The Adoption of Social Media by Australian Banks to Communicate with the Public

by

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Submitted in fulfilment of the requirements for the degree of

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Dedication

This dissertation is dedicated to my father and late mother who have been a pillar of support for me during my academic development, and to my loving wife and children for giving inspiration and purpose to my life.
Acknowledgements

This thesis represents the work and contributions of many remarkable people who I must acknowledge individually and as a group.

First and foremost, I would like to extend my sincere thanks to my supervisory group that enabled successful completion of my research study:

- Professor Matthew Warren for his dedication throughout this research study as the principal supervisor and as the primary source of knowledge that yielded substantial contribution to the research.
- Associate Professor Shona Leitch for her flexible approach to work that made me feel that my research was her priority and enabled me to maintain sustained interest in the study.
- Dr Graeme Pye for his ability as an experienced academic to generate continued enthusiasm that enabled me to overcome challenging situations.

I would also like to acknowledge the contributions of the following people and organisations that provided indirect support and assistance:

- Dr Scott Salzman for his expert advice on matters relating to quantitative research.
- Professor Roger Horn for his academic insights delivered through seminars, workshops and chapter retreats.
- Associate Professor Sharman Lichtenstein as a former departmental colleague for her support and general advice relating to academic research and writing.
- Academic Staff of the Department of Information and Business Analytics for providing encouragement and enthusiasm individually and during meet-ups.
- Administrative Staff of the Department of Information and Business Analytics and the Faculty of Business & Law, especially Julie Asquith and Bronwyn Kelly, for all the back-office support in regard to HDR working space, administrative information sharing, grant disbursement and conference attendance.
- Deakin University, for organising all support activities relating to skills enhancement, financial assistance for a research scholarship, and workspace.

Finally, I would like to acknowledge Patricia Hewson for her editorial advice as well as my supervisory team for their contribution that made the publication of this thesis possible.
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2015


2011

ABSTRACT

Social media as a technology has experienced a phenomenal growth over the last 10 years (since 2005) with the exponential growth in the number of users as a facilitating factor. Parallel to this, the momentum created is increasingly enticing businesses and brands to adopt social media as a communication method in order to benefit from a potential tool that would enable them to gain cost-effective access to a vast pool of existing and potential customers.

Businesses have benefited from the concept of online communities and adopted mobile and other Internet-based technologies that facilitated access to a wider section of the public. Social media in this regard adds a different perspective to broaden the discussion around online communities. However, they create a multitude of challenges for businesses, primarily due to the unique characteristics attached to social media, such as the public nature of the engagement and its sociotechnological character. As a consequence, adoption decision-makers require better insights and frameworks to traverse the social media environment, which would enable them to benefit from this novel technology.

Notwithstanding the increase in research relating to social media, there has been little to no research associated with social media-based online communities. Meanwhile, as an industry, the Australian banking sector has always been at the forefront of adopting innovative technological solutions to improve the profitability of their business. In this regard, they are more likely to benefit from social media if used as a method of communication. It adds a viable context to the discussion, but has not received enough research attention. Therefore, this research study addresses this gap in knowledge by focusing on the question, “How can social media be adopted by Australian banks to effectively communicate with the public?”

This study conceptualises social media adoption through a review of literature that addresses the complex sociotechnological nature of the research environment and drives the study by enabling a mixed-methods approach to data collection and analysis. It delivers an empirically tested social media adoption model for Australian banks to use to communicate with the public, as the viable answer to the overarching research question posed to address the gap in knowledge. This proposed model has theoretical implications relating to social media technology adoption and has the potential to drive further research discussions. The model also has the potential to address gaps in social media strategy development in business organisations.
1. INTRODUCTION

1.1. Introduction

Over the last decade (since 2005), considerable changes have occurred in the field of information systems. Amongst those changes is the emergence of new technologies that have the capabilities to allow online social interaction, and that have been accepted by millions of users around the world. Continued developments in this regard have resulted in the integration of new functionalities to facilitate the creation and sharing of content over and above the ability to form online relationships or networking that these technologies were initially intended for.

A growing body of research is developing around the subject of social media facilitated by continuous growth in the number of people taking up the technologies, having understood the numerous benefits on offer through their use. The resulting growth in online social interactions has contributed towards continuous improvements to the technologies involved by way of enhanced functionalities and entrenchment of some of these technologies as preferred mediums of communication. As a result, businesses continue to assess their inclusion in their communication strategic-mix through mindful adoption of the technologies concerned.

Meanwhile, the Gartner Inc. report proposed the idea of a nexus of forces that describes the convergence of four independent trends to empower individuals as they interact with each other to facilitate engagement in an effective manner (Howard et al., 2012). These forces, identified in the report as social interaction, mobility, cloud and information, combine to create new business opportunities by opening up businesses for enhanced engagement with existing and potential customers through novel forms of communication, such as social media.

Social media offers unprecedented access to people, identified by van der Aalst (2014) as an ‘Internet of People’ and data relevant to them generated and archived within the public domain. Moreover, in social media, businesses are employing a novel medium that facilitates direct engagement with their intended audience which includes existing and potential customers. Under these circumstances, businesses that have a larger public exposure through the important day-to-day services they offer to the public need to be more innovative in their approaches, to maximise the benefits they expect to gain. In this regard, public-facing businesses, such as banks that have considerable exposure to the public, require access to new
knowledge that would allow them to develop new business models to facilitate the mindful adoption of and transition towards these new technologies.

Considering the importance of maintaining customer relationships for the success of banking technology acceptance (Chiou and Shen, 2012) and banking technology acceptance to maintaining customer relationships (Lichtenstein and Williamson, 2006), social media, with its public acceptance, has the potential to provide a cost-effective source of communication to facilitate such relationships. Also, social media provides the potential to build personal relationships by enabling access to those customers that are less inclined to walk to a bank branch due to the availability of banking services through mobile and Internet technologies. Social media can also be used as a complementary form of communication to attract a younger generation identified as a growth category by banks (Foscht et al., 2009).

With 86% of Australians having access to the Internet and 65% of them using social media (Butterworth, 2013), Australian banks have found a medium to attract the majority of its population for online social interaction. Also, social media as a communication method complements the increased use of technology-based self-services, including mobile technologies (Wessels and Drennan, 2010), as both Australian banks’ and public emphasis is on maintaining their relationships. This PhD research study focuses on the adoption of social media by Australian banks as they increase the use of social media to communicate with the public (Senadheera et al., 2011). The overall research outcome introduces new knowledge backed by empirical research that methodically explores issues brought to the forefront through a review of literature.

Notwithstanding these opportunities arising, Australian banks continue to operate in a highly competitive and regulated environment in order to provide an important service to the public; however, they need to abide by rules and regulations. In this regard they face challenges in dealing with sensitive information of both a commercial and a personal nature being discussed in a public forum such as social media. This was evident in the exploratory research that observed the social media strategies of some Australian banks not being able to keep up with the speed of technological changes (Senadheera et al., 2011), leading to errors in judgements, quite uncharacteristic for these resourceful businesses.
Chapter 1: Introduction

The growing body of knowledge relating to social media and online communities in general, however, makes minimal reference to social media-based online communities and more so that focuses the attention of the adoption of social media by Australian banks to communicate with the public. Therefore, this research focuses its attention on social media and more specifically on the social media-based online communities as a form of communication in an Australian context.

Key questions that arise in this study relate to how Australian banks use social media in general, and specifically their functionalities applied to communicating with people, and their behaviour in the adoption of social media to communicate with banks. Due to the speed in which technological changes occur around social media, there is an urgency to determine answers to these questions that have not been given due consideration. As the first step in this regard, key research definitions have been identified.

1.2. Key Definitions

The following key definitions have been identified and are discussed in detail in the given sections:

- Social Media and Social Media Technologies – Refer to section 2.10.1.
- Social Media-based Online Communities – Refer to section 2.10.2.
- Social Media Adoption – Refer to section 2.10.3.
- Sociotechnological Communication Environment – Refer to section 3.2.

1.3. Outlining the Research Context

The primary focus of this research study was to make a theoretical contribution in the form of a model governing the adoption of social media by Australian banks to communicate with the public. This conceptual model formation involved revisiting some of the established theoretical foundations in the technology adoption and communications research. This was followed by an empirical gathering of data involving Australian banks, three selected social media technologies, namely Facebook, Twitter, and YouTube and representatives of the Australian public. The outcomes of the analysis of the relevant data have led to the determination of the model’s contribution to theory and practice.
1.3.1. Research Rationale

The concept of online communities had been discussed in the literature since the inception of the Internet. However, it has taken a new direction with the advent of Web 2.0 and social networking that had given social media users the capability to create their own social media-based online community by allowing fellow social media users to connect with their social media presence. As these technologies qualitatively evolved, they attracted millions of users to its fold that resulted in the growing adoption of the technologies by businesses to achieve various business expectations, primarily relating to greater engagement with the user-public.

A review of existing research associated with online communities since the advent of social media has observed a gap in knowledge associated with the unique specificities of the online communities formed within the social media environment. Further exploration of this research gap has focused the attention on using these online communities formed on social media by businesses to communicate with the public. This is followed by further narrowing-down of the research focus has resulted in the selection of Australian banks as the most appropriate study sample, considering the complexities driven by security, privacy and regulatory issues that banks are required to adhere to when adopting a technology available in public domain.

In view of the novelty of social media as a communication method and the wider reach it could provide for communicated content, addressing this gap in knowledge has the potential to achieve significant insights into both information systems and communications research. From a practitioner’s point of view, the potential applicability of research findings to a wider cross-section of businesses will empower business decision-makers in the formulation of appropriate social media strategies to achieve expected business outcomes.

1.3.2. Research Overview

A review of literature relating to adoption issues within the sociotechnological nature of the social media environment enabled the formulation of the social media adoption model for Australian banks to communicate with the public. This conceptual model of social media adoption by Australian banks demonstrated the challenging research environment and encapsulated technology and the social communication aspects of social media adoption.

The ‘conceptual adoption model for Australian banks to communicate with the public’ has been formed using a comprehensive review of literature. This is followed by the undertaking
of disparate research activities involving mixed methods to test and critique technology and the social communication aspects of the model and corresponding model components.

The subsequent findings were based on the analysis of data relating to individual research components involving a longitudinal study, online survey, and focus groups. Their findings are discussed in Chapters 5, 6, and 7. Chapter 5 is dedicated to discussion that brings to the forefront how Australian banks use social media functionalities to communicate with the public based on the findings of a longitudinal study spread across three years. Meanwhile, Chapters 6 and 7 present the findings of an explanatory sequential study consisting of an online survey and focus groups. The outcomes of these discussions were used to progressively refine the conceptual model proposed in Chapter 3 through the applied triangulation of mixed methods research analysis.

The refined conceptual model was presented to a focus group consisting of social media users, for further review, whose opinion of the model reflecting their expertise as users was applied to validate the model and its components. The outcome of this research study was presented as the final adoption model and as the theoretical contribution following a discussion of its potential contributions in practice.

1.4. Research Question

This study was initiated to answer the overarching research question, “How can social media be adopted by Australian banks as a method to effectively communicate with the public?”

Taking into consideration the necessity to address sociotechnological nature of the social media environment as a result of the involvement of both people and technology, the main research question was divided into two research sub-questions. They aim to capture diverse aspects that govern the adoption of social media, enabling Australian banks to conduct effective communication with the public. The two sub-questions are:

- RSQ1: What social media functionalities are effective when the public and Australian banks communicate?
- RSQ2: How do the adoption decisions of users affect their participation in social media-based communication with Australian banks?

The research question/sub-questions will be discussed in detail in section 2.9.
Chapter 1: Introduction

1.5. **Research Contributions**

The social media adoption model for Australian banks to communicate with the public, as the primary theoretical contribution that answers the overarching research question, and its potential to empower practitioners, is briefly summarised here.

1.5.1. **Contribution to Theory**

The social media adoption model for Australian banks to communicate with the public answers the overarching research question and provides a significant contribution to theory as it fills a gap in research associated with the adoption of social media as a novel communication method. Importantly, this research outcome adds significance to the academic discussion around the social communication and technological aspects governing the use of social media as a method of communication.

As a result of review and application established theoretical frameworks previously discussed in literature relating to communication technology adoption and empirical testing of the aspects relevant to social media identified in the Lin (2003) model has added significance to this exploratory model.

Similarly, the adaption of the Honeycomb Model (Kietzmann et al., 2011, Kietzmann et al., 2012) and its testing through empirical longitudinal study has added value to this exploratory model. The adapted model has also provided clarity to various social media functionalities, independent of the technologies used.

The use of Australian banks as the study group has generated discussion that adds a valuable contribution to the overall research findings in a geographical context that could prove beneficial for future research endeavours in different geographical and organisational context.

This research study has employed a mixed-methods approach consisting of a longitudinal study, an online survey, and focus groups to gain access to appropriate data. This methodology add value to theory as more research will conducted relating to novel communication methods in the future.

1.5.2. **Contribution to Practice**

The social media adoption model for Australian banks to communicate with the public, which was conceptualised and tested in the course of this research study, encapsulates the technology
and social communication aspects that govern the complexities of the social media environment. It can be effectively used to empower the decision-makers of Australian banks in their quest to implement appropriate social media strategies. This can be achieved by employing adoption model components to generate relevant insights from the social media environment consisting of a mixture of technology functionalities and public attitudes and beliefs as described in the following sections.

1.5.2.1. Formulate Social Media Strategy through Social Adoption

The key aspect of the social media adoption model for Australian banks is to communicate with the public, and the adoption model contains seven key social media functionalities that have been elicited based on the literature review, and illustrated using the Honeycomb Model. The relevance of the technological aspects to the overall research study was demonstrated in the longitudinal study findings as per discussion in Chapter 5. It identified the social media functionalities used when public and Australian banks communicate.

Social communication aspects contain three key factors that encompass fundamentals relating to the adoption decisions of users that affect their participation in social media-based communication with Australian Banks. These factors have been elicited from the integrated communication technology adoption model (Lin, 2003) having considered their relevancy to social media when considered as a form of communication. The explanatory sequential study has identified the fundamental themes relating to the adoption decisions of users that affect their participation in social media-based communication with Australian Banks.

1.5.2.2. Maintain the Flexibility of the Social Media Strategy

The social media adoption model for Australian banks to communicate with the public focuses on different functionalities that are fundamental to different technologies, and is open for consideration of the unique functionalities that could become available in the future. Hence, the model can be identified as a ‘social media technology independent’ and offers flexibility in its use notwithstanding future developments. As a result, the model provides continuity and stability to social media strategies of the respective Australian banks notwithstanding the potential changes in social media technologies. This technological independency of the model provides flexibility and sustainability in a scenario where a change in strategic focus is required driven by a multitude of reasons or innovations.
1.5.2.3. **Identify Gaps in the Existing Social Media Strategy**

The social media adoption model can be used to identify gaps in the implementation of a social media strategy, as was done in this research study. Using the model to articulate a discussion around its various components facilitates the identification of gaps in implementation. Having identified these gaps, remedial action can be initiated by targeting areas of neglect (or any other possible reasons). Taking this into consideration, the social media adoption model will be useful as a research template if and when Australian banks expect to undertake further research in order to recalibrate their overall social media strategy.

1.6. **Research Structure**

The research structure of this study explains how the research has progressed through the following five critical stages:

- Stage 1 – Evaluating Existing Research;
- Stage 2 – Conceptual Representation of the Research Objective;
- Stage 3 – Analysis of Body of Research Methods and Principles;
- Stage 4 – Moving from Concept to Theory & Practice;
- Stage 5 – Discussion of Research Outcomes.

On completion of these five research stages, research limitations and emerging future prospects will also be discussed.

1.6.1. **Evaluating Existing Research**

This stage consisted of a literature review that eventually led to the formulation of the research question. Considering the evolving nature of the research area, this literature review has continued throughout a considerable part of the research study. This stage covered the formulation of key definitions and explored the current status of social media and key technologies. It also determined the importance of Australian banks as the most relevant study sample that would facilitate generalisation of the research findings.

**Relevant Thesis Chapter**: Literature Review (Chapter 2).
1.6.2. **Conceptual Representation of the Topic**

This is a continuation of evaluating existing research and focuses on the conceptual representation of the topic, taking into consideration the sociotechnological nature of the adoption involving social media technologies. This literature review, supported by exploratory research, has led to the formation of the ‘conceptual social media model for Australian banks to communicate with the public’.

**Relevant Thesis Chapter:** Conceptual Model Development (Chapter 3).

1.6.3. **Analysis of Body of Research Methods and Techniques**

Research activities relating to this stage were partly informed by the outcome of the conceptual model discussion and the specificities relating to the field of research. However, the discussion also covered established methodological foundations in determining the mixed-methods approach as the most appropriate considering the sociotechnological nature of the research area.

The mixed-methods approach has taken a ‘convergent parallel design’ that converged a longitudinal study and an explanatory sequential study involving an online survey followed by focus group analysis. These two parallel studies have overseen the collection and analysis of data relating to the sociotechnological research environment as explained in section 1.6.4.

**Relevant Thesis Chapter:** Methodology (Chapter 4).

1.6.4. **Moving from Concept to Theory & Practice**

This stage has covered the conduct and analysis of relevant data collected using the previously identified methodological approach as well as their interpretation and presentation. Analytical rigour was established through analysis of both quantitative and qualitative data. These are explained in detail within analysis Chapters 5, 6, and 7.

The use of the mixed-methods approach has enabled triangulation of the findings and further scrutiny of what had already been analysed and discussed following the completion of each research component.

The refined conceptual adoption model had undergone further scrutiny via a focus group discussion that validated the refined adoption model put forward for focus group discussion.
The analysis of empirical data gathered at various stages of the research process and ensuing discussions are presented in the following chapters.

**Relevant Thesis Chapter(s):** Analysis & Discussion – Longitudinal Study (Chapter 5)  
Analysis & Discussion – Online Survey (Chapter 6)  
Analysis & Discussion – Focus Group (Chapter 7)  
Model Validation (Chapter 8).

The social media adoption model for Australian banks to communicate with the public is formulated following the model validation that ensued after further discussions on overall contributions to theory and practice.

**1.6.5. Discussion of Research Outcomes and Conclusion**

This final stage of the research explores the research outcomes as a brief discussion, and research significance of the validated adoption model to theory and practice. This is followed by a chapter with concluding remarks to the overall outcome and introduces the reader to potential openings for future research. Future research prospects are discussed with the aim of continuing the research discussion in order to broaden the emerging and evolving field of knowledge.

**Relevant Thesis Chapter(s):** Discussion (Chapter 9) and Conclusion (Chapter 10)

**1.7. Conclusion**

This chapter serves to introduce the research topic and outlines the broad scope of the research undertaken. Having discussed the background that led to the identification of this research topic, it has introduced the key definitions and provided links to relevant discussions undertaken in subsequent chapters outlining the research context.

Finally, the contributions to theory and practice have been briefly discussed to add a preliminary outline of the discussions expected in the following chapters. These chapters have been identified by the five research stages of this study.

Chapter 2 will undertake a review of the literature. It explores existing research studies associated with this area of research with the expectation of identifying an area where gaps are evident in the existing knowledge.
2. LITERATURE REVIEW

2.1. Introduction

The technologies that evolved from Web 1.0 as a form of communication (Laningham, 2006) continue to gather momentum as demonstrated by recent developments associated with the technologies supporting online social connectivity. Amongst other possibilities, these technologies have the potential to change how people communicate and discussions are starting to take place that associate this with the changing fundamental design principles of the Internet (Feldmann, 2007). These technologies were initially identified as ‘social networking sites’, but were loosely defined using popular acronyms such as ‘Web 2.0’. They have evolved further to become social media technologies that inherited a multitude of media-rich functionalities that led to their acceptance by billions of users from around the world, thereby creating a novel medium of communication.

However, this phenomenal growth was seen by some researchers as a potential reputational risk for businesses and they suggested that risk mitigation strategies should begin before reputational crises unfolded (Aula, 2010). At the same time, businesses wishing to engage with their customers have been provided with an opportunity to gain direct access not only to existing customers but also to millions of potential customers through this evolving online social environment. By creating their presence on social media in order to exploit their potential benefits, businesses have knowingly or unknowingly subscribed to challenges associated with technology’s inherent characteristics, such as open participation.

This chapter has undertaken a review of existing research associated with online communities in order to determine specificities relating to online communities formed in social media. The intention is that of a systematic reading of texts (Hart, 1998) will enable the identification of the main elements, criterion for the development of an argument, and identification of existing gaps in research knowledge leading to formulation of the overarching research question.

This literature review has encapsulated the use of social media based online communities by businesses in general and has led to determining the feasibility of using Australian banks as a group of businesses to focus the attention of this research on. This decision was driven by the importance of critical factors such that the processes governing the adoption of social media
by Australian banks need to be looked upon as businesses that deal with regulatory mechanisms and the sensitive nature of personal and public information.

The adoption of social media by Australian banks to communicate with the public is the main focus of this research project. It is conducted in a very dynamic research environment that sees new forms of social media technologies being introduced on a regular basis. Considering the dynamic nature of the research environment, social media technologies as discussed in this chapter were selected at the inception of the research study based on their appeal to the Australian public and were locked in to maintain consistency.

Considering the dynamic nature of the technological environment and its effect on the academic activities surrounding the development of knowledge on the subject, ongoing academic research has been closely examined and reported throughout the period of research. This chapter has been updated with information using all verifiable information, ideas, and data emanating from credible sources. The expectation in their selection is the confidence that diverse information sources add to the rigour of the discussion while providing the background information for this research.

This literature review begins with by guiding the reader through a history of related definitions in order to provide a foundation for the associated research activities, and will be followed by discussion of the social media technologies used in the research study. A systematic analysis of existing research relating to the strategic use of social media as a method of communication will be discussed in the following section.

2.2. Evolution of the Web

Research indicates that online social connectivity, relationships and characteristics are often defined by the resulting terminology associated with Web 2.0; a term that itself has no known technological foundation. The term, however, broadly characterises the current state of the Internet-based functionalities that enable users to get more involved in creating and sharing the content (Everson et al., 2013) when compared with the static unidirectional version of the initial Web that is now referred to as Web 1.0. However, Constantinides and Fountain (2008) criticise such terminology and consider that the ‘radical’ changes described in Web 2.0 do not have technological backing nor generate consensus amongst those who have demonstrated interest in the subject. With this in mind, social media needs a definition that is aligned with
the current developments and use of the technology and is devoid of any associations with
terminology, such as Web 2.0. The following section, however, will briefly describe the
history behind the terminology for Web 2.0 that will further justify the impracticality of using
this term to define any other terminology. It will also provide an insight into the evolution of
the information society, thereby explaining the fluidity of the technologies involved and the
associated research challenges.

2.2.1. The Internet and Web

The Internet is a global system of interconnected computer networks that experienced its
greatest milestone when the Web, a form of communication (Laningham, 2006) that uses the
Internet infrastructure, came into being. Tim Berners-Lee is widely attributed by the Internet
community as the person who conceptualised the Web and first used this term in a proposal to
the European Organisation for Nuclear Research (CERN), promoting the idea for linked
information systems (Segal, 1995). The idea of a Web of notes that was initially proposed with
links between them has become far more useful than the fixed hierarchical system (Berners-
Lee, 1989) that was prevalent at the time. Web applications as they are known today, are the
beginning of the creation of a responsive user interface and added interactive capabilities to
the static Web (Paulson, 2005).

2.2.2. Web 2.0 and Social Networking

The Web 2.0 concept was first discussed at a conference brainstorming session between
O’Reilly and his associated company, Media-Live International (O’Reilly, 2005). At this
session it was noted how the new wave of Web applications had gained importance in the
aftermath of stock market correction in 2001 associated with the rise and fall in value of Web-
based companies. It pinpointed seven distinctive characteristics of such Web applications and
established the term Web 2.0 to cover them all. These characteristics included harnessing
collective intelligence, the end of the software release cycle, lightweight programming models
and the rich user experience. Since then, they have evolved into social media and various other
applications that provide a rich user online experience.

The participants of the sessions have formulated their sense of Web 2.0 in comparison with
Web 1.0 as demonstrated in Table 2.1.
Table 2.1: Explaining the difference between Web 1.0 and Web 2.0 (O'Reilly, 2005)

<table>
<thead>
<tr>
<th></th>
<th>Web 1.0</th>
<th>Web 2.0</th>
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<tbody>
<tr>
<td>DoubleClick</td>
<td>-</td>
<td>Google AdSense</td>
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<tr>
<td>Ofoto</td>
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<td>Akamai</td>
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<tr>
<td>mp3.com</td>
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<td>Napster</td>
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<td>Britannica Online</td>
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<tr>
<td>personal websites</td>
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<td>evite</td>
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<td>upcoming.org and EVDB</td>
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<tr>
<td>domain name speculation</td>
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<td>page views</td>
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<td>screen scraping</td>
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<td>publishing</td>
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<tr>
<td>content management systems</td>
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<td>wikis</td>
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<tr>
<td>directories (taxonomy)</td>
<td>-</td>
<td>tagging (&quot;folksonomy&quot;)</td>
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<td>stickiness</td>
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<td>syndication</td>
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However, the new definition was not accepted by the pioneer of the Internet, Tim Berners-Lee, who saw no solid technological foundation for using such a term (Laningham, 2006) and thereby created parallel discussion against the efficacy of its use. Barsky and Purdon (2006, p.65) considered “Web 1.0 was all about commerce” and “Web 2.0 is almost all about people”. Kamel Boulos and Wheeler (2007) point to the difference between Web 1.0 and Web 2.0 as the ability for users in the Web 2.0 era to generate content, and therefore refer to it as the ‘Social Web’. Baumbach (2009) describes Web 2.0 as a concept that has led to the creation of social networking sites such as MySpace and Facebook, amongst others.

Notwithstanding how the term Web 2.0 is perceived in general, it is being used by practitioners to support related developments in specific areas of business, such as “Enterprise 2.0” (Kuikka and Åkkinen, 2011) and “Library 2.0” (Casey and Savastinuk, 2006).

Boyd and Ellison (2007) have instead focused their attention on the fast growing “social networking” aspect of Web 2.0 technology and have come up with a common definition primarily focusing on social networking as a functionality. This has allowed them to avoid the use of the Web 2.0 association. The definition covers three key aspects relating to allowing online social connectivity: “(1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (p.211).
Later, as a result of evolving qualitative changes around the technologies governing social networking, more functionalities have been added to the mix and a range of new websites have been created that include functionalities not limited to social bookmarking, social citations and media sharing (Warr, 2008). The appearance of new websites that offer a range of new functionalities was also observed by Gunawardena et al. (2009). Their research study based around the new online social phenomenon has categorised them into social networking, social bookmarking and social cataloguing.

The rapidly evolving nature of those sites driven by the expectations of their user community (Li and Bernoff, 2008) is considered the primary reason for their growth and their appeal to the wider-public. These changes have directly affected the validity of the three aspects of social networking sites identified by Boyd and Ellison (2007). The examples provided to this effect are:

- Allowing businesses and brands to create their own profiles with different characteristics to other user profiles, which has negated the reciprocal nature previously prevailed between online social connections;
- Inclusion of functionalities that allowed users to share content created on various other sites that negated the term “bounded system”; and
- Improved capabilities to create and embed rich media content through various functionalities has taken the emphasis away from the relationships factor identified with the word networking.

It is in this background that the term social media started appearing in discussions, news and write-ups on conventional media, as well as in business and academic literature, especially considering the regular use of Web 2.0 in an attempt to define social media.

### 2.3. Social Media

The term social media is frequently used in academic literature and by practitioners, but with no universally accepted definition for the term. Hence a well-defined umbrella term is required to cover a range of websites offering ‘online social functionalities’. Beare-Greenwell (2009) stated that social media is actually Web 2.0 that enhances creativity, information sharing and collaboration, using Web technologies. Kaplan and Haenlein (2010) have also adopted a similar terminology in their attempt to clarify the “confusion among managers and academic
researchers alike” (p. 60) as to what exactly should be included under the term social media. Kaplan and Haenlein considered social media as a group of Internet-based applications that allow the creation and exchange of user generated content that are built on the *ideological and technical foundations* of Web 2.0.

On the other hand, Agichtein *et al.* (2008) made an attempt to deviate from associating social media directly with Web 2.0 and considered social media as being just about user-generated content. Having understood the gap in research relating to the absence of an acceptable all-round definition, Kane *et al.* (2014) explored four key features associated with social media to update the widely used definition by Boyd and Ellison (2007) for social networking. These four key features are digital profile, search and privacy, relational ties and network transparency. They argued the need for such considering the technological developments that occurred since creating this definition. Importantly, in order to come up with the four-part definition they narrowed down the focus to social network analysis and limited their definition to social media used to support interpersonal interactions. Meanwhile, Froget *et al.* (2013) consider the social media technologies we see today as fitting within the definition of user-generated content or consumer-generated media.

Having evaluated the present scenario associated with defining the technologies concerned, this researcher proposes that the formulation of a suitable definition is best served through developing a proper understanding of the current environment associated with websites facilitating social interaction by looking at the history of their evolvement.

### 2.3.1. Contemporary Social Media Technologies

Having defined social media, it is also important to understand how social media has evolved while acknowledging applications of selected social media, especially those that have the potential to entice businesses to use them to communicate with the public.

The emergence of social media goes back to 1996 when the social networking site sixdegrees.com was created (Boyd and Ellison, 2007). Since then, similar task specific sites have evolved into much larger and broad-based platforms with user memberships numbering in the hundreds of millions. In the post sixdegrees.com era, the promulgation of social media sites has continued to offer users numerous forms and variety of content generation and sharing.
functionalities. The resulting social media environment has become extremely diversified and chaotic as per Figure 2.1.

![Figure 2.1: Evolution of social media 1997-2012 (Adapted from (Boyd and Ellison, 2007))](image)

Social media technology evolution as illustrated in Figure 2.1 explains the continuing popularity of some websites known for online social interaction with Internet users, while certain other sites have failed to live up to their audience’s expectations and were closed down. Social media technologies that offered their users unique functionalities have experienced a higher growth, as demonstrated in the user acceptance of technologies, such as Facebook (relationships), YouTube (sharing) and Twitter (conversations).

As Figure 2.1 further illustrates, other social media technologies have either ceased their operations or changed their focus in order to attract more users (Catalano, 2013). The most recent service that ceased its operations is Orkut. Owned by Google, Orkut’s demise is considered the result of the parent company focusing on the social media technologies, such as Google+, Blogger, and YouTube (OrkutBlog, 2014).
The user numbers identified in the figures indicate that three leading social media technologies, namely Facebook, Twitter and YouTube together have combined user population of nearly two billion. The following discussion will focus specifically on these three technologies for their ability to provide enhanced reach to businesses, and the resulting benefits they provide to communicate with the public while focusing on their uniqueness and their appeal to businesses.

2.3.1.1. Facebook

Facebook is considered the most dominant social media technology, with user numbers reaching 1.2 billion; this equates to the population of India (Naughton, 2014). Facebook is increasingly being used as a platform for networking by other social media technologies such as Academia (a website for academics to share research papers), Pinterest (a website that allows users to organise and share pictures they find on the Internet), and FourSquare (a website that helps users make the most of the places they have visited).

Prior to losing its relevance amongst users of social media with the advent of Facebook, MySpace was considered a leading social networking site (Helft, 2010). When Facebook first launched, its obvious comparison was with MySpace; however, some saw them not as direct competitors. Given the opportunity to select between the old and new, users increasingly preferred Facebook which expanded gradually through an exclusive customer base compared to MySpace with its disorganised look that failed to improve and evolve over time. This shifting of allegiance was viewed by Robards (2012, p.389) as an outcome caused by “functionality and critical mass”. Since then, MySpace underwent several changes in majority ownership before re-emerging in 2012 as a music sharing site (MySpace, 2013) with its new owners, Justin Timberlake and Specific Media Group (Catalano, 2013).

