Brand as an influence on mobile converged technology purchases among Australian 18 to 34 year old young adults

David Edwin Rogerson
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UNIVERSITY OF WOLLONGONG

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BRAND AS AN INFLUENCE ON MOBILE CONVERGED TECHNOLOGY PURCHASES AMONG AUSTRALIAN 18 TO 34 YEAR OLD YOUNG ADULTS

DAVID EDWIN ROGERSON

A thesis submitted in fulfilment of the requirements for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION – RESEARCH

SCHOOL OF BUSINESS, SYDNEY BUSINESS SCHOOL

UNIVERSITY OF WOLLONGONG

2016
Certification

I, David Edwin Rogerson, declare that this thesis, submitted in partial fulfilment of the requirements for the award of Master of Business Administration, in the School of Business, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

David Edwin Rogerson

April, 2016
Abstract

This thesis explores the influence of brand on mobile converged technology purchase decisions made by young adult Australians, between 18 to 34 years of age, specifically focusing on mobile phone purchase decisions from 1 February, 2009 to 31 January, 2011. A review of the literature reveals that, predominantly, research has focused on the individual elements of brand, technology convergence and the consumer decision making processes, however, research into the combination of multiple variables in the purchase decision making process, for newer converged technologies, is not apparent. This research contributes to the available literature analysing the influence of brand as well as identifying other variables and the interactions between these influences in mobile converged technology purchase decisions. This research, therefore, aims to contribute to the literature on the influence of brand on consumer mobile converged technology purchase decisions, to formulate a model of the variables that influence consumer purchase decisions, identified through a review of literature and empirically validated through research. A model was developed and tested with a cross-sectional analysis, performed using a mixed methodology process through a survey of 303 Australian young adult users of mobile phones. The findings suggest that the retailer, as the last point of contact in the decision process, has influence on customer consideration of non-brand variables such as desired functions within the device and the available pricing structure options and that, at the point of purchase, these variables have a greater influence than brand and outweigh brand preferences.

Keywords: mobile converged technology, mobile phones, brand, variables that influence purchase decisions
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## Glossary of Terms

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<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>3G and 4G</td>
<td>3rd and 4th Generation technology for broadband mobile phones</td>
</tr>
<tr>
<td>ACMA</td>
<td>Australian Communications and Media Authority</td>
</tr>
<tr>
<td>AMA</td>
<td>American Marketing Association</td>
</tr>
<tr>
<td>B2B</td>
<td>Business To Business</td>
</tr>
<tr>
<td>B2C</td>
<td>Business To Consumer</td>
</tr>
<tr>
<td>Bluetooth</td>
<td>Bluetooth is a short-range wireless technology that extends to approximately 10 meters and enables you to connect computers, mobile phones, and handheld devices to each other and to the Internet</td>
</tr>
<tr>
<td>Bundling</td>
<td>Joining products or services together to sell as one unit</td>
</tr>
<tr>
<td>Call Plan</td>
<td>Call Plan is denoted as the financial investment the consumer is required to make in order to receive a packaged bundle of mobile telephony services which include various call rates, special offers and access to other services such as data downloads, SMS and social media</td>
</tr>
<tr>
<td>CBEE Model</td>
<td>Customer Based Brand Equity Model</td>
</tr>
<tr>
<td>CRM</td>
<td>Conceptual Research Model</td>
</tr>
<tr>
<td><strong>DMT</strong></td>
<td>Digital Media Technology</td>
</tr>
<tr>
<td><strong>Facebook</strong></td>
<td>Facebook is an online social networking service</td>
</tr>
<tr>
<td><strong>GPRS</strong></td>
<td>General Packet Radio Service which was the first popular data standard for mobile phones</td>
</tr>
<tr>
<td><strong>GPS</strong></td>
<td>Global Positioning System</td>
</tr>
<tr>
<td><strong>ICT</strong></td>
<td>Information and Communication Technology</td>
</tr>
<tr>
<td><strong>iPhone</strong></td>
<td>A range of smartphones designed and manufactured by Apple Inc. and first released in June 2007</td>
</tr>
<tr>
<td><strong>MMS</strong></td>
<td>Multimedia Message Services whereby text and/or sound can be incorporated into one message</td>
</tr>
<tr>
<td><strong>Mobile Converged Devices</strong></td>
<td>The integration of two or more different technologies into a single device or system such as a mobile phone. These could include a mobile phone that also has an MP3 player, call function and a camera</td>
</tr>
<tr>
<td><strong>MP3</strong></td>
<td>Initially known by its technical term MPEG 2 layer 3 (MP3) a common audio format for consumer audio recording and playback</td>
</tr>
<tr>
<td><strong>NBN</strong></td>
<td>National Broadband Network</td>
</tr>
<tr>
<td><strong>OEM</strong></td>
<td>Original Equipment Manufacturer, a company that manufactures items to be used in another company’s products</td>
</tr>
</tbody>
</table>
or a company that buys a product to rebrand under its own name

**Optus** SingTel Optus Pty Ltd is the second largest telecommunications company in Australia, and is a wholly owned subsidiary of Singapore Telecommunications trading primarily as Optus

**PDA** Personal Digital Assistant

**Smartphone** A device that lets you make telephone calls, but also adds in features that, in the past, you would have found only on a personal digital assistant or a computer—such as the ability to send and receive e-mail and edit Office documents, for example

**SMS texting** Short Message Service texting

**Spectrum** Electromagnetic Spectrum which carries signals used for radio, television, mobile phones, mobile broadband, scientific research, defence activities, public safety and other personal communications systems

**Telstra** An Australian telecommunications company whose network and systems infrastructure underpins the carriage and termination of the majority of Australia's domestic and international voice and data telephony traffic

**VCR** Video Cassette Recorder
**Vodafone**

In Australia, Vodafone is operated by Vodafone Hutchison Australia (VHA), a 50:50 joint venture between Vodafone Group Plc and Hutchison 3G Australia. It should be noted that the spelling of this company, in references or literature, the authors often use Vodafone and Vodafone interchangeably when describing Vodafone Hutchison Australia, and as such, the reader should see these as the same business name within this thesis.

**VoIP**

Voice over Internet Protocol—where a handset connects to a broadband internet connection.

**Wi-Fi**

"Wireless Fidelity." Wi-Fi refers to wireless networking technology that allows computers and other devices to communicate over a wireless signal.
Chapter 1: Introduction

1.1 Introduction

This report discusses the influence of brand in mobile converged technology purchases among Australian young adults, between 18 to 34 years of age. This research specifically focuses on the factors considered by young adults (aged 18 to 34 years) in Australia, when purchasing mobile telephone (mobile phone) technology during the period from 1 February, 2009 to 31 January, 2011.

A combination of different technological capabilities in a single device is a concept known as convergence (European Commission 1997, ACMA 2007). Mobile phones are a rapidly growing segment of mobile converged technology device consumption (ACMA 2009 p. 16) and young adults, aged between 18 to 34 years, are the most significant current and future consumers of today's rapidly developing mobile converged technology (ACMA 2009).

Brand is often assumed to be a critical factor in consumer mobile convergent technology purchase decisions and, as such, is a focus of the original equipment manufacturer (OEM) and retail outlet marketing efforts. Announcing financial results for the fiscal 2009 first quarter, on January 21, 2009, Apple Inc. reported that quarterly iPhone mobile phone units sold numbered 4,363,000, representing 88 percent growth over the same quarter the previous year (http://www.apple.com/pr/library/2009/01/21Apple-Reports-First-Quarter-Results.html, viewed 20 July, 2014). The apparent ubiquity of some brands, such as Apple, in the mobile converged technology market, would seem to suggest that brand does have an influence on consumer purchase decisions. Currently, however, there is little peer
reviewed research available on mobile converged technology purchase decisions from the consumer perspective or on the influence of brand on these consumer decisions.

Given the significance of the social and structural changes occurring as a result of the rapid uptake of mobile converged technology, there have been repeated recognition, primarily from Europe and the USA, of the need for further investigation into the processes that assist in predicting or explaining adoption, influence, acceptance and use of mobile services (Blechar et al. 2006, Lyytinen et al. 2004, Sarker et al. 2003 cited in Constantiou et al. 2007) and the need for a theoretical framework to assist in predicting what decides mobile customers in their purchase decisions (Wong & Hsu 2006). This suggests that the changes occurring to mobile services and the consumer implications are not clearly understood and should be further investigated. This research aims to contribute to the literature on the consumer perspective of mobile converged technology adoption.

As such, the research presented in this thesis had to find its own direction and set an initial framework for further scholarly pursuit. Some of the findings support the earlier work of Bazerman, particularly Decision Theory. Using Bazerman et al. (2008) as a foundation, a further overlaying model has been offered, which builds on this work and extends the basic theory into a Multi Nodal decision model.

Although focusing on a specific time, as all academic studies do, a secondary literature review (Addendum, 2016) suggests that this work is still of academic merit, as very few relevant scholarly articles have been produced in this field. Further, no scholarly work has been conducted within the Australian context.
1.2 Background

The current young adult demographic will form the backbone of the future mobile technology market (ACMA 2009). This consumer group is required to make purchase decisions about mobile communication devices in order to facilitate their social and business interactions in an age where mobile connectivity and digital technology options have become the norm.

The end of the 20th century saw a shift in the communication methods available to individuals to facilitate interpersonal communication for social or business purposes. Technological developments such as the internet, access to small and affordable computing devices and access to digital devices and wireless connectivity services have dramatically changed the communication channels accessed by people. Previously, letters were written or memos typed and these written messages were subsequently delivered through the postal service or inter-office couriers.

Conversations were exchanged over fixed line connections or on a physical face-to-face basis. Social networking, as a concept, was also socialising on a personal face-to-face basis in the domain of dining rooms, private functions, meetings, conferences or such other opportunities to meet person to person.

For entertainment, separate devices such as a television (TV) set or a clock radio in a bedroom were utilised by consumers to seek personal sources of entertainment and these were based at a fixed location. For example, less than 20 years ago a separate TV set was located in a lounge room connected to a video cassette recorder (VCR) to watch TV broadcasts or home movies; for radio listening, a tuner was typically located in the kitchen, bedroom, lounge, or in the car. Access to the internet required a computer with
a hard wired telephone or cable connection. Today, however, communication and entertainment are increasingly through portable devices.

At the time of this research, functionalities of vision, sound and internet have become accessible via portable devices. Viewing functionality has been enabled by the miniaturisation of the presentation screen, while wireless connectivity to technology networks has broadened the range of locations where functionality can be accessed, meaning a fixed location is less important particularly for the use of Mobile TV (Constantiou et al. 2007).

Single function mobile phone handsets have evolved since the 1990’s into the current range of multifunctional portable devices. Multifunctional mobile devices can provide access to various combinations of technological capabilities such as email, texting (Short Message Service—SMS), digital cameras, media players, global positioning systems (GPS) and the internet. These capabilities can be described as Digital Media Technologies (DMT). DMT’s are characterised by their innovation, accessibility, portability, and flexibility of use. Use of DMT’s is not confined to any particular location, as long as the network can support the DMT functions. Through wireless and internet capabilities, the division between DMT usage in homes, workplaces and social spaces is less clearly defined and less restricted.

Combining DMT functionalities into a single technological device is a concept known as convergence (European Commission 1997, ACMA 2007). Rather than selecting communications equipment based on a singular function, or the portability/mobility of the device (Moreau et al. 2001), consumer choice can now be based on the DMT converged functionality accessible via portable communication devices such as mobile phones or personal digital assistants (PDA) (Gill 2008, Gill & Lei 2009).
With the convergence of media and technology functions in mobile phone devices, these devices are changing the way people communicate, both for social and business purposes. These functions and the associated changes in the way people communicate, have social, structural and economic influences, in regards to which governments and businesses require information in order to respond with appropriate decision making and strategic planning.

This research attempts to understand the importance of brand, amongst other identified external influences on choice, when purchasing a mobile phone with converged technology contained within the mobile phone itself. Importantly, the research reflects the influence of brand in the Australian market and technological environment within the time frame in which the research was undertaken and the findings of the research and investigations undertaken are relative to the research time frame from 1 February, 2009 to 31 January, 2011.

It is significant that this thesis, while focusing on an analysis of brand as one discrete variable, extends beyond this analysis to identifying significant other influences. This research provides a critical enquiry into the complexity of the interaction of these variables and a broader understanding of the way this interaction influences the impact of brand on the mobile phone purchase decisions of the stated demographic. This research approach also contributes to the development of a model that provides a theoretical framework to model the influence of variables in converged technology mobile phone purchase decisions.

Identifying the range of variables, in addition to brand, that may influence purchase decisions is necessary for this enquiry because the technology facilitating personal communication is becoming increasingly complex, providing consumers with a variety
of choices in terms of connectivity options. The choices in connectivity options extend across network delivery options, device options and technological capability options. A review of literature confirms that as telephone delivery technology has increased in its complexity, moving from fixed telephone line analogue services to mobile phone wireless and digital platforms, the mobile devices that facilitate personal communication have experienced their own rapid development (Eng & Quaia 2009, Latzer 2009, Gill 2008).

The development of infrastructure, such as new delivery technology that delivers faster network speeds, is an essential part of the availability and consumer adoption of new mobile converged technology capabilities. Consumer access to network infrastructure is usually through telecommunications companies. A consumer, therefore, has to choose a telecommunications company as well as a mobile device to utilise mobile converged technology. The literature review indicates that consumer purchase decisions may be considered to be influenced by a package of the actual mobile device, along with the converged technology functions and network accessibility. This packaging of products and services is often called bundling.

The literature review also indicates that to explore the question of the influence of brand on mobile converged technology purchases of young adult Australians, it is necessary to consider the broader context of the purchase decision and compare the influence of brand to other influences on the purchase choice. This extends the research paradigms by indicating that, along with the focus on brand and how brand influences mobile phone purchase decisions, it is necessary to develop an understanding of what mobile technology is being adopted by the demographic, what convergence means and what it means to the Australian consumer in the context of the Australian technological environment supporting convergence, an understanding of the Australian market for
mobile phones, as well as an enquiry into consumer decision behaviour. Theoretical research into the available literature was undertaken to establish this context and to develop a framework to model the variables that influence mobile converged technology purchases among young adult Australians, 18 to 34 years of age. Empirical research was undertaken to validate the theoretical model.

Mobile converged technology is changing rapidly so, for the purpose of this research, the focus will be on converged technology mobile phone purchase decisions. These are now typically referred to as Smartphones (devices that enable telephone calls, but also add in features that, in the past, would only have been found on a personal digital assistant or a computer). The speed at which the advances in technology are reaching the market place contributes to the challenges faced by consumers in terms of choice of convergent communication options (Luke 2007, Gill 2008), and for research, in terms of analysing the influences on consumer adoption of new media technologies (Constantiou et al. 2007). Recognising these challenges, this research is limited to the mobile converged technology described below in Section 1.2.1.

1.2.1 Mobile Converged Technology and Functionality Included in this Research

In the context of this work, mobile converged technology and portable digital media technology (DMT) functions include:

- Mobile phones with connectivity to services like voice communication and the latest inclusion of VoIP (Voice over Internet Protocol—where a handset connects to a broadband internet connection, offering much lower subscription call rates to anywhere in the world). Use of VoIP by both business and household consumers has been identified in Australia as a new and emerging service (ACMA, Report 1, 2009) with 33 per cent per cent of respondents
claiming access to an internet service and subsequently reporting use of VoIP services.

- Media players for both music, radio and video (such as MP3 players and ipods).
- Portable communication devices such as cellular telephones and personal digital assistants (PDA) (such as Blackberry’s, iPhones, Treo’s, Palm Pilots).
- Portable information systems (such as global positioning systems (GPS), directional mapping devices).
- Entertainment platforms (such as Sony PlayStation, Microsoft X-box, Nintendo Wii gaming consoles, Apple iTouch).

Many portable DMT’s have internet connectivity options, or alternatively, the capabilities built into the device for it to access all, or some, of the functionality components available. In addition, many of the innovative features are available on other DMT devices. For example, iPhones possessing telephone, internet, and media player capabilities; or a computer laptop with Wi-Fi connectivity via a Bluetooth connection to Wi-Fi locations. The integration of these functions and features are included in ACMA’s definition of convergence (ACMA, Report 1, 2009).

Some mobile phones and personal digital assistants (PDA) contained, at the time of this research, Wi-Fi chips embedded within their technology offering enhanced functionality. This technology was starting to negate the need for a consumer to purchase an additional mobile handset solely for either making telephone calls or using the internet, as this was now becoming contained in the one handset. This offered future opportunities for the application of this Wi-Fi DMT from not only being an entertainment device but also a business application, for example, contractors making their jobsite a connectivity location or mobile sales executives filing sales reports in the
field. As an example of the increasing connectivity requirements of consumers and enhanced potential of devices, in 2009, installation of the mobile Wi-Fi device technology had commenced in General Motors Corporation top of the line Cadillac motor vehicles (Business Wire 2009).

In Australia, mobile converged technology has continued to become a normal and essential part of daily life and this growth is reflected in the announcement by General Motors Holden (GMH) in May 2013 that their new version VF Holden Commodore would include state of the art electrical architecture, with voice control and Bluetooth technology, enabling the driver to activate their smartphone to stream on line music providers like Pandora. The vehicle’s dashboard now includes an 8 inch control screen, with the ability to receive text messages on the in-built dashboard screen. The new software architecture also includes 8 new software applications. An illustration of the VF Holden Commodore dashboard in 2013, is provided in Figure 1 (http://www.holden.com.au/cars/commodore).

![Holden VH Commodore Interior Dashboard with 8 Inch Control Screen](http://www.holden.com.au/cars/commodore)

Figure 1: Holden VH Commodore Interior Dashboard with 8 Inch Control Screen
1.3 Motivations for the Research

The primary motivation for this research is to contribute to the area of literature investigating the influence of brand in purchase decision making processes. This thesis particularly focuses on making a contribution to the understanding on the influence of brand from the perspective of the consumer in the context of multiple influential variables. This provides the second motivation for this research which is to develop a model that provides a theoretical framework for the consideration of the influence of key variables on mobile phone purchase decisions and to provide a process for considering whether interrelationships of the variables or the influences of positioning in the supply chain, particularly at the last point of customer contact, have greater bearing on the purchase decision than brand.

A review of the existing research indicates that, in the main, brand research has tended to be focussed on the brand owner’s perspective, as opposed to the consumer’s perspective and decision making processes have typically been conceived as linear processes through consecutive steps.

This observation was supported while undertaking a search of the available literature in which it was apparent that, not only is peer reviewed research information not keeping pace with rapid technology development, the availability of research identifying ‘purchase influences’ from a young adult consumer’s perspective is rare.

Research to date appears to have focused mainly on the B2C (Business-To-Consumer) and B2B (Business-to-Business) segments of the market (Keller & Lehmann 2006, Wong & Hsu 2008, Kotler & Pfoertsch 2007), concentrated on the role of new technology development and convergence (Gill 2008, Christensen et al. 2001, Latzer

The literature review also revealed that existing research on mobile converged technology focuses on investigations into functionality options (ACMA 2008), consumer product preferences and acceptance (Constantiou 2009), legislative frameworks governing technology functions (Michalis 1999, ACMA 2008), and monitoring technology of adoption (ACMA 2007, ACMA 2008, Wilska & Pedrozo 2007, Constantiou et al. 2007). Of note is the rarity of research into the factors that influence the consumer’s choice in selecting an individual converged mobile device capable of accessing DMT functionality and, more particularly, the influence of brand in the influence process by consumers. This thesis is motivated by the requirement for research from the customer perspective on the importance of brand amongst other influences. Furthermore, through the model developed, the research examines whether the interaction of variables at the point of retail, as the final point in the device purchase supply chain, can be a more important determinant of purchase decision than brand or other variables alone. The model developed provides a theoretical approach for understanding consumer purchase decision processes with multiple variables influencing the decision.

1.4 Significance of the Study

This thesis furthers the critical enquiry into the role of brand in mobile converged technology purchase decisions in Australia and the identification of other influences on consumer purchase decision making. This research also proposes a model that provides a theoretical framework to consider the influence of the variables that influence mobile phone purchase decisions and to extend theories of decision making.
Australian research contributes to this area of mobile converged technology adoption influences as well as brand research because, presently, relatively little research information is currently available for academic or commercial purposes and the context of the Australian market is relevant as this is a mature market in the adoption and use of mobile converged technology devices (ACMA 2009). This research, therefore, provides a point of comparison to most other research which is being undertaken into brand in the mobile phone technology environment which has been primarily focused in the northern hemisphere of the world and focussed on the technology itself as opposed to a consumer’s view on influencing factors in purchase decisions.

This work provides a better understanding of what influences the preferences choices young Australian adults aged 18 to 34 years undertake when selecting a converged mobile device to purchase and this may be significant in terms of government infrastructure and regulatory decision making, business strategic planning and marketing and consumer awareness.

1.5 Research Question

The research question of this thesis is, ‘What is the influence of brand on mobile converged technology purchases among young adult Australians, 18 to 34 years old?’

To assess this, it is hypothesised that brand plays an important and key role in influencing the purchase of a mobile phone and the converged technology within the device. The research, therefore, also sought to identify the significant influences, other than brand, on mobile phone purchase decisions for young adult Australians through a literature review and test a proposed model of the interaction of the identified variables.

A mixed methodology was used to test the hypotheses that: Young adults aged 18-34
years will report that brand is the primary influencing factor when deciding on which mobile converged device they choose to purchase.

1.6 Research Design

Research design requires the identification and implementation of a methodology that is suitable for the question under investigation, including the purpose of the research and the relevant demographic. Limitations of the various methodologies needs to be critically analysed to ensure the validity of the methodology chosen to investigate the research question. A literature review of the research methodologies utilised in previous relevant studies has been undertaken and described in Chapter 2. In addition, a literature review and a consumer research process utilising a cross-sectional analysis through mixed methodology, identified the role of a preference for an existing brand within a mix of identified variables and compared the influence of brand and these identified variables on the final purchase decisions of Australians aged between 18 to 34 years.

For the purpose of this research a cross-sectional design has been identified as the most appropriate from the literature review. The cross-sectional research design has been employed with a mixed methodology of both quantitative and qualitative research. Data gathered relating to a number of variables identified through a literature review and pilot study, including the variable of brand and patterns of association, were considered in the research findings.

To consider the variables that influence the adoption of mobile converged technology in the Australian marketplace, it is important to place the usage, connectivity and adoption of services in the context of the broader technological environment where this research has been undertaken. This enables a comparative contrast and analysis with relevant
data which has been identified beyond Australia, namely in northern hemisphere markets. In addition, this approach assists in identifying the attributes and variables that potentially shape the environment of the Australian mobile telephony market, while also identifying areas for future research. The context of the Australian technology environment is, therefore, a focus of this research into the influence of brand of mobile converged technology purchases among young adult Australians and is investigated through a literature review.

1.7 Research Methodology

The literature review was undertaken as a critical enquiry into identifying the variables that influence mobile converged technology purchase decisions and particularly those of significance within the context of the Australian technology environment at the time of this research.

The literature review also included an analysis of the research into brand and the methodologies adopted for brand research. The literature review indicated that research methodology undertaken among young adults aged 18 to 34 years, that incorporated the use of both qualitative and quantitative methodologies has been utilised as an effective approach to gather and analyse data in an investigation into understanding the influence of brand.

A qualitative and quantitative questionnaire was designed based on the findings from the literature review. The question was tested in a pilot study and then administered online. The focus interview pilot study, therefore, gathered data that would both refine the self-administered questionnaire and also contribute data to the survey. An online self-conducted questionnaire method was used whereby a survey questionnaire was
placed on the internet, via a third party commercial provider experienced in this field of research. An online survey method is supported as appropriate by data from the ACMA (2008). This study also found that online connectivity is highest among young adults and also suggests that it is the technology and environment that encourages young adult participation.

