongly influenced by their motivations, abilities and opportunities to process information (Batra & Ray, 1986). Since the consumer’s processing capacity is limited, the consumer cannot process large amounts of cognitive information in relation to all choice situations and consumers undertake heuristic decision-making (Hansen, 2005). ‘Central or systematic processing is generally seen to require greater cognitive effort than peripheral or heuristic processing’ (Sirgy & Su, 2000, p. 348). Therefore ‘...central or systematic processing is likely to require greater ability and motivation to process information’ (Sirgy et al., 2005, p. 339).

Symbolic cues, such as product user image, are processed with little cognitive effort due to their self relevance and therefore peripheral processing (Sirgy et al., 2005). Functional congruity on the other hand requires systematic processing which requires greater cognitive effort, ability and motivation to process the information (Sirgy & Su, 2000). This cognitive effort can be moderated by situational factors. Based on this argument, it is proposed that the predictive effects of self-congruity versus functional congruity are moderated by consumers’ product class knowledge and trust. This proposition is expanded upon with literature in the following two sections.
3.2.1 Knowledge

Cognitive structure is the factual knowledge that consumers have about products and the ways in which that knowledge is organised (Brucks, 1986; Kanwar, Olson, & Sims, 1981; Marks & Olson, 1981). There are two cognitive processes for obtaining attribute values; recalling values and constructing values (M. D. Johnson, 1984). When knowledge of choice alternatives is high, abstract attribute values already stored in the memory are simply recalled as needed (M. D. Johnson, 1984). When knowledge is low, high effort is required to evaluate the attributes of alternatives. Knowledge increases with use, purchase and thoughtful consideration of a product (M. D. Johnson, 1984). Consumers gain expertise in product categories and knowledge of specific brands through information seeking and consumption experience (Neeley, Min, & Kennett-Hensel, 2010). Experience with a product class leads to acquisition of increased expertise (C.W. Park, Mothersbaugh, & Feick, 1994; Perrouty, d’Hauteville, & Lockshin, 2006).

Jacoby, Troutman, Kuss and Mazursky (1986) proposed that consumer knowledge has two major components; familiarity and expertise. Alba and Hutchinson (1987) carried forward that proposition and extended it with a definition of familiarity and expertise. Familiarity coincides with the number of product related experiences that have been accumulated by the consumer (Alba & Hutchinson, 1987). Expertise is defined as the ‘ability to perform product related tasks successfully’ (Alba & Hutchinson, 1987, pp 411). Product related experiences are defined at the most inclusive level (Alba & Hutchinson, 1987). They include an advertising exposé, an
information search, interactions with sales people, choice and decision-making, purchasing and product usage in various situations (Alba & Hutchinson, 1987). Similarly the term consumer expertise is defined broadly to include both cognitive structures (such as beliefs about product attributes) and cognitive processes (such as decision rules for acting on those beliefs) and requirements to perform product related tasks successfully (Alba & Hutchinson, 1987).

Assuming that consumers generally have a disutility for cognitive effort, one major benefit of product familiarity should be a reduction in effort expended during consumer decision-making and product use (Einhorn & Hogarth, 1981). Because experts possess more highly developed conceptual structures they are better equipped to understand the meaning of product information. Given the higher payoffs and lower costs, knowledgeable consumers are more likely to search for new information prior to making decision (Duncan & Olshavsky, 1982; E. J. Johnson & Russo, 1984; Punj & Staelin, 1983). In addition expert consumers may seek a greater amount of information about particular product attributes simply because they are aware of the existence of those attributes (Brucks, 1985) or because they are more capable of formulating specific questions about them (Miyake & Norman, 1979).

It is argued that knowledgeable buyers may evaluate a product based on utilitarian criteria more than on symbolic criteria (Sirgy et al., 2005). This is because experienced buyers have the necessary knowledge and background enabling them to evaluate utilitarian attributes (Sirgy et al., 2005). Prior knowledge encourages information search by making it easier to process new information (Brucks, 1985). As the cognitive cost of using and obtaining information is reduced and the potential
benefits of obtaining it increases, increased search is initiated (Brucks, 1985). Those without the necessary knowledge will be more likely to use a simple decision heuristic and evaluate the product based on symbolic attributes such as the product user image (Sirgy et al., 2005). Consumers’ prior knowledge therefore plays an important role in determining the type of evaluation process undertaken (Sujan, 1985).

3.2.2 Trust

Blau (1964, p. 940) defined trust as ‘...the belief that a party's word or promise is reliable and a party will fulfil his/her obligations in an exchange relationship.’ Anderson and Weitz (1989) defined trust as ‘... one party's belief that it's needs will be fulfilled in the future by actions undertaken by the other party’. Dwyer, Schurr and Oh (1987) suggested that when one party possesses disproportionate leverage over the other, the weaker party becomes mistrustful and apprehensive about the stronger party's intentions. Anderson and Weitz (1989) reported results that indicated, in dyads where one party has more power, the level of trust was much less stable. According to McConkie (1975, p. 131) there is perhaps ‘...no other single variable which so thoroughly influences interpersonal and intergroup behaviour’.

In the context of this research, trust will be measured between the consumer (potential purchaser) and the advertiser (the real estate agent) as these are the two major parties at the evaluation of alternative stage during residential property purchase decision making. Due to the nature of the initial evaluation of property alternatives (predominantly done online or at a real estate window front) the trust to
be investigated in this research is of a holistic level. This means that trust is developed and evaluated in terms of real estates in general rather than one particular real estate agent. General trust literature and its implications given the specific nature of trust within the property purchase will now be discussed.

Trust is required in all transactions because one party must undertake action before the other party and therefore must rely upon the other party to honour their commitments and not exploit the situation (Kronman, 1985). Wood, Boles and Babin (2008) outline three broad frameworks of trust. Trust as a learned expectancy, trust as an assessment of repeated observations and trust as a calculative process. First lets look at trust as a learned expectancy.

According to the learned expectancy framework, trust develops with the assessment of repeated observations. Folkers (1988) indicated that consumers make assessments of an individual or company’s trustworthiness based on prior beliefs and situational cues. Doney and Cannon (1997) discuss the process by which trust can be developed in relationships. They present five theories from a range of conceptual roots. The transference process is of most relevance to this research as it indicates that trustees develop trust by transferring trusting beliefs from one group or person to another with whom the trustee has little or no direct experience with (Strub & Priest, 1976). Given the nature of property purchase, and the moment within the decision-making process this research is investigating, the researcher believes this is the most likely way trust is developed. Research by Adkins and Swan (1980) showed that a person’s past experience often resulted in an initial state of distrust in car and insurance salespeople. Pruitt (1981) showed that an individual is
more willing to commit if the person holds a reputation for cooperative behaviour. Research by Anderson and Weitz (1989) showed that the past behaviour of manufacturers affected their current relationships even when the past behaviour was with different parties. Morgan and Hunt (1994) showed that trust can be developed with organisations. Therefore in a buying situation a consumer can develop trust or lack of trust for sales people in general.

We must also look at Lindskold's (1978) concept of the calculation process, where trust is determined by calculating the cost and rewards of the other party cheating or being dishonest. This indicates that if the cost of being dishonest is less than the reward then the party is more likely to cheat and therefore will not be trusted. This is in line with the definition of trust by Singh and Sirdeshmukh (2000), a firm's intention to hold consumers' interest ahead of their self-interest. Buss and Kenrick (1998) suggest that the calculative approach is particularly salient in initial trust formation (as occurs during the evaluation of alternatives stage that this research investigates). Consumers make assessments of an individual or company's trustworthiness based on prior beliefs and situational cues (Folkes, 1988). This assessment is influenced by the consumers' predisposition to trust (Wood et al., 2008). Trust in the early stages of decision making that this research is studying is primarily transference and calculation based (Doney & Cannon, 1997; Lewicki & Bunker, 1995) depending largely on information from trusted third parties, the strength of institutions that govern the relationship and calculations based on categorical processing (McKnight, Cummings, & Chervany, 1998).
As the evaluation of property alternatives for owner occupation purchases are most commonly new transactions with no prior dealing with the party the other types of trust development are not relevant. These are the predication process, capability process and intentionality process.

Consumer behaviour was expressed as a complex process that involves risk to the consumer and it was suggested that consumers develop ways of reducing the vulnerability. Trust, a willingness to rely on an exchange partner, can reduce the feelings of vulnerability associated with consumer behaviour (Gilliland & Bello, 2002; Moorman et al., 1993). A trusted partner is seen as possessing credibility and benevolence; they can be relied upon and are genuinely interested in the other’s welfare (Doney & Cannon, 1997).

Research shows that trust influences consumer decision-making (Kim et al., 2008; Morgan & Hunt, 1994; Sung & Campbell, 2007). Trust enables the buyer to economise cognitive and emotional energy and rely on a seller before extensive information can be gathered (Jones & George, 1998; Luhmann, 1979; Mayer, Davis, & Schoorman, 1995; Yamagishi, Kikuchi, & Kosugi, 2002). Therefore the consumer experiences a feeling of less risk and will be more likely to use a simple decision heuristic and evaluate the product based on symbolic attributes such as the product user image. If however the consumer does not assess a partner as trusting they will expect increased risk and as the cost of not obtaining additional information is increased they are more likely to evaluate the utilitarian attributes.
3.3 Research aim and questions

The aim of this research is to investigate relationships between functional and self-congruity within the context of consumer residential property purchase decisions. The literature review identified seven research gaps and this section will discuss the four research questions that will address these gaps. A summary table is subsequently provided showing each research question and associated addressed gaps.

The first research question was:

1. What is the relationship between ASC, ISC, ASSC, ISSC and self-congruity (SC) during the residential property purchase decision?

This research question was developed to address four of the seven gaps in the literature. The previous chapter began with a discussion of consumer behaviour in general followed by consumer decision-making literature and self and functional congruity were presented as an appropriate way to better understand consumer's residential property decision-making. Self-congruity was identified as multi-dimensional and the lack of consistent empirical results testing all four types of self-congruity was outlined (research gap #1). In addition to the general lack of empirical studies on all four types of self-congruity, this research question investigated the evaluation of alternatives stage of the consumer decision-making model which following a review of the literature was found to be a gap (research gap #5). It was additionally identified that the use of the theory on high involvement purchases had
not been rigorously studied (research gap #7) and in particular no empirical works were found investigating residential property decision-making from a consumer behaviour perspective (research gap #6).

The second research gap was specified as:

2. What is the effect of self and functional congruity on residential property purchase intentions?

The literature review indicated a lack of research that investigates both symbolic and utilitarian (or functional) consumption simultaneously (research gap #2). Consumer behaviour based studies are predominantly symbolic and housing grounded research predominantly focuses on functional methods (research gap #6). It is important to understand the degree of influence each of these types of self-congruity have on consumer behaviour (Dolich, 1969). As discussed in the literature review there are also a number of situational research gaps for self and functional congruity. Gaps in research on the impact of the two concepts on high involvement purchases (research gap # 7) and during the alternative decision-making stage of the evaluation of alternatives (research gap #5) were highlighted.

The literature review then moved to discuss information search and processing due to its importance during consumer decision-making. In particular it was suggested that consumers' knowledge plays an important role in determining the type of evaluation process undertaken (research gap #3). Therefore the following research question was developed:
3. What is the effect of knowledge on functional and self-congruity during the residential property decision-making process?

This research question also addresses the gap in research on the lack of consumer behaviour based studies into housing decision-making (research gap #6), on the impact of the two concepts on high involvement purchases (research gap #7) and the lack of studies investigating the alternative decision-making stage of the evaluation of alternatives (research gap #5).

Trust was then discussed as another component of information processing and the potential impact of consumer/advertiser trust on the consumer decision-making process was presented (research gap #4). Therefore the following research question was developed:

4. What is the effect of trust on functional and self-congruity during the residential property purchase decision-making process?

This research question additionally addressed the gap in research highlighted during the review of consumer behaviour based studies on housing decision-making (research gap #6), on the impact of the two concepts on high involvement purchase (research gap #7) and studies investigating the alternative decision-making stage of the evaluation of alternatives (research gap #5).

Table 3.3-1 provides a summary of these research questions and the research gaps that they each address.
Chapter 3: Information search and processing

<table>
<thead>
<tr>
<th>Research gap</th>
<th>RQ1: What is the relationship between ASC, ISC, ASSC, ISSC and SC during the residential property purchase decision?</th>
<th>RQ2: What is the effect of SC and FC on residential property purchase intentions?</th>
<th>RQ3: What is the effect of knowledge on SC and FC during the residential property decision-making process?</th>
<th>RQ4: What is the effect of trust on SC and FC during the residential property purchase decision-making process?</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG1: There is limited empirical research investigating the relationship of ASC, ISC, ASSC and ISSC with SC and consumer behaviour.</td>
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<tr>
<td>RG2: There is limited empirical research on integrating SC and FC</td>
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<tr>
<td>RG3: There is limited empirical research on the relationship between knowledge and SC and FC’s relationship with consumer behaviour</td>
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<tr>
<td>RG4: There is a lack of empirical research on the relationship between trust and SC and FC’s relationship with consumer behaviour</td>
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<td>√</td>
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<tr>
<td>RG5: There is a lack of empirical research using intentions during alternative stages of the decision-making process.</td>
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<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>RG6: There is a lack of empirical research on property purchase decision-making</td>
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<td>√</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>RG7: There is a lack of empirical research on SC and FC during the decision-making process of high involvement purchases.</td>
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<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Table 3.3-1 - Summary of the research questions’ contributions

Having presented the research questions the research model will now be outlined.
3.4 Research model

The literature review identified seven specific gaps that are to be addressed by research designed to pursue the following four research questions;

1. What is the relationship between ASC, ISC, ASSC, ISSC and self-congruity (SC) during the residential property purchase decision?
2. What is the effect of self and functional congruity on residential property purchase intentions?
3. What is the effect of knowledge on functional and self-congruity during the residential property decision-making process?
4. What is the effect of trust on functional and self-congruity during the residential property purchase decision-making process?

Conceptualised as a model in Figure 3.4-1 the association can be clearly identified and from this associated hypotheses are listed.
3.5 Research hypotheses

The aim of this research was to investigate relationships between functional and self-congruity within the context of consumer residential property purchase decisions.

The first research question developed to answer this aim is:

1. What is the relationship between ASC, ISC, ASSC, ISSC and self-congruity (SC) during the residential property purchase decision?

Actual self-congruity (ASC) was outlined in section 2.2.1.3.1 as the influence the match between the consumer’s product user image and their actual self-image has on consumer behaviour (Johar & Sirgy, 1991). Actual self-image was shown to be how consumers currently see themselves (Sirgy et al., 2005). Actual self-congruity is therefore consumers acting in ways consistent with their current personal identity.
This self-consistency motivation provides support for the development of hypothesis H1A below.

**H1A - Actual self-congruity has a relationship with self-congruity.**

Ideal self-congruity was outlined in section 2.2.1.3.2 as the influence that the match between a consumer's product image and their ideal self-image has on consumer behaviour (Johar & Sirgy, 1991). With ideal self-image defined as how consumers would like to see themselves (Sirgy et al., 2005). The ‘need for self esteem’ motivates ideal self-congruity to influence consumer behaviour and provides the bases for hypothesis H1B below.

**H1B - Ideal self-congruity has a relationship with self-congruity**

Actual social self-congruity was outlined in section 2.2.1.3.3 as the match between consumer's product user image and their actual social self-image that in turn influences consumer behaviour (Johar & Sirgy, 1991). Actual social self-image was defined as how consumers believe significant others, such as friends, relatives, associates and co-workers, see them (Noble & Walker, 1997). Based upon the ‘social consistency motive’ the hypothesis H1C below was developed:

**H1C - Actual social self-congruity has a relationship with self-congruity**

Ideal social self-congruity was outlined in section 2.2.1.3.4 as the influence on consumer behaviour as a result of the match (or mismatch) between consumer's product user image and their ideal social self-image (Johar & Sirgy, 1991). Ideal social self-image was defined as how consumers would like to be seen by significant others.
The ‘social approval motive’ provides justification for the development of hypothesis H1D below:

**H1D - Ideal social self-congruity has a relationship with self-congruity**

Section 2.2.1.3.5 provides a review of the literature pertaining to the strength of the four components of self-congruity, ASC, ISC, ASSC and ISSC. Given the contradicting nature of the results extant in the literature and the previously noted situational and product type impacts upon self-congruity, three hypotheses were developed to provide additional insight into this first research question. Previous research has shown that consumer behaviour is directed at maintaining or enhancing their self-concept (Dobni & Zinkhan, 1990; Elliot & Wattanasuwan, 1998; Kwak & Kang, 2009; Piacentini & Mailer, 2004; Rogers, 1951).

Research on identity and symbolic consumption suggests that housing as a symbolic product is more likely to be dominated by ideal self-image compared to tangible (functional) products which are likely to motivate consumers through their actual self-image (Quester et al., 2000). Therefore the researcher postulates that ISC and ISSC will have stronger relationships with self-congruity than the two actual self-congruity theories. Research has also shown that possessions can serve social purposes (Muniz Jr & O’Guinn, 2001) and according to Clammer (1992) shopping is the buying of identity. Research by Ball and Tasaki (1992) indicated that homes are closely associated with identity. Therefore the researcher postulated that the social self-congruity model would have the strongest relationship with self-congruity. To test these the postulations research hypotheses H1E, H1F and H1G were developed.
H1E - Ideal self-congruity (ISC) has a stronger relationship with self-congruity than actual self-congruity (ASC).

H1F - Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than actual social self-congruity (ASSC).

H1G - Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than ideal self-congruity (ISC).

The second research question is:

2. What is the effect of self and functional congruity on residential property purchase intentions?

The development of the associated hypotheses are now presented.

Self-congruity theory proposed by Sirgy (1981) indicated that consumers attempt to preserve or enhance their self-image by selecting products with ‘images’ they believe are congruent with their own self-concept and avoid products that are not (Claiborne & Sirgy, 1990; Johar & Sirgy, 1991; N. D. Wright & Sirgy, 1992). By choosing products with particular image associations individuals can communicate to others the type of person they are or want to be seen as, enhancing their self-image (Parker, 2009). Grubb and Grathwohl (1967) used the theory of individual self-enhancement (Rogers, 1951) as a basis for the argument that individuals’ behaviour is directed towards protecting and enhancing their self-concept.
Self-congruity theory indicates that people use possessions as both a means of self-expression and a way of judging the people and situations they face. Research has shown that individuals purchase products and services to create, foster and develop their identity (Elliot & Wattanasuwan, 1998; Piacentini & Mailer, 2004). Therefore hypothesis H2A was developed:

**H2A - Self-congruity has a relationship with intention to act**

Functional congruity theory proposes that consumer behaviour is directed at matching ‘product image’ with the consumer’s referent attributes (Sirgy & Johar, 1985; Varvolis & Sirgy, 1984). Product image refers to the functional attributes associated with a given product or service (Sirgy, 1983). Referent attributes are the consumers’ needs or ideal features and are used to evaluate the actual performance of the product (Johar & Sirgy, 1991). The greater the congruence between the audience’s utilitarian beliefs about the product and their referent beliefs the greater the likelihood of a positive evaluation.

The cognitive process that describes the functional congruity model is the expectancy value model. This model indicates that a disposition towards a course of action is a function of the desirability of the perceived consequences that might occur (Johar & Sirgy, 1991). Therefore the greater the congruence between the consumer’s beliefs about the product’s attributes and the consumer’s referent attributes the greater the likelihood of purchase. Put simply this means that consumers decide on whether to obtain products by comparing the functional attributes of a product with their ideal
or desired product specifications (Kressman et al., 2006). Therefore hypothesis H2B was presented:

**H2B - Functional congruity has a relationship with intention to act**

The third research question is:

3. What is the effect of knowledge on functional and self-congruity during the residential property decision-making process?

It is argued that experienced buyers may evaluate a product based on utilitarian criteria more than symbolic criteria (Sirgy et al., 2005). This is because experienced buyers have the necessary knowledge and background enabling them to evaluate utilitarian attributes (Sirgy et al., 2005). Prior knowledge encourages information search by making it easier to process new information (Brucks, 1985). As the cognitive cost of using and obtaining information is reduced and the potential benefits of obtaining it increased, increased search is initiated (Brucks, 1985). Those without the necessary knowledge will be more likely to use a simple decision heuristic and evaluate the product based on symbolic attributes such as the product user image (Sirgy et al., 2005). Consumers’ knowledge hence plays an important role in determining the type of evaluation process undertaken (Sujan, 1985). Therefore the hypotheses H3A and H3B were developed:

**H3A – Knowledge has a relationship with FC**

**H3B – Knowledge has a relationship with SC**
The fourth research question was:

4. What is the effect of trust on functional and self-congruity during the residential property purchase decision-making process?

Consumer behaviour was expressed as a complex process that involves risk to the consumer and it was suggested that consumers develop ways of reducing their vulnerability. Trust, a willingness to rely on an exchange partner, can reduce the feelings of vulnerability associated with consumer behaviour (Gilliland & Bello, 2002; Moorman et al., 1993). A trusted partner is seen as possessing credibility and benevolence; they can be relied upon and are genuinely interested in the other's welfare (Doney & Cannon, 1997). Therefore the consumer experiences a feeling of less risk and will be more likely to use a simple decision heuristic and evaluate the product based on symbolic attributes such as the product user image. If however the consumer does not assess a partner as trusting they will expect increased risk and as the cost of not obtaining additional information is increased they are more likely to evaluate the utilitarian attributes. Therefore hypotheses H4A and H4B were developed:

H4A - Trust has a relationship with FC

H4B - Trust has a relationship with SC
3.6 Summary

This chapter explored the literature on information search and processing before knowledge and trust were presented as influences on the self/functional congruity model. This led to the identification of two additional research gaps;

3. There is limited empirical research on the relationship between knowledge and self and functional congruity’s relationship with consumer behaviour

4. There is a lack of empirical research on the relationship between trust and self and functional congruity’s relationship with consumer behaviour.

To address these two gaps and the five gaps identified in chapter 2, the following four research questions were established before the research questions were presented. In reference to the literature, the hypotheses associated with those research questions were then presented. The following chapter presents the methodology.
Chapter 4 - Methodology

4.1 Introduction

This chapter sets out the methodology followed in this thesis research. The chapter begins with a discussion of the research framework, exploring research paradigms and their significance in research. In particular, the paradigm adopted by the researcher in this study is highlighted, the research design is then discussed. This discussion is broken down into the following sections; theoretical framework, conceptual model and approach to the research. The sampling plan is outlined before an in-depth discussion of the method is undertaken. This includes a justification for the method and a discussion of the procedure used to increase the response rate. The use of a pre-test is explained. Lastly, ethical considerations are considered and a conclusion to the chapter is given.

4.2 Research framework

This section examines three research paradigms and the philosophical assumptions associated with each paradigm. These research paradigms are positivism, constructivism and pragmatism. The research paradigm adopted in the present study is then presented with a justification for its choice.
4.2.1 Research paradigms

A paradigm is the basic set of beliefs that guides action (Guba, 1990). In academia a paradigm is defined as the ‘basic belief system or world view that guides the investigation’ (Guba & Lincoln, 1994, p. 105). Therefore the research paradigm adopted will influence the design of the researcher’s study. Hence, understanding research paradigms will help researchers to select an appropriate research design.

In establishing the methodological basis for the present study, three major research paradigms were explored; positivism, constructivism and pragmatism. The positivist paradigm is labelled as the scientific, the traditional, the experimental or the empirical paradigm (Hussey & Hussey, 1997). Constructivism tries to understand particular phenomena within their social context (Rocco, Bliss, Gallagher, & Perez-Prado, 2003). Under the pragmatist approach, knowledge or truth is considered to be ‘what works’ rather than searching for metaphysical truths (Tashakkori & Teddlie, 1998).

4.2.2 Assumptions relating to paradigms

Each paradigm is associated with ontological, epistemological and methodological assumptions. These three paradigms will be compared in the following sections using ontological, epistemological and methodological assumptions.