Facebook however has stood by the adage that social media technology is primarily driven by user-generated content and evolves according to the expectations of its user community (Li and Bernoff, 2008), something that MySpace was unable to achieve. This has contributed to its demise as a leading social media technology (Bajarin, 2011). The new look MySpace enables ‘social login’ from user accounts of other widely popular social media sites, such as Facebook and Twitter, further highlighting their dominance within the social media environment. As mentioned earlier, Facebook and Twitter are also being used as social logins.
by other social media technologies such as Academia (Academia.edu, 2013), Pinterest (Pinterest, 2013), and FourSquare (Foursquare, 2013).

In 2011, Facebook introduced updates to Facebook profiles allowing businesses and brands to offer ‘robust features’ (Facebook, 2011) including a page administration panel and enabling administrators to mention people within comments on Page postings, as well as a comment view for photo albums. This activity subsequently led to the introduction of the ‘verified page’ to strengthen the credibility of a page against a proliferation of ‘fake accounts’ (Facebook, 2013). These developments have facilitated the developers to promote the benefits of businesses having a credible social media presence in order to create an online community consisting of divergent but willing participants driven by their need to receive verifiable and credible content. Facebook pages are non-reciprocal and permit users to join and leave freely, similarly to that exhibited in the social interactions of a physical community.

As Robards (2012) explained, “Facebook’s functionality invites users to articulate the more mundane, inconsequential goings-on of everyday life” (p.391). In reality, this simplicity has eased adaptation complexities generally associated with new technologies and generated enhanced user participation. From the point of view of user privacy, with new features such as secure browser connectivity and social authentication in the form of challenge-response test (Rice, 2011). These features have further strengthened the acceptance of Facebook as a de-facto technology supporting online social relationships.

2.3.1.2. Twitter

If the success of Facebook can be attributed to positive emotional experiences the success of Twitter can be attributed to it adapting to its users and their perceptions and changing its focus. Twitter emerged in 2006 as a micro-blogging service, evolving to become a key tool in “participatory or citizen journalism” (Kwak et al., 2010, p.300). During this time, Twitter has changed slogans on several occasions to better express to its audience what it is that Twitter actually does. These slogans included, “service for friends, family, and co-workers to communicate and stay connected through the exchange of quick, frequent answers to one simple question: “What are you doing?”; “share and discover what’s happening right now, anywhere in the world” (Leach, 2009); “information network that brings people closer to what’s important to them” (Twitter, 2012). According to their official webpage, the present
motive of Twitter is to “help people to create and share ideas and information instantly, without barriers” (Twitter, 2015). Twitter also operates in a non-reciprocal manner and has the characteristics of a robust community similar to human communities in the physical human world.

As had been the situation with other social media technologies, Twitter as a secure platform to engage, especially with banks, was questioned by financial experts (Pilcher, 2010). Twitter, being an evolving website, has continuously addressed these concerns, with the most recent being the implementation of a Content Security Policy (CSP), a whitelisting mechanism used in spam filtering to complement other security enhancing measures, such as browser security with HTTPS and login verification for mobile users (Twitter, 2014a).

2.3.1.3. YouTube

Founded in 2005, YouTube allows users to share, discover and watch videos and is considered as a distribution platform to facilitate communication using rich media content (YouTube, 2013a). It also assists in maintaining social relationships between the user and one or more YouTube channels (hosted by an individual or another entity including a business) through a subscription service (Lange, 2007) with over four billion hours of videos being watched monthly. It is this activity on YouTube that is increasingly attractive to business as a means to convey a message to a wider audience (Senadheera et al., 2011) and at a fraction of the cost of airing the same message using conventional advertising media channels. Through subscribing to a specifically dedicated business YouTube channel, users become part of a community, similar to other social media technologies, and are able to participate in the ongoing discussions with other subscribers. This facility enables some businesses to create a feedback mechanism around the video content they create and engage directly with their customer audience. Exploratory studies also observed the use of other social media technologies, such as Twitter by businesses, to link their users to YouTube based video content, thereby generating an increased viewing audience (Senadheera et al., 2011).

As it was made evident in this discussion in the light of the low cost of implementing publicly available technologies, the technological advancements discussed in sections 2.3.2.1 – 2.3.3.4, and an ever-increasing number of users populating the environment, social media provides a viable form of communication for businesses. Moreover, the ability of social media to provide
Chapter 2: Literature Review

2.4. Existing Research on Online Communities

Notwithstanding that the focus of this research study is predominantly on social media-based online communities, it is imperative to look through the history of research involving online communities to grasp how research discussion evolved prior to social media.

With advancements in Internet and Web technologies, the importance of online communities had been frequently covered in research undertaken with the focus on both social and business domains. The areas that received research attention included online community design (Kollock, 1998), sociability and usability in online communities (Preece, 2001) and seeking and sharing expertise through the use of online communities (Zhang et al., 2007); these stand out amongst many others. The advent of social media has provided further impetus to this discussion.

The study by Backstrom et al. (2006), was undertaken at a time when social interaction through online social networks are at its infancy with Twitter was yet to be formed and the public had no access to Facebook. The researchers conducted their experiment on the group formation of large social networks using data gathered from Live Journal, a social networking website, and DBLP (Digital Bibliographic Library Project), a computer science bibliography website with over one hundred thousand authors. Backstrom et al. (2006) found that the propensity of users to join an online community is influenced by the number of friends a user has within the community and also by how those friends are connected with each other. It can be argued that by aligning the question of online community membership with the diffusion of innovation in social sciences, the study has contributed to the growth technologies such as Facebook. Even though this research study discussed important issues confronted by online community creators including its membership, growth and changes, the sources of data that have become irrelevant are valid considering the evolutionary changes undergone by present day social media technologies.

Furthermore, the on topic of online communities, Shen and Khalifa (2008) examined potential areas of influence that drive online community participation. They considered social presence, dimension which includes awareness, affective social presence, and cognitive social presence,
to augment motivational theory to explain online community participation. The integrated model they proposed covered both social presence and motivational theories. Their findings demonstrated a direct effect of social presence on participation that overrode the effects and motivational variables consisting of intrinsic and extrinsic motivation.

Based on the characteristics of social media discussed previously in section 2.3.1, online communities formed on are not entirely considered to be “mediated spaces”, but “shared spaces” used to create and share content. However, the intrinsic (i.e. seek out novelty, to exercise one’s capacities) and extrinsic (i.e. to achieve informational and instrumental goals) motivational factors highlighted in Shen and Khalifa study (2008, p.732) can potentially be considered for studies involving communities formed on social media. The same can be attributed in relation to dimensions of social presence discussed earlier.

Bateman et al. (2011) focused their research on online discussion communities, in which they examined reasons why participants willingly invest their time and effort in such communities where they have no specific role to play. The study focused on forms of community commitment, such as continuance, affective and normative to create a “commitment framework” (p. 844) has determined that members of such communities to have psychological bonds based on need, affect, and obligation. Bateman et al. (2011) analysed archival data from BroadForum, (pseudonym) a discussion community, has determined the explanatory power of each form of community commitment and their non-interchangeability with others.

Even though this study was conducted based on data gathered from an organised and mediated online community environment, it provides valuable insights into applying a similar view towards determining factors that drive participants to unmediated social media as well as using similar data gathering techniques in the context of social media technologies.

However, findings from this research study cannot be considered relevant for online communities formed on social media because of the distinctive operational and functional differences they have with online discussion communities, such as BroadForum. Within the social media environment participants can join or leave the community anytime, in a non-reciprocal manner with no requirement to provide subscription forms or to obtain approval for membership. Also, the options available for a social media user keen to get involved in an online community are enormous when compared to joining a topic-specific online discussion...
community. This makes the task of moderating an online community formed on social media sustainably over a period of time, a challenging undertaking.

Boyd and Ellison’s (2007) research attempted to understand and define social networking sites and can be considered as an important stage in the study of online communities formed on social media technologies supporting online social connectivity and interaction. The primary focus of their discussion was on the networking aspects that brought Internet users from around the world to online communities within the boundaries of such technologies. Importantly for further research, they identified the structure of social media based online communities at the time as a personal hierarchy compared to a topical hierarchy present in the previously known public online communities, such as Usenet, identified as a Web 1.0 type technology. They went on to explain that the structure of a personal hierarchy places the “individual at the centre of their own community” (Boyd and Ellison, 2007, p. 219), thereby creating a new research context even though its focus was towards personal networks rather than networks used by businesses.

Ma and Agarwal (2007) contributed further towards enhancing knowledge around the topic of online communities by surveying members of two online communities. Their study focused on the association between information technology-based features in online communities and online knowledge contribution. They highlight the importance of technology as the foundation and medium through which community members interact and describe it as one of the key determinants that drive community dynamics.

Even though the primary focus of the study was only one particular social media technology, it unearthed valuable knowledge that could augment research studies associated with online communities created on other forms of social media technologies.

Iriberri and Leroy (2009) have undertaken a literature review to identify success factors derived from various fields of research, such as sociology, psychology and other fields of research. They support the claims made by Ma and Agarwal (2007) that from the psychological perspective, there is a need to encourage participation. To elaborate on the topic they refer to Koh et al. (2007, p.70), who have undertaken research to understand the dynamics of virtual communities and highlighted the fact that “lack of social presence creates communication weakness in any virtual community”. Focusing on the importance of the success of an online
community for practitioners, Iriberri and Leroy (2009) also identified metrics, such as members’ contribution and quality of relationships that define the success of an online community. They categorise them into quantitative and qualitative. According to this categorisation, quantitative metrics include size (i.e. participant numbers), participation (i.e. number of visits), contributions (i.e. number of contents generated within a period of time), and relationships (i.e. contacts between participants) whereas participant satisfaction and quality of relationships have been identified as qualitative metrics (Iriberry and Leroy 2009, p.10). In the context of the use of online communities by businesses, identification of such a matrix is important to determine the basis of their involvement and thereby determine the success or failure of such involvement.

Furthermore, Iriberri and Leroy (2009, p.13) suggest that online communities evolve in stages that they consider as an “online community lifecycle”. After analysing research literature that advocates various stages and justifications, they identify and present five such stages, namely: inception, creation, growth, maturity, and death. More importantly, they argue for the need to have features matching each life cycle stage to lead the community to success (and therefore to avoid death). They later prescribe an integrated and organised view of factors that lead to success, as opposed to a list of isolated factors for maximising success.

Conducting an analysis of online communities created within the social media environment, Kozinets (2010) made an important comparison between online communities and physical communities. With the growing use of social media, this work, which identified growing similarities between the two, highlighted the fact that they both consist of users/people coming together with a shared interest or purpose in a non-reciprocal manner. Kozinets (2010) also criticises those in the research community who view the online environment with cynicism and suspicion and who categorise online interactions as “cold”, “unsociable” and “impersonal”. Exploring the work of Kozinets (2010), Bowler (2010) further elaborates on this idea by claiming that the availability of community content created within social media to a wider audience gives way to accepting online communities having similar, if not the same, characteristics as those of physical communities.

Kozinets (2010) study also discusses new research paradigms that could determine future research relating to online communities and specifically those formed in social media with an analogy being made between ethnography and “Netnography”, which is defined as
ethnographic research conducted on the Internet. This new approach and related research explains that the manner in which a researcher gathers information from or makes observations of the communities formed online could also be applicable to social media-based online communities. Immersion of the researcher within the online community itself is important in order to gather relevant data from the same, which evolves at a rapid pace as a result of consistent changes to the technologies facilitating the online community.

LaRoche et al. (2012) consider communities initiated on the platform of social media as social media based brand communities. Their research study, based on a survey findings show positive effects such brand communities have on community markers, such as shared consciousness, shared rituals and traditions, and obligations to society. These markers in turn generate positive effects on value creation practices, such as social networking, community engagement, impressions management, and ultimately brand use. The research findings also confirm the ability of these brand communities to enhance brand loyalty through brand use and impression management practices. In addition, the study demonstrated the mediating role of brand trust in converting value creation practices into brand loyalty.

Phang et al. (2013) research study highlights the importance of social media in promoting niche products taking into consideration the tendency of consumers to participate in generating reviews and discussing such products, thereby raising interest in them. This outcome further strengthens the arguments put forward by LaRoche et al. (2012) on brand communities. Based on their study findings, Phang et al. (2013) established the effect of user interaction in discussing a niche cultural product in influencing higher levels of community participation. In addition to that, their research findings indicated that interaction patterns with high inclusiveness and “betweenness centralization” has the potential to enhance participation levels, whereas “out-degree centralisation and core-periphery” (p. 662) have a detrimental influence. Similarly to the findings of LaRoche et al. (2012) this study too demonstrated greater community participation leading to enhanced consumption intentions.

This discussion on the topic of online communities has focused attention on participation, continuance, success factors, and the significance of online communities for creating brand loyalty. In the process. It explained the broadening research paradigms as a result of online communities becoming a mainstream and online equivalent of physical communities. It revealed the benefits that online communities deliver to brands loyalty as well as challenges
related to the sustainability of a community formed within the social media environment as a result of the non-reciprocal nature of community formation. Theoretical foundations determining online community participation have also been identified and discussed that could also form the basis for further research into online communities based on social media. Overall, there is a considerable amount of knowledge available on the topic of online communities that could inform further research into the topic, especially where there is a clear gap in the available research knowledge.

However, identifying and narrowing down avenues for further research require further exploration of past research, but with a focus on specific contexts where online communities formed on social media are being used. The following discussion will focus on this.

2.5. **Existing Research on Communities Formed on Social Media**

With rising numbers of users embracing social media, businesses and brands have identified an opportunity to form social media based communities of their own and strive towards absorbing some of the large resource pool of participants. Naturally, the focus of this researcher’s attention is to understand how online communities formed on social media are being used by practitioners.

In this regard, Culnan *et al.*’s (2010) study becomes prominent as it covers selected large US companies. This case study-based research led to determining the importance of community building as part of businesses’ social media implementation strategy. Describing the functioning of communities created around a business or a brand, they touch upon the aspect of their formation enabled by various social media technologies they have used in the study, such as company blogs, Facebook and Twitter. To support their research and to assist with building future research around the topic, they define such social media-based communities as Virtual Customer Environments (VCEs).

At the same time, Nah and Saxton (2010) conducted a research study with one hundred large US, not-for-profit organisations, using the corresponding data on Twitter, Facebook and other sources to identify factors that drive their social media adoption and use. They used a model that was built around four key factors: strategy, capacity, governance and environment, and was employed to examine the determinants of three key facets of social media utilisation: (1) adoption; (2) frequency of use, and (3) dialogue.
Referring to Lewis (2006), the definition of a non-profit organisation’s goal is fulfilment of a social mission, which is to create public value. Nah and Saxton (2010) formulate several hypotheses attached to various forms of creating such public value with their respective relationship with the adoption and use of social media. They have identified various forms of creating public value that have either positive or negative associations with their social media adoption and use. More importantly, the study asserts the key roles played primarily by those internal to the organisations concerned, factors such as strategy, capacity, and governance in mobilising social media as an alternative source.

The findings of de Vries et al. (2012) based on their analysis of brand posts of 11 international brands on Facebook add value to the findings of LaRoche et al. (2012) and Phang et al. (2013) discussed in section 2.4 by focusing the attention on specific functionalities associated with social media-based online communities. Their results showed that positioning the brand post on top of the brand fan page enhance brand post popularity. The outcomes pointed to the influence of antecedents such as vivid and interactive brand post characteristics on the number of likes and comments and identified a positive relationship between the share of positive comments on a brand post and the number of likes. However, Luo et al. (2013) focusing their attention on brand communities highlight the importance for businesses to focus on finding the right balance between user-generated content and marketer (business) generated content for optimal and persuasive outcomes.

The analysis of 800,000 tweets published by influential social media users during the 2011 Egyptian revolution by Choudhary et al. (2012) further strengthened the Culnan et al. (2010) findings on the significance of having a critical mass of influential users as its participants in an online community for its success.

The task of obtaining the critical mass of users needed to sustain an active online community represents the biggest challenge for businesses. Germonprez and Hovorka (2013, p.528) provide useful insights into the nature of such challenges, the primary reason being that non-reciprocal participation is shaping a new form of “migrant online public” as users traverse through a vast array of alternatives available that satisfy their needs for online engagement.

Notwithstanding these challenges, businesses that are increasingly constrained by the fading potentials of one-way communication strategies are turning their attention to social media with
the aim of engaging their customers (Schriener and Tuchman, 2010). Furthermore, the additional benefits of having potential access to an ever-increasing audience of inquisitive social media users who can be considered as a large pool of potential customers, creates a strong case for businesses to form online communities within the social media environment. Also, the qualitative changes to social media technologies discussed earlier in section 2.3 have created a more conducive environment to be present on social media and make it an incentive to think strategically in this regard.

Based on the above discussion, it is evident that: 1) the formation of online communities on social media by businesses; 2) the importance of social media users participating in such communities; and 3) the need to create a critical mass of such participants who are more involved within the community, are important factors for the success of the community concerned. Also, this discussion leads to the determination that the size of the community, one of the metrics identified by Iriberri and Leroy (2009), in particular plays a major role in the success of the online community towards achieving the underlying business objective of communicating to a larger and broader audience. Most importantly, this discussion has identified the growing importance of online communities created as a result of users’ inclination to participate in communities formed on social media by businesses through their presence using various social media technologies.

The growth of social media has given rise to the business value of the companies that develop and maintain social media technologies and is a reliable metric to measure the success of the technology. As a result, Facebook, Twitter, and YouTube are being listed publically on the United States Stock Exchange (Moreano, 2010, Horn, 2011, Albanesius, 2012, Oritz and Golgowski, 2013) and operate as business organisations answerable to their shareholders and are subjected to relevant regulatory mechanisms.

With business realities beginning to drive social media technology development, as businesses the developers have become informed about strengthening their respective technologies through new features, some of which were discussed in sections 2.3.1.1-2.3.1.3 which explained three key social media technologies. As a result, the evolving social media technology environment further facilitates the adoption of social media by businesses to communicate with the public.
In this context of businesses adopting social media, it is necessary to delve into existing adoption models to evaluate whether they can be employed, considering the novel and unique aspects of social media discussed in section 2.3. In this regard, the following section will evaluate existing technology adoption models with the expectation of determining an appropriate adoption model that absorbs the uniqueness of social media as a communication technology.

2.6. Existing Research on Technology Adoption

Prior studies associated with user acceptance of technologies was an important part of the discussions involving information and communication technologies (Chuttur, 2009) as an organisational environment, including that in the banking sector becoming heavily reliant on technology to conduct uninterrupted operations (Arduini and Morabito, 2010). Considering social media as another technology tool available for banks, this section will explore established technology adoption models and their variants that have been considered at different times due to regular changes in technology, to determine their relevancy to the adoption of social media.

2.6.1. Technology Adoption Model

The Theory of Technology Adoption Model (TAM) introduced by Davis (1986) was adapted from the Theory of Reasoned Action (TRA), model widely studied within the sphere of social psychology (Davis et al., 1989). This model was promoted as a result of the increasing importance of information technology (IT) and information systems (IS), and the investment risks for businesses attached to IS (Venkatesh et al., 2003). The model’s application primarily focused on business systems used ranging from basic email applications to major decision support systems and users within businesses (Chuttur, 2009) that are operating in a controlled environment.

The initial model focused on modelling how users perceive and come to accept and use the technology or systems driven by motivational factors such as perceived usefulness and perceived ease-of-use (Davis, 1989). Growth in mobile technologies has seen researchers taking into consideration the adoption decisions of individual end-users by applying cognitive and social theories of decision making, mainly Theory of Planned Behaviour (TPB) and Theory of Reasoned Action (TRA), primarily to overcome criticisms about the absence of
attitudinal concepts (Pedersen, 2005). Further evolvement of the model has occurred with the inclusion of these concepts, relying on prior work by Fishben and Ajzen (1975) and Ajzen (1985) respectively.

With technology being transformed to become more user-centric and Internet enabled, the Technology Acceptance Model has also undergone transformations based upon its use or application (Vannoy and Palvia, 2010, Abril, 2007), but TAM has been present when it comes to technology acceptance.

As a result of its unique aspects that gives power to the user to create and publish as explained in section 2.3, social media has “transformed the Internet from a platform of information, to a platform of influence” (Hanna, Rohm, and Crittenden, 2011, p.272). Under these circumstances, it is unrealistic to consider TAM in the discussion involving social media adoption as TAM implies the availability of a controlled environment that social media does not offer. It is unrealistic to expect the successful application of concepts such as planned behaviour in an environment of content creation and sharing by end-users. Hence, the impracticality of applying TAM in its current form or through its numerous variants in the context of social media.

2.6.2. Technology-Organisation-Environment

Since Web 2.0 based technologies came to the forefront in terms of their application, research into these technologies has taken new approaches, deviating from previous Technology Adoption-based models. One of the models that researchers had drawn upon in this instance was the Technology-Organisation-Environment (TOE) model initially proposed by Tornatzky et al. (1990) who argued that organisational innovation is influenced by the three factors the model was named after.

Later, the TOE model was widely used in addressing technology adoption (Kuan and Chau, 2001), innovation (Schaupp and Bélanger, 2013) and issues within the organisational environment. The latter’s research focuses on identifying potential antecedents of small business social media usage. It demonstrates that the model can provide empirical support in a variety of contexts; however, its use in adopting social media to approach a community that is physically beyond an organisation’s reach and control, is arguable.
Forecasters predict the use of social networks as amongst others, “integrated hubs to communicate” to replace or supplement existing applications used for online communications on the back of the phenomenal growth of social media acceptance, with an estimated 1.46 billion Internet users globally (ACMA, 2014, p.37). In this environment the rapid emergence of information, communication and Internet technologies has resulted in the emergence of online social interaction supported by advanced mobile technologies becoming entangled within the social fabric. As a consequence, the task of modelling their adoption becomes ever more complex, thereby creating the necessity for a new perspective to determine factors that shape the adoption of contemporary communication media. Hence the disregard of the TOE model in this research study where research requirements go beyond the organisational operational control.

2.6.3. Social Influence Model of Technology Adoption

Vannoy and Palvia (2010) have undertaken a literature review to discuss adoption issues stemming from the environment created as a result of converging networking and communication technologies that they define as social computing. Having observed a “cycle of influence between technology and society” and the insufficiencies in prior models of technology adoption, Vannoy and Palvia (2010, p.150) have proposed a social influence model of technology adoption. According to this model, social influence is developed using four constructs, namely: social computing action, social computing consensus, social computing cooperation, and social computing authority. They provide antecedents to the adoption of social computing.

The social influence model of technology adoption was intended for applications such as peer-to-peer technologies and is still limited in terms of applying to the broader societal scale technologies such as social media and therefore has a limited value in relation to social media. However, the model acknowledges the presence of a cycle of influence between technology and society and discusses the need to examine technology adoption from a cross-disciplinary context, further highlighting the importance of such an approach in this research.

2.6.4. Integrated Communication Technology Adoption Model

Lin (2003) proposed the ICTA model as a research framework integrating distinct communication research traditions to study factors that assist in shaping adoption decisions
about communication technologies and consists of six groups or factors, each composed of established theoretical foundations identified as components. These groupings, named use, audience, social, technology, system, and adoption factors, are illustrated in Figure 2.2.

![Figure 2.2: Interactive Communication Technology Adoption model (Lin, 2003)](image)

The ICTA model was intended to be used for research associated with traditional (at the time) communication technologies, such as television and telephony. The broader reach of the ICTA model, however, covered adoption beyond technological and organisational aspects, and also involved the “potential impact of technology adoption on the social system, audiences, and use patterns” (Lin 2003, p.345).

As a result of the breadth of issues that the ICTA model takes into consideration, in that it covers both the technology and social communication aspects, it can be considered as the basis for further discussion in relation to social media adoption. Also, the model is supported by a broad range of theoretical foundations associated with technology adoption as well as communications, providing the flexibility required to study a phenomenon involving complex socio-technological aspects such as social media.

The ICTA model has been previously discussed in research relating to the social and psychological factors of interactive communication (Sohn and Lee, 2005) and intra-organisational communication (Backstrom et al., 2006). The model has also been discussed in
research associated with “consumer-generated media adoption and use” (Gretzel et al., 2008, p.99), and provides a testimony to its broad-based application potential.

The essence of Lin’s (2003) ICTA model is that it is based on a set of interrelated constructs that links various groupings of established theoretical tradition, or to an established theory, and these are identified as “adoption factors” (Lin 2003, p. 345). The groupings, named as: use, social, audience, technology, adoption, and system factors, are illustrated in Figure 2.2 along with their inter-relationships. Their relevancy in adopting social media as a form of communication will be broadly discussed considering the unique aspects of social media in relation to the adoption of traditional methods of communication in a controlled organisational environment.

This approach is in agreement with the argument put forward by Kleinberg (2008) where the author describes the environment of communication using new forms of media:

“Even as these new media have led to changes in our styles of communication, they have also remained governed by longstanding principles of human social interaction – principles that can now be observed and quantified at unprecedented levels of scale and resolution through the data being generated by these online worlds (Kleinberg 2008, p. 66).”

Taking the aforementioned arguments into consideration, it can be confidently claimed that the practicality of the ICTA model is most appropriate for social media when compared with other established models associated with communication technology adoption. Its grouping of similar theoretical perspectives associated with mediated communication technology adoption makes it practicable to segregate the social, technological, and organisational aspects of technology adoption, thereby making it more amenable for use in social media adoption scenarios. The following section will critique the ICTA model components that groups of established theories identified by the Lin (2003) model depicted in Figure 2.2.

2.7. ICTA Model Components

The expectation of this discussion is to ascertain the relevancy of the groupings of theoretical foundations (factors) in terms of their applicability to social media as a communication method. The discussion will take the form of an analysis of facts relating to the unique attributes of social media that set it apart from other forms of contemporary technologies of
mediated communication. Flexibility of use in the adoption of a technological innovation in a social setting would be the primary reason for the selection or non-selection of a given factor.

2.7.1. Use Factors

Lin (2003) identifies use factors as a “cumulative use experience” that will come into effect post-implementation of the adoption decision and explains how such an experience would create a range of responses. Use factors bring together other theoretical foundations and include self-evaluation to seek: 1) an understanding of the perceived ability to control the use experience (communication flow); 2) the user attention generated by the use experience (expectancy value theory); and 3) whether expected rewards associated with the technology’s use is realised and the gratifications received through such use (uses and gratifications theory).

2.7.1.1. Communication Flow

Perceived communication flow as described by Trevino and Webster (1992) in Lin’s (2003, p.357) research consists of constructs such as a perceived sense of control, attentiveness, curiosity, and interest as experienced through their interaction with the technology which can influence how the audience evaluates a technology. Trevino and Webster (1992) have gone beyond previous understandings of the flow in computer-mediated technologies to include motivational aspects, such as enjoyment derived from the use of the technology. In confirming this, they have identified that respondents to their survey perceived communication flow with the use of email than voice mail, primarily driven by users’ enjoyment in using the technology that goes beyond the process of communicating the message. However, Lin (2003) explains the possibility of such favourable perception and attitude being changed due to the unsatisfactory experiences of the participants.

With regard to social media, Lu et al. (2010) discussed the importance of satisfaction and flow in using Web-based systems in relation to blogs, and interactivity was considered one of the antecedents of communication flow. Their research confirmed the significant impact of flow and satisfaction on using blogs and sharing behaviours within them.

2.7.1.2. Expectancy Value Theory

Conducting their research based on the expectancy value theory, LaRose and Atkin (1991) claimed that technology adopters are likely to develop positive attitudes towards the
technology concerned if they can be convinced of the ability of the technology to improve
their communication efficiency; for example, ease of use, while avoiding potential negatives,
such as adverse privacy or security issues of the same.

Johnson and Yang’s (2009) research explored the possibility of applying expectancy value
theory in the social media context. They investigated the social and information motives of
Twitter users. The study determined the absence of any relationship between Twitter use
variables and social motives; however, it identified the existence of relationships between
Twitter use variables and information motives, thus highlighting the informative nature of
Twitter. They also measured the extent of their satisfaction with Twitter use by measuring the
gratifications sought and gratification obtained, and determined that they were satisfied. This
explains the need to explore the use of more than one social media technology in this research
study in order to capture a broader picture of using social media to communicate, rather than
using a single technology.

2.7.1.3. Uses and Gratifications

Uses and gratification theory assumes that people use media to satisfy underlying needs or
that a positive attitude towards the adoption of a technology is dependent upon the audience’s
expectancy values and it can be further mediated by the audience’s gratification with their
technological experience.

According to an explanation provided by Rubin (1994, p.419) on the uses and gratification
perspective, media use is determined by a group of key elements including “people’s needs
and motives to communicate, the psychological and social environment, the mass media,
functional alternatives to media use, communication behaviour, and the consequences of such
behaviour”. Wang et al. (2012a) have determined the gratification of only some of the
categories of needs that drive social media use, namely emotional, cognitive, social and
habitual. They have confirmed that the subsequent social media use is driven by those
accumulated ungratified needs.

2.7.2. Audience Factors

Lin (2003) identifies that the audience factor contains four constructs. They are individual
innovative attributes that according to Lin can be identified by a particular user’s social
membership to determine why, how, when, and which communication product may be adopted. These can be categorised to predisposed personality traits that make an audience receptive to the idea of innovation adoption (i.e. being venturesome, novelty seeking, sensation seeking, and willingness to take risks), innovative need (i.e. work or pleasure), and self-efficacy defined as belief in one’s ability to adopt and use a technological innovation. Audience factors also encompass the construct of theory of reasoned action that is understood to be the beliefs and attitudes about the rationale for innovation adoption.

### 2.7.2.1. Innovative Attributes

A research study by Amichai-Hamburger and Vinitisky (2010) describes people as increasingly transferring their offline activities and interaction with friends to online environments. This gives rise to the notion of applying the findings of previous research relating to other forms of technological innovation, such as the findings of Nov and Ye (2008), that some innovators are more open to new experiences than others. This is especially significant for creating a successful presence on social media because, as in the physical world communities, innovators, lead users, opinion leaders and those with a large number of offline connections, are being encouraged to participate in online communities too.

The theory is also applicable to social media. According to research by Correa et al. (2010) innovative and creative people have the propensity to use social media more frequently than others. Hence they may prove important for the longevity of an online community based on social media.

### 2.7.2.2. Need for Innovativeness

The need for innovativeness is considered by Lin (2003, p.350) as “an indicator of an individual’s need to satisfy their novelty-seeking drive”. In their study, Hughes et al. (2012) confirm that personality is an influential factor in the use of social media; however, they have identified different personality traits driving the use of different types of social media technologies. Meanwhile, taking this discussion further, Correa et al. (2010) observed that openness to experience is reflected in the curiosity and novelty-seeking tendency of the users. Even though the above research was conducted in the context of person-person relationships on social media technologies such as Facebook, it can be logically concluded that openness to
experience could also be associated with the communities formed around businesses, brands and personalities.

2.7.2.3. Self-Efficacy Theory

Lin (2003) describes self-efficacy as the self-belief about one’s ability to adopt a mediated communication technology, and determines how people make judgements concerning the applicability of their perceived abilities to confront situations derived from various circumstances. However, in relation to social media as a method of communication, adopters do not possess the same control or authority they had over conventional mediums, even though they have the authority and capacity to moderate communications within their own network. The challenge for users therefore is to take adequate precautions to make a concerted effort to meet the expectations of those who join the community as creators or consumers of communicated content.

Applying this to social media, the multi-item scale developed by Chandra (2011) primarily explored the self-efficacy of customers to use the services offered via social media. Most importantly, the scale confirms the importance of understanding one’s self-confidence in evaluating technological innovations and adoption decisions. The study has also confirmed lesser susceptibility towards potential barriers of adoption, leading to adoption decisions being taken more confidently.