The results of the literature review and the initial individual focus interviews contributed to a theoretical framework of variables that influence consumer converged technology purchase decisions. Through the analysis of the questionnaire data using quantitative methodology, the influence of brand has been measured and, significantly, this data supports the theoretical framework model of the factors influencing purchase decisions that was developed through the literature review and the pilot study. The developed model and research results assist in identifying the various influencing factors in mobile phone choice and the significance of their placement in the supply chain process and includes the finding that brand alone is not the determining factor in purchase decisions.

1.8 Theoretical Framework

The theoretical orientation of this thesis is in Bazerman, Chugh and Milkman’s (2008) decision making theory and Bazerman and Moore’s (2008) six step decision making process which suggests that decisions are made on intuition and facts and provides a structure for achieving an objective result. The theoretical framework is a development from Reason Based Choice theory (Shafir et al, 1993). Shafir (1993) identified an absence of a comprehensive theory of choice and identified Reason Based Choice and Value-Based Choice approaches. Reason based choice identifies various reasons and arguments that influence decisions. This theory then explains choice in terms of a
balance of the positive and negatives associated with the various attributes identified by
the individual making the choice. This theoretical framework based on Bazerman and
Moore’s decision making process and structure is appropriate to the research question
which requires an understanding of multiple and complex influences and their
interrelationship on consumer choices in order to identify the influence of the specific
brand variable. Reason based choice approaches have typically been used to explain
data that is not obtained experimentally, suggesting that it is suitable for investigating
the justifications consumers adopt to make purchase decisions with complex variables
through a mixed methodology approach.

1.9 Findings and Applications

The retailer, at the last point of customer contact in the purchase decision process and in
the product and service supply chain process, has influence on the customer in the
ultimate purchase decision and, therefore, on the choice of mobile phone device. Brand
has a role, however, the results of this research shows the key determining factors are in
the hands of the retailer and at the end of the supply chain, particularly where the
retailer has control or influence over the structure and offering of the telephone call plan
supplied to the consumer. The research showed that factors influencing the purchase
decision more significantly than brand, at the point of purchase, include the cost of the
consumer’s mobile telephone call plan provided by the telephone provider and the
availability of desired functions. At the point of purchase in the supply chain, the
influence of brand on the decision is less than the influence of the consumer’s desired
functions within the mobile phone and the financial considerations by an individual of
how far their financial means enables them to invest in a call plan.
Research results show that more than one-in-two respondents (51.5%) chose their mobile phone as part of a plan that was included in the call-rate provided by the mobile phone company. This suggests that call plan rates need to be considered as a significant influencing factor in the purchase of converged mobile phone technology among young adults in Australia. This research result contributed to the finding that the influence of brand on the purchase decision is less than the influence of the other variables for consideration at the last point of contact in the retail process.

The research results include an extension of Bazerman and Moore’s six step decision making process in a model that includes an iterative process of feedback that influences multiple variable decision making processes.

These findings provide a better understanding of what influences the preferences decisions young Australian adults aged 18 to 34 years undertake when selecting a particular converged mobile device and the significance of the role of brand.

1.10 Research Limitations and Suggestions for Future Research

The analysis in this thesis is retrospective and is limited in scope, covering a specific time period, specific product type and specific age group. This work captures a snapshot in time from 1 February, 2009, to 31 January, 2011, in the Australian mobile phone market for 18 to 34 year olds. This research is not specifically about branding research, brand loyalty or about developing a brand but, rather, the research investigates mobile phone devices and the converged technology contained inside the device and how this and other identified influences interact with brand in the purchase decision. Importantly, the research does not encompass iPad devices, tablet devices or other similar computer based devices.
Further, the research methodology in this area is impacted by the speed in which advances in technology reach the market. This brings challenges to researchers in analysing the influences on consumer adoption of new mobile convergent technologies as the technology, delivery services and other influential factors keep changing. Rapid change is not limited to the devices. This market is a rapidly changing environment where new technology, product ranges and applications evolve in a matter of months and become available at different times and in bundles of different cost and feature combinations through different brands, retailers and telecommunications companies. This limits the opportunity for isolation and comparison of discrete influences through research.

Future research expanding into other mobile converged technology devices such as tablets and notebooks and the influence of brand on purchase decisions is suggested. Consumer focused research in the area of the decision making process would also contribute to the available literature on the influence of brand. Further research into how positioning in the supply chain may increase or decrease the influence of a factor in the decision making process may also be pursued.

1.11 Structure of the Thesis

In order to satisfy the research question “Brand as an influence on mobile converged technology purchased among Australian 18 to 34 years old young adults” this thesis has 6 chapters that are outlined below:

The first chapter introduces the research question and provides an overview of the importance of understanding brand on purchase decisions and the importance of understanding the variables that influence mobile phone device purchase decisions in
Australia. The purpose of the study, significance of the study and research question are also discussed. The theoretical orientation is explained, along with the research methodology and research design adopted to meet the purpose of the study. Findings and their applications are also summarised.

The second chapter presents the findings from a literature review and establishes the context of this research. As this thesis is concerned with identifying the influence of brand on purchase decisions, this chapter identifies the variables that influence mobile converged technology decisions. To establish the context of this research this chapter also discusses the patterns of consumer adoption of mobile converged technology, the existing research into consumer adoption of mobile converged technology and the meaning of convergence. Chapter 2 will give an account of convergence in Australia and contextualise the Australian market and also review the literature on brand and its influence on consumers.

The third chapter discusses the methodology adopted, the collection and analysis of data and the development of a theoretical framework of variables that influence mobile converged technology purchase decisions.

The fourth chapter presents the research results and explains the questionnaire and analysis of results.

The fifth chapter provides a discussion of the research results identified in Chapter 4. The research outcomes and findings are explained and the limitations of the study are discussed.

The sixth chapter concludes this research and suggests areas for further research.
1.12 Summary

This chapter has presented the background to the research area, identified the research problem and the research questions to be addressed in this dissertation. The contextual framework for the research has been outlined and will be expanded further in Chapter 2, through a review of the literature relevant to this research.
Chapter 2: Literature Review and Establishing the Context of this Research

2.1 Introduction

The previous chapter, introduced the research question, ‘Brand as an Influence on Mobile Converged Technology Purchases Among Australian Young Adults, 18 to 34 Years Old’. The purpose and significance of the research was explained and the research question, design, methodology and theoretical framework were described. Finally the findings and applications were discussed and the structure of this thesis was outlined. The previous chapter also established the research paradigms of technology convergence, the context of the Australian technology environment and the Australian mobile phone market, brand definitions and how brand is researched as relevant research issues pertaining to this question.

Chapter 2 provides relevant background to the multiple and complex technological inter-developments underlying the concept of convergence. A critical enquiry into the background of convergence in Australia places this research into the context of the technological environment and the variables that influence consumer decisions at the time and in the place this research was undertaken. This context is necessary to assess the impact of brand and identify other variables that influence purchase decisions, in a rapidly changing market with multiple external influences on consumer decisions. The relevant literature in this area is reviewed in this enquiry to provide an overview of the influence on mobile converged technology purchase decisions of technological infrastructure development, technological DMT functional development, technological device development and technological literacy development. The literature review is
then extended to a critical enquiry into the research on the influence of brand and consumer choices and how this research relates to converged mobile phone purchase decisions. This chapter starts with a brief overview of research into consumer adoption of mobile convergent technology and then reviews the literature defining what the convergence of technology means, secondly on providing a background to the broader Australian mobile converged technology environment, the context of the Australian market at the time of this research, and fourthly focuses on brand, how it is defined, how it functions and how it is researched.

Within the context of this work and because of the rapidly changing market and technology capability, it was necessary to expand the research focus beyond peer reviewed research into contemporary sources such as industry trade magazines, blog sites and online publications.

2.2 Consumer Adoption of Mobile Converged Technology

Young adults have readily adopted mobile methods of maintaining contact with each other. Web based communication via the internet to reach young adults has been identified as one of the common channels used by young adults to communicate and socialise (Bioca 2000, cited in Thurlow & McKay 2003 p. 97, Latzer 2009). For example, multiple text messages are often exchanged instead of a vocal interaction via a telephone call. The internet is the place to ‘chat’ rather than using personal face to face conversation in a physical space; and smartphone functionally is preferred along with ease of use features such as touch pads on miniaturised colour screens rather than traditional push buttons. Through social networking groups, like Twitter and Facebook, friends and associates can stay in touch with each other, observing and commenting on actions and thoughts as they are posted or uploaded. This expanding consumption of
mobile communication technology and services by young adults has kick started a massive consumer driven industry. Investigation into the purchase decisions of these products and services by young adults is taking place in Australia and overseas to identify the drivers of purchase behaviour.

A review of the available literature in this area found that the majority of research identifying attitudes towards mobile technology has been within the northern hemisphere including Canada, USA, Denmark, Finland and UK (Wilska & Pedrozo 2007, Constantiou 2009, Gylling & Lindberg-Repo 2006, Constantiou et al. 2007, Gill 2008, Gill & Lei 2009).

The literature review also indicates that existing convergence research focuses on investigations into functionality options (ACMA 2008), consumer product preferences and acceptance (Constantiou 2009), legislative frameworks governing technology functions (Michalis 1999, ACMA 2008), and monitoring technology of adoption (ACMA 2007, ACMA 2008, Wilska & Pedrozo 2007, Constantiou et al. 2007). These studies did not consider the influences of brand in consumer choice of converged mobile technology options and the literature review suggests there is little research into the factors that influence the consumer’s choice in selecting an individual converged mobile device capable of accessing DMT functionality.

The speed with which the advances in technology are reaching the market place contributes to the challenges faced by consumers in terms of identification and purchase decisions of convergent communication options (Luke 2007, Gill 2008) and suggests a requirement for identifying the variables that influence purchase decisions and an understanding of the context of the technological environment.
2.3 Definition of Convergence

While the definition of the term convergence is a relatively new addition to the technology world, the literature research and review identified key areas of research into convergence focusing on the definition of convergence and placing the concept as it applies to mobile devices in a broader technological environment.

One of the earliest terms defined for convergence in the telephony environment is attributed to the European Union where convergence is defined as “the ability of the different network platforms to carry essentially similar kinds of services” (European Commission 1997, p1).

The European Union released their definition of convergence in 1997, via a Green Paper and it was formulated when the concept of convergence was just beginning to emerge as a term to categorise combined technological functions. It can be argued that more than 15 years since this definition, the European Union’s definition is simplistic in its description of convergence in terms of technology when compared to the variety of technology available in a single mobile phone device today. The future possibilities of converged technology does not appear to have been considered when the definition was constructed. Clearly, these future possibilities would not have been readily predictable in 1997, given the early stage of development of technologies that are now accepted as part of everyday life.

Since 1997, new mobile phone delivery technologies have shifted from the use of analogue to digital signals, via new innovative technology services such as 3G technology (third generation technology). The implications of 3G technology are further expanded on in Section 2.7, The Relationship Between the Mobile Phone Service
Delivery Environment and the Adoption of Mobile Phones in Australia. This faster delivery technology has facilitated the expansion of the range of converged services available from a telephony service provider. Advances in delivery technology, such as 3G and updated mobile communication devices, have empowered consumers to access DMT such as e-mail, SMS texting, and to take and send over the internet high quality images and video on a portable, mobile device.

2.4 Australian Definition of Convergence

In the Australian market context, the Australian Communications and Media Authority (ACMA) proposed an updated definition of convergence in 2009, which includes the concept of converged functionality, while acknowledging that convergence operates within a wide technological environment. The ACMA notes that ‘a converged environment is one in which a user can access a wide range of multimedia services using any device and any type of network connection’ (ACMA, 2009 p. 7). This definition is closer to the situation described by Kim, Lee & Koh (2005 p. 817), who specifically identify this concept of technological environment and device capability as device convergence, where “devices and terminals used for various means are incorporated into a new, converged device”.

The ACMA convergence definition, in comparison to the European Union’s, acknowledges that access to DMT’s via new digital mobile phone networks using 3G enables both an in home and out of home environment where convergence can take place. Further, ACMA’s overview contains richer, specific information derived from the total Australian market aged 18 years and over. It investigates individual demographic segments using both fixed land line and mobile phone services, and includes detailed
information on the functionalities enabled in mobile devices within Australia (ACMA 2007, ACMA 2008, ACMA 2009).

Despite the recent definition of the term, it is logical to suggest that ACMA’s 2009 definition of convergence is still open to review in a world experiencing rapidly changing external market factors such as new technological capabilities and new technological applications. One notable potential challenge to the ACMA’s definition is the pace of the development of the technology converged into the mobile phone and the upgrading from 3G to 4G delivery environments. A further underlying theme through the global mobile phone and converged functionality development is of speed to market intertwined with speed of product development and capability for speed of delivery according to the ACMA report. In broad terms, the letter "G" following a number stands for a generation of mobile technology installed in phones and on cellular networks, hence the updated numbering allocated is based on the updated speed of the developed product. Typically, the report says, 4G users can experience a three to five fold average improvement in speed.

Further refinements of the Australian defined term for convergence, in addition to the way the global environment defines convergence, may be required within the next 12 months. This is due to the wider global market continuing to develop and enhance mobile technology, including the use of the further enhanced 4G technology, accelerating new developments of technology and the devices facilitating access. Redefinition of the meaning of convergence may need to evolve in a time frame paralleling the development and speed to market of new technology.

A further example of the factors that may influence the need for a redefinition of convergence came with the Australian Federal Government’s announcement, in April
2009, of its intention to roll out high speed broadband services across the country from 2010, a project which was initiated in the state of Tasmania and has now progressed into mainland Australia. This potentially facilitates the ability for converged devices to connect at higher internet speed rates and therefore increase and upgrade the quality of functionality and applications (Conroy 2009).

The complexity of defining convergence in an environment of rapidly changing technological capability and user applications has been discussed above, along with recognition of the research that has developed the concept of convergence to include the wider technological environment, which impacts on the operation, functionality and adoption of mobile converged devices. This review of the complexity surrounding the definition of convergence supports the limitation of the focus of this research to mobile phone devices, rather than a broader range of mobile converged devices, in a market environment where new devices and capability combinations can emerge rapidly.

The next section will look further into the broader environment for mobile converged technology and specifically mobile phone devices in Australia to provide contextualisation for this research.

2.5 Background to the Mobile Converged Technology Environment in Australia

The Australian government’s National Broadband Network (NBN) is a complex project given the geographical size of the island continent. The NBN project has been initiated with the aim to establish Australia as a leading global digital economy by 2020, with first reports estimating an investment of AUD $43 billion required over the eight years
to build and operate the NBN, making it one of the largest capital works infrastructure projects ever undertaken in Australia (Conroy 2009).

The goal of the NBN is to offer high-speed access to 93 per cent of Australian households, learning institutions and businesses via a fibre optic cable connection. The remaining 7 per cent are proposed to receive high-speed wire-less connection according to the ACMA. Connecting via fibre optic cabling has been selected as the major focus of the infrastructure due to the ability for the cabling to offer internet connection speeds that are 100 times faster than speeds many Australians currently use.

As defined previously in Section 2.3, Definition of Convergence, mobile converged technology is a combination of technological environment, functional capabilities and mobile devices. For the purpose of this research it is, therefore, necessary to provide a background of the Australian technology environment and market to place the usage, connectivity and adoption of services and the identified influences on purchase decisions in the context of where this research is focused. This enables a comparative contrast and analysis with relevant data which has been identified beyond Australia, namely in northern hemisphere markets. In addition, this approach assists in identifying the attributes and variables that potentially shape the environment of the Australian mobile telephony market including variables of delivery, device and pricing structure, while also clarifying the context for future academic and commercial applications arising from the research outcomes.

The mobile converged technology market in Australia and around the world is characterised both by rapid growth and rapid technological development (Constantiou & Mahnke 2010). Within this broad mobile converged technology market, mobile
phone consumption is a significant segment and, accordingly, the mobile phone market and usage is also growing and changing rapidly (ACMA 2007).

The continuous development of new mobile device functionality and the associated changes in the way in which people communicate and access information, has social, structural and economic influences regarding which, governments and businesses require information in order to respond with appropriate decisions and products. The impact of the consumption of mobile convergent technology on government and business decision making includes such important considerations as consumer protection legislation, market regulation processes, infrastructure investments, technological and product developments, marketing methods and communication channels (Michalis 1999, ACMA 2008). Information is, therefore, required to provide a greater understanding of the way in which consumers changing attitudes and habits are impacting on the use of technology.

With changes in the use of technology, including the growing consumption of mobile converged technology, large scale national infrastructure investments are proceeding and rapid technological developments are being made. Understanding consumer purchase decisions can assist in informing appropriate government infrastructure and private sector technological development as well as OEM and retailer marketing decisions (Conroy 2009).

2.6 Australian Regulatory Environment

In response to these observed and anticipated changes being brought about by mobile convergent technology and reflecting the perceived importance of these changes, the Australian Federal Government formed the Australian Communication and Media
Authority (ACMA), on 1 July 2005, to inform government on communications use and development. ACMA was formed by a merger of the responsibilities of the Australian Broadcasting Authority and the Australian Communications Authority. As an Australian Federal Government authority, it is one of only a handful of converged communications regulators in the world and is responsible for the regulation of broadcasting, the internet, telecommunications and also radio communications in Australia.

ACMA’s responsibilities also include promoting self-regulation and competition in the telecommunications industry, while protecting consumers and other users; fostering an environment in which electronic media observe community standards and responds to audience and user needs; managing access to the radio frequency spectrum, including the broadcasting services bands; representing Australia's communications and broadcasting interests internationally.

http://www.directory.gov.audirectory?ea0_1f99_120&organizationalUnit&b3c7fa9-03a0-4237-84ee-c93e729e8bee Viewed 12 May 2012)

To meet these responsibilities, the Australian Communication and Media Authority (ACMA) commissioned a series of reports (ACMA 2007, 2008, 2009). The ACMA reports were to provide the Australian government with a series of sequential market based information that was designed to provide a greater understanding of the way in which consumers changing attitudes and habits were impacting their use of technology.

The reports also researched the further impact changing use of technology would have on fixed telephone line usage within a household versus the adoption of mobile phone technology and the infrastructure that would be required for the future Australian market place. It has also sought to identify additional influencing factors such as a call
plan cost, the functionality within a mobile phone, and the role family and friends play in the decision making process that influences purchase. These reports would eventually form part of the data used to assist the Australian Government in its future development of the National Broadband Network (NBN). The ACMA research also assisted the Australian Government to form the basis of a series of further longitudinal studies that assisted with the understanding of internet, telephony and mobile phone adoption in the Australian market place (ACMA 2007).

2.7 The Relationship Between the Mobile Phone Service Delivery Environment and the Adoption of Mobile Phones in Australia

Associated with the rapid growth in mobile phone usage, there has been the allocation by governments of a particular electronic frequency band or bands within a particular geographic area. In the field of telecommunications this frequency band allocation is referred to as spectrum availability and allocation.

Almost immediately after 3G technology (3rd Generation technology for broadband mobile phones) been approved for use, the even faster and more effective 4G technology was being prepared for testing and rollout across markets in Australia. 3G technology, enables the data sent across the network to be parcelled up into small ‘packets’ which are reassembled in the correct order at the receiving end. This smart encoding means more data can be sent more efficiently. The 3G technology is also known as ‘mobile broadband’ because the evolution of this mobile technology is similar to the difference between dial-up internet and the always available broadband internet services.
As part of its role and responsibilities in reporting directly to the Minister for Communications, the ACMA had been required by the Australian government to focus its attention on providing further electronic frequencies for the 4G technology. In addition, the ACMA set up a process in Australia whereby it managed and made this technology available to companies, both domestically and internationally, who wished to take part in the technology auction process in early 2012. At this time the Australian government expected the competition amongst bidders in the open market would be fierce, and therefore, it was hoped that the auctioning of these frequencies would provide significant revenue for the government based on the scarcity and availability level of these 4G electronic frequencies within the Australian market.

The digital communications company, Optus, offered 4G mobile services in Newcastle, Australia, in April 2012, with a progress roll out to the Australian capital cities of Sydney, Melbourne and Perth throughout the year. The company also continued the upgrading of its existing 3G network with Adelaide, Canberra, the Central Coast and Wollongong, completing their upgrade process by the end of 2013.

The ACMA auctioned further spectrum for the new 4G service in early 2012 with trials of this upgraded service undertaken in select parts of Sydney in late 2012. A staggered roll out of the 4G service commenced in early 2013 with Telstra offering a limited coverage area service within the major urbanised areas of select capital cities across Australia.

Research into the impact of the improvements in the technological environment on the adoption of mobile converged technology in Australia has been part of the responsibilities of the ACMA.
In 2007, the ACMA undertook a mixed methodology and mixed method study into attitudes, adoption, and use of telecommunication services. The ACMA’s 2007 focus groups revealed that the main perceived benefits of a mobile phone ‘are its portability outside the home and its suitability for quick conversations and short messages’ (ACMA 2007, p13). In contrast ‘fixed lines are convenient for longer conversations’, possibly due to the Australian distance call rates applied to mobile phones at the time the research was undertaken (ACMA 2007, p.14). Fixed lines are also ‘perceived as being more reliable’ in terms of service and ability to be able to make a phone call avoiding signal drop out which is a problem reported with mobile phone services according to the research. However, it was noted that both forms of telephony ‘have security benefits and are a way of keeping in touch with friends and relatives’ (ACMA, 2007, p.14).

ACMA’s 2007 study involved a quantitative telephone survey among a representative sample of respondents aged 18 years and over followed by a second stage of the research comprising of 12 focus groups among selected residential consumers. Respondent selection was based on the respondent’s age, and self-assessed measures of technological literacy or confidence, though the measure of this was not reported by ACMA.

ACMA’s work contained focus group respondents who were recruited from a random sample, with each group containing between 8 and 10 participants. Metropolitan and non-metropolitan markets were used in order to provide a balance between the urban areas outlined by ACMA. In setting the Metropolitan and Non-metropolitan geographical locations for a series of qualitative research projects, the research outlined that metropolitan areas included the mainland capital cities of Sydney (N=3 Focus Groups) and Adelaide (N=3 Focus Groups), while non-metropolitan markets included
Bathurst (N=3 Focus Groups), Glenn Innes (N=2 Focus Groups) and Murray Bridge (N=1 Focus Group). The ‘N’ value in this research represents the number of qualitative focus groups undertaken within the respective markets.

Both the quantitative and qualitative sample sizes for ACMA’s research differed in the composition of the respondents identified in studies undertaken in the northern hemisphere. By contrast, other studies have under represented sampling of adults aged over 35 years (Wilska & Pedrozo 2007) and where sample respondent populations have comprised undergraduate and postgraduate university students (Gill & Lei 2009, Moreau et al. 2001, Veloutsou & Moutinho 2009).

In 2008, ACMA reported that the majority of household consumers choose to use both fixed line and mobile phones as complementary services. Nearly 90 per cent of respondent households had a fixed line and mobile phone, and 87 per cent used both services. In a follow up report (ACMA 2009) young adults were identified as leading Australia’s shift away from fixed line communications, ‘with many choosing not to connect to a fixed-line phone in their new residence when they move out of their parental home’ (ACMA 2009, p.1).

In 2006-2007 there were 2.1 million mobile phone subscribers in Australia an increase of 165% since 1999-2000 (ACMA 2008, p.8). The number of mobile phone services increased by 9.5% in 2008-09 to 24.22 million (ACMA 2009, p.16), while wireless broadband services grew strongly, increasing 162% from 2007/2008 to reach 2.1 million services as at 30 June 2009 (ACMA 2009, p.56).