4.2.2.1 Ontological assumptions

One's ontological assumption indicates the beliefs about the nature of reality, if you see the world as objective and external to the research or socially constructed, only
understood by examining the perceptions of the human actors (Hussey & Hussey, 1997). Positivists view reality as objective, external and independent of the researcher while constructivist researchers believe that there are multiple local and specific social realities (Guba & Lincoln, 1994). Similarly to positivist researchers, pragmatist based researchers believe that there is an external reality which is independent of them, however they do not believe that the ‘truth’ can be determined once and for all (Cherryholmes, 1992). The constructivism paradigm, in contrast, believe that ‘reality’ is not objective and exterior but socially constructed (Easterby-Smith, Thorpe, & Lowe, 2002).

4.2.2.2 Epistemological assumptions

Epistemology is concerned with the study of knowledge and what we accept as being valid (Hussey & Hussey, 1997). This involves an examination of the relationship between the researcher and that which is being researched (Hussey & Hussey, 1997). Positivists believe that only phenomena which are observable and measureable can be validly regarded as knowledge (Hussey & Hussey, 1997). They try to maintain an independent and objective stance and believe that their values and biases are prevented from influencing the outcomes, so long as the prescribed procedures are rigorously followed (Guba & Lincoln, 1994; Hussey & Hussey, 1997).

Pragmatistic researchers attempt to maintain a close relationship between themselves and those they are researching (Neuman, 2006). The pragmatist paradigm requires this relationship in order to understand the phenomena of study, as their epistemological assumption is that knowledge is valid when the individuals
being researched understand it as reality (Hussey & Hussey, 1997; Neuman, 2006). By creating a relationship with the participants the ‘understanding’ can occur.

The epistemological orientation within the pragmatist paradigm is based on the view that it is appropriate to embrace both objective and subjective points of view in finding an answer to the phenomena under investigation (Tashakkori & Teddlie, 1998).

### 4.2.2.3 Methodological assumptions

Methodological assumptions are concerned with the process of the research and as such are concerned with the techniques used to discover the ‘reality’ (Guba & Lincoln, 1994; Hussey & Hussey, 1997). Therefore the paradigm of the research will influence the method of the study. Constructivists undertake research through a process of using samples, often taken over a period of time, and apply different research techniques to obtain various perceptions of the phenomena. The constructivist paradigm usually underlies inductive logic and qualitative research processes such as in-depth interviews, focus groups and participant observation (Guba & Lincoln, 1994). Analysis by constructivists is based on understanding the situation and looking for patterns that may be repeated in similar situations (Hussey & Hussey, 1997). Pragmatist researchers differ in that they believe that both inductive and deductive processes are appropriate to be used in answering their research questions, with the decision regarding the use of either qualitative or quantitative methods being dependent upon the research question (Tashakkori & Teddlie, 1998). For pragmatist researchers the research question under study is considered more
important than the methodological approach and they use whatever approach is available to understand and derive knowledge about the research problem (Rossman & Wilson, 1985). Lastly positivists are concerned with ensuring that any concept they use can be operationalised and described in such a way that it can be measured, hence they use large samples focusing on objective facts and the formation of hypotheses and analyses are usually related to association or causality (Hussey & Hussey, 1997). Positivist research is deductive.

4.2.3 Research paradigm for the present study

The current study was undertaken using a positivism paradigm. This was chosen partly due to the researchers bias and experience however due predominantly to the research question being concerned with the relationship between variables which is a key focus of the positivism paradigm (Gephart, 1999). From the above discussion on methodological assumptions it can be seen that the method, and therefore the entire research design is interwoven with the assumptions and philosophies of the researcher’s paradigm. The following sections outline the research design. Given this study was guided by the positivism paradigm; the research was conducted externally and objectively to, and independently of, the researcher. Rigorous procedures were followed and these are outlined in the following sections. These procedures were used to ensure that the values and biases of the researcher were prevented from influencing the outcome of the research.
4.3 Research design

This section explores relevant issues associated with the quantitative research design adopted in the present study. An overview of the research design is provided to develop an overall understanding, before the theoretical framework and conceptual model are summarised. This is followed by a discussion of the measurement approach utilised and the sampling plan. Following this section the method will be discussed in detail.

4.3.1 Understanding research design

Research design is defined as the master plan which will specify the methods and procedures that will be undertaken to collect and analyse the required information (Zikmund, 2003). Vogt (1993, p. 196) defines the research design as the ‘science (and art) of planning procedures for conducting studies so as to get the most valid findings’. The research questions determined during the early stages of the research are included in the design to ensure that the data collected is appropriate for solving the problem (Zikmund, 2003). The selection of an appropriate research design is critical to the success of the research in answering the research questions.

4.3.2 Theoretical framework and conceptual model

The theoretical framework and conceptual model for this study were developed in the literature review extant in chapter 2 and 3. The literature review highlighted seven research gaps and four research questions and 13 associated hypotheses were developed to provide insight into these gaps. The model is presented again here in
Figure 4.3-1. A summary of the theoretical framework will now be provided, refer to chapter 2 for the complete literature review.

4.3.2.1 Self and functional congruity

Self-congruity theory proposes that consumer behaviour is directed at matching the buyer’s self-concept with the product user image (Sirgy, 1982; Sirgy et al., 1997). The product user image is a representation of the stereotypical user of the product (Bosnjak & Rudolph, 2008). Alternatively the product user image can be explained as the symbolic attributes associated with a given product. While the term self-concept has been long considered from various perspectives, the consumer behaviour domain defines it as the totality of the individual’s thoughts and feelings in reference to themselves as an object (Rosenberg, 1979). In the most basic sense the self-concept is the way in which one perceives themselves (Grubb & Grathwohl, 1967).
Self-congruity theory proposes that consumers attempt to preserve or enhance their self-image by selecting products with ‘images’ they believe are congruent with their own self-concept and avoid products that are not (Claiborne & Sirgy, 1990; Johar & Sirgy, 1991; N. D. Wright & Sirgy, 1992). By choosing products with particular image associations individuals can communicate to others the type of person they are or want to be seen as, enhancing their self-image (Parker, 2009). Grubb and Grathwohl (1967) used the theory of individual self-enhancement (Rogers, 1951) as a basis for the argument that individuals’ behaviours are directed towards protecting and enhancing their self-concept.

Self-concept refers to self related prototypes or self-schema (Zinkhan & Hong, 1991). A self-schema denotes a knowledge structure made up of conceptually related information about oneself (Zinkhan & Hong, 1991). Self-schemas contain verbal information as well as images, representations and feelings (Zinkhan & Hong, 1991). As an individual grows up, the components that make up the self-schema are described in increased detail and the schema is constantly developing and changing as components and perceptions of one’s life are integrated into it.

Self-concept is multidimensional and there are a variety of models that reflect the kinds of self-concept, dimensions and these include actual self-image, ideal self-image, actual social self-image and ideal social self-image (Noble & Walker, 1997; Sirgy, 1982; Sirgy et al., 1997). Actual self image is how consumers see themselves (Sirgy et al., 2005). Ideal self image is how consumers would like to see themselves (Sirgy et al., 2005). Actual social self-image is how consumers believe significant others, such as friends, relatives, associates and co-workers, see them (Noble &
Walker, 1997). Ideal social self-image is how consumers would like to be seen by significant others (Sirgy et al., 2005).

Global self attitude or self-esteem has been treated as a conscious judgement regarding the relationship of ones actual and ideal selves (Rogers, 1951).

The cognitive process that describes the self-congruity model is self-image congruence, the cognitive matching of symbolic attributes of a product with a consumer’s self concept (Johar & Sirgy, 1991). As previously identified the self-concept is multidimensional and therefore so too is the process of self-congruity. These processes are defined by the models; the actual self-congruity model, the ideal self-congruity model, the social self-congruity model and the ideal social self-congruity model.

The actual self-congruity model suggests that there is a match between the consumer’s product-user image and their actual self-image and this influences consumer behaviour (Johar & Sirgy, 1991). This tendency to act in ways consistent with one’s personal identity is referred to as ‘self-consistency motivation’ (Johar & Sirgy, 1991; Lecky, 1945; Sirgy, 1986, 1990; N. D. Wright & Sirgy, 1992).

The actual social self-congruity model suggests that there is a match between the consumer’s product user image and their actual social-image and this influences consumer behaviour (Johar & Sirgy, 1991). The actual social self image affects consumers’ behaviour through the ‘social consistency motive’, (Johar & Sirgy, 1991; Sirgy et al., 2005; N. D. Wright & Sirgy, 1992).

The ideal social self-congruity model suggests that there is a match between the consumer’s product user image and their ideal social-image that influences consumer behaviour (Johar & Sirgy, 1991). The ideal-social self image affects consumers’ behaviour through the ‘social approval motive’, people are motivated to do things that will cause others to think highly of them (Johar & Sirgy, 1991; Sirgy et al., 2005; N. D. Wright & Sirgy, 1992).

The degree of influence that the actual, ideal, actual social and ideal social self have on the purchase decision is unknown. It is important to know which of these self images regulates behaviour to allow better understanding of consumer behaviour (Dolich, 1969). It is possible that the purchase of different products are influenced by different self-concepts (Dolich, 1969). For example socially conspicuous products have been suggested to have significantly different self-congruity than privately consumed products. The choice of which self to express is influenced by the specific characteristics of a given situation.

Functional congruity theory proposes that consumer behaviour is directed at matching ‘product image’ with the consumer’s referent attributes (Sirgy & Johar, 1985; Varvolis & Sirgy, 1984). Product image refers to the functional attributes
associated with a given product or service (Sirgy, 1983). Referent attributes are the consumers’ needs or ideal features and are used to evaluate the actual performance of the product (Johar & Sirgy, 1991). The greater the congruence between the audience’s utilitarian beliefs about the product and their referent beliefs the greater the likelihood of a positive evaluation. The cognitive process that describes the functional congruity model is the expectancy value model. This model indicates that a disposition towards a course of action is a function of the desirability of the perceived consequences that might occur (Johar & Sirgy, 1991). Therefore the greater the congruence between the consumer’s beliefs about the products’ attributes and the consumer’s referent attributes the greater the likelihood of purchase. Put simply this means that consumers decide on whether to obtain products by comparing the functional attributes of a product with their ideal or desired product specifications (Kressman et al., 2006).

Having revisited the major theory, the next section will outline the measurement approach, which is followed by definitions of the individual constructs and thus the measurement models for each construct. Finally the measurement models will be presented together to show the whole model in its testable form.

4.3.3 Measurement approach to the research

Structural equations modelling (SEM) was employed as the primary statistical technique. SEM simultaneously deals with multiple relationships and allows both measured and latent variables and constructs to be linked into a compact model (Hair et al., 2010). SEM provides the methodological advantage of specifying the theory
more exactly, testing more precisely and subsequently communicating more easily the content and findings (Seyed-Mohamed, 1995). It is particularly useful when a dependent variable becomes an independent variable in a subsequent dependent relationship (Hair et al., 2010).

The six stage decision process recommended by Hair et al. (2010) was undertaken to implement SEM. The six stages are as follows:

- **Stage 1**: Defining individual constructs
- **Stage 2**: Developing the measurement models
- **Stage 3**: Designing a study to produce empirical results
- **Stage 4**: Assessing measurement models validities
- **Stage 5**: Specifying the structural model
- **Stage 6**: Assessing the fit of the overall structural model

Stage 1 to 3 are outlined in this chapter and stage 4 to 6 will be conducted in chapter 5. The next section begins this discussion by outlining stage 1.

### 4.4 Defining the individual constructs (Stage 1)

This section outlines the questionnaire design and measures.
4.4.1 Questionnaire design

Data collection was done via a self-administered internet survey. Due to the speed and cost effectiveness of online questionnaires the required large sample sizes (as will be discussed in section 4.6.1.2) can be obtained by this method (Zikmund, 2003). In the past a disadvantage of online surveys has been that they can result in an unrepresentative sample as many individuals in the general population cannot access the internet or lack powerful computers or software that is compatible with features programmed into internet questionnaires (Zikmund, 2003). However with 86.8% of Australians having access to the Internet in 2012 (Ewing & Thomas, 2012) the researcher suggests that these disadvantages have been vastly reduced. In order to ensure that the sample was representative of the population, demographic information was collected. The demographic information was then compared to the demographics of the general population. The demographic information that was collected can be seen in section 4.4.2.3. The survey was administered via Qualtrics an online survey tool.

4.4.2 Measures

Four research questions were presented to address the research aim: to investigate relationships between functional and self-congruity within the context of consumer residential property purchase decisions. These research questions are:

RQ1 – What is the relationship between ASC, ISC, ASSC and ISSC and self-congruity (SC) during the residential property purchase decision?
RQ2 - What is the effect of self and functional congruity on residential property purchase intentions?

RQ3 - What is the effect of knowledge on functional and self-congruity during the residential property purchase decision-making process?

RQ4 - What is the effect of trust on functional and self-congruity during the residential property purchase decision-making process?

To address the research questions the following measures were used in this study: knowledge, trust, actual self-congruity, ideal self-congruity, actual social self-congruity, ideal social self-congruity, functional congruity and intention to act. All of the variables, except intention to act, included in this study were measured using multiple-item interval scales drawn from validated previous research. The use of a collective set of questions is used to create a better representation of the concept than a single item can (DeVellis, 1991). Details of the operationalisation of the measures and the demographic variables used are described in the following sections. In addition the rationale for using a single item scale for intention to act will be shown.

4.4.2.1 Stimulus materials

The stimulus set consisted of five fictitious property advertisements. The advertisements were developed to represent typical properties. The five property categories and the advertisements (including image selection) were defined through consultation with a property marketing manager, real estate agents and through market analysis by the author. In addition the appropriateness of the categories and
images were assessed through a pilot study. Details of the pilot study are outlined in section 4.6.4. The property advertisements are attached as Appendix 1 - Appendix 5.

Literature supports the use of multiple stimuli. In the literature review (section 2.2.1.1) a discussion of the decision making process was presented. It was noted that consumers progress through a number of stages. This research investigates the evaluation of alternatives state however it is important to look at the stage before to understand the development of these stimulus materials. In specific research investigating house decision making D. S. Levy and Lee (2004) found a stage unique to housing decisions; the product specification stage. During this stage the family specifies the initial choice criteria for their search (e.g. price, location, number of bedrooms/bathrooms, parking) (D. S. Levy & Lee, 2004). The stimulus set was therefore created with this in mind. A range of properties were utilised to ensure that the product (property) the consumer was responding to was within their evoked set. The product specification decisions are linked to the family life cycle (D. S. Levy & Lee, 2004) and therefore by including products with different functional attributes the researcher could ensure all consumers had a product within their evoked set. If the house in the research was within the consumers inept set the results would be invalid as the participants would not be making a decision relating to that type of house.

All questions following will refer to one of the five properties, participants will be sorted into the appropriate group by answering the following question:
Which of the following properties reflect the type of property you are considering buying?

- 1 bedroom, 1 bathroom unit with an underground parking space (Appendix 1)
- 2 bedroom, 2 bathroom unit with a single lock up garage (Appendix 2)
- 3 bedroom, 2 bathroom townhouse with a single lock up garage (Appendix 3)
- 3 bedroom, 2 bathroom house with double lock up garage (Appendix 4)
- 4 bedroom, 3 bathroom house with double lock up garage (Appendix 5)

Based on Levy’s (2004) product specification stage consumer’s will be able to select the appropriate property with little cognitive effort.

4.4.2.2 Qualifier questions

While the data collection panel specifically targeted those consumers who stated they were looking to purchase residential property in the next 2 years, in order to ensure that respondents were suitable, a qualifier question was initially asked with respondents screened out if they answered no. The question was ‘do you intend to purchase property in the next 2 years?’ Therefore ensuring participants were within the sampling unit of analysis (see section 4.6.1.1). In addition to the qualifier the reason for purchase was also asked. This question was added as previous housing literature indicates a difference between purchasing a residential property for the purpose of owner occupation versus investment (Arrondel & Lefebvre, 2001). This question will additionally allow for further analysis based on reason for home occupation purchase in the event that the results were inconclusive. The reason for purchase item choices were defined in collaboration with the marketing manager for
Domain.com.au who has 10 years experience and with a professor with 17 years of experience undertaking property research to ensure they were appropriate. These items are presented in Table 4.4-1.

<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for purchase</td>
<td>Please select the reason for your purchase.</td>
<td>Upsizing, Downsizing, First Home, Investing, Relocating, Other</td>
</tr>
</tbody>
</table>

Table 4.4-1 - Reason for purchase qualifier question

4.4.2.3 Demographic variables

A number of demographic variables were included in the study to allow a comparison to be made to the population to assess if the sample was representative and to allow comparison between groups if the results were inconclusive. These questions included gender, year born, postcode, household income and education level. The questions and associated choices are outlined in Table 4.4-2. To allow for comparison to the Australian population all item choices were drawn from Australian Bureau of Statistics categories (Australian Bureau of Statistics, 2012).

<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>What is your gender</td>
<td>Male, Female</td>
</tr>
<tr>
<td>Year born</td>
<td>What year were you born?</td>
<td>Respondent input, four digit year</td>
</tr>
<tr>
<td>Postcode</td>
<td>In which state do you currently reside?</td>
<td>NSW, ACT, VIC, QLD, SA, TAS, WA, NT</td>
</tr>
<tr>
<td>Household income</td>
<td>What is your gross household income per</td>
<td>Negative or no income, $1 - $20,799</td>
</tr>
<tr>
<td>Item</td>
<td>Question</td>
<td>Answers</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>week?</td>
<td>$20,800 - $41,599</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$41,600 - $62,399</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$62,400 - $83,199</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$83,200 - $103,999</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$104,000 - $145,599</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$145,600 plus</td>
</tr>
<tr>
<td>Education</td>
<td>What is the highest level of education you have completed?</td>
<td>Postgraduate Degree</td>
</tr>
<tr>
<td>level</td>
<td></td>
<td>Graduate Diploma/Graduate Certificate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bachelor Degree</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advanced Diploma/Diploma</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Certificate III/IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Certificate I/II</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Certificate n.f.d.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Year 12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Year 10 or below</td>
</tr>
</tbody>
</table>

Table 4.4.2 - Demographic questions categories from the Australian Bureau of Statistics (2012)

4.4.2.4 Trust

Trust was defined in the literature review as a willingness to rely on an exchange partner, reducing the feelings of vulnerability associated with consumer behaviour (Moorman et al., 1993). The bounds of the trust to be investigated in this research were also discussed in the literature review. It was stated that in the context of this research, trust will be measured between the consumer (potential purchaser) and the advertiser (the real estate agent) as these are the two major parties at the evaluation of alternative stage during residential property purchase decision making. Due to the nature of the initial evaluation of property alternatives (predominantly done online or at a real estate window front) the trust to be investigated in this research is of a holistic level. This means that trust is developed and evaluated in terms of real estates in general rather than one particular real estate agent. Given this boundary trust was viewed at an aggregate level of the marketplace and following Walsh and Mitchell (2010) conceptualised as the sum of a consumer's willingness to rely on real estate agents’ future behaviour.
Two dominant conceptions of trust are evident in the literature: trust as a cognitive expectation or affective sentiment and trust as a risk-taking behaviour or a willingness to engage in such behaviour (McAllister, 1995). Although Moorman et al. (1993) combine these trust perspectives in a higher order construct; Morgan and Hunt (1994) suggest that behavioural intent is implied. They argue that one would not label a trading partner as ‘trustworthy’ if one is not willing to take actions that otherwise would entail risk (Morgan & Hunt, 1994). The genuine confidence that a partner can be relied on indeed implies the behavioural intention to rely (Morgan & Hunt, 1994). Morgan and Hunt’s (1994) suggestion that behavioural intent is implied is the rationale used to support the choice of trust scale.

The trust scale used in this study measures the consumer’s confidence in property advertisers reliability and integrity and is measured by items which Gilliland and Bello (2002) derived from Morgan and Hunt (1994). Gilliland and Bello’s original scale and the modified scale are shown in Table 4.4-3

<table>
<thead>
<tr>
<th>Original scale</th>
<th>Modified scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>This distributor can be trusted at all times</td>
<td>Property advertisers can be trusted at all times</td>
</tr>
<tr>
<td>This distributor is perfectly honest and truthful</td>
<td>Property advertisers are perfectly honest and truthful</td>
</tr>
<tr>
<td>This distributor can be trusted completely</td>
<td>Property advertisers can be trusted completely</td>
</tr>
<tr>
<td>This distributor can always be counted on to do</td>
<td>Property advertisers can always be counted on to do</td>
</tr>
<tr>
<td>what is right</td>
<td>do what is right</td>
</tr>
</tbody>
</table>

Table 4.4-3 - Gilliland and Bello (2002) trust scale as modified by the author for this research

4.4.2.5 Knowledge

Knowledge was discussed in section 3.2.1 of the literature review. It was shown to be a cognitive structure that consumers hold about products and the ways in which that information is organised (Brucks, 1986; Kanwar et al., 1981; Marks & Olson, 1981).
There are two major approaches to measuring product knowledge; actual and perceived (C Whan Park & Lessig, 1981). Actual knowledge measures in terms of how much a person knows about the product and perceived knowledge measures how much a person thinks they know about the product. C Whan Park and Lessig (1981) indicate that using actual amount of knowledge contributes to our understanding of how memory impacts the decision making process whereas self—assessed (or perceived) provides us with information about the decision makers’ systematic biases and heuristics in choice evaluations and decisions.

Given this study is investigating consumer behaviour in terms of heuristics, perceived knowledge was utilised. Knowledge was measured by a four item, seven-point interval scale used to measure a consumer’s perceived knowledge of a specified product category as well as the confidence to make purchase decisions and give advice to others about the product class. The operationalisation of the scale can be seen in Table 4.4-4. The development of the scale was not specified by Smith and Park (1992) however they report a Cronbach alpha of .80 for the scale.

<table>
<thead>
<tr>
<th>Original scale</th>
<th>Modified scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel very knowledgeable about this product</td>
<td>I feel very knowledgeable about <strong>property</strong></td>
</tr>
<tr>
<td>If a friend asked me about this product, I could give them advice about different brands</td>
<td>If a friend asked me about buying <strong>property</strong>, I could give them advice</td>
</tr>
<tr>
<td>If I had to purchase this product today, I would need to gather very little information in order to make a wise decision</td>
<td>If I had to purchase <strong>property</strong> today, I would need to gather very little information in order to make a wise decision</td>
</tr>
<tr>
<td>I feel very confident about my ability to tell the difference in quality among different brands of this product</td>
<td>I feel very confident about my ability to tell the difference between different <strong>properties</strong></td>
</tr>
</tbody>
</table>

Table 4.4-4 - Smith and Park (1992) knowledge scale as modified by the author for this research
4.4.2.6 Self-congruity (actual, ideal, actual social, ideal social)

There are two primary methods of measuring self and functional congruence. These two categories are the traditional method and the direct (or holistic) method.

When measuring self-congruity the traditional method measures participants’ self-concepts and their product user images separately in relation to the product. A discrepancy or ratio score is then calculated from the two measurements to show overall self-congruency. Malhotra’s (1981) scale to measure self-concepts, person concepts and product concepts is the most widely used traditional method. Alternatively the measures are tailor made for the specific study with the image dimensions being created as a function of the product used. Most studies found in the literature search of consumer self-congruity research measured self-congruity using the traditional method.

The alternative direct method was suggested in order to overcome some inherent shortcomings of the traditional measure. Sirgy et al. (1997) assessed the predictive validity of the two measurement methods. They provided three key problems with the traditional method; the use of discrepancy scores, the use of predetermined images and the use of a compensatory decision rule. Through these three points Sirgy et al. (1997) developed an argument that showed the direct method as more predictively valid. These three key problems will now be discussed in detail.

The first problem the direct method overcomes is that the traditional methods need to combine constructs mathematically to capture congruity (Sirgy et al., 1997). As previously explained, the traditional approach is a piecemeal process, elements are
measured separately then combined using a mathematical calculation. This process involves multiple problems. The use of discrepancy, distance and ratio have been criticised as being unreliable, having systematic correlations with other variables, having questionable construct validity and restricting variables (Peter, Churchill Jr, & Brown, 1993). A better process utilises a method that can capture the constructs more directly so that the subsequent calculation of difference scores is unnecessary (Johns, 1981). In their study of consumer satisfaction, Tse and Wilton (1988) showed in an empirical test that a direct measure outperformed a difference score measure. In addition to the performance benefits Tse and Wilton (1988) indicated that the direct measurement was less taxing on respondents because they had half as many items to respond to. The direct method measures congruity holistically and was therefore considered to be a superior method.