2.7.2.4. Theory of Reasoned Action

TRA stems from beliefs, evaluations and motivations and drives behavioural intention leading to actual behavior and is widely discussed alongside TAM (Chuttur, 2009). According to Fishbein (1980), applications of the theory determined that an individual may adopt and use a technology if the users perceive a value that makes the adoption desirable, notwithstanding whether the technologies concerned are cost or labour prohibitive.

2.7.3. Social Factors

Lin (2003) sees opinion leadership in a social or organisational setting, the availability of the critical mass of adopters, which enables a sufficient level of communication applications associated with technology use, and social symbolic meaning attached to the medium, as the key constructs of the social adoption factor. Pedersen (2005) discussed the relationship
between social reasons for use, adoption, and the need for integration of the two, thereby
drawing the conclusion that social networks and the position of the adopter in social networks
are important determinants of adoption.

2.7.3.1. Opinion Leadership

The importance of opinion leadership in an environment where communication is conducted
in a social setting was identified by Lin’s (2003) model as a potential driver of adoption. The
importance attached to opinion leaders in a social media environment has risen exponentially
and opinion leaders with a larger social following have become influencers (Choudhary et al.,
2012), over and above their conventional role of disseminating information to a larger
audience of followers. Metzger and Marugi (2009) believe the opinion leadership role
previously held by conventional media outlets has now been vested with the social media users
who possess simple tools provided by various social media technologies to create and
disseminate information. Here, the diffusion of information occurs with the flow of
information from mass media to opinion leaders who in turn disseminate amongst online social
networks to reach a wider population. This description has become more relevant in social
media.

2.7.3.2. Media Symbolism

Lin (2003) highlighted media symbolism as a social factor that drives the adoption of a
mediated communication technology. Previously, Trevino et al. (1987) conducted a discussion
backed by a review of relevant literature on the issue of selecting a particular communication
medium within an organisational environment who highlighted ‘media symbolism’ as one key
factor that drives such a selection, where the medium itself becomes the message. Conducting
their research study on the topic of crisis communications using social and conventional media,
Schultz et al. (2011) confirmed the fact that the medium sometimes matters more than the
message, hence its consideration as a relevant construct in the social media environment.

2.7.3.3. Critical Mass

Critical mass in relation to social media can be interpreted as the number of participants within
an organisation’s community of interest on a particular social media technology. Culnan et al.
(2010), describing the critical mass of users in social media, identified that greater the
involvement an individual has with the community, more likely the user is to contribute
towards the community discussion, thereby creating a vibrant online community. Kietzmann et al. (2011) expanded the benefits of such a critical mass of users within an online community by pinpointing the example of it being the driving force for the success of present-day social shopping services, such as Groupon.

2.7.4. Technology Factors

Lin (2003) considers constructs such as social presence, media richness, and technology fluidity as constituting technology factors. In online communities based on social media, they form the basis for the selection of a specific technology for the purpose of communication, and the use of technological functionalities for the initiation and continuation of engagement with the public. This is conducted within the framework of the internal decision-making environment of a business.

At the same time, for a business organisation expecting to engage the public, technology factors form the interface that connects them with their external stakeholders and are therefore an integral part of communicating with the public.

2.7.5. System Factors

System factors are inherent to organisations. According to Lin (2003), they dictate the availability and affordability of technology products to the organisation. Lin (2003) considers regulation and policy, technological culture, industry trends, and market competition, as constructs that form the system factor and have an impact on the overall adoption decision. System factors therefore address issues internal to a business organisation that cover procedural and technological governance, issues that are not directly associated with the process of communicating with the public.

2.7.6. Adoption Factors

Lin (2003) sees the adoption factor following all other factors discussed earlier as assisting in the interpretation of an audience’s adoption decision on the respective technology. Adoption factors encompass non-adoption, discontinuance, likely adoption, adoption, and re-invention.

Similarly to system factors, adoption factors are also an integral part of the internal decision-making environment of a business and facilitate the final decision-making relating to the expected status of a technology within the overall business strategy. As per research sub-
questions, this study assumes that the Australian banks have already established a presence in social media and therefore deciding on using social media that involves system and adoption factors is no longer relevant. It is not possible to associate them with the process of communication with the public.

This review of individual factors identified in the ICTA model results in determining their relevancy to the continuation of the discussion adoption of social media as a method of communicating with the public. Importantly, this determined the relevancy of use, audience and social factors that groups established theoretical foundations and their direct relevancy to the discussion, as they form the basis of communication within an open and public forum. However, system and adoption factors were considered not relevant as they focus on issues specific to the internal decision-making environment. The role of technology factors was considered relevant as they affect both internal decision-making as well as communication within the parameters of the social media environment.

This literature review was able to add to the previously determined gap in knowledge relating to online communities formed on social media. Having determined the importance of the ICTA model in this research discussion considering the multitude of social and technological aspects it encompassed, the discussion also unearthed theoretical foundations that could govern the adoption of social media for communication. As a consequence, a good theoretical foundation had been put in place to take this research discussion forward. Also, this discussion has also observed a gap in knowledge relating to the adoption of social media as a method of communication.

Notwithstanding this, it is imperative to determine the relevancy of social media in a practical business sense that would drive businesses towards its adoption as a viable alternative or as a complementary technology to an existing mix of technologies. The following section will focus the attention of the existing literature and undertake an analysis of the business benefits of social media.

2.8. Adoption of Social Media by Businesses

As social media expands its reach, both users and businesses alike have an opportunity to explore this phenomenon further to realise potential benefits emanating from this freely available resource. Using social media to communicate between businesses and users can be
considered one such benefit. However, businesses wanting to engage users in the social media space are challenged to find the right balance between user-generated content and marketer-generated (business) content for optimal informative and persuasive outcomes expected from such engagement (Goh et al., 2013).

With social media facilitating the businesses to form their own online public communities enabling them to engage in conversation, the technology as a method of communication has gradually become a strategic tool driving practitioners to develop their relevant technology skills (Eyrich, Padman & Sweetser, 2008). Importantly for businesses, social media presents a platform to engage the consumer in a timely and direct manner (Kaplan & Haenlein, 2010). At the same time, users of social media as consumers use social media to socialise and conduct peer communication with like-minded users (Wang, Yu & Wei, 2012) to support their purchase intentions. Businesses on their part monitor these customer-customer communication and exploit the findings for customer dialogue management.

Even though existing research focused on social media as a strategic tool to achieve specific business objectives, there have been no research that specifically focused on social media technologies as a formal method of communication.

However, these developments associated with the increasing adoption of social media are an impetus for businesses that are naturally disinclined to adopt Internet-based tools, especially for those that require the development of reputation and trust with their subjects for online relationship building, such as banks. In this regard, there is a propensity of banks to consider Internet-based tools, such as social media to enhance their customer engagement, with studies confirming the possibility of banks that develop good online reputations having a higher chance of retaining their customers (Vatanasombut et al., 2004). At the same time, with technological developments in such fields as mobile and wireless technologies driving self-service technologies through Internet banking, banks will be compelled to use new mediums of communication to engage with customers who are less likely to visit a bank branch (Ahmad, 2005), to maintain a closer relationship with them.

Considering the above, if banks are to greatly benefit from the adoption of social media, this research study too would immensely benefit by studying the adoption of social media as a
method of communication by the banking industry. In this regard, the following section will evaluate existing research on the use of social media in the banking industry.

2.8.1. Social Media in the Banking Industry

Wilson et al. (2010) had undertaken their research study with a strategic perspective that resulted in categorising the companies they had studied into groups based on the social media strategies implemented. Their study included the social media strategies of over 1100 diverse companies located on different continents, and interviews with 70 executives. The aim of their research was to inform and guide managers/decision makers to prepare them to adapt to social media platforms beyond Facebook and Twitter. Explaining their findings, Wilson et al. (2010) deliberated on an instance where a banking executive they had interviewed indicated that one of their customers, who is only eligible for a lower level of service, had over 100,000 Twitter followers, when the bank itself had no exposure through social media. While these findings are purposeful, they also highlight the ambiguity amongst business decision-makers. According to observations made by Senadheera et al. (2011), even large businesses, such as Australian banks, are finding it difficult to come up with the most appropriate strategy in relation to social media.

However, banks in their search for growth markets have identified Generation Y, who were born after the year 1981, as the market segment they need to focus on in this regard (Foscht et al., 2009). Also widely regarded for their propensity to use technology, banks are increasingly using new approaches driven by technology to get through to this segment (Crosman, 2010). Therefore, a detailed discussion on the topic of banks’ use of social media with a focus on the benefits and challenges associated with its adoption and use could unearth new research opportunities.

2.8.1.1. Benefits

Some research undertaken with banks highlighted the potential benefits of using social media even though the primary focus of those research studies had no social media focus. However, an outcome of such research could easily be tied in with social media if further research were to be conducted.

Ahmad (2005) explored the means to overcome increasingly less personal interaction with customers and prospects owing to the increasing adoption of self-service banking
technologies, such as ATM's, Internet banking, and mobile banking. In order to enhance this fading ‘personal aspect’ of banking as a result of decreasing face-to-face contact resulting from fewer people walking into a bank branch, Ahmad (2005) suggested exerting innovative strategies using new technologies to maintain their bonds with customers.

With regard to Australian banks, the younger generation is adapting to Internet banking more than older generations are as they perceive that Internet banking provides a higher quality service (Heaney, 2007). In this context, any problems associated with Internet banking could create dissatisfaction amongst this ‘market segment’ considered as a growth category by banks (Foscht et al., 2009). Therefore, there is a likelihood of banks resorting to new technologies, such as social media to target the younger generation widely considered as having a penchant towards such technologies (Crosman, 2010).

If adopted by banks, social media can supplement existing technologies as an enabler to narrow this widening gap in personal relationships with their existing customers while expanding the reach to gain access to new customers via online social networks. Apart from that, banks using social media will be able to communicate directly with their target audience, thereby reinvigorating the diminishing personal relationship.

Taking into consideration the propensity of the younger generation, especially Generation Y, to use social media, banks are increasingly working towards getting their attention to generate more business. In this regard, Cocheo’s (2009) discussion based on direct conversations with banking professionals claims that 90% of the social media-based messages were targeted towards younger people. In the same study, Facebook and Twitter were identified as being amongst the leading three social media technologies used.

It is estimated that over 90% of people in the 18-29 year age group in Australia use the Internet, and a considerable proportion of this are well-conversant with social media (Foster et al., 2010). Unlike their older counterparts, people from the younger generation are less concerned about privacy as a result of their beliefs in their ability to control information. Therefore, banks will be emboldened in making their strategic decisions targeting this group.

In addition to acting as a method of communication, from the banks’ point of view, social media can also supplement ‘social banking’, where social media users can conduct their banking transactions without having to leave their social network. Commonwealth Bank, a
leading Australian bank, has already taken definitive strides in this regard by implementing ‘Kashing’, their version of ‘social banking’ for users of Facebook (Tay, 2012). Therefore, considering the multitude of potential benefits that social media could add to banks’ overall business strategies to enhance their overall standing in the market, they may soon feel compelled to adopt social media.

Apart from the potential benefits, a fair amount of research has also been conducted that is directly associated with the challenges of using social media in the banking sector. The following section explores some of the research work that highlights the effect that using social media and its unique characteristics have on compliance, risk management and reputational issues.

### 2.8.1.2. Challenges

Banks are facing several challenges associated with using social media that have been highlighted in the following academic and industry-based research studies.

Farrell (2010) discusses important compliance related issues associated with the use of social media by banks. She considers that banks’ messages on social media fall into the category of ‘advertising’ and suggests strategies that need to be considered and relevant guidelines to be followed to overcome any compliance-related issues. However, Farrell has considered only messages that identify specific products such as those relating to loans and investment.

Albro (2010) agrees that banks’ fears about social media are unjustified, and explains this by highlighting specific fears banks’ compliance departments have in relation to divulging personal information, obscenities or complaints. Having conducted case studies and interviews involving the personnel of two leading banks in the United States, Albro (2010) argues how the presence of MidWestOne Bank on Facebook is promoting community activities and the bank’s role by building relationships with local communities, and has positively affected the attitudes of compliance personnel towards social media. This industry-based research demonstrates the developing scenario of businesses overcoming initial apprehensions about social media, especially those concerning compliance-related issues and the usefulness of social media-based online communities for banks. Albro’s (2010) view on adopting social media is similar to that of Culnan et al.’s (2010) suggestion to thoroughly research all issues that drive social media adoption. This highlights the importance of considering banks as a
study sample as their inclusion allows covering a multitude of issues relating to their engagement with the online community they form on social media.

However, Kline (2013) highlights an intriguing effect of banks using social media and argues how social media has become more effective in maintaining “bank honesty” than the Consumer Financial Protection Bureau, a regulator in the United States that was setup to ensure banks’ services treat their customers fairly. Referring to comments made by a senior banking executive, the article claims that social media is undertaking a key task of determining banks’ standing amongst customers as well as shareholders.

Banks are businesses that hold large databases of personal information on their customers and other stakeholders, and on businesses that are operating in a highly regulated environment, and entities that generate public scrutiny need to address risk management issues associated with their use of social media.

Adler (2013) outlined the difficulty in setting policies for banks around social media considering its evolving nature, using the metaphor of trying to board a moving bullet train. The article further explains increased understanding demonstrated by the regulators in this regard who advise companies against using prescriptive rules about its use. They provide relevant (financial) institutions with a set of broad principles to assist them with the formulation of their risk management strategies depending on their exposure to social media. The interim nature of the solutions suggested by the regulators to relevant financial institutions suggests the need for a broad-based approach when considering the adoption of a technology that is as dynamic as social media.

Amongst other issues, in the Australian context, there have been similar issues discussed in the conventional media that highlighted the use of social media to publicly discuss issues pertaining to customers affected by disruptions to customer-facing services provided by Australian banks (Zappone, 2011, Merrett, 2011). On a more global scale, Mishra et al. (2010) discuss amongst other issues those relating to the perils of using social media, where an American bank had to counter social media user anger and how it took several months for the bank to overcome negative sentiments generated within the social media environment.

By providing a forum for anyone to engage in an open conversation through content creation and sharing, social media also facilitates the formation of influence (Cha et al., 2010) where
content can be virally propagated across online networked communities. While viral propagation can be positively considered by businesses for viral marketing purposes (Weaver and Morrison, 2008), there is always a danger associated with negative sentiments about a business being propagated in a similar manner. This highlights the power gained by consumers over established and powerful businesses, including banks (Taylor, 2012), through the effective use of social media that has the potential to adversely affect the reputation of the businesses concerned. In this regard, businesses are required to implement effective strategies to guard them against the associated risks of using social media.

To mitigate these risks, businesses are required to develop their know-how in regard to the manner in which relevant social media technologies operate. Furthermore, they are required to improve their understanding of the manner in which social media-based communities operate, as well as the needs of the individuals who participate in such communities. In this scenario, well-crafted apologies stemming from the boardrooms of organisations have minimum relevance, but businesses may also need to consider social media etiquette when undertaking such apologies (Van Laer and De Ruyter, 2010).

In the scenario of overcoming challenges to achieve the business benefits of using social media, it is necessary to explore whether Australian banks would consider the adoption of social media.

Roberts and Amit (2003) having undertaken a research study with Australian retail banks as their study subject, and were able to determine associations between innovative activity and their intensity with the financial performance of the respective bank. By testing hypotheses using scientific analysis methods, they were able to determine, firstly, that banks do not necessarily benefit from the early adoption of true innovations. However, they were able to determine, secondly, that a bank’s history of innovative activity significantly affects the financial performance and, more significantly the strong positive association that financial performance has with the activeness and consistency of their innovative activity.

Under such circumstances it is reasonable to argue that Australian banks in search of sustainable competitive advantage are more likely to adopt social media, and the above discussion has highlighted reasons for banks to use them wisely if they are to adopt social
media. The findings of the longitudinal study of Senadheera et al. (2011) are a further confirmation of this effect.

Furthermore, it is important to understand the seriousness of the effect of negative sentiments expressed over social media causing crises situations, and their potential effect on organisations’ credibility that subsequently affect shareholder sentiments. In this regard, regulators, such as the Australian Securities Exchange (ASX, 2014), are taking proactive measures to address them. Australian banks as publicly listed companies of the ASX have to abide by the rules and guidelines issued by ASX. While these developments highlight acceptance by the regulatory authorities about the importance of social media as a form of communication, they could also increase the importance of social media amongst businesses to use these technologies to achieve broader business objectives.

Considering the propensity of Australian banks to adopt technologies to further empower organisational financial performance, the following section will discuss the current Australian banking environment in order to determine the possibility of their adopting social media as a communication technology.

2.8.2. Social Media in the Australian Banking Industry

The Australian banking sector is well regarded amongst financial institutions worldwide, and the Global Competitiveness Report 2013-14 ranks them 9th in the world in terms of the soundness of banks and in terms of their financial strength (Schwab, 2013). Australian (owned) banks are operating in a coherent business environment supervised by the Australian Prudential and Regulatory Authority (APRA), one of four independent agencies that oversees the Australian financial system (APRA, 2014). All Australian banks are listed in the ASX and operate independently. There were eleven Australian banks listed by APRA in its 2010 yearly update, but the number increased to twenty-one (APRA, 2015) over the two years that followed, primarily as a result of large credit unions being converted to banks. There are four leading banks, namely the Commonwealth Bank of Australia (CBA), the Australia and New Zealand Banking Group Limited (ANZ), National Australia Bank (NAB) and Westpac Banking Corporation (Westpac), which control close to 70% of the Australian banking market in terms of their market capitalisation. They are amongst the leading world banks with a credit rating of AA and above (Joshi et al., 2010).
Considering the closeness of Australian banks to day-to-day financial matters concerning the public, the high levels of regulation and compliance issues associated within the industry in which they operate, and as publicly listed companies in the ASX, they have more reasons to be a subject of public discussion and scrutiny. APRA, the Australian banking regulator, proactively monitors all publicly available social media metadata (APRA, 2014).

The adoption strategies employed by Australian banks were captured in the exploratory research conducted by Senadheera et al. (2011) with Australian banks by observing Australian banks’ presence on social media over a three-year period. This longitudinal exploratory study was based on data snapshots captured from multiple Australian bank profiles represented on various social media technology platforms. The study not only identified that Australian banks, at the time, were ill-equipped to manage these challenges, they were also uncertain about the underlying technologies leading to strategic mistakes in their adoption and use. The study observed the propensity of social media users to increasingly use the technology to get through to Australian banks, especially in situations frustrating to them for not being able to gain access to customer-facing banking services and technologies that provide such services.

This study also highlighted the necessity and importance for Australian banks to have a vibrant social media-based online community and in the context of neutralising a potential threat of viral distribution of negative sentiments across the social media ‘ecosystem’ affecting their credibility. Interestingly, as per the evidence presented in the Senadheera et al. (2011) study, Australian banks have seemingly overcome hesitancy in adapting to the changing communication technology landscape (Knight, 2010).

At the same time the study also points to spikes in social media activity at times when banks are facing problems with their customer-facing technologies, such as teller machines, Internet banking and payment gateways. However, the ability demonstrated by Australian banks with a social media presence to neutralise any potential adverse effects due to the viral propagation of negative sentiments has also been captured in this study. Australian banks in such instances proactively approach the affected parties within the boundaries of their online community and do not hesitate to publicly apologise. Interestingly, this study also observed that during the periods of enhanced social media activity, Australian banks’ presence on social media noticeably increased in user participation in the respective online communities.
The increased use of social media by publicly listed companies, such as banks and its implications is also acknowledged by regulators with the Australian Securities Exchange (ASX) releasing amended guidelines for listed companies. These new guidelines are meant “to monitor any investor blogs, chat-sites, or other social media it is aware of that regularly post comments about the entity” (ASX, 2014, p.19).

This argument that Australian banks are increasingly focusing their attention on social media is further strengthened by the news about the formation of a 'social media command centre' by the National Australia Bank (Wisniewski, 2012). With this action, NAB had demonstrated its intention to consider social media as part of its overall communication strategy. The bank thereby had expanded its communication reach to include a rapidly increasing Australian social media user-base (Lee, 2010). This milestone of one bank further highlights progressively changing attitudes of Australian banks towards social media.

In summary, this discussion is about the multi-dimensional issues that banks need to consider to make a decision on adopting social media, including the complex nature of its relationship with the public. The above discussion has also demonstrated the importance placed on social media by Australian banks and the potential benefits they could gain through its adoption and use.

Most importantly, the discussion also highlighted the importance of online communities formed on social media in achieving enhanced reach through increased participant numbers in such communities. This brings the attention towards the communal aspects of such online communities created on social media.

There have been significant amount of research has been conducted into the phenomenon of online communities along various stages of technological evolvement. The aim of the following section is to discuss such research and identify potential gaps in research relating to online communities formed on social media.

In this discussion on the benefits and challenges that social media brings to the banking industry as a whole, and more importantly to Australian banks, it is evident that a homogenous group of Australian banks can be considered as a viable study sample to focus further research attention. The consideration of Australian banks will incorporate every aspect of a legitimate business, including their subordination to critical issues relating to business continuation, such
as information privacy and security, regulation, and public scrutiny as publicly listed companies. These characteristics of Australian banks if used in the study therefore have the potential to enhance the generalisation of research findings.

Furthermore, there are other reasons that justify their selection for this study. As per earlier discussion, Australian banks are being utilised by a broader section of the Australian public and they have a significant exposure to regulatory mechanisms as listed companies which forces them to consider privacy, security or other risk factors generally associated with the use of social media (Leitch and Warren, 2011). Also, established knowledge indicates Australian banks’ propensity to use innovative products to achieve better financial performance. The literature review also identified a growing need for banks to use alternative resources to maintain relationships with the public (as existing and potential customers) via technology commensurate with decreasing face-to-face customer relationships as a result of growth in the use of technology to gain access to banking services.

This outcome has demonstrated the importance of Australian banks as a viable study sample. It augurs well with the previously determined gap in knowledge in the adoption of social media for communication. More importantly, this discussion has provided the background to formulate the research question that would form the basis for continuation of this research discussion.

2.9. Research Question/Sub-Questions

According to Tashakkori and Teddlie (2010, p.18), a research question needs to “incorporate all aspects of events or behaviours under study”. Hence in order to make this study feasible and remain within its scope, the gap in knowledge identified earlier was narrowed-down further. In this regard, the importance of Australian banks as highlighted in section 2.8.2 was considered apart from their importance in the Australian context as a driver of its economy. Their consideration is further entrenched by its public-facing role that attaches relevancy to their adoption of social media.

The research question to drive the research process forward and to contribute towards addressing the identified gap in knowledge can thus be formulated as follows:

- **RQ: How can social media be adopted by Australian banks as a method to effectively communicate with the public?**
As the literature review has demonstrated, the adoption of social media as a technology operates as a result of user-generated content created, shared and consumed through online communities in a public forum. It challenges businesses with its unique features and therefore creates a different adoption proposition when compared to traditional means of communication as determined in section 2.7.

Operating in this environment, for a business, the success of forming an online community of users in order to communicate with them cannot be solely determined through the measurement of metrics done internally to the organisation. Therefore, communicating effectively within social media is a culmination of the use of the technology and an understanding of the needs of the public in relation to their own adoption of social media to communicate with their participants in specific online communities.

This unfolding complex operational environment creates challenges for researchers who have studied the adoption of conventional technologies, such as information systems and communication technologies within an organisational context.

In support of this claim, Van Dijck (2013) explains perfectly the overarching research environment in the research relating to engineering online connections using Facebook. According to Van Dijck (2013, p. 135), “Platforms, protocols and interfaces aptly illustrate the convoluted connection between the technological and the social. Social practices are increasingly mediated by platforms that affect people’s daily interactions and reciprocal relationships”.

This is in agreement with the opinion explained by Germonprez and Hovorka (2013, p.525) who considered that social media based online communities “represent an intersection of people and technology in forms that necessitate evolution, design and emergence”. Their representation of social media-based online communities as a unique form of information system that is kept functional through the combination of content-contributing and content-consuming members, highlights its emergence as an information system.

Taking into consideration the importance of satisfying both these contrasting aspects, the main research question will be divided into two research sub-questions. They aim to capture diverse aspects that govern the adoption of social media, enabling Australian banks to conduct effective communication with the public. The two sub-questions are:
RSQ1: What social media functionalities are used when the public and Australian banks communicate?

RSQ2: How do the adoption decisions of users affect their participation in social media-based communication with Australian banks?

The following section will discuss several prominent communication technology adoption models and their variants.

2.10. Research Definitions

The definitions provided in this section add to the social media definition provided in section 2.3.1 and further enhances the understanding of the research question/sub-questions.

2.10.1. Social Media/Social Media Technologies

Taking into consideration the challenges associated with defining social media as per discussion in section 2.3, Social Media Technology is identified as a specific technology, such as Facebook, and is defined as a website that provides space for interested users to make their presence and connect with others to engage in meaningful communications using functionalities inherent to each such website to create, share, and consume content. Social Media meanwhile is a broad term used to describe one or more social media technologies.

2.10.2. Social Media based Online Communities

It is clear from the discussion in section 2.7 that online communities created within the parameters of various social media technologies have their inherent specificities that are different to any other form of online community. These differences are primarily driven by the inherent characteristics of social media itself. Therefore it is important to define these online communities accordingly in this research study.

Several previous definitions have been considered in this regard to identify any commonalities that could be derived to make the definition not too different from those used in research relating to other forms of online communities.

Researching the topic of online communities without making a direct reference to social media, Shen and Khalifa (2008, p.724) have defined online communities as “mediated social spaces in the digital environment that allow groups to form and be sustained primarily through ongoing communication processes”. Undertaking their research within the space and use of
online communities with a customer service focus, Culnan et al. (2010) identified online communities formed on social media as Virtual Customer Environments or VCEs, while Germonprez and Hovorka (2013) used the term Digitally Enabled online Social Networks, or DESN, to describe the same.

Considering this lack of uniformity and acknowledging the reality of ongoing changes within social media technologies and the boundaries within which online communities are formed, the following definition will be articulated that also takes into account the purpose of this research.

Therefore online communities within the frameworks of this research will be identified as social media based online communities. They are defined as online communities formed when social media users elect to connect with businesses’ social networks formed on one or more social media technologies.

Having defined social media-based online communities, the following section will further expand the set of definitions used in this study by defining adoption in terms of this research. This would enable the progression of a further review of literature with the aim of formulating the conceptual model.

2.10.3. Social Media Adoption Model

This researcher prefers the word adoption and its corresponding definition in relation to Australian banking, notwithstanding the fact that adoption and innovation are often used side-by-side in the literature. In their study of innovative activity for competitive advantage in Australian retail banking, Roberts and Amit (2003, p.108) use Rogers’ (1995) definition of innovation, “an idea, practice, or object that is perceived as new by an individual or other unit of adoption”. They further explain true innovations as a “subset of adoptions and modifications considered as industry first”. They come to this conclusion after having observed how banks become innovative without having to employ any true innovations as long as their innovative activity results in effecting a uniquely valuable system of strategic attributes.

This has formed the basis for Robert and Amit’s (2003) study that makes associations between banks’ financial performance and application of innovations in the form of either adoption or modification.
Considering that social media is not an innovation in the Australian banking sector, this research endeavours to extend Robert and Amit’s (2003) analogy into this research involving social media as an element of innovation. Therefore, in the context of this research, social media adoption (or adopting social media) is defined as the process that allows individuals and organisations alike to participate in one or more social media technology. In regard to organisations, it is considered as an innovation that leads to the creation of an extension to the overall communication strategy of a business, directly affecting changes to a strategic attribute in the form of a social media strategy. The definition is used in conjunction with the word “Model” where appropriate.

2.11. Conclusion

This chapter draws from the broad understanding of social media in general and specific social media technologies that have gained heightened public acceptance. The ensuing discussion was able to highlight the importance of social media as an evolutionary outcome as a result of ongoing changes associated with the development of online communities. A review of existing research identified a clear gap in the knowledge area of adopting social media as a method of communication to engage the public.

This outcome has put the focus of discussion on the technology adoption models. As a consequence of the resulting discussion this gap in the knowledge was further narrowed down to the limitations in the existing technology adoption models relating to the adoption of social media as a method of communication.

The continuing discussion has focused its attention on the benefits of social media within the contemporary communication environment notwithstanding the challenges they pose and reflected upon their relevance to banks in general and specifically to Australian banks. As a result, the focus of the area of research was further narrowed down to consider the adoption in the Australian context and specifically the adoption of social media by Australian banks.

As was determined during the discussion, Australian banks, in the wake of striving to regain diminishing personal connections owing to increased use of technology by the public to gain access to day-to-day banking operations, the issue has a considerable relevance to Australian banks and in a broader sense to other businesses. Furthermore, the inclusion of Australian banks is expected to add value to the overall outcome of this research study, especially with
regard to the generalisation of research findings as a result of the multitude of adoption related issues this research can be associated with.

This determination of the gap in knowledge has resulted in the formation of the overarching research question, “How can social media be adopted by Australian banks to effectively communicate with the public?” Taking into consideration the complex nature of the social media environment that requires appropriate integration of the social communication and technological aspects for the conduct of effective communication, two separate research sub-questions were formed and key terms defined.

The following chapter will continue the literature review, taking into consideration the dual-faceted nature of the research environment. The discussion in this ‘conceptual model development chapter’ will be conducted along two pathways, each driven by respective research sub-questions. The resulting two conceptual model components will be converged to form the conceptual model for social media adoption by Australian banks to communicate with the public, which will become the basis for continuation of this research study.
3. CONCEPTUAL MODEL DEVELOPMENT

3.1. Introduction

This chapter will continue the literature review with the aim of formulating a conceptual model for social media adoption by Australian banks to communicate with the public. It further explains the complexity of the research environment created as a result of an integration of social communication and the technological aspects governing social media. The chapter also encompasses the dual-faceted research approach in the context of social media adoption by Australian banks in order to communicate with the public.

In this regard, two separate discussions in two separate sub-sections are conducted based on the reviews of relevant literature addressing the social and technological aspects of social media adoption.

The first sub-section focuses on the technological aspects of social media adoption by Australian banks. The second sub-section is dedicated to a discussion of the broader social communication matters associated with communicating in a publicly accessible online social environment.

This researcher describes the dual-faceted approach taken towards the review of literature as a ‘sociotechnology’ approach. It explains the sociotechnological nature of the environment created by social media.

3.2. Emergence of the Sociotechnology Environment

The research sub-questions describe the emergence of the dual-faceted sociotechnological environment with the advent of social media. The term sociotechnology was defined by Bunge (1999) as the process of applying insights from social sciences to design policies and programs. However, in the context of the present day environment where technologies such as social media encroach on people’s and businesses’ daily lives and routines, the term sociotechnological environment can be defined as the environment in which the convergence of technological and social insights occur.

Koh et al. (2007), who conducted their research on online virtual communities and communication within such communities, stressed that a lack of social presence can create a
weakness in such communities. This explains the importance and need to add social and
technical perspectives to the discussions surrounding virtual communities. Moreover, when
explaining the findings of their research, Vannoy and Palvia (2010) described the existence of
a cycle of influence between society and technology and the proposed social influence model
of technology adoption.

The growing understanding amongst the research community about the creation of a
sociotechnological environment was further demonstrated by Abedin et al. (2013) through
their review of literature associated with social networking sites. Their selection of the
literature was based upon the presence in their content and use of social networking to
communicate with the customers and those that discussed the aspects effecting communication
using social media. This review led to the identification of critical factors for communicating
with customers on social networking sites that lead to the deployment of appropriate strategies.
The analysis of the data has distinguished two themes in this regard, a customer-centric
organisational culture and awareness of technology know-how by the organisations concerned.