In contrast, fixed line phone subscriptions in Australia increased slowly reaching a peak in 2003-2004. Since that time fixed line subscriptions have decreased by an average of
two percent each year, with 10.9 million services in operation in 2006-2007 (ACMA 2008) declining to 10.67 million in 2008/9 (ACMA 2009).

As evidenced in developed countries (Sweeney 2006; Constantiou et al. 2007), and most recently in Australia (ACMA 2008, ACMA 2009) adoption and usage of mobile phones and converged mobile technology among young adults (those currently aged between 18 and 34 years) is overtaking their use of fixed telephone and fixed cable internet services leading to an expectation that the usage of fixed line services will continue to decline. This has been supported by further research by the Australian Communications and Media Authority (ACMA 2011—Report 2 and 3) that found that 16% of those aged 18-65 years live in households that only have one mobile phone access, i.e. no landline.

In June 2012, the ACMA reported that 73 per cent of internet users went online more than once a day while Australians spent on average 81 hours online during June 2012. Further, it was observed that ‘Australians demonstrate a relatively high level of confidence in managing their online interactions, with almost two-thirds believing they have the necessary skills to do everything they want to do online. This is likely a result of increasing experience with the online environment’ (ACMA 2011a Report 2—Australia’s progress in the digital economy). This has led to an increase in the frequency of online only research/surveys driven by the growth in use of mobile devices where the Pew Research Internet and American Life Project (http://pewinternet.org/) has observed that ‘mobile has brought a lot of promise and evidence that people want information, they want to connect, and once they have opportunities and the tools to do so, they will’ (Lenhart, A http://dmlcentral.net/newsletter/05/2012/analytical-take-youth-social-networking-and-web-20-few-moments-amanda-lenhart viewed June 9, 2013).
Furthermore, research conducted with people from mobile-only households has found that their demographic, socio-economic, and health profiles differ markedly from those with landlines (Pennay & Bishop 2009). This, in part, can be attributed to landline households tending to be made up of families and those who either own or have a mortgage over their home. Mobile phone households tend to comprise single person households, transient members of the community who move regularly due work, study or personal reason (Grand & Taylor 2010). People from mobile-only households have also been found to be different from those recruited via internet panels (Pennay & Bishop 2009). This has implications for the adoption of converged technology and may suggest that there are lifestyle factors influencing purchase decisions, particularly with regards to the converged functional capabilities in a mobile phone.

2.8 Australian Perspectives On Enhanced Functionality Within Mobile Devices

In the Australian market context, additional functionality attributes, other than voice calls, cover ten areas of enhanced technology (ACMA 2009). In reviewing this research covering additional functionality, it is observed that each element has digital enhanced functionality, meaning, that it can easily and readily conform to the digital environment it is contained within. Furthermore, each of the following also has the ability to converge within the 3G and newly released 4G digital platform operated by mobile phone technology. The ten areas of enhanced technology in Australia are:

1. GPS—a Global Position System designed around a radio navigation system that allows land, sea, and airborne users to determine their exact location and assists the user in locating their current position on a global map.

2. Camera—built into the mobile phone to take still or moving pictures.
3. MMS—Multi Media Messaging Service whereby text and/or sound can be incorporated into one message and then forwarded from the device to another location.

4. Mobile Internet—enables the mobile phone user to gain access to the Internet via a wireless network using a lightweight, handheld device.

5. Bluetooth—a short-range wireless technology that extends to approximately 10 meters and enables the end user to connect computers, mobile phones, and handheld devices to each other and to the Internet without using wires or cable connections.

6. Video recorder—records moving pictures on the mobile phone device.

7. Video Player—enables playback and viewing of moving pictures on the mobile phone device.

8. MP3 player—allows the mobile phone user to listen to audio, including music, in MPEG 2 layer 3 (MP3) a common audio format for consumer audio recording and play back.

9. Video Calls—also known as "videophone", or "video conferencing", this feature lets two people with 3G video phones talk to each other while viewing 2-way vision of each other.

10. Document Reader—this can be used to view text or documents within or on the viewing screen integrated into the mobile phone device.

Enhanced functionality is available via third party or additional external electronic applications.
2.9 Influences on Australian Consumer Mobile Technology Choices

From the literature reviewed it has been identified that consumer choice and uptake can be influenced by a number of issues in Australia (ACMA 2007) including:

1. The frequency of use of a converged functionality
2. The frequency of use of the media player functions
3. Technical quality of mobile phone service received
4. Availability of new technology via mobile network services

2.9.1 The Frequency of Use of a Converged Functionality

The cost of using the mobile phone can depend on the frequency of use of the different types of converged functions. For example, some phone contracts offer SMS texting bundled into a monthly mobile phone access and usage fee (http://www.telstra.com.au/mobile-phones/plans-rates/every-day-connect-plans/?tc=G|BMM|D|TP|TPP|BrandTermsKWTelstraPlans&mqp=s8klcUKCa|dc_33057246221_%2Btelstra%20%2Bplans_b#tab-plan-80) viewed 27 July, 2013.

The range of bundles and fee structures is extensive and can vary between retailers as well as between devices and functional capabilities. The implications of this is yet to form part of ACMA’s research.

2.9.2 The Frequency of Use of the Media Player Functions

The desired frequency of use of the media player functions may influence a consumer’s choice of device and service provider, for example, limited ability by the consumer to download or transfer music can be due to the incapability of the mobile phone handset to download music directly from services such as Apple's iTunes and Telstra Big Pond
online music stores. This may be a consequence of lack of functionality or lower internet speed. However, a multi-step process can take place where transfer of downloaded music from a web based music supplier can take place into the mobile phone via a connection to a computer.

2.9.3 Technical Quality of Mobile Phone Service Received

The technical quality of the mobile phone service received may be an influence on some consumers as, due to the geographic expanse of Australia and the concentration of population living in larger metropolitan cities, the quality of mobile phone service signals differs considerably. Metropolitan versus non-metropolitan coverage is a major point of consumer contention. For example, the inability to connect to a quality signal and the connection dropout rate of mobile phone calls in non-metropolitan areas potentially impacts on the ability to use converged technology devices such as MMS, Mobile Internet, SMS and GPS. This problem is rarely related to the quality of the mobile phone handset used, being more often linked to the quality transmission and coverage area of the signal being transmitted by the telephone company’s network.

2.9.4 Availability of New Technology Via Mobile Network Services

Introduced to the Australian market in 2003, 3G (third generation) mobile network services enabled a consumer access to a wide range of services beyond those of just voice based mobile calls, including new services such as video calls and broadband wireless data. While all mobile telephony carriers in the Australian market currently offer 3G broadband through a range of portable digital media devices, the ability to access the device and the technology in non-metropolitan areas on mobile phones is still a problem. This is most likely due to the limited connection access to the appropriate
telephone network based across Australia’s vast land track areas where accessibility to a service provider’s mobile phone transmitter is unavailable.

2.10 Reliance on Telecommunications Companies for Service Delivery

A challenge for the brand owner and OEMs identified by this literature review is that, at the point of retail due to the combination of variables such as connectivity options, price models called call plans and mobile phone brands and models, the brand owners rely heavily on their business or telecommunications companies to deliver on the expectations of the consumer’s brand experience. This reliance on the telecommunication companies is particularly significant when consumers have complaints relating to poor phone call quality and call drop outs during conversations with another phone user or users. It is apparent that an inability exists for some telephone network providers to be proactive in meeting the consumer’s needs for delivery of a consistent, fault free telephone call service when problems arise with mobile phone call costs, or the technical efficiency of the network service provider.

These factors are evident in an investigation of the trouble experienced throughout 2011 by Vodafone which, at the time, was Australia’s third largest telecommunications provider. According to Vodafone Hutchison Australia Chief Executive, Nigel Dews, service and reliability problems plagued the network. These problems were manifested by a series of engineering issues including line drop outs during calls within the Vodafone carrier network. As a result of these technical problems, the company stopped listening to its customers and service issues were overlooked. During this troubled period, more than 375,000 customers deserted the company causing Vodafone’s co-owner Hutchison Australia to lose money. This enabled a disruptive opportunity for
competitors and an aggressive push by rival carriers to entice and convert Vodafone customers.

Disruptive Influence Factors may be identified in a model (see Figure 2) where there is conflict at the point consumer expectations meet the actual provision of available technology and service options causing disruptive influences in reason-based choices:

![Disruptive Influence Factors at the Point of Purchase](image)

**Figure 2: Disruptive Influence Factors at the Point of Purchase**

The impact of disruptive influence factors supports the findings detailed later in this thesis report (see Figure 4: Illustration of Brand Driver Influence Hypothesis) that there is disruption between what the consumer would ideally prefer and provision of technology and services. This area of disruption requires the consumer to make compromises between preferred and available variables in the purchase decision and these variables may include the service provider, the type of device, the functional capabilities and the cost.
The technical and service disruptive influence factors resulted in an increased loss of Vodafone customers to its rival competitors. It also contributed to negative publicity and brand image for Vodafone as disgruntled Vodafone consumers also developed a “Vodafone” web site and networking forum enabling past and existing customers who felt aggrieved by Vodafone to express their feelings via a public forum. As a direct consequence of the disgruntled opinions expressed on this website, the service and reliability problems that plagued the network were resolved by Vodafone. The result was Vodafone invested heavily in infrastructure and customer service. (http://www.dailytelegraph.com.au/its-tough-but-vodafone-isnt-hanging-up/story-e6frez7r-1226056777227 Thom, G viewed 12 May, 2013).

During this period, a study showed that Australian telecommunications provider, Telstra, had added 465,000 new mobile services compared with Optus adding 131,000 and Vodafone losing 56,000 services, between July and September 2011. This had a positive impact for Telstra, increasing their revenue and the number of mobile phone connections to the Telstra network as former Vodafone customers sought new providers and call plans (source Warwick Bray Executive Director of Mobile Products – Telstra Investor Day, 2011, presentation provided to shareholders and reported to Australian Stock Exchange, 11 November 2011).

**2.11 Service Provision and Cost Variables that Influence Consumers**

During this research it transpired that a concurrent research study was being undertaken by Macquarie University into the impacts of so-called ‘bill shock’. The outcomes of the university’s research showed that the reliance on mobile phones by Australians is costing consumers more than half-a-billion dollars a year in excess charges (Gray et al. 2012). This problem is exacerbated by call plans that accrue excess charges that can
only be identified by the consumer after receiving the mobile phone bill. Grey (2012) says that one of the major influences contributing to what is termed as “bill shock” is the charge arrangements whereby consumers do not often realise the true cost of their phone calls and use of associated integrated technology until their telephone bill is received and subsequently reviewed.

The Macquarie University report outcomes include the observation that price is a determining factor in the purchase decision and ‘bill shock’ issues may impact the decisions made by consumers when selecting their mobile plan and bundle of features. This may particularly be a factor in phone device choices after the process of signing onto a telecommunications company supplier. In the Macquarie University study, it is revealed that 40% of all users go over their telephone cost and call caps included in their telephony plan, and that 25 to 49 year olds are the most likely to experience 'bill shock'. Reporting in the findings of the study, ‘bill shock’ impacts on ‘the ability of consumers to compare different mobile phone products on offer; develop an understanding of the significance of unexpectedly high bills’ (Gray et al. 2012, p3).

The report also found that trading up to more expensive mobile phone plans does not prevent ‘bill shock’. In addition, the report notes that despite recent changes adopted by the telephone industry to improve the clarity of their call plans some of the bills viewed during the research suggested that the financial and specific benefits claimed to be present in call plans were questionable.

A contributing fact to the difficulty in understanding the financial and other benefits claimed to be present in call plans would appear to be the abundance of small print included in these plans, often running to thousands of words for many plans with consumers not being totally informed of the restrictions within the plan before signing
onto their supplier of choice. (Appendix 4 – see attached example of Telstra Terms and Conditions- 2013)

Failure to provide a clearly defined and easily understandable call plan policy potentially impacts on consumer choice by creating a lack of clarity over exactly what the phone plan linked to their mobile phone device delivers and at what cost.

Sainsbury (2006) provides research that states that slow networks and complicated pricing structures are hindrances for growth.

This has been recognised by the ACMA, who in 2013 advised that tighter controls on the disclosure of call plan costs would be required by mobile phone call plan providers (http://acma.gov.au/theACMA/Newsroom/Newsroom/Media-releases/cutting-the-fine-print-new-information-tool-for-telco-consumers viewed 27 July, 2013). The ACMA has indicated that a Customer Information Summary (CIS) is required from the phone plan supplier to the individual customer, and would commence on March 1, 2013. The aim of this industry based, self- regulation code is for customers to have a clearer understanding of the obligations their service provider has to them, particularly in the areas of disclosing the terms used in the contract the consumer has with their mobile phone service provider.

The ACMA has stated that the new industry code is, in the first instance, self- regulatory; however any non-compliance gives the ACMA a trigger to direct service providers to comply with code obligations. If the provider fails to comply with such a direction, the ACMA can commence Federal Court proceedings for orders, including the imposition of a pecuniary penalty of up to $250,000.
These reports indicate that price plan bundles may be an influential factor in young adult choice of mobile phone plans.

2.11.1 Call Plans

Other factors bundled within pricing arrangements identified in these reports include the ability to access a range of level requirements and associated costs of:

- Call times and lengths.
- The size of data downloads accessible within the scope of the select Call Plan.
- Availability of communication via texting.
- Availability of communication and interactivity via social media.
- Ability to provide the availability of video and visual uploads. (Mobile Life: Global Telecoms Insights March 2011).


2.12 International Research into the Adoption of Mobile Converged Technology

In the Finnish market, specific research has been undertaken to investigate how Information and Communication Technology (ICT) self-identity is defined among people between 16 and 20 years of age (Wilska & Pedrozo 2007). The term self-identity refers to how an individual uses ICT to promote the development of their own positive
self-image. The research identified that this self-image development is contributed to via the types of mobile converged technology devices people in this age group use. Self-identity includes the technology they choose to communicate with and the use of the latest products available to the market. This research is particularly relevant to the context of this work. The identification of both the technology and the device available to a market as variables of significance, reinforces the importance of placing this research into brand influence in the context of the broader technological environment where the research is being undertaken.

The above mentioned research focused not only on people aged between 16 and 20 years of age in Finland, but included comparisons with identical age groups in Brazil. It is suggested that socio-economic factors such as low income and cultural influences limit mobile phone adoption in Brazil, however, an important outcome of the research showed that the largest mobile phone company in Finland (while not directly named due to business-in-confidence protocols) claimed 20 per cent of its clients were aged less than 25 years. This supports the validity of the limitation of the focus of this study to the demographic of young adult Australians aged between 18 and 34 years as these have been identified as the largest consumers in the Australian market as well as the consumers who are expected to continue to form the largest group of consumers of the future mobile technology market (ACMA 2009) making their consumption patterns particularly significant.

While this body of work did not provide a direct comparison to Australia, this data does provide a valuable contribution toward a trend that mobile phone technology adoption is typically highest among the young adult and youth market and towards identifying a self-identity aspect in the mobile phone purchase decision that suggests that brand could be investigated as an influencing factor.
These studies did not specifically consider the influences of brand in consumer choice of converged mobile technology options and the literature review suggests there is still little research into the factors that influence the consumer’s choice in selecting an individual converged mobile device capable of accessing DMT functionality.

There have, however, been repeated requests for further investigation into the processes that assist in predicting or explaining adoption, influence, acceptance and use of mobile services (Blechar et al. 2006, Lyytinen et al. 2004, Sarker et al. 2003 cited in Constantiou et al. 2007), primarily from Europe and the USA. There is evidence that this investigation would assist with adequate infrastructure planning and strategic business responses within this market. For example, the USA market was one of the last countries to integrate mobile phone roaming between networks and locations, and was a late adopter of SMS text messaging.

2.12.1 Influences Other Than Brand in International Markets on the Adoption of Mobile Converged Technology

At the time of this research, in most European countries a mobile phone subscriber must subscribe to GPRS network services in order to utilise Multimedia Message Services (MMS), therefore mobile users can be clearly divided into GPRS and non-GPRS subscribers (Constantiou et al. 2007). In select European markets such as Finland (Wilska & Pedrozo 2007) and Denmark (Constantiou 2009, Constantiou et al. 2007) telephony companies such as Nokia and Erickson have separately developed mobile phone technology and introduced converged functionality to facilitate the locate market requirements.

In Denmark, adoption and usage of mobile phone handsets is encouraged by phone company subsidies via cash incentives and promotional offerings (Constantiou et al.
This specifically has the objective of encouraging consumers to update and upgrade to the latest handsets and enhanced functionality. While this research provides useful insight into new phone technology adoption, it is not representative of the wider global perspective of technology adoption where non-subsidised services tend to be the norm.

2.13 Background to Research on Brand as an Influence on Consumer Converged Technology Purchase Decisions


This literature review identified that the majority of respondents used in consumer based empirical research has tended to comprise undergraduate and postgraduate student/university populations (Moreau et al. 2001, Gill & Lei 2009, Han et al. 2006, Veloutsou & Moutinho 2009, Jun et al. 2003). Further, the focus of research and examination has taken place in the Northern Hemisphere, predominately in Europe and the USA. This includes studies by Aaker (1996), Constantiou et al. (2007), Sweeney (2006), Cole et al. (2008), Keller & Lehman (2006), Moreau et al. (2001). A suggestion for research outside this geographic area has been made by a number of authors (Whitelock & Fastoso 2007, Keller & Lehmann, 2006).
2.14 The Influence of Brand

The literature reviewed on brand influence on mobile phone choices indicated that research into the brand and its impact on mobile converged technology purchase decisions is limited. The primary areas of available research into brand are relevant to this investigation into the influence of brand on converged mobile phone purchase decisions of young adult Australians and this section provides a critical enquiry into the literature on the following aspects of brand:

1. Brand Definitions in Use
2. The Function of Brands
3. Ideas and Opinion on Brands and Branding
4. Brand Research Methodologies
5. Consumer Choices

Significantly, the literature review indicates that brand related researched has progressed from the overall importance of the brand image and brand diffusion (Aaker 1991) to the concept of brand loyalty (Lehmann et al. 2008); brand value (Milewicz & Herbig 1994, Wood 2000); brand extension (Taylor & Bearden 2002, Cheong & Phau, 2003) and brand communities and “tribes” (Veloutsou & Moutinho 2009). This is relevant to the influence of brand on converged mobile technology decision making amongst young adults where Finnish research has identified self-identity criteria in the mobile phone purchase decision.

2.15 Brand Definitions in Use

The term brand has been used to describe identifying marks such as a “name, term, design, or symbol” that is used to differentiate, or identify products or services
(American Marketing Association 2009), assisting consumers or users of their product or service in their decision making processes (Milewicz & Herbig 1994). Legal protection for brands is provided through registered trademarks, and where a brand identifies an entire company, it is usually referred to as a trade name (American Marketing Association 2009), or a corporate brand (Gylling & Lindberg-Repo 2006).

The American Marketing Associations’ (AMA) definition of brand has been criticised for focussing on visual depictions of the brand as the differentiating mechanism between products or services rather than the features or benefits associated with the brand itself. In contrast, de Chernatony and McDonald (1998 p. 20), propose a broader definition of brand that includes terms such as value, relevance and sustained performance from a consumer’s perspective. Despite this criticism, aspects of the AMA’s definition continue to form part of the overall perspective on the singular term of brand shared by authors such as (Aaker 1991, Keller 2000, Keller & Lehmann 2006, Kotler & Pfoertsch 2007).

2.16 The Functions of Brand

The importance of managing brands has gained increasing attention as companies realise that a strong and reliable brand is a “valuable intangible asset” (Keller & Lehmann 2006, p. 740), establishes and maintains “sustainable competitive advantage” (Kotler & Pfoertsch 2007, p. 359), and can increase a corporation’s “visibility, recognition and reputation” (Gylling & Lindberg-Repo 2006, p. 260).

Brands can perform a number of functions from a consumer’s perspective such as simplifying choice options, engendering loyalty and relationships (Veloutsou & Moutinho 2009), and denoting quality attributes, reputation and price (Milewicz &
Herbig 1994, Low & Lamb 2000, Keller 2000, Veloutsou & Moutinho 2009, Veloutsou & Moutinho 2008). The range of real or perceptual impressions a brand has, such as the perception of value in the mind of a consumer, presents a challenge in measuring the range of influence that a brand can have on purchase decisions (de Chernatony & McDonald, 1998, p. 398).

Other functions of brands have been researched from the brand owner/brand manager’s point of view, examining how a brand is developed, integrated, positioned and measured in terms of performance both from a consumer awareness and financial perspective (Lehmann et al. 2008, Keller & Lehmann 2006). In addition, using a brand to achieve long term prosperity for companies and shareholders has been examined (Veloutsou & Moutinho 2009), however, it has also been identified that the monetary value of a brand can have different meanings between accountants and marketers even within the one company (Wood 2000).

2.17 Concepts and Opinions on Brands and Branding

There are many concepts concerning branding. The history of brands and their role in the consumer marketplace is long and varied. Typically, common key areas of investigation have centred on:

1. Brand Loyalty
2. Brand Value
3. Brand Equity
4. Brand Extension
2.17.1 Brand Loyalty

Throughout the 1960’s and 1970’s brand loyalty, that is a continued association that a consumer has with a particular brand, was being considered as a two-dimensional construct containing both behavioural and attitudinal components (Fishbein & Ajzen 1975). The 1980’s saw investigation into an additional dimension of behavioural aspects (de Chernatony & McDonald, 1998, p. 71) which contributed to research into brands and brand loyalty.

Brand loyalty has extended to a concept where personal social constructs or relationships influence loyalty, through the social influence of the branded product referred to by Veloustou & Moutinho (2008 p. 314) as ‘brand communities or brand tribes’.

Testing of brand loyalty has taken place with luxury products, retail products and popular foods such as soft drinks (Lehmann et al. 2008, Latzer 2009), in order to determine whether or not there is a consumption predictive power associated with the brand. These product groups have predictable consumption cycles affected by regular seasonal influences such as summer and winter garment and/or food requirements for example. This enables researchers to establish patterns and cycles of consumption and measure the impact of brand on these cycles based on the seasonality of the brand demand.

It is, however, apparent that there is a lack of identifiable academic research on brand loyalty related to converged technologies and converged mobile phone devices. This may be due to the rapid speed to market of technologies that are not tied to regular seasonal purchase patterns with defined consumer needs making it difficult to investigate utilising similar cyclic demand patterns.
2.17.2 Brand Value

Brand value extends not only to the dollar or portfolio value of a brand but also to the perceived value that consumers attribute to a brand (Low & Lamb 2000, Wood 2000, Keller 1993, 2000). Research suggests that while marketing can play a role, many other variables will come into play in the decision and influencing process such as previous experience with the brand and the recommendations of others.

It is reasonable to suggest that the value consumers see in the brand should not only be measured as a value for money proposition, but also include the company name responsible for the brand, sales support and other attributes of the brand such as prior experience and reliability. Gylling & Lindberg-Repo (2006) label these as brand experiences and present it as part of their concept of a Customer Based Brand Equity (CBBE) model, which has brand experience as a component. CBBE is further discussed in Section 2.18.2.3.

2.17.3 Brand Equity

Brand equity can be defined as the added value endowed to products and services, reflected in how consumers think, feel and act with respect to the brand, as well as the prices, market share and profitability that the brand commands for the firm (Aaker 1991, Wood 2000). Brand equity also involves the concept of how customer based brand equity can be the differential effect that knowledge of a brand has on consumer response to the marketing of that brand (Keller 1993, 1998).