Lastly Sirgy et al. (1997) indicated that the use of the compensatory decision rule in the traditional method makes it inferior. This is because it assumes that participants experience self-congruity with a variety of image dimensions and then integrate the information additively across all image dimensions. According to Payne, Bettman, and Johnson (1993), no single model, such as an additive one, is likely to be an adequate representation of evaluative decision-making. The author suggests that this is because the decision-making strategies have different advantages and disadvantages in different situations. Beach and Mitchell (1978) agree, indicating individuals select the strategy that is best for the specific task. Peter et al. (1993) noted that as a direct measure approach requires subjects to mentally combine their thoughts as they normally would, rather than to have an arbitrary combination rule
forced upon them, it has huge advantages over indirect measures. Thus the researcher was of the opinion that the overall productiveness of self-image congruence measures could be increased by using global instead of dimension based cues.

In summary the direct method assumes that congruence is a holistic perception and alleviates the problems associated with the traditional method as follows:

- The direct method deals with the problem of discrepancy scores by directly measuring congruence
- The direct method overcomes the problem of the compensatory decision rule by guiding participants to focus on the product user image and product image and to rate the congruency holistically.

Sirgy et al. (1997) undertook six studies which provided support for the high productiveness of the direct method over and beyond the indirect one. Consistent findings were evident from the six studies predicting an array of consumer behaviours including brand preference, product form preference, brand attitude, program choice and consumer satisfaction. In addition, the findings were consistent across a variety of goods and services, different consumer populations and different consumption settings.

The new scale will allow additional theoretical insights into consumer decision-making to be made, through the comparison of different products on a universal scale.
Based on the analysis of the shortcomings of the traditional method of measuring congruence and the ability of the direct method to overcome these shortcomings, the direct method was used in this research study. The items were generated by modifying the existing scales identified through the review of the literature.

In this study the questions that are outlined below were preceded by the following:

- In order to answer the remaining questions you will need to reflect upon yourself. This will be done in four ways.
  
  - How you currently see yourself
  
  - How you want to see yourself
  
  - How you believe others see you, and
  
  - How you want others to see you

For some people these will be very similar however for others they will be very distinct. Even if they are very similar please answer each block of questions. Take as much time as you need to think about how you want to be thought of, how you think others currently see you, how you want to see yourself and how you currently see yourself.

The remaining questions relate to the property in this advert. Take a moment to think about the property in this advert. Think about the kind of person who typically owns this type of property. Visualise this person in your mind. If you are having trouble visualising them think about their age, family life stage, income
or social status. Once you have a clear picture in your mind move on to the questions below.

The items assessing actual self-congruity were generated by modifying the work of Sirgy et al. (1997). The items are shown in Table 4.4-5.

Table 4.4-5 - Actual self-congruity scale as modified by the author for this research

<table>
<thead>
<tr>
<th>Original scale</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image of the [user of focal brand] is highly consistent with how I see myself</td>
<td>The image of the typical owner of this property is highly consistent with how I see myself</td>
</tr>
<tr>
<td>Wearing Reebok shoes reflects the type of person I am</td>
<td>The typical owner of this property reflects the type of person I am</td>
</tr>
<tr>
<td>I can identify with marketing students</td>
<td>I can identify with the typical owner of this property</td>
</tr>
<tr>
<td>The typical visitors (or tourists) to Norfolk are very much like me</td>
<td>The type of person who lives in this property is very much like me</td>
</tr>
<tr>
<td>The typical visitors (or tourists) to Norfolk are similar to me</td>
<td>The typical owner of this house is similar to me</td>
</tr>
</tbody>
</table>

Based on Sirgy et al. (1997) These items, as presented in the above table, were preceded by the following instruction:

*Let's start with how you currently see yourself. Take a moment to think about how you view yourself (remember to distinguish this from your ideal self image) and once you have a complete picture in your mind, indicate your agreement or disagreement with the following statements.*

Based on the definition and concept of the three self-concepts in the literature, the basic structure for actual self-congruity was used to develop measures of each of the additional self-congruity concepts. See Table 4.4-6 for details of the modification of the scales.
<table>
<thead>
<tr>
<th>Ideal Self-Congruity</th>
<th>Original Item</th>
<th>Modified Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image of the typical owner of this property is highly consistent with how I see myself</td>
<td>The image of the typical owner of this property is highly consistent with how I would like to see myself</td>
<td></td>
</tr>
<tr>
<td>The typical owner of this property reflects the type of person I am</td>
<td>The typical owner of this property reflects the type of person I would like to be</td>
<td></td>
</tr>
<tr>
<td>I can identify with the typical owner of this property</td>
<td>I would like to identify with the typical owner of this property</td>
<td></td>
</tr>
<tr>
<td>The type of person who lives in this property is very much like me</td>
<td>The type of person who lives in this property is very much like the person I would like to be</td>
<td></td>
</tr>
<tr>
<td>The typical owner of this house is similar to me</td>
<td>The typical owner of this house is similar to the person I would like to be</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Actual Social Self-Congruity</th>
<th>Original Item</th>
<th>Modified Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image of the typical owner of this property is highly consistent with how I see myself</td>
<td>The image of the typical owner of this property is highly consistent with how others see me</td>
<td></td>
</tr>
<tr>
<td>The typical owner of this property reflects the type of person I am</td>
<td>The typical owner of this property reflects the type of person others see me as</td>
<td></td>
</tr>
<tr>
<td>I can identify with the typical owner of this property</td>
<td>Others would think I identify with the typical owner of this property</td>
<td></td>
</tr>
<tr>
<td>The type of person who lives in this property is very much like me</td>
<td>The type of person who lives in this property is very much like how others see me</td>
<td></td>
</tr>
<tr>
<td>The typical owner of this house is similar to me</td>
<td>The typical owner of this house is similar to how others see me</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ideal Social Self-Congruity</th>
<th>Original Item</th>
<th>Modified Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image of the typical owner of this property is highly consistent with how I see myself</td>
<td>The image of the typical owner of this property is highly consistent with how I would like others to see me</td>
<td></td>
</tr>
<tr>
<td>The typical owner of this property reflects the type of person I am</td>
<td>The typical owner of this property reflects the type of person I would like others to see me as</td>
<td></td>
</tr>
<tr>
<td>I can identify with the typical owner of this property</td>
<td>I would like others to think I identify with the typical owner of this property</td>
<td></td>
</tr>
<tr>
<td>The type of person who lives in this property is very much like me</td>
<td>The type of person who lives in this property is very much like how I would like others to see me</td>
<td></td>
</tr>
<tr>
<td>The typical owner of this house is similar to me</td>
<td>The typical owner of this house is similar to the person I would like others to see me as</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.4-6 - Ideal self-congruity, actual social self-congruity and ideal social self-congruity actual self-congruity scale as modified by the author for this research based on Sirgy et al. (1997).

The following sentences preceded each block of questions that covered the constructs of ideal self-congruity, actual social self-congruity and ideal social self-congruity, as presented in Table 4.4-6:
• Now take a moment to think about the person you would like to be. With this in mind answer the following questions.

• The next set of questions requires you to reflect upon how you think others (such as your family, friends and co-workers) see you. Keep in mind that this is different to how you want others to see you.

• Now reflect upon how you would like others to see you for the following statements

4.4.2.7 Functional congruity

Functional congruity was defined in the literature as the matching of the ‘product image’ with the consumer’s referent attributes (Sirgy & Johar, 1985; Varvolis & Sirgy, 1984). Given the product specific nature of functional attributes, functional congruity scales are predominantly developed for the specific study (for examples see Malhotra (1981) and Kressman et al. (2006)). The most common development method is a two step exploratory design. Given the availability of research on functional attributes in housing this was assessed as an unnecessary step in this study (Brandstetter, 2011; Bruce & Kelly, 2013; Hartig, 2006; Lindberg et al., 1989; Susilawati & Anunu, 2001). Therefore using the data from previous studies the functional congruity scale in Table 4.4-7 was developed. The questions, presented in Table 4.4-7, were preceded by the following paragraph and property advert (see Appendix 1 - Appendix 5):

Take another moment to think about this property. Think about the functional attributes that you want in a property. Once you have done this, indicate your satisfaction with the following attributes.
Table 4.4-7 - Functional congruity scale items developed from literature review

<table>
<thead>
<tr>
<th>Item</th>
<th>7 point scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>General layout of the property</td>
<td>Very dissatisfied/Very satisfied</td>
</tr>
<tr>
<td>Storage space</td>
<td>Very dissatisfied/Very satisfied</td>
</tr>
<tr>
<td>Proximity to desired facilities</td>
<td>Very dissatisfied/Very satisfied</td>
</tr>
<tr>
<td>Indoor entertaining space</td>
<td>Very dissatisfied/Very satisfied</td>
</tr>
<tr>
<td>Bathrooms (Number and Size)</td>
<td>Very dissatisfied/Very satisfied</td>
</tr>
<tr>
<td>Outside entertaining space</td>
<td>Very dissatisfied/Very satisfied</td>
</tr>
<tr>
<td>Kitchen (Size and Layout)</td>
<td>Very dissatisfied/Very satisfied</td>
</tr>
<tr>
<td>Garage/car space/s</td>
<td>Very dissatisfied/Very satisfied</td>
</tr>
<tr>
<td>Bedrooms (Number and Size)</td>
<td>Very dissatisfied/Very satisfied</td>
</tr>
</tbody>
</table>

4.4.2.8 Intention to act

In social psychology a behavioural intention is ‘...a predisposition to act in particular ways towards an object’ (Sutherland, 1989, p. 49). Behaviour suggests action, and intent, a present resolve to perform some future action’ (Wolman & Adler, 1973, p. 43). In this research a distinction was made between attitudes and behavioural intentions. Whereas an attitude is a predisposition to think or feel a certain way about an object, a behavioural intention is a predisposition to act a certain way towards an object. Studies by Klein and Lansing (1955), Tobin (1959) and Adams (1964) proved that in short term cross sectional studies behavioural intentions were more accurate predictors of purchase than attitudes were. Because of the nature of housing decision-making this study looked at the intention to arrange an inspection of the property during the evaluation of alternatives stage. Therefore we assessed the consumer’s behavioural intention to act.
Day, Gan, Gendall and Esslemount (1991) suggest that the poor predictiveness of buying intention scales is largely due to the way in which they are measured. Intention scales get respondents to express their likelihood of purchase using verbal intention descriptors. Examples range from three point scales ‘yes’, ‘no’ and ‘don’t know’ to nine-point semantic differential scales (Pickering & Greatorex, 1980). It has been raised that yes-no scales are very limited in enabling respondents to report their intentions (Ferber & Piskie, 1965). At the other end, purchase intention scales with additional items lack reliability as respondents interpret them differently (Worcester & Burns, 1975). Juster (1964) argues that verbal intentions are really just disguised probability statements and asked why these probabilities were not collected directly? Thus increasing the reliability.

Intention to act was therefore measured using the Juster (1964) purchase probability scale. This scale has been shown to consistently outperform other types of scales and has been applied to a wide range of applications (Day et al., 1991; East, Hammond, & Lomax, 2008; Faulkner & Corkindale, 2009; Juster, 1964, 2012; M. Wright & MacRae, 2007). In the original study by Juster (1966) the purchase probabilities (Juster scale) explained twice as much of the variance in actual purchase rates than the buying intentions data. Clawson (1971) reported that it was due to the Juster’s study that the United States Bureau of Census subsequently shifted to the use of probability purchase scales. Stapel (1968) conducted a study on car purchase in the Netherlands with similar results to Juster’s (1966) study. Gabor and Granger (1972) tested the scale in Britain on cars with confirming results. Wright and MacRae (2007) undertook a meta-analysis of studies that examined the accuracy of the Juster scale.
and concluded that the Juster scale has smaller confidence intervals than purchase intentions.

The Juster scale has been shown to provide better discrimination between buyers and non-buyers than purchase intentions (Gabor & Granger, 1972; Juster, 1966, 2012; Pickering & Isherwood, 1974). It was therefore assessed as an appropriate scale to use to measure consumers' intentions to act.

The scale indicated in Table 4.4-8 was preceded by the same property advert (see Appendix 1 - Appendix 5) and the question:

> What is the probability that you would contact the seller to arrange an inspection of this property?

<table>
<thead>
<tr>
<th>Scale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Certain, practically certain (99 in 100)</td>
</tr>
<tr>
<td>9</td>
<td>Almost sure (9 in 10)</td>
</tr>
<tr>
<td>8</td>
<td>Very probable (8 in 10)</td>
</tr>
<tr>
<td>7</td>
<td>Probable (7 in 10)</td>
</tr>
<tr>
<td>6</td>
<td>Good possibility (6 in 10)</td>
</tr>
<tr>
<td>5</td>
<td>Fairly good possibility (5 in 10)</td>
</tr>
<tr>
<td>4</td>
<td>Fair possibility (4 in 10)</td>
</tr>
<tr>
<td>3</td>
<td>Some possibility (3 in 10)</td>
</tr>
<tr>
<td>2</td>
<td>Slight possibility (2 in 10)</td>
</tr>
<tr>
<td>1</td>
<td>Very slight possibility (1 in 10)</td>
</tr>
<tr>
<td>0</td>
<td>No chance, almost no chance (1 in 100)</td>
</tr>
</tbody>
</table>

Table 4.4-8 - Purchase Intention Item modified from Juster’s (1966) purchase probability scale

While multi-item measures are preferred in SEM, Hair et al. (2010) acknowledge that there are exceptions. When a single item measure adequately represents a single construct it can be sufficient (Hair et al., 2010). Rossiter (2002) provided theoretical backing with the argument, if the object of the construct can be conceptualised concretely and if the attribute of the construct can be designated as concrete there is
no need for a multi-item scale. Rossiter then teamed up with Berkrist to present empirical findings that indicated that single item measures demonstrated equally high predictive validity as multi-item scales (Bergkvist & Rossiter, 2007, 2009). Therefore the use of a single item measure for intention to act was deemed suitable.

This section outlined the operationalising of the constructs. This was done in direct consultations with the conceptual model (refer to section 1.2.4). Stage 2 will now develop and specify the construct measurement models.

4.5 Developing and specifying the construct measurement models (Stage 2)

Specification of the construct measurement model is an important stage as SEM is based on the premise that models are completely specified before the data is analysed (Bentler & Chou, 1987). This section provides a diagram of each of the measurement models as specified in the previous section.

4.5.1 Trust

Figure 4.5-1 provides a diagram of the trust measurement model as specified in the section 4.4.2.4. It consists of four items with four error terms.
4.5.2 Knowledge

Figure 4.5-2 provides a diagram of the knowledge measurement model as specified in section 4.4.2.5. It consists of four items with four error terms.
4.5.3 Actual self-congruity

Figure 4.5-3 provides a diagram of the actual self-congruity measurement model as specified in the section 4.4.2.6. It consists of five items with five error terms.

![Diagram of actual self-congruity measurement model]

4.5.4 Ideal self-congruity

Figure 4.5-4 provides a diagram of the ideal self-congruity measurement model as specified in section 4.4.2.6. It consists of five items with five error terms.
4.5.5 Actual social self-congruity

Figure 4.5-5 provides a diagram of the actual social self-congruity measurement model as specified in section 4.4.2.6. It consists of five items with five error terms.
4.5.6 Ideal social self-congruity

Figure 4.5-6 provides a diagram of the ideal social self-congruity measurement model as specified in section 4.4.2.6. It consists of five items with five error terms.

![Diagram of Ideal Social Self-Congruity Measurement Model]

4.5.7 Functional congruity

While functional congruity was measured by multiple items, it was condensed into a single item. It is common practice in applications of structural equation modeling techniques is to create composite measures from individual items (Landis, Beal, & Tesluk, 2000). There are several approaches to weighing individual scale items in SEM. These approaches include total aggregation, total disaggregation, partial disaggregation, and partial aggregation (Bagozzi & Heatherton, 1994). Under the total aggregation approach, all the items are summed into a single indicator or latent
variable (Hoe, 2008). This was the approach used for creating a composite functional congruity single item measure.

4.5.8 Intention to act

Intention to act was measured using a single item. The implications of single item measures for structure equation models were discussed in section 4.4.2.8 and it was raised that when a single item measure adequately represents a single construct it can be sufficient (Hair et al., 2010). The Juster scale has been shown to provide better discrimination between buyers and non-buyers than purchase intentions (Gabor & Granger, 1972; Juster, 1966, 2012; Pickering & Isherwood, 1974). It was therefore assessed as an appropriate scale to use to measure consumers’ intentions to act.

This section specified the measurement models. Each latent construct to be included in the model was identified and the measured indicators were assigned to latent constructs. Functional congruity and intention to act were not specified into construct measurement models as they were single item measures and therefore measurement models are not possible to create. The single items are still incorporate into the observed covariance matrix however there will only be one item associated with each construct (Hair et al., 2010).

4.6 Designing a study to produce empirical results (Stage 3)

With the measurement models now specified we now look at the elements that will influence the research design and ensure the validity of the empirical results. In
particular we address the sampling plan procedures to increase response rate, estimation technique, computer program and pre-testing.

4.6.1 Sampling plan

In designing a sampling plan a number of issues need to be taken into account; unit of analysis, target population and sampling frame, sampling procedures and sample size (Zikmund, 2003). The following sections discuss each of these issues.

4.6.1.1 Unit of analysis, target population and sampling frame

This study was undertaken within the real estate market, in Australia, targeting anyone who intends to purchase property within the next 2 years. This defines the study’s unit of analysis to encompass Australian consumers currently searching to purchase a house in the next 2 years.

Zikmund (2003, p. 373) defines the target population as ‘the complete group of specific population elements relevant to the research project’. Thus the target population for this study is Australian home buyers currently intending to purchase property within 2 years.

A sampling frame is ‘...a list or other record of the population from which all the sampling units are drawn’ (Vogt, 1993, p. 202). A partnership with Permission Corp was set up to allow access to property buyers (refer to discussion in section 4.6.1.3 and 4.6.1.3.1). The sampling frame was therefore consumers who were a member of Permission Corp's MyOpinion research panel who stated that they intended to purchase property in the next 2 years.
4.6.1.2 Sample size

When determining the required sample size the statistical data analysis methodology, needs to be taken into consideration. As previously mentioned structural equation modelling (SEM) was utilised for the data analysis. Compared with other multivariate data analysis methods, SEM requires a large sample size in order to generate reliable results. Several rules of thumb have been offered in the literature. Sample size changes according to the complication level of the SEM model: the more complicated the model, the larger the sample size required. Bentler (1985) suggested a ratio of respondents to the number of free parameters should be 10:1 for data with arbitrary distributions, while Bentler and Chou (1987) indicated a ratio of 5:1 for data with normal distributions. However, some researchers have argued that, no matter how simple a model is, a sample size of at least 200 should be maintained (Bearden & Etzel, 1982; Bentler & Yuan, 1999; Boomsma, 1985).

Hair et al. (2010) suggest that the sample must adequately represent the population of interest and that this may be the most important factor when determining sample size. Based on Bentler and Chou (1987) and Bearden, Sharma, and Teel (1982) a sample size of 420 was required for this study in order to allow for the use of a split sample approach to the modification of any of the construct measures and retested should the construct require it. In addition the sample was checked to ensure that it adequately represented the population as per Hair et al. (2010).
4.6.1.3 Sample source

The sampling frame and therefore the source of participants came from Permission Corp’s leading research panel MyOpinions.

MyOpinions has developed, and continues to maintain, an active panel which adheres to a strict “research only” policy governed by industry research bodies such as ESOMAR, AMSRS and AMSRO (MyOpinions, 2012). MyOpinions is also accredited to ISO 20252 and ISO 26362 which is further evidence of its commitment to professional standards and guidelines (MyOpinions, 2012). The currently active panel members is 370,000 and MyOpinions has never needed to use a top up with external panels as their panel can meet all sample size and target group requirements (MyOpinions, 2012).

The MyOpinions panel is recruited through a wide range of both offline and online sources (MyOpinions, 2012). Approximately 51% of its panel is recruited from offline sources. MyOpinions has a recruitment strategy that ensures the panel represents broad demographics including hard to reach groups (MyOpinions, 2012).

The panel has a double opt-in registration process (MyOpinions, 2012). They also have a confirmation of identity procedure to prevent fraudulent respondents (MyOpinions, 2012).
4.6.1.3.1 Sampling process

To increase sample quality, MyOpinions adopts a systematic approach based on market research fundamentals. The process required to select a sample for any survey follows the specific steps below:

1. Available panellists are isolated (panellists who do not fit the research specification profile or are currently in quarantine are removed from the available sample).

2. Quota groups are defined (available panellists are divided into the relevant quota groups for stratified sampling).

3. The sampling frame is randomly selected and defined.

4. Individuals are randomly selected from within quota groups or from distribution percentages provided by the clients.

5. Invitations to participate are sent. (MyOpinions, 2012).

The sample design, methodology and release plan were discussed in detail with MyOpinions to ensure that there was no compromise on data integrity during or at the end of the fieldwork.

Because of the overwhelming responses and the filling of all required quotas, procedures to increase response rate were not required. MyOpinions is careful not to over-incentivise and attract professional respondents (MyOpinions, 2012). At the same time MyOpinions ensures that panellists are adequately motivated (MyOpinions, 2012). MyOpinions provides nominal points for screen outs as well as for survey completion (MyOpinions, 2012). This increases the validity of the
responses as respondents are less likely to skew their answers to screener questions in an attempt to qualify for the survey (MyOpinions, 2012). The nominal points can be redeemed for cash or donated to charity (MyOpinions, 2012).

4.6.2 Estimation technique

The estimation technique used was maximum likelihood (ML) method. The ML estimation assumes that the following conditions are met; that the sample is very large, that the distribution of the observed variables is multivariate normal, that the hypothesized model is valid and the scale of the observed variables are continuous (Byrne, 2001). The assumption of continuous variables has been discussed in much detail in the literature and it is generally accepted that Likert type scales are assumed to be continuous (Byrne, 2001). The assumption of multivariate normality is of issue to this study as if the data is not normally distributed the estimates are not robust (Schumacker & Lomax, 2004), to overcome this issue robust statistics developed by Satorra and Bentler (1988b) were used in addition to ML to verify that the non-normal multivariate nature of the data did not influence the results.

4.6.3 Computer program

The statistical program AMOS (Analysis of Moment Structures) version 20 was used to undertake the majority of data analysis. Hair et al. (2010) suggest that SEM programs are becoming more similar as they evolve and the principle difference is the notation used in specifying the measurement and structural models. EQS was additionally used to undertake the robust statistical analysis that AMOS could not and
which was required in those instances when the data was found to be multivariate non-normal (this is discussed during the analysis see sections 6.2, 6.3 and 6.4).

4.6.4 Pre-test

A pilot study was undertaken to test the questionnaire. Wengraf (2001) identified that one’s questionnaire and method in general can be improved in unforeseen ways by undertaking pilot studies. When measures are taken from a variety of sources some type of pre-test should be performed (Hair et al., 2010).

The pre-test was undertaken in two steps. Firstly the questionnaire was checked over by research professionals then a trial run was undertaken with a pilot sample of 51. This two step pre-test attempts to detect any problems relating to question wording, leading questions and bias due to question order (Zikmund, 2003).

4.6.4.1 Changes as a result of pre-test – Step 1: review by researchers

As a result of the first step of the pre-test the following changes were made to the questionnaire design.

<table>
<thead>
<tr>
<th>Change</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual, ideal, social actual and ideal social congruity were split up into separate questions</td>
<td>Reduce the cognitive burden on the respondent.</td>
</tr>
<tr>
<td>Fixed typographical errors</td>
<td></td>
</tr>
<tr>
<td>Fixed question repeat answer – self-congruity</td>
<td></td>
</tr>
<tr>
<td>Added additional demographic items: Income</td>
<td>Allow more accurate comparison to the population</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
</tr>
<tr>
<td>Education level</td>
<td></td>
</tr>
<tr>
<td>Standardisation of scales</td>
<td>Reduce the cognitive burden on the respondents.</td>
</tr>
<tr>
<td>Use of five property categories</td>
<td>Self relevance – reduce noise – ensure the product was within the consumer’s evoked set.</td>
</tr>
<tr>
<td>Added additional items to self-congruity scale</td>
<td>Ensure correct measurement and identification for data analysis.</td>
</tr>
<tr>
<td>Originally 3 items now 5 items</td>
<td></td>
</tr>
<tr>
<td>Purchase intention scale changed to intention to act/juster scale</td>
<td>Improve predictiveness therefore increasing the reliability of the research</td>
</tr>
</tbody>
</table>

Figure 4.6-1 - Changes as a result of pre-test – Step 1: review by researchers
4.6.4.2 Changes as a result of pre-test – Step 2: pilot study

As a result of the second step of the pre-test the following changes were made to the questionnaire design.