In the context of the sociotechnological nature of the two research sub-questions presented
leading to addressing the overarching research question, these can be interpreted as themes
relating to social and technological aspects. As a result, the existence of these underlying
aspects governing communication in a social media-based online communication environment
can be confirmed and presented in the following manner:

- Aspects that determine organisational awareness of the technology tools and their
capabilities are broadly described as technological aspects; and
- Aspects related to establishing effective relationships with the customer/public are
broadly described as social communication aspects.

The ensuing discussion associated with social communication and technological aspects
governing the two research sub-questions will lead to the amalgamation of findings that
address the overarching research question. The application of these findings to the
communication occurring between Australian banks and the public within the social media
environment is illustrated in Figure 3.1.
In Figure 3.1, the upper section represents the Australian banks’ decision-making environment and presents factors that are not directly associated with the social media environment. The lower section meanwhile, represents the social media environment where communication occurs between Australian banks and the users of social media. It presents two key aspects, namely technological and social communication, contributing to the success of social media-based communication through mindful adoption of social media. In the context of this research these two aspects represent the two research sub-questions.

The focus of this research is reflected in the bottom half of the diagram. The orange section, encompassing the technological aspects, with its components reflecting basic social media functionalities, represents the first research sub-question. The green box, incorporating the factors that influence the public to adopt social media to communicate with Australian banks,
represents the second research sub-question. The resulting integration is identified with an arrow connecting the two and explains the social media adoption model for Australian banks to communicate with the public. This integrated model answers the overarching research question:

“How can social media be adopted by Australian Banks as a method to effectively communicate with the public?”

The discussions that follow in sections 3.3 and 3.4 are dedicated to a discussion around the technological and social communication aspects identified earlier. This enables further review of literature to be conducted with due consideration of the theoretical foundations governing technology and social communication.

The knowledge arising from two separate discussions will later be converged to formulate a conceptual research model with the aim of answering the main research question. The researcher holds the unambiguous view that such segregation and convergence would facilitate the use of appropriate data collection techniques and gathering of data required to undertake an analysis using the applicable methodologies.

3.3. Technological Aspects of Social Media Adoption

As explained and illustrated in section 3.2, the technological aspects governing social media adoption relate to the first research sub-question, “What social media functionalities are effective when the public and Australian banks communicate?” This stems from the importance of technology awareness attached to social media-based communication, leading to significance given to Australian banks’ use of social media technology functionalities to create and maintain online communities in order to communicate with the public.

These functionalities of social media have been identified through a further scrutiny of literature and the Australian banks’ presence on selected social media technologies, and can be used to observe how such functionalities are being used by them to communicate with the public. The following discussion is aimed at uncovering the key functionalities of social media and presenting them in a manner that facilitates the formation of the conceptual model of social media adoption. The publicly available information can be used to gather real-time data and subsequently analysed to present credible findings in response to this question.
3.3.1. **Identifying Key Social Media Functionalities**

Numerous research studies have been conducted relating to various social media technologies since the first recorded social networking site sixdegrees.com came into being in 1996. The tradition of defining any website supporting online social activity as Web 2.0 technology was interrupted by Boyd and Ellison (2007) who presented their own definition for social networking. However, a continuously changing social media technological environment presents a barrier in determining evolving functionalities associated with various technologies (Kaplan and Haenlein, 2010) that subsequently affects the appreciation of their true value for practitioners.

Fraser and Dutta (2008) formally categorised social media technologies into five broad characteristics, namely: egocentric sites that allow users to build profiles; community sites that replicate in the virtual world those communities found in the physical world; opportunistic sites that facilitate business; passion-centric sites that aggregate fans; and media-sharing sites that let users share rich media. However, such categorisations make their understanding difficult for users, practitioners and researchers alike, considering the ever-evolving nature of social media technologies. For example, every contemporary social media technology is expecting to aggregate fans/users for obvious business compulsions of their own, hence this categorisation is vague and difficult to interpret.

Subsequently, Kaplan and Haenlein (2011) further categorised social media along various (low/high) levels of selected dimensions, such as social presence, media richness, self-presentation, and self-disclosure. However, this categorisation is unsustainable considering the rapid changes that occur within the social media environment. For example, with recent changes, Facebook, Twitter as well as YouTube have acquired new technology functionalities that make maintaining such a categorisation difficult with such a narrow foundation. Considering this, identifying the strengths of the different social media websites over a period of time proves difficult with the model proposed by Kaplan and Haenlein (2010).

Research carried out by Weinberg and Pehlivann (2011) to understand and categorise social media relates to the “half-life of information” and the “depth of information”. This was done from a marketing point of view to learn how the social media serve various marketing objectives and purposes. While the descriptions provided by the authors have some validity,
qualitative changes that are continuously incorporated into contemporary social media sites have made long-term categorisation imprecise. For example, Twitter, considered by Weinberg and Pehlivan (2011) as a website that shares “relatively shallow information” is arguably in the present day context because Twitter, just as all other social media technologies, undergoes continuous change and has further enabled access and incorporated rich information using links and images.

This demonstrates the futility of categorising social media, because such categorisations may become ineffective as changes occur within the social media landscape. Hence, there is a need to identify common functionalities that can be attributed to any social media technology. Sections 3.3.1.1 – 3.3.1.7 will endeavour to determine such basic functionalities of social media.

### 3.3.1.1. Identity

Identity in the social media environment is considered an important aspect (Zhao et al., 2008) when creating a social media presence for oneself as an object. Undertaking their research on the challenges in the adoption of social media in a large organisation, Kuikka and Äkkinen (2011) identified internal and external challenges relating to their identities. These include reputation management, legal, and public or private identity issues. Dimicco and Millen (2007) conducted their study on the concept of creating multiple profiles on Facebook, and identified the difficulties of creating such identities, thereby highlighting the importance of using multiple sites to present self in a different manner, for example, personal and professional.

Advancing on the foundation laid by Dimicco and Millen (2007) on the identity-related issues in the use of social media, Zhao et al. (2008) conducted their research on identity construction on Facebook with a focus on individual users, and they described the importance of maintaining the key facets of real world identity in the online world. The aim of the research study was partly to explore whether identity performance/presentation depends on the environment, but mostly to increase understanding about self-presentation in the online environment.

As for the identity of individuals, according to Zhao et al. (2008, p.1831), identity is a “social product” and they describe online identities as having consequences for the lives of the real world individuals who constructed the online identities. They also point out the possibility of
differences in such identities depending on the type of technology being used. People who have a personal identity on Facebook whilst maintaining a professional identity on LinkedIn can be considered as an example.

The Westerman et al. (2012) research focused on identity and confers how various components of an online identity affect the credibility of the online social media presence. They have justified the research by considering the increasing use of social media as a source of news and the increasing tendency of social media users becoming ‘gatekeepers’ to measure the credibility of an online profile. They suggest that social media users consider various components of a user profile and in making that judgement they have focused their research on the source credibility judgements scenarios based on the number of followers and the ratio of followers and followees a Twitter source has acquired.

When the same principles are applied to businesses’ social media presence, it is imperative to manage all their identities across the breadth of their presence with a level of sophistication (Kietzmann et al., 2012) in order to present the ‘real-self’. Failure to do that may result in providing an opportunity for miscreants to create fake profiles. As social media users traverse through various social media technologies, they may end up accepting such fake profiles as legitimate. These practical issues of content-creators misusing social media were observed by Senadheera et al. (2011) in their exploratory research study conducted with Australian banks.

As a result of this, presenting one’s identity in an appropriate manner is unarguably an important part of Australian banks’ social media presence, hence it is important to use technologies providing this functionality.

3.3.1.2. Relationship

From the point of view of a businesses’ presence on social media, building and maintaining a relationship with the customers or potential customers is considered a critical reason for their social media presence compared to other methods of communication (Abedin et al., 2013). Many social media technologies are offering functionalities that facilitate businesses to build and maintain relationships that are used by them to promote community activities (Farrell, 2010).

Van Dijck (2013) endeavoured to explain how social media technologies are active mediators between content, users and technology to facilitate connections both weak and strong. The
relevant research findings also pointed out the increasing effect of mediated platforms on the social lives of people in forming reciprocal relationships.

Sundararajan et al. (2013), with the assistance of four different investigations and an in-depth analysis of literature, discussed the relationship structure of social networks. Their research also highlighted the importance of a novel method that combines the analysis of relationships with the analysis of content in order to provide visibility into how social networks affect different phenomena. They also suggested an examination of network structures and content generation within such networks concurrently to map relationships and structures that connect people and technologies.

In an environment where customer visits to their respective bank branches are diminishing due to the advent of customer-facing technologies (Ahmad, 2005), Australian banks will appreciate the presence of a functionality that supports the building and maintenance of online relationships. This functionality therefore needs to be considered by Australian banks when they communicate with the public using social media.

### 3.3.1.3. Presence

Social presence is an important aspect of online communities, and Kaplan and Haenlein (2010) have attempted to categorise social media based on how they facilitate social presence and media richness.

Sometimes, researchers describe presence technologies differently that could affect the overall understanding of the functionality. Correa et al. (2010) describe presence technologies, such as instant messaging, which are sometimes embedded into mainstream social media, as a stand-alone application for richer and faster communication.

Quan-Haase and Young (2010) compared two different technology paradigms in Facebook and instant messaging in order to understand gratification similarities in users. Furthermore, they identified technology presence as “social know” that facilitates a more intimate exchange of information compared to using the publicly visible wall posts of Facebook. However, for the purpose of this research only social media technologies that facilitate the indication of one’s presence as a functionality will be considered for discussion.
Researchers argue that businesses should consider presence as a strategic component that requires serious attention (Culnan et al., 2010), with the goal being to enhance one’s “cyberspace presence” (Jansen et al., 2009, p.2171). Social presence theories, meanwhile, emphasise “the degree of physical realism in mediated social interaction” (Lin, 2003, p.355) and therefore can be considered an important functionality when communication is conducted via an online presence, such as social media. Also described by Peters et al. (2013, p.291) as a “dynamic trend” in communication activity, there is a possibility of Australian banks exploiting the advantages of this functionality when they communicate with the public.

3.3.1.4. **Sharing**

Sharing is considered a fundamental functionality that technologies supporting user-generated content are based upon and used to share videos, photos, audio, and text. Overall, the sharing functionality demonstrates the power of social media-based communications (Mishra et al., 2010).

Even though knowledge sharing has long been a key driver in the growth of online communities (Koh et al., 2007), the advent of social media has taken the sharing facet to another level with the capabilities their users have gained to create media-rich content. Sharing has been identified as one of six types of social media functionality used by the younger generation (Bolton et al., 2013), a functionality that is increasingly used within various social media technologies to share photos and videos (Boyd and Ellison, 2007).

Susarla et al. (2012) identified that, apart from determining the success of a particular item that was shared over social media, sharing these items drives social interactions that become influential based on the magnitude of that impact towards social influence. To this end, “share” means power and it is becoming an integral part of the business relationship with the consumers, as it could “enhance understanding of consumer needs and preferences based on the information shared” (Mitic and Kapoulas, 2012, p.668).

An exploratory study conducted by Senadheera et al. (2011) highlighted the propensity demonstrated by Australian banks in using this functionality to share media-rich content. The participants of Australian banks’ social media-based online communities have also used this functionality to share information about issues relating to accessing banks’ customer-facing
technologies, such as ATMs and Internet banking. Hence the sharing functionality plays a fundamental role when Australian banks communicate with the public.

3.3.1.5. Groups

With the surge in the take-up of social media, the proliferation of characteristics that are inherently present in physical societies are now moving into online communities (Kozinets, 2010), and the tendency of people to come together to form groups can be observed. Groups are an extension of self-presentation in the context of social media as observed by Zhao et al. (2008) who studied identity construction on Facebook during its early days.

The functionality was extended by various social media technologies to facilitate greater presence for businesses and other entities interested in forming their own groups consisting of social media users as their volunteer participants.

By facilitating group formation as an integral functionality, social media technologies enable the formation of trust groups that users delve into when deciding their informational and relational needs (Xu et al., 2010). These user needs drive the formation of groups consisting of like-minded entities that businesses are increasingly paying attention to when making decisions about their online presence (Wilson, 2009). To justify the collaborative activities that groups could facilitate within the social media environment to create a value greater than some of its parts (Weaver and Morrison, 2008), they are being used for specific purposes, such as learning management systems (Wang et al., 2012a).

In the context of this research study, social media-based online communities can be considered as groups themselves within a broader environment created by social media. In this regard, Australian banks are highly likely to consider social media technologies with a larger user base as a parameter for potential success in creating a larger online community for themselves within the boundaries of that social media technology.

3.3.1.6. Reputation

Haas and Wearden (2003) discussed the importance of concentrating on the reputation of an online presence. Their argument was based on the fact that within an online community environment users have become their own gatekeepers. In the social media-based online
community environment, the need to strengthen online reputation has become even stronger as content-consuming users search for credible content-creators.

With online reputation augmenting the credibility of the source, Westerman et al. (2012) suggest potential avenues to enhance online reputation using various design features and source attributes. The developers of social media have in fact listened to the advice and have incorporated features such as ‘verified accounts’ (Facebook, 2013, Twitter, 2013) advocating the support-enhanced online reputation of businesses, brands and famous people. For all other users, developers of social media suggest linking their social media presence through their respective official websites.

Potential impacts of inadequate attention to one’s online reputation was captured by Senadheera et al. (2011) when they observed “fake profiles” of Australian banks attracting social media users, potentially damaging the respective banks’ online reputations if the creators of such profiles present those users with non-credible information. In such a scenario, users armed with the content-creation abilities of social media technologies could engage in distributing information detrimental to both the online and broader reputation of the bank concerned, as had occurred with certain other businesses (Moses, 2011; Mishra et al., 2010).

Considering the above wide-ranging implications attached to the online reputation of Australian banks’ social media presence, they are more likely to use technologies that provide them with opportunities for presenting a credible social media presence.

3.3.1.7. Conversation

When conducting online communication, the ability to conduct conversations within the given environment leads to public participation, thereby raising their overall interest (De Choudhury et al., 2009). Hence it can be considered an important functionality to be present within the social media environment.

Having observed people using social media opting for personal conversations over communications forced upon them by “faceless and impersonal organisations”, Parent et al. (2011, p.219) focused their research on using social media users as their “brand personalities” to conduct brand conversations on behalf of them. Based on their study of different social media technologies, they have come up with a model for social media engagement, where conversations are identified as a critical component.
Hughes et al. (2012) described conversations as the single most important reason for the broad popularity of social media. Phang et al. (2013), in discussing their research outcomes, have explained that stimulating conversations do promote higher levels of participation and interaction on social media. In this regard, they have proposed the use of specific design features among others that enhance conversation between participants, leading to higher connectedness. Their work provided guidance to practitioners contemplating exploiting social media to promote interactions through enhanced communication between participants while also encouraging the use of design features that stimulate conversations as a means to achieve higher levels of participation and interaction.

Phang et al.’s (2013) findings are in agreement with those of Clark and Brennan (1991), who considered communication as a collaborative activity that requires the coordinated action of all the participants. With evolving technologies making online communities inherit the characteristics of the physical communities, they argue that communication within online communities is a collaborative activity that requires similar coordination from all participants. Within online communities, this is accomplished through conversation functionality. Clark and Brennan (1991) also explains that accomplishing the task of communication is assisted by the medium used to communicate and the techniques available in the medium. In the context of social media as a communication method, it can be argued that other functionalities act similarly to these techniques.

In conclusion, the discussion relating to social media functionalities did ascertain their importance as potential predictors of social media technology adoption. They are being supported by established theoretical foundations relating to communication in general and more specifically to social media for their ability to form online communities and facilitate communication within such communities. These predictors, identified henceforth as seven key functionalities of social media, will be considered in this research study for their important and central role in the facilitation of communication between Australian banks and the public. Their overall effect on this research study is illustrated in Figure 3.2.
It is in this context that the Honeycomb Model proposed by Kietzmann et al. (2011) becomes prominent. The aim of the following section is to understand the model and its implications.

3.3.2. Relevance and Importance of the Honeycomb Model

Kietzmann et al. (2011, p.241), in their pursuit of a better understanding of various social media technologies, and to assist practitioners in their decision-making, have brought these functionalities together in a model. In their view, this model enables “strategies for monitoring, understanding, and responding to different social media activities”. The Honeycomb Model consists of seven functional building blocks, namely: Identity; Reputation; Sharing; Groups; Conversations; Presence; and Relationships, as illustrated in Figure 3.3. The Honeycomb Model facilitates a better understanding of individual social media technologies by explaining
their relevant functionalities in relation to “functional building blocks” (Kietzmann et al., 2011, p.245), as described in sections 3.3.1.1 – 3.3.1.7.

Figure 3.3: Honeycomb Model – description of seven functionality blocks of social media (Kietzmann et al., 2011)

These model components were defined according to their relevancy to social media as a whole and the description of individual functionalities subscribed to this view. For example, Kietzmann et al. (2011, p.247) considers reputation functionality as “the extent to which users can identify the standing of others, including themselves, in a social media setting”. Also, they consider groups as being a functional block that “represents the extent to which users can form communities and sub-communities”.

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However, in their follow-up work which discussed the broader research implications of the model, they have widened the scope of initial descriptions. Having described reputation as “a complex phenomenon”, Kietzmann et al. (2012) considers the following also to be in this regard:

“In many cases, although users might seek trust-building information around functional, social and expressive reputations, this is often only hidden in data presented quantitatively, through the sheer numbers of followers for people, view counts for videos, likes for contents on Facebook, through ratios and averages of peer ratings, thumbs up versus thumbs down or through cumbersome archives of qualitative feedback via endorsements” (Kietzmann et al., 2012, p.113).

As for groups, Kietzmann et al. (2012) explains the following while making reference to past research conducted in this regard:

“Given this increasingly complex social media environment, platforms have started to allow users to organize their contacts into ‘groups’, which are used for audience segregation and for circumventing ‘embarrassment’. This building block represents the extent to which consumers can form and join communities and sub-communities that can be open to anyone, closed (approval required) or secret (invite only); and the degree to which they can control their membership or even group moderate the amount of influence some social media customers or groups exert” (Kietzmann et al., 2012, p.111).

One advantage of the Honeycomb Model is the possibility of applying it to determine key functionality strengths associated with different social media technologies. For example, Facebook’s strength is in the ‘relationships’ functionality whereas YouTube is strong in the ‘sharing’ functionality. They suggest using different shades of grey to indicate whether a particular functionality is stronger or weaker within a particular social media technology. This suggests a broad range of applicability of the model notwithstanding the evolving nature of the technology.

The Honeycomb Model can therefore be considered as a model that brings together the seven key social media functionalities discussed in sections 3.3.1.1 – 3.3.1.7. It can be used as an appropriate tool to capture and describe functionalities identified with different social media technologies. Together, these functionalities represent technological fundamentals that govern
communications and engagement within the social media environment. These functionalities will be collectively identified as ‘technological aspects of the social media adoption model’ and used to describe Australian banks’ communications with the public within the boundaries of online communities formed on various social media technologies. However, definitions of these functionalities will be refined to accurately reflect their capabilities in the context of how they are used by businesses in the present day social media technological environment.

3.3.3. Model Formation – Technological Aspects

This research study considers social media functionalities for their individual capabilities in harnessing greater business and brand involvement in social media for communication purposes. These functionalities will be defined in the following manner.

**Identity:** The action taken by Australian banks to reveal their identity with the aim of attracting participants to their respective social media-based online communities. This relates to assisting users in determining ‘Australian banks are in fact who they say they are’. For social media users, online identity is the primary measure of the Australian banks’ social media presence as a credible source of information. Based on Westerman et al.’s (2012) description of identity, design features such as brand name, logo, corporate colours, and presence of either contact information or a corresponding link to the official website, were considered.

**Reputation:** The action taken by Australian banks to further strengthen their online identity with the aim of enhancing the online credibility of their social media-based online communities. In this research study, reputation is an addendum to the overall identity and is also a measure of Australian banks’ social media presence as a credible source of information. Having understood the importance of the credibility of a social media presence for content-consumers in their gatekeeper activity, technology developers now understand the most effective way of doing this is by implementing measures that provide credibility to content-creators.

**Sharing:** The action taken by Australian banks to distribute created content with the primary purpose of sharing with the participants of their social media-based online communities.

**Conversations:** The action taken by Australian banks to distribute content with the primary purpose of generating conversations within their social media-based online communities.
**Relationships**: The action taken by Australian banks to relate to other participants of their community created within the parameters of a particular social media technology.

**Presence**: The action taken by Australian banks to instantaneously communicate with one or more participants of their respective social media-based online communities.

**Groups**: The action taken by Australian banks to facilitate the creation of groups within their respective social media-based online communities.

These definitions will act as the basis for all future discussions relating to this research study, and the resulting adapted Honeycomb Model is presented in Figure 3.4.

![Figure 3.4: Seven key functionalities governing the technological aspects of the research study (adapted from the Honeycomb Model in Kietzmann et al., 2011)](image-url)
The key functionalities that determine the broad technological aspects of this research study, the relevant conceptual model component discussed in section 3.3.1.7, can now be expanded to include them for the graphical representation in Figure 3.5. This detailed model component depicts the research component governing the first research sub-question.

Here, the technological aspect of the conceptual model is presented alongside the internal decision-making environment of Australian banks to create a better understanding of how the model component fits in with banks’ adoption of social media and their specific functionalities.

Figure 3.5: Conceptual model component governing the first research sub-question

Apart from facilitating the overarching research sub-question, the model component broadly explains the multitude of benefits relating to social media adoption by:

- Explaining the effective use of functionalities by demonstrating the relevance of each functionality in relation to the specific social media technology used;
• Encapsulating the customer-centric approach Australian banks are expected to take when adopting new media in order to leverage their corporate communication strategy (Hearn et al., 2009);

• Explaining the two-way information transfer to and from the social media environment and provide greater transparency (Jiang et al., 2009) of functionality use leading to continuous improvements to the social media adoption strategy;

• Facilitating objectivity to social media technology adoption and use by enabling the determination of key success metrics independent of the type or the novelty of the social media technology considered.

From a practical point of view, Bonsón and Flores (2011) have taken a similar view of the development of a functional communication environment associated with social media. Their work is concerned with broadening “unidirectional communication from the corporation to the user” (2011, p.35) to adopt “corporate dialogue” by “facilitating multidirectional flows between the stakeholders”.

Nevertheless, the conceptual model of social media adoption is incomplete without capturing the expectations of fellow social media users, relating to their adoption of social media as a method of communication that subsequently leads to their communications with Australian banks using online communities. This is achieved through an explanatory research study involving an online survey and focus groups conducted sequentially. Their analysis and findings are discussed in Chapters 6 and 7 respectively.

3.4. Social Communication Aspects of Social Media Adoption

The second research sub-question “How do the adoption decisions of users affect their participation in social media-based communications with Australian Banks?” stems from the importance of social media users’ participation in the banks’ social media-based online communities.

This research sub-question, as had been identified in section 2.9, stems from the greater involvement of the user in the formation of social media-based online communities. Under these circumstances, there are challenges that Australian banks need to overcome when adopting social media to communicate with the public, knowledge of which is required to determine the formation of a usable adoption model.
The following section will deliberate on such challenges identified in the literature that discuss first-hand experiences of businesses in their adaptation of social media. This will inform the discussion relating to the established technology adoption models that follow.

3.4.1. Social Media Adoption Challenges

It is a basic requirement for businesses operating within the social media environment to make their social media presence sustainable over a period of time to achieve their business expectations, measure its success and determine return on investment. However, achieving this task is faced with challenges primarily as a result of an operational environment created by social media. These challenges involve, for example, the technological aspects, and the legal issues relating to the presentation of an accurate identity to reflect the actual identity of the business concerned. At the same time, challenges can involve social communication aspects, such as reputation management when adverse content about a business is communicated (Kuikka and Äkkinen, 2011). The overall effect of these adoption challenges can be multiplied with businesses having less control in social media than in traditional media, of what is being communicated within the medium. Businesses therefore need to engage with social media users (Foster et al., 2010) and are required to do this continuously, which in itself poses challenges.

Cha et al. (2010, p.1) researched the influence that “popular users” have in a social media-based online community, in particular their influence over others in the community. They discovered that such influence is not gained spontaneously or accidentally, but through a concerted effort. Based on their research findings, Cha et al. (2010) also argue that the size of the community alone, in terms of number of participants, would not provide an individual or a business a level of influence over their community. They explain that a concerted effort must also be made to continuously engage with the community.

The literature also points out that the success of an online community is in getting a critical mass of participants involved (Choudhary et al., 2012; Germonprez and Hovorka, 2013). Also, it is the motivation factor that drives social media users to participate in one online community or another (Shen and Khalifa, 2008), and the capability of moderators of online communities to facilitate and encourage user participation (Ma and Agarwal, 2007).
In this regard, Culnan et al.’s (2010) research identified three key aspects required for the successful implementation of social media by businesses. They were: 1) mindful adoption – the importance of gaining an understanding of technologies and how they should be used; 2) community building – the importance of community building measures for better engagement with the participants of the community in order to maximise the benefits offered by various social media technologies that businesses mindfully decide to adopt; and 3) absorption capacity – the capacity of the business to learn (and act) from the content generated within the community by its participants.

The work of Kuikka and Äkkinen (2011) compliments Culnan et al.’s (2010) article and stresses the need for careful planning even though social media is considered free or inexpensive. Having undertaken an in-depth case study similar to what Culnan et al. (2011) accomplished, they discuss several challenges in detail. These challenges include defining clear goals, identifying metrics to measure the success of the social media involvement, defining resources, authorisation, and dealing with challenges associated with user attitude.

Van Dijck (2013), while highlighting the mediating role played by social media in bringing together users, technologies and content, also points to their complicated connections. This explains the importance of considering social practice issues that go beyond the technological aspects of the process, such as users’ determination of the value derived by their adaptation of social media and formation of relationships in their quest to be part of a social media-based online community.

Agreeing with the findings of Cha et al. (2010), Rui and Yongsheng (2010) used their study to highlight the importance of continuous engagement to attract participants to its online community notwithstanding the level of reputation attached to the brand or the business concerned. They emphasised the need to manage the followers over a long period of time (Rui and Yongsheng, 2010).

Weng et al. (2010) discuss the effects of non-reciprocal relationships on influence and how the non-reciprocal nature of Twitter connections determine the strength of the influence. This, in the context of this research study, indicates that if social media users are to follow an Australian bank’s presence on Twitter the bank concerned will gain influence. Similarly, the social media users also have the right to ‘unfollow’ the bank, thus the bank will lose the
influence previously gained. Therefore, Australian banks are challenged to meet their followers’ expectations in order to maintain followers and subsequently influence them. Similar to Twitter profiles, Facebook Pages and YouTube Channels also support non-reciprocal connectivity, thereby creating a challenging environment for banks in achieving their respective business objectives.

These discussions highlight among others the unique environmental differences relating to social media, especially the non-reciprocal nature of participants’ association with the respective social media-based online community. Hence Australian banks must develop an understanding of social media user expectations in their quest to develop and maintain effective social media-based communities that enable achieving their business expectations.

The above discussion highlights the significant challenges faced by businesses and, in the context of this research study, by Australian banks in attracting social media users to participate in their social media-based online communities. Furthermore, operating in this environment, they are also required to understand social media user expectations in order to form non-reciprocal relationships in different technological environments and to keep them engaged within the given online community.

It is in this background that the Interactive Communication Technology Adoption (ICTA) model can be described as the most appropriate to provide the basis for continued discussion relating to the adoption of social media as a means of communication. The ICTA model components identified in section 2.7, which groups theoretical perspectives (factors), provide an outlook that explains the breadth of issues that could potentially be used to adapt to the challenges identified in this section.

3.4.2. Social Communication Aspects and the ICTA Model

The Internet is used as an interpersonal as well as a mass communication medium (Flanagin and Metzger, 2001) driven by purely media-related and interpersonal motives. Using the Internet in a traditional unidirectional manner for consumption changed with the advent of social media, which facilitates highly interactive bi- and multi-directional discussion enriched with multi-formatted content created by its consumers. Social media has created a complex communications environment with blurred boundaries between public and private spheres. It
has altered traditional relationships between consumer and corporations and between citizens and corporations (Robbin, 2011).

It is in this context that the ICTA Model is of greater importance in describing the social communication aspects that govern social media adoption. As explained in section 2.7, the ICTA model components encompass multifaceted necessities of individual, social and organisational players. They explain shared theoretical frameworks and core concepts that resemble public participation in social media-based online communities, and the complex nature of the communication that occurs between an organisation and its users–stakeholders within this community. In addition, these model components have the capacity to take into consideration the growing influence of users’ ability to move with the content as it adds a new dimension of content fluidity that may impact upon users’ social media adoption tendencies.

Sections 3.4.2.1 – 3.4.2.7 scrutinise the ICTA model and its components to determine their relevancy to the social communication aspects governing social media adoption.

3.4.2.1. **Use Factors**

Use factors drive users’ desire to achieve a specific outcome. The discussion in section 2.7 is a prelude to several model components or theoretical constructs that can be grouped together as use factors. In the context of using social media for communication, it is understandable that the public expects values such as communication efficiency, especially considering the easier access to the medium through mobile technologies.

Similarly, use factors explain how and why people use social media to communicate. For businesses expecting to maximise business benefits through their social media adoption, knowledge of use factors is important in devising appropriate strategies, such as using one or more social media technology to articulate messages differently for different demographic sectors.

Considering the above, use factors can be considered an important social communication aspect that needs to be included in this research discussion.

3.4.2.2. **Audience Factors**

Audience factors compel communication driven by individual users’ personal characteristics. Considering the social impact created as a result of users’ social memberships and the public
nature of their social relationships, audience factors can be considered as an important social communication aspect in the context of this research discussion.

Furthermore, by grounding the theoretical foundations that group together as audience factors, businesses will be able to derive key decision-support information to determine their own social media adoption strategies. This information will include why certain members of the public tend to prefer a particular social media technology over others for their social media-based communication.

Audience factors as a whole are important in identifying key information relating to the actions of the public driven by their individual capabilities and self-confidence in self-evaluating innovative technologies for their own benefit. Therefore, in the context of this research which is based on a rapidly evolving social media environment, audience factors are imperative in this discussion as a social communication aspect.

3.4.2.3. Social Factors

Social factors describe adoption driven by a particular user’s need to participate in online social activities, to interact, share or collaborate with others.

Social media technologies facilitate the creation and maintenance of complex social networks consisting of millions of users. These users, with their diverse levels of technological capabilities and individual expectations of adopting social media as a form of communication, do influence others within their own networks.

Furthermore, considering the importance of the diffusion of information and the manner in which social media-based information is diffused, it is imperative to consider social factors as a driving force of social media adoption. With theoretical foundations such as critical mass theory included in the grouping, social factors can be regarded as an important social communication aspect and hence will be included in this research discussion.

3.4.2.4. Technology Factors

Technology factors relating to the adoption of social media by Australian banks have been identified in the form of seven social media functionalities discussed in section 3.3. These functionalities that govern the technological aspects of social media adoption are included as functional building blocks of the adapted Honeycomb Model presented in section 3.3.3.
Technology factors describe the interface that connects businesses’ internal decision-making environments with the public domain. In other words, the seven key factors form Australian banks’ outlet to the social media environment that they use to communicate with the public. Similarly, technology factors facilitate the public to use various technology functionalities offered by different social media technologies to communicate with Australian banks.

Taking this into consideration, for this research study, technology factors will not be considered as a social communication aspect. However, considering their relevance in facilitating social media-based communication, they will be included in the proposed adoption model for Australian banks to communicate with the public. Consequently, technology factors replicate the technological aspects when the public and Australian banks communicate with each other using social media.