More recently, research suggests that brand equity (Wood 2000, Keller 2000) and brand value (Keller 1993, Wood 2000) provide a potential asset to a company, and, as such, contribute to the value of a company represented in shareholder value.
In the Australian market, it is noted that accessibility to an appropriate pricing plan from a mobile phone company that fits the consumer’s requirements for access to a supplier’s network, and the geographic location of the consumer (metropolitan versus non-metropolitan as defined in the studies by ACMA), are just two examples of the variables that can impact and influence the brand equity equation.

2.17.4 Brand Extension

When a company uses an established brand, and that brand’s reputation, to introduce a new or revitalized product, this is known as brand extension (Milewicz & Herbig 1994). Strong brands use their existing relationship with the consumer (brand loyalty) to encourage purchases of similarly branded products. This brand extension can, however, be affected by the price of the parent brand (Jun et al. 2003), and the ‘brand’s perceived expertise in the extension category’ (Vanhonacker 2007 p. 61). Brand relationships can be sustainable when associated with a brand extension or diffusion product or service (Veloutsou & Moutinho 2009 p. 320). Despite this body of research, however, data testing this relationship with converged mobile phone technology appears limited.

To investigate the value perceived in a strong brand, research has evolved from the concept of focusing primarily on the brand itself to a wider examination of the link between the brand and brand/product relationships. From the 1990s into late 2000’s, the concept of brand image dimensions (Aaker 1991, Keller 2000) and brand extension (Cheong & Phau 2003, Jun et al. 2003, Taylor & Bearden 2002) entered a new era of investigation. The growth of the global economy and new technology developments were assisting the drive to find new ways to extend return on acquired investments while maintaining the strength of the brand and brand equity (Milberg & Sinn 2008). This led to research into the role of existing parent brands to extend further branded
products via the collection of brands either acquired or currently held by a company (Gylling & Lindberg-Repo 2006, Milewicz & Herbig 1994, Milberg & Sinn 2008). During the same period, Martinez & de Chernatony (2004) examined the effect of brand extension on brand image.

There is a view that if there is high perceived consumer value in a strong brand, companies have an opportunity to exploit the value that exists in their brands to leverage their most valuable assets into new product sales. In the area of DMT’s, examples include Microsoft Xbox video game system; Apple iPod digital music player and Erickson mobile phones. Outside this market segment, brand attitudes and choice towards a brand name associated with new products, also impact on the fit of a brand when considering the choice available (Aaker 1991, Keller & Lehmann 2006, Milewicz & Herbig 1994) for example, consumers with high mobile converged functionality requirements might perceive Apple and Samsung as smartphone providers a better fit than a traditional mobile phone device manufacturer such as Nokia.

Brand extension can be broadly classified into two general categories (Martinez et al. 2008, Milewicz & Herbig 1994, Park et al. 1991, Vanhonacker 2007), these are:

1. **Line extension**: where the parent brand is used on a new product within a category currently used by the parent. An example of line extension would be Apple iPod and Apple Nano media players.

2. **Category extension**: where the parent brand is used to enter a different category from that currently served by the parent brand. An example would be Samsung’s entry into the mobile phone market after establishing itself as a supplier of electrical goods.
There is some debate about these categories of brand extension with Aaker (1991) labelling the concept of line extension as brand diffusion. Cheong & Phau (2003 p. 187) examined brand diffusion extensions in the Australian fashion industry, noting that diffusion brands are targeted towards ‘young middle market’ consumers. This suggests that with the young adult demographic an important consumer of mobile converged technology, brand extension strategies may be adopted to market mobile phones and be a factor in the range of devices available within many brand names.

2.18 Brand Research Methodologies

In the literature review, it was identified that a number of models were being used or developed for conducting business brand and consumer brand research. These research methods fell into two broad areas:

1. Existing Models
2. Model Proposing and Testing

2.18.1 Existing Models

There were predominately two existing models being used:

2.18.1.1 Multinomial Choice Models

Multinominal choice refers to a variety of choices within a range which are used to examine consumer choice. These variations, for example, may include colour and flavour (Kim et al. 2002).

The Multinominal choice model can be applied to a variety of situations. It is primarily used when respondents in a research study sample are only offered the opportunity to choose from subsets of the responses that are theoretically available. This situation may
arise in a range of environments including, for example, a voter’s choice in a government election where some of the political parties participating do not run their candidates in every electorate across the country. It can also be undertaken in situations among transport commuters who may lack access to a particular mode of transport choices. In this situation, the consumer choice for all transport choices may be unavailable in some local markets, but not necessarily others in the surrounding area. By way of example, a ferry boat service and bus transport may be the only commuter transport choice in one area. However in another area a bus, tram and train may offer a separate choice set of commuter transport options.

The model therefore makes it possible to analyse the complexity of the data available from the research study more accurately than standard models of discrete choice, which often assumes that all choices are available to every observation.

2.18.1.2 Bayesian Interdependence Preference Models

Bayesian interdependence preference theory is based on a “beyond reasonable doubt model” that takes a series of variables and predicts probability of something occurring as a result of them (Kim et al. 2005).

The use of this theory and preference has application in a range of situations including where more than one influence or influencer can have impact upon an outcome. For example, in households where choice of a product, television program, motor vehicle purchase and other consumer decisions may be influenced by more than one individual or more than one factor. (Estimating the Interdependence of Television Program Viewership Between Spouses: A Bayesian Simultaneous Equation Model, Yang et al, (2005). Yang et al, (2005) found that a preference interdependence among family members is likely to be significant because of cohabitation and strong emotional ties. In
addition, differences in levels of spousal interdependence across households are partially explained by the age and the education level of the spouses.

2.18.2 Model Proposing and Testing

There is wider use of research being undertaken in the area of research model proposal and testing, with four models being identified. These are:

1. Conceptual Research Model (CRM)
2. Unified Theory of Acceptance and Use of Technology (UTAT)
3. Customer Based Brand Equity Model (CBBE)
4. Reputation Building and Destruction (RBD)

2.18.2.1 Conceptual Research Model (CRM)

The Conceptual Research Model uses three hypotheses; CRM quality, image and purpose intention to establish the conceptual model for purchase decisions (Cheong & Phau, 2003).

Conceptual models are primarily used to provide an organising structure for a particular type or mode of the research study design and the research study methods. In addition, a CRM can assist in guiding the re-working, ongoing development and testing of a series of hypothesis based on particular beliefs or findings of a theory. When examining the data from the research, a CRM has the ability to assist in outlining the results of the study and place the findings within the context of research.

2.18.2.2 Unified Theory of Acceptance and Use of Technology (UTAT)

The Unified Theory of Acceptance and Use of Technology (UTAT) model is an attempt to synthesise eight identified models into one whole model using attributes such as
intention, usage, and relationships. This used a mixed methodology and mixed method approach utilising quantitative and qualitative research (Venkatesh et al. 2003).

The model of Venkatesh et al. (2003) aimed to explain user intentions, use information services and subsequent usage behaviour. The theory proposes that four key elements (performance expectancy, effort expectancy, social influence, and facilitating conditions) are direct determinants of usage intention and behaviour. Further to this, the model also identified that gender, age, experience, and voluntariness of use is used to mediate the impact of the four key constructs on usage intention and behaviour. Subsequent validation of UTAT in longitudinal research found it to account for 70% of the variance in usage intention.

2.18.2.3 Customer Based Brand Equity Model (CBBE)

A Customer Based Brand Equity Model (CBBE) attempts to link corporate brand and customer brand equity. The key restriction is that it does not use customers as stakeholders in the model equation and therefore is limited in use for investigating the reasons for consumer preferences (Gylling & Lindberg-Repo 2006).

2.18.2.4 Reputation Building and Destruction (RBD)

The Reputation Building and Destruction model is one of the relatively earlier models used which take brand reputation and credibility as its starting points for the evaluation of brand extension and therefore is not considered to be as comprehensive in its investigation of the factors that influence brand as the CBBE or UTAT model (Sweeney 2006, Milewicz & Herbig 1994).
2.18.2.5 Deliberative Systematic Decision Making

Deliberative Systematic Decision Making requires a five stage process involving recognising the problem, searching for information, evaluating alternatives, deciding on the purchase and post purchase behaviour (Cole 2007, Cole et al. 2008).

This model is frequently used in health based research where the researcher is attempting to identify what rational versus irrational systematic thinking is undertaken when considering choices available for a desired positive outcome. By way of example, the outcome could range across a series of health choices for an individual including, but not limited to, elements such as, ceasing smoking, losing weight, taking prescribed medicines at regular intervals and deciding when to move into assisted health care.

2.19 Consumer Choice Research

The research into consumer choices has a deeper history to that of brand related research. This consumer choice research provides the background to identifying variables other than brand and the interrelationship of these brand and non-brand variables and to developing a model of the way these variables influence mobile phone purchase decisions for young adult Australians. The requirement for a model is supported by two Australian researchers Wong & Hsu (2006 p. 77) who argue that ‘without a theoretical framework, it is difficult to predict what decides mobile users/customers in their buying decisions’. It is suggested, therefore, that the research contained within this thesis adds to the development of a body of theoretical framework recommended by Wong & Hsu (2006) and towards developing this model, the following areas were identified in the literature review as having relevance to the purchase decisions of converged mobile devices by young adult Australians:
1. Young Adult Consumer Choices in the Mobile Phone Environment
2. Consumer Decision Making
3. Consumer Adoption and Modelling

2.19.1 Young Adult Consumer Considerations in Mobile Phone Purchase Decisions

It is observed when reviewing ACMA’s research (2007, 2008, 2009) that, when new technology is being considered by young adults, questions of particular relevance in regards to their purchase decisions may be:

- What determines the choice of a particular branded product over another if both offer identical new features and attributes previously not available to the market?
- Does brand impact or influences choice, or does the new technology itself entice the purchase or influence usage decisions?
- What pre-purchase processes, if any, are used by young adults in evaluating a new product purchase?
- In what way may immediate friends, wider social circles and other personal friendships play in mobile phone consideration or brand recommendation?
- Is the actual experiential side of the new technology an influence over and above brand preference?
- Is previous experience with a brand a major determinant in the influencing of new technology usage?

It may be argued that these issues would differ in order or priority across a range of consumer identifying criteria such as age, socio-economic indicators, lifestyle, gender,
cultural divides, generational gaps, perceived versus real need, previous experience with new technology and many more variables.

de Chernatony and McDonald (1998 p. 77) offer their view that ‘consumers use brands to meet specific needs in a specific situation’, also described by Gordon (1994 cited in de Chernatony & McDonald 1998, p. 77) as ‘need-state’. In addition, Cole (2007 p. 309-310), outlines two consumer decision making routes. They are:

1. Deliberative systematic decision making

2. Affective / experiential decision making

Deliberative systematic decision making is a process described by Wong & Hsu (2008) as a methodical approach comprising five stages of consumer decision making involving recognising a problem, finding information, evaluating alternatives, making decisions and post decision responses.

Affective/experiential decision making indications are characterised as ‘intuitive, automatic, and fast decisions’, where consumer purchase decisions can bypass some of the intermediate stages, moving straight from problem recognition, to deciding on a purchase (Cole 2007 p. 310).

Cole’s (2007) work has focused in the upper age demographics, predominately among people aged 65 years and over, using a benchmark based on the US retirement age. Further Cole et al. (2008) concentrated more on personal health choices and gerontographic segmentation. The proposed model of socio-emotional selectivity theory hypothesises that “when people perceive remaining time as limited, they prioritise social goals that are emotionally meaning over those that are more knowledge-related “ (Cole et al. 2008 p. 356).
2.20 Identified Variables that Influence Consumer Choices

The review of literature suggests that, when it comes to choosing from the range of products featuring new technology and/or digital media, a series of questions arise as to what affects, or indeed, influences the consumer’s decision choice, including:

- An existing brand image. (Keller 2000)
- Word of mouth. (Rogerson et al. 1995)
- Previous experience and loyalty. (Veloutsou & Moutinho 2008)
- A totally new brand or device featuring added benefits and functionality. (Constantiou 2009, Gill 2008, Gill & Lei 2009)
- Generational. (ACMA 2008)
- Ability for the technology to integrate with other branded elements from the parent company for example Apple iPod into an Apple Mac Computer. (Martinez et al. 2008, Vanhonacker 2007)
- Workplace usage versus pleasure usage. (Venkatesh et al. 2003, Wong & Hsu 2008)
- Adaptability to the geographic location and environment in which it is being used. (ACMA 2009, Latzer 2009)
- Dissatisfaction with existing alternatives. (Constantiou 2009, Eng & Quaia 2009)
- Brand used as a status symbol or symbol of power among peer groups. (Bullen 2009, Cheong & Phau 2003)
Research into the effectiveness of word of mouth as a means of consumers selecting or trialling a new or existing product demonstrated that it was a reliable and strong influence on adoption and purchase decisions (Rogerson et al. 1995 p. 250).

These questions may also be subject to ranks in order of priority for some sub-groups, for example, young adults may perceive status symbol as more important than an existing brand image. (Bullen 2009, Cheong & Phau 2003).

2.21 Consumer Decision Making Processes

It is suggested that consumer decision making can be influenced by individual goals or objectives, needs (de Chernatony & McDonald 1998), mood (affect), and mental capacity of the purchaser (Cole et al. 2008 p. 363). The age of the consumer will have further impact on these decision areas, particularly in relation to convergent capable technology devices (Mantena & Sundararajan 2002 p. 2). Bazerman, Chugh and Milkman (2008) note that optimising decision making is critical when the impact of poor decisions is so detrimental and expensive to people, businesses and society. Their research suggests that sub-optimal decision making is often based on intuitive reactions by people who are busy and have much on their minds and are inexperienced in the choice domain in question. Fact based decision making, it is argued, requires slower more considered and logical processes to account for biases, that maybe unacknowledged and unrecognised, and allow for feedback during the decision making process. This research calls for further study into strategies for improving decision making processes.

This supports the relevant questions raised in the research by ACMA (2007, 2008, 2009) and suggests that young adult Australian consumers of converged technology
mobile phones use deliberative systematic decision making processes, as described in Section 2.19.1, working through a methodical approach comprising five stages (Wong & Hsu, 2008):

1. Recognising the problem
2. Searching for information
3. Evaluating alternatives
4. Deciding on the purchase
5. Their post purchase behaviour

This systematic approach is distinct from the “intuitive, automatic, and fast decisions” that are indicative of affective/experiential decision making (Cole 2007 p. 310).

In reviewing limitations that a 5 stage model (Wong & Hsu, 2008) may have in assessing the role of brand among young adults aged between 18 and 34 years, a further element to the 5 stage deliberative systematic model may be appropriate for the converged mobile telephony environment when assessing future research opportunities.

It is hypothesised that this “sixth element” could include a Repeat Purchase stage. The objective of adding this sixth stage would be to measure the role repeat purchase of an existing brand or branded product plays in the decision making process of young adults.

Identifying whether this sixth stage is a relevant, and necessary addition, would assist in developing a revised model. This potentially creates a greater insight into the young adults’ decision making process within an area of technology that is rapidly moving forward.
2.22 Research and Models of the Consumer Adoption Processes

A number of studies have proposed concepts and models to describe the consumer adoption process. The Diffusion of Innovations Model (Veneris, 1990) and the Disruptive Innovation Theory (Christensen, 1997) are models within the available literature that may describe some of the processes identified in other research within the literature review such as the disruptive influences of consumer expectations and technology and service provision and the adoption of mobile technology by young adult consumers.

The consideration of brands and features in purchase decisions by young adults has been examined by Malcolm Gladwell (2000). This research included an investigation into how the innovative ‘Airwalk’ sneaker brand building campaign achieved success. This deliberate targeting of a brand to an age related market segment, identified in the study, aligns with Schor’s (2004) view about the product adoption process of young adults. This research suggests that purchase decisions are influenced by the perception that clothes and brands describe who the young adult is and defines their social status (Schor 2004 pp. 13 cited in Bullen 2009).

Another model used is the ‘diffusion model’, best described as a theoretical way of looking at how a product is accepted by way of contagious ideas or how a product innovation moves through a population (Latzer 2009, Mahajan et al. 1990, Rogers 1976). The original genesis of this diffusion study emerges from Ryan & Gross’s (1943) analysis of the spread of hybrid seed corn in the USA state of Iowa in the 1930’s. Despite hybrid seed being introduced in 1928, as a new corn seed superior to others available at the time, adoption was slow but gradually over time, and via acceptance, the new seed was finally adopted and more widely accepted. These early 1930’s early seed
users were labelled as innovators, as the respected and adventurous opinion leaders in the community. They were followed by those who decided to give the seed a try. This group was labelled as the Early Adopters. Following on were a succession of groups labelled as Early Majority and Late Majority, the latter being the deliberate and sceptical mass who resist trying something new. Finally, the research described the last adoptive group as Laggards who represent the most traditional of all of the farmers who saw no urgent reason to change. These areas of investigation into diffusion modelling offer further insight beyond the original Ryan and Gross (1943) Diffusion of Innovation Model, and the findings of this study can be correlated with broader consumer new product adoption processes. Figure 3 illustrates how a process of consumer adoption moves through a population and over time becomes an accepted norm.

Figure 3: Diffusion of Innovations Model
This model shows successive groups of consumers adopting the new technology (shown in red), and the accumulative total adoption (black). (Ryan and Gross 1943)

This area of study was later explored by Rodgers (1976), who summarised the diffusion innovation model, in addition to Veneris (1990) who reviewed diffusion in terms of the environment of durable consumer products.

Theories such as the Disruptive Innovation Theory suggests that innovative disruptive technologies offer consumers ‘products and services which are cheaper, better and more convenient than ever before’ (Christensen et al. 2001 p. 81). Whereas it is agreed that technology can develop at a fast pace, it is also thought that further development of existing technological knowledge can disrupt the incremental innovation and diffusion of products into the market (Latzer, 2009). It is observed, however, that the rapidly changing world of technology, and the speed of development today, offer limited opportunity for either a disruptive or diffusion model to be integrated into the proposed area of research.

It is difficult to review the observations for, and by, individual companies into the role diffusion models have played in the development of their product as, understandably, ‘a large proportion of these reports lie only in the secret files of the sponsoring companies because of competitive threat, and are thus unavailable to attempts at academic synthesis and the progress of scientific understanding of the diffusion process’ (Rogers 1976 p. 293).

2.23 Research into Young Adult Adoption of Technology

Latzers’s (2009) suggestion that technological knowledge developments can disrupt the incremental innovation and diffusion of products into the market has been identified as
being particularly relevant to product adoption among young adults, or those who are labelled to be part of the Millenial Generation Y era, because ‘Millenials clearly adapt faster to computer and internet services because they have always had them’ (Sweeney 2006 p. 4). While there are no precise dates to define when the Millenial Generation starts and ends it is reasonable to suggest that birth years range from the early 1980s to the early 2000s.

The research into adaptation to technology by Sweeney (2006) was conducted in universities in one country and, while it could be contended that basing outcomes on a series of 43 focus groups across University campuses in the USA may exaggerate some finding due to bias toward the student composition of the respondents, nonetheless there is relevance in the observations with the focus groups of this research being conducted among young adults. Sweeney’s (2006) observations lend anecdotal evidence to other more robust Australian market studies suggesting young adults utilise and adopt new technological services such as the internet and mobile phones at a faster rate than the general population (ACMA 2007, 2008, 2009). When looking at the research from the Product Life Cycle and Adoption Curve (Latzer 2009, Mahajan et al. 1990, Rogers 1976), it is however found that this theory suffers from the limitation that new technology innovations and convergent devices do not fit a predictive time frame, especially where speed to market can mean a competitive commercial advantage.

It is therefore, reasonable to hypothesise that the percentage composition of each segment within the Adoption/Innovation Curve will alter according to variables such as the industry and product being measured, and the financial and socio-economic drivers that impact uptake of the product (Constantiou et al. 2007, Wilska & Pedrozo 2007, Sweeney 2006, ACMA 2009 p. 15).
2.24 Summary

According to ACMA (2008) younger consumers show a clear preference for mobile communications. The literature provided the following snapshots:

- Among 18 to 24 year olds, 79 percent use their mobile phone more often than a fixed line service.
- Among 25 to 35 year olds, the level of mobile phone service take-up is among the highest in the country, at 95 per cent with 24 to 35 year olds.

These demographic statistics support the focus of this research on the 18 to 34 year old young adult market in Australia. The literature review also identified that existing research has often relied on university student cohort populations as the sole sample base upon which to draw data, (Moreau et al. 2001, Gill & Lei 2009, Han et al. 2006, Veloutsou & Moutinho 2009, Jun et al. 2003) but suggested an increasing use of online studies has accompanied the adoption of mobile technology and this has been used as a valid research method in similar studies enabling broader population sampling. The literature review also identified that the focus of research and examination has taken place in the Northern Hemisphere, predominately in Europe and the USA. This includes studies by Aaker (1996), Constantiou et al. (2007), Sweeney (2006), Cole et al. (2008), Keller & Lehman (2006), Moreau et al. (2001).

To provide the context for this research, the Australian technology and regulatory environment was described in this chapter. The Australian definition of convergence was discussed and the interrelationship of the delivery of technology, functional capabilities and device was identified. The literature review identified that the brand owner has to rely on telecommunications companies and retailers to meet consumer
brand experience expectations. Through the influence of price models in the brand purchase model, customer service and technical delivery companies other than the brand owner have a large influence on the consumer’s use of a mobile phone device. This is particularly so when dealing with customer complaints relating to poor phone call quality and call drop outs during conversations with another phone user or users. The chapter also reviewed the various definitions of brand and the concepts surrounding these definitions and research methodologies used to tested theories and models were discussed.

The next chapter will discuss the research design of this thesis. This will include the methodology, method and approaches to survey design. A theoretical framework designed to model the influence of variables in converged technology mobile phone purchase decisions made by young adult Australians will also be described.
Chapter 3: Methodology

3.1 Introduction

In Chapter 2, the literature on existing research was reviewed and the background of the Australian technology environment contextualised with the aim of identifying the breadth of analysis and peer reviewed information available specifically pertaining to young adult mobile phone users, the influence of brand, the identification of variables other than brand in mobile phone purchase decisions and the definition of mobile converged technology within the context of the technology environment.

The purpose of this study is to measure the influence of brand on mobile converged technology purchases among 18 to 34 year old Australians between 2009 and 2011. The research contained in this report is not about branding research, brand loyalty or brand development but specifically, the research focus of this report is concerned with existing brand and its role among the external variables and influences on decision making when purchasing a mobile device. This research aims to provide a better understanding of what influences the decision young Australian adults, aged 18 to 34 years, make when selecting a particular converged mobile device and to develop a theoretical framework to model the influence of the variables. The research aim is to determine the influence of brand in the purchase of mobile phone converged technology in Australia.

This chapter is a discussion of the research methodology, data collection and analysis and framework development that have been identified as valid for the purpose of this research and how these process have been undertaken to address the research question of this thesis.
The first section of this chapter outlines the research design and the key research methodologies identified in the literature review and their relevance in informing the research design utilised in this report for assessing brand influence on mobile phone purchase decisions by young adult Australians.

The second section explains the mixed methodology process utilised for this research. This involved qualitative research through a pilot study and self-conducted questionnaire to collect data. The results were quantified to analyse patterns. The data collection process will be described in detail.

The third section describes the application of analysis to the research data and the development of a theoretical framework informed by the literature review and a pilot study. Significantly, the quantitative and qualitative research results supported the theoretical framework.

The final section summarises the application of the research method and discusses the content of this chapter.