<table>
<thead>
<tr>
<th>Change</th>
<th>Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seller was changed to Agent</td>
<td>Remove the explicit meaning attached to agent and ensured that the participants took a holistic view and answered the question relative to all sellers rather than just those that are acting as agents.</td>
</tr>
<tr>
<td>Addition of relocating to reason for purchase.</td>
<td>Was found to be a major reason that was originally overlooked. By including it as an option it reduces the cognitive effort therefore burden by making it a choice rather than participants having to type it in.</td>
</tr>
</tbody>
</table>

Figure 4.6-2 - Changes as a result of pre-test – Step 2: pilot study

4.7 Ethical considerations

In order to conform to ethical requirements, the research process was undertaken in accordance with the Australian Code of Conduct for Research. Due to the nature of the research it was considered to have low and negligible risk. Therefore an expedited ethics review was submitted to Southern Cross University’s Human Research Ethics Committee. Contact with participants was not made until ethics approval had been given with the ethics approval number ECN-11-088.
4.8 Summary

This chapter presented the methodology used for this study. The research framework in terms of the paradigm and associated assumptions was presented. The research design was explained with a foundation of the theoretical and conceptual framework and a discussion of the measurement approach to the research. The measurement of the constructs identified in the conceptual model developed from the literature (refer to chapters 2 and 3) were discussed and item selection was justified. The measurement models were then developed and specified for each construct. Procedures that were put in place to ensure empirical results were outlined including the sampling plan and pre-testing. Lastly the ethical considerations were highlighted. The following chapter will present the data cleaning completed to guarantee valid and reliable data analysis could be undertaken.
Chapter 5 - Data cleaning

5.1 Introduction

This chapter describes the data cleaning that was undertaken before the data analysis was undertaken. The chapter starts by checking for errors then describing and dealing with missing data. Normality, outliers, homoscedasticity and linearity are then discussed.

5.2 Cleaning and transforming the data

The data was downloaded from the online software program Qualtrics and opened in the program SPSS version 20 for data analysis. Before data analysis could be undertaken the data needed to be cleaned and transformed into an appropriate format, where necessary.

5.2.1 Checking for errors

The first step undertaken with the data was to check for errors. This was done through descriptive statistics. Minimum and maximum values and continuous variable means were checked to ensure that there were no values that exceeded the response ranges. No errors were found.
5.2.2 Missing data

Tabachnick and Fidell (1996) indicate that missing data is one of the most widespread problems in data analysis. Hair et al. (2010) state that missing data must always be addressed if the missing data is in a non-random pattern or more than 10 percent of the data items are missing. They suggest that any statistical results based on data with a non-random missing data process could be biased (Hair et al., 2010). Bias caused by missing data can lead to inaccurate results (Hair et al., 2010). Tabachnick and Fidell (1996) agree stating that non-random missing values are serious as they affect the generalizability of the results. Missing data are considered missing completely at random (MCAR) if the pattern of missing data for a variable does not depend on any other variable in the data set or on the values of the variable itself (Rubin, 1976).

5.2.2.1 Missing data treated as non-response

A total of 27 responses were deleted, as the participants did not respond. These participants were included in the calculation of the non-response rate. A breakdown of these 27 responses is as follows. n=10 were deleted as they clicked on the link but the page did not load before they exited the window. n=9 were deleted as the participant exited the window after only seeing the third party invite page. n=4 were deleted as they exited the survey after reading the information sheet. n=4 were deleted as they only answered the very first question then dropped out.
5.2.2 Known missing data

Hair et al. (2010) define missing data errors that are known as those that can be identified due to procedural factors such as data entry that created invalid codes, disclosure restrictions, failure to complete the entire questionnaire or even the morbidity of the respondent. After removing the ignorable and non-response missing data n=19 cases contained missing data due to the respondents dropping out of the survey after starting. The potential bias in results amongst those who did not complete the survey will now be investigated.

5.2.3 Level and description of missing data

Having determined that some non-ignorable data is missing the researcher set about to determine whether the extent or amount of missing data was low enough to not affect the results. Firstly the level of randomness was assessed. In addition to the analysis of the tabulated missing data showing the dropout rate, missing data analysis was undertaken for each case. This analysis showed that the missing data was due to attrition at the end of the questionnaire. To diagnose the level of randomness the researcher compared the missing data based on the final question tabulated against gender, education, age and household income. Tabachnick and Fidell (1996) suggest that the pattern of missing data is more important than the amount missing. If cases with missing data are not randomly distributed through the data, distortions of the sample occur if they are deleted (Tabachnick & Fidell, 1996). Table 5.2-1 displays the missing data based on reason for purchase. It shows that there was no particular bias in missing data based on reason for purchase.
Chapter 5: Data cleaning

Table 5.2-1 - Analysis of missing data based on reason for purchase

| Reason for Purchase | Cases | | | | | |
|---------------------|-------|-------|-------|-------|-------|
|                     | Valid | Missing | Total |
|                     | N     | Percent | N     | Percent | N     | Percent |
| Upsizing            | 53    | 100.0%  | 0     | 0.0%    | 53    | 100.0%  |
| Downsizing          | 49    | 94.2%   | 3     | 5.8%    | 52    | 100.0%  |
| First Home          | 105   | 96.3%   | 4     | 3.7%    | 109   | 100.0%  |
| Investing           | 104   | 94.5%   | 6     | 5.5%    | 110   | 100.0%  |
| Relocating          | 89    | 93.7%   | 6     | 6.3%    | 95    | 100.0%  |
| Other               | 20    | 100.0%  | 0     | 0.0%    | 20    | 100.0%  |

Table 5.2-2 shows the missing data based on gender. As can been seen in the table, there was no drop out bias based on gender.

Table 5.2-2 - Analysis of missing data based on gender

| Gender | Cases | | | | | |
|--------|-------|-------|-------|-------|-------|
|        | Valid | Missing | Total |
|        | N     | Percent | N     | Percent | N     | Percent |
| Male   | 210   | 95.5%   | 10    | 4.5%    | 220   | 100.0%  |
| Female | 210   | 95.9%   | 9     | 4.1%    | 219   | 100.0%  |

Table 5.2-2 - Analysis of missing data based on gender

Table 5.2-3 shows the missing data based on location. There was some variance in the missing data by state however each percentage was less than 10% therefore the data was assessed as random based on state of residence.

Table 5.2-3 - Analysis of missing data based on location

| Location | Cases | | | | | |
|----------|-------|-------|-------|-------|-------|
|          | Valid | Missing | Total |
|          | N     | Percent | N     | Percent | N     | Percent |
| NSW      | 139   | 95.9%   | 6     | 4.1%    | 14    | 100.0%  |
| ACT      | 6     | 100.0%  | 0     | .0%     | 6     | 100.0%  |
| VIC      | 107   | 97.3%   | 3     | 2.7%    | 11    | 100.0%  |
| QLD      | 81    | 95.3%   | 4     | 4.7%    | 85    | 100.0%  |
| SA       | 35    | 92.1%   | 3     | 7.9%    | 38    | 100.0%  |
| TAS      | 6     | 100.0%  | 0     | .0%     | 6     | 100.0%  |
| WA       | 42    | 93.3%   | 3     | 6.7%    | 45    | 100.0%  |
| NT       | 4     | 100.0%  | 0     | .0%     | 4     | 100.0%  |

Table 5.2-3 - Analysis of missing data based on location
Chapter 5: Data cleaning

Table 5.2-4 displays the missing data based on income. The above table shows that household income between $41,600-$62,399 had a non response of n=6. Again given it was less than 10% the researcher assumed that the missing data was random.

<table>
<thead>
<tr>
<th>What is your gross household income per year?</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Negative or no income</td>
<td>11</td>
</tr>
<tr>
<td>$1 - $20,799</td>
<td>29</td>
</tr>
<tr>
<td>$20,800 - $41,599</td>
<td>72</td>
</tr>
<tr>
<td>$41,600 - $62,399</td>
<td>72</td>
</tr>
<tr>
<td>$62,400 - $83,199</td>
<td>83</td>
</tr>
<tr>
<td>$83,200 - $103,999</td>
<td>53</td>
</tr>
<tr>
<td>$104,000 - $145,599</td>
<td>52</td>
</tr>
<tr>
<td>$145,600 +</td>
<td>48</td>
</tr>
</tbody>
</table>

Table 5.2-4 - Analysis of missing data based on income

Table 5.2-5 shows the missing data based on education. As per the table, it can been seen that there was a slight bias towards year 12 or below (n=7) and certificate (n=6) in education level, however all percentages were below 10% therefore it was deemed that the missing data was random.

<table>
<thead>
<tr>
<th>What is the highest level of education you have completed?</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Year 12 or below</td>
<td>119</td>
</tr>
<tr>
<td>Certificate</td>
<td>66</td>
</tr>
<tr>
<td>Diploma/ Advanced Diploma</td>
<td>70</td>
</tr>
<tr>
<td>Bachelors Degree</td>
<td>94</td>
</tr>
<tr>
<td>Graduate Certificate/ Graduate Diploma</td>
<td>20</td>
</tr>
<tr>
<td>Postgraduate Degree</td>
<td>51</td>
</tr>
</tbody>
</table>

Table 5.2-5 - Analysis of missing data based on education

Table 5.2-6 shows the missing data based on age. As it can be seen that there was a slight bias towards 65 years and old (n=7) however given it’s similar level to 35-44year olds (n=7) and given they were all under 10% the research assumed the missing data was random.
Table 5.2-6 - Analysis of missing data based on age

Due to the amount of missing data being so small it was easy for the researcher to visually see the patterns and with the additional analysis of demographics in the previous tables see that the data was random. Therefore the researcher diagnosed the missing data as missing completely at random (MCAR). An imputation method was then chosen. For MCAR missing data Hair et al. (2010) indicated two basic approaches; using only valid data or defining replacement values for the missing data. To impute using only valid data two assumptions must be met. The missing data is in a random pattern and the valid data is an adequate representation (Hair et al., 2010). Given the analysis and discussion undertaken in the previous section it could be seen that these assumptions were both met.

The simplest and most direct approach for dealing with missing data is to include only those observations with complete data. Hair et al. (2010) suggest deleting offending cases with excessive levels of missing data. They do warn that the number of cases with no missing data must be sufficient for the selected analysis technique if replacement values will not be substituted for the missing data (Hair et al., 2010). The number of cases with no missing data was 420. This number was sufficient to undertake SEM as per the discussion on sample size in section 4.6.1.2. Hair et al.
Hair et al. (2010) state that cases with 50 per cent or more missing data should be deleted. Therefore cases 2640, 2654, 2679, 2652, 2608, 2632, 2602, 2512, 2810, 2671 were deleted as they all had over 50% missing data.

Hair et al. (2010) go on to say that as the level of missing data decreases the researcher must employ more judgment to determine if the cases should be deleted. In order to determine if the remaining cases with missing data should be removed analysis was undertaken on the demographics of the respondents. Given the above analysis the remaining cases with missing data were deleted. These were cases 2447, 2578, 2885, 2572, 2541, 2667, 2553, 2517 and 2502. This resulted in complete data for n= 420. Tabachnick and Fidell (1996) indicate that deletion of cases is a reasonable choice if the pattern appears random and if only a very few cases have missing data. Table 5.2-7 provides a summary of the missing data and displays the response rate.

<table>
<thead>
<tr>
<th>Total responses</th>
<th>Cases with data imputation</th>
<th>Deleted cases</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>439</td>
<td>0</td>
<td>19</td>
<td>95.7%</td>
</tr>
</tbody>
</table>

*Table 5.2-7 - Summary of missing data and response rate*
5.2.3.1 Other data imputation methods and reasoning as to why they weren’t used

Given the importance of handling missing data correctly and to show that the missing data imputation method was the most appropriate, each of the alternative methods will be outlined in the following table.

<table>
<thead>
<tr>
<th>Process</th>
<th>Reason for not using</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using all available data</td>
<td>Similar to complete data approach, as missing data is not replaced. This method is also known as pairwise deletion. Complicates the specification of sample size as it uses different sample sizes for each covariance term (Hair et al., 2010).</td>
</tr>
<tr>
<td>Case substitution</td>
<td>Replaces entire observations with another non-sampled observation. Inability to obtain observations for replacement. Normally used to replace complete missing data.</td>
</tr>
<tr>
<td>Hot deck imputation</td>
<td>Value comes from another observation in the sample that is deemed similar. Must define suitable similar case and this can be biased.</td>
</tr>
<tr>
<td>Cold deck imputation</td>
<td>Replacement value comes from an external source. Inability to obtain observations for replacement.</td>
</tr>
<tr>
<td>Mean substitution</td>
<td>Substitutes the missing values for a variable with the mean value of that variable from the mean for that variable. Understates the variance estimates. Distorts the distribution of values. Depresses the observed correlations.</td>
</tr>
<tr>
<td>Regression imputation</td>
<td>Regression analysis is used to predict the missing values of a variable based on the relationship it has with other variables. Reinforces relationships already in the data. Can understate the variance of the distribution. Assumes that the variable has substantial correlations with the other variables. The regression procedure is not constricted in the estimates it makes.</td>
</tr>
</tbody>
</table>

Table 5.2-8 - Comparison of alternative missing data processes

Given the disadvantages of the alternative methods of data imputation, the previous discussion of the advantages of complete case deletion and it’s appropriateness for MCAR, missing data it was utilised in this study.
5.2.4 Normality

If the variation from the normal distribution is sufficiently large, all the resulting statistical tests are invalid (Hair et al., 2010). Therefore normality is one of the most fundamental assumptions in multivariate analysis. Hair et al. (2010) suggest that both graphical and statistical tests should always be used to assess normality.

Assessment of skewness and kurtosis provides an indication of normality. Kurtosis refers to the peakedness or flatness of the distribution compared with the normal distribution. Skewness describes the balance of the distribution; if it is unbalanced and shifted to one side or centred and symmetrical. Distribution is considered normal where kurtosis and skewness z scores are $<\pm 1.97$ (Hair et al., 2010). In addition to the statistical tests of skewness and kurtosis a visual check of histograms was undertaken using SPSS.

The histograms for all the continuous variables revealed no major deviations from normality. Skewness and kurtosis of all variables were within the acceptable range. With skewness values ranging from -.928 to 0.609 and kurtosis values ranging from -1.158 to 0.654. Given the robustness of the maximum likelihood analysis method used the levels of kurtosis and skewness were deemed acceptable.

The assumption of multivariate normality is of issue in this study as, if the data is not multivariate normally distributed the estimates are not robust (Satorra & Bentler, 1988a). Multivariate normality was tested using Mardia’s coefficient (Mardia, 1970) and robust EQS statistics were used when issues were found. This is discussed in section 6.4 for each construct. As we will discuss, a number of constructs had
multivariate normality issues and robust statistical analysis was used for those models.

### 5.2.5 Outliers

Hair et al. (2010, p. 64) defines outliers as ‘...observations with a unique combination of characteristics identifiable as distinctly different from the other observations’. They indicate that a unique characteristic is usually judged to be an unusually high or low value of a variable or it can be a unique combination of values across several variables that make the observation stand out from the others (Hair et al., 2010).

The first step was to detect potential univariate outliers. Examining the box plots for all continuous variables showed that two variables KNOW4 and ASC3 had potential outliers. As per Hair et al. (2010) the standardised z scores were analysed. Hair et al. (2010) suggest that standard scores greater than 4 define variables as outliers in larger sample sizes (n>80). None of the z scores were greater than 4 for any of the continuous variables.

Multivariate outlier detection was also undertaken, using Mahalanobis distances. This method measures each observation’s distance from the mean centre of all observations, providing a single value for each observation no matter how many variable are considered (Hair et al., 2010). Hair et al. (2010) suggest values for $D^2/\text{df}$ of 3 or 4 in large samples. Seven cases were over 3 and two cases were over the suggested value of 4.
While Tabachnick and Fidell (1996) suggest that little is lost by deleting the additional outliers if the sample size is sufficient, Hair et al. (2010) warn about simply removing outliers, as if they do portray a representative segment of the population, the research runs the risk of improving multivariate analysis but limiting the generalisability of the results. They state that their belief is that outliers should be retained unless demonstrable proof indicates that they are truly aberrant and not representative of any observations in the population. Tabachnick and Fidell (1996) do go on to state that it is also necessary to determine and to discuss how a case’s deletion limits generalisability. Given the small number of outliers compared to the sample and the suggestions from the literature the outliers were not deleted.

5.2.6 Homoscedasticity

Homoscedasticity refers to the assumption that dependent variables exhibit equal levels of variance across the range of predictor variables (Hair et al., 2010). Inspection of the residuals in the final analyses showed that homoscedasticity did exist.
5.3 Summary

This chapter outlined the data cleaning undertaken before the data analysis to ensure valid and reliable conclusions to be made. The chapter outlined that no errors were found in the data and that deletion of cases was used to remedy the missing data. Normality was shown to be acceptable and the procedure for dealing with multivariate normality where evident was discussed. With there being only a small number of outliers these were deemed to be of no consequence. Therefore with the researcher confident that the data was clean the following chapter outlines the data analysis and presents the results.
Chapter 6 - Data analysis and results

6.1 Introduction

Chapter 4 presented the methodology to be implemented in this study in order to answer the research questions which were developed from the research model. Chapter 5 outlined the data cleaning that was performed to guarantee the data analysis undertaken would produce genuine results. Having assessed the data as clean, the analysis of the data and the results will now be presented. The chapter begins with a discussion of how the measurement models were assessed for validity, and then the structural model is presented and tested. The chapter then finished with a discussion on testing the hypotheses which were developed in direct consultation with the conceptual model and research questions (refer to section 3.3 and section 3.5).

6.2 Assessing measurement model validities (Stage 4)

Having developed the model from the literature and collected the data the models must now be tested to ensure that the measurement models are valid (refer to stage 2 section 4.5). We assess measurement model fit by establishing acceptable levels of goodness-of-fit. There are a variety of goodness-of-fit indices and a discussion of these now follows.
6.2.1 Fit indices

Goodness-of-fit (or fit indices) indicate how well the specified model reproduces the observed covariance matrix among the indicator items (Hair et al., 2010). A large number of fit indices have been created to help researchers evaluate the extent to which a model is supported by the data (Blunch, 2008). Hooper, Coughlan, and Mullen (2008) indicate that it is not necessary (or realistic) to include every index presented in the output. This stance is taken by many others in previous articles and books (Hair et al., 2010; Hoyle & Panter, 1995; Tabachnick & Fidell, 2007; Tanaka, 1993). Hooper et al. (2008) go on to raise the issue of selectively choosing the fit indices that indicate the best fit and emphasise the importance of not doing so. Fit indices will therefore now be discussed. These indicators were selected before reporting the results.

Hooper et al. (2008) suggest that simply going by what is most frequently used is not necessarily good practice. Often indicators are reported due to historical reasons rather than for their sophistication. Therefore the following sections outline the most commonly reported indicators and discuss their levels of sophistication.

6.2.1.1 Absolute fit indices

According to McDonald and Ho (2002) the absolute fit indices determine how well a model fits the sample data. Specifically the absolute fit indices are ‘...the degree to which covariances implied by the fixed and free parameters specified in the model match the observed covariances from which free parameters in the model were estimated (Hoyle & Panter, 1995, p. 165). These measures provide the most
fundamental indicators of how well the proposed theory fits the data (Hooper et al., 2008). Optimal fit is indicated by a value of zero (Hoyle & Panter, 1995). The types of such measures are outlined in the following sections.

6.2.1.1 Model chi-square ($\chi^2$)

Chi-square ‘...assess the magnitude of discrepancy between the sample and fitted covariance matrices’ (Hu & Bentler, 1999, p. 2). Hooper, Coughlan and Mullen (2008) state that while it has retained its popularity there are a number of severe limitations to its use. Of particular importance for this study is that chi-square assumes multivariate normality and deviations from this may result in the rejection of the model even when it is properly specified (McIntosh, 2006). This problem, which is also relevant to other absolute fit indices can be overcome by using robust statistics as developed by Satorra and Bentler (1988b). Additionally, sample size impacts upon this indicator. The chi-square nearly always rejects models when large samples are used (Bentler & Bonett, 1980) and with small samples the statistic lacks power and therefore may not discriminate between good and poor fitting models (Kenny & McCoach, 2003). To minimise the impact of sample size, Wheaton, Muthen, Alwin, and Summers (1977) developed the relative/normed chi-square ($\chi^2$/df). There is no definitive consensus on an acceptable ratio for $\chi^2$/df. Wheaton et al. (1977) recommend a high cut off of 5.0 whereas Tabachnick and Fidell (2007) suggest a cut off as low of 2.0. This fit index was used with a cut of less than or equal to 3.
6.2.1.1.2 RMSEA

According to Diamantopoulos and Siguaw (2000) RMSEA has become regarded as ‘one of the most informative fit indices’, due to its sensitivity to the number of estimated parameters in the model. Hu and Bentler (1999) suggest a cut off at a value close to .06 and Steiger (2007) suggest a stringent upper limit of .07. Chen, Curran, Bollen, Kirby, and Paxton (2008) present research that indicates an absolute cut off value is inadvisable. Rigdon (1996) provided empirical analysis that found RMSEA is best suited as samples become larger. Hair et al. (2010) indicates that samples are considered large when consisting of 500 respondents or more. As with the chi-square test, the RMSEA is sensitive to multivariate non-normality and in such cases the Satorra-Bentler robust statistics need to be used. This fit index was therefore used.

6.2.1.1.3 RMR/SRMR

The RMR measures the average level of the residuals that exist after a model has been fitted to the data. However, the RMR has no definable cut-off value for the approval of model fit. Standardising this value however to produce SRMR values does provide an ability to assess a model’s fit against a set criterion of less than .05 for a good fit. (Byrne, 1998; Diamantopoulos & Siguaw, 2000). This fit index was used.

6.2.1.1.4 GFI

GFI was not used in this thesis research because of its sensitivity, which has led to it becoming less popular and with it being recommended that this index should not be used (Sharma, Mukherjee, Kumar, & Dillon, 2005). Similarly AGFI was not used due to
its sensitivity to sample size (Hooper et al., 2008) and the lack of a robust statistical method of evaluation.

### 6.2.1.2 Incremental fit indices

Incremental fit statics do not use chi-square in its raw form, they compare the value to a baseline model. Hoyle and Panter (1995, p. 165) describe incremental fit indices as ‘...the degree to which the model in question is superior to an alternative model, usually one that specifies no covariances among variables’. Larger values indicate a better fit (Hoyle & Panter, 1995).

#### 6.2.1.2.1 NFI

NFI assess the model by comparing the $\chi^2$ value of the model to the $\chi^2$ of the null model (Hooper et al., 2008). The null model is the worst case scenario, it evaluates the discrepancy value for a model where all the measured variables are uncorrelated. A perfectly fitting model is one that is totally saturated and where all of the model variance is explained. On this basis a value of .9 or higher as is recommended by Bentler and Bonnett (1980) indicates a model where the fit is 90% or more along a continuum between a model with zero fit and one with a complete fit and therefore can be accepted as indicating a good fit. The index is sensitive to sample sizes and underestimates fit when sample size is less than 200 (Bentler, 1990).

#### 6.2.1.2.2 CFI

This builds upon the NFI by taking in to account the sample size (Byrne, 1998). Therefore it performs well even with small sample sizes (Tabachnick & Fidell, 2007). This indicator is one of the most popular fit indicators because it is one of the
indicators least effected by sample size (Fan, Thompson, & Wang, 1999). However, the measure is affected by non-normality when robust statistics should be used for its assessment as was done in this thesis research.