3.4.2.5. System Factors

The discussion in section 2.7.5 explained system factors as being inherent to organisations in their adoption of communication technologies. However, considering social media as a technology that is available in the public domain within the social media environment and beyond Australian banks’ decision-making environment (Figure 3.2), system factors will not be considered as a social communication aspect, and will not be part of the proposed social media adoption model for Australian banks to communicate with the public. However, system factors will be noted in the diagram that differentiates the social media environment from Australian banks’ internal decision-making environments (Figure 3.5).

3.4.2.6. Adoption Factors

Similarly to system factors, audience factors have relevancy only if applied to adoption in an organisational setting, such as within respective Australian banks’ technological environments. Therefore, just as with system factors, adoption factors too will not be considered as a social communication aspect and will not be included in this research study. However, adoption factors will be noted in the diagram that differentiates the social media environment from Australian banks’ internal decision-making environments (Figure 3.5).

Consequently, this discussion was able to determine the relevance of three of the six ICTA model factors (grouping of theoretical foundations), namely use, audience, and social factors that can be considered as social communication aspects.
3.4.2.7. Contextual Factors

Apart from the six factors identified in the Lin (2003) model, contextual factors are also considered to be an integral part of the conceptual model.

The contextual factors have not been identified in the Lin (2003) research. However, the exploratory research study conducted by Senadheera et al. (2011) over a six month period. This study consisted of two data gathering phases and constantly monitored Australian banks’ social media presence on MySpace, Facebook, Twitter, and YouTube, observed heightened levels of social media user activity at specific time-periods. Upon conducting deeper observations, it was identified that such heightened social media activity has occurred at times when Australian banks have encountered outages in customer-facing banking services. Most frequently such outages involved failures to Internet banking and automated teller machines (ATM’s) and the resulting social media activity was driven by the exchange of communication via social media by the users and representatives of corresponding banks.

These issues can be considered as antecedents that drive communications during situational crises (Coombs, 2007) and be identified with the contextual factors. In the context of this research study, they can be considered as potential predictors of social media adoption since there had been a considerable growth in the number of participants in respective Australian banks’ social media-based online communities following such occurrences. Consequently, contextual factors were included in the conceptual adoption model.

Evidently, this discussion has led to the identification of four key factors that can be identified with social communication aspects that drive users’ social media adoption to communicate with Australian banks. Based on this outcome, relevant social communication aspects of the conceptual social media adoption model for Australian banks to communicate with the public is formulated.

3.4.3. Model Formation – Social Communication Aspects

The discussions in sections 3.4.2.1 – 3.4.2.7 have added value to the relevant discussion in section 2.10 in terms of the public using social media to communicate with Australian banks. This has facilitated the identification of four factors, namely use, audience, social, and contextual factors that can be associated with user communication with Australian banks within the social media environment. The outcome is illustrated in Figure 3.6.
This discussion has also explained the reasons for non-relevancy of system and adoption factors to this research study, as they only relate to Australian banks’ decision-making environments. In Figure 3.6, these factors have been identified, but presented separately in a box with a darker background. Their presence in the figure has the potential add relevance to future research, discussed in section 10.5.

**Figure 3.6: Depiction of the research approach to the second research sub-question**

Figure 3.6 illustrates two distinct sections. The top section represents the internal decision-making environment of Australian banks, encompassing system, adoption, and technology factors. The social media environment identified in the bottom section encompasses the four social communication aspects identified earlier. As explained, technology factors act as the interface between the internal decision-making environment and the external social media environment by presenting organisational identity using the appropriate social media.
functionalities. These functionalities have been identified as the technological aspects governing social media adoption, as discussed in section 3.3.

3.5. **Formation of Social Media Technology Adoption Model**

The discussions in sections 3.3 and 3.4 have enabled the formation of two contrasting model components that address the two research sub-questions relating to the technological and social communication aspects of social media adoption. This section focuses on continuing these discussions to inform how their integration into a single model contributes to the overarching research question by providing a holistic approach.

3.5.1. **Integrating Individual Model Components**

As explained earlier, conceptual model components formulated based on discussions in sections 3.3 and 3.4 are integrated to formulate the conceptual social media adoption model for Australian banks to communicate with the public. This conceptual model is illustrated in Figure 3.7.

Figure 3.7 represents the model and explains the potential scenario where Australian banks, through their presence on social media, are provided with the opportunity to communicate with social media users through their own presence on the social media technologies. It encapsulates the two-way communication between social media users and banks, hence the flow of communication is identified with bi-directional arrows.

In Figure 3.7, system, adoption, and technology factors discussed in sections 3.4.2.4 – 3.4.2.6 are identified with the internal decision-making environment of Australian banks. The technology factors that encapsulate the seven key functionalities described in section 3.3 act as the interface that connects respective banks’ internal decision-making environment with the social media environment. As explained earlier in section 3.4.2.4, these technology are broadly identified as technological aspects in following discussions.

Social media users who have made their own presence in the social media environment are thereby given the opportunity to communicate with Australian banks through one or more of these functionalities. This communication content is filtered through to banks’ internal decision-making environments for further decision-making, and the flow of communication continues.
Chapter 3: Conceptual Model Development

Figure 3.7: Conceptual social media adoption model for Australian banks to communicate with the public

From a theoretical perspective, this model addresses a gap in research by answering the research question posed in section 2.9. As a consequence, numerous established theoretical foundations that have previously been identified with the adoption of communication technologies discussed in section 2.6 can be further nourished in the context of adopting social media as a communication method. The findings are expected to be used as the basis for theory construction (Shoemaker et al., 2003) where the theory is defined as “a statement of concepts and their interrelationships that shows how and/or why a phenomenon occurs” (Gioia and Pitre, 1990, cited in (Corley and Gioia, 2011, p.12)).

Form a practitioner’s perspective, this model is expected to guide practitioners in identifying their strategic perspective-associated social media method to communicate with the public. This conceptual model which integrates the technological and social aspects of communication
has the potential to provide broader perspectives of the adoption process, thereby enabling the effective use of technology functionalities while enriching communications with the public. As a consequence, Australian banks will be able to sustain their engagement with the public notwithstanding the inevitable time and technological changes and regain a personal relationship with their customers that has been gradually diminishing with the advent of technologies.

3.5.2. Adoption Model Summary

The proposed conceptual social media adoption model for Australian banks to communicate with the public integrates social aspects that drive users to communicate with Australian banks using social media with technology. While social aspects encompass the public adoption of social media to communicate with banks, technology encompasses Australian banks’ use of key social media functionalities to communicate with the public. They encompass a broader spectrum of sociotechnological issues that make social media-based online communities an effective component for Australian banks in their strategy to communicate with the public. As per Figure 3.7, these two aspects are explained in sections 3.5.2.1 and 3.5.3.2.

3.5.2.1. Technological Aspects

The technological aspects of social media as a means of communication facilitate communication between Australian banks and their intended audience which in the context of this research study is the Australian public:

- The seven boxes illustrate seven key social media functionalities. These functionalities were explained in section 3.3.3.
- All seven functionalities may not necessarily be present on a particular social media technology.
- Some functionalities have the potential to stand out more in certain social media technologies than in others. For example, Twitter and Facebook have a stronger ‘conversation’ functionality, while YouTube is stronger in the ‘sharing’ functionality.
- Australian banks, when they make their presence on social media, use one or more of these functionalities.
- Users, when they make their presence on social media, also subscribe to using one or more of these functionalities.
These technological aspects that contain key social media functionalities create an interface between the internal decision-making environment of Australian banks and the social media environment, as explained in section 2.7.4.

3.5.2.2. Social Communication Aspects

Social communication aspects were identified during a review of the literature and an exploratory research study, and consist of factors that drive the public to adopt social media to communicate with Australian banks. These components include:

- Use, audience, and social factors that have been identified through a review of literature. Each factor groups together established theoretical frameworks associated with mediated communication.
- Contextual factors were considered based on the outcome of a preliminary analysis, an exploratory study on how Australian banks use social media, and on the premise that they could drive the public to adopt social media to communicate with Australian banks.

Determination of an appropriate methodological approach to facilitate model confirmation and validation through empirical research is discussed in the next chapter.

3.6. Conclusion

This chapter has continued with the review of literature to further delve into the complex sociotechnological phenomenon associated with social media adoption.

As a result of this discussion, it was possible to ascertain seven key social media functionalities that underpin the technological aspects of communication between Australian banks and the public. Social communication aspects covered the adoption decisions of users affecting their participation in social media-based communication with Australian banks. Discussion was built upon an adoption model previously proposed for organisational adoption of integrated communication technologies, such as telephony. This discussion has led to the identification of use, audience, social, and technology factors that were used to group established theoretical foundations relating to research in the field of technology adoption and communications. Apart from these factors, contextual factors were also considered based on the preliminary findings of the exploratory research that studies how Australian banks use social media.
This has resulted in the formulation of two adoption model components. The model component that focused on the technological aspects of adoption reflected upon the first research sub-question. The model component that considered social communication aspects reflected upon the second research sub-question.

The formulation of the conceptual model facilitates the move to the next stage of research associated with determining the most appropriate research approaches and data-gathering techniques. The primary objective of the forthcoming discussion is the collection of required data leading to their analysis and subsequent interpretations of the findings of such analysis. This discussion of methodological considerations will be informed and driven by unique characteristics associated with social media as a novel phenomenon as well as the advantages offered by established methodological traditions.
4. METHODOLOGY

4.1. Introduction

The literature review in the previous two chapters discussed the background of the development and formation of an integrated conceptual model of social media adoption. The aim of the conceptual model is to manage the adoption of social media and communication, which addresses the overarching research question.

This conceptual model resembles the operational realities of the sociotechnological environment created by social media. The adoption factors identified with the conceptual model further demonstrate complexities associated with the social media environment. While the technological aspects of the conceptual model govern the use of social media technology functionalities in the facilitation of user engagement, the social aspects of the model focus on the factors that drive the public to adopt social media. The adoption scenario competes when these two aspects become intertwined to produce an effective social media presence for Australian banks by converting their presence into a credible source of information for the public.

Discussion in this chapter further advances the research process based on the determinations made throughout the discussions conducted in the two previous chapters, through selecting the appropriate research approach, data collection techniques, and analytical tools. In so doing, this chapter will outline and justify their appropriateness in achieving the expected research objectives, while addressing other associated methodological challenges and considerations.

This chapter will also address and justify the selection of a particular research methodology over other options for gathering data, and the selection and application of appropriate tools to analyse them. The intention is to also explain how the data collected is consistent with accepted practice in the field of study and, where appropriate, how respondents/participants were presented with a reasonable range of answers to choose from to broaden the scope of the findings. Polonsky and Waller (2011, p.127) explained the importance of identifying the right data for research when they noted that “unless you gather the right data, there is no way you can fully answer your research problem and objectives”.

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The process of identifying the right data, and devising the most appropriate methodology or mix of methods employed for the collection of this data, requires careful evaluation of the challenges posed by the social media environment where this research study is focused. It is expected that correctly identifying these challenges would lead to the selection of relevant methodological approaches and data-gathering techniques. Therefore, the aim in this chapter is to create an understanding of any potential challenges through a discussion. As a result, methodologies or techniques identified will be justified for their selection over others in this research study.

Having identified social media as the environment this research study will be focused on, based on the outcome of the discussions in the previous two chapters, the following section will focus on this environment as the source of the right data. This discussion is based on topics inherent to this novel research environment and will justify the selection of the most appropriate data-gathering technique/methodology and non-selection of others. In the process, the use of established and novel approaches will also be discussed for their appropriateness in achieving the intended results without having to denigrate the quality of this research or ethical considerations relating to the conduct of socially responsible research.

4.2. Social Media Environment

Previous research challenges associated with Internet-based data argued that research practices are shaped by the environment in which researchers choose to conduct their research. Explaining the importance and challenges associated with the proliferation of data from online social activities, Savage and Burrows (2009, p.765) identified this as the “crisis of empirical sociology” in reference to the ethical issues relating to anonymity and confidentiality expected in research. As a solution to overcome potential challenges, they proposed that researchers be radical in innovating new ways to gather valid data as evidence to support their hypotheses.

As explained in the previous chapter, this research study focuses on the social media-based communities formed as a result of Australian banks establishing their presence on various social media technologies. Numerous functionalities that are inherent to these technologies facilitate their endeavour. While this environment provides an opportunity to gather appropriate data directly associated with Australian banks’ respective social media presence without having to get directly involved with these banks, it also poses challenges with regard to explaining the value of this research solely based on this social data. Therefore, considering
a mixed-methods approach that integrates qualitative and quantitative approaches (Tashakkori and Teddlie, 2010) is necessary.

The aforementioned method of gathering social media-based data from Australian banks’ social media presence also requires appropriate positioning of the investigator in relation to such data. In this regard, any novel approaches would require the consideration of techniques that have not been tested in existing research studies.

Research in this constantly evolving environment requires a suitable data-gathering technique or methodology that will capture relevant data that reflects upon changes in technology over a period of time to achieve overall research objectives. Furthermore, the social media environment is frequented by people who are driven by a range of factors, and capturing relevant data requires a technique/methodology capable of gaining access to relevant information.

Considering the above in relation to the research within the social media environment, the following sections will explore specific aspects associated with this environment of research interest. This discussion will facilitate decision-making to identify the most appropriate data-gathering techniques and sources of such data, as well as a means of reaching out to suitable research subjects.

4.2.1. **Longitudinal Approach to Data Collection**

Conducting longitudinal studies serve to collect data on the same specific phenomenon over a longer duration of time, and the data gathered through longitudinal methods is of a higher quality and value (Walter, 2010).

As discussed in the previous chapter, addressing the first research sub-question required a thorough understanding of:

- social media functionalities; and
- how such functionalities are used by Australian banks to communicate.

Therefore, this research is designed partly to study the phenomena surrounding the business use of social media functionalities to communicate with fellow users. However, it is imperative to keep track of their evolving nature while reflecting on their effect on social media-based online communities. Under such circumstances, a longitudinal approach is
required to gather social media data and use appropriate statistical techniques to analyse them in order to answer the first research question.

There are also other reasons that highlight the need for a longitudinal study. Apart from the need to overcome issues associated with the evolving nature of the technologies concerned, legitimate questions could also be raised in relation to the generalisation of research findings based on a single snapshot of data, as it may not be current within the framework of research study conducted over a longer duration. Furthermore, for this research study to reflect the banks’ use of social media functionalities, the data collected needs to be firmly associated with a business objective relating to social media. This brings to the surface a situation requiring capture of two data snapshots to reflect the ‘then’ and ‘now’ scenarios, to determine the effects of their social media presence, thus requiring a longitudinal approach.

Identifying the size of the online community as the key measure of success of their social media involvement is a key determinant in this regard. It was based on the discussions in the previous chapters and also drives the need to employ a longitudinal approach to data gathering. In addition to the fact that a longitudinal approach enables measurement of success based on the data gathered from two or more phases and two or more data points, it also provides additional insights into how motivations develop and change over time (Foster et al., 2010).

In this research, the longitudinal study approach is the only practical method that can be employed when collecting data for the purpose of distilling such insights relating to Australian banks’ online presence. Past research conducted on the broader topic of social media has successfully used longitudinal approaches to unearth credible research outcomes.

Wang et al. (2012c) demonstrated the use of longitudinal data-gathering. In their study, they examined social media use, needs and gratifications amongst university students, taking into consideration the dynamic nature of mediated cognition and student behaviour. The dynamic uses and gratification model they proposed was tested using data collected from university students’ presence on selected social media technologies, three times a day for four continuous weeks. The method they used to collect data enabled the prediction of current social media use in comparison to the day before, thereby highlighting the importance of longitudinal data in predicting the patterns of behaviour in social media.
Similarly, Cha et al. (2010) made important inferences having investigated the Twitter dynamics of user influence across topics and time. Based on their analysis of a large amount of tweets, they were able to determine amongst others things that the popularity gained on Twitter in terms of the number of Twitter followers does not necessarily convert to generating re-tweets or mentions. In this instance, even though a single snapshot of tweets was used, their analysis included the time factor relating to tweets associated with different entities whose presence were captured.

Alternatively, not using multiple observations or gathering data from social media with little consideration of the evolving nature of the technology, could lead to making arguable presumptions, such as, Twitter used to “share relatively shallow information with a relatively shallow half-life” (Weinberg and Pehlivan, 2011, p.279). While it is a fact that a tweet contains a limited number of characters, making a statement about the value of the information it contains is arguable, especially considering how Twitter usage has evolved as a news source (Choudhary et al., 2012) and for crisis communication (Schultz et al., 2011).

In this research study, social media data that is of a quantitative and qualitative nature will be collected over a three-year period at different time points of varied duration. These time durations are selected at 3, 6, and 12 months. They should provide indicative and useful data relating to respective banks’ social media presence. During the analysis the outcomes for different time durations will be matched to see potential causalities associated with time duration as explained in section 3.3.1.

These functionalities are: identity; relationship; presence; sharing; groups; reputation; and conversation. Further information about mapping these functionalities will be discussed in detail in section 4.3.3.4.

4.2.2. Social Media Data

The longitudinal study described in the previous section necessitates gathering data from the social media environment. Therefore, a suitable strategy is required in place to gather data that support undertaking relevant statistical analysis.

Burnap et al. (2013, p.218) discussed using “harvested” data from social media technologies such as Facebook, MySpace and Twitter, and proposed software that interfaced with the above-mentioned technologies to gather and visualise data to assist discourse or content
analysis. In addition, the findings of Sundararajan et al. (2013) are based on complex relationship analysis in social networks, highlighting the importance of exploring novel methods that combine the analysis of relationships with the analysis of content. This combination is meant to provide greater insights into how social networks affect different phenomena. This bodes well in the search for an appropriate method to unearth greater insights into phenomena driven by the sociotechnological factors to be discussed in this research.

However, there are opponents of using data gathered from the social media environment. While acknowledging the advantages of social media as providing a “wealth of data”, Branthwaite and Patterson (2011, p.430) argue that they cannot be presented as a straightforward substitute for other qualitative approaches with time-tested supportive data collection techniques, such as in-depth interviews. To prove their point further they highlight issues such as conversation and active listening as ways research participants conduct themselves in the real world and the social media world.

Notwithstanding the contrasting arguments put forth by different researchers, gathering social media-based data is imperative to the success of this research study in view of its sociotechnological focus. In this regard, the data relates to the use of various social media functionalities by Australian banks to establish their presence on selected social media technologies in order to achieve their broader business objectives.

More specific information associated with the study sample relating to social media technologies, specific variables to be measured, and analytical tools to be used, is provided in section 4.3.3.

4.2.3. Collecting Data from Social Media-Based Communities

Technologically advanced online communities appeal to the wider public whose affection for the technologies concerned is demonstrated by the growing number of participants engaging in social media in general, as well as online communities created within them. Furthermore, the discussion in section 2.4 pinpointed the narrowing gap between online and physical communities driven by the technology tools that enable rich functionalities for users to create online communities. These developments have also facilitated the expansion of a toolkit that gave rise to exploring novel approaches to gather reliable evidence (Kozinets, 2010).
Social media-based secondary data is extremely relevant to the research problem being studied in this research, as explained in the previous section. It is envisioned that the research process will facilitate answering the first research sub-question, thereby enriching the overall interpretation of the research findings. Their availability in the public domain, unlimited access to them with no restrictions or community membership approval process, provides an investigator with unhindered access to join and become part of the communities, make observations and to gather data. The ethical considerations associated with this method of data collection will be discussed in section 4.4.

These developments in the social media space have potential advantages for those intending to study the phenomena associated with it. Importantly, operating in the public domain allows research communities to participate in them and to observe or ‘lurk’ while gathering data and information. Kozinets (2010) identifies this as engaging ethnography research on the Internet, or Netnography. Elaborating on the applicability of Netnography research, Bowler (2010) considers that Netnography research is closer to traditional ethnographic standards of participant observation, prolonged engagement, and deep immersion.

Even though it is not the expectation to conduct a ‘Netnography research’ here, the flow of the Netnography research project (Figure 4.1) proposed by Kozinets (2010) will be adapted to inform and gain access to Australian banks’ presence on selected social media technologies. Being public forums, such online communities do not require potential participants to undertake a specific subscription or approval process nor do they require subscription to an ethics approval process (NHMRC, 2007).

Figure 4.1 is an illustrative overview of the approach suggested by Kozinets (2010) regarding data gathering from online communities, which will be adapted to gather relevant data in this study.
Steps 1, 2, 4, and 5 of Figure 4.1 are relevant to all types of research, while Step 3 highlights a multitude of actions that can be taken depending on the research requirements. As indicated, this research study will be able to utilise the online community’s participation for data collection purposes.

4.2.4. Access to Appropriate Research Subjects
A significant issue concerning this research study that informs the selection of the most appropriate methodological approach, is the fact that the study in its entirety focuses on an environment consisting of social media users who operate online. This reflects upon the identification of research units and subsequent identification of appropriate data collection techniques. With all social media users being Internet users, there is a higher probability of engaging with them using Internet-based tools. Matsuo et al. (2004) argue that there is a greater likelihood that certain populations are more accessible using an online survey than with traditional data collection techniques, such as printed questionnaires.

Web-based surveys are improvisations of ‘manual’ surveys that are still being widely used by the research community and are known for their versatility as an enabler to study a range of topics across large population samples. Their conduciveness towards statistical analysis techniques enables the derivation of broader generalisations of research findings (Walter,
2010), which is further improved by various providers who now facilitate all aspects of survey research from design to analysis using Web-based tools (Snow, 2012).

With the advent of advanced Web-based tools, online surveys now have the potential to gain access to most relevant sources to gather data of which appropriate analysis can be conducted. Their limitations as a primary data collection tool can however, be negated by the use of techniques that could gather qualitative data (Calderwood, 2013).

When explaining social media use in social research, Calderwood (2013) argues that exploiting them is an innovation, especially in longitudinal studies, and demonstrates this with the results from two studies that used Facebook and MySpace data. To justify the possibility of attracting a survey sample that represents a wider section of the general population for Web or social media-based surveys, Calderwood (2013) pinpoints that this is because of higher access to and uptake of the Internet by the populace in the United Kingdom. She also refers to the growth of Internet capable smart phones being used by the public, especially by the younger generation that he defines as “digital natives” (p.4), or those who have grown up with the Internet as part of their daily lives.

In Australia, in June 2013, nearly 11 million people accessed the Internet more than once a day, a 72% increase over the preceding five years. The use of mobile Internet in Australia was also on the rise with nearly 8 million users opting for mobile Internet access during the same period (ACMA, 2013). Therefore, the use of Web-based tools for gathering data enhances the reach to a greater proportion of the Australian adult population who are likely users of social media and has the potential to gather the views of social media users from across Australia. In this context, an online survey can be considered as the most relevant technique to gather representative data from a larger sample of the Australian public who could provide a broader spectrum of views on the factors that influence their social media adoption decisions.

The data gathered from a larger sample based on the answers from the Australian public, to a set of structured questions, provides explainable findings regarding attitudinal factors that influence their adoption of social media. Issues such as feelings and attitudes would require data collection methods that enable the capturing of such information (Polonsky and Waller, 2011). Therefore, there is a need to explore methods that allow data gathering on such insights, such as in-depth interviews or focus groups, for this research study.
4.2.5. **Sourcing Insightful Data**

The previous discussion established the need for insightful data relating to the feelings and attitudes of the public that drives them to adopt social media, and more specifically relating their social media-based communications with Australian banks. Such data would also facilitate gathering information that is not necessarily driven by the subjective judgement of the researcher’s own view of a given topic.

To address this issue, both in-depth interviews and focus group interviews enable the gathering of important information about a topic of interest (Creswell, 2007). However, there are differences with these two methods that make their selection dependent upon research expectations.

In-depth interviews are conducted on a one-to-one basis (Polonsky and Waller, 2011), and therefore take a considerable amount of time to interview a few candidates. Even though in-depth interviews could unearth a wealth of data, it is difficult to compare responses as a result of each participant using their own words and expressions. Also, with individual interviews being conducted in different environmental settings, there is a danger of the interview outcome being affected or influenced by the environmental conditions. Hence, this would affect the analysis and determination of the meaning of the data when two interviews were compared.

Focus groups, often described as group interviews, alternatively facilitate an environment that stimulates discussion. They encourage collaboration and the timely collation, integration and assembly of views. However, there are known limitations with the focus groups as a data gathering technique identified in the literature, such as limited generalisability (Lichtenstein and Swatman, 2003) and the possibility of participants guarding their views for the fear of disagreement with others (Grant, 2011). Due to its group format and the associated dynamics, any unstructured issue or a changed question would equally affect everyone in the group, thereby making the analysis easier and more consistent. Focus group advantages are mostly associated with such group dynamics, for example collecting better data when participants are not known to each other, thereby enriching the discussion (Stewart *et al.*, 2007).

Having considered two qualitative data-gathering options, it is apparent that in the given research scenario, the focus group approach will provide a better research outcome for several reasons. Firstly, the issues relating to their limits in generalising the findings would not unduly
affect the research outcome, as focus groups are considered supplementary to online surveys. Taken together, the findings should provide an adequate illustration of the phenomenon to inform the research outcome. Secondly, focus groups provide flexibility to research administration and if organised appropriately could gather information from different demographic groups, leading to a collection of opinions from a wider section of the public. Finally, with the research topic centred on social media adoption to communicate with the public, focus groups could provide an environment to stimulate further discussion, thereby expanding the data boundaries and potentially the knowledge.

In considering this, it has become evident that this research study requires the use of multiple data-gathering techniques in order to gather most appropriate data relating to specific aspects of the study. Table 4.1 identifies these techniques in relation to two integrated but contrasting research dimensions identified earlier as social and technological. These two dimensions focus on the two research sub-questions.

Table 4.1: Identifying research methods and methodologies

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Method(s)</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Longitudinal Study</td>
<td>Quantitative</td>
</tr>
<tr>
<td>Social</td>
<td>Online Survey</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Focus Group Interview</td>
<td>Qualitative</td>
</tr>
</tbody>
</table>

The discussions in sections 4.2.1 – 4.2.5 further expand two main research paradigms identified in Table 4.1. They necessarily consider a mixed-methods approach to govern the process of data gathering and analysis of the gathered data, and use findings to facilitate accurate interpretations. In the process, they demonstrably explain how such contrasting techniques will be managed to achieve expected research outcomes.

4.3. Mixed-Methods Approach (Mixed Methodology)

Mixed methodology (hereinafter called the Mixed Method Approach) is widely considered as the third methodological movement (paradigm) with quantitative and qualitative also known as positivist and interpretivist in the literature, being widely used and the dominating methodological approach. While the application and validity of a quantitative paradigm is well established and the important use of a qualitative paradigm to gather useful information is widely discussed, use of the mixed-methods approach is a relatively recent development
Attention is increasingly focused on moving beyond constant arguments about the pros and cons of the two leading paradigms and progressing towards developing a disciplined methodological pluralism (Landry and Banville, 1992); such discussions are still less prevalent in Information Systems literature (Mingers, 2003). This can also be attributed to the fact that empirical research is cited more often than non-empirical research (Hamilton and Ives, 1982). Notwithstanding the newness, mixed-methods research has seen a rapid rise in popularity over the past ten years (since 2005) (Cameron, 2011).

Venkatesh et al. (2013) argue that the strength of mixed-methods research is based on its applicability to deriving understanding and explaining complex organisational and social phenomena. This strongly suggests engaging in such research to “provide rich insights into various phenomena and develop novel theoretical perspectives” (Venkatesh et al., 2013, p.22). Furthermore, Venkatesh et al. suggest that mixed-methods research uses both quantitative and qualitative methods either concurrently or sequentially, in which findings from one approach inform the other.

4.3.1. Selection Rationale

Apart from the practicalities discussed in previous sections (4.2.1-4.2.5) that led to the identification of individual data collection techniques to be used in this study, the primary rationale for the selection of the mixed method as an approach is the research question and its underlying sub-questions. While the main research question is divided into two sub-questions that govern the technology and the social aspects of the social media environment, the second research sub-question also requires contrasting approaches to data collection. These aspects were captured in the discussion relating to specific sub-questions in sections 3.3 and 3.4 during the formation of the conceptual model. In this unfolding scenario, the following three reasons drive the selection of the overall research approach:

1. The evidence-gathering process relating to the use of social media technologies in order to achieve a pre-defined outcome in a technological environment where changes occur constantly, necessitates consideration of a novel approach. As these changes occur over a reasonable period of time, any associated data collection does require a longitudinal approach.
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2. Regarding the second research sub-question, a focused research design is required that interfaces two contrasting data collection techniques in order to convincingly interpret the results (Creswell and Clark, 2011).

3. Capturing evidence that reflects attitudes of a broad population of the Australian public towards factors relating to their social media adoption requires a method capable enough to gather information about large groups of individuals, such as a survey. However, it is arguable whether such a researcher-driven approach would describe a wholesome picture of a phenomenon without identifying information relating to issues of a complex nature, such as people’s attitudes or opinions. Therefore, the study may necessitate a supplementary evidence-gathering measure of a qualitative nature to provide more insightful information, covering a diversity of views, to add credibility or to provide additional insight, as explained by Bryman (2008).

When selecting mixed methods, the key assumption considered was that adoption of social media is a precursor to using social media to communicate with Australian banks. Mixed methods combine theoretical perspectives realised by analysing responses from a larger participant sample and analysis of relevant data gathered from a smaller theoretical sample to provide a complete understanding of the problem (Creswell and Clark, 2011). A more comprehensive account of the area of inquiry can be brought to the research discussion, for example information extracted from selective and narrowed-down expansion of discussion using both quantitative and qualitative approaches.

However, there are other rationales that can be considered secondary, but still significantly strengthen the argument for the mixed-methods research, as explained by Bryman (2008), and Greene et al. (1989, cited in Creswell and Clark (2011, p.62). These rationales that could be considered secondary in the given context were considered in further decision-making associated with the research design process discussed in the following section.

4.3.2. Mixing Methods

These decisions mostly revolved around the selection of individual methods and issues relating to their levels of interaction, their priorities, timing, and the way they mix in the design, analysis or interpretation stages (Creswell, 2010), and were given careful consideration. The following section will provide a detailed explanation of how such issues have been addressed.
4.3.2.1. Levels of Interaction Between Methods

There are two levels of interaction between the different methods employed in this study, which can be described as independent and interactive (Creswell and Clark, 2011). The level of interaction is considered ‘interactive’ if different data sets are analysed together, otherwise the interaction is considered ‘independent’ and they integrate only when drawing conclusions during the overall interpretation of findings. Table 4.2 illustrates the levels of interaction at the six interface points identified in the entire research process.

Table 4.2: Mixed methods – points of interfaces vs. levels of interaction

<table>
<thead>
<tr>
<th>Points of Interfaces</th>
<th>Level of Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longitudinal study (quantitative and qualitative data)</td>
<td>Interactive</td>
</tr>
<tr>
<td>Online survey and design of the first focus groups</td>
<td>Independent</td>
</tr>
<tr>
<td>Online survey and first focus groups (analysis)</td>
<td>Interactive</td>
</tr>
<tr>
<td>Online survey and first focus groups (interpretation)</td>
<td>Interactive</td>
</tr>
<tr>
<td>Longitudinal study and design of the second focus group</td>
<td>Independent</td>
</tr>
<tr>
<td>Longitudinal study and second focus group (interpretation)</td>
<td>Interactive</td>
</tr>
</tbody>
</table>

As is evident from Table 4.2, the data gathering process covers a broad range of issues and uses different levels of interaction with the data-gathering subjects. This study is subject to two levels of interaction – interactive and independent.

4.3.2.2. Priorities of Quantitative and Qualitative Methods

There are three instances where quantitative and qualitative data gets mixed in the design, analysis or interpretation stages. Three types of priorities were considered in this regard; they are equal priority, quantitative priority and qualitative priority. Table 4.3 presents the priorities identified in each of the three instances.