3.2 Methodological Perspectives Identified in the Review of Literature and Research Design

A cross-sectional analysis of three hundred and three young adult Australians, aged between 18 and 34 years, was used to determine the influence of brand among identified variables that influence converged mobile phone purchase decisions. The research design was iterative with the theoretical framework model informing a questionnaire and feedback from a pilot study and, significantly, the quantified results of a self-conducted questionnaire confirming the developed model.
The research data was collected though an online survey conducted throughout Australia between 2009–2011, following an initial pilot study. The online method was chosen to ensure that as many 18–34 year-olds as possible could be contacted, in a research environment they were comfortable in. While the literature review identified that many views exist on how to undertake an investigation into the influences on product purchases, it was apparent that models and methods which attempted to further explore the role brand played in specifically influencing young adults in their mobile phone purchases was not readily available. The following provides an outline of the key methodology identified in the review of literature and comments relating to the efficacy of these methods for this research:

3.2.1 Quantitative Focus

In Chapter 2, section 2.7, quantitative research can be seen to be utilised by ACMA (2007) to determine how common particular behaviours are for a particular age group. The review of literature showed the research methodology undertaken among young adults aged 18 to 34 years incorporated the use of a quantitative method approach (ACMA 2007, 2008, 2009). Through the subsequent development theories and models outlined in Chapter 2, section 2.18, it was deemed appropriate that an online survey method would be used whereby a self-administered survey questionnaire was placed on the internet via a third party commercial provider, experienced in this field of research. This is relevant to the focus of this research as quantification of results will assist with comparison of the influence of the identified variables. The literature review did reveal that quantitative methodology in the form of surveys may have limitations as to whether the findings are representative of the wider population when the majority of research may be undertaken among university graduates. In this research, to understand the implications of the research among a broader consumer population it is considered an
important aspect of the research design that it include a wider cross section of the consumers, within the established age group, including those who are part of the work force, may have families and/or who are part of a non-student or post graduate cohort.

3.2.2 Qualitative Research

The literature review indicated that qualitative research methodologies can be utilised to determine why people engage in certain behaviours. It was identified in the literature reviewed, however, that focus groups were rarely used (Blechar et al. 2006, Lyytinen et al. 2004, Sarker et al. 2003 cited in Constantiou et al. 2007). This precludes researchers from gaining consumer insight in the language of the consumer. Where focus groups are used (ACMA 2008, Payne et al. 2009) the richness of the data and the understanding of how consumer attitudes to a range of variables that are converged in mobile phone technology within the devices provides a clearer insight into the role converged functionality plays from the consumers perspective. Further, a focus group study facilitates discussion in and around the specific topics and issues which form part of the goals and objectives of the qualitative study (ACMA 2007).

3.2.3 Secondary Data Analysis

An analysis of secondary data has provided the technological and regulatory environmental context of this work and identified the interrelationship of variables inherent in converged technology products. The analysis has supported the development of a theoretical framework to model the variables that influence purchase decisions. This reflects the research studies undertaken by ACMA in 2008 and 2009. These provided an Australian based context and baseline quantitative data upon which to determine the background usage and take-up/ adoption of mobile phones among young adult Australians.
3.2.4 Mixed Methodology

The literature review indicated that a mix of quantitative and qualitative research approaches is appropriate to research into brand influence (ACMA 2007). Venkatesh et al. (2003) provided the opportunity to see a range of insights and consumer outcomes using their multi-stage and multi-method process. This is relevant to this research, despite this research being from a consumer perspective and one of the research studies by Venkatesh et al. (2003) being undertaken from a business to consumer perspective.

For the purpose of this research, survey questionnaires were used and results were quantified and measured for analysis.

Mixed methods research was adopted as most appropriate for the purpose of this research from the findings in the literature review. A survey was administered as a self-completion questionnaire. The samples selected were within the demographic of interest for this research and from a broad population within the demographic. The sample surveyed was not limited to university students, unlike many of the studies in the literature review. The questionnaire requested levels of agreement with statements about the influence of the variables identified in the literature review and developed into a model in this research process.

The mixed methodology utilised allowed for a more complete understanding of the various influences on consumer purchase decisions within the demographic and the impact of each influence, than would have been achieved through either qualitative or quantitative research alone.
3.3 Hypothesis Developed from the Literature Review

In observing the role mobile phones play in general day to day life, the identification of brand tribes in the literature review and converged technology brands that have become household names, it is hypothesised that brand would play an important and key role in influencing the purchase of a mobile phone with converged technology embedded within it. As such, the developed hypotheses is:

**Hypothesis:** *Young adults aged 18-34 years will typically report that brand is the primary influencing factor when deciding on which mobile phone device with converged technology they choose to purchase.*

![Illustration of Brand Driver Influence Hypothesis](image)

**Figure 4: Illustration of Brand Driver Influence Hypothesis**

Figure 4 demonstrates the Hypothesis by suggesting that a brand of mobile phone will be the primary driving factor and key influencer in the purchase of a mobile phone. The
Hypothesis suggests that the combined elements of the following will also influence and support the brand purchased:

1. Integrated Functionality
2. Call Plan provided by the mobile phone company
3. Social Acceptance of the mobile phone owned by the individual
4. Personal versus business related use

An additional element to consider outside of the Hypothesis model is an experiential factor. Does the prior usage of and/or experience with a mobile device, either by the individual or their circle of friends and family, play a role in the influencing of purchase? Further, is this experiential factor also part of the influencing factors in the purchase of a mobile phone? This prior experiential factor was identified in the literature review in Section 2.20, where the question of the influence of friends and family was discussed and in Section 2.21 where repeat purchase behaviour was also suggested as a variable.

The variables in Figure 4, were identified in the literature review as influencing factors in mobile converged technology purchase decisions. It is hypothesised that all the other variables will be secondary to brand so that overriding other variables, brand will significantly influence the decision to purchase a particular mobile phone device. In a world where the internet is constantly making headlines, the use of a mobile phone and its portability with converged technology within it, widens the communication opportunities among young adults (ACMA 2009). Apart from the specific use for making calls, and staying in contact with family and friends, the mobile phone brand’s functions such as those offered by the Apple iPhone and Nokia, further enhance the communication process by including access to social media through use of software like
Facebook and Twitter. These brands may also enhance social image through a perceived status imbued on the user as suggested by the study in Finland reported in Section 2.12 International Research into the Adoption of Mobile Converged Technology. This enhanced functionality is particularly significant where the number of landline telephone connections is falling among an age group whose socialising is characterised by the inclusion of a wider circle of friends and associates either through direct personal friendships, online or work related interaction. For these reasons, as based on the findings in the literature review, the call plan, integrated functionality, social acceptance such as brand tribe influences, usage patterns and previous experiences, are other significant variables influencing young adult consumer purchase decisions. The research methodology has been designed to test this hypothesis.

3.4 Explanation of Online Survey Data Collection Methodology

An online survey method was used whereby a self-conducted questionnaire was placed on the internet via a third party commercial provider to a sample population of 330 young adult Australians aged between 18 to 34 years, who own a mobile phone with a minimum of two converged functions other than voice communication and are considering purchasing a new, converged portable media device, which inherently contains voice communication as its function.

The online self-administered survey was administered by the research company for compliance, date, and time ranges in which the questionnaire was required to be completed.

Online recruitment of a sample for research allows very specific pre-targeting of respondents, this is attributed to all panellists required to complete a profiling survey
when they join, detailing various demographics, attitudes, and products they may buy or own. Online recruitment also allows for the presentation of visual stimuli and prompts if and where required. (Lenhart, A http://dmlcentral.net/newsletter/05/2012/analytical-take-youth-social-networking-and-web-20-few-moments-amanda-lenhart viewed June 9, 2013).

This online method was found to be more respondent friendly than other methods, such as pen and paper, during the pilot study, as it used formats such as drop down menus, click buttons (using a mouse to tick or cross a response), and provided the ability to automatically use computer language program to skip a question where it was not relevant to a response required from a particular respondent. The online survey method was found to be more amenable in the focus interviews conducted during the pilot study particularly due to this ability to skip a question, unlike more traditional face-to-face surveys where the respondent may be required to hand write responses and interpret questions that may or may not apply to them and not require them to answer if not applicable. Utilising the internet for access to information and social environments is a particular attraction for younger users (Bioca, 2000, cited in Thurlow and McKay, 2003) and this supports the use of an online survey for this research to elicit responses from a broad range of people within the specific age group, extending the focus beyond only university students to a wide range of occupations and lifestyle variations. Telephone recruitment can miss people without a landline, a limitation of significance in a study of young people, as the literature review has shown that young adults are increasingly only using mobile phones.

The online survey approach for research is also supported by Koller & Sinitsa (2009 p. 10) who reviewed 71 internet based empirical studies on marketing related topics conducted between 1997 and 2008. Their research found that online surveys and mixed
method approaches were applicable to consumer behaviour and internet/technology based subject areas.

The online panel approach provided a relatable and relevant technology based environment and atmosphere to engage young adult respondents. In addition, this approach also provided the opportunity to monitor compliance, as well as the ability to provide reminder updates via the internet for the questionnaire to be completed and returned. In addition, an online survey provided the respondent with the opportunity to interact and complete the questionnaire in their own time, in the location of their choice without the intrusiveness that can be associated with telephone interviews. This method is supported by data from the ACMA (2008) that states online connectivity is highest among young adults and also suggests that it is the technology and environment that encourages young adult participation.

The recruitment of respondents online for research purposes is the fastest growing sampling method, and, with Australian internet penetration in 2012 estimated to be at 88.9% (internetworldstats.com http://www.internetworldstats.com/stats6.htm) online recruitment has immense advantages in respect of the ability to have faster response times in placing the questionnaire/study into the market; the ability to remind via email message those who are part of the study the deadlines for resending to the study, and monitoring compliance of the study among respondents. The use of an online approach is supported by Mantena & Sundararajan (2002) and Maztat (2009) as the most cost and time efficient methodology to undertake a study of this type. The online survey also enables the respondent to stop and return to complete the study at any time they chose to, even though the average on line time to complete the study was less than 6 minutes.
The use of surveys has been demonstrated as a successful approach for mixed methodology research, as shown in the ACMA (2009) study that used a mixed methodology approach. This research utilised a mix of telephone interview focus groups across Australia to ascertain a series of quantitative requirements relating to ownership of fixed and mobile phones, usage of integrated converged functionality features in mobile phones, and to provide cross tabulation of other information such as age group and mobile only phone use. A further qualitative stage was undertaken by ACMA (2009) using a series of focus group studies where three primary consumer segments were identified from the qualitative focus groups:

1. Enthusiastic Embracers
   Enthusiastic embracers are usually young consumers aged 18 to 30 years who tended to be knowledgeable about new services and technology and engage more heavily with 3G mobile and internet services.

2. Mainstream Followers
   Mainstream followers are consumers more likely to be aged between 31 and 50 years who tend to keep up with services on an “as required” basis but are less likely to proactively seek knowledge about new technology and services.

3. Technology Non-Adopters
   The Technology non-adopters classification generally consists of older consumers, aged over 50 years who are unlikely to adapt to newer technology unless they are compelled or pushed by someone else. They are also less likely to engage with the online environment.

These identified patterns of adoption reflect the Diffusion of Innovations Model described in Section 2.22. This methodological approach of administering surveys, offers an insight into the behavioural patterns of consumers, however, due to the sample
sizes that tend to be smaller in focus groups and the limitations of focus groups by themselves not being representative of the wider population (Koller & Sinitsa 2009), it could be contended that utilising the focus groups as the base upon which to formulate market segmentation into these three categories is inconclusive and the quantitative results are more robust.

For the purposes of this research, the survey consisted of a self-conducted questionnaire that requested levels of agreement with attributive statements about their mobile phone purchase decisions and usage as discussed in Section 3.7.

In addition an initial pilot study was utilised with a more traditional pen and paper version of the questionnaire form also utilised and subsequent opportunity to give feedback after completion of the questionnaire. The individuals in the pilot study were chosen from individuals within the demographic specifications in the Sydney area. The qualitative semi-structured focus interviews after the questionnaire had been completed, provided valuable additional material and refinement of the questionnaire content. The pilot study, therefore, contributed to the design of the survey questionnaire that was subsequently administered online to three hundred and thirty young Australian adults. The pilot study outcomes also reflected the developed theoretical framework that was subsequently supported by the results of the online questionnaire survey in an iterative process.

The mixed methodology allowed for a more complete understanding of the various influences on a purchase decision and the impact of each influence, than would have been achieved through either qualitative or quantitate research alone.
3.5 Research Objective and Design for Content Analysis

In the research undertaken for this thesis project, the requirements varied from those of the ACMA studies (ACMA 2007). This warranted a variation to the method and technique to provide a more finite sample of respondents aged 18 to 34 years of age as previously outlined in section 3.1. The online and internet based methodology and collection of research data enables a more user friendly technology environment which is in keeping with the day to communication activities of young adults while also allowing profile criteria of candidates to be specified to ensure respondents conformed to the survey’s demographic requirements.

3.6 Research Questionnaire Development

An online survey among N=303 respondents aged 18 to 34 years was utilised (where N= the total number of useable respondent questionnaires able to be included in the final data tabulation). As the questionnaire was conducted on line, the survey was developed in two stages. The first stage was a pilot study, to ensure that respondents in the 18-34 age group could easily follow the questionnaire while also providing feedback to understand any anomalies which may need to be addressed prior to the questionnaire being conducted online. The second stage was the online self-conducted questionnaire. This process is supported by the research of Constantinou & Mahnke (2010) who utilised a similar pilot study prior to the larger research survey being undertaken.

These initial two stages of development included:

- **Stage 1 Pilot Study**: The pilot sample was undertaken under visual observation by the researcher. This method was adopted to enable the respondents in the pilot study to offer feedback once the questionnaire was completed. The
feedback included any ambiguities or other situation scenarios which may exist and that had not been fully explored in preparing the pilot questionnaire. A face to face smaller sample to pilot the questionnaire (N=5 among 18-34 year old cohorts) was adjusted to remove any ambiguity in areas which may require streamlining of the questionnaire prior to proceeding stage 2. In Stage 1, the online questionnaire was designed with the intent that the respondent would only require a maximum of 10-12 minutes to complete the questionnaire.

- **Stage 2 Questionnaire Development**: Adjustment of the final questionnaire structure to include any considerations which arose from the face to face pilot study, for example reasons for purchasing or obtaining a mobile phone for personal or work place use. In Stages 2 and 3, The questionnaire was piloted first, by using a small sample of young adults (N=5 aged 18 to 34) to enable a check for any ambiguity or further streamlining required prior to the questionnaire being released among the wider sample. This method reflects the method utilised in the research conducted by Constantiou & Mahnke (2010).

- **Stage 3 Online Pilot Sample**: A small final online pilot sample (N=5) was undertaken to confirm that in the online environment the questionnaire was understood by the respondents and that the questionnaire itself flowed and remained stable in the online environment, such as not causing a system crash while it was be undertaken by the respondent. The questionnaire from both a respondent use and online stability perspective required no further updates and was therefore ready to be implemented in stage 4.

- **Stage 4 Questionnaire Distribution**: An online study of n=330 respondents was uploaded online via the research company, with an email invitation sent to
an online panel of young adults aged 18-34 years who had agreed to be part of online research conducted by the research company.

A total of 330 invitations were sent to invite participation which represented a 20% over recruitment to allow for any unforeseen research questionnaires which may not be able to be used in the study and for any respondents who, for unknown reasons, may not be able to complete the questionnaire in time. This sample size is based on a 90% confidence level, 0.5 standard deviation and a margin of error of +/- 5% which requires a sample size of 270 people in a population of one million people. To achieve a response rate of 270 people, an additional 60 invitations were sent to make a total of 330 invited participants. This sample size also reflects the sample size of 232 usable responses in the research by Constantiou & Mahnke (2010).

The email invitation methodology assists in limiting the number of survey invitations sent to targeted respondents by the research company, aids in avoiding harassment and response bias caused by the repeated recruitment and participation by the panel of data subjects from other market research groups, avoids recruiting professional survey respondents and increases the usable response rate. The respondents in this study have already consented by “opting in” to be considered for participation in online studies undertaken by the research company, therefore they represented a broad range of the demographic and were not limited to one particular geographical area or occupation and had a high response rate potential.

3.7 Online Questionnaire Development and Administration

The aim of the on-line questionnaire was to elicit the influence of brand on purchase decisions and the influence of other variables. Inter alia, the influence brand plays
among young adults who own a mobile phone with a minimum of two converged functions other than voice communication and are considering purchasing a new, converged portable media device, which inherently contains voice communication as its function.

A range of attribute statements were used in order to elicit attitudes and behavioural patterns among the target respondent base. These questions were based on the influences identified in the literature review in Chapter 2, Section 2.20 and Section 2.21. As a specific guideline these questions used a semantic scale and included, but were not restricted to:

- ‘When it comes to purchasing a mobile phone for my personal use I consider the brand name is a primary factor in making the choice of mobile phone I purchase’.
- ‘When making a decision about purchasing a mobile phone for my own use, I do not seek input from friends or relatives about their experience with the mobile phone I intend to purchase for myself’.
- ‘It’s not the brand name on a mobile phone that’s important to me—it’s the other functions that it performs that are of greater importance’.
- ‘As long as it functions and sends and receives phone calls, it doesn’t matter to me what brand of mobile phone I buy’.
- ‘Before buying a mobile phone, I check to make sure that my potential telephone service provider has the network capability to perform the functions my mobile phone offers’.

The final online questionnaire is provided in Appendix 1.
As a result of the pilot testing, some minor modifications were made to remove ambiguity particularly pertaining to the method by which the potential respondent obtained or used their mobile phone. The modifications were made to the following question:

- ‘Was the mobile phone provided as part a workplace requirement or possibly purchased for private use only’.

Resolving this ambiguity enabled the author to more clearly define the structure of the questionnaire which would eventually be transferred to the online environment. The pilot study also assisted in determining and providing the scope of instructions that would be required by the online respondents in order to ensure accuracy and reliability of the data.

### 3.8 Distribution and Response

At total of N=330 email invitations to complete the on line study was initially sent to the consumer respondent panel. (Detailed response rates see Appendix 2).

The invitation sample was split evenly using a quota sample among age and sex demographics (N=110 for each age group cell) for the following age groups:

- All people 18-24 years
- All people aged 25-30 years
- All people aged 31-34 years

The only qualifying filters for the study was that the respondent must have currently owned or had used a mobile phone at the time of the study with at least two converged
technology functions in addition to voice calls and who are considering purchasing a new mobile phone with converged technology capabilities.

Quota sampling is a non-probability sampling technique and was used as it enabled a sample of the wider adult population subgroup that is of great interest to this study of 18-34 year old young adults who are the core future for growth among mobile phone users. The final response rates exceeded expectations for a study of this type and size using the online methodology. The final total tabulated response of N=303 respondents reached the required minimum of sub group N=50 in each age group cell.

The addition of over sampling by approximately 20% of the total sample required resulted in all sub age all group minimum cells delivering fully completed and usable questionnaires. The main reason all the over quota samples were not achieved was due to nil response from N=27 respondents. However, this was anticipated from the beginning of the study plan, and therefore has no impact on the outcome of the tabulated data. This non response was spread among all age groups, with males less likely to respond to the invitation the study. The validity of this methodology and sample is based on previous research by Constantiou & Mahnke (2010). In addition to using a sample size similar to a previous study, a statistical confidence level of 90% for an unknown population size was calculated to confirm that a sample size of 270 people would be statistically valid. To allow for an uncertain response rate and given that the online questionnaire was to be delivered once only and was not designed for additional selection and sampling of candidates, over sampling of 20% was selected and this figure of an additional 54 people was rounded up to 60 people in an attempt to ensure a sufficient number of responses were received.
3.9 Validity of Sample

As previously outlined in Section 3.6 Research Questionnaire Development, the respondents were drawn from a proprietary research panel of online respondents who have agreed to be contacted for research purposes.

The sample requirements derived from the wider Australian population statistics (Australian Bureau of Statistic, 2011) were:

- An even balance of 18 to 34 year olds who own and use a mobile phone to make a mobile phone call at least once per week.
- Ownership of a mobile phone that includes a minimum of two converged technology devices into the phone’s functionality in addition to telephone calls and, to be considering the purchase of a new converged technology mobile phone. The converged technology included functionality such as a mobile phone that contains a camera and a media player.

The sample was balanced among males and females living in metropolitan and non-metropolitan areas as in the ACMA (2007) research. This sample frame information was obtainable from respondent attributes from the online panel which indicated the postcode of the respondent receiving the invitation. The sample was evenly distributed as a quota sample, according to the Australian population within sub demographic cells i.e. 18 to 24 25-30 years and 31 to 34 years. It should be noted that it was not deemed reasonable to place a limitation on respondents relative to ownership of a particular brand of mobile phone or contracted to a specific service provider, as the study was not measuring loyalty to a specific brand nor to a specific call plan provider.
3.10 Purchase Hypothesis Model

A six stage purchase model has been developed to illustrate the Hypothesis: Young adults aged 18-34 years will typically report that brand is the primary influencing factor when deciding on which mobile phone device with converged technology they choose to purchase.

The first stage in the model is the young adult between 18 to 34 years of age who already has an existing mobile phone but is making a purchase decision on a new mobile phone with converged technology functions. The second stage of the model suggests that brand being a primary influencing factor will be the key evaluation in the decision making process. The third stage, the Consideration stage, suggests that the combined elements of the following will also influence and support the brand evaluation:

1. Integrated Functionality
2. Call Plan provided by the mobile phone company
3. Social Acceptance of the mobile phone owned by the individual
4. Personal versus business related use

Stage 4 in the model suggests a Final Market Evaluation where as in Bazerman and Moore’s (2008) structured six step process, the information gathered so far and details of the needs are considered to identify the best alternatives.

Stage 5, the Decision to Purchase stage, aligns with rating the alternatives in the six step process so the consumer decides which product best meets their criteria. At this stage the consumer is making the decision to purchase but has not yet undertaken the action of purchasing.
The final purchase is Stage 6 and requires the purchase of a mobile phone device from a retailer along with any associated plan packages. This is the last point of contact with the consumer in the supply chain to the point of purchase and at this point the consumer is in contact with the retailer. These six stages are illustrated in Figure 5.
Figure 5: Illustration of the Purchase Hypothesis
3.11 Design of a Model

The literature review revealed a range of models that are being applied in research for the purpose of the examination of the influence of brand. It was apparent from the review of the literature, however, that models and methods which attempt to examine the role brand plays, amongst other variables, in influencing mobile converged product purchase decisions are lacking.

A model has been developed to identify the variables that the literature review indicated were significant influences on mobile converged technology and mobile phone purchase decisions. The framework developed will also provide an iterative loop with the questionnaire to test the impact of the influences identified in the literature review relating to brand influence on purchase decisions.

The developed hypotheses is that: Young adults aged 18-34 years will typically report that brand is the primary influencing factor when deciding on which mobile phone device with converged technology they choose to purchase.

This framework is designed to identify the variables from the literature review, including brand, that are significant in influencing the mobile converged technology purchase decisions of young adult Australians. The framework will also identify the interrelationships of these variables.

It is hypothesised that all the other variables will be secondary to brand so that overriding other variables, brand will significantly influence the decision to purchase a particular mobile phone device.
3.12 Summary

This chapter has identified the methodology used in this research. The selection criteria for participation in the study was described, the procedure undertaken to collect the data explained, including the recruitment of the sample population and the construction of the questionnaire outlined. The development of a framework to understand the variables that influence mobile converged technology purchase decisions was also explained. Chapter 4 will present the results of the data collection through the research method of a self-administered online questionnaire.
Chapter 4: Results

4.1 Introduction

Chapter 3 discussed the methodology for collecting data, including the survey sample criteria, size, recruitment and the research procedure utilised. A framework that explains the mix of variables that influence mobile converged technology purchase decisions was also developed and described from the findings of the review of literature in Chapter 2.