6.3 Assessing measurement model fit

This section assesses the fit of the construct measurement models. This was done by using confirmatory factor analysis (CFA) and comparing the theoretical measurement models developed in section 4.5 against the model as determined by the data that had been collected. Convergent validity which relates to how well the construct indicators indicate their particular construct and discriminant validity which evaluates whether constructs are different from one another will also be shown and the overall measurement model will be assessed for fit.

The dataset that had been obtained from the survey research was split into two halves of equal size by placing the even numbered cases in one dataset labelled A and the odd numbered cases into a dataset labelled B. Using the Amos 20 software program, and the A labelled half of the dataset for each model, the model fits were assessed using CFA. The fit statistics were all acceptable with the exception of the RMSEA measure. The multivariate normality of the data in respect of each model was also assessed by means of the Mardia (1970) coefficient. Where multivariate non-normality was detected the Satorra-Bentler robust statistics were used to evaluate the chi-square discrepancy fit and associated statistics using the EQS program for those models that were multivariate non-normal. There is statistical support for the
use of Satorra-Bentler robust statistics, for example in Hu, Bentler and Kano’s (1992) study, the statistic performed best overall over the variety of distributions and sample sizes. Additionally simulation studies by Chou, Bentler, and Satorra (1991) and Curran, West, and Finch (1996) found that the scaled statistic worked well.

After the individual models\(^1\) had been assessed using the A sample modifications were undertaken in those instances where the fit of the model to the data was deemed to be unsatisfactory. These modifications were based on the elimination of any indicators that were found to fit poorly, after due consideration had been given to whether the elimination of any indicators would result in an unacceptable change in the construct. The modified constructs were then re-assessed using the B split half sample. The overall measurement model that incorporated any modified constructs was also assessed using the B data set.

The fit indices from the AMOS 20 output are presented in tabular form in addition to the EQS robust statistic based fit indices that were determined in the case of any multivariate non-normality.

### 6.3.1 Trust

This section outlines the development of the construct that measured trust. Trust was defined in section 3.2.2 as ‘...the belief that a party's word or promise is reliable and a party will fulfil his/her obligations in an exchange relationship’ (Blau, 1964, p. 940).

\(^1\) Note that intention to act was not assessed for model fit as it is a single item and functional congruity was not assessed for model fit as the items were condensed into a single item.
The items used to measure trust and their corresponding labels are listed in Table 6.3-1. These labels will be used throughout the results discussion.

<table>
<thead>
<tr>
<th>Item</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property advertisers can be trusted at all times</td>
<td>TRUST1</td>
</tr>
<tr>
<td>Property advertisers are perfectly honest and truthful</td>
<td>TRUST2</td>
</tr>
<tr>
<td>Property advertisers can be trusted completely</td>
<td>TRUST3</td>
</tr>
<tr>
<td>Property advertisers can always be counted on to do what is right</td>
<td>TRUST4</td>
</tr>
</tbody>
</table>

Table 6.3-1 - Trust items and labels

Table 6.3-2 provides a summary of the fit statistics and a discussion follows.

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>AMOS – Sample A</th>
<th>Robust statistics in EQS – Sample A</th>
<th>Indicators of good fit</th>
<th>Fit statistics indicate good fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X^2$ (df)</td>
<td>.01</td>
<td>4.5(2)</td>
<td>&gt;.05</td>
<td>✓</td>
</tr>
<tr>
<td>p</td>
<td>.11</td>
<td>.01</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>$X^2$/df</td>
<td>4.74</td>
<td>2.25</td>
<td>≤ 3</td>
<td>✓</td>
</tr>
<tr>
<td>SRMR</td>
<td>.017</td>
<td>.017</td>
<td>≤ .05</td>
<td>✓</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.14</td>
<td>.08</td>
<td>≤ .10</td>
<td>✓</td>
</tr>
<tr>
<td>GFI</td>
<td>.98</td>
<td>.98</td>
<td>≥ .09</td>
<td>✓</td>
</tr>
<tr>
<td>CFI</td>
<td>.99</td>
<td>.996</td>
<td>≥ .09</td>
<td>✓</td>
</tr>
<tr>
<td>Composite Reliability</td>
<td>.93</td>
<td>.996</td>
<td>≥ .70</td>
<td>✓</td>
</tr>
<tr>
<td>AVE</td>
<td>.78</td>
<td>.78</td>
<td>≥ .50</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.3-2 - Fit indices for the trust measurement model

Trust had a Mardia’s coefficient of 11.5 therefore the data was seen to be multivariate non-normal. Cases 200, 197, 198 and 158 which provided the greatest amounts of contribution to non-normality were deleted and robust statistics were used. The results can be seen in Table 6.3-2. Given the adequate fit statistics no modifications were undertaken for trust. Figure 6.3-1 shows the standardised loadings for each item.
6.3.2 Knowledge

This section outlines the development of the construct that represented the measurement of perceived knowledge. Perceived knowledge was defined in section 3.2.1 as comprising of two major components; familiarity and expertise. The items used to measure perceived knowledge and their corresponding labels are listed in Table 6.3-3. These labels will be used throughout the results discussion.

<table>
<thead>
<tr>
<th>Item</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel very knowledgeable about buying property</td>
<td>KNOW1</td>
</tr>
<tr>
<td>If a friend asked me about buying property, I could give them advice</td>
<td>KNOW2</td>
</tr>
<tr>
<td>If I had to purchase property today, I would need to gather very little information in order to make a wise decision</td>
<td>KNOW3</td>
</tr>
<tr>
<td>I feel very confident about my ability to tell the difference in quality among different properties</td>
<td>KNOW4</td>
</tr>
</tbody>
</table>

Table 6.3-3 - Knowledge items and labels

Table 6.3-4 provides a summary of the fit statistics and a discussion follows.
Chapter 6: Data analysis and results

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>AMOS – Sample A</th>
<th>Robust statistics in EQS – Sample A</th>
<th>Indicators of good fit</th>
<th>Fit statistics indicate adequate fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X^2$ (df)</td>
<td>8.12(2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$p$</td>
<td>.01</td>
<td>.072</td>
<td>&gt; .05</td>
<td>√</td>
</tr>
<tr>
<td>$X^2$/df</td>
<td>5.1</td>
<td>4.06</td>
<td>≤ 3</td>
<td>x</td>
</tr>
<tr>
<td>SRMR</td>
<td>.029</td>
<td></td>
<td>≤ .05</td>
<td>x</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.14</td>
<td>.125</td>
<td>≤ .10</td>
<td>x</td>
</tr>
<tr>
<td>GFI</td>
<td>.98</td>
<td>.983</td>
<td>≥ .09</td>
<td>√</td>
</tr>
<tr>
<td>CFI</td>
<td>.98</td>
<td>.983</td>
<td>≥ .09</td>
<td>√</td>
</tr>
<tr>
<td>Composite Reliability</td>
<td>.86</td>
<td></td>
<td>≥ .70</td>
<td></td>
</tr>
<tr>
<td>AVE</td>
<td>.61</td>
<td></td>
<td>≥ .50</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.3-4 - Fit statistics for the knowledge measurement model

Using the A sample, cases 74, 154, 169 and 196 were deleted as contributing to non-normality after which the Mardia’s coefficient was 2.69 so that normal fit statistics were used. As the fit indices were not adequate the residual values were investigated and KNOW3 was removed due to it’s high residual value. As can be seen in Table 6.3-3 KNOW3 was ‘If I had to purchase property today, I would need to gather very little information in order to make a wise decision’. It was deemed reasonable to remove this item given that the question content was evident in the remaining three normative knowledge measures. However, the removal of the KNOW3 variable meant that the model was no longer able to be assessed as it was now no longer identified since its degrees of freedom were zero. The final assessment of this model was thus left to its later assessment as a component of the overall measurement model. Results from the full measurement model assessment are presented and discussed in section 6.3.7.
6.3.3 Actual self-congruity

This section outlines the development of the construct measuring actual self-congruity. Actual self-congruity was discussed in section 2.2.1.3.1 as the match between the consumer’s product-user image and their actual self-image and that this influences consumer behaviour (Johar & Sirgy, 1991). Rosenberg (1979) defined this tendency to act in ways consistent with one’s personal identity as ‘self-consistency motivation’. Actual self-congruity is the most widely tested of the self-congruity models. The items used to measure actual self-congruity and their corresponding labels are listed in Table 6.3-5. These labels will be used throughout the results discussion.

<table>
<thead>
<tr>
<th>Item</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image of the typical owner of this property is highly consistent with how I see myself</td>
<td>ASC1</td>
</tr>
<tr>
<td>The typical owner of this property reflects the type of person I am</td>
<td>ASC2</td>
</tr>
<tr>
<td>I can identify with the typical owner of this property</td>
<td>ASC3</td>
</tr>
<tr>
<td>The type of person who lives in this property is very much like me</td>
<td>ASC4</td>
</tr>
<tr>
<td>The typical owner of this house is similar to me</td>
<td>ASC5</td>
</tr>
</tbody>
</table>

Table 6.3-5 - Actual self-congruity (ASC) items and labels

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>AMOS – Sample A</th>
<th>Robust statistics in EQS – Sample A</th>
<th>Robust statistics in EQS – Sample B</th>
<th>Indicators of good fit</th>
<th>Robust fit statistics indicate adequate fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X^2$ (df)</td>
<td>.00</td>
<td>6.74(2)</td>
<td>3.02 (2)</td>
<td>≥ .05</td>
<td>v</td>
</tr>
<tr>
<td>p</td>
<td>.04</td>
<td>.22</td>
<td>.05</td>
<td>≤ 3</td>
<td>v</td>
</tr>
<tr>
<td>$X^2/df$</td>
<td>9.58</td>
<td>3.37</td>
<td>1.51</td>
<td>≤ .05</td>
<td>v</td>
</tr>
<tr>
<td>SRMR</td>
<td>.030</td>
<td>.11</td>
<td>.02</td>
<td>≤ .10</td>
<td>v</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.21</td>
<td>.91</td>
<td>.95</td>
<td>≥ .09</td>
<td>v</td>
</tr>
<tr>
<td>GFI</td>
<td>.96</td>
<td>.99</td>
<td>.99</td>
<td>≥ .09</td>
<td>v</td>
</tr>
<tr>
<td>Composite Reliability</td>
<td>.95</td>
<td>.96</td>
<td>.99</td>
<td>≥ .09</td>
<td>v</td>
</tr>
<tr>
<td>AVE</td>
<td>.77</td>
<td></td>
<td></td>
<td>≥ .50</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.3-6 - Fit statistics for the actual self-congruity (ASC) measurement model
Cases 195, 196 and 201 were deleted. The multivariate Mardia's coefficient at 14.3 indicated multivariate non-normality therefore robust statistics were used. As the fit statistics did not indicate a good fit the residuals were examined and ASC1 removed due to high residuals. The model was then reassessed using the B dataset and was found to fit well. Figure 6.3-2 shows the standardised loadings for each item.

6.3.4 Ideal self-congruity

This section outlines the development of the construct measuring ideal self-congruity. Ideal self-congruity was defined in section 2.2.1.3.2, the ideal self-congruity model suggests that the match between the consumer’s product user image and their ideal self-image influences consumer behaviour (Johar & Sirgy, 1991). Sirgy (1987) indicated that the ideal self motivates behaviour through the ‘need for self esteem’. The items used to measure ideal self-congruity and their corresponding labels are listed in Table 6.3-7. These labels will be used throughout the results discussion.
Chapter 6: Data analysis and results

<table>
<thead>
<tr>
<th>Item</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image of the typical owner of this property is highly consistent with how I would like to see myself</td>
<td>ISC1</td>
</tr>
<tr>
<td>The typical owner of this property reflects the type of person I would like to be</td>
<td>ISC2</td>
</tr>
<tr>
<td>I would like to identify with the typical owner of this property</td>
<td>ISC3</td>
</tr>
<tr>
<td>The type of person who lives in this property is very much like the person I would like to be</td>
<td>ISC4</td>
</tr>
<tr>
<td>The typical owner of this house is similar to the person I would like to be</td>
<td>ISC5</td>
</tr>
</tbody>
</table>

Table 6.3-7 - Ideal self-congruity (ISC) items and labels

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>AMOS – Sample A</th>
<th>Robust statistics in EQS – Sample A</th>
<th>Indicators of good fit</th>
<th>Fit statistics indicate adequate fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X^2$ (df)</td>
<td>6.9 (5)</td>
<td>.00</td>
<td>$.05</td>
<td>✓</td>
</tr>
<tr>
<td>$X^2$/df</td>
<td>1.5</td>
<td>.022</td>
<td>≤ 3</td>
<td>✓</td>
</tr>
<tr>
<td>SRMR</td>
<td>.012</td>
<td>.11</td>
<td>≤ .05</td>
<td>✓</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.19</td>
<td>.11</td>
<td>≤ .10</td>
<td>x</td>
</tr>
<tr>
<td>GFI</td>
<td>.92</td>
<td>1.00</td>
<td>≥ .09</td>
<td>✓</td>
</tr>
<tr>
<td>CFI</td>
<td>.98</td>
<td>1.00</td>
<td>≥ .09</td>
<td>✓</td>
</tr>
<tr>
<td>Composite Reliability</td>
<td>.98</td>
<td>1</td>
<td>≥ .70</td>
<td></td>
</tr>
<tr>
<td>AVE</td>
<td>.89</td>
<td>1</td>
<td>≥ .50</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.3-8 - Fit statistics for the ideal self-congruity (ISC) measurement model

The Mardia's coefficient was 17.9 therefore robust statistics were used and cases 161, 169 192, 195, 199 and 201 were deleted. The model was found to fit the data well except for the RMSEA value which was only marginally greater than the desired cut-off level for acceptability therefore the model was accepted based on research by Chen et al. (2008) indicating that it is inadvisable to have an absolute cut off value. Figure 6.3-3 shows the standardised loadings for each item.
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6.3.5 Actual social self-congruity

This section outlines the development of the construct measuring actual social self-congruity. Actual social self-congruity was defined in section 2.2.1.3.3, the actual social self-congruity model suggests that there is a match between the consumer’s product user image and their actual social-image and this match or mismatch influences consumer behaviour (Johar & Sirgy, 1991). The actual social self-image affects consumers’ behaviour through the ‘social consistency motive’, (Johar & Sirgy, 1991; Sirgy et al., 2005; N. D. Wright & Sirgy, 1992). The items used to measure actual social self-congruity and their corresponding labels are listed in Table 6.3-9. These labels will be used throughout the results discussion.

<table>
<thead>
<tr>
<th>Item</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image of the typical owner of this property is highly consistent with how others see me</td>
<td>ASSC1</td>
</tr>
<tr>
<td>The typical owner of this property reflects the type of person others see me as</td>
<td>ASSC2</td>
</tr>
<tr>
<td>Others would think I identify with the typical owner of this property</td>
<td>ASSC3</td>
</tr>
<tr>
<td>The type of person who lives in this property is very much like how others see me</td>
<td>ASSC4</td>
</tr>
<tr>
<td>The typical owner of this house is similar to how others see me</td>
<td>ASSC5</td>
</tr>
</tbody>
</table>

Table 6.3-9 - Actual social self-congruity (ASSC) Items and labels
Chapter 6: Data analysis and results

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>AMOS – Sample A</th>
<th>Robust statistics in EQS – Sample A</th>
<th>Indicators of good fit</th>
<th>Fit statistics indicate adequate fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X^2$ (df)</td>
<td>3.02</td>
<td>0.00</td>
<td>&gt;.05</td>
<td>✓</td>
</tr>
<tr>
<td>p</td>
<td>150</td>
<td>0.22</td>
<td>≥ .05</td>
<td>✓</td>
</tr>
<tr>
<td>$X^2$/df</td>
<td>3.52</td>
<td>1.5</td>
<td>≤ 3</td>
<td>✓</td>
</tr>
<tr>
<td>SRMR</td>
<td>.007</td>
<td>≤ .05</td>
<td>≥ .05</td>
<td>✓</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.11</td>
<td>.05</td>
<td>≤ .10</td>
<td>✓</td>
</tr>
<tr>
<td>GFI</td>
<td>.96</td>
<td>1.00</td>
<td>≥ .09</td>
<td>✓</td>
</tr>
<tr>
<td>CFI</td>
<td>.99</td>
<td>1.00</td>
<td>≥ .09</td>
<td>✓</td>
</tr>
<tr>
<td>Composite Reliability</td>
<td>.98</td>
<td>≥ .70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVE</td>
<td>.91</td>
<td>≥ .50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.3-10 - Fit statistics for the actual social self-congruity (ASSC) measurement model

The Mardia's coefficient was calculated to be 45.9 therefore robust statistics were used and case 196 was deleted. The statistics indicated a good fit therefore no modification was undertaken. Figure 6.3-4 shows the standardised loadings for each item.

![Figure 6.3-4 - Actual social self-congruity model with standardised loadings (Sample A)](image)

6.3.6 Ideal social self-congruity

This section outlines the development of the construct measuring ideal social self-congruity. Ideal social self-congruity was defined in section 2.2.1.3.4, the ideal social
self-congruency model suggests that there is a match between the consumer’s product user image and their ideal social-image that influences consumer behaviour (Johar & Sirgy, 1991). According to Crowne and Marlene (1964) the ideal-social self-image affects consumers’ behaviour through the ‘social approval motive’, people are motivated to do things that will cause others to think highly of them (Johar & Sirgy, 1991; Sirgy et al., 2005; N. D. Wright & Sirgy, 1992). The items used to measure ideal social self-congruity and their corresponding labels are listed in Table 6.3-11. These labels will be used throughout the results discussion.

<table>
<thead>
<tr>
<th>Item</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image of the typical owner of this property is highly consistent with how I would like others to see me</td>
<td>ISSC1</td>
</tr>
<tr>
<td>The typical owner of this property reflects the type of person I would like others to see me as</td>
<td>ISSC2</td>
</tr>
<tr>
<td>I would like others to think I identify with the typical owner of this property</td>
<td>ISSC3</td>
</tr>
<tr>
<td>The type of person who lives in this property is very much like how I would like others to see me</td>
<td>ISSC4</td>
</tr>
<tr>
<td>The typical owner of this house is similar to the person I would like others to see me as</td>
<td>ISSC5</td>
</tr>
</tbody>
</table>

Table 6.3-11 - Ideal social self-congruity (ISSC) items and labels

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>AMOS – Sample A</th>
<th>Robust statistics in EQS – Sample A</th>
<th>Robust statistics in EQS – Sample B</th>
<th>Indicators of good fit</th>
<th>Robust fit statistics indicate adequate fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ (df)</td>
<td>25.6 (5)</td>
<td>6.94 (5)</td>
<td></td>
<td>$.00</td>
<td>$&gt; .05$ (V)</td>
</tr>
<tr>
<td>p</td>
<td>$.00</td>
<td>.00</td>
<td>.23</td>
<td>$.00</td>
<td></td>
</tr>
<tr>
<td>$\chi^2$/df</td>
<td>5.14</td>
<td>8.1</td>
<td>1.18</td>
<td>$\leq 3$</td>
<td>V</td>
</tr>
<tr>
<td>SRMR</td>
<td>.008</td>
<td></td>
<td></td>
<td>$.05</td>
<td></td>
</tr>
<tr>
<td>RMSEA</td>
<td>.14</td>
<td>.15</td>
<td>.04</td>
<td>$.10</td>
<td>V</td>
</tr>
<tr>
<td>GFI</td>
<td>.95</td>
<td></td>
<td></td>
<td>$.99</td>
<td></td>
</tr>
<tr>
<td>CFIs</td>
<td>.99</td>
<td>.99</td>
<td>1.0</td>
<td>$.09</td>
<td>V</td>
</tr>
<tr>
<td>Composite Reliability</td>
<td>.98</td>
<td></td>
<td></td>
<td>$.70</td>
<td></td>
</tr>
<tr>
<td>AVE</td>
<td>.92</td>
<td></td>
<td></td>
<td>$.50</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.3-12 - Fit statistics for the ideal social self-congruity (ISSC) measurement model

The Mardia’s coefficient was calculated as 26.7 therefore robust statistics were used. The robust statistics were run using sample A and the robust statistics while close did
not fall within the recommended cut-offs. No adjustments were recommended by the residuals or other methods that EQs uses to suggest modifications. For this reason the high kurtosis variables were removed (cases 199, 200, 201) from the B sample and the model was re-run. This resulted in adequate fit on the indicators therefore no modification was undertaken. Figure 6.3-5 shows the standardised loadings for each item.

![Ideal social self-congruity model with standardised loadings (Sample B)](image)

**Figure 6.3-5** - Ideal social self-congruity model with standardised loadings (Sample B)

### 6.3.7 Complete measurement model

Having assessed the measurement model fit for all of the multi-item constructs (ITA and FC were single item therefore did not need to be assessed), the complete measurement model was then assessed for model fit. The complete measurement model was assessed using the B sample of data and to evaluate the fit of all of the constructs including that for KNOW which had not been able to be independently assessed after its modification. The Mardia’s coefficient for the complete measurement model was 274 therefore robust statistics were used.
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Fit Index | Robust statistics in EQS – Sample B | Indicators of good fit | Robust fit statistics indicate adequate fit
---|---|---|---
$X^2$ (df) | 605.1 (362) | | |
p | 0.00 | >.05 | x
$X^2$/df | 1.67 | ≤ 3 | ✓
SRMR | 0.04 | ≤ .05 | ✓
RMSEA | 0.04 | ≤ .10 | ✓
GFI | | ≥ .09 | ✓
CFI | 0.98 | ≥ .09 | ✓

Table 6.3-13 - Fit statistics for the complete measurement model

As can be seen in Table 6.3-13 the fit statistics for $X^2$/df, RMSEA and CFI are all acceptable. While the p value is below the generally acceptable level, Hair et al. (2010) suggest that for models with number of observed variables greater than or equal to 30, significant p-values are expected. Therefore given the acceptable fit statistics on all other indices the model was accepted.

Having established an acceptable measurement model the validity of the constructs will now be assessed.

6.3.8 Validity

Validity is defined by Hair et al. (2010) as the degree to which a set of measures represents what it is supposed to. In other words the validity is the degree to which the measures are free from systematic or non-random error (Hair et al., 2010). Hair et al. (2010) suggest that ensuring validity starts with a thorough understanding of what is to be measured and then making the measurements as correct as possible. Validity can be assessed through a number of types of validity including, face validity, convergent validity, discriminant validity and nomological validity. The following sections will outline the types of validity and assess their validity in this study.
6.3.9 Face validity

Face validity is defined by Hair et al. (2010) as the extent to which the content of the items is consistent with the construct definition and is based solely on the researchers judgement. Even when scales have previously been applied with adequate reliability and validity the researcher should still assess the face validity (Hair et al., 2010).

For this study face validity began from the start with in-depth exploration of the literature. The identification of the questions from literature and previous knowledge added to face validity. In addition face validly was assessed through academic assessment and pretesting. This helped to ensure that the selected scales were empirically, theoretically and practically valid. Face validity was established during pretesting as it must be done prior to undertaking CFA. The pretesting procedure and outcomes were shown in section 4.6.4.

6.3.10 Convergent validity

Convergent validity states that the indicators of a specific construct should share a high proportion of variance in common (Hair et al., 2010). Convergent validity can be estimated by factor loadings, average variance extracted and assessing reliability. Each of these are outlined below.

6.3.10.1 Factor loadings

The size of the factor loading obtained from the confirmatory factor analysis of the measurement model is one part of assessing the convergent validity. High loadings on
a factor indicate that they converge on a common point and therefore have high convergent validity. Hair et al. (2010) indicate a good rule of thumb is a standardised loading estimate of .5 or higher and ideally that the loading should be .7 or higher. The standardised loadings for this study were presented in the figures in section 6.3, they are presented again here in tables for ease of comprehension.

<table>
<thead>
<tr>
<th></th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUST1</td>
<td>.826</td>
</tr>
<tr>
<td>TRUST2</td>
<td>.874</td>
</tr>
<tr>
<td>TRUST3</td>
<td>.893</td>
</tr>
<tr>
<td>TRUST4</td>
<td>.854</td>
</tr>
</tbody>
</table>

**Table 6.3-14 - Factor loadings trust (TRUST)**

Table 6.3-14 shows that all factor loadings for trust were higher than .7 therefore supported convergent validity.