Table 4.3: Mixed methods – methods used vs. priorities

<table>
<thead>
<tr>
<th>Methods used</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longitudinal study (quantitative and qualitative data)</td>
<td>Equal priority</td>
</tr>
<tr>
<td>Online survey and first focus groups</td>
<td>Qualitative priority</td>
</tr>
<tr>
<td>Online survey and first focus groups (analysis)</td>
<td>Qualitative priority</td>
</tr>
</tbody>
</table>

The priority assigned to one approach over another plays a crucial part in this research study, especially the priority assigned to focus groups over online survey. The research strategy in
this instance is to gain access to relevant information using focus groups that have been used as a primary source during analysis and interpretation. To enhance research value, the participants were selected from the most appropriate demographic segment, identified through online survey analysis that within the broader perspective of the study had a secondary role.

4.3.2.3. Timing of Methods Used

Timing describes the temporal relationships between different methods used in this study. In determining timing or pacing and implementation, three types of classification were used (Creswell and Clark, 2011). They are concurrent (occurs when two or more methods are conducted during a single phase of the study), sequential (occurs when two methods are implemented in two distinct phases) and multiphase combination (occurs when multiple phases are employed consisting of sequential or concurrent timings). Table 4.4 shows the timing of three methodical scenarios identified in this study.

Table 4.4: Mixed methods – methods used vs. timing of methods

<table>
<thead>
<tr>
<th>Methods used</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longitudinal study (quantitative and qualitative data)</td>
<td>Concurrent</td>
</tr>
<tr>
<td>Online survey and first and second focus groups</td>
<td>Sequential</td>
</tr>
<tr>
<td>Longitudinal study and all other methods</td>
<td>Multiphase combination</td>
</tr>
</tbody>
</table>

Details of theses research timings are also graphically illustrated in Figure 4.2.

4.3.2.4. How and Where Methods are Mixed

Mixing is considered a definitive combination of different methods used in the study at the points of interfaces identified earlier for the four different purposes identified by Tashakkori and Teddlie (2010) and Creswell and Clark (2011). They are: mixing during interpretation; mixing during data analysis; mixing during data collection; and mixing at the level of design. These self-explanatory mixing strategies are illustrated in Table 4.5 and identify how each given mixing method is undertaken. Also, the following interfacing strategies were used:

- Merging (explicitly brings two sets of results together);
- Embedded mixing (embeds online survey and first focus groups within the design associated with the online survey);
- Connecting (results of the longitudinal study build to the collection of second focus group data in the form of questionnaire preparation); and
• Program objective framework-based mixing (mixes the findings of the longitudinal study and outcomes of the other sequences of methods within the overall research objective, which guides two joining research paths that provide the multiphase combination. These are illustrated in the Table 4.5.)

Table 4.5: Mixed methods – points of interfaces vs. mixing strategy

<table>
<thead>
<tr>
<th>Points of Interfaces</th>
<th>Mixed …</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longitudinal study (quantitative and qualitative data)</td>
<td>during data analysis and data interpretation by merging</td>
</tr>
<tr>
<td>Online survey and design of the first focus groups</td>
<td>at the level of design by embedded mixing</td>
</tr>
<tr>
<td>Online survey and first focus groups (analysis)</td>
<td>during data analysis by merging</td>
</tr>
<tr>
<td>Online survey and first focus groups (interpretation)</td>
<td>during data interpretation</td>
</tr>
<tr>
<td>Longitudinal study and design of the second focus group</td>
<td>at the level of design by connecting</td>
</tr>
<tr>
<td>Longitudinal study and second focus group (interpretation)</td>
<td>during data interpretation by program objective framework-based mixing</td>
</tr>
</tbody>
</table>

In strategising the aforementioned in Table 4.5, two typologies of reasons for mixing methods articulated by Greene et al. (1989) and Bryman (2006) were considered and are a culmination of issues presented in Tables 4.1 to 4.4.

The identification of points of interfaces and how methods became mixed also considered building research credibility (Niglas, 2010) through the provision of appropriate validity and reliability measures. This was driven by the expectation that employing both approaches enhances the integrity of findings. However, with each method having its own advantages and disadvantages the main challenge of the design phase was not to compound the weaknesses of both methods used, but to compound their strengths.

One such strength of the quantitative method is its ability to draw conclusions using efficient data analysis techniques based on the responses of large numbers of people. This strengthens the generalisability of the findings. However, these findings are very impersonal, especially given the context of the study where it is necessary to understand participants’ attitudes and opinions, which require an understanding of the thought processes behind their decision-making.
Qualitative methods have also provided an opportunity to understand and gather participant experiences as data with minimal external intervention. However, they too have weaknesses, especially the limited generalisability of the findings because only a small number of participants are studied and therefore the findings are considered highly interpretive, and reliance on participants minimises the use of the researcher’s expertise.

In this scenario, mixed methods provide a diversity of views (Bryman, 2006) for this research with the inclusion of two different rationales that combine researcher’s and participants’ perspectives through quantitative and qualitative research respectively. Together, they lead to uncovering relationships between variables through quantitative research while also revealing meanings amongst research participants through qualitative research.

Furthermore, they provide insight by allowing qualitative data to complement quantitative findings, often referred to as putting “meat on the bones” of “dry” quantitative findings, according to Bryman (2006, cited in Creswell and Clark, 2011, p.63).

According to Greene et al. (1989), a mixed-methods approach supports complementarity through an enhanced level of discussion. Applying this precept in the use of mixed methods in this research, together they seek elaboration, enhancement, illustration, and clarification of the results from one method, i.e. the online survey with the results from the focus groups. However, complementarity may not be a factor in the analysis of quantitative and qualitative data gathered separately in the longitudinal study.

From a practitioner’s perspective, especially considering the involvement in the research discussion on Australian banks, the use of mixed methods improves the usefulness of findings. This, according to Bryman (2006), refers to a suggestion more likely to be prominent amongst articles with an applied focus, which is that combining the two will be more useful to practitioners than to others.

4.3.2.5. Research Process

Having made decisions relating to the selection of individual methods and mixing them together in order to address the research purpose, it had become evident that resulting mixed-methods research is an illustration of a convergent parallel design. This consists of a longitudinal study (which collects, analyses, and interprets quantitative and qualitative data) that addresses the first research sub-question, and an explanatory sequential study (online
survey and focus groups) that addresses the second research sub-question (Creswell and Clark, 2011). This is illustrated in Figure 4.2.
The longitudinal study is designed to collect quantitative and qualitative data relating to Australian banks’ presence on selected social media technologies. The quantitative data collected included scales that measured sharing and conversation functionalities, while qualitative data included observing specific aspects of the identities presented by Australian banks’ online presence on selected social media technologies. This data collection was facilitated by direct participation in online communities formed by Australian banks.

The explanatory sequential design that involves an online survey followed by focus groups takes the form of a triangulation design. Interpretation of the explanatory sequential design results in modifications to the theoretical conceptual model. The modified conceptual model and results, interpreted based on the longitudinal study data, were used as the basis for the preparation of questions for the final focus group conducted to validate the modified conceptual model.

For final analysis and interpretation purposes, the results of the two were merged to provide interpretation of the final conceptual model. The overarching consideration is therefore to provide better insights to determine user attitudes towards the social media adoption.

**4.3.2.6. Products and Procedures of the Research Process**

Table 4.6 describes the ‘procedures’ and ‘products’ (Creswell and Clark, 2011) associated with each phase of the data collection and analysis. The four sections 4.3.2 – 4.3.5 will detail each data collection phase.

When mixed methods are used, the sequence of qualitative or quantitative components is dependent upon the context of the study (Brannen, 2005, Barbour, 2005). Therefore, in the explanatory sequential study, the quantitative approach precedes the qualitative approach. The underlying reason is that the participants of social media-based online communities of Australian banks (a smaller number of social media users) are a sub-section of those who adopt and participate in social media (a much larger number of users) in general. The corresponding numbers have partly driven the selection of respective methods.

Table 4.6 describes procedure and products presented during and after the completion of each individual research component.
## Table 4.6: Procedures and products of the convergent parallel design

<table>
<thead>
<tr>
<th>Phase No.</th>
<th>Description</th>
<th>Procedure</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Longitudinal Study (Data Collection)</td>
<td>Three data collection phases with time intervals of 3 months (November/December 2010 - February 2011), 6 months (May/June 2012 - December 2012) and 12 months (December 2012 - December 2013).</td>
<td>Quantitative Data gathered from Australian banks’ social media presence on Facebook (page likes, wall posts), Twitter (tweets, followers), and YouTube (video uploads, subscribers); Qualitative Data such as page information, branding, logos, contact information gathered from Australian banks’ social media presence on Facebook, Twitter, and YouTube.</td>
</tr>
<tr>
<td></td>
<td>Longitudinal Study (Data Analysis)</td>
<td>Collect, collate, and organise downloaded data.</td>
<td>Data set.</td>
</tr>
<tr>
<td></td>
<td>Online Survey (Data Collection)</td>
<td>Cross-sectional Web-based survey (N=213).</td>
<td>Numeric Data.</td>
</tr>
<tr>
<td></td>
<td>Online Survey (Data Analysis)</td>
<td>Descriptive Analysis using IBM SPSS Statistics v22; Mann-Whitney U Test.</td>
<td>Key themes &gt; Thematic Map; Attitudes of Gender and Age Groups towards factors that influence the adoption of social media as a method of communication.</td>
</tr>
<tr>
<td>2</td>
<td>Focus Group Case Selection</td>
<td>Use Descriptive Statistics from phase 2 to select participants from age group 18-34.</td>
<td>2 x Focus Groups with 3-4 participants each.</td>
</tr>
<tr>
<td></td>
<td>Focus Group (Data Collection)</td>
<td>Focus Group Interviews.</td>
<td>Interview Transcripts.</td>
</tr>
<tr>
<td></td>
<td>Focus Group (Data Analysis)</td>
<td>Coding and analysis - Grounded Theory using the thematic map; QSR NVivo v10 Software.</td>
<td>Codes and Themes; Re-evaluate the Conceptual model of social media adoption.</td>
</tr>
<tr>
<td>3</td>
<td>Focus Group (Data Collection)</td>
<td>Focus Group Interviews.</td>
<td>Interview Transcripts.</td>
</tr>
<tr>
<td>4</td>
<td>Focus Group (Data Analysis)</td>
<td>Coding and analysis; QSR NVivo v10 Software.</td>
<td>Codes and Themes.</td>
</tr>
<tr>
<td></td>
<td>Integration of the results of phases 1 &amp; 4</td>
<td>Interpretation of results.</td>
<td>Discussion, Research Limitations, Future Research.</td>
</tr>
</tbody>
</table>
4.3.3. **Longitudinal Study**

The aim of the longitudinal study design was to:

- accommodate the evolving nature of social media technologies; and
- capture any shift in the adoption approaches of Australian banks towards social media in an evolving technological environment.

It is important to consider approaches adhered to by researchers studying phenomena associated with social media.

In their study of social media adoption by the fastest growing US companies (Inc. 500), Barnes and Mattson (2009) adapted a longitudinal approach to unearth the adoption tendencies of the companies concerned. They include the adoption curves of different technologies and tendencies towards the adoption of new technologies over the study period. Several other studies have extracted important research outcomes associated with the evolving nature of social media technologies. Calderwood (2013) considers that longitudinal studies are uniquely placed to exploit social media through the use of social networking sites, while Foster et al. (2010) suggest the use of longitudinal studies to unearth insights into how motivations develop and change over time.

Considering the above, a longitudinal approach was used in this study to gather appropriate data from online communities formed by Australian banks on the selected social media technologies. In this regard, researchers of this study became participants of the respective online communities, which enabled observation of their activities and gathering relevant data using an approach similar to the one proposed by Kozinets (2010) and discussed in section 4.2.3.

4.3.3.1. **Phases of Longitudinal Data Collection**

Three data collection phases have been identified, with varied durations for each phase. The purpose of this was to extend the observations to determine the presence of any association between measured variables and the relevant time duration phase. Importantly, this added validity to the test method used. In Phases 1 and 2 data collection was conducted across the month.

The longitudinal study period was from November/December 2010 to December 2013:
• Phase 1 – November/December 2010 to February 2011 (3-month duration);
• Phase 2 – May/June 2012 to December 2012 (6-month duration);
• Phase 3 – December 2012 to December 2013 (12-month duration).

Using different time durations would have no negative implications on the overall result because the analysis would take place between pairs of variables within each data collection phase. To gather relevant data, the social media-based community participation strategy in section 4.2.3 was adopted. Participation has enabled accurate ongoing observation of the respective online community activity.

As the next step in this process, study samples were determined, informed primarily by a review of the literature, especially in sections 2.3 – 2.5.

4.3.3.2. Selection of Study Samples

Two major study samples are used in this study:

Australian banks

Further to discussions in sections 2.4 and 2.5, which determined the importance of social media to their future business strategy, Australian banks have been selected for this longitudinal study as the first study sample. The banks’ ability to encompass wide-ranging issues, such as regulatory, security and privacy compliance, as a homogenous group of businesses has supported the reasons for their selection, and would enhance the chances of generalising the research outcomes.

The list of Australian banks was obtained from the website of the Australian Prudential Regulation Authority (APRA) as the most appropriate source of Australian banking information (APRA, 2014). Considering the longitudinal nature of this study, any changes to the list within the study period, such as an additional new bank or a name change, was recorded and all corresponding data collected. The final list included: AMP Bank (AMP), ANZ Bank (ANZ), Bendigo Bank, Bank of Queensland (BOQ), Commonwealth Bank of Australia (CBA), Macquarie Bank, Members Equity Bank Australia (ME Bank), National Australia Bank (NAB), Suncorp Bank, Rural Bank, Westpac Bank, Heritage Bank, bankmecu, QT Mutual Bank, Defence Bank, Teachers Mutual Bank, Victoria Teachers Mutual Bank, Beyond Bank, Police Bank, Bank Vic and P & N Bank.
Social media technologies
Many social media technologies are being used by businesses to establish their social media presence by forming social media-based online communities, some of which have been discussed in section 2.3.1. However, this study has considered online communities formed on social media technologies, namely Facebook, Twitter, and YouTube, considering their high use by Australian businesses (Butterworth, 2013) as well as their availability when the study started in November/December 2010.

4.3.3.3. Hypotheses Formation
It had been identified in sections 3.3.1.1 – 3.3.1.7 how various functionalities attached to individual social media technologies form the backbone of the technological aspects attached to their use as communication media. In this regard, the importance of the adapted Honeycomb Model as an appropriate tool that brings together these functionalities was also discussed, in section 3.3.3. As a result, from a practical sense, the model has demonstrated its potential usefulness as a tool to determine the functionality strengths and weaknesses attached to different social media technologies.

Kietzmann et al. (2011) proposed to do this by assigning shades of grey, with a darker shade demonstrating the strength of the functionality for that particular social media technology. For example, Twitter is strong in ‘conversation’ functionality as it can support quick bursts of short messages; so is Facebook, with its ability to support discussion threads. YouTube however is known for being strong on sharing functionality. The outcome of the application of this categorisation strategy on the selected study sample of social media technologies, namely Facebook, Twitter, and YouTube, is presented in Tables 4.7 and 4.8.
Table 4.7: Identification of functionality strengths of selected social media technologies

<table>
<thead>
<tr>
<th>Functionality/Construct</th>
<th>Application of the functionality in relation to social media-based online communities</th>
<th>Relevant/Measured?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity</td>
<td>This is a functionality used by every social media user when creating their social media presence.</td>
<td>Yes</td>
</tr>
<tr>
<td>Relationship</td>
<td>With Facebook, Twitter, and YouTube facilitating online networking, this functionality is relevant to all three technologies.</td>
<td>Yes</td>
</tr>
<tr>
<td>Presence</td>
<td>This functionality is not available for online communities across all three technologies. Hence will not be considered in this study.</td>
<td>N/A</td>
</tr>
<tr>
<td>Sharing</td>
<td>Sharing is a functionality identified with all three technologies, but more with YouTube</td>
<td>Yes</td>
</tr>
<tr>
<td>Groups</td>
<td>Online communities are themselves considered as a group within the social media environment. Hence will not be considered in this study.</td>
<td>N/A</td>
</tr>
<tr>
<td>Reputation</td>
<td>The three technologies concerned do provide verified accounts – a functionality that adds to online reputation.</td>
<td>Yes</td>
</tr>
<tr>
<td>Conversation/Communication</td>
<td>Conversation is a functionality identified with all three technologies, but more strongly with Facebook and Twitter.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Having determined the functionalities relevant to the three technologies that are to be measured, Table 4.8 maps these functionalities to variables and relevant constructs that are to be measured empirically. In this table, quantitative data are identified as those that can be measured and analysed numerically, whereas qualitative data are identified as those that can only be explained qualitatively, for example, visual examination. The data collection procedure is explained in section 4.3.3.4.

Table 4.8: Mapping of key social media functionalities to measured variables

<table>
<thead>
<tr>
<th>Functionality</th>
<th>Data Type</th>
<th>Measured Constructs/Observed themes</th>
<th>Facebook</th>
<th>Twitter</th>
<th>YouTube</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversations</td>
<td>Quantitative</td>
<td>Wall Posts, Tweets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharing</td>
<td>Quantitative</td>
<td>Page Likes, Followers, Subscribers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationships</td>
<td>Quantitative</td>
<td>Verified account and links through official website</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reputation</td>
<td>Qualitative</td>
<td>Brand name, logo, corporate colours, and contact information</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.8 identifies three functionalities that can be measured quantitatively. Therefore, two null-hypotheses were formed to measure the presence of any potential association that relationships functionality has with sharing and conversations functionality. The presence of any potential association relationships functionality has with reputation and identity functionality was analysed qualitatively and therefore no null-hypotheses were formulated.
The two null-hypotheses are:

H0: There is no positive association between shared content and relationships;

H0: There is no positive association between conversations and relationships.

4.3.3.4. Data and Collection Procedure

This longitudinal study design process was driven by the need to capture the dynamic from selected social media technologies, especially the changes that occurred in key qualitative and quantitative parameters identified in section 4.3.3.3, within the social media presence of Australian banks. The data collection procedure consisted of the following steps, which occurred at the start and end of each data collection phase identified earlier:

- Search the official websites of registered Australian banks for links to their respective social media presence. Also, search the names of respective banks within the social media technologies. Any such presence to be duly recorded;
- Google search for word conjunctions with the names of social media technologies and bank names;
- If any presence of Australian banks on either Facebook, Twitter or YouTube is observed, researcher will take the appropriate action relevant to each technology to become a participant of that community;
- Observe and record the number of Facebook Wall posts/Page likes, Twitter tweets/followers, and Video uploads/subscribers relevant to the data collection period. Online relationships formed between participants of Australian banks’ social media-based online communities through their own social media presence were not considered in the data-gathering process.
- Follow above steps at each of the data-gathering phases described in section 4.3.3.1.

As stated earlier, considering the longitudinal nature of this study, any changes that occurred to the list of Australian banks within the study period, such as the addition of a new bank to the list or a name change, was recorded and all corresponding data collected.

4.3.3.5. Assumptions

The following three assumptions have been considered to facilitate the collection of appropriate data and their analysis:
Assumption 1: Australian banks have not modified their Facebook posts and/or comments, Twitter tweets and/or responses, YouTube video uploads and/or comments as owners of their respective social media presence. This assumption was made based on past experience with one of the Australian banks that has received public hostility on the mainstream as well as social media for deleting unfavourable public comments made on social media (Bruns, 2012).

Assumption 3: Australian banks are more likely to use social media technologies that have a larger user-base. This assumption, if tied to the determination to focus on the size of the online community measured by the number of online relationships with Australian banks, could accumulate on their respective social media presence (section 2.7).

4.3.3.6. Data Analysis Techniques

The longitudinal quantitative and qualitative data collected as per Table 4.8 was analysed separately to determine the nature of association that sharing and conversation (quantitative analyses) as well as identity and reputation (qualitative analyses) functionalities have with the relationship functionality that quantified the size of the community.

With regard to the quantitative aspects of the analysis, Spearman’s correlation analysis was selected over Pearson’s coefficient analysis as it is considered satisfactory for testing the null hypotheses of no relationship. Also, with the number of samples being low, the greater sensitivity of Pearson’s coefficient to outliers was also a reason for the selection of Spearman’s correlation analysis. The Spearman’s correlation coefficient does not require the variable to be measured on interval or ratio scale (Bolboaca and Jäntschi, 2006).

According to Kendall (1948), Spearman’s correlation coefficient determined any correlation between selected pairs of dependent variables. It and has been used in such analyses since the turn of the twentieth century, when it was often used to measure statistical dependence between two variables. The Spearman’s correlation coefficient ($r_s$) can take values from +1 to −1, where $r_s$ of +1 indicates a perfect association of ranks, and $r_s$ of −1 indicates a perfect negative association of ranks. The association between the ranks is considered weaker when $r_s$ is closer to zero. In the analysis, a statistical significance test is used to evaluate the possibility of accepting or rejecting the null hypotheses. It is assumed that a monotonic relationship exists between selected variables.
With regard to the qualitative aspect of the analysis, the manner in which Australian banks have presented themselves on respective social media, and how banks present their brand online, as identified in Table 4.8, has evolved over the period of the study and will be analysed. In this regard, suggestions such as visualising, filtering and sorting to derive values espoused by Heer and Shneiderman (2012) have been used.

4.3.4. **Explanatory Sequential Study**

As discussed in section 4.3.2.5, an explanatory sequential study is conducted with the aim of addressing the research sub-question, “How do the adoption decisions of users affect their participation in social media-based communication with Australian banks?” Conducting an explanatory sequential study uses a combination of quantitative and qualitative research approaches conducted sequentially. In this regard, the findings of the researcher-driven analysis of data gathered from a broader cross-section of the Australian public using an online survey will inform the subsequent gathering and analysis of qualitative data gathered from focus group participants. As indicated in section 4.3.1, the key assumption here is the adoption of social media is a precursor to using social media to communicate with Australian banks.

Sections 4.3.4.1 and 4.3.4.2 describe these two studies in detail.

4.3.4.1. **Online Survey**

The primary objective of the online survey is to determine in general terms the factors that influence the public to use social media as a form of communication. With the adoption of social media considered as a compulsory precursor to participation in social media-based online communities by the public, the online survey findings will be used for the focus group discussion that follows (see section 4.3.2).

Notwithstanding the methodological issues associated with online surveys, such as self-selection or lack of control over testing conditions (Gosling et al., 2004), the selection of the online survey was governed by the discussion in section 4.3.4. This method was given preference over others primarily because it provided a higher probability of gaining access to the Internet population in which social media users form a subgroup. Methodically, it had also been considered that issues such as self-selection are no more troublesome than in mail or telephone surveys (Matsuo et al., 2004).
4.3.4.1.1. Population and Sampling

The population selected for this research was the Australian adult population who are likely users of social media. This population sample was chosen because of the Australian context of the research, their highly likely associations with Australian banks, the subject of this research study, and for the purpose of research generalisations (Seddon & Scheepers, 2012). The online survey questionnaire was designed to filter those people who are 18 years or older. Non-probability convenience sampling (Walter, 2010) was used to select an adequate sample of social media users. To overcome potential disadvantages, such as its unrepresentative nature, the advantages of online communication tools were exploited to distribute invitations to participate with the survey link. This has facilitated broaden the reach to include a wider audience, not constrained by geographical limitations.

The survey invitations to participate in the online survey were primarily propagated via social media built into the survey design environment provided by Qualtrics Inc. – the company that facilitated the design and hosting of the online survey. The social media technologies where the researcher had an active presence were also used to distribute the survey.

Apart from social media, invitations to participate in the research were distributed across multiple media, including the university learning management system (CloudDeakin), and mail-outs with survey links randomly selected staff members of the university (academic/non-academic). No reminders were posted on any of the media used to propagate the invitation. However, it cannot be discounted that the recipients of the original email or those who have seen the social media message recommended it to others.

Two hundred and sixty one (261) respondents took part in the survey of which two hundred and thirteen (213) indicated they were users of social media and therefore were used in the following analysis. This number provides adequate responses to undertake a principal component analysis consisting of 18 variable as the number is within the required ratio of 10-15 response per variable (Zorn et al., 2011). Considering the invitation propagation method used, it is not possible to determine the rate of response.

4.3.4.1.2. Questionnaire Design

The online survey questionnaire (Appendix A) was designed primarily to gather information on variables deemed to influence the adoption of social media as a collective communication
medium. The structured questions were formulated based on the outcome of the discussion conducted in section 3.4.3 around the factors governing users’ adoption of social media for communication. In formulating the questions, relatively non-technical nomenclatural language was used to enable a common contextual understanding by the majority of those interested in participating. The survey questionnaire was segregated into four distinctive categories.

The first category included four probing questions that conformed to meeting participatory requirements. These questions covered participant acceptance of the plain language statement and verification of participant age and residency requirements. Finally, a probing categorical question was included to confirm whether or not the participant is a user of social media.

The second category of questions included fifteen (15) questions formulated as self-descriptive attitudinal statements based on established theoretical foundations identified as influential in the adoption of technologies as communication media. Thirteen of the fifteen questions were selected in a manner that represented at least one grouping of related theoretical foundations, identified in the Interactive Communication Technology Adoption (ICTA) model as use, audience, and social factors. The other two questions related to specific banking situations that would have driven the public to resort to social media, represented contextual factors. In these questions, respondents were asked to rate their agreement/disagreement with the statements using a Likert scale from strongly disagree (-2) to strongly agree (2).

The third category of questions included multiple-choice questions. These questions covered respondents’ attitude towards using social media and specific issues relating to banking. They were meant to explore peoples’ reactions in specific situations, for example in relation to problems associated with technologies providing day-to-day banking services, such as Internet banking or Automated Teller Machines. However, data gathered from responses to these questions were not considered a relevant part of the analysis in this research study.

The fourth category of questions can be identified as categorical. They were included to capture participant demographic information related to gender, age group, occupation, salary range, and a question that inquired of the manner in which the participant came to be informed of the survey.

These attitudinal questions, formulated to collect data from a cross-section of a wider population and to measure their attitudes towards adopting social media as a method of
communication, were converted into numerical form to have them statistically analysed. The interpretation of these was then applied to the qualitative aspect of the design.

4.3.4.1.3. Scale Selection

A Likert-type scale that is commonly used in social sciences in the assessment of attitudes (Gliem and Gliem, 2003) was used in this online survey questionnaire to learn public attitudes towards factors that determine their adoption of social media as a method of communication. With research conducted with a number of response categories ranging from two to eleven, indicating different scales for different purposes (Preston and Colman, 2000), considering the balance between respondent time pressures and reasonable reliability and validity indices, the five-point Likert-type scale was used. Questions with the option to select multiple items were transformed into questions with dichotomous items.

4.3.4.1.4. Addressing Survey Issues

Self-selection, multiple submissions, and control over testing conditions are considered potential problem areas in online survey designs (Gosling et al., 2004). It is possible that some participants are motivated to take part in the survey by their interest in the research topic, thereby creating a bias to the sample representation. However, self-selection in online surveys may be no more ambiguous than mail or telephone surveys, according to Matsuo et al. (2004), who undertook an exhaustive review of literature on the issues surrounding the methodologies, design, conduct and monitoring of online surveys.

Based on the findings of earlier research, Kraut et al. (2004) suggest that online surveys have a lower response rate than mail or telephone surveys, and recommend offering material incentives upon completion of the survey to encourage participation. Even though there is continuing discussion on the pros and cons of this initiative, previous research has proved that there is an increase in participation rates and therefore completion rates when material incentives are employed (Göritz, 2006). Such an approach therefore makes sense as it gets the attention of the potential participants in a competitive environment where more resourced organisations operating in the online environment offer attractive incentives.

Couper (2000) reminds researchers of another disadvantage of an online survey, the difficulty of exactly defining the sampling frame. In this online survey, pre-identification of the sampling
frame was not possible considering the multiple mediums required to propagate the survey invitations with the aim of attracting participants from varied demographics.

4.3.4.1.5. Selection of Web-Based Survey Tool

Two well-known Web-based tools were considered for the purpose of hosting the survey, namely ‘Survey Monkey’ and ‘Qualtrics’; both are highly regarded and used in market and academic research. The survey questionnaire was then designed and hosted using Web-based tools offered through qualtrics.com.

Improvements made to online survey questionnaire building tools such as Qualtrics, have made it easier to overcome multiple submission issues by limiting responses stemming from a given Internet Protocol (IP) address that is considered as a unique number, to a single response. Such tools also allow the investigator to have more control over the flow of the survey or the testing environment, even though there are potential repercussions with limiting responses from IP addresses due to dynamic IP address allocation and proxy servers. These contemporary survey/questionnaire building tools also have functionalities that would enable forcing the respondent to answer questions in order to move forward and also to move back and forth to different pages of the online survey.

The last section covered demographic questions regarding gender, age, occupation, and income, as well as a question about how they heard about the online survey. Two of the five questions were open-ended and a further three questions were included to measure the attitude of the participants in three given situations.

4.3.4.1.6. Content Validity

Content validity was conducted using the staff email list of the School of Information Systems at Deakin University. The pilot was responded to by five staff members. Two useful comments made by the participants of the pilot study were later incorporated into the survey questionnaire:

- ‘Other’ as an option to qualitative open-ended questions: This addition has facilitated broadening the answers to respective questions.

- Place of residence: Formulating the question “In which country do you reside?” has led to one pilot study participant getting confused and answering “outside Australia”, thinking that the question was about the actual residency of the participant who is an
international student living in Australia even though considered as living in Australia for survey purposes. The question was later changed to “Where do you live at this moment?” to better reflect what is expected for the response.

4.3.4.2. Focus Groups
As identified in the research process (Figure 4.2), focus groups follow the online survey, which is conducted with a sample of Australian social media users as the intended population. Focus groups were considered to obtain more insightful information relating to their adoption of social media to communicate with Australian banks. Considering the broad-ranging discussion that the focus group moderator and its participants could initiate and facilitate, the usefulness of focus groups is thus significant in unearthing such information relating to social media as relatively new phenomena. Because banking is a service close to the public’s mind, considering its significance in conducting their day-to-day financial activities, public opinion about their use of social media to communicate with banks carries a significant importance in this research study.

In research, the use of focus groups is an important data-gathering technique that has been used previously to gather insightful information “into thoughts, ideas, perceptions and attitudes of individual social networking members” (Urista et al., 2009, p.221). Applying this theory in this research study, it was expected that each individual would share his or her opinion by applying their cognitive attention to the topic (Hydén and Bülow, 2003) of adopting social media to communicate with Australian banks. This information contained participants’ views of the phenomena captured in the form of articulated, attributional and emergent data, which was then analysed and interpreted for the overall research findings (Massey, 2011).

However, it is equally important to describe the basic methodological assumptions made when selecting this qualitative method.

Caelli et al. (2008) highlighted a lack of methodological clarity amongst the common problems identified with qualitative studies, arguing the need to heighten awareness of the basic methodological assumptions employed in making research choices. This research study has adapted two key assumptions based on Morgan and Smircich’s (1980, p.492) discussion that relates to qualitative data collection, analysis and interpretation. The two assumptions, which are philosophical and human in nature, are:
• reality as a social construction; and
• man as a social constructor, the symbolic creator.

These two methodological assumptions are made to realistically reflect on the inductive nature of the procedures. They are also an outcome of researcher’s own experience in the collection and analysis of focus group data and the subjectiveness of the data created, gathered, and analysed. They explain that the researcher works with the details and specific information relating to user participation in social media-based communication with Australian banks, the manner in which they provide information, and the manner in which the researcher gathers and analyses such information. Their relevance in the qualitative aspect of this research will be implicitly displayed when the collection, collation, and analysis of relevant data is completed, which explores “recurring patterns, categories or factors that cut through the data and help to further delineate the theoretical frame” (Caelli et al., 2008, p.3).