This chapter presents the results of the data collected through the online self-conducted questionnaire of 303 young adult Australians who met the sample criteria of ownership of a mobile phone that includes a minimum of two converged technology functions in addition to the phone’s functionality for voice calls who are considering purchasing a new mobile phone also with converged technology functions.

4.2 Response Rate and Results

Questionnaires were sent to 330 participants. As described in Chapter 3, Section 3.7, a total of 303 completed and compliant questionnaires were received. The final, usable sample for data tabulation comprised N=303 young adults aged between 18 and 34 years who met the phone ownership, usage and purchase consideration criteria.

The questions were developed around 3 key themes:

1. The Reasons Behind the Procurement of Their Existing Mobile Phone
2. The Usage Patterns of Their Existing Mobile Phone
3. The Attributes Considered Most Important When Purchasing a Mobile Phone
1. The Reasons Behind the Procurement of Their Existing Mobile Phone

Respondents were asked questions to help establish the factors in the choice of their existing phone.

- 63.6% of the participants had used their mobile phone for more than a year
- 51.5% of the participants had purchased their mobile phone as part of a call plan
- 54% of the participants currently used an Apple iPhone. This was followed by 22% of the participants using a Nokia mobile phone.

These findings did not appear to have any bearing on the overall results, but do reveal the high level of iPhone usage among respondents.

2. The Usage Patterns of Their Existing Mobile Phone

Respondents were asked to report on the way they use their existing mobile phone

- 84% of the participants report that they depend on their mobile phone
- 78% of the participants used their mobile phone for personal use only
- 48% was the highest level of regular usage reported for any function and this was reported equally for mobile phone calls, SMS texting and taking photos

3. The Attributes Considered Most Important When Purchasing a Mobile Phone

The following table outlines the attributes that young adults considered most important when purchasing a mobile phone.
Table 1: Attributes Considered Most Important When Purchasing a Mobile Phone

<table>
<thead>
<tr>
<th>Attributes considered most important when purchasing a mobile phone</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased mobile phone as part of a call plan</td>
<td>51.1%</td>
</tr>
<tr>
<td>Additional functions built into the phone a main contributing factor in final purchase decision of current mobile phone</td>
<td>48.5%</td>
</tr>
<tr>
<td>Additional functions more important than phone and SMS texting capabilities</td>
<td>80%</td>
</tr>
<tr>
<td>Brand a primary consideration in the purchase decision of a new mobile phone</td>
<td>70%</td>
</tr>
<tr>
<td>Functions more important than brand*</td>
<td>55%</td>
</tr>
<tr>
<td>Do not rely on input from others in making purchase decisions</td>
<td>42%</td>
</tr>
<tr>
<td>Preferred provider can support the functions of the mobile phone</td>
<td>72%</td>
</tr>
</tbody>
</table>

*However, 43% of participants disagreed with the statement: ‘as long as the phone functions and sends and receives phone calls, it doesn’t matter to me what brand of mobile phone I buy’.

The results show some seemingly contradictory responses that suggest complexity in the purchase decision due to the multiple variables and their interrelationships.
The Apple iPhone was owned by significantly more of the participants than any other brand of phone and 70% of participants agreed that brand was a primary consideration in the purchase decision, however, in the purchase of the phone they currently use the primary influence was reported to be the additional functions built into the phone. Functions, in addition to phone call and texting capabilities, were desired by 80% of the respondents, however, present usage patterns indicate that phone calls and texts are still the most regularly used capabilities. The finding that more than twice as many respondents purchased their mobile phone as part of a call plan rather than an outright purchase may be the key consideration in understanding the results.

The results do confirm that most young adults would be lost without their mobile phone. The use is predominantly personal, however, the mobile phone seems to be regarded as essential to facilitating communication. The results also indicate that young adult Australians are engaged in considering a number of variables in the purchase decision, expressing brand preferences, desire for functionality and careful consideration of the service delivery. The results suggest, however, there is some degree of conflict with
brand preferences being taken into consideration with functionality and service provision influences but not necessarily overriding these influences at the time of the purchase decision. The results indicate that at the point of purchase the bundle of features in a call plan outweigh brand preferences.

The ensuing sections outline the data collected through the online questionnaire.

4.3 Question 1 – Recency of Purchase or Usage

Respondents were asked to how long they have owned or have been using the mobile phone they personally use on a regular basis.

Table 2: Recency of Purchase or Usage

<table>
<thead>
<tr>
<th>Question 1.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>How long have you owned or been using the mobile phone you personally use on a regular basis?</td>
<td></td>
</tr>
<tr>
<td>Within the last month</td>
<td>3.0%</td>
</tr>
<tr>
<td>1 month but less than 3 months ago</td>
<td>6.1%</td>
</tr>
<tr>
<td>3 months but less than 6 months ago</td>
<td>9.1%</td>
</tr>
<tr>
<td>6 months but within the last year</td>
<td>15.2%</td>
</tr>
<tr>
<td>A year or more ago</td>
<td>63.6%</td>
</tr>
<tr>
<td>I don’t use a mobile phone</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

Young adults aged 18-34 years were more likely to have owned or been using their mobile for “a year or more” (63.6%). The next highest mobile phone usage was with those who had owned or had been using their mobile phone “for 6 months but within the last year.”
As a fast moving consumer good, the question arises as to whether there is an anomaly here. At first sight it could be suggested that the majority are holding onto their mobile phones for a year or more with no perceived need to update or purchase a new mobile phone. This could, however, be due to the fact that the call plan they are on dictates, to a great extent, the period in which they will own the phone until it is completely paid out under the terms of the call plan they have undertaken. This is particularly relevant as the findings of this research suggest that 51.5% of respondents had purchased their mobile phone as part of a call plan (see 4.3 Question 3 – Situation Analysis).

As such the overall responses to 4.1 Question 1 – Recency of Purchase or Usage, provides a good calibration of sample respondents against the expected norm if they are using a call plan. The question is raised about the possibility that the call plan itself is the primary determining factor as to the length of time a young adult will keep their mobile phone.

4.4 Question 2—Mobile Phone Usage

Respondents were asked what the mobile phone they personally use on a regular basis is mainly used for. This question allowed for a single response only.
Table 3: Mobile Phone Usage

<table>
<thead>
<tr>
<th>Question 2.</th>
<th>Is the mobile phone you personally use on a regular basis, mainly for?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal use only</td>
<td>78.8%</td>
</tr>
<tr>
<td>Business use only</td>
<td>0.0%</td>
</tr>
<tr>
<td>A mix of business and personal use</td>
<td>21.2%</td>
</tr>
<tr>
<td>None of these (please state)</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

A majority of respondents in this study clearly (78.8%) used their mobile phone for personal use only. Likewise, there is a lower percentage of reports for a mix of business and personal use suggesting, once again, that the sample in this research is robust as it includes those who are also working, as opposed to other studies which have chosen to only use student cohorts in their research. The remainder of young adults aged 18-34 years (21.2%) used their mobile phones for a mix of business and personal use and none of the respondents reported using their regular mobile phone for business use only.

4.5 Question 3 – Situation Analysis

Respondents were asked to nominate, “Which one of the following best describes the situation in which you came about obtaining your mobile phone?”
Table 4: Situation Analysis

<table>
<thead>
<tr>
<th>Question 3.</th>
<th>Which one of the following best describes the situation in which you came about obtaining your mobile phone?</th>
</tr>
</thead>
<tbody>
<tr>
<td>I purchased my mobile phone outright after choosing the mobile phone I wanted</td>
<td>21.2%</td>
</tr>
<tr>
<td>I chose my mobile phone as part of a plan that was included in the call rate provided by the mobile phone company</td>
<td>51.5%</td>
</tr>
<tr>
<td>I had no opportunity to choose the mobile phone I wanted – it was included in the plan and call rate provided by the mobile phone company</td>
<td>0.0%</td>
</tr>
<tr>
<td>I chose a mobile phone call plan and had to take the mobile phone that came with that plan</td>
<td>3.0%</td>
</tr>
<tr>
<td>Somebody else chose my mobile phone for me and provided it as part of a call rate and plan from the mobile phone company</td>
<td>6.1%</td>
</tr>
<tr>
<td>I share the use of the mobile phone I regularly use with someone else and we both arrived at a compromise</td>
<td>0.0%</td>
</tr>
<tr>
<td>Any other reason or reasons?</td>
<td>18.2%</td>
</tr>
</tbody>
</table>

More than 50% of respondents (51.5%) chose their mobile phone as part of a plan that was included in the call-rate provided by the mobile phone company. This suggests that call plan rates may be a key driver in influencing the purchase of converged mobile phone technology among young adults. The number of respondents who chose as plan was more than twice the number who purchased a mobile phone outright. This suggests that other responses to functionality and service provision may also be influenced by the call plan bundle of features. The large majority of respondents with an Apple iPhone also raises questions about the relationship of Apple with service providers and whether
the high preference for Apple products is related to the availability of attractive call plans. This was outside the scope of this research and has not been investigated in this questionnaire.

The second driver identified from the research results may, conversely, be the freedom of not having a combined device and service call plan and buying a mobile phone outright (21.2%). This raises the question of this choice being related to the ability to choose the preferred mobile phone through an outright purchase giving consideration to brand and function variables but with less influence from the service provision variables. Again, these findings suggest that the mobile phone call plan could also be a decisive variable considered along with such other criteria as the need for freedom of purchase and ownership. Not being tied or restricted by the call plan could in itself be a catalyst to purchase and own a mobile phone outright and may influence the brands available to choose from and the cost.

A further influence on the decision may be that in buying a phone outright, the young adult would be able to have a direct influence on purchasing their mobile phone brand of choice, choosing to forgo the cost of the call plan and directly determining their own set of personal requirements and preferences over those dictated by a call plan provider.

While ‘other reasons’ (18.2%) was the third highest response, these reasons were broad in nature. They centred around a range of instance and issues which included:

- The mobile phone had been given to me
- I had won/been gifted/ inherited/ the mobile phone
- The mobile phone had been replaced due to breakage/loss
- A new mobile phone was substituted by an employer
• I was still on an alternate mobile phone provider’s call plan and needed to swap to bring it into line with my employees call plan company

• I just wanted another mobile phone

4.6 Question 4—Personal Factors Contributing to the Decision of Mobile Phone Purchase

In this question, respondents aged 18-34 years were asked to nominate the one main contributing factor that assisted in the final decision they personally made to purchase the mobile phone that they currently use regularly. In answering this question, respondents were asked to nominate one of the provided responses that best described the final decision they made. If none of the provided responses were the main factor, they were asked to type in their decision in the ‘Other Factor’ open ended response option in the on line questionnaire.

Figure 7: Contributing Factors in Final Decision to Purchase a Mobile Phone
The one, key contributing factor in influencing the final decision to purchase a mobile phone was ‘additional functions built into the phone’. This suggests that while the primary function of a mobile phone in itself is to make a phone call from one person to another, the ability to only make a phone call on their mobile device is not the sole reason young adults choose a mobile phone. The presence of additional in built functionality (48.5%), brand (18.2%) and ‘other’ factors appeared in the top 3 reasons.

Again, there is further evidence that brand alone is not the one main contributing factor in the final decision to purchase a mobile phone, with brand scoring at a lower level than the functionality requirements of the mobile phone.

In this response ‘other’ factors varied and included:

- I preferred another operating system
- The mobile phone I chose was based on reliability from the last one I had
- The phone was gifted/inherited
- My partner gave me theirs
- The key board was a qwerty as opposed to alpha numeric

4.7 Question 5—Functions Included in the Mobile Phone Device

Respondents aged 18 to 34 years were asked which functions/functionality were built into the mobile phone they use on a regular basis. This question gave the respondent the opportunity to choose a multiple of answers based on their particular circumstances.
### Table 5: Functions Included in the Mobile Phone Device

**Question 5**

Thinking about the functions the mobile phone you use on a regular basis can perform, which of the following functions are included in your mobile phone?

<table>
<thead>
<tr>
<th>Function</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile phone calls</td>
<td>48%</td>
</tr>
<tr>
<td>SMS texting</td>
<td>48%</td>
</tr>
<tr>
<td>Still shot Camera</td>
<td>48%</td>
</tr>
<tr>
<td>Social Networking</td>
<td>44%</td>
</tr>
<tr>
<td>E-mail</td>
<td>42%</td>
</tr>
<tr>
<td>MP3 player</td>
<td>42%</td>
</tr>
<tr>
<td>GPS Maps</td>
<td>36%</td>
</tr>
<tr>
<td>MMS Texting</td>
<td>36%</td>
</tr>
<tr>
<td>Video camera</td>
<td>35%</td>
</tr>
<tr>
<td>Others</td>
<td>11%</td>
</tr>
</tbody>
</table>

The three key functions contained in the mobile phone were mobile phone calling; SMS texting and still shot camera (all 48%). The next highest were social media functionality (44%) and MP3 player and e-mail (both equally representing 42% of mobile phones built in functionality). This indicates that although additional functionality is highly desired, regular usage patterns still centre on calling, texting and taking photographs.
Figure 8: The Percentage of Converged Technology Function Availability in the Mobile Phone Devices Already Owned

This data supports the findings outlined in 4.4 Question 4 – Personal Factors Contributing to the Decision of Mobile Phone Purchase, where additional functions built into the mobile phone (48.5%) was reported to be the main contributing factor in the final decision to purchase a mobile phone.

Further exploration of these additional functions contained within the mobile phones of young adult Australians, reveals that mobile phone calls (48%) SMS texting (48%) and a still shot camera (48%) are equally important functions required by this consumer group. Further to this, it could be suggested that these functions represent the social connecting factors that link the young adults to family and friends.

4.8 Question 6a—Feelings Towards the Mobile Phone used Regularly

Respondents were asked to consider how much they agree or disagree with a series of statements provided to them. The aim here was to gain a clearer understanding of the attitudes and beliefs, or biases, which may influence a young adult when purchasing a
mobile phone. The respondents were asked to choose the one statement that best fitted their level of agreement, and then to provide one response for each question which best matched their agreement level to the statement.

These statements covered the following:

- “When it comes to purchasing a mobile phone for my personal use I consider the brand name is a primary factor in making the choice of mobile phone I purchase”.
- “When making a decision about purchasing a mobile phone for my own use, I do not seek input from friends or relatives about their experience with the mobile phone I intend to purchase for myself”.
- “It’s not the brand name on a mobile phone that’s important to me—it’s the other functions that it performs that are of greater importance”.
- “As long as it functions and sends and receives phone calls, it doesn’t matter to me what brand of mobile phone I buy”.
- “Before buying a mobile phone, I check to make sure that my potential telephone service provider has the network capability to perform the functions my mobile phone offers”.
- “I’d be lost without my mobile phone as it’s an important part of the way I communicate with other people”.
- “The brand of mobile phone a person uses defines the type of person they really are”.
- “Mobile phones that come with other functions built into them interest me more than just a mobile phone that you can only use to send and receive basic phone calls and SMS texts”.

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This question was asked in order to ascertain whether the brand of a mobile phone is a primary factor in decision choice.

**Question 6a**

“When it comes to purchasing a mobile phone for my personal use I consider the brand name is a primary factor in making the choice of mobile phone I purchase.”

![Figure 9: Response to Question 6a – Agreement Toward Brand Being a Primary Factor in Mobile Phone Choice](image)

Young adults were more likely to agree (70%) that the brand name was a primary factor when purchasing a mobile phone. This contradicts the finding in Section 4.4 that indicates that in their existing mobile phone purchase decision the availability of additional functions significantly outweighed the influence of the brand. These results may suggest that, with most existing phones already owned for a year, there was a significant difference in functionality between brands previously but this difference no longer exists. This result may reflect an internal conflict where there is a brand preference but also functionality preferences with the consumer having to make a compromise to reach a purchase decision.

This result may also be related to the purchases of call plan bundles of the device, the functions and the service provision which bring together a range of variables in different
configurations that make decision making complex. Amidst the multiple variables and interrelationships consumers are therefore not fully aware of the influences that are deciding their purchase choices.

4.9 Question 6b—The influence of Input from Others when Making a Decision on Mobile Phone Purchase

In order to ascertain the role another person/s played in the decision of a mobile phone is purchase the following question was asked.

**Question 6b**

“When making a decision about purchasing a mobile phone for my own use, I do not seek input from friends or relatives about their experience with the mobile phone I intend to purchase for myself”.

![Figure 10: Response to Question 6b—Influence of Input by Others](image)

Young adults aged 18 to 34 years disagree or totally disagree (60%) that they do not seek input from others when making a decision about a mobile phone they plan to purchase for their own use. This indicates that the collaborative input from others within the circle of friends and family is influential in the gathering of information before
making the purchase decision but does not negate, however, that young adult Australians consider their purchase decision to be an individual choice based on their personal preferences and requirements.

4.10 Question 6c—Brand Name Versus Functionality Importance

Respondents were asked the following question to assist in understanding the importance a Brand name plays versus the functionality of a mobile phone in purchase choice.

This question was designed to ascertain the importance of brand over functionality. Functionality again is revealed to be the stronger preference with over 65% of respondents either agreeing or totally agreeing that the functions are of greater importance.
importance. As was reflected in Question 1, brand still is influential in mobile phone purchase (agree 40%). However, the neutrality among Neither Agree or Disagree (30%) suggests that for others, balancing the requirements for specific inbuilt functions together with brand name is an influence for them when purchasing a mobile phone.

4.11 Question 6d—Brand over the Simple Ability for a Mobile Phone to Function

This question was asked to ascertain the role of brand versus the simple ability for a mobile phone to function in purchase choice.

The responses to this question support the findings in the previous question 6a that brand does play an influence in the purchase decision. 60% of respondents indicated...
that for the mobile phone to be in working order and capable of basic call making functions was not what they required. The number of participants who disagreed was 43% and the number who totally disagree was 17%, so that in total some 60% disagreed that to have a mobile phone in working order and capable of making phone calls was sufficient and that brand was not a consideration.

It does support previous findings that functionality is also a driver in the influence of mobile phone purchase decisions among young Australian adults. While brand is important, as reported in Question 6a, a desired branded phone that solely has the ability to make or receive a call is not reported as being what is desired or required. Question 6d indicates that greater functionality within the branded mobile phone is required beyond the one dimension of call making and receiving.

The conundrum revealed is that while a brand is desirable, to a greater extent functionality is considered important and desirable and this requires the young adult consumer to choose according to variables other than brand. When the call plan is considered as one of the influencing factors (see Question 3), then one main contributing factor influencing the purchase decision is not clearly apparent.

4.12 Question 6e—Ensuring Mobile Phone Capability of Network Service Provider

This question was developed and asked to assist in gaining a clearer understanding of the investigation into the capabilities of a mobile phone network service provider respondents may undertake prior to making a mobile phone choice.
This response suggests that, prior to purchasing their mobile phone, people aged 18 to 34 years are reasonably astute in ensuring their mobile phone will capably function on their preferred network provider. Agree (48%) and totally agree (24%) represent the highest agreement responses in this instance when it comes to checking mobile phone capability with the network service provider.

This may also be due to the consideration of personal financial outlay required by young adults in Australia when committing to a mobile call plan rate as part of the contract terms and conditions. Young adults, therefore, consider the financial outlay in comparison to the ability of their call provider to meet the requirements of the levels of functionality contained within their mobile phone. Based on responses to Question 4, these could include, but are not limited to, the ability for the service provider to
technically be able to offer reliable SMS texting and the sending/receiving of photos taken on the mobile phone device.

This additional requirement to thoroughly investigate a telephone service providers network capabilities is further supported by the challenges faced by Vodafone (see 2.10 Reliance on Telecommunications Companies for Service Delivery), where lack of service delivery and engineering issues saw a strong backlash from disappointed existing users of the company’s mobile phone services.

4.13 Question 6f—Importance of the Mobile Phone in Communicating with Others

In order to gain a clearer understanding of the importance of the role an individual’s mobile phone plays in the communication process with other people, the following question was asked.
Figure 14: Response to Question 6f—Importance of the Mobile Phone in Communicating with Others

The mobile phone device plays an important and significant role in young adults keeping in touch with other people. The significant “total agreement” response to this question (54%) suggests that although, while there may be other means of communicating with friends, family and business colleagues, the mobile phone is still primarily an important mobile communication device.

Furthermore, responses to this question indicate that the mobile phone is a “must have” device in order to maintain contact and communication with others, with Total Agreement with the statement at 54%, and Agreement at 30%, the combined total level of agreement is 84%, which further supports the essential communication role the mobile phone has taken in ensuring contact between those aged 18 to 34 years.
4.14 Question 6g—Does the Brand of Mobile Phone Define Self Image?

This question was asked to ascertain the level of agreement from the respondent toward their mobile defining their self-image.

<table>
<thead>
<tr>
<th>Question 6g</th>
<th>“The brand of mobile phone a person uses defines the type of person they really are.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totally Disagree</td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
</tr>
<tr>
<td>Neither Agree or Disagree</td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td></td>
</tr>
<tr>
<td>Totally Agree</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 15: Response to Question 6g—Does the Brand of Mobile Phone Define Self Image?**

This response shows that among respondents aged 18 to 34 years, brand alone does not define self-image with 44% disagreeing with the statement, and 12% totally disagreeing that the brand of mobile phone a person uses defines the type of person they really are. This suggests that brand alone is not considered a driver of self-image when it comes to mobile phone ownership among young adults.

However, there is a suggestion of contradiction here in that, while brand may help define image in some products, the “Disagree” response (44%) could be due to the majority of respondents owning an Apple phone but not wanting to have their personal
self image defined by the brand they currently use (see Question 6i following, “I already have an Apple mobile phone, but please don’t align my choice of an Apple phone with the type of person I really am”. This may reflect a cognitive dissonance or the unconscious bias suggested by Bazerman, Chugh and Milkman (2008). Alternatively, the respondent may be trying to second guess what the question was trying to find out and this influenced their response.

4.15 Question 6h—Interest in the In-built Functions of a Mobile Phone

While a basic mobile phone can be used to undertake phone calls, this question was used to understand the level of interest in other functions provided and built into a mobile phone.

**Question 6h**
“Mobile phones that come with other functions built into them interest me more than just a mobile phone that you can only use to send and receive basic phone calls and SMS texts.”

![Figure 16: Response to Question 6h—Interest in the In-built Functions of a Mobile Phone](image_url)
This result suggests that function overrides form in the levels interest of young adult aged 18 to 34 years when it comes to mobile phones. The number of participants that agree that they are interested in additional functions is 36% and totally agree was a relatively high (48%) at close to one in to two respondents. With 84% of respondents agreeing, this implies phone call functions and SMS texting are a minimum entry level requirement for mobile phone ownership among young adults and additional features are desirable.

These levels of agreement support the findings of Question 4, where 48.5% of young adults stated that additional functions built into a mobile phone were the one main contributing factor in the final decision to purchase a particular mobile phone. These findings suggest that the multi-dimensional functions of the mobile phone are important to the young adult is Australia as it provides a variety of choice for communication with others depending on the form of communication that they wish to have. This may vary from a simple one-to-one text message which does not require a phone call to be made, or sending a photo to one or many friends. The choice of communications options contained within the mobile phone’s functions assists the relevant levels of communication required at a particular point in time.

4.16 Question 6i—Brand of Mobile Phone Currently Used

This question was designed to examine the brand of phone respondents in this sample were using, as opposed to using the data to compare and contrast the market share by brand within the 18 to 34 year old age group at the time this research was undertaken.
When it came to brand ownership, the Apple iPhone (54%) was the clear brand preference among respondents. This was followed by Nokia (22%) and Sony/Sony Ericsson (9%).