<table>
<thead>
<tr>
<th></th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNOW1</td>
<td>.724</td>
</tr>
<tr>
<td>KNOW2</td>
<td>.776</td>
</tr>
<tr>
<td>KNOW4</td>
<td>.460</td>
</tr>
</tbody>
</table>

**Table 6.3-15 - Factor loadings knowledge (KNOW)**

Table 6.3-15 shows that only 2 of the factor loadings for knowledge were greater than .7 and one was below the recommended lower cut off of .5. While KNOW4 was below .5 it was deemed acceptable as it was close to .5 and Hair et al. (2010) indicate that loadings that fall below an ideal cut off level can still be considered, since they do contribute to the explanation of the construct even though for such an indicator, more of the variance is error variance rather than explained variance.
Table 6.3-16 - Factor loadings actual self-congruity (ASC)

Table 6.3-16 shows that all factor loadings for actual self-congruity were higher than .7 except ASC3, which was not below the recommended lower cut off of .5, therefore the assessment supported convergent validity.

Table 6.3-17 - Factor loadings ideal self-congruity (ISC)

Table 6.3-17 shows that all factor loadings for Ideal Self-Congruity were higher than .7 and therefore supported convergent validity.

Table 6.3-18 - Factor loading actual social self-congruity (ASSC)

Table 6.3-18 shows that all factor loadings for actual social self-congruity were higher than .7 and therefore supported convergent validity.
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Table 6.3-19 - Factor loading ideal social self-congruity (ISSC)

<table>
<thead>
<tr>
<th>ISSC1</th>
<th>.940</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSC2</td>
<td>.959</td>
</tr>
<tr>
<td>ISSC3</td>
<td>.961</td>
</tr>
<tr>
<td>ISSC4</td>
<td>.959</td>
</tr>
<tr>
<td>ISSC5</td>
<td>.972</td>
</tr>
</tbody>
</table>

Table 6.3-19 shows that all factor loadings for ideal social self-congruity were higher than .7 and therefore supported convergent validity.

As intention to act was a single item and functional congruity was condensed into a single item convergent validity was irrelevant.

6.3.10.2 Average Variance Extracted

The average variance extracted (AVE) is calculated as the mean variance extracted for the items loading on a construct and is a summary indicator of convergence. It is calculated as the average of the squares of the construct loadings (Hair, Black, Babin, Anderson, & Tatham, 2006). An AVE of .5 or higher indicates adequate convergence according to Hair et al (2010). The following table outlines the AVE for each construct in this study.

<table>
<thead>
<tr>
<th></th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUST</td>
<td>0.74</td>
</tr>
<tr>
<td>KNOW</td>
<td>0.45</td>
</tr>
<tr>
<td>ASC</td>
<td>0.72</td>
</tr>
<tr>
<td>ISC</td>
<td>0.83</td>
</tr>
<tr>
<td>ASSC</td>
<td>0.78</td>
</tr>
<tr>
<td>ISSC</td>
<td>0.92</td>
</tr>
</tbody>
</table>

Table 6.3-20 - Average Variance Extracted
As Table 6.3-20 shows all items except KNOW indicate adequate convergence as they are .5 or higher. Although the AVE of KNOW is low it was decided to use the KNOW construct because it was close to 0.5 and the indicators were pertinent to the study. Hair et al. (2006) notes that the VE test is a very conservative one, supporting the acceptance of KNOW. Due to the single item nature of intention to act and functional congruity measuring of convergent validity for these measures was not required. While VE is effectively performing the same operation as the assessment of the loadings, it also provides an overall assessment across all indicators for each construct. It is therefore beneficial to test VE in addition to the assessment of loadings.

6.3.10.3 Reliability

Construct reliability was computed for each measure using Cronbach alpha (Cronbach, 1951). Hair et al (2010) and Nunnally and Bernstein (1994) suggest a measure at or above .7 indicates a good reliability while reliability of between .6 and .7 may be acceptable provided other indicators of a model’s construct validity are good. As can be seen from Table 6.3-21 below, all constructs had a reliability above .7 therefore reliability was supported for all constructs. Due to the single item nature of intention to act and functional congruity measuring of reliability was not required.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUST</td>
<td>0.951</td>
</tr>
<tr>
<td>KNOW</td>
<td>0.912</td>
</tr>
<tr>
<td>ASC</td>
<td>0.946</td>
</tr>
<tr>
<td>ISC</td>
<td>0.960</td>
</tr>
<tr>
<td>ASSC</td>
<td>0.948</td>
</tr>
<tr>
<td>ISSC</td>
<td>0.981</td>
</tr>
</tbody>
</table>

Table 6.3-21 - Reliability
6.3.11 Discriminant validity

Discriminant validity is the extent to which a construct is truly different from the other constructs in the study. Discriminant validity was assessed by comparing the average variance-extracted values of two constructs with the square of the correlation estimate between the two constructs (Fornell & Larcker, 1981; Hair et al., 2006). The variance-extracted estimates must be greater than the squared correlation estimate. Table 6.3-22 shows that for all of the pairs of constructs the variance-extracted values were greater than the squared correlations. Discriminant validity means that each construct should be a distinctly individual measure. Should this not be the case it would be expected that there would need to be cross-loadings in order to achieve a satisfactory fit of a model to the data. No cross-loadings were incorporated into the model that was tested in this research. Due to the single item nature of intention to act and functional congruity, measuring of discriminant validity was not required.

<table>
<thead>
<tr>
<th></th>
<th>KNOW</th>
<th>ASC</th>
<th>ISC</th>
<th>ASSC</th>
<th>ISSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUST</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVE</td>
<td>= 0.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVE</td>
<td>= 0.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corr²</td>
<td>= 0.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KNOW</td>
<td>AVE  = 0.72</td>
<td>AVE  = 0.83</td>
<td>AVE  = 0.78</td>
<td>AVE  = 0.92</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Corr² = 0.05</td>
<td>Corr² = 0.02</td>
<td>Corr² = 0.01</td>
<td>Corr² = 0.02</td>
<td></td>
</tr>
<tr>
<td>ASC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVE</td>
<td>= 0.45</td>
<td>AVE  = 0.83</td>
<td>AVE  = 0.78</td>
<td>AVE  = 0.92</td>
<td></td>
</tr>
<tr>
<td>Corr²</td>
<td>= 0.04</td>
<td>Corr² = 0.01</td>
<td>Corr² = 0.01</td>
<td>Corr² = 0.01</td>
<td></td>
</tr>
<tr>
<td>ISC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVE</td>
<td>= 0.72</td>
<td>AVE  = 0.83</td>
<td>AVE  = 0.78</td>
<td>AVE  = 0.92</td>
<td></td>
</tr>
<tr>
<td>Corr²</td>
<td>= 0.64</td>
<td>Corr² = 0.59</td>
<td>Corr² = 0.59</td>
<td>Corr² = 0.59</td>
<td></td>
</tr>
<tr>
<td>ASSC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVE</td>
<td>= 0.83</td>
<td>AVE  = 0.78</td>
<td>AVE  = 0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corr²</td>
<td>= 0.59</td>
<td>Corr² = 0.59</td>
<td>Corr² = 0.59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.3-22 - Discriminant validity
6.3.12 Nomological validity

Nomological validity is tested by examining whether the correlations among the constructs in the measurement theory make sense. This test is therefore covered by the test of the final model, see section 6.3.7.

6.3.13 Specify the structural model (Stage 5)

This section applies the procedure of stage 5 (specification of the structural model). This stage was outlined in section 4.3.3. Stage 5 involves specifying the structural model by assigning relationships from one construct to another based on the proposed theoretical model (Hair et al., 2010). The structural model is a visual presentation of the theory using a path diagram. The path diagram for the overall structural model is presented in Figure 6.3-6.
6.4 Assisting the structural model fit (Stage 6)

This final stage of structural equation modelling involves testing the validity of the structural model and its corresponding hypothesised theoretical relationships (Hair et al., 2010). This section assesses the structural model fit as outlined in section 4.3.3.

6.4.1 Evaluating the structural model fit

In testing the fit of the model, the indices of absolute and incremental fit that were identified in section 6.2.1.1 and 6.2.1.2 were used. The fit statistics for the overall model are presented in Table 6.4-1.
Chapter 6: Data analysis and results

Table 6.4-1 - Model fit indices summary

<table>
<thead>
<tr>
<th></th>
<th>AMOS Results</th>
<th>Robust statistics</th>
<th>Value = good fit</th>
<th>Appropriate fit met?</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$/df</td>
<td>2.89</td>
<td>3.09</td>
<td>$\leq 3$</td>
<td>✓</td>
</tr>
<tr>
<td>$P$</td>
<td>.00</td>
<td></td>
<td>$&gt; .05$</td>
<td>×</td>
</tr>
<tr>
<td>SRMR</td>
<td>.035</td>
<td></td>
<td>$\leq .08$</td>
<td>✓</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.07</td>
<td>0.07</td>
<td>$\leq .08$</td>
<td>✓</td>
</tr>
<tr>
<td>CFI</td>
<td>.96</td>
<td>0.95</td>
<td>$\geq .09$</td>
<td>✓</td>
</tr>
</tbody>
</table>

As reported in the table above a good fit to the data was found for all fit indices, except for the chi-square $p$ value. However as has been previously identified this measure is unreliable especially when samples are large and there is multivariate non-normality. The fit of the model to the data was therefore assessed on the basis of the other fit indices. In addition, Hu and Bentler (1995) indicate that regardless of the implications of the chi-square test or fit indices if the standardised residuals are appropriate then the model is good at accounting for the data.

The final overall structural model showing standardised coefficients is presented in Figure 6.4-1. It contains 7 Significant paths ($p \leq .05$) and two non-significant paths; KNOW-> SC and TRUST-> FC.
Figure 6.4-1 - Structural model showing standardised coefficients
6.4.2 Evaluating residuals

When assessing absolute model fit, an examination of residuals is recommended (J. C. Anderson & Gerbing, 1982; Baumgartner & Homburg, 1996; Holmes-Smith & Coote, 2006; Hu & Bentler, 1995). In general, large standardised residuals indicate that a particular covariance is not well reproduced by the hypothesised model (Holmes-Smith & Coote, 2006). Small residuals on the other hand indicate that the model is reproduced well by the data, regardless of the implications of the chi-square $\chi^2$ test or fit indices (Hu & Bentler, 1995). By examining the residuals the research was able to identify that none of the variables were problematic as none of the residuals was larger than the 2.58 cut off recommended by (Holmes-Smith & Coote, 2006).

6.4.3 Comparing nested models

In order to test hypotheses H1E, H1F and H1G, a comparison of nested models was required. These models are called nested models as they contain the same number of variables and are formed from the primary model by altering the relationships, such as adding or deleting paths (Hair et al., 2010). By restricting two paths as equal an analysis of the chi-square difference statistic can be undertaken (Hair et al., 2010). The $x^2$ value from the baseline model is subtracted from the $x^2$ of the nested model (Hair et al., 2010). Based on the degrees of freedom the value is compared to the $x^2$ table. For 1 degree of freedom $x^2 <3.84$. Table 6.4-2 provides the results of the nested models.
### 6.5 Testing the research hypotheses

This section assesses the hypotheses in relation to the research model by examining the significance and size of the standardised path coefficients for the model. The research questions and the corresponding hypotheses were developed in direct response to the literature and were outlined in chapter 2. Table 6.5-1 summarises the research hypotheses.

| Hypothesis                                                                 | DF | \( \chi^2 \) | Significant  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H1A - Actual self-congruity has a relationship with self-congruity.</td>
<td>342</td>
<td>984.25</td>
<td>( \chi^2 &lt; 3.84 )</td>
</tr>
<tr>
<td>H1B - Ideal self-congruity has a relationship with self-congruity</td>
<td>342</td>
<td>1005.01</td>
<td>Significantly different</td>
</tr>
<tr>
<td>H1C - Actual social self-congruity has a relationship with self-congruity</td>
<td>1</td>
<td>20.76</td>
<td></td>
</tr>
<tr>
<td>H1D - Ideal social self-congruity has a relationship with self-congruity</td>
<td>1</td>
<td>20.68</td>
<td></td>
</tr>
<tr>
<td>H1E – Ideal self-congruity (ISC) has a stronger relationship with self-congruity than actual self-congruity (ASC).</td>
<td>342</td>
<td>984.35</td>
<td>Not significantly different</td>
</tr>
<tr>
<td>H1F - Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than actual social self-congruity (ASSC)</td>
<td>1</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>H1G – Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than ideal self-congruity (ISC).</td>
<td>1</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>H2A - Self-congruity has a relationship with intention to act</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2B - Functional congruity has a relationship with intention to act</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3A – Knowledge has a relationship with FC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3B – Knowledge has a relationship with SC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4A - Trust has a relationship with FC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4B - Trust has a relationship with SC</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.5-1 - Summary of the research hypothesis
The direct, indirect, total effect and significance are summarised in Table 6.5-2.

Discussion of the hypotheses will be undertaken in the final chapter.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Effect</th>
<th>Significant</th>
<th>Accept/reject</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1A - Actual self-congruity has a relationship with self-congruity.</td>
<td>.85</td>
<td>Yes</td>
<td>Accept</td>
</tr>
<tr>
<td>H1B - Ideal self-congruity has a relationship with self-congruity</td>
<td>.95</td>
<td>Yes</td>
<td>Accept</td>
</tr>
<tr>
<td>H1C - Actual social self-congruity has a relationship with self-congruity</td>
<td>.80</td>
<td>Yes</td>
<td>Accept</td>
</tr>
<tr>
<td>H1D - Ideal social self-congruity has a relationship with self-congruity</td>
<td>.90</td>
<td>Yes</td>
<td>Accept</td>
</tr>
<tr>
<td>H1E – Ideal self-congruity (ISC) has a stronger relationship with self-congruity than actual self-congruity (ASC).</td>
<td>.95 vs .85</td>
<td>Yes</td>
<td>Accept</td>
</tr>
<tr>
<td>H1F - Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than actual social self-congruity (ASSC)</td>
<td>.90 vs .85</td>
<td>Yes</td>
<td>Accept</td>
</tr>
<tr>
<td>H1G – Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than ideal self-congruity (ISC).</td>
<td>.90 vs .95</td>
<td>No</td>
<td>Reject</td>
</tr>
<tr>
<td>H2A - Self-congruity has a relationship with intention to act</td>
<td>Direct .46</td>
<td>Yes</td>
<td>Accept</td>
</tr>
<tr>
<td></td>
<td>Indirect .13</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>H2B - Functional congruity has a relationship with intention to act</td>
<td>.21</td>
<td>Yes</td>
<td>Accept</td>
</tr>
<tr>
<td>H3A – Knowledge has a relationship with FC</td>
<td>.09</td>
<td>Yes</td>
<td>Accept</td>
</tr>
<tr>
<td>H3B – Knowledge has a relationship with SC</td>
<td>-.07</td>
<td>No</td>
<td>Reject</td>
</tr>
<tr>
<td>H4A - Trust has a relationship with FC</td>
<td>-.03</td>
<td>No</td>
<td>Reject</td>
</tr>
<tr>
<td>H4B - Trust has a relationship with SC</td>
<td>.19</td>
<td>Yes</td>
<td>Accept</td>
</tr>
</tbody>
</table>

Table 6.5-2 - Summary of the direct, indirect and total effects and significance of the research questions
Chapter 6: Data analysis and results

6.6 Summary

Chapter 4 presented the methodology to be implemented in this study in order to answer the research questions which were developed from the research model. Chapter 5 outlined the data cleaning that was performed to guarantee the data analysis undertaken would produce genuine results. Having assessed the data as clean, the analysis of the data and the results will were presented in this chapter. The chapter began with a discussion of how the measurement models were assessed for face, discriminant and nomological validity, and then the structural model was presented and tested. The chapter then presented the testing the hypotheses. The following chapter will discuss these results.
Chapter 7 - Conclusions and implications

7.1 Introduction

The stated aim of this thesis was to investigate relationships between functional and self-congruity within the context of consumer residential property purchase decisions. Four research questions were subsequently developed following a review of extant literature (refer to chapter 2) and 13 associated hypotheses established.

A structural equation methodology was developed to statistically test the hypotheses and data was collected and analysed (refer to chapters 4, 5 and 6). The acceptance or rejection of the research hypotheses was outlined in the previous chapter. In the following sections conclusions and implications in regards to those hypotheses, the research questions and ultimately the research aim will be discussed. The contribution of this research to theory and practice will also be explicitly outlined and the limitations and recommendations for further research discussed.

7.2 Conclusions about the research aim

This thesis initially identified the lack of research into property purchase decision-making. Self and functional congruity were presented as appropriate concepts to investigate given evident gaps in the literature and a research agenda justified that could address these in the domains of housing decision-making and self and functional congruity. The aim of this research was defined as:
To investigate relationships between functional and self-congruity within the context of consumer residential property purchase decisions.

Building from the aim the following four research questions were developed:

RQ1 - What is the relationship between ASC, ISC, ASSC and ISSC and self-congruity (SC) during the residential property purchase decision?

RQ2 - What is the effect of self and functional congruity on residential property purchase intentions?

RQ3 - What is the effect of knowledge on functional and self-congruity during the residential property purchase decision-making process?

RQ4 - What is the effect of trust on functional and self-congruity during the residential property purchase decision-making process?

The development of the research questions and the associated hypotheses for this research was discussed in sections 2.2, 3.2 and 3.3. Outcomes relating to research hypotheses were addressed in section 6.5 and a summary of hypotheses and associated outcomes is presented here in Table 7.2-1.
### Table 7.2-1 - Summary of research hypotheses

The conclusions resulting from the research questions will now be discussed in the following sections.
7.2.1 RQ1 – What is the relationship between ASC, ISC, ASSC and ISSC and self-congruity (SC) during the property purchase decision?

The hypotheses associated with the first research question were:

- H1A - Actual self-congruity (ASC) has a relationship with self-congruity (SC)
- H1B - Ideal self-congruity (ISC) has a relationship with self-congruity (SC)
- H1C - Actual social self-congruity (ASSC) has a relationship with self-congruity (SC).
- H1D - Ideal social self-congruity (ISSC) has a relationship with self-congruity (SC).
- H1E - Ideal self-congruity (ISC) has a stronger relationship with self-congruity than actual self-congruity (ASC).
- H1F - Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than actual social self-congruity (ASSC)
- H1G - Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than ideal self-congruity (ISC).

Each of these hypotheses will be now discussed within the context of addressing research question 1.
Chapter 7: Conclusion and implications

7.2.1.1 H1A - Actual self-congruity (ASC) has a relationship with self-congruity (SC)

As reported in section 6.5 and again in Table 7.2-1, hypothesis H1A was accepted. A significant coefficient between ASC and SC of .85 indicated a large effect. This result is consistent with the conceptual and empirical literature discussed in chapter 2 section 2.2.1.3.1. The strong positive association provides support for the suggestion by Johar and Sirgy (1991) that actual self-congruity is one component of the multidimensional self-congruity model. The results are also consistent with empirical work on self-congruity. Ibrahim and Najjar (2008) for example showed that actual self-image congruity has a positive influence on attitudes. Jamal and Al-Marri (2007) investigated the impact of actual self-congruity and brand preference on brands and found a strong relationship between self-congruity and brand satisfaction. Chebat, Sirgy and St-James (2006) used actual self-congruity theory to explain the transfer of images from malls to stores. Sirgy, Lee, Johar and Tidwell (2008) looked at the effect actual self-congruity with sponsorship has on brand loyalty.

While the majority of studies provide support for this hypothesis there are some studies that failed to confirm his relationship (Green, Maheshwari, & Rao, 1969; Hughes & Guerrero, 1971). Therefore the acceptance of this hypothesis in relation to the purchasing of real estate properties while being consistent with recent research adds value by supporting the rejection of previous studies that failed to confirm the relationship.

The acceptance of this hypothesis extends knowledge in two additional directions. The first is the area of alternative stages of decision-making. Previous empirical
studies using ASC have focused on end selection, purchase and post purchase. This research, by investigating intention to act during the initial decision between alternatives, provides an extension to our understanding of the relationship of ASC with SC. The acceptance of this hypothesis supports the use of ASC to predict behaviour during alternative stages of decision-making.

The second area of new knowledge the acceptance of this hypothesis provides is in residential property purchase decisions. This discipline has traditionally had very little application of consumer behaviour models. The acceptance of this hypothesis provides support for the developing study of housing research from a CB perspective. It also indicates that the ASC model is an appropriate one to predict intention to act during residential property purchase.

7.2.1.2 H1B- Ideal self-congruity (ISC) has a relationship with self-congruity (SC)

As reported in section 6.5 and again in Table 7.2-1, hypothesis H1B was accepted. A significant coefficient between ISC and SC of .95 indicated a large effect. This result was consistent with the conceptual and empirical literature discussed in section 2.2.1.3.2.

The acceptance of this hypothesis is in line with the literature reviewed during the study. For example Wattansuwan’s (2005) statement that we consume products to carry out self-creation. Again the strong positive association provides support for the Johar and Sirgy (1991) suggestion that ideal self-congruity is one component of the multidimensional self-congruity model. The results are also consistent with empirical work on self-congruity for example Dolich (1969); Malhotra (1981); Sirgy and Danes
(1982); Sirgy (1985); Quester et al. (2000); Litvin and Kar (2004); Kressman et al. (2006) and Beerli et al. (2007) all investigated ideal self-congruity and agreed that a relationship existed between ISC and SC.

While the acceptance of this hypothesis does not add much to the already accepted notion of ISCs relationship with SC it does extend this knowledge in two additional directions in the same way that H1A did. The first is in the area of alternative stages of decision-making. As with ASC, previous empirical studies using ISC have focused on end selection, purchase and post purchase. By investigating intention to act, during the initial decision between alternatives, this hypothesis provides an extension to our understanding of ISC and intention to act during alternative stages. Therefore the acceptance of these hypotheses supports the use of self and functional congruity in alternative stages of decision-making.

The second area of new knowledge the acceptance of this hypothesis provides is in residential property purchase decisions. This discipline has traditionally had very little application of consumer behaviour models. The acceptance of these hypotheses provides support to the developing study of housing research from a CB perspective.

7.2.1.3 H1C - Actual social self-congruity (ASSC) has a relationship with self-congruity (SC)

As reported in section 6.5 and again in Table 7.2-1, hypothesis H1C was accepted. A significant coefficient between ASSC and SC of .80 indicated a large effect. This result was consistent with the conceptual and limited empirical literature discussed in section 2.2.1.3.3.
The strong positive association provides support for Johar and Sirgy (1991) suggestion that ASSC is one component of the multidimensional self-congruity model. ASSC has been researched to much less of an extent than ASC and ISC therefore the empirical results of this study provide a contribution to our knowledge of the concept. The acceptance of this hypothesis does indicate support for the empirical research that has been undertaken. For example Muniz and O’Guinn’s (2001) study found that possessions can serve a social purpose of reflecting ties to one’s family, community and cultural groups. The results of Muniz and O’Guinn’s (2001) research indicate possessions symbolising current connections which indicated a social consistency motive for purchase. The social consistency motive is how the actual social self-congruity model affects consumer behaviour (Johar & Sirgy, 1991; Sirgy et al., 2005; N. D. Wright et al., 1992). Therefore the acceptance of this hypothesis suggests that purchasers of residential properties are motivated by a need or want for social consistency.

The acceptance of this hypothesis extends this limited empirical research by investigating a specific product category that has not previously been researched using ASSC. Residential property purchase decisions have traditionally had very little application of consumer behaviour models. The acceptance of this hypothesis therefore both provides support to the developing study of housing research from a CB perspective and for the use of ASSC as a generalizable theory explaining consumer decision-making.
Additionally the study of ASSC during the alternative stages of decision-making supports the use of ASSC as a generalisable theory for consumer decision-making and its use in different stages of the decision-making process.

7.2.1.4 H1D - Ideal social self-congruity (ISSC) has a relationship with self-congruity (SC).

As reported in section 6.5 and again in Table 7.2-1, hypothesis H1D was accepted. A significant coefficient between ISSC and SC of .90 indicated a large effect. This result was consistent with the conceptual and empirical literature discussed in section 2.2.1.3.4.