4.3.4.2.1. Sample Selection

As previously indicated in Table 4.6, the population sample was determined based on the outcome of the online survey findings and the subsequent analysis of the gender and age-group attitudes towards factors that influence their adoption of social media as a communication method. The overall findings indicated that those who are in 18-34 age-group demonstrate significant attitudinal differences, hence their selection as the population sample. The selection of this population sample is also in agreement with the determination made in the literature review to the effect that banks considering this age-group as a potential growth segment (Foscht et al., 2009) as banks consider new technology approaches (Crosman, 2010) to get through to this segment. Importantly, this selection can also be considered relevant in light of the findings of Bolton et al. (2013) to the effect that the younger generation, age group category 18-34, is more likely to prefer social media as a method of communication. Considering the aforementioned reasons, any relevant information gathered from members of this group would enhance the applicability of the conceptual model being studied.

To capture the attention of potential members of this group, a pre-focus group questionnaire (Appendix C) was designed and published using the online tool provided by Qualtrics Inc. This questionnaire included an open-ended question that covered the use factors of the social media adoption model and four demographic questions, in addition to the primary focus of
obtaining consent to participate. The data gathered from these additional questions will be used in coding and analysing the focus group transcriptions.

As with the online survey, an invitation was distributed using primarily online media channels such as Deakin University’s Web platform, social media, and social media-based student communities, such as the student association and higher degrees by research group where members of the targeted age group frequent. This invitation was also propagated via social media channels built into Qualtrics as survey distribution tools. Apart from that, this researcher’s own presence on various social media technologies was also used to distribute the survey invitation.

There were 18 respondents who expressed their intention to participate in the pre-Focus Group questionnaire. An invitation letter containing two potential dates and times organised in consultation with the moderator was sent to participants who passed the selection process, using the contact email address they provided in their response to the questionnaire. Even though focus groups generally consists of about 6-8 people, it was decided to have two micro focus groups of 3-4 people conducted on the same day, under a similar environment to strengthen the analysis outcomes by adding an extra ‘validation’ layer to compare and present participant responses. Subsequently, two focus groups sessions were conducted that consisted of 3 and 4 participants who previously expressed their interest to participate.

The focus group sessions were audiotaped, transcribed verbatim and checked for accuracy by comparing the transcriptions with audio data once more.

4.3.4.2.2. Focus Group Questions

The aim of the question design phase was to ensure that the questions were theoretically relevant in their participation or non-participation in social media-based online communities. They formed the basis for further focus group discussion. In addition, consideration was given to making the questions ethically appropriate, in view of the open nature of a focus group discussion. The outcome of this exercise was a one-page ‘running sheet’ that was used by the moderator during focus group sessions, which also contained introductory information, basic focus group rules, and definition of social media-based online communities. Semi-structure focus group questions are included in Appendix B.
4.3.4.2.3. Focus Group Analysis Procedure

Coding the data was conducted by using NVivo software version 10.0 which is a vastly improved version of the one that Welsh (2002) had considered incapable of undertaking in-depth search of the content, i.e. search in external files of different formats. The use of this software has improved the quality of the analysis by enabling constant comparisons between two data sets gathered from two separate focus group sessions.

A constant comparative method supported by theoretical sampling was used in the analysis of the focus groups data. Together, these components constitute the core of qualitative analysis associated with the Grounded Theory approach, developed by Glaser and Strauss (1967, cited in Glaser, (1992)).

Focus group participants’ responses were analysed in the same order as they were conducted, following which constant comparative guidelines suggested by Boeije (2002, p.395) were adapted and employed:

- Comparisons of responses within a single structured question, a topic emanated from the discussion, or questions that the moderator has posed to generate more discussion. In this regard, open coding was used with the primary aim of making sense of the data.
- Comparison of responses within two separate focus groups for responses to aforementioned questions and topics. For this purpose, axial coding was used in formulating criteria for comparing responses and hypothesising about patterns and types.
- Comparisons of responses from both focus groups with different perspectives but with a focus on the inquiry – How do the adoption decisions of users affect their participation in social media-based communication with Australian banks?
- Grouping and naming emerged themes under each of the four adoption factors, namely use, audience, social, and contextual, relating to social communication aspects. These factors form the thematic map of the analysis. They have been identified in section 3.4.3 and empirically determined their appropriateness in section 6.3.2 in the context of this research.

Focus group data consisted of answers to seven structured questions, the formulation of which was partly from the outcomes of the longitudinal study and the online survey. Apart from
responses to those questions, any relevant topics that were initiated by the participants during the course of the discussion were also included in the analysis.

These focus group interviews were organised to derive key information from a selected demographic group representing the public. Initially informed by the longitudinal study and the online survey, they were expected to enrich the discussion in regard to factors that drive them to use social media as a method of communication. Chapter 7 will explain and interpret the outcome of this focus group analysis.

4.3.5. **Focus Group (Model Validation)**

The purpose of this focus group is to validate the re-evaluated conceptual model based on the empirical research findings from the explanatory sequential study discussed earlier, consisting of an online survey and focus groups. Focus groups have been considered widely in research associated with various disciplines (Brown and Jayakody, 2008, Verhagen *et al.*, 2006). Using a focus group in the model validation provides an opportunity to understand participant insights relating to the model. Pye (2009) used multiple focus groups in the framework formation and validation of data to determine critical revisions and amendments. The data was gathered with minimal intervention and moderation, and is entirely the views of participants, who can be considered experts on governing factors that drive them to communicate with Australian banks through social media. From a practitioner’s point of view, this input provides valuable insight into users’ decision-making.

4.3.5.1. **Sample Selection**

The same guidelines employed in the sample selection for initial focus groups associated with the explanatory sequential study was used for model validation. Four of the seven focus group participants who had taken part on the earlier occasion and had given their consent to participate in further research associated with this study, were sent invitations to their respective email addresses.

With an important part of the research focused on the public, the selected group of participants, with their prior exposure to communicating with Australian banks using social media, are in a better position to provide their impressions of the conceptual model that would add clarity to the discussion. This information was obtained from the pre-focus group questionnaire that every participant had voluntarily completed.
Those who expressed their continued interest in the research study via a return email confirming their participation, were provided with date, time and location details of the focus group.

4.3.5.2. **Focus Group (Model Validation) Questions**

Focus group questions are formulated in a semi-structured manner to explore in more depth the related participant experiences and the meanings they attribute to them (Tong *et al.*, 2007). The questions were based on various aspects of the re-evaluated conceptual model and empirical research studies described in sections 4.3.3 – 4.3.4. The overall objective of these focus groups is to evaluate the theoretically formulated and empirically supported conceptual model and determine whether the model grasps the crucial aspects of Australian banks using social media to communicate with the public.

The structured questions consisted of specific questions aimed at eliciting participants’ overall impression of the model and their understanding in relation to their communications with Australian banks using social media.

This focus group was also audiotaped, transcribed verbatim and checked for accuracy by comparing the transcriptions with audio data once more. A focus group running sheet with the re-evaluated conceptual model was presented to the participants.

While the initial focus groups have provided useful information with regard to the social aspects of social media communication adoption, this focus group was designed to validate the adoption model that was formulated after careful application of research outcomes in the preceding research activities. Chapter 8 will explain and interpret the outcomes of this focus group.

This discussion has focused on a range of methods that are to be employed in a mixed-methods approach and covered limitations attached to each method. Apart from these individual limitations, use of mixed methods also poses challenges relating to their levels of interaction, their priorities, timing, and the way they mix in the design, analysis or interpretation stages (Creswell, 2010) as mentioned in section 4.3.2. These broader limitations were addressed in a logical manner in sections 4.3.2.1 – 4.3.2.4 that have provided protection against potential pitfalls affecting overall research expectations.
4.4. **Ethics Consideration**

The ethical issues associated with three of the four data collection phases have been addressed in accordance with the guidelines stipulated by the National Health and Medical Research Council relating to the Australian code for responsible conduct of research (NHMRC, 2007). The application submitted to the Deakin University Human Ethics Advisory Group (HEAG) was categorised as ‘low-risk’ by the group and given the relevant ethics approval under the code BL-EC 28-13.

4.5. **Conclusion**

This chapter has discussed the methodological aspects associated with this research study. The methodological discussion started with key research issues identified in the preceding two chapters, namely the literature review and the conceptual model development. The outcomes support the reasons behind selecting one methodology or one data-gathering technique over another.

The complexities associated with integrating diverse research approaches and data-gathering techniques, as well as overcoming such challenges, have been discussed and addressed.

Consequently, a convergent parallel research design was proposed – a convergence of longitudinal study and an explanatory sequential study. In support of this, the designs of each of the data-gathering techniques have been addressed to facilitate broader understanding of the analysis chapters to follow.

Moving forward, the forthcoming Chapter 5 covers the analysis of the longitudinal study discussed in section 4.3.3. Meanwhile, Chapters 6 and 7 cover the individual research components that form the explanatory sequential study, namely the online survey and the focus groups respectively, discussed in section 4.3.4.
5. ANALYSIS & DISCUSSION – LONGITUDINAL STUDY

5.1. Introduction

This chapter focuses on the analysis of data collected during the longitudinal data-gathering process that was discussed in section 4.3.3. This analysis aims to provide a preliminary answer to the first research sub-question, ‘What social media functionalities are effective when the public and Australian banks communicate?’

The analysis also considers the primary success factors relating to Australian banks’ use of social media to communicate with the public, and the creation of an online community with an adequate number of participants. Considering the large number of users associating themselves with different social media technologies, to whom Australian banks can gain access using social media, there is no definitive or minimal number of participants required to demonstrate the success of their efforts.

Quantitative and qualitative social media data was gathered longitudinally over a period of three years. The primary focus of this analysis is relationship functionality, identified as one of the seven key social media functionalities of the adapted Honeycomb Model (section 3.3.3) and the associations it has with sharing, conversation, identity, and reputation functionalities.

In this regard, the relationship functionality is identified as a key quantitative measurement of the number of social media users expressing interest in communicating with Australian banks by participating in their respective social media-based online communities. These are measured in this study by Facebook Page Likes, Twitter followers, and YouTube channel subscriptions, as explained in section 4.3.3.4.

Based on the quantitative and qualitative of data gathered, two separate analyses were conducted using suitable analysis techniques/approaches. The quantitative analysis explored the association between relationship functionality, sharing and conversation functionalities using Spearman’s correlation coefficient. The findings of this analysis are presented in section 5.2. The qualitative analysis that explored the association between relationship functionality with identity and reputation functionalities use the researcher’s observations of the predetermined signs that reflect identity and reputation functionalities. These findings are presented in section 5.3.
Chapter 5: Analysis & Discussion - Longitudinal Study

The overall findings are summarised in section 5.4 and serve three main purposes. Firstly, they answer the first research sub-question. Secondly, they are to be used later to form the social media adoption model for Australian banks to communicate with the public that was later validated through a focus group discussion. Thirdly, these findings were later used to formulate semi-structured questions for a focus group that validates the model.

The following sections present data gathered longitudinally and analysis conducted to explore associations that relationship functionality has with sharing, conversation, identity, and reputation functionalities.

5.2. Quantitative Analysis of Association Between Functionalities

As explained in section 4.3.3.3, quantitative analyses of association between two sets of functionalities were conducted to test two null hypotheses. In this regard, the Spearman’s correlation coefficient analysis was used on the relevant data collected as per Table 4.8.

5.2.1. Association Between Sharing and Relationship Functionalities

The findings of this analysis explain how Australian banks use the sharing functionality and explore potential associations it has with the relationship functionality that quantifies user numbers accumulated in their respective social media communities. As explained in section 4.3.3.4, sharing is measured in YouTube Video Uploads (video clips posted on YouTube by the respective Australian banks). The results of the analysis apply Spearman’s correlation coefficient by pairing it with corresponding measures of YouTube subscribers, as presented in Table 5.1. The three rows correspond to the three temporal data collection intervals.

Table 5.1: Analysis outputs for sharing and relationship functionality pairing (intra-technology)

<table>
<thead>
<tr>
<th>Test Pair</th>
<th>Data Collection Interval</th>
<th>Correlation Coefficient</th>
<th>Sig.</th>
<th>Paired Observations</th>
<th>Monotonic Relationship? (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YouTube Uploads vs. YouTube Subscribers</td>
<td>3 months</td>
<td>.661</td>
<td>.052</td>
<td>9</td>
<td>Yes</td>
</tr>
<tr>
<td>YouTube Uploads vs. YouTube Subscribers **</td>
<td>6 months</td>
<td>.911</td>
<td>.000</td>
<td>11</td>
<td>Yes</td>
</tr>
<tr>
<td>YouTube Uploads vs. YouTube Subscribers **</td>
<td>12 months</td>
<td>.942</td>
<td>.000</td>
<td>17</td>
<td>Yes</td>
</tr>
</tbody>
</table>

** Correlation is significant at 0.01 level (2-tailed).
An increase in the number of subscribers (that represent relationship functionality on YouTube) is strongly associated with an increase in YouTube Video Uploads (that represent sharing functionality on YouTube). While this association is not statistically significant in relation to an initial data collection of 3-months’ duration, it has returned a statistically significant association for data collections of 6-months’ duration \( (r_s(9) = .911, p < .0005) \) and 12-months’ duration \( (r_s(9) = .942, p < .0005) \) respectively. Considering the larger sample sizes in the latter two associations, it is possible to reject the null hypothesis identified in section 4.3.3.3 and accept the alternative hypothesis.

Similarly, a further Spearman’s correlation analysis was conducted to determine potential associations YouTube Video Uploads have with relationship functionality on Facebook and Twitter. The outcomes of this analysis carries weight because of the observations made relating to Australian banks’ use of these two technologies to disseminate information about relevant YouTube Video Uploads. In fact, YouTube (2013b) suggests using other social media channels to leverage the relationships created on them, and associations were tested using intra-technology variables. In this regard, sharing, measured by the YouTube uploads functionality, was paired with relationship functionalities of both Facebook and Twitter, measured by Page Likes and Followers respectively. The test outcomes are presented in Table 5.2.

Table 5.2: Analysis outputs for sharing and relationship functionality pairing (inter-technology)

<table>
<thead>
<tr>
<th>Test Pair</th>
<th>Data Collection Interval</th>
<th>Correlation Coefficient</th>
<th>Sig.</th>
<th>Paired Observations</th>
<th>Monotonic Relationship? (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YouTube Uploads vs. Facebook Page Likes</td>
<td>3 months</td>
<td>.500</td>
<td>.667</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>YouTube Uploads vs. Facebook Page Likes **</td>
<td>6 months</td>
<td>.929</td>
<td>.001</td>
<td>8</td>
<td>Yes</td>
</tr>
<tr>
<td>YouTube Uploads vs. Facebook Page Likes ***</td>
<td>12 months</td>
<td>.622</td>
<td>.018</td>
<td>14</td>
<td>Yes</td>
</tr>
<tr>
<td>YouTube Uploads vs. Twitter Followers</td>
<td>3 months</td>
<td>.700</td>
<td>.188</td>
<td>5</td>
<td>No</td>
</tr>
<tr>
<td>YouTube Uploads vs. Twitter Followers ***</td>
<td>6 months</td>
<td>.857</td>
<td>.014</td>
<td>7</td>
<td>Yes</td>
</tr>
<tr>
<td>YouTube Uploads vs. Twitter Followers ***</td>
<td>12 months</td>
<td>.543</td>
<td>.030</td>
<td>16</td>
<td>Yes</td>
</tr>
</tbody>
</table>

** Correlation is significant at 0.01 level (2-tailed). *** Correlation is significant at 0.05 level (2-tailed).
An increase in the number of Page Likes (that represent relationship functionality on Facebook) is strongly associated with an increase in YouTube Uploads (that represent sharing functionality on YouTube). The Spearman’s correlation coefficient result for the data collection of 3-months’ duration is neither statistically significant nor is there a monotonic relationship between the variables, hence it is ignored. However, the Spearman’s correlation coefficient for data collections of 6-months’ duration ($r_s (6) = .929, p < .05$) and 12-months’ duration ($r_s (12) = .622, p < .05$) did return statistically significant positive associations.

A similar pattern was demonstrated in the intra-technology correlation tests between YouTube and Twitter. An increase in the number of Australian bank Twitter followers (that represent relationship functionality on Twitter) is strongly associated with an increase in YouTube Uploads (that represent sharing functionality on YouTube). This reflects the effect of using the sharing functionality that Australian banks have on all social media technologies where they have an active presence. The Spearman’s correlation coefficient result for the data collection of 3-months’ duration is neither statistically significant nor is there any monotonic relationship between the variable pair, hence it is ignored. However, the Spearman’s correlation coefficient for data collections of 6-months’ duration ($r_s (5) = .857, p < .05$) and 12-months’ duration ($r_s (14) = .543, p < .05$) did return statistically significant positive associations.

Interestingly, in both situations, the strength of the association has reduced with the increase in duration and number of combinations. However, the results do not invalidate the ability to reject the null hypothesis and accept the alternative hypothesis.

Most importantly, the test results illustrated in Tables 5.1 and 5.2 highlight the strong association present between sharing and relationship functionalities when using both inter-technology and intra-technology variables.

### 5.2.2. Association Between Conversation and Relationship Functionalities

The findings of this analysis explain how Australian banks use the conversation functionality and explore potential associations it has with the relationship functionality that quantifies user numbers accumulated in their respective social media communities. As explained in section 4.3.3.4, conversations are measured by the number of Facebook Wall Posts and Twitter Tweets. The results of the analysis using Spearman’s correlation coefficient by pairing it with
corresponding measures of Facebook Page Likes and Twitter Followers are presented in Table 5.3. Three rows each correspond to three data collection intervals on Facebook and Twitter respectively.

Table 5.3: Analysis outputs for conversation and relationship functionality pairing (intra-technology)

<table>
<thead>
<tr>
<th>Test Pair</th>
<th>Data Collection Interval</th>
<th>Correlation Coefficient</th>
<th>Sig.</th>
<th>Paired Observations</th>
<th>Monotonic Relationship? (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook Wall Posts vs. Facebook Page Likes</td>
<td>3-months</td>
<td>-.500</td>
<td>.667</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>Facebook Wall Posts vs. Facebook Page Likes ***</td>
<td>6-months</td>
<td>.742</td>
<td>.014</td>
<td>10</td>
<td>No</td>
</tr>
<tr>
<td>Facebook Wall Posts vs. Facebook Page Likes **</td>
<td>12-months</td>
<td>.684</td>
<td>.003</td>
<td>16</td>
<td>Yes</td>
</tr>
<tr>
<td>Twitter Tweets vs. Twitter Followers **</td>
<td>3-months</td>
<td>.964</td>
<td>.000</td>
<td>7</td>
<td>No</td>
</tr>
<tr>
<td>Twitter Tweets vs. Twitter Followers **</td>
<td>6-months</td>
<td>.888</td>
<td>.000</td>
<td>12</td>
<td>Yes</td>
</tr>
<tr>
<td>Twitter Tweets vs. Twitter Followers **</td>
<td>12-months</td>
<td>.802</td>
<td>.000</td>
<td>22</td>
<td>Yes</td>
</tr>
</tbody>
</table>

** Correlation is significant at 0.01 level (2-tailed). *** Correlation is significant at 0.05 level (2-tailed).

Based upon data presented in Table 5.3, an increase in the number of Page Likes (that represent relationship functionality on Facebook) is strongly associated with an increase in Facebook Wall Posts that represent conversation functionality on Facebook (see Table 4.7). The Spearman’s correlation coefficient result for the data collection of 3-months’ duration is neither statistically significant nor is there a monotonic relationship between the variables. The correlation coefficient associated with the data collection for 6-months’ duration was also ignored due to the lack of a monotonic relationship between this pair of variables. However, the Spearman’s correlation coefficient for data collections of 12-months’ duration ($r_s (14) = .684, p < .005$) returned a statistically significant positive association. Similarly to previous tests of associations (Tables 5.1 and 5.2), the results are not indicative of any causality.

However, an analysis based on Twitter data has returned a stronger pattern of associations between Twitter Tweets and Followers. An increase in the number of Twitter Followers (that represent relationship functionality on Twitter) is strongly associated with an increase in Tweets (that represent conversation functionality on Twitter). The Spearman’s correlation coefficient result for the data collection of 6-months’ duration is ($r_s (10) = .888, p < .05$) and for 12-months’ duration is ($r_s (20) = .802, p < .05$). However, the 3-months’ duration results were ignored considering the lack of a monotonic relationship.
These outcomes based on analyses conducted on data collected from two disparate social media technologies, have demonstrated the presence of strong positive associations between the conversations and relationships functionalitites, even though such relationships are weaker on Facebook than on Twitter. However, the results justify the rejection of the null hypothesis and acceptance of the alternative hypothesis.

Next, Spearman correlation coefficient tests were conducted to observe any association between conversation functionalities where intra-technology variables are concerned, and the results are presented in Table 5.4.

Table 5.4: Analysis outputs for conversation and relationship functionality pairing (inter-technology analysis)

<table>
<thead>
<tr>
<th>Test Pair</th>
<th>Data Collection Interval</th>
<th>Correlation Coefficient</th>
<th>Sig.</th>
<th>Paired Observations</th>
<th>Monotonic Relationship?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook Wall Posts vs. Twitter Followers</td>
<td>3 months</td>
<td>-1.000</td>
<td>.000</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>Facebook Wall Posts vs. Twitter Followers</td>
<td>*** 6 months</td>
<td>.811</td>
<td>.027</td>
<td>7</td>
<td>Yes</td>
</tr>
<tr>
<td>Facebook Wall Posts vs. Twitter Followers</td>
<td>*** 12 months</td>
<td>.599</td>
<td>.014</td>
<td>16</td>
<td>Yes</td>
</tr>
<tr>
<td>Twitter Tweets vs. Facebook Page Likes</td>
<td>3 months</td>
<td>1.000</td>
<td>.000</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>Twitter Tweets vs. Facebook Page Likes</td>
<td>*** 6 months</td>
<td>.857</td>
<td>.014</td>
<td>7</td>
<td>Yes</td>
</tr>
<tr>
<td>Twitter Tweets vs. Facebook Page Likes</td>
<td>*** 12 months</td>
<td>.600</td>
<td>.018</td>
<td>15</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*** Correlation is significant at 0.05 level (2-tailed).

An intra-technology analysis was also conducted to further test the outcome when the conversation functionality of one technology was paired with the relationship functionality of another technology and vice versa.

A trend similar to previous tests continued, with Spearman’s correlation coefficient analysis conducted on data collected over 3-month intervals returning neither a statistically significant result nor monotonic relationship between the pair of variables.

In this regard, an increase in the number of Twitter Followers (that represent relationship functionality on Twitter) is strongly associated with an increase in Wall Posts (that represent conversation functionality on Facebook). The Spearman’s correlation coefficient result for the data collection of 6-months’ duration is (rs (5) = .811, p < .05) and 12-months’ duration is (rs
Similarly, an increase in the number of Page Likes is strongly associated with an increase in Twitter Tweets (that represent conversation functionality on Twitter). The correlation coefficient associated with the data collection for 6-months’ \((r_s (5) = .857, p < .05)\) and 12-months’ duration \((r_s (14) = .600, p < .05)\) returned statistically significant positive associations. Maintaining the trend across all analyses, the strength of positive associations in this test also reduced over subsequent data collection phases.

The analyses to determine the association between sharing and conversation functionalities with the relationship functionality have confirmed positive associations in both scenarios for the three selected social media technologies. From a theoretical perspective this highlighted the possibility of using Facebook Page Likes, Twitter Followers, and YouTube Subscribers as constructs for variables that represent relationship functionality. Similarly, Facebook Wall Posts and Twitter Tweets could represent the conversation variable. However, it must be noted here that Spearman’s correlation coefficient does not confirm the strength of this association and the relationship does not necessarily automatically translate into increased influence (Cha et al., 2010).

Having determined the tangible outcomes resulting from the analysis of quantitative data, the following section focuses attention on the analysis conducted to determine the association that identity and reputation functionalities have with relationship functionality.

### 5.3. Qualitative Analysis of Association Between Functionalities

The identification of themes relating to the identities of Australian banks’ social media presence was based on the argument put forward by Westeman et al. (2012) on the use of specific online profile components by their respective gatekeeper users (Haas and Wearden, 2003) when making a subjective judgement on the source credibility. Both identity and reputation functionalities support “judgments made by a perceiver concerning the believability of a communicator” (O'Keefe, 2002, p.181) by defining the credibility of the source.

However, considering the evolving nature of social media technologies, these functionalities and their use by Australian banks were observed and analysed together with changes in the respective technologies. Figure 5.1 illustrates changes that occurred with the technologies used in this study within the three-year study period.
As shown in Figure 5.1, over the three-year study period, developers of all three social media technologies made considerable investments in the advancement of their respective technologies. These include making their technologies secure by: providing HTTPS-level security and improved account verification capabilities; and enhancing mobility by promoting similar interfaces across different technological platforms, such as computers, smart phones and tablet computing devices. Also, technological capabilities were enhanced by facilitating better searching through the Facebook graph search and the Twitter ‘Discover’ tab, while providing improved conversations across technologies by releasing clickable hash (#) tags. In the adoption of social media by businesses, these changes can be considered critical in achieving expected business outcomes.

It is in this background that the identity and reputation functionalities were measured and analysed to determine the presence of any association with the reputation functionalities that would predict enhanced user participation in the respective online communities. Considering
the complex character of the variables concerned requires closer observation and description, and they were measured and analysed qualitatively.

Table 5.5 presents information that was used in this qualitative analysis. In this table, two rows are assigned for each of the Australian banks to present relevant information gathered at the beginning and the end of the longitudinal data-gathering effort. The shading indicates the absence of a particular bank’s presence on a given social media technology at the start and the end of data collection.

These identity measurement guidelines are identified in section 4.3.3.4 and were used to qualitatively describe the identity presented by each Australian bank on the respective social media technology. These are identified in the ‘Identity Requirements met?’ columns in Table 5.5. The columns assigned to ‘Verified page?’ demonstrate whether Australian banks’ social media presence is verified as per the guidelines determined by the respective social media technology. Similarly, the column ‘Website mention?’ identifies whether or not the Australian banks have links to their social media presence through social media. If the answer to any of the three questions described above is yes, it is indicated with the letter Y (Yes) in the appropriate column, and N (No) in the alternative scenario. Reputation, unlike identity, is determined through the observation of two aspects.

Firstly, it is based on the presence or absence of links from Australian banks’ official websites to their respective social media presence. Such links facilitate the Australian banks’ presence to inherit credibility already gained by the respective official website of the relevant bank. In fact major social media technologies, such as Facebook, promote linking official websites with the corresponding social media link as a reputation-enhancing measure (Facebook, 2013).

Secondly, the use of credibility-enhancing facilities such as ‘verified’ accounts by Australian banks, is based upon their availability within the social media technology space concerned. Identified with a ‘verified badge’ (✓ sign), verified accounts visually confirm the authenticity of the respective social media presence. Considering the possibility of creating ‘fake’ accounts (Senadheera et al., 2011), verified accounts ensure that the presence actually belongs to the business they say it belongs to. The verification process varies with the technology. With Twitter, preference is given to high users (Twitter, 2013) Facebook has an application process allocated only to celebrities, journalists, Government officials, and brands or businesses.
Table 5.5: Australian banks’ social media presence vs. performance (2010-2013)

<table>
<thead>
<tr>
<th>Australian Bank Name</th>
<th>Data Snapshot taken</th>
<th>Twitter</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Adelaide &amp; Bendigo Bank</td>
<td>Dec /10</td>
<td>3918</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>43</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>1887</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>413</td>
<td>Y</td>
<td>N</td>
<td>3735</td>
<td>Y</td>
</tr>
<tr>
<td>AMP Bank</td>
<td>Dec /10</td>
<td>999</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>73</td>
<td>Y</td>
<td>N</td>
<td>9229</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>23918</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>516</td>
<td>Y</td>
<td>N</td>
<td>70704</td>
<td>Y</td>
</tr>
<tr>
<td>ANZ Bank</td>
<td>Dec /10</td>
<td>23918</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>516</td>
<td>Y</td>
<td>N</td>
<td>70704</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>2707</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>47</td>
<td>Y</td>
<td>N</td>
<td>6371</td>
<td>Y</td>
</tr>
<tr>
<td>Bank of Queensland</td>
<td>Dec /10</td>
<td>1249</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>219</td>
<td>Y</td>
<td>N</td>
<td>2976</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>29268</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>2123</td>
<td>Y</td>
<td>N</td>
<td>573240</td>
<td>Y</td>
</tr>
<tr>
<td>Commonwealth Bank</td>
<td>Dec /10</td>
<td>112</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>1</td>
<td>N</td>
<td>N</td>
<td>189</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>1644</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>3</td>
<td>N</td>
<td>N</td>
<td>189</td>
<td>N</td>
</tr>
<tr>
<td>Macquarie Bank</td>
<td>Dec /10</td>
<td>461</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>25</td>
<td>Y</td>
<td>N</td>
<td>6901</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>832</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>93</td>
<td>Y</td>
<td>N</td>
<td>6934</td>
<td>Y</td>
</tr>
<tr>
<td>National Australia Bank</td>
<td>Dec /10</td>
<td>2362</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>112</td>
<td>Y</td>
<td>N</td>
<td>196</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>19612</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>769</td>
<td>Y</td>
<td>N</td>
<td>111587</td>
<td>Y</td>
</tr>
<tr>
<td>Rural Bank</td>
<td>Dec /10</td>
<td>2</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>2</td>
<td>Y</td>
<td>N</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>3</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>5</td>
<td>Y</td>
<td>N</td>
<td>5</td>
<td>N</td>
</tr>
<tr>
<td>Suncorp Bank</td>
<td>Dec /10</td>
<td>1097</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>40</td>
<td>Y</td>
<td>N</td>
<td>8250</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>19612</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>769</td>
<td>Y</td>
<td>N</td>
<td>111587</td>
<td>Y</td>
</tr>
<tr>
<td>Westpac Bank</td>
<td>Dec /10</td>
<td>18</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>7</td>
<td>Y</td>
<td>N</td>
<td>3763</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>785</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>25</td>
<td>Y</td>
<td>N</td>
<td>230</td>
<td>Y</td>
</tr>
<tr>
<td>Heritage Bank</td>
<td>Dec /10</td>
<td>424</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>21</td>
<td>Y</td>
<td>N</td>
<td>12463</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>1009</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>28</td>
<td>Y</td>
<td>N</td>
<td>2388</td>
<td>Y</td>
</tr>
<tr>
<td>MECU Bank</td>
<td>Dec /10</td>
<td>18</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>7</td>
<td>Y</td>
<td>N</td>
<td>3763</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>785</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>25</td>
<td>Y</td>
<td>N</td>
<td>230</td>
<td>Y</td>
</tr>
<tr>
<td>QT Mutual Bank</td>
<td>Dec /10</td>
<td>125</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>10</td>
<td>Y</td>
<td>N</td>
<td>667</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Dec /13</td>
<td>266</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>1</td>
<td>Y</td>
<td>N</td>
<td>1974</td>
<td>Y</td>
</tr>
<tr>
<td>TM Bank</td>
<td>Dec /10</td>
<td>430</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>785</td>
<td>Y</td>
<td>N</td>
<td>230</td>
<td>Y</td>
</tr>
<tr>
<td>Beyond Bank</td>
<td>Dec /10</td>
<td>125</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>10</td>
<td>Y</td>
<td>N</td>
<td>667</td>
<td>Y</td>
</tr>
<tr>
<td>Police Bank</td>
<td>Dec /10</td>
<td>266</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>1</td>
<td>Y</td>
<td>N</td>
<td>1974</td>
<td>Y</td>
</tr>
<tr>
<td>P &amp; N Bank</td>
<td>Dec /10</td>
<td>266</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>1</td>
<td>Y</td>
<td>N</td>
<td>1974</td>
<td>Y</td>
</tr>
<tr>
<td>Bank Vic</td>
<td>Dec /10</td>
<td>266</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>1</td>
<td>Y</td>
<td>N</td>
<td>1974</td>
<td>Y</td>
</tr>
</tbody>
</table>

Note: Defence Bank and Victorian Teachers Mutual Bank were not mentioned in this table due to not having a presence on any of the three social media technologies.
Information relating to the application of reputation functionality depending on their availability at the time of the respective data collection phase is also presented in Table 5.5 in the columns allocated to each social media technology. Data presented in Table 5.5 is used in the forthcoming analyses of identity and reputation functionalities and their potential effect on the relationship functionality. Considering the qualitative nature of the data presented, the analyses take a qualitative approach supported by illustrations of screenshots taken at the three data collection phases.