4.17 Summary

This chapter described the results of the online questionnaire that was completed by 303 young adult Australians who met the research criteria. The results suggest that brand preference is an influence on the converged technology mobile phone purchase decision process, however, it is not the only influence, or the most important influence in the purchase decision. A strong preference for functional capabilities was identified and some conflict between the results suggests that this is a complex purchase decision with consumers giving consideration to multiple variables in the final purchase choice.
The results of the research are discussed in Chapter 5 under the headings Research Outcomes and Findings, Interrelationships Between Variables in the Call Plan, Integrated Functions that Influence the Call Plan Costs, Personal Qualitative Attributes that Form Variables that Influence Mobile Phone Purchase Decisions.
Chapter 5: Discussion

5.1 Introduction

In Chapter 4 the response rate to the online sample was stated and the quantitative results of the online self-conducted questionnaire tabulated. The questions were described and the results explained and analysed.

In this chapter the results of the research are discussed and the influence of the interrelationship between the variables is described. The research identified that there is a brand preference, however, the influence of brand is outweighed by other variables. There is a suggestion that the call plan provider, at the last point of contact with the customer in the mobile phone sales supply chain, may have an influence that outweighs brand preference through the interrelationship of the financial considerations of the call plan, required functionality and device capabilities.

5.2 Research Outcomes and Findings

The findings of the research suggest that while brand may play an important part in the influencing factors, following the review of the research brand does not seem to be the dominant influence as in the hypothesis of this research that, Young adults aged 18-34 years will report that brand is the primary influencing factor when deciding on which mobile converged device they choose to purchase.

This outcome is supported by the theoretical framework that models the variables that influence converged technology mobile phone purchase decisions and shows a complex interrelationship of multiple variables. The literature review, the theoretical framework and the questionnaire results all indicate that brand alone is not the key influencing
factor in the purchase decision of young adult Australians. The results suggest that the key influencing factor is in the package of the variables, such as a bundle within a call plan, with consumers compromising on specific preferences for greater perceived functionality and cost benefits in the bundle. This also suggests that the retailer, as the last point of customer contact in the purchase supply chain, has substantial influence on the purchase decision.

Figure 18: Disruptive Influence Factors at Point of Purchase

Figure 18 illustrates the disruption to the purchase decision caused at the point where consumer expectations have to align with technology and service provision capabilities and costs at the point of purchase.

5.3 Disruptive Influences

The findings suggest that a disconnect occurs for young adults aged 18-34 years between the Disruptive Influencing Factors identified in Figure 2, Section 2.10. These Disruptive Influencing Factors are a cause of disruption in the decision process at the
point of purchase between the consumer’s ideal preferences and the actual availability of technology and service provision. At this point of Disruptive Influencing Factors, the consumer is prepared to compromise on some specific preferences for a bundle of variables that has a higher perceived benefit than any discrete variable.

The investigation reveals that contrary to the initial H1 hypothesis, a call plan plays a greater role in the influencing factors than was first identified in H1. In this case, a call plan is denoted as the financial investment the consumer is required to make in order to receive a packaged bundle of mobile telephony services which include various call rates, special offers and access to other services such as data downloads, SMS and social media. These call plans most often require the consumer to commit to a predetermined contract period spread across a predefined number of months and may include the device at special discount pricing determined by the number of months of the contract period. In broad terms, the longer the period of commit over a given period, the greater the cost savings offered by the phone company in their bundled packages. These contracts are often complex and can be specific to a particular retail outlet or telecommunications company (See Appendix 4 Telstra Pricing Terms and Conditions – General Notes).

The questionnaire results show in Section 4.8, question 6a, that young adults typically do have an ‘ideal brand’ preference, however, the analysis of the results indicates that functional capabilities, service delivery and economic influences in relation to the cost of the call plan and the economic benefits a call plan provides the consumer, tended to override the ‘brand idealism’ in the purchase decision. The results suggest that the bundle of functions and financial package upon which the consumer is either able to or willing to commit, influences and outweighs ‘brand idealism’.
5.3.1 Interrelationships Between Variables in the Call Plan

Figure 19: Interrelationship Between Variables in the Call Plan

Figure 19 indicates that there are 2 sub elements that were identified through the research as significant influences in the call plan decision. These are:

1. **Integrated functions**

Integrated functions, particularly social media access, phone calls and SMS texting, are influenced by the call plan cost, therefore, consumer choice of functional capability may also be influenced by the call plan cost.
2. Brand

The preferred brand of the mobile phone is also influenced by the call plan cost at the point of retail due to the bundled call plans available by retailers and telecommunications service providers. This is particularly so with call plans that subsidise certain mobile phone devices, such as two year call plan contracts which include the cost of the mobile phone.

5.4 Integrated Functions Influenced by the Call Plan Cost

Integrated functions within the mobile phone device, such as camera, phone call capability and social media access, play an important part in the purchase decision influencing factors but are also linked to call plan costs. The telecommunications companies offer mobile phone devices, digital media technology and call plan packages. Consumer choice may include call plans which offer an economically attractive mobile phone call cost, with a plan that also includes costs of access to social media via third party providers including Facebook. In short, the “bundling” of integrated functions relative to the total cost of the services contained within the call plan is an influencing factor. This complex bundling of variables was identified in the literature review and confirmed by findings in the research that 50% of the participants had selected their existing mobile phone as part of a call plan package and that this was more than twice the number who chose to buy a mobile phone without a call plan package.

The conflicting results in the questionnaire between brand preference and functionality preference suggest that young adults also consider a compromise when choosing the brand of mobile phone device and call plan features. This compromise is between the mobile device, including brand preferences, together with a complete bundle of
integrated functions that may form the “ideal” requirement and the limitations imposed by what the consumer can afford and what is personally essential, in terms of functionality, as part of their day to day mobile phone use requirements. The compromise between idealism and a mobile phone’s communication/function reality is influenced by the brand offered by a retailer or telecommunications service provider that offers the best call plan bundle of functionality and cost.

5.5 Personal Qualitative Attributes that Form Variables that Influence Mobile Phone Purchase Decisions

Analysis of the data from the research undertaken for this study reveals respondent qualitative attributes that form part of the holistic outcomes in the influence factors. With mobile phones being the subject of this research, it is reasonable to suggest that the communicative elements of using a mobile phone are a primary emotive element, such as, an emotional connection through verbal communication for person to person voice calling versus using text driven social media to communicate. This is supported by the finding in Section 4.13, question 6f, that most young adult Australians would be lost without their mobile phone. Other qualitative compromises influencing choice identified by the research include:

- **Degree of Dependency on a Mobile Phone Compromises**

The degree of dependency on a mobile phone is an influence on purchase decisions. Dependency can vary from highly dependent users who report, ‘I’d be lost without it’, to those who don’t need a mobile phone.
• **Brand Idealism and Cost Compromises**

Brand preference was identified, however, results suggest that respondents are more likely to compromise on their preferred brand than on cost according to the results of existing mobile phone choices. Responses typically suggested that ‘Ideally I’d like this brand of phone versus the others I have to choose from, however is it an option I can afford considering the cost based on my phone company’s call plan’?

• **Image and Actual Requirement Compromises**

The research results suggest that consumers make compromises through decisions of perceived desirability of a particular phone against the phone that best meets their requirements. Respondents reported a compromise between, ‘An Apple iPhone is more fashionable, however, realistically a Blackberry better suits my needs’.
The research suggests that a disconnect occurs for young Australian adults, between the Disruptive Influencing Factors and Point of Purchase Decision Factors. The Disruptive Influencing Factors in the consumer choice process are the personal qualitative considerations of prior experience, ideals of mobile phone functionality requirements and brand preferences or a need for belonging to a brand tribe. The Point of Purchase Decision Factors are the call plan, integrated functionality and the mobile device including its brand.

Figure 20 demonstrates that the young adult consumer experiences a disconnect where the disruptive influencing factors and Point of Purchase Decision Factors cannot be
combined so a compromise must be adopted in deciding on which mobile phone to purchase.

The young adult consumer can readily rationalise the need for a call plan that makes economic sense and the integrated functionality and cost package that a call plan can provide. The brand chosen will reflect the balance or compromise between an economic call plan and integrated functionality contained within the mobile device. The disconnect when it comes to making the final decision on which mobile phone device to purchase is between the inherent stakeholder conflicts and compromises that occur between the manufacturer, the subscription plan provider, the third party suppliers (such as Facebook) and the personal preferences of the consumer.

5.5.1 Influence of the Call Plan

As found in the literature review (ACMA 2007), in Australia the call plan cost criteria typically consist of:

- Call times and lengths
- The size of data downloads accessible within the scope of the select Call Plan
- Availability of communication via SMS texting
- Availability of communication and interactivity via social media
- The ability to provide availability of video and visual uploads.
5.5.2 Influence of Form, Fashion and Function

Functionality is an important factor in influencing purchase; however it is used in balance with three other factors:

1. Form
2. Fashion
3. Function

Figure 21: Future Model of Influence Amongst Target Groups

The Influencing Factors are linked to the 3 F’s of Form, Fashion and Function. Each element can either stand alone in the influence factor, or can interact with the other, whereby:

1. Form – is the shape, size, and tactile factor of the device
2. Fashion – is the social acceptability, and reflection of outward self expression the mobile device possess

3. Function – is the functionality and capability contained within the mobile phone

Figure 21 demonstrates the intricate link between Form, Fashion and Function. It suggests that each of these attributes can influence the purchase of a mobile phone either as a standalone element of influence or a combination of each. For example, in no particular order:

- Form + Function, or
- Form + Fashion, or
- Fashion + Function

5.5.3 Influence of Personal Identity

When setting out to undertake this research project the hypothesis was that brand did in fact impact the decision making process of young adults. However, the final outcome suggests brand is not an exclusive influence. The dollar value cost of the call plan is clearly a driver in the final consideration. The areas of want verses need verses financial capability/reality are a pre-cursor to the purchasing consideration of a mobile phone by young adults. The results of this research show that although brand is a strong preference, price is a variable influencing the choice of purchase.

Why, if price was not an influence, would young adults buy an iPhone? For some it may be the fashion or coolness factor of owning a brand that is a reflection of their own self or desired self-image. For those who choose not to own one, it is possible that being “uncool” is actually the new “cool.” Viewed differently, not owning an iPhone or Apple product is what separates you socially from others. You don’t follow in lockstep with
those around you. This relates to the brand tribe identified in the research literature and the research results suggest that this seems to be a variable of influence in mobile converged technology purchase decisions but it is still outweighed by the call plan considerations.

For competitors to the iPhone brand, engaging potential and existing consumers based on the product’s functionality as opposed to fashion may be one avenue to reach the rational thinker in the influence of purchase. For these consumers the glamour of a brand may be secondary or tertiary in the influence of purchase, thereby offering a point of difference in the brand marketing model and market capture process. This is indicated by the research results on Section 4.14 question 6g where participants disagreed with brand as a symbol of self-expression.

Self expression is part of the adoption of mobile converged technology, however, as portable devices have given the consumer the ability to have a service provider customise options in a ‘help me shape the phone in the way I want it’ bundle by offering and providing the following features:

- An external option via phone call plans etc.
- An internal option via phone apps, ability to tailor your own configurations that suit me.

It is a desire for alternate personalisation of product within the framework and the environment the mobile phone provides. The mobile phone offers the opportunity of mass personalisation at the individual level. Driving the consumer's ability to display their own uniqueness through the individuality desired within the configuration. This suggests that the mobile phone presents an opportunity for projection of self-image within a socially acceptable device and communication environment. It provides an
ability to display one’s own uniqueness through a socially acceptable technology equivalent to the way a consumer may add charms to a bracelet. This has the effect of the mobile phone becoming a tribal badge, a social symbol, within the comfort of the device selected. The device is purchased with the intent to personalise it to the owner’s personal requirements.

For the mobile phone user to personally customise the purchase is important, something which is rarely available in other purchases made by the young adult consumer. The mobile phone becomes an expression of ‘me’ because ‘I have had the chance to totally customise it not only just immediately after purchase, but at a constant, on whatever frequency basis ‘I choose to in the future’. This phenomenon correlates to the ‘me’ generation, where the focus is on the individual and the concept of ‘self’.

5.6 Discussions of Findings from the Research

Prior to undertaking this research, brand was expected to be a higher influencing factor higher among young adults because brands like Apple, Sony and Nokia were seen to be at the leading edge of mobile communications. They were also established brands, each with their own level of uniqueness, for example:

- Apple was a growing brand which was leading new product development with a ‘cool’ factor associated around the innovative products it was producing from MP3 players to computer laptops
- SONY/ Erickson as joint partners in mobile phone development, were part of larger parent companies who had an entrenched history in the development of electronic consumer goods
Nokia was an established and recognised global leader of mobile phone technology. However, over half (51.1%) of the respondents surveyed chose a mobile phone as part of a phone call plan that was included in the call rate. Further to this, one in 34.7% of respondents claimed additional functions built in the phone such as an MP3 player, camera and SMS texting were important. These two results were higher than the influence of the brand of mobile phone which was 27.2%. This demonstrates that brand is not the sole influence variable among young adults aged 18 – 34 years in their choice a mobile phone purchase.

Further to this, the research also showed that SMS texting and making a call were the functions used the most on a mobile phone by young adults. While SMS Texting and making a call rank in the top 2 functions used on a mobile phone, they are not exclusively desired functions. The young adult consumer considers the specifics and the range of multiple functionality available to them contained within a mobile phone when considering a mobile phone purchase. From this it can be assumed that the mobile phone is much more than a phone for talking one to one. It forms two levels of communication with friends, family and co-workers:

1. On one level an opportunity to make a phone call and engage in conversation and verbal dialogue.
2. On a second level, for young adults, the mobile phone is a communication device which via its functionality facilitates “connection” with others. There is a link between texting, brand image and the “connectedness” of Generation Y. Texting is less intrusive. On this level there is “personalised social networking
whereby texting is the “intimate social network” that offers privacy and convenience.

As opposed to conducting a mobile phone call in public, texting weaves an intimate social fabric that enables discrete communication without the wider intrusiveness and having to share a verbal conversation with those around you. We live in a “short hand” communication society where abbreviated words, texts and anagrams form the basis of communication. For young adults, SMS texting fits squarely and comfortably within this environment.

Texting and using the mobile phone to make a call are equalled in regular usage with a still shot camera. While there are not real significant differences in these top three, it had been expected that social networking (77.1%) to be higher. The questionnaire contained multiple choice questions which did ask for “use on a regular basis.” The data suggests that making calls and texting are a regularly used function, however they are not the only functions utilised.

While brand is not a primary, determining factor in the influence of purchase, young adults are still influenced by a number of variables in their mobile phone choice. This is based on a multiple of three factors including:

1. The multiple functionality delivered and built in to the phone
2. The costs of use of each of these functions
3. The cost structure within the contract associated with the phone plan purchased

While the brand of phone is not a significant projection of a young adult’s own personality, freedom of brand choice when cost is not a primary consideration sees young adults preferring an Apple iPhone during the period of study.
5.7 Implications of the Research

This research has identified that the brand owners, through the influence of price factors in the brand purchase model, rely heavily on their retail or telecommunications companies to deliver on the expectations of the consumer's brand experience. These may form part of the Disruptive Influence Factors identified in the model in Figure 2 and Figure 16 where consumer preferences conflict with technology and service provision. Decision making theory (Bazerman et al. 2008) supports that intuitive and fact based decision processes are apparent in purchase decisions and biases in decision making can exist but that these biases also be reconsidered through feedback during the process. The research indicates that reliance on intuition in purchase decisions when people are busy, have a lot to think about and little time and are inexperienced in the domain of choice is reflected in the initial focus on brand that was apparent in the study. The research of Bazerman, Chugh and Milkman (2008) reported that consumers rely more on intuition when deliberating over separate choices, however, that they show less reliance on intuition when considering interrelated or multi-variable choices. This finding is supported by this research into the influence of brand on mobile converged technology purchase decisions that indicates that multiple variables influence the consideration and evaluation stage in the purchase of mobile phone devices and that these multiple considerations override initial brand preferences. This research suggests that young adults move from intuitive thinking to fact or reason based thinking during the purchase process and that this is influenced by the contact with the retailer at the last point of contact in the supply chain which is often at the point of purchase.
5.8 Purchasing Influence Factors Among Young Adults Aged 18 to 34 years

For young adults, it can be argued that as a consequence of their personal mobility, changing roles and activities in the workplace, the appeal of working away from the office can help contribute to a strong desire to use portable devices like mobile phones as part of their work life. An added benefit for the young adult is the mobile phone enables an integration of their personal and work life via one seamless electronic device.

The concept that, in the not too distant future, purchasing a motor vehicle without a built-in on-line availability or connectivity will be a thing of the past. The question will be what kind of infotainment or factory fitted connectivity package comes included with the vehicle. Similarly connectivity to the internet while on board an aircraft in Australia is not so much a question of if, as to when it will brought following in-flight trials with business and first class passengers. This research identifies that the range of functional capabilities may be more attractive to consumers than the offering of a specifically branded device.

Australia’s wider challenges in technology revolve around the availability of spectrum as the mobile industry places a capacity squeeze on existing networks. Mobile phone providers are continually updating the amount of data a consumer can download for the same or lower prices, while also adding further converged technology within the mobile phone to run the applications which can also be heavy users of available spectrum, for example browsing the internet, sending/receiving pictures or viewing internet sites such as You Tube that contain video images. Adding capacity, which would also enable the launch of faster applications and services, requires the system itself to grow with capacity requirements. Those who are heavy broadband users may move to the newer
4G network; however this still comes at a price for download. Inevitably, call price plans interacts with the influence of purchase at a range different points within the model.

From this point going forward from purchase with a quick and easy way to customise your mobile phone is another brand benefit to consider. The mobile phone has become a portable device which connects us with the essentials we consider are part of our life, resulting in many consumers users being hooked to the point they would feel lost without access to a mobile phone in their daily life.

The young adult prefers to investigate and assess their own personal needs and desires for what is contained within a mobile phone as part of the influencing purchase factors. Feedback from friends on their mobile phone experience is not a major contributing factor in influence of purchase, however, it is an important part of the process.

5.9 Influence of Supply Chain on Purchase Decisions

The research results indicate that the overriding driving influence on the purchase decision is the total call plan package. This raises the question as to whether the total call plan package and cost as defined by the telecommunications company provider is externally and indirectly providing influencing factors in the purchase of a mobile phone device by young Australian adults.

This suggests that whoever controls the supply channel also assists in driving the influence of the brand, product take up and mobile converged technology adoption. A more complex supply chain is, in effect, driven under the mobile phone call plan.
5.10 Limitations of the Research

The project was limited in several ways. First, the project was limited to research on mobile phone devices and excluded the use of mini tablets and computers as a form of converged mobile devices. The primary function of the project was to examine mobile phones and the influence of brand in the purchase of such devices, however, it would be relevant to compare experiences of individuals within the same cohort on their use of tablet and mini devices and the role brand may place in influencing the purchase of these devices.

Secondly, this project commenced during a time in which mobile call plan and the negativity to mobile call plan providers was building. Consumer backlash was actually being reported in mainstream media, and emerged as an external influencing factor once the data was examined and hypotheses models were being formulated and update. If the role of brand in the influence of mobile phone purchasers is to be moved forward, a better understanding of the mobile phone supply chain needs to be developed and investigated to gain a clearer and current understanding of the role it has in influencing mobile phone purchases by young adults.
This research was limited in scope to young adult Australians aged between 18-34 years and the period of time between January 2009 and December 2011.

In the context of the Australian market, the literature and research reviewed identified further gaps in research. The gaps in the research could potentially investigate:

- The influence of brand in the purchase process.
- The role converged functionalities play in the influence of a purchase.
- The consumer’s perspective as opposed to the commercial business insight with regards to the role brand plays when influencing the purchase.
- The influence of pricing models developed by telecommunications operators on the purchase of mobile phones.
- Examination of the consumer’s repeat purchase experience in relation to subsequent repurchase of the brand.

5.11 The Mobile Converged Technology Purchase Decision and Influence Processes

The Bazerman and Moore (2008) decision making process is a structure for making an objective decision supported by evidence or facts that support the decision being made. This structured process is a method of overcoming intuitive or biased decisions that can be made when people are busy and have a lot to think about but little time in which to think or little knowledge of the area under consideration. This structured process is illustrated in Figure 23 below:
This research suggests that in mobile phone converged technology purchase decisions the Bazerman Decision Process is only a first stage in the purchase decision. This
research suggests a duality of choice stages. The first is an independent choice stage. This is where brand preference typically was prevalent. The second choice stage identified in this research is a Retailer Influence Choice stage. In this second stage, the more intuitive Independent Choice is influenced by more variables and, therefore triggers a more fact based decision approach. This supports the findings of Bazerman, Chugh and Milkman (2008).

The model proposed by the findings of this research extends the Bazerman Decision Process into an ongoing process whereby the Bazerman Decision Process describes the initial stage of independent choice. This initial stage of independent choice, this research suggests, involves the Bazerman processes of Framing or determining the objective to be achieved, Gathering Intelligence to find out what would meet the objective and Coming to Conclusions of what mobile phone would be purchased. This research suggests that while at this initial stage brand has a high influence, this Independent Choice stage is followed by subsequent stages, each with their own decision structure of steps. The second stage is one where retailer influence can take precedence over the previously determined independent choice.

In this second stage of Retailer Influence, the decision structure is an iterative process of steps of learning from feedback, framing the desired selection criteria and gathering intelligence. The “Learning from Feedback” step in this second Retailer Influence stage, involves consideration of variables introduced by the retailer that change expectations and the optimal solution that was independently determined in the first stage. These developing expectations and optimal desired outcomes from the retailer influence leads to Framing. Framing is a process of defining the fundamental objectives that are to be achieved through the decision. The Feedback and Framing steps are iterative, with Framing requiring more feedback of expectations and the feedback then influencing the
Framing of objectives. This triggers the third step of Gathering Intelligence, this is a step of obtaining reliable data of the multiple variables under consideration. This intelligence again informs Framing and the gathering intelligence process may be continually reactivated as Framing requires more information.

When sufficient intelligence has been gathered and the decision process is now being made with evidence and facts that support the decision, the third stage is entered. This third stage is the Purchase Stage. In the purchase stage there is a logical response to the intelligence gathered in the second stage. This supports a particular decision and finally there is a feedback stage where learning takes place of how this decision has performed against the expectations and optimal outcomes evaluated in the second Retailer Influence stage.

This extended decision process observed in the purchase process for mobile converged devices is illustrated in Figure 24 below:
Figure 24: The Duality Decision Process for Mobile Converged Technology Devices

This finding suggests that a decision making process is non-sequential and multi-dimensional. The consumer is continually reviewing or returning to previous steps.
during the process. This finding indicates that the decision process is not entirely an individual process but that the retailer has considerable influence in the decision process. The initial consumer decision of “I want” a certain phone with certain features changes at the retailer as other variables such as functions, cost and call plan packages cause disruption that changes the initial “I want” decision. The retailer can so heavily disrupt the choice with information that the consumer returns to the initial decision steps. This suggests that the decision process may vary according to the type of industry or consumer product under consideration. In the choice of mobile phones with converged technology choices for young adults aged between 18-34 years in Australia, this research has found that there is an iterative process of working through the steps of Bazerman’s decision process in key stages according to the influence of brand then retailer and then customer evaluation of the best alignment between the disruptive factors of their preferences and the availability and cost of technological services and devices. This decision and influence process is illustrated in Figure 25 below:
5.12 Summary

This chapter has discussed the results of the research findings. The influence of variables has been identified as well as the interrelationship between the variables. The research identified that there is a brand preference, however, the call plan offered by the retailer at the last point of customer contact in the supply chain typically has a greater influence on the choice of mobile device. The following chapter summarises the conclusions of this research and makes suggestions for further research.
Chapter 6: Conclusions

6.1 Introduction

Chapter 5 discussed the results of this research. Significantly, the questionnaire results support the framework developed for the identification of variables that influence converged technology mobile phone purchase decisions. The results of this research also identified that, at the final point of contact with the consumer in the supply chain, variables other than brand may outweigh a brand preference in the purchase decision.