The strong positive association provides support for the Johar and Sirgy (1991) suggestion that ideal social self-congruity is one component of the multidimensional self-congruity model. Again the limited empirical studies found during the literature review support the acceptance of this hypothesis. For example the research of Sirgy and Samli (1985) investigate the store-image evaluation as a positive function of ASC and ISSC. Barone et al. (1999) undertook specific research into ISSC effects with product ownership as a moderator. Murphy et al.’s (2007) destination branding and self-congruity research and Ibrahim and Najjar’s (2007) retail outlet and self-congruity research also show ISSC’s relationship with SC.

While agreeing with the limited studies this hypothesis indicates that ISSC is an important predictor of its relationship with SC therefore with consumer decision-making. In particular the acceptance of this hypothesis adds to our knowledge by investigating an alternative stage of decision-making. As with the other three types of
SC, the limited previous empirical studies using ISSC have focused on end selection, purchase and post purchase. This research by investigating intention to act, during the initial decision between alternatives, provides an extension of our understanding of ISSC and initial decision-making and supports the use of ISSC in predicting consumer behaviour during alternative stages of the decision-making process.

By investigating the relationship of ISSC and SC within residential property purchase decisions this hypothesis also extended the literature. Housing research has traditionally had very little application of consumer behaviour models. The acceptance of this hypothesis provides support to the developing study of housing research from a CB perspective.

7.2.1.5 H1E – Ideal self-congruity (ISC) has a stronger relationship with self-congruity than actual self-congruity (ASC).

Hypothesis H1E was supported. The relationship that ISC had with self-congruity was .95 and the relationship ASC had was .85. In section 6.4.3 this hypothesis was tested using a chi square test based on a difference between the two. As shown in Table 6.4-2 the two are significantly different. Therefore ISC had a stronger relationship.

The acceptance of this hypothesis both supports and contradicts previous empirical and conceptual studies. While a study by Martineau (1957) suggested ideal self-congruity is more closely aligned to and explains consumption preference better than actual self-congruity, Dichter (1964) and Schlesinger (1964) both implied that actual self-congruity more closely corresponds to and explains preference. Additional studies such as Dolich (1969) state that in general actual and ideal congruity are
equally congruent and Ross (1971) indicate that actual self-image was more congruent with brand image than ideal self-image. Landon (1974) suggested that the purchase intentions of some products tend to be more correlated with (actual) self-image than ideal self-image and for other products the opposite. This suggests that the inconsistencies in the studies on actual and ideal self-congruities are due to a product or situation specific influence of self-congruity. This suggestion is in line with the Grubb and Grathwohl (1967) call for additional research into specific consumer decision situations. They believed that in given situations consumers are motivated by different needs, to support their actual self-concept or to promote the attainment of ideal self-concept. Given the unique nature of residential property purchase this research provides a contribution to our understanding of ASC and ISC in residential property purchase and high-involvement products in general.

7.2.1.6 H1F - Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than actual social self-congruity (ASSC)

Hypothesis H1F was supported as the relationship between ISSC and self-congruity was $0.90$ and the relationship between ASSC and self-congruity was $0.80$. This relationship was tested using nested models. The results were presented in Table 6.4-2 and showed that the two are significantly different. Therefore ISSC has a stronger relationship. Ibrahim and Najjar (2007) found that ASSC had the strongest relationship with consumer retail patronage. While this is the opposite of this research it was expected. Research by Quester et al. (2000) explains that symbolic products are more likely to be dominated by ideal self-image and tangible (functional) products are likely to motivate consumer through their actual self-image.
Additionally this research investigated self-congruity from a different stage of the decision-making process and investigated a high involvement product. Therefore the acceptance of this hypothesis provides a contribution of our understanding of ISSC and ASSC in specific contexts.

**7.2.1.7 H1G – Ideal social self-congruity (ISSC) has a stronger relationship with self-congruity than ideal self-congruity (ISC)**

Hypothesis H1G was rejected as ISSC had a relationship of .90 with self-congruity and ISC had a relationship of .95 and the results of the chi-squared tests resulted in the two not being significantly different (refer to Table 6.4-2). Therefore ISC and ISSC had equally strong relationships with self-congruity. While different from hypothesised, this result provides us with a greater understanding of the relative influence of the components of self-congruity during housing purchases.

Previous research on identity and symbolic consumption gives us insight into the results of this hypothesis. Research by Quester et al. (2000) explains that symbolic products are more likely to be dominated by ideal self-image and tangible (functional) product are likely to motivate consumer through their actual self-image. This therefore indicated that housing provides both symbolic and functional benefits to consumers. Given that the need for housing decision-making research that focused on both functional and symbolic attributes was expressed during the literature review and raised as a research gap, the results of this hypothesis highlight that not only does housing purchases provide both functional and symbolic benefits these are equally influential during the decision-making process.
A second area that this research hypothesis provides a contribution is in regard to ideal versus actual congruity. Previous research has shown that consumer behaviour is directed at maintaining or enhancing self-concept (Dobni & Zinkhan, 1990; Elliot & Wattanasuwan, 1998; Kwak & Kang, 2009; Piacentini & Mailer, 2004; Rogers, 1951). This research therefore shows that during the consumer decision-making process for residential property consumers are interested in enhancing their self-concept as the two ideal self-congruity models influenced intention to act more than the two actual self-congruity models. This research extends that research showing that in the context of housing purchase decisions consumers seek to enhance their self-image.

### 7.2.1.8 Summary of research question 1 findings

As can be seen by the preceding discussions on each of the hypotheses associated with research question 1, this research question has been addressed by this study. In summary research question 1 found:

- Actual self-congruity has a relationship with self-congruity during residential property decision-making
- Actual self-congruity has a relationship with self-congruity during the evaluation of alternatives
- Ideal self-congruity has a relationship with self-congruity during residential property decision-making
- Ideal self-congruity has a relationship with self-congruity during the evaluation of alternatives
- Actual social self-congruity has a relationship with self-congruity during residential property decision-making
- Actual social self-congruity has a relationship with self-congruity during the evaluation of alternatives
- Ideal social self-congruity has a relationship with self-congruity during residential property decision-making
- Ideal social self-congruity has a relationship with self-congruity during the evaluation of alternatives
- Ideal self-congruity has a stronger relationship with self-congruity than actual self-congruity during residential property decision-making
- Ideal social self-congruity has a stronger relationship with self-congruity than actual social self-congruity during residential property decision-making
- Ideal self-congruity and ideal social self-congruity have equally the strongest relationships with self-congruity during residential property decision-making

### 7.2.2 RQ2 – What is the effect of self and functional congruity on home purchase intentions?

The hypotheses associated with research question two were:

- **H2A** - Self-congruity (SC) has a relationship with intention to act (ITA)

- **H2B** - Functional congruity (FC) has a relationship with intention to act (ITA)

Each hypothesis will be discussed in detail in the following sections.
7.2.2.1 H2A - Self-congruity (SC) has a relationship with intention to act (ITA)

As reported in section 6.5 and again in Table 7.2-1, hypothesis H2A was accepted. A significant coefficient between SC and ITA of .46 indicated an effect. This result was consistent with the conceptual and empirical literature discussed in chapter 2.

The positive significant relationship that supports the acceptance of this hypothesis is support of empirical studies in general. Ericksen (1996) found a significant relationship between self-congruity and purchase intention of cars. Research by Birdwell (1968) and Mehta (1999) also indicated that self-congruity can effect consumer preferences and purchase intentions. Results from Jamal and Goode’s (2001) study showed that self-congruity was a very strong predictor of consumers’ brand preferences. Results by Lim and O’Cass (2001) into Southeast Asian consumers found a significant relationship between self-congruity and brand purchase intentions of fashion apparel. Kressman et al. (2006) showed that self-congruity predicted brand loyalty.

The agreement of this research with previous research provides support for the conclusion that self-congruity can be extended to high-involvement purchases and specifically to housing purchases. These areas had previously been neglected and therefore this research provides insight into these new areas. Additionally the application of self-congruity to the evaluation of alternative stages of consumer decision-making added to knowledge as this was highlighted as a research gap. The acceptance of this research question shows that self-congruity has a relationship with intention to act during the evaluation of alternatives therefore self-congruity theory
is an appropriate theory to apply during different stages of the consumer decision-making process.

As reported in section 6.5 and again in Table 7.2-1, a significant coefficient between SC and ITA of .13 indicated an indirect effect. The existence of an indirect effect provides support of Samli and Sirgy’s (1981) suggestion of a biasing effect of self-congruity on functional congruity. It also provided support to Sirgy and Samli’s (1985) follow up study that tested the hypothesis and provided empirical support for it. Additional research by Sirgy, Johar, Samli, and Claiborne (1991) looked at the influence of self-congruity on functional congruity and found support for an indirect relationship of self-congruity with store loyalty and intention towards a brand through functional congruity. Hohenstein, Sirgy, Herrmann, and Heitmann (2007) showed that brand self-congruity has a predictive influence on brand satisfaction, attitude and loyalty indirectly through functional congruity with two studies, one on cars and the other on public transportation systems. Self-congruity was also shown to predict functional congruity positively and significantly in Kressman et al. (2006). The agreement of this research with previous studies provides support for the extension of the self and functional congruity model to high involvement and specifically to residential property purchases.

As discussed in the literature review, consumers have limitations on their capacity to process information and that since consumers’ cannot process large amounts of cognitive information in relations to all purchase situations, consumers undertake heuristic decision-making (Hansen, 2005). Consumer attention and comprehension processes were outlined to be strongly influenced by consumers’ motivations,
abilities, and opportunities to process information (Batra & Ray, 1986; Bettman et al., 1998). Given the high involvement nature of housing consumers motivations to purchase the ‘right’ one is high, this suggests that consumers are motivated to undertake extensive research rather than use heuristics such as using their symbolic evaluations to inform their functional evaluations. However given the infrequent nature of housing purchase consumers are less likely to have had opportunities to process information on housing purchase and therefore be more likely to use decision heuristics and rely on the easier to process symbolic cues to inform the functional cues, which require greater cognitive effort (Sirgy et al., 2005; Sirgy & Su, 2000).

Previous research while raising that self-congruity might influence functional congruity due to information processing limitations had not empirically tested them; therefore this research provides an extension of our knowledge on self-congruity by showing that for housing purchases self-congruity has a biasing effect on functional congruity during the evaluation of alternatives.

7.2.2.2 H2B - Functional congruity (FC) has a relationship with intention to act (ITA)

As reported in section 6.5 and again in Table 7.2-1, hypothesis H2B was accepted. A significant coefficient between SC and ITA of .21 indicated an effect. This result was consistent with the conceptual and empirical literature discussed in chapter 2.

The acceptance of this hypothesis supports the conceptualisation of functional congruity outlined by Sirgy and Johar (1999), that consumers may select a brand or product based on perceived utilitarian aspects. It also supports empirical studies
such as research by Kressman et al. (2006) showing that functional congruity predicted brand loyalty positively and significantly and by Molin, Oppewal, and Timmermans (1996) investigated the functional attributes that influence consumer housing preferences.

The acceptance of this hypothesis expands theory by showing that the functional congruity model is appropriate to measure the influence of functional attributes on the purchase of residential property. It also indicates that the functional congruity model is an appropriate one to measure the functional purchase of high involvement products which had previously not been shown. Additionally the acceptance of this hypothesis shows that functional congruity theory can be generalisable to alternative stages of consumer decision-making such as the evaluation of alternatives as found in this study.

7.2.2.3 Summary of research question 2 findings

As can be seen from the previous discussions on hypotheses H2A and H2B, research question 2 has been addressed. In summary research question 2 found that:

- Self-congruity has a direct and indirect relationship with intention to act during residential property decision-making
- Self-congruity has a direct and indirect relationship with intention to act during the evaluation of alternatives
- Functional congruity has a relationship with intention to act during residential property decision-making
Functional congruity has a relationship with intention to act during the evaluation of alternatives

7.2.3 RQ3 - What is the effect of knowledge on functional and self-congruity during the residential property purchase decision-making process?

This research question had two associated research hypotheses:

H3A – Knowledge has a relationship with FC

H3B – Knowledge has a relationship with SC

These will now be discussed.

As reported in section 6.5 and again in Table 7.2-1, hypothesis H3A was accepted. This is consistent with the conceptual and limited empirical studies in the literature. However hypothesis H3B was not accepted which is inconsistent with previous studies and the conceptual model outlined in section 3.2.1. For example the acceptance of one hypothesis and not the other is at odds with the findings of Sirgy et al. (2005) who suggested that the two are correlated. Sirgy et al. (2005) theorised that experienced buyers would evaluate a product based on functional criteria more than symbolic criteria. They went on to indicate that a buyer without the necessary knowledge would use simple decision heuristics and evaluations based on symbolic attributes (Sirgy et al., 2005). This result therefore produces a contribution and suggests that in the context of high involvement purchases and housing purchase knowledge does not influence the self and functional congruity theories in the same
way. If we refer back to the discussion in section 3.2 on information processing we can gain an understanding of this contribution. Functional congruity requires greater cognitive effort, ability and motivation to process information (Sirgy & Su, 2000) therefore a change in ability (due to level of knowledge) influences functional congruity. Thus a relationship between knowledge and functional congruity exists.

Self-congruity on the other hand, requires little cognitive effort and therefore changes in the level of ability (e.g. knowledge) does not have a significant impact on self-congruity. Therefore while Sirgy et al. (2005) showed their hypotheses hold true for low involvement products the results of these hypotheses indicate that it does not for high involvement product decision-making. Therefore these hypotheses have shown that in the context of high involvement decisions knowledge has a relationship with functional congruity and not with self-congruity.

7.2.3.1 Summary of research question 3 findings

As outlined in the previous discussion, the results from hypotheses H3A and H3B addressed research question 3. In summary this research question has shown that:

- Perceived knowledge has a relationship with functional congruity during residential property decision-making
- Perceived knowledge has a relationship with functional congruity during high involvement purchases
- Perceived knowledge has a relationship with functional congruity during the evaluation of alternatives
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- Perceived knowledge does not have a relationship with self-congruity during residential property decision-making
- Perceived knowledge does not have a relationship with self-congruity during high involvement purchases
- Perceived knowledge does not have a relationship with self-congruity during the evaluation of alternatives

Research question 4 and the associated hypotheses are now discussed.

7.2.4 RQ4 - What is the effect of trust on functional and self-congruity during the residential property purchase decision-making process?

This research question had two associated research hypotheses:

H4A – Trust has a relationship with FC

H4B – Trust has a relationship with SC

As reported in section 6.5 and again in Table 7.2-1, hypothesis H4A was rejected. This result was inconsistent with the conceptual model and literature discussed in section 3.2.2. Additionally H4B was accepted despite the two being discussed in the literature as being correlated. Consumers with trust for the other party were suggested to be more likely to use simple decision heuristics and evaluate using symbolic attributes (self-congruity). On the other hand it was suggested that consumers who do not hold trust for the partner were suggested to be more likely to evaluate based on utilitarian attributes (functional congruity) (refer to section 3.2.2 for full discussion).
These results therefore provide a contribution to our understanding of the impact of trust on high involvement products and in particular housing, given the different results between this and previous research. As previously discussed functional congruity requires greater cognitive effort, ability and motivation (Sirgy et al., 2000). Because of the high involvement nature of housing, consumers are more motivated to process functional information and there is therefore less reliance on decision heuristics such as relying on the information of agents. Hence the level of trust does not have a significant relationship with functional congruity during high involvement purchases. On the other hand, self-congruity, being intangible and emotional, is psychologically related to trust and therefore, given the importance of making the right choice when consumers are highly involved in the decisions, trust has a relationship with self-congruity.

Given the lack of research into high involvement purchases in general and specifically into housing, this research question provides a contribution to our understanding. Specifically this contribution is that during high involvement purchases, trust has a relationship with self-congruity however it does not have a relationship with functional congruity.

7.2.4.1 Summary of research question 4 findings

The preceding discussion on hypotheses H4A and H4B show that research question 4 was addressed by this research. In summary the research question found that:

- Trust has a relationship with self-congruity during residential property decision-making
Chapter 7: Conclusion and implications

- Trust has a relationship with self-congruity during high involvement purchases
- Trust has a relationship with self-congruity during the evaluation of alternatives
- Trust does not have a relationship with functional congruity during residential property decision-making
- Trust does not have a relationship with functional congruity during high involvement purchases
- Trust does not have a relationship with functional congruity during the evaluation of alternatives

The implications of this research and the contributions it has made to theory and practice are now discussed.

7.3 Research contributions and implications

A number of gaps in the existing literature have been highlighted and research contributions and implications for theory and practice have been detailed throughout the discussions. These contributions are now specifically outlined in the following sections.
7.3.1 For theory

As noted in chapter 3 section 3.3 there are a number of gaps in the existing literature on self and functional congruity. Specifically these are:

1. There is limited empirical research investigating the relationship of ASC, ISC, ASSC and ASSC with SC and consumer behaviour.
2. There is limited empirical research into the integration of self-congruity and functional congruity.
3. There is limited empirical research into the relationship between knowledge and self and functional congruity’s influence on consumer behaviour.
4. There is a lack of empirical research into the relationship between trust and self and functional congruity’s influence on consumer behaviour.
5. There is a lack of empirical research using intentions during alternative stages of the decision-making process.
6. There is a lack of empirical research on property purchase decision-making
7. There is a lack of empirical research on self and functional congruity during the decision-making process of high involvement purchases.
Table 7.3-1 provides a summary of the contributions to theory based on the hypotheses.

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<th>Contribution</th>
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Table 7.3-1 - Summary of theoretical contributions

This thesis has addressed these gaps and each of these contributions will now be discussed.

7.3.1.1 There is limited empirical research investigating the relationship of ASC, ISC, ASSC and ASSC with SC and consumer behaviour.

There has been limited empirical work into the role of ASC, ISC, ISSC and ASSC concurrently. The results from research question one addressed this gap. Overall the
research indicated that all four types of SC have a significant relationship with SC and intention to act during residential property housing purchase decision-making.

As outlined in the literature review, conceptual works discussing the role of ASC, ISC, ISSC and ASSC are numerous however empirical works are limited. This research by investigating all four types of SC has provided an expansion of the literature on SC. In particular it provides support to the suggestion that SC is multidimensional.

Research pertaining to the relative strengths of the four types of SC is even more limited therefore this research has provided an extension of knowledge here with it being shown that ISC and ISSC equally had the strongest relationships. ASC and ASSC also had strong relationships. Previous empirical studies simultaneously investigating the strength of all four types of SC were not found during the literature search. This highlights the contribution of this research and the call from Erasmus et al. (2001) for more context and product specific research rather than generalised research. The high involvement decision-making process of housing therefore also provides evidence of this contribution to theory.

Given the unique nature of residential property purchase, with its diverse characteristics, complex contractual relationships, multiple users after purchase, affordability and family lifecycle influences, this application is substantial. By showing that the self-congruity theories which were developed for homogenous products are applicable to a heterogeneous product, this research has expanded the theory to investigate a very specific context. At the same time as providing unique insight into the residential property decision making process, this research has
shown that the theories of self-congruity are at a holistic level generalisable to both homogenous and heterogeneous products.

7.3.1.2 There is limited empirical research on integrating self-congruity and functional congruity.

Despite the array of conceptual works the number of empirical studies on the integrated self and functional congruity model is limited. This research extends those that have been undertaken, expanding the model to include intention to act, knowledge, trust, high involvement products and specifically property purchase. Research question two addressed this gap in knowledge. The results indicate that both self-congruity and functional congruity have strong positive relationships with intention to act during participants’ evaluations of alternatives during property purchase decision-making.

The agreement of H2A and H2B with previous empirical studies supports the use of a combined self and functional congruity model during alternative stages of the decision-making process. The acceptance of these hypotheses also supports the use of a combined self and functional congruity model for high involvement products where previous research has not been undertaken. Additionally the use of the combined model provides us with a greater understanding of previously unstudied consumer behaviour during residential property purchase. This research shows that consumers use both functional and symbolic attributes to evaluate alternatives during the property purchase decision. It also highlighted that self-congruity biases the effect of functional congruity during housing purchase decisions which had not been previously shown.
Given the unique functional nature of the residential property ‘product’ the application of the functional congruity theory must be examined in additional detail. As previously discussed property is unique because each ‘product’ is characterised by a combination of unique functional attributes (Khoo-Lattimore & Thyne, 2008). These include the location (and neighbourhood), access to transport and community amenities, the structural design, access to work, schools, leisure and entertainment (Khoo-Lattimore & Thyne, 2008). Therefore the replication of the functional congruity theory which was originally developed for application on homogeneous products onto a heterogeneous product is significant.

7.3.1.3 There is limited empirical research on the relationship between knowledge and self and functional congruity’s relationship with consumer behaviour

The inclusion of knowledge into the model provided a contribution to our understanding of the relationship of knowledge with self and functional congruity. This gap was addressed through research question 3. The results show that knowledge has a relationship to functional congruity during the evaluation of alternative properties.

The results also showed that the level of knowledge did not have a significant impact on self-congruity’s relationship with intention to act. As previously discussed this was in disagreement with the conceptual models found during the literature review that indicated a correlation between the two. The inconclusive nature of this research question with previous research again highlights Erasmus et al. (2001) suggestion for a need for context and product specific research rather than trying to create huge complex all-encompassing consumer decision-making models.
As discussed in section 7.2.3 these results indicate that the impact of knowledge is influenced by the level of involvement the consumer has with the product. This research, conducted on a high involvement product, shows that knowledge has a relationship with functional congruity but not with self-congruity. The research suggested that this was due to functional congruity requiring greater cognitive effort, ability and motivation to process information (Sirgy & Su, 2000) therefore a change in ability (due to level of knowledge) influences functional congruity. Therefore a relationship between knowledge and functional congruity exists. Self-congruity on the other hand requires little cognitive effort and therefore changes in the level of ability (e.g. knowledge) do not have a significant impact on self-congruity. This research therefore provides a contribution to our understanding of knowledge and self and functional congruity by showing that it is influenced by the level of involvement.

Given the particular nature of the property ‘product’ these conclusions made in regards to knowledge and its relationship with self and functional congruity cannot be generalised beyond the context of residential property purchase without further study.

7.3.1.4 There is a lack of empirical research into the relationship between trust and self and functional congruity’s relationship with consumer behaviour.

The inclusion of trust into the model provided a contribution to our knowledge of trust’s relationship with self and functional congruity. The gap was addressed by research question 4. The results show that the level of trust towards the advertiser has a relationship with self-congruity. The results also showed that trust did not have
a relationship with functional congruity and equally to the knowledge construct. The conceptual models found during the literature review showed functional and self-congruity to be correlated with one going up as trust increased and the other going down, and vice versa. Therefore these results provide theoretical advancement by showing that involvement moderates the relationship of trust to self and functional congruity in the real estate field. The finding from of this research supports the suggestion by Erasmus et al. (2001) for a need for context and product specific research rather than trying to create huge complex all-encompassing consumer decision-making models. This research indicated that during high involvement purchases the evaluation of functional attributes are not influenced by the level of trust and that the trust does however influence self-congruity.

As previously discussed in relation to knowledge, the unique nature of the residential property product indicates these results need additional contextual study in order to generalise beyond a property application.

7.3.1.5 There is a lack of empirical research using intentions during alternative stages of the decision-making process.

This research looked at the intention to act after consumers assessed a product in their evoked set, therefore providing new knowledge of self and functional congruity. Testing the models at that stage of decision-making was not found to have occurred in past studies. The results from all four research questions provided an extension of knowledge.
The first research question showed that all four types of self-congruity (actual self-congruity, ideal self-congruity, actual social self-congruity and ideal social self-congruity) influence consumers’ intention to act during the evaluation of alternatives of residential properties. This has previously not been empirically studied and therefore provides a foundation for future research to examine the use of all four types of self-congruity in alternative stages of the decision-making process with other product types.

The second research question showed that both self and functional congruity are significant influences of consumers’ intentions to act during the evaluation of alternatives. Again this has previously not been empirically studied and therefore provides a contribution to theory indicating the use of both self and functional congruity theories in alternative stages of the consumer decision-making process.