5.3.1. **Association Between Identity and Relationship Functionalities**

This section deliberates on the identity aspect by focusing on the use of identity functionality by Australian banks on three social media technologies used in the sample. This discussion takes the form of a critical reflection of approaches taken by Australian banks in presenting their identity on the three technologies. Following this discussion, the effects of identities on the generation of relationships are analysed to determine the presence of any association. In this regard, identities presented on the three social media technologies by three Australian banks over three years are analysed.

5.3.1.1. **Facebook**

Figure 5.2 contains three separate screenshots that illustrate how the Facebook identity of the Commonwealth Bank has changed over the period of this study. These screenshots were taken during each of the three data collection phases described in section 4.3.3.1, specifically in November/December 2010, in May/June 2012 and in December 2013. The screenshots are used to qualitatively analyse the identity presented by the bank in the evolving technological environment. The following three images capture twelve instances where significant design and interface changes occurred within the technology that enabled the Commonwealth Bank to present an improved online identity over the study period.
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1 – Creation of a Facebook group to interact with users of social media;
2 – More focused on attracting employees instead of the public;
3 – Page administrators were identified by name;
4 – Inclusion of tabs for better maneuvering through Facebook Page.

November/December 2010

5 – Release of Facebook Pages and provision of space for logo and pictures to improve the overall identity;
6 – Provisions were made for branding. The ‘Join’ button is replaced by a ‘Like’ button;
7 – Welcome message;
8 – Profile name of the researcher that was used to collect data.

May/June 2012

9 – Participants in the community are given the option to make suggestions to the bank;
10 – Changes to the technology interface enabled the presentation of more information;
11 – An opportunity to communicate directly with the bank by creating a post;
12 – Sign of page verification.

December 2013

Figure 5.2: Changing outlook of Commonwealth Bank’s Facebook profile

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Based on the analysis of qualitative data gathered from the Commonwealth Bank’s Facebook identity over the period of study, it is evident that the bank has made a concerted effort to adapt to the evolving nature of the technology. During this period their social media presence, which started as a Facebook group with a focus on past and present employees, has evolved into an online community with over half a million participants.

Over the period of the study, all but one Australian bank with a Facebook presence have subscribed to basic identity requirements to include their respective logos, corporate colours, and brand names. They adapted the Facebook design changes that enforced all Facebook pages to subscribe to a basic interface that included timeline, page information (about), and photos.

However, the four largest banks, namely ANZ, Commonwealth Bank, NAB, and Westpac Bank, have gone beyond these default requirements by adding more pages. These new page items are mostly dedicated to engaging user involvement in the online community conversations specific to the bank. The NAB created page items for careers, videos and events, while Commonwealth Bank, apart from events, has created a page item for a competition called ‘Snap up a holiday’. Westpac Bank has used this space to promote the efforts of its lifesaver rescue helicopter, identified as ‘the 70,000’. Meanwhile ANZ Bank did not have a Facebook presence when this study began, but has since established links to their presence on Instagram and Twitter.

These changes have given their Facebook pages a ‘look and feel’ similar to their respective official Web pages, thereby creating a positive impression amongst potential participants who have become accustomed to the official bank website.

When the longitudinal study began, only Westpac Bank and Commonwealth Bank had been identified as having a Facebook presence; however, over the study period, another fifteen banks created their own Facebook presence. This demonstrates the increased acceptance of Facebook as a potential tool to be used in communicating with the public. In terms of relationships cultivated on social media, the four largest banks have accounted for 93% of total Facebook Page Likes accumulated by all Australian banks. Of those, 61% of all Page Likes were recorded with Commonwealth Bank. Interestingly, Macquarie Bank did not subscribe to basic identity requirements and returned the lowest number of participants in their community.
5.3.1.2. Twitter

Similarly to the analysis of Commonwealth Bank’s Facebook identity, Figure 5.3 presents three screenshots that illustrate the evolving identity of the Bank of Queensland over the three data collection phases. This demonstrates the evolving nature of Twitter technology that facilitated and enhanced the identity features of the banks’ Twitter presence.

These three screenshots encapsulate fourteen instances where significant design and interface changes to the Twitter technology enabled the Bank of Queensland to enhance its Twitter identity over the study period. While key changes, such as a direct display of pictures and videos in the timeline and inclusion of conversation threads, have raised user engagement by 35%, analysts do believe they fall behind the changes made in Facebook (Shih, 2014). Notwithstanding these changes in the technology, Twitter was still able to maintain its lightweight format and its ‘microblogging’ characteristics.

| November/December 2010 | 1, 2 & 3 – Twitter users can present their identity better when compared to Facebook or YouTube; |
|                       | 4 – Include ‘lists’, presently known as hash tags that stimulate communication; |
|                       | 5 – Links to key information sources relevant to users (11). |
| May/June 2012         | 6 – Educate users to protect their personal information; |
|                       | 7 – Interface change; |
|                       | 8 & 9 – Contact and other information to enhance identity; |
|                       | 10 – Can include images and relevant links to further information; |
|                       | 11 – Discover options for enhanced searches. |
Based on the analysis of data gathered from the Bank of Queensland’s Twitter presence, the bank has demonstrated not only adjustment to the changes, but has also incorporated fundamental changes to their business, such as a change in the motto in their Twitter profile. In the process of improving their Twitter identity over the study period, the bank experienced a nine-fold increase in their follower numbers.

Taking into consideration the data presented in Table 5.5 relating to Twitter, all Australian banks with a Twitter presence have subscribed to all basic identity requirements. This is an indication that newer banks have understood the importance attached to implementing a branding strategy. Towards the end of the study period, seventeen of the twenty-one Australian banks (81%) had a Twitter account compared to six of the eleven Australian banks (54%) with a Twitter presence when the study began. This is a 27% overall increase in the Australian banks’ take-up of Twitter. Importantly, eight of the ten newer banks that were not in the APRA list of Australian banks when the study started, have now opted for a Twitter presence since their inception, an indication that Twitter is gaining in importance amongst Australian banks as a standard in communicating using social media.

Apart from the design aspects, the use of an appropriate brand name also has an important role to play in the overall branding strategy. At the beginning of the study, only the NAB resorted to using their unique brand name (NAB) across all three social media technologies. However, there was a tendency amongst banks to consider using an appropriate name for their Twitter
presence. For example, the AMP bank has changed the name of its Twitter presence (Twitter handle) from @AMP_Media to @AMP_AU, and Commonwealth Bank started using @Commbank in addition to @Netbank.

Following the trend in Facebook, the largest four Australian banks continued to accumulate more followers than their smaller counterparts over the three-year study period. The follower numbers of each bank varies, but skewed towards the four largest Australian banks accounting for 86% of all Twitter follower numbers. This ratio stood at 90% when the study started, an indication that smaller Australian banks are also beginning to engage fellow social media users using Twitter. While ANZ Bank did not have a Twitter presence when the study began, Commonwealth Bank, NAB, and Westpac Bank have experienced 20, 25, and 8-fold increases in their follower numbers respectively.

5.3.1.3. YouTube

Even though broadly identified as a social media technology, YouTube is categorised primarily as a video-sharing service (Culnan et al., 2010). However, as a result of evolving changes in this technology, YouTube is demonstrating an inclination towards enhancing its networking credentials. In this regard, YouTube has made two important changes: an improved channel subscription service, and the introduction of a verified accounts feature (Figure 5.4), allowing YouTube to further enhance its growing recognition as a technology that facilitates social interaction (Susarla et al., 2012). Apart from enhancing its networking credentials, YouTube is also making its sharing functionality stronger (Kietzmann et al., 2012) by providing its users with enhanced opportunities for online social interaction. In support of this endeavour, YouTube has included a discussion section to stimulate social interaction through conversations between users.

Similarly to the approach taken with Facebook and Twitter, the screenshots presented in Figure 5.4 were also taken during the data collection phases described in section 4.3.3.1. They illustrate how Members Equity Bank’s YouTube channel identity had evolved over the three-year study period. These three images identify thirteen instances of technological changes that enhanced the bank’s identity presentation on YouTube.
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<table>
<thead>
<tr>
<th>November/December 2010</th>
<th>1 – Limited use of graphics in the channel interface; 2 – Channel subscription requires more than a single step; 3 – Menu items not named for easier channel manoeuvring.</th>
</tr>
</thead>
<tbody>
<tr>
<td>November/December 2010</td>
<td>4 – Changes channel name to reflect the brand; 5 – Graphical interface and inclusion of single-click channel subscription; 6 – Search facility; 7 – Better organisation of tabs to manoeuvre the channel; 8 – More information to provide added credibility to the channel’s identity.</td>
</tr>
<tr>
<td>December 2013</td>
<td>9 – Inclusion of the logo driven by the overall design improvements to the technology. Overall appearance similar to the presence on other technologies, i.e. Twitter and Facebook; 10 – Change of channel name to reflect the brand; 11 – Extra menu items allow better manoeuvring. Supporting conversation through ‘discussion’; 12 – Link to the official website for enhanced reputation of the channel; 13 – Links to bank’s presence on other social media technologies.</td>
</tr>
</tbody>
</table>

*Figure 5.4: Changing outlook of Members Equity Bank’s YouTube channel*
Based on the analysis of the identity presented by ME Bank, which is a smaller bank compared to the market capitalisation of the four largest banks, it is making a concerted effort to improve its identity on YouTube. During the period of this longitudinal study, the bank has changed its brand name presented in its YouTube identity three times to allow users to identify the bank in the Australian context. While the overall design is mainly driven by changes to the underlying technology, the bank has exploited these changes to enhance its brand identity by including its logo, profile picture with a motto, and a link to its official website.

When the study first began, YouTube was the most widely used social media technology by the Australian banks, with ten of the eleven banks having a presence on this technology. However, only three of those banks have presented their identity by subscribing to the identity requirements identified in Table 4.8 and in section 4.3.3. The attitude of Australian banks towards presenting their YouTube identity has changed considerably over the period of this study. Currently, seventeen of the eighteen Australian banks with a YouTube presence have presented their identity appropriately. However, naming conventions used in identifying the respective banks’ YouTube presence is impeding potential subscribers’ subscription to the channel. This includes the use of unconventional names such as Macquarie Bank TV (Macquarie Bank) and Heritage People First (Heritage Bank).

Continuing the trend that was observed in Facebook and Twitter, the four largest Australian banks have together accumulated the largest number of YouTube subscribers. When the initial data capture was taken, these four banks accounted for 63% of all YouTube subscriptions, which increased to 88% over three years, thereby widening the gap between the smaller and larger banks. Over the three years, overall subscriptions to the Australian banks’ YouTube channels had seen nearly a ninefold increase, primarily driven by the larger banks.

In the next section, an analysis was conducted of qualitative data relating to Australian banks’ presentation of their respective identity on the three technologies. However, the outcome of this qualitative analysis does not warrant making a direct association with data presented in Table 5.5 relating to relationships generated by the respective Australian banks. This is taking into consideration the effect of other potential variables, such as the size of the Australian banks in terms of numbers of customers they serve.
Therefore, it was considered that there is potentially an association between the identity presented and the relationships created, and that such association, if present, is positive.

5.3.2. Association Between Reputation and Relationship Functionalities

To determine the presence of any association between reputation and the relationship, it is necessary to consider a measure of reputation. The following sections discuss key aspects to be considered in relation to the reputation of Australian banks as presented on social media, and how banks have responded to reputational issues over the period of the study.

5.3.2.1. Verified Accounts

Twitter is the first of three social media technologies used in this research to enable a functionality called a ‘Twitter verified account’ in 2009, which provides added confirmation of an online reputation to their users that they consider as influential and is not available to the general public. Twitter explains their account verification process as follows:

“Twitter proactively verifies accounts on an ongoing basis to make it easier for users to find who they're looking for. We concentrate on highly sought users in music, acting, fashion, Government, politics, religion, journalism, media, sports, business, and other key interest areas. We are constantly updating our requirements for verification. Note, verification does not factor in Follower count or Tweet count.

We do not accept requests for verification from the general public. If you fall under one of the above categories and your Twitter account meets our qualifications for verification, we may reach out to you in the future (Twitter, 2013).”

A similar account verification facility was not available on YouTube during the course of the three-year data collection period (see Figure 5.1); however, YouTube verified accounts were introduced in December 2013. Now owned by Google, the YouTube account verification process uses ‘Cress’ verification through Google+, Google’s own social media technology, as a means to provide source verification.

In May 2013, Facebook launched its own verified accounts scheme. Similar to Twitter, Facebook’s page verification is currently done automatically for celebrities, journalists, Government officials, and popular brands and businesses; as yet, other users are unable to request verification.
As for obtaining technology-specific reputation-enhancing verified account status, only the four largest banks had been successful. Both Twitter and Facebook explicitly mention that the verification process has no direct association with the number of Followers/Page Likes of Tweets/Wall Posts. However, considering the activities of the four largest Australian banks within the social media environment, it is highly likely that they are rated more influential than their smaller counterparts by the technologies concerned.

For other authentic page owners, Facebook suggests three alternatives (Facebook, 2013) to enhance reputation:

1. report ‘fake accounts’;
2. provide more information;
3. Link the Facebook page from the page owner’s official website.

As discussed in section 3.3.1.6, reputation as perceived by users is extremely relevant in terms of users becoming content-creators with no control mechanisms governing the content they create. On the other hand, the process of account verification as it is being done in the present context is beyond Australian banks’ control. There is a need for Australian banks to explore other possibilities as a means of gaining adequate online credibility by employing other reputation-building measures. Therefore, this qualitative analysis incorporates discussion of the following measures that enhance their social media reputation, thereby attracting participants to their respective social media-based online communities.

The following sections discuss these suggestions more broadly.

5.3.2.2. Consistency in Identity Presentation

Maintaining the consistency of the identity presented on one or more social media technologies where Australian banks had a presence was discussed by Senadheera et al. (2011). This study observed the presence of 12 and 14 Westpac Bank or related accounts on Facebook and Twitter respectively, mostly created by some of the bank’s branches. However, collectively they failed to garner more participants in comparison to two other larger Australian banks, namely Commonwealth Bank and NAB, which were considered late adopters.
During the latter part of the study, these numbers were reduced, with banks gradually gaining control over what is occurring with the technology and strategising their overall approaches accordingly.

Another observation with regard to Australian banks enhancing the reputation of their online social media presence is the decreased tendency of some banks to allow its branches, or even specific banking services, to create their own social media presence. At the inception of the study, Westpac Bank had fourteen separate instances of presence either relating to some of their bank branches or to specific services they offer, such as interest rates. If the expectation was to attract more participants to their respective communities, the strategy of authorising multiple instances of a social media presence did not provide the desired results, hence their change in strategy towards the end of the study to establish a centralised presence approach.

5.3.2.3. Eliminate Illegitimate Social Media Accounts

As indicated earlier, providing accurate and relevant information about the bank is important for a social media user intending to participate, to consider the particular social media presence of Australian banks as a credible source of information.

However, a lack of control over the creation of accounts tends to create illegitimate accounts, as illustrated in Figure 5.5. This longitudinal study has observed the presence of two illegitimate accounts throughout the study, an indication that the relevant powers have not been taking any action to have them eliminated. As a result of banks not taking appropriate action in this regard, this could drive potential participants towards such illegitimate accounts.

Figure 5.5 contains two screenshots taken in June 2012 associated with the Twitter presence of two Australian banks, namely Bendigo Bank and Suncorp Bank. Both images do identify the bank name correctly; however, the image that associates itself with Bendigo Bank does not meet the identity requirements stipulated earlier. The image for Suncorp Bank, which creates the impression of a legitimate account with the use of appropriate logos and corporate colours, has resulted in misleading nearly 700 users, as indicated in the image, as followers of this account, including several other Australian banks.

Even though the scope of this research study did not focus on gathering data relating to any damage caused as a result of these illegitimate accounts that can be identified as ‘fake’ accounts, they have the potential to create damage to the goodwill and reputation of a brand
or business. Even though there are laws governing trademarks, according to Friedmann (2010) courts are generally lenient towards protecting freedom of expression.

![Figure 5.5: Potential fake Twitter accounts](image)

Twitter has addressed this issue by incorporating new rules governing the creation and naming of accounts, and also reserves the right to change rules whenever it sees fit, further highlighting the fluidity of the environment they operate in, and driven by the evolving nature of the technology.

The current Twitter rules (Twitter, 2014b) governing accounts in relation to usernames cover:

**Impersonation:** You may not impersonate others through the Twitter service in a manner that does or is intended to mislead, confuse, or deceive others. **Trademark:** We reserve the right to reclaim usernames on behalf of businesses or individuals that hold legal claim or trademark on those usernames. Accounts using business names and/or logos to mislead others may be permanently suspended. **Private information:**
Friedmann (2010, p.11) describes this open-endedness of the rules presented by “private parties”, such as Twitter have achieved and are considered “self-determination”, as creating a “walled garden phenomenon”. This means these parties cater only to the needs of its stakeholders in a way that would not be possible in the ‘outside’ world. Therefore Australian banks have to pay continuous attention to the changes that occur within the environment and ‘play by ear’ their effect on issues relating to the outside world, such as applying the trademark law. They are required to constantly evaluate their social media strategies and take appropriate action when deemed necessary. The proposed model is meant to enable such continuous action.

Apart from illegitimate (fake) accounts, some Australian banks have encountered ‘hate accounts’ created by disgruntled customers of banks for the purpose of making negative comments about the bank that they have disagreements with. These ‘hate’ accounts were found in 2011, during the early stages of the study. The possibility of their creation still exists; however, new rules governing the creation of Twitter accounts has made it easier to detect and eliminate them.

Apart from fake accounts, ‘hate’ accounts are also created by some social media users to express their dissatisfaction towards a business or a brand. Figure 5.6 illustrates a ‘hate account’ created on Facebook by a disgruntled Australian bank customer unhappy with the
level of service received. The reasons for this customer’s unhappiness with the bank’s service relates to several issues that have been highlighted on the front page of the group that was created to invite other potential like-minded users. These are common banking issues over which the customer may have lodged a complaint via offline channels such as post or telephone where social media was non-existent.

At the time, the account creator(s) had a successful outcome in terms of spreading their message, with 47 users deciding to subscribe to this group, an indication of their agreement.

Figure 5.6: Hate account created by a disgruntled customer of an Australian bank

This section has highlighted potential areas where there is a possibility of damage to the online reputations of Australian banks as a result of users creating illegitimate accounts, with no authority to act on behalf of banks. The changes incorporated in the rules governing the creation of Twitter accounts have reduced the possibility of such accounts continuing and causing reputational damage to Australian banks. These technological procedural changes further complement the discussion in section 2.3 and positively influence the use of this technology by Australian banks.
5.3.2.4. Additional Information

In order to provide more information and thereby enhance the overall reputation of social media presence, Facebook suggests that page-owning businesses or brands complete the ‘About’ section of the respective page. This is another of the three alternative strategies suggested by Facebook for users who do not belong to the categories of celebrities, journalists, Government agents, and businesses for whom awarding Facebook ‘verified accounts’ is considered.

In the absence of this information and non-availability of Facebook Pages during the early stages of the data collection, it was observed that Australian banks tended to create Facebook profiles similar to the ones created by individuals. When it was required to provide more information about the bank, Facebook initially directed the profile to access the Wikipedia information page of the respective business or brand. Figure 5.7 is an illustration of how the Facebook profile created by Members Equity (ME) Bank refers to the corresponding Wikipedia page for information about the bank.

![Facebook profile of Members Equity Bank](http://www.facebook.com/p)

Figure 5.7: Information about ME Bank obtained by Facebook from Wikipedia
However, with the advancement of technology and the launch of Facebook Pages, owners of such pages were instructed to appropriately complete the ‘About’ section of the respective Facebook profile or Page to provide more information.

5.3.2.5. Cross-linking with Official Website

Another reputation-enhancing measure as advised by Facebook, including the other two technologies considered in this study, is to link the respective social media presence with the official website and vice versa.

Even though website mention or providing more information about self cannot be considered as a social media functionality in itself, linking with the respective official bank website adds to the overall credibility of their social media presence. In this regard, it was evident during the course of this study that banks have overcome their apprehensiveness towards social media by identifying their official social media presence with links to their official websites. The number of Australian banks doing this increased towards the end of the study.

While only Commonwealth Bank linked its social media presence through its official website during the early stages of the study, fourteen of the nineteen Australian banks adopted the same strategy towards the end of the study period. Importantly, all eight newer Australian banks who joined the list of Australian banks since the initial data collection phase had their social media presence linked through their official websites. This is partly caused through Facebook page creators being compelled to link their Facebook presence to their respective official websites. However, considering the vastly improved brand image of Australian banks’ presence on the three technologies, it can be argued that Australian banks have gained an awareness of the need to preserve their actual reputation within the social media environment.

Qualitative analyses in sections 5.3.2.1 to 5.3.2.5 have pinpointed five potential options that Australian banks could employ to enhance their online reputation. Along with the data presented in Table 5.5, the analyses established the likelihood that Australian banks subscribing to these options were able to attract larger numbers of participants to their respective social media-based online communities. The longitudinal nature of the study has confirmed a marked improvement across most Australian banks in the manner in which they enhanced the reputation of their social media presence. In this regard, most of the Australian banks have exploited the technological improvements that occurred within the respective
technologies. They have also demonstrated experience in the use of social media when compared with their presence during the early stages of the longitudinal study.

Similarly, the analysis of reputation functionality has not determined the presence of any direct association with relationship functionality. It has also not detected any causality that reputation-enhancing measures drive higher participation within the community. This is primarily due to the fact that the data gathered from Australian banks’ social media presence was too small to determine such causality, and also due to the potential influences of other predictors driving enhanced user participation. One such potential predictor is the market penetration of Australian banks. In this regard, an assumption was made relating to the direct positive association that market penetration has with the number of customers they offer their banking services to that would ultimately affect the number of participants within their respective online community.

However, this research study was not scoped to consider such aspects internal to Australian banks. Notwithstanding this, an effort was made to gather evidence of the presence of any direct association between the number of customers Australian banks provide their services to and their respective online community participant numbers. Figure 5.8 graphically illustrates the total number of participants each Australian bank has accumulated on each of the three technologies used in this longitudinal study.

![Facebook Page Likes](image)
Figure 5.8: Relationships created by Australian banks on Facebook, Twitter and YouTube (2010-2013)

It is evident from the charts presented in Figure 5.8 that the four largest Australian banks (identified in red in the three graphs), namely the Commonwealth Bank, NAB, ANZ, and Westpac Bank can be separated from the rest of the banks (identified in blue in the three graphs) in terms of relationship generation on social media. Overall, they account for 976,000 of the 1.05 million social media users who have decided to participate in Australian banks’ social media-based online communities. Their relationships, identified in red, demonstrate the
skewness in the relationship creation. This must be viewed in the context of the four largest Australian banks accounting for 67% of the Australian banking market (Joshi et al., 2010). As a result, more information is required to make definitive interpretations regarding the existence of any associated relationship functionality with respective identity and reputation functionalities.

Furthermore, Spearman’s correlation coefficient analysis does not indicate a cause–effect relationship, primarily because of the possibility of multiple confounding factors that this study did not focus on. For this reason, gaining an understanding of how the adoption decisions of users affects their participation in social media-based communication with Australian banks becomes ever more important.

The following discussion lays the foundation in this regard. Its outcome enables an interfacing of the findings of this longitudinal study with that of the explanatory sequential study, discussed in Chapters 6 and 7. It also takes into consideration that the findings of the explanatory sequential study analysis would provide missing data associated with the adoption decisions of users affecting their participation in social media-based communication with Australian Banks.

5.4. Discussion

The longitudinal study has provided useful information to further explore selected social media functionalities that are used by Australian banks when they communicate with the public. Based on the findings of quantitative and qualitative analyses on the functionalities associated with each of the three social media technologies, the study determined the use of five of the seven key functionalities by Australian banks, identified in section 3.3.1. The study has also exposed the use of these functionalities in varying intensities and importance by Australian banks. Even though no causality was confirmed between these functionalities and the social media user participation in their respective social media-based online communities, positive relationships between them have been established.

Furthermore, this discussion builds upon the findings of this longitudinal study using the adapted Honeycomb Model for improved clarity. It uses visual representation (Figure 5.9) of already established facts colour being used to represent functionality strengths, in a manner similar to the one suggested by Kietzmann et al. (2011). This is the preliminary step towards
interfacing longitudinal and explanatory sequential studies that are discussed in Chapters 6 and 7, leading to re-evaluation of the conceptual adoption model presented in section 3.5.

Figure 5.9: Longitudinal study outcome of social media functionality use by Australian banks (in relation to Facebook, Twitter, and YouTube)

Considering the fact that the relationship functionality was central to both quantitative and qualitative analyses, it is represented in red in Figure 5.9. The blue colours reflect the strengths of association each one of the functionalities had with the relationship functionality. The quantitative analysis determined strong positive associations of sharing and conversation functionalities with the relationship functionality, and is therefore represented in dark blue.
Additionally, qualitative identity and reputation functionalities have been identified in light blue, considering the incompleteness of the analysis due to inadequate information.

5.4.1. Sharing

The findings of this study relating to the use of the sharing functionality is in agreement with its inherent ability to drive further social interactions. Therefore, in Figure 5.9, sharing is identified in dark blue to indicate this positive association.

This outcome is further confirmation of the facts presented in section 3.3.1.4 on the importance of the sharing functionality, considered as fundamental to the power associated with the use of social media for communication purposes. All Australian banks have, to an extent, used this functionality with varying effect. However, based on the data gathered, larger Australian banks tend to use this functionality more than their smaller counterparts, something that is not necessarily dependent upon their respective market penetration.

The observations made over the period of study in relation to the evolving nature of the technologies, some of which are presented in Figure 5.1, highlight the attention given by the developers in further enhancing the quality of shared content to include rich media.

5.4.2. Conversation

Similarly to sharing, conversation is identified in Figure 5.9 in dark blue to indicate the direct positive association of conversation towards the generation of relationships (red).

In the relevant discussion in section 3.3.1.7, it was identified that the capability to conduct conversations within the given social media environment leads to enhanced public participation in the online community. The study findings have further demonstrated this with Australian banks that contribute content in this regard, as they are more likely to generate greater public participation in their respective social media-based online communities. For example, Australian banks that have conducted more conversation opportunities using Tweets and Wall Posts were awarded with the largest number of participants in their respective communities.

This finding further emphasises the effect of conversations on the broad popularity of social media, and larger Australian banks have used this functionality more than others to stimulate higher levels of participation. Considering the collaborative nature of the communication
activities, enhanced user participation in the communities therefore has the potential for further growth of the given social media-based online community.

5.4.3. Identity

In the illustration presented in Figure 5.9, identity is identified in light blue as an indication of its ‘potential’ positive association with the relationship functionality. As discussed, this indicates an inability to make specific positive associations due to a lack of further verifiable data. However, subsequent studies should be able to provide more insight into this association when further data is collected from the users of social media.

As discussed in section 3.3.1.1, creating an online identity to reflect self always presents challenges. This was observed when gathering data during the initial stages of the longitudinal study. However, most Australian banks have overcome these challenges as a culmination of heightened levels of technology awareness as well as evolving technology providing a more conducive environment for presenting one’s identity.

This longitudinal study has also identified that relationships generated on Australian banks’ online identities to a certain extent reflect respective banks’ real-world relationships with the Australian public. This argument is based on the number of relationships that the four largest Australian banks were able to garner in their respective online communities compared to their smaller counterparts. However, owing to limitations attached to this study no definitive causal relationship was determined.

With time, Australian banks have identified the importance of presenting their identity in a manner such that potential participants who are in search of a credible information source relating to an important aspect of their day-to-day lives are drawn to a banks’ respective social media community.

5.4.4. Reputation

Reputation is identified in Figure 5.9 in light blue to indicate the presence of a weaker positive association, primarily due to a lack of verifiable data that could confirm a definite association. However, similar to the situation with the identity, qualitative data gathered directly from users of social media could provide better insight into this phenomenon.
This functionality was discussed in section 3.3.1.6, presented as an addition to the identity to provide improved credibility of an online presence through enhanced reputation. While the credibility of any online presence is important, additional reputation-building measures are required when operating in an environment where anyone has the power to create content.

As users keep searching for credible information in an environment that provides everyone with unregulated content-creating capabilities, the online reputation of a social media presence gains additional importance.

5.4.5. Presence and Groups

As described earlier, the presence and groups functionalities were not considered nor analysed for their effect on the relationships. The primary reason is their non-relevance in the business presence as established in the selected social media technologies, namely Facebook, Twitter, and YouTube. However, selection of alternative technologies, such as FourSquare or LinkedIn, could open up future prospects to further study these functionalities. FourSquare (a technology that helps users make the most of the places they have visited) and LinkedIn (a technology dedicated to social networking amongst professionals) facilitate strong presence and groups functionalities respectively.

Based on the information available from the analysis of the longitudinal study data, it can be confidently stated that five of the seven social media functionalities have been used by Australian banks when they communicate with the public at different levels of intensity. These intensities have increased with time, which indicates that Australian banks’ use of social media as a method of communication is increasing, and also they have a better grasp of the technologies involved.

In making this determination, the role of the adapted Honeycomb Model and its importance as an effective tool to address the technological aspects associated with the use of social media can be considered as a major theoretical contribution. The capability of this adapted Model to identify specific social media functionalities, determine their strengths, and categorise social media technologies accordingly, could enhance future research involving social media.

For practitioners, the adapted Honeycomb Model has proved its importance as a potential tool for their social media strategy planning, formulation and implementation. In an environment where social media technologies evolve rapidly, this adapted Model with its functionality
focus could assist practitioners by identifying the relevant technologies to drive their social media strategies to evolve seamlessly. This is extremely important for establishing a credible social media presence – in an environment where the creation of ‘fake’ identities is a real possibility (Gerathy, 2010; Boyd and Ellison, 2007) – by using various social media functionalities to effectively communicate with the public.

5.5. Conclusion

This longitudinal study has covered the technological aspects of the conceptual model relating to social media adoption by Australian banks in order to communicate with the public. It specifically focused on the research sub-question, ‘What social media functionalities are used when the public and Australian banks communicate?’ In this regard, it considered three popular social media technologies, namely Facebook, Twitter, and YouTube, and the functionalities specific to them.

The findings indicate how different banks employ various social media functionalities to encourage social media users to participate in their social media-based online communities. They point towards the use of five of the seven functionalities at various levels of effectiveness by the Australian banks included in the study sample. It was also identified that the use of these functionalities tends to vary depending on the technologies Australian banks use in establishing their social media presence.

In terms of achieving their primary communication objectives – having a sizeable online community to communicate with – it had been identified that Australian banks have encountered varied levels of success. Their adoption of social media to communicate with the public would also require an understanding of public attitudes towards specific factors that drive them to use social media to communicate. It is through understanding such public attitudes that Australian banks could apply targeted strategies to communicate effectively.

The findings of the explanatory sequential study to be discussed in the next two chapters provide critical information necessary to strengthen this discussion on social media functionalities used when the public and Australian banks communicate. In this regard, Chapter 6 focuses on the factors that influence social media adoption in general using the instrument presented in Appendix B and informs the qualitative