This chapter presents the conclusions drawn from the research and provides suggestions for further research.

6.2 Conclusions

This research aimed to identify the influence of brand on mobile phone converged technology purchases among young adult Australians, aged between 18 to 34 years (1 February, 2009 to 31 January 2011). From the literature review this research also sought to identify and understand the influence of additional factors such as a call plan cost, the functionality within a mobile phone, and the role family and friends play in the purchase decision making process and the interrelationship between the variables that influence purchase decisions of mobile phones with converged technology. The research also aimed to develop a theoretical model of the decision process in mobile converged technology purchase decisions. This research makes several noteworthy contributions to the understanding of the influencing factors and interrelationship between the influencing factors, in purchase decisions of mobile converged technology devices among Australian 18 to 34 year old young adults.
As such, the research presented in this thesis had to find its own direction and set an initial framework for further scholarly pursuit. Some of the findings support the earlier work of Bazerman, particularly Decision Theory. Using Bazerman et al. (2008) as a foundation, a further overlaying model has been offered, which builds on this work and extends the basic theory into a Multi Nodal decision model.

Although focusing on a specific time, as all academic studies do, a secondary literature review (Addendum, 2016) suggests that this work is still of academic merit, as very few relevant scholarly articles have been produced in this field. Further, no scholarly work has been conducted within the Australian context.

The findings of this research include contributions in the following areas:

- **Brand**

This research found that brand is an important influence on purchase preferences for mobile phones with converged technology but not the largest influence on purchase decisions amongst young adult Australians. This research also suggests that the influence of brand is at a particular point in the supply chain and its weight in the purchase decision changes as the consumer moves through the supply chain.

- **Call Plan**

This research identified that the call plan, usually offered by a telecommunications company through the retailer, has a larger influence than brand on the purchase decision. This is particularly due to the way the call plan is linked to and influences many other factors in the purchasing decision. The research also indicates that the point of contact with the retailer in the supply process may influence the importance of the call plan in the decision making process.
• Functionality

In the demographic under investigation in this research, the functionality of the phone had a significant influence on the purchase decision. The mobile phone has to conform to a minimum set of requirements from being able to make a phone call to offering communication connectivity to social media, to meet consumer expectations.

• Form

The research suggests that shape, size and tactility of the device influences purchase decisions.

• Fashion

The research identified that the ability to be able to customise and tailor a mobile phone to suit the young adult’s needs is also a variable that influences purchase decisions.

It was hypothesised in this research that brand played the primary role in influencing purchase decisions.

A framework was devised to model the variables identified as influential in converged technology mobile phone purchase decisions.

The literature review also indicated that the interrelationship of the variables is significant in understanding the influences that impact on the purchase decision of a mobile phone. The framework that was developed, utilising the input from the literature review, reflects the variables and the significance of the interrelationship of these variables that has been identified by the existing research as influential on purchase decisions. The literature reviewed consistently acknowledged the rapid pace in which technology was changing but also suggested that the significant changes in delivery
capabilities and the terms and conditions of call plan pricing structures could be identified as major influences as well. Service delivery, along with bundles of devices, functionality options and call price structures were also influencing the terms of young adult consumer engagement with telecommunications operators, with consumers desiring to change service providers due to poor or bad service experience. This suggests that the choice of a call plan, the acceptable cost and the functionality preferences of operating a mobile phone were being influenced by an element outside the brand of mobile itself. The literature review results suggest that the interrelationship of the service provider, in the form of the telecommunications company, and the call plan also influences the decision as to which brand the young adult consumer decides to purchase.

The literature suggested that there is a disconnect between what the young adult consumer can rationally evaluate as their influencing decisions has a disruptive influence overriding it due to the role the telecommunications providers play in an external influencing sense. The research results supported this indicating that consumer preferences are compromised at the point of purchase by the provision of technology and service and the way these are bundled and priced in call plans.

The mobile phone has become a personal must have for young adults. It forms a critical extension of their ability to communicate with others within their cohort. The mobile phone has evolved into becoming an article of dependency – this was not always the case until the common fixed land line phone became a portable, mobile device that could slip into a pocket, purse or adaptor in a vehicle. Dependency on the mobile phone is high due to it being the individual would be lost without. The young adult aged 18-34 years has seen their mobile phone evolve from a simple electronic portable phone, to become a completely integrated device which contains numerous ways to communicate
a obtain information on the go. This included in built functions such as text messaging, the ability to use social media as a further extension of the manner in which one to one and one to many communication can be made. No longer is it just an electronic device to make a simple phone call. It is a mobile communication and information device which places a variety of functions at the fingertips of the consumer.

The importance, and dollar value of these devices, further sees the mobile phone as more than just something which is carried around when one thinks about picking it when it is felt the device may be needed throughout the day to day travails of the individual. The mobile phone has become one of the ‘don’t forgets’ when leaving home and the office – it’s just as important as picking up the car keys, the house keys and in turn the mobile phone.

The research results indicate that the overriding driving influence on the purchase decision is the total call plan package. This raises the question as to whether the total call plan package and cost as defined by the telecommunications company provider is externally and indirectly providing influencing factors in the purchase of a mobile phone device by young Australian adults.

6.3 Suggestions for Further Research

The research literature reviewed identified further influential variables requiring an understanding of the following:

- The influence of brand in the purchase processes
- The role of converged functions within the mobile device
- The context of the technological and regulatory environment
- The influence of the telecommunications provider’s pricing plans
• The purchase decision point in the mobile converged technology device supply chain

Areas for further research identified through this research include:

• Further investigation into the mobile phone supply chain to provide a clearer and current understanding of the role each part of the supply chain has in influencing mobile phone purchases by young adults. This would assist in furthering understanding of mobile converged technology purchase decisions.

• Further investigation into the role of the total call plan package and cost as defined by the telecommunications company, on the purchase decision to examine if the service provider is externally and indirectly influencing the variables of consideration in the purchase of a mobile phone by young Australian adults.

• Revised delivery methods under the NBN suggest that research into the influence of price point as an influential factor in young adult choice of mobile phone plans will have implications for retail business models. Further to the development of this hypothesis and in support of the findings from this research study, The Australian NBN Business Model of one centralised provider of a network with separate ‘retail sellers’ able to access the NBN network emphasises the future impact mobile phone call plans will have on the consumers choice of mobile phone companies. The findings of this research suggest that that the mobile phone call plan and the plan’s cost to the young adult consumer will consequently impact on the individual retailer’s business model. In turn the fluid nature of the above will potentially impact the Strategic Supply Chain Alliance between the NBN’s proprietor (in this case the Australian
Federal Government) and the “retail” suppliers of mobile phone service connectivity. In this case “retail” referring to the third party connectors of commercialised connection of the consumer to a 3G or similar network overseen and operated by the NBN.

- A further investigation into what right or level of response the consumer could or can expect when it comes to customer service problems arising from connectivity to a network is suggested. From the consumer’s perspective, given the high level of influence on Call Plan investment, the young adult consumer would reasonably expect to know who will be responsible for the continuity of connection over 3G or similar. Would it be the ‘retailer’ or NBN, and to whom is the consumer required to deal with in such serviced resolution?

- Further research into the observation that SMS texting has an addictive quality to it is suggested as an outcome of this research.

Consumer focused research in the area of the decision making process, when purchasing new technology and/or digital media is limited. Further research is required among the existing or potential young adult consumer market to consider not only the technology itself, but broaden to include:

1. The social (brand tribal) influences of the branded product relative to mobile phone converged technology.

2. Whether the brand of the converged functionality is actually delivering the “benefits customers truly desire” (Keller, 2000 p.148).

3. Whether the converged functionality contained in a branded mobile phone device fits within the consumer’s budget while aligning with the service provider’s call plan being considered.
4. Academic research and real world contribution gaps exist in the provision of sound research examining the role of brand in purchasing decisions for new technological devices from the consumer’s perspective.

5. Further research into other mobile converged technology devices such as tablets and notebooks to test the influence of brand is suggested. Leading mobile device brands have demonstrated their expertise in the use of brand extension via the release of DMT products including the iPod nano; Apple iTouch and Apple iPhone. However, research into the role of brand in consumer decision making processes in adopting such technology is scarce. This suggests the area of future research will have both a commercial and academic application which would encapsulate other devices such as tablet type computers (e.g. Apple iPad, Galaxy Tablet) and the inclusion (or lack of) connection to 4G networks whose operating spectrum frequency range varies from country to country around the world.

6. Some contradictions in respondents’ answers were identified, and this is true when whole percentages are provided as part of the data. But are these contradictions real or apparent? A more solid analysis, using various mathematical tools (e.g., multi regression or structural equations) could potentially reveal the motivation of the purchasers.

This research addressed the question of the influence of brand on the purchase decisions of mobile phones with converged technology by young adult Australians. This research identified variables that influence purchase decisions of mobile phones in the interrelationship between technological environment, mobile phone device and retail call plans. The framework developed may help understand the iterative loop between the variables and further study using this framework may help to improve understanding
of the importance of brand, infrastructure and retail influences on the purchase and adoption of mobile converged technology for social and business purposes and increase consumer awareness of their purchase decisions.
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Appendix 1: Online Questionnaire

PLEASE READ THIS BEFORE BEGINNING

Thank you for agreeing to take part in our brief study looking at the way people use their mobile phones and social media. We’re particularly interested in the mobile phone you personally use on a regular basis. By regular, we mean the one mobile phone you personally rely on a day to day basis to send or receive mobile phone calls or text messages or any of the other functions your mobile phone may contain.

This questionnaire will take on average about 5 minutes to complete. Don’t worry about spending too much time on each question; it’s the answer that first comes to mind that we’re most interested in.

Q1. How long have you owned or been using the mobile phone you personally use on a regular basis? (please tick one only)

☐ Within the last month
☐ 1 month but less than 3 months ago
☐ 3 months but less than 6 months ago
☐ 6 months but within the last year
☐ A year or more ago
☐ I don’t use a mobile phone

Q2. Is the mobile phone you personally use on a regular basis, mainly for? (please tick one)

☐ Personal Use Only
☐ Business Use only
☐ A mix of business and personal use
☐ None of these (please write in here what you use it for).................................

Q3. Which one of the following best describes the situation in which you came about obtaining your mobile phone? (please tick just one of the following):

☐ I purchased my mobile phone outright after choosing the mobile phone I wanted
☐ I chose my mobile phone as part of a plan that was included in the call rate provided by the mobile phone company
☐ I had no opportunity to choose the mobile phone I wanted—it was included in the plan and call rate provided by the mobile phone company
☐ I chose a mobile phone call plan and had to take the mobile phone that came with that plan
☐ Somebody else chose my mobile phone for me and provided it as part of a call rate and plan from the mobile phone company.

☐ I share the use of the mobile phone I regularly use with someone else and we both arrived at a compromise

☐ Any other reason or reasons? (Please write them in this space.)...

Q4. What was the one main contributing factor that assisted in the final decision you personally made to purchase the mobile phone you currently use regularly? (Please tick one of the following responses that best describes the final decision you made. If none of these were the main factor, please write in your decision in the Other Factor space provided)

☐ The brand of the mobile phone

☐ The mobile phone call plan from the provider

☐ The additional functions built into the mobile phone

☐ The price of the phone and call plan bundled together

☐ Other factor in the decision (please write in)...

Q5. Thinking about the functions the mobile phone you use on a regular basis can perform, which of the following functions are included in your mobile phone? (Tick as many of the functions that your mobile phone includes.)

☐ Mobile phone calls

☐ SMS texting

☐ MMS Texting

☐ GPS Maps

☐ MP3 player

☐ Still shot Camera

☐ Video camera

☐ E-mail

☐ Any others? (Please write them in here:)...
“When it comes to purchasing a mobile phone for my personal use I consider the brand name is a primary factor in making the choice of mobile phone I purchase”

☐ Totally Agree  ☐ Agree  ☐ Neither Agree or Disagree  ☐ Disagree  ☐ Totally Disagree

“When making a decision about purchasing a mobile phone for my own use, I do not seek input from friends or relatives about their experience with the mobile phone I intend to purchase for myself”

☐ Totally Agree  ☐ Agree  ☐ Neither Agree or Disagree  ☐ Disagree  ☐ Totally Disagree

“It’s not the brand name on a mobile phone that’s important to me—it’s the other functions that it performs that are of greater importance”

☐ Totally Agree  ☐ Agree  ☐ Neither Agree or Disagree  ☐ Disagree  ☐ Totally Disagree

“As long as it functions and sends and receives phone calls, it doesn’t matter to me what brand of mobile phone I buy”

☐ Totally Agree  ☐ Agree  ☐ Neither Agree or Disagree  ☐ Disagree  ☐ Totally Disagree

“Before buying a mobile phone, I check to make sure that my potential telephone service provider has the network capability to perform the functions my mobile phone offers”

☐ Totally Agree  ☐ Agree  ☐ Neither Agree or Disagree  ☐ Disagree  ☐ Totally Disagree

“I’d be lost without my mobile phone as it’s an important part of the way I communicate with other people”

☐ Totally Agree  ☐ Agree  ☐ Neither Agree or Disagree  ☐ Disagree  ☐ Totally Disagree

“The brand of mobile phone a person uses defines the type of person they really are”

☐ Totally Agree  ☐ Agree  ☐ Neither Agree or Disagree  ☐ Disagree  ☐ Totally Disagree

“Mobile phones that come with other functions built into them interest me more than just a mobile phone that you can only use to send and receive basic phone calls and SMS texts”

☐ Totally Agree  ☐ Agree  ☐ Neither Agree or Disagree  ☐ Disagree  ☐ Totally Disagree
Q7. Now just a few final questions about you and the brand of mobile phones available. Which brand of mobile phone is the one you currently own or use on a regular basis? (Please write in the brand name of your mobile phone here) ............................................

Q8. Regardless of cost, if you could choose any brand of mobile phone for your day to day personal use, which brand would you personally choose? (If you are unsure, please tick Don’t Know and go to question Q11) ..........................................................

☐ Don’t Know (go to Question 11)

Q9. Why would you personally choose this brand?..................................................................................................................................................................................................................................................................................................................................................................................................................................................................

Q10. Finally, to make sure we have a good cross section of people in our study, please tick the following details that correspond to you:

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aged</td>
<td>18-24 years</td>
<td>25-29 years</td>
</tr>
</tbody>
</table>
Thank you for your time. Any other comments you would like to make about your mobile we may not have covered, please feel free to include them here:........................................................................................................................................................................
........................................................................................................................................................................
........................................................................................................................................................................
........................................................................................................................................................................
........................................................................................................................................................................

Please be assured that your privacy will be observed under the Commonwealth Privacy Act (1996) and that this data will only be used to interpret information gained from the study. No individual personal details will be used or be able to be identified in the data analysis.
Appendix 2: Questionnaire Results and Data Tables

Sample and tabulated response rates

<table>
<thead>
<tr>
<th>Age Group in years</th>
<th>Sample Invited to participate online N=330</th>
<th>Sample returned N=303</th>
<th>Sample tabulated for this study N=303</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males 18-24</td>
<td>55</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Females 18-24</td>
<td>55</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Males 25-30</td>
<td>55</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Females 25-30</td>
<td>55</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Males 31-34</td>
<td>55</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Females 31-34</td>
<td>55</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Total All people aged 18-34 years</td>
<td>N=330</td>
<td>N=303</td>
<td>N=303</td>
</tr>
</tbody>
</table>
Appendix 3: Research Timeline

The following flow chart illustrates the steps involved in designing the questionnaire:

<table>
<thead>
<tr>
<th>Research</th>
<th>Timeline</th>
</tr>
</thead>
</table>
| Drafted Questionnaire                         | • Face To Face Pilot  
• Tested to check ambiguity                                               |
| Pilot Test                                    | • Re draft and tested for length  
• Face to Face to check for any further ambiguity following re draft          |
| Re Worked Questionnaire ON Line               | • Updated for use in on line research mode  
• Flow and continuity of questionnaire finalised                           |
| Pilot Questionnaire ON Line                   | • Tested for ambiguity among small on line sample  
• On Line Pilot Test Data Reviewed                                                 |
| Recruited on line                            | • On Line Questionnaire activation, respondents recruited  
• Date retrieved and checked for compliance                                     |
| Data Processed                                | • On Line data processed                                                 |
| Data Tabulated                                | • Data tabulated, reviewed and output to tables                           |
| Final Analysis                                | • Final data analysis and analysed for dissertation                       |
THINGS YOU NEED TO KNOW

Valid from 26 October - 31 December unless otherwise stated. Device prices and repayments and product range are subject to change.

Telstra and Partners may at any time cancel the offer or relevant Telstra service without notice.

Easy-Share Business Plans
Some usage is excluded, such as calls to SMS/ MMS business plans, Telstra Mobile Broadband Plans, Telstra Mobile Broadband Share Plans and Telstra Mobile Broadband Data Plans.

Telstra Pricing Terms and Conditions — September 2013

Appendix 4: Telstra Pricing Terms and Conditions, September 2013

Telstra Pricing Terms and Conditions — September 2013

Valid from 26 October - 31 December unless otherwise stated. Device prices and repayments and product range are subject to change.

Telstra and Partners may at any time cancel the offer or relevant Telstra service without notice.

Easy-Share Business Plans
Some usage is excluded, such as calls to SMS/ MMS business plans, Telstra Mobile Broadband Plans, Telstra Mobile Broadband Share Plans and Telstra Mobile Broadband Data Plans.

Telstra Pricing Terms and Conditions — September 2013
Introduction

Since completing this body of work and research the world of the mobile phone has continued to change and move in a fast evolving field. With the continuing development and convergence of media and technology functions in mobile phone devices, these devices continue to change the way people communicate, both for social and business purposes. These functions and the associated changes in the way people communicate, have social, structural and economic influences, in regards to which governments and businesses require information in order to respond with appropriate decision making and strategic planning.

Key manufacturers such as Nokia and Sony/Erickson have diminished their activities in the global market while the sale of iPhones from Apple and smartphones from Samsung have continued to grow the mobile phone market. Chan M, (2013) notes that the number of mobile phone subscriptions worldwide reached almost 7 billion in 2013. Therefore, the social and psychological consequences of the technology are of great interest to new media scholars and policy makers.

According to EMarketer (2014), there will be more than two billion smartphone users, or one-quarter of the global population, by 2016. Shopping or buying with a mobile device (mobile purchase) has become an increasingly important topic that has drawn much attention in both industry and academia (Gao et al, 2015).

However, what has remained relatively unchanged since the launch of the first i-phone in the USA in June, 2007 is the nature of research being undertaken in the role of brand as an influence on mobile converged technology purchases among Australian 18-34 old
young adults. Subsequent literature research covering the years 2010 to 2016 has revealed that peer reviewed papers and information of an academic nature with relevant research among 18-34 year old young adults is still an area open to further investigation.

**Search and Critical Review**

An exhaustive database review and research was undertaken to identify what further scholarly work has been undertaken in the period 2010-2016 which is relevant to the body of work and the subject covered in this theses.

This search covered a wide ranging area of words and terms including:

- **Mobile Phone:**
  - covering Cell Phones, Cell Phone systems, Wireless Communication Systems, Smart Phones

- **Youth:**
  - covering Young Adult Consumers, Young Consumers

- **Mobile/Cell Phone Use:**
  - covering Usage, Use

Further to identifying these words and terms, a series of respected databases and search engines were used to dig deeper with additional precision targeting of the relevant areas.

The databases used included:
• **Business Source Complete:** using Cell Phone (as the subject) and Youth and Use (limiting the data search to academic reviewed and accepted information). This resulted in a total of 19 responses.

• **Web Of Science:** using Cell Phone or Mobile Phone and Youth. This resulted in 2 responses

• **Proquest Central (Business—Marketing and Management)** using Mobile Phone, Youth, Young Adults, Cell Phones resulted in 11 responses

• **Scopus:** Cell Phones or Mobile phones and Youth or Young Adults was utilised. This resulted in 489 responses.
  
  o A further filter on the above Scopus search engine using Cell Phones, Mobile Phones and Young Consumers reduced the number of relevant responses to a total of 15.

**Analysis and Findings**

Where research has been undertaken in the period 2010-2016, it has tended to fall into three broad areas:

1. Interaction and self assessed feedback: Spatial mobility, the role of cyber bullying, the use of mobile phones in health risk assessment (Wang, D et al. 2015)

2. Engineering: telephone network upgrades, engineering and technical updates to the way in which spectrum and electronic adaption of mobile phone networks has changed (D'Alessandro S et al. 2015)

3. Applications: Development of specific applications for a variety of users covering promotions and marketing based targeting of consumers and creating applications. (Lane ND, et al. 2010)
Further research continues to be primarily in the northern hemisphere (Forgays D.K., et al. 2014) who investigate the role of texting among a range of genders and Roberts, J.A (2015), with an overview of the addictive nature of technology among young adults.

Indeed, in examining the role of service in China and specifically the role of service in the use of mobile phones and on line purchases, the findings of Gao et al. (2015) support the body of this research (see section 2.10: Reliance on Telecommunications Companies for Service Delivery). Their observations reinforce that quality of service and provision of a reliable and stable service is as important now as it was when the original theses research was undertaken.

The subsequent literature review also indicates that the technical system quality provided by a mobile phone company continues to be of high importance. The positive correlation between system quality and satisfaction with a mobile phone provider service is consistent with extant findings (Chatterjee et al., 2009; Elliot et al., 2013; Lee & Chung, 2009; Zhou, 2013a).

This is further outlined in citing “consumers expect to conduct purchases via mobile devices at anytime from anywhere. Thus a low quality system will decrease their evaluation on the utility and satisfaction with mobile purchase. For example, if a mobile site has a slow access speed, consumers may need to wait a long time for the system to respond to their request. They may also encounter service unavailability or interruptions because of an unreliable system. These problems will lower their satisfaction with mobile sites. Thus mobile vendors need to enhance their back-end systems and ensure that reliable and stable systems are offered to consumers.”

In short, quality and reliability of service regardless of whether it is on a 3G or 4G platform continues to be a constant.
Conclusion

Whereas it is recognised that database searches can change at any future point in time, as of March 2016 after conducting an exhaustive literature research it is apparent that there is very limited additional information in the area covering the period post 2010.

As such the body of research in this thesis had to find its own direction to set an initial frame work for further scholarly pursuit. Some of the findings support the earlier work of Bazerman and Decision Theory. Using Bazerman as a foundation (Bazerman et al. 2008), a further overlaying model has been offered and in addition adds to Bazerman’s earlier work while also extending the Bazerman basic theory into a Multi Nodal decision model (see Figure 25. The Decision and Influence Process of Mobile Converged Technology).

Although dated by the normal traditional academic terms of timing of the study, a secondary literature research suggests that this work is still of academic merit due to the small number of relevant scholarly articles in this area. Further, generally and specifically, no scholarly work has been conducted within the Australian context.
References:


Chan, M 2013 2013, ‘Mobile phones and the good life: examining the relationships among mobile use, social capital and subjective well-being’, *New Media & Society.*


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