The third and fourth research questions, by having mixed results, could suggest that the application of trust and knowledge during alternative stages of decision-making is not consistent with that of purchase and post purchase stages. Therefore by finding contradicting results this research has provided the groundwork for future studies to investigate the impact of moderating factors like trust and knowledge during alternative stages. Additionally these contradicting results could be a consequence of the unique nature of the property decision-making process (see section 4.4.2.1). Due to this complexity the research suggests that trust and knowledge have a more complicated relationship with consumer decision making.
There is a lack of empirical research on property purchase decision-making

As this research was conducted on property purchase decision-making it provides a unique area of contribution by using consumer behaviour models in an area that in the past has had very little application of marketing theories. Indeed Gibler and Nelson (1998) presented the need for non-functional research into housing. The results from all four research questions provide us with knowledge of property purchase decision-making.

Research question one showed that all four types of self-congruity (ASC, ISC, ASSC and ISSC) influence consumer's decision-making process when purchasing residential property. The first research question also showed that for residential property decision-making ASC has the strongest relationship.

The second research question showed that both self and functional congruity influence the residential property purchase decision and highlights a need for further holistic decision-making studies into property purchaser's decision-making.

Research question three and four provided mixed results and therefore indicate a need for additional research into property decision-making in order to better understand these discrepancies. As discussed in the previous section, this result is potentially due to the complicated nature of residential property and therefore increased complexity of the relationship between influencing factors and residential property decision making.

Overall this research showed that symbolic consumption is an important and significant part of consumers' decision-making during property purchase therefore
providing an extension to theory by developing these conclusions based upon empirical work.

7.3.1.7 There is a lack of empirical research on self and functional congruity during the decision-making process of high involvement purchases

There has been a lack of empirical research of self and functional congruity during the decision-making process of high involvement purchases. The results from all four research questions addressed this gap. Overall the research has shown that the influence of self and functional congruity is different for high involvement purchases.

As outlined in the literature, previous research has shown that product involvement significantly affects consumer decision-making (see for example Suh and Yi (2006); Warrington and Shim (2000)). It was indicated that in high involvement decision individuals dedicate more attention and effort to the decision problem (Xue, 2008).

Research question 1 showed that during high involvement decisions all 4 types of SC influence decision-making and ISC and ISSC have the strongest relationships with intention to act.

Research question 2 showed that self-congruity has a direct and indirect relationship with intention to act during high involvement decisions. This seems to contradict research by Heath and Scott (1998) which investigated cars, however as highlighted in the paper the lack of influence of self-congruity was due to the products having similar physical and symbolic attributes. Therefore the findings are not indicative of high involvement purchases. The results of research question 2 also showed that
during high involvement purchases functional congruity has a relationship with intentions to act.

Research question 3 indicated that knowledge has a relationship with functional congruity but not with self-congruity during high involvement purchase decisions. This is different to conceptual and empirical studies on low involvement products therefore these results provide a theoretical advancement showing involvement moderates the relationship between knowledge and self and functional congruity during residential property purchase.

Lastly research question 4 revealed that involvement also moderated the relationship between trust and self and functional congruity during residential property purchase decisions. In this high involvement situation trust was found to have a relationship with self-congruity but not with functional congruity.

This research therefore provides a contribution to our understanding of self and functional congruity theories by showing that it is influenced by the level of involvement.

### 7.3.2 For practice

As discussed in the background to this research, the housing market is experiencing profound change (Beer et al., 2006). Research by Beer et al. (2007) showed that housing is increasingly being used both as a location for, and object of, higher level consumption (Beer et al., 2007). While the consumption aspects of housing have always been significant (see, for example, N. C. Saunders (1981)) they have become a
more important driver of housing lifecycles over the last decades when compared with the past (Beer et al., 2007).

The importance of a search for identity through the construction of a lifestyle has important implications for housing (Clapham, 2006). Saunders (1990) argued that home ownership is an important source of this identity, but the impact on people’s perception of housing is wider than a focus on tenure alone. Therefore the results of this research provide those associated with the design, building and selling of residential property with new information.

The building and construction industry could use this information to design and build houses that encapsulate both functional and symbolic attributes of importance to property purchasers. By doing so a premium price could be sought from products that meet all of a consumer’s needs rather than only one component.

Real estate agencies could potentially use this information to better understand their customers and provide customer service to a higher standard by understanding completely what the consumers want rather than focusing on only one side of the story (e.g. functional). By better understanding consumer decision making agents can reduce wasted time by not showing the customer properties that are unsuitable. Research by Anglin (1997) found that an agent that knew more about a buyer’s tastes decreased time till purchase. Additionally by understanding that amount of knowledge affects consumer decision-making process can also allow agents to tweak their sales pitches to present those attributes that are most important to the consumers.
Consumers who are looking to renovate their property for future sale can use this information to better understand what future buyers will be looking for when purchasing. In the same way investors who are looking for capital gains growth could think about the future buyer of a property when making their own decision on which property to purchase. Traditionally investors would purchase based on functional attributes however as the results of this study have shown non-functional components have a significant relationship with residential property purchase. By thinking about the potential residential buyers’ decision-making process the investor can purchase property that will be evaluated positively by future consumers and therefore the investor can gain a price premium.

Lastly those consumers who are struggling to find the right property and cannot quantify what is not right about a property can use this information to better understand themselves as consumers. By understanding themselves as consumers, they can make better decisions and buy more wisely (Blackwell et al., 2006).

7.4 Delimitations

There are some delimitations of this research that should be recognised and taken into account when interpreting findings.

1. The cross-sectional research design meant that the data collected was from one point in time. Due to the nature of the decision-making process and the particular stage of consumer decision-making studied in this research this is a
boundary to the research rather than a bias of the study. Therefore time is assumed to have a minimal effect on the research.

2. The choice of construct indicators was made according to findings from an examination of consumer behaviour literature and the scales haven't previously been used in the context of property research before. The multi-item indicators used in the research were validated using accepted SEM procedures (see Chapter 5) and through pretesting, validity and reliability testing (see sections 4.6.4 and 6.3.8) however it is possible that there might be other influencing elements that have not been identified.

3. Structural equation modelling only allows disconfirmation of a model and does not provide proof of causality nor superiority of the tested model over other possible non-nested alternative models (J. C. Anderson & Gerbing, 1988). Therefore while this research has shown that the research model is theoretically sound and has a satisfactory fit, the researcher acknowledges that other models may provide an equal or better fit to the data.

4. The researcher acknowledges that there are different aspects of knowledge. The results of this study and the conclusions made must therefore be taken within the bounds of the definition and operationalisation of the knowledge construct used in this study.

5. Similarly the researcher acknowledges that there are different aspects of trust. Additionally trust develops as consumers pass through the decision making process. Therefore the results and conclusions made must be taken within the
bounds of the definition and operationalization of the trust construct used in this study.

7.5 **Recommendations for further research**

As noted during the conclusions about the research questions there are a number of areas of future research that this study has raised.

1. Additional research needs to be undertaken on the impact of knowledge on self and functional congruity’s relationship with consumer behaviour. In particular the researcher recommends this be done in the context of property purchase and high-involvement products.

2. Similarly, additional research is needed to investigate the impact of trust on self and functional congruity’s relationship with consumer behaviour. The contexts of property purchase and high-involvement products are recommended as a potential explanation for the previous differences found in other studies.

3. There is also a need to investigate trust within the context of consumer residential property purchase. In particular the implications of the complex agency/consumer relationship that develops in investment situations would be of interest and was not within the bounds of this home occupier property purchase research.
4. This research has shown that consumer behaviour theories are relevant to residential property purchase and this research needs to be extended with further study.

5. The role of the family in consumer behaviour has long been studied, therefore the researcher indicates a need for future consumer behaviour research to investigate the relationship between residential property purchase and the family decision unit.

### 7.6 Conclusions

Through the application of the research process detailed in chapter 3, the research aim; to investigate the relationship between functional and self-congruity within the context of consumer residential property purchase decisions; has been effectively addressed. To do so, a review of the literature was undertaken, a conceptual model was established and seven research gaps were identified. From the conceptual model and the seven research gaps, four research questions were developed and to answer those research questions 13 hypotheses were designed. Ten of the hypotheses were accepted and three were rejected and the key findings of the research were:

Self-congruity has a relationship with intention to act. Specifically it was found that:

- SC has a direct and indirect relationship with ITA during residential property decision-making
- SC has a direct and indirect relationship with ITA during the evaluation of alternatives
• ASC has a relationship with self-congruity during residential property decision-making
• ASC has a relationship with self-congruity during the evaluation of alternatives
• ISC has a relationship with self-congruity during residential property decision-making
• ISC has a relationship with self-congruity during the evaluation of alternatives
• ASSC has a relationship with self-congruity during residential property decision-making
• ASSC has a relationship with self-congruity during the evaluation of alternatives
• ISSC has a relationship with self-congruity during residential property decision-making
• ISSC has a relationship with self-congruity during the evaluation of alternatives
• ISC has a stronger relationship with SC than ASC during residential property decision-making
• ISSC has a stronger relationship with SC than ASSC during residential property decision-making
• ISC and ISSC have equally the strongest relationships with SC during residential property decision-making

Functional congruity has a relationship with intention to act. Specifically it was found that:
Chapter 7: Conclusion and implications

- FC has a relationship with ITA during residential property decision-making
- FC has a relationship with ITA during the evaluation of alternatives

Knowledge has a relationship with self and functional congruity’s relationship with intention to act. Specifically it was found that:

- K has a relationship with FC during residential property decision-making
- Knowledge has a relationship with FC during high involvement purchases
- Knowledge has a relationship with FC during the evaluation of alternatives
- Knowledge does not have a relationship with SC during residential property decision-making
- Knowledge does not have a relationship with SC during high involvement purchases
- Knowledge does not have a relationship with SC during the evaluation of alternatives

Trust has a relationship with self and functional congruity’s relationship with intention to act. Specifically it was found that:

- Trust has a relationship with SC during residential property decision-making
- Trust has a relationship with SC during high involvement purchases
- Trust has a relationship with SC during the evaluation of alternatives
- Trust does not have a relationship with FC during residential property decision-making
- Trust does not have a relationship with FC during high involvement purchases
• Trust does not have a relationship with FC during the evaluation of alternatives
Appendix 1 – Property 1

Property Type: Apartment/Unit
Bed: 1 Bath: 1 Car: 1

Superb single bedroom 2nd floor unit. This unit is extremely central, close to shops, restaurants and bus stop at your door. Enjoy modern living on your doorstep.

The bathroom consists of a combined shower/bath and a toilet in its own separate room.

The living space is open plan and the spacious bedroom has a small private balcony.

Parking for one car in the underground secure car park.

Laundry cupboard with sliding doors for privacy.

Features
- secure parking
- open plan living
- balcony off bedroom
- built in wardrobes
- air-conditioned

Proximity to
- shops
- public transport
- restaurants
- entertainment
Appendix 2 – Property 2

With 2 bedrooms, 2 bathrooms and spacious open plan living, this apartment won't stay on the market long. Full resort facilities with a pool, tennis court and BBQ area.

Features:
- Stylish modern design
- Large open plan living
- Full length balcony
- Fully furnished kitchen
- High-speed internet
- Central heating
- Built-in wardrobes
- Swimming pool

Located with close proximity to shops, restaurants, public transport and entertainment. Enjoy trendy modern living right on your door step.
Appendix 3 – Property 3

This well-maintained townhouse has 3 bedrooms, 2 bathrooms and a single lock-up garage. Close proximity to schools, childcare, parks and recreation areas. The main bedroom has walk-in robe and en-suite. The main bathroom is upstairs with bath/shower. Fully tiled downstairs and carpeted upstairs.

Downstairs opens up to a fully fenced private paved, low maintenance courtyard and entertaining area with side access.

Features:
- Close to schools
- Childcare
- Parks
- Recreation areas
- Air conditioning
- Built-in wardrobes
- Outdoor entertainment area
- Master bedrooms with walk-in robe and en-suite
- SLUG
Appendix 4 – Property 4

Property Type: House
Bed: 3 Bath: 2 Car: 2

Features:
- En-suite master bedroom
- Entertaining area
- Remote double garage
- Open plan living
- Sunny covered deck
- 3 bedrooms
- Separate laundry room
- Modern kitchen
- Outdoor entertaining area with pergola
- Backyard is private, fully fenced and with its own garden areas for low maintenance lifestyle
- Full sized bathroom with separate toilet

Master bedroom with en-suite.
Modern kitchen - fitted with stainless steel applications
Double lock up garage.
Outdoor entertaining area with pergola. Backyard is private, fully fenced and with its own garden areas for low maintenance lifestyle.
Separate laundry room.
Appendix 5 – Property 5

Property Type: House
Bed: 4
Bath: 3
Car: 2

Features
- DLUG
- Private pool
- Large entertaining room
- Separate lounge room
- Double walk-in robes in master bedroom

Within easy walking distance to schools and parks.

Featuring 4 generous bedrooms, 3 bathrooms and separate formal dining room. Covered decks on both sides of the house. DLUG and located in a quite cul de sac.

Stunning in ground pool. Elevated block.

2 storage spaces in the garage. Separate laundry room.

Main and second bedroom en-suite
Appendix 6 - Questionnaire

Q1.1 Hello from MyOpinions
Thank you for agreeing to participate in this survey. To begin the survey, click on the button below. As you move through the survey please do not use your browser buttons - use the buttons at the bottom of each screen.

Please remember:
Your views are important to us and your answers will be kept in the strictest confidence.
None of the responses you give are directly linked to you as an individual. They are used purely for statistical purposes only.
The survey incentives and expected length are outlined in the invitation e-mail.
In order for us to reward you for your time and opinion, please complete this survey in one unless specified otherwise.
Honest and thoughtful answers to this survey are vital to the integrity of the market research process. We, and our clients, require factual information in order to make important decisions that not only affect consumers like you; but other people as well.
Please click next if you agree to spend a reasonable amount of time completing this survey and to provide honest and thoughtful responses.

Q2.1 This research is being conducted as part of a Doctor of Philosophy degree at Southern Cross University. The research is investigating housing decision-making and I am contacting you to invite you to participate in this research by completing an anonymous survey. Participation is voluntary and will take approximately 10 minutes to complete.
The results of this study may be published in a peer-reviewed journal and presented at conferences however only group data will be reported. All completed survey data will be stored in its anonymous form and retained for a period of 7 years as required for all University research data.
All participants are entitled to feedback from the study. If you wish to receive a summary of the results via email or would like additional information about this project please email me at mthomas@scu.edu.au
This research has been approved by the Human Research Ethics Committee at Southern Cross University.
The approval number is ECN-11-088

If you have concerns about the ethical conduct of this research or the researchers, the following procedure should occur.

Write to the following:
The Ethics Complaints Officer Southern Cross University PO Box 157 Lismore NSW 2480 Email: ethics.lismore@scu.edu.au All information is confidential and will be handled as soon as possible.
Please click Next to continue to the survey. Thank you.

Q3.1 Do you intend to purchase property in the next 2 years?
Appendix 6: Questionnaire

Yes (1)
No (2)

Answer If Do you intend to purchase property in the next 2 years? No Is Selected

Q136 We would like to thank you for taking the time to participate in our survey. Your opinions and responses are gratefully received and extremely important to us.
The survey is now closed due to overwhelming responses from people like yourself.
Once again thank you for your interest. To ensure that you receive further relevant surveys, please make sure that your details are always up to date.
Please click the NEXT; button below to earn your points.

If We would like to tha... Is Displayed, Then Skip To End of Survey

Q4.1 Please select the reason for your purchase
Upsizing (1)
Downsizing (2)
First Home (3)
Investing (4)
Relocating (5)
Other (6) ____________________

Q4.2 What is your gender?
Male (1)
Female (2)

Q4.3 What year were you born?

Q4.4 In which state do you reside?
NSW (1)
ACT (2)
VIC (3)
QLD (4)
SA (5)
TAS (6)
WA (7)
NT (8)

Q4.5 What is your gross household income per year?
Negative or no income (1)
$1 - $20,799 (2)
$20,800 - $41,599 (3)
$41,600 - $62,399 (4)
$62,400 - $83,199 (5)
$83,200 - $103,999 (6)
$104,00 - $145,599 (7)
$145,600 + (8)
Q4.6 What is the highest level of education you have completed?
Year 10 or below (1)
Year 12 (2)
Certificate (3)
Diploma/Advanced Diploma (4)
Bachelors Degree (5)
Graduate Certificate/Graduate Diploma (6)
Postgraduate Degree (7)

Q5.1 Property advertisers can be trusted at all times
Strongly Disagree (1)
Disagree (2)
Somewhat Disagree (3)
Neither Agree nor Disagree (4)
Somewhat Agree (5)
Agree (6)
Strongly Agree (7)

Q5.2 Property advertisers are perfectly honest and truthful
Strongly Disagree (1)
Disagree (2)
Somewhat Disagree (3)
Neither Agree nor Disagree (4)
Somewhat Agree (5)
Agree (6)
Strongly Agree (7)

Q5.3 Property advertisers can be trusted completely
Strongly Disagree (1)
Disagree (2)
Somewhat Disagree (3)
Neither Agree nor Disagree (4)
Somewhat Agree (5)
Agree (6)
Strongly Agree (7)

Q5.4 Property advertisers can always be counted on to do what is right
Strongly Disagree (1)
Disagree (2)
Somewhat Disagree (3)
Neither Agree nor Disagree (4)
Somewhat Agree (5)
Agree (6)
Strongly Agree (7)

Q6.1 I feel very knowledgeable about property
Strongly Disagree (1)
Disagree (2)
Somewhat Disagree (3)
Neither Agree nor Disagree (4)
Somewhat Agree (5)
Agree (6)
Strongly Agree (7)
Appendix 6: Questionnaire

Q6.2 If a friend asked me about buying property, I could give them advise
Strongly Disagree (1)
Disagree (2)
Somewhat Disagree (3)
Neither Agree nor Disagree (4)
Somewhat Agree (5)
Agree (6)
Strongly Agree (7)

Q6.3 If I had to purchase property today, I would need to gather very little information in order to make a wise decision
Strongly Disagree (1)
Disagree (2)
Somewhat Disagree (3)
Neither Agree nor Disagree (4)
Somewhat Agree (5)
Agree (6)
Strongly Agree (7)

Q6.4 I feel very confident about my ability to tell the difference between different properties.
Strongly Disagree (1)
Disagree (2)
Somewhat Disagree (3)
Neither Agree nor Disagree (4)
Somewhat Agree (5)
Agree (6)
Strongly Agree (7)

Q7.1 Which of the following properties most closely represents the type of property you are considering purchasing?
1 bedroom, 1 bathroom unit with an underground parking space (1)
2 bedroom, 2 bathroom unit with a single lock up garage (2)
3 bedroom, 2 bathroom townhouse with a single lock up garage (3)
3 bedroom, 2 bathroom house with double lock up garage (4)
4 bedroom, 3 bathroom house with double lock up garage (5)

Q124 In order to answer the remaining questions you will need to reflect upon yourself. This will be done in four ways - How you currently see yourself - How you want to see yourself - How you believe others see you, and - How you want others to see you. For some people these will be very similar however for others they will be very distinct. Even if they are very similar please answer each block of questions. Take as much time as you need to think about how you want to be thought of, how you think others currently see you, how you want to see yourself and how you currently see yourself. The remaining questions relate to the property in this advert. Take a moment to think about the property in this advert. Think about the kind of person who typically owns this type of property. Visualise this person in your mind. If you are having trouble visualising them think about their age, family life stage, income or social status. Once you have a clear picture in your mind move on to the questions below.
Q125  Lets start with how you currently see yourself. Take a moment to think about how you view yourself (remember to distinguish this from your ideal self image) and once you have a complete picture in your mind, indicate your agreement or disagreement with the following statements.

| The image of the typical owner of this property is highly consistent with how I see myself (1) | Strongly Disagree (1) | Disagree (2) | Somewhat Disagree (3) | Neither Agree nor Disagree (4) | Somewhat Agree (5) | Agree (6) | Strongly Agree (7) |
| The typical owner of this property reflects the type of person I am (2) | | | | | | | |
| I can identify with the typical owner of this property (3) | | | | | | | |
| The type of person who lives in this property is very much like me (4) | | | | | | | |
| The typical owner of this house is similar to me (5) | | | | | | | |
Q126 Now take a moment to think about the person you would like to be. With this in mind answer the following questions.

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<th></th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Somewhat Disagree (3)</th>
<th>Neither Agree nor Disagree (4)</th>
<th>Somewhat Agree (5)</th>
<th>Agree (6)</th>
<th>Strongly Agree (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image of the typical owner of this property is highly consistent with how I would like to see myself (1)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The typical owner of this property reflects the type of person I would like to be (2)</td>
<td></td>
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<tr>
<td>I would like to identify with the typical owner of this property (3)</td>
<td></td>
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</tr>
<tr>
<td>The type of person who lives in this property is very much like the person I would like to be (4)</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>The typical owner of this house is similar to the person I would like to be (5)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Q128 The next set of questions requires you to reflect upon how you think others (such as your family, friends and co-workers) see you. Keep in mind that this is different to how you want others to see you.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Somewhat Disagree (3)</th>
<th>Neither Agree nor Disagree (4)</th>
<th>Somewhat Agree (5)</th>
<th>Agree (6)</th>
<th>Strongly Agree (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image of the typical owner of this property is highly consistent with how others see me (1)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>The typical owner of this property reflects the type of person others see me as (2)</td>
<td></td>
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<tr>
<td>Family, friends and co-workers would think I identify with the typical owner of this property (3)</td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>The type of person who lives in this property is very much like how others see me (4)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>The typical owner of this house is similar to the person my family, friends and co-workers see me as (5)</td>
<td></td>
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</tr>
</tbody>
</table>
Q130 Now reflect upon how you would like others to see you for the following statements

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Somewhat Disagree (3)</th>
<th>Neither Agree nor Disagree (4)</th>
<th>Somewhat Agree (5)</th>
<th>Agree (6)</th>
<th>Strongly Agree (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image of the typical owner of this property is highly consistent with how I would like others to see me (1)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The typical owner of this property reflects the type of person I would like others to see me as (2)</td>
<td></td>
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</tr>
<tr>
<td>I would like my family, friends and co-workers to think I identify with the typical owner of this property (3)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>The type of person who lives in this property is very much like how I would like others to see me (4)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The typical owner of this house is similar to the person I would like my family, friends and co-workers to see me as (5)</td>
<td></td>
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</tr>
</tbody>
</table>
Q132 Take another moment to think about this property. Think about the attributes that you want in a property. Once you have done this, indicate your satisfaction with the following features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Very Dissatisfied (1)</th>
<th>Dissatisfied (2)</th>
<th>Somewhat Dissatisfied (3)</th>
<th>Neutral (4)</th>
<th>Somewhat Satisfied (5)</th>
<th>Satisfied (6)</th>
<th>Very Satisfied (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garage/car space/s (1)</td>
<td></td>
<td></td>
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<tr>
<td>General layout of the property (2)</td>
<td></td>
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<tr>
<td>Storage space (3)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bathrooms (Number and Size) (4)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Kitchen (Size and Layout) (5)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Indoor entertaining space (6)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Bedrooms (Number and Size) (7)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside entertaining space (8)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Proximity to desired facilities (9)</td>
<td></td>
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</tr>
</tbody>
</table>
Q13.4 What is the probability that you would contact the seller to arrange an inspection of this property?
10 Certain, practically certain (99 in 100) (1)
9 Almost sure (9 in 10) (2)
8 Very probable (8 in 10) (3)
7 Probable (7 in 10) (4)
6 Good possibility (6 in 10) (5)
5 Fairly good possibility (5 in 10) (6)
4 Fair possibility (4 in 10) (7)
3 Some possibility (3 in 10) (8)
2 Slight possibility (2 in 10) (9)
1 Very slight possibility (1 in 10) (10)
0 No chance, almost no chance (1 in 100) (11)

Q13.1 We would like to thank you for taking the time to complete our survey. Your opinions and responses are gratefully received and extremely important to us.

Your responses will be used at an aggregate level only, and as such we would like to assure you once again that your details will be used in the strictest of confidence and will not be passed on to any other party for any purpose other than that which it was intended.

Once again thank you for your interest. To ensure that you receive further relevant surveys, please make sure that your details are always up to date.

Please click the 'Next' button below to earn your points.

If We would like to... Is Displayed, Then Skip To End of Survey
Reference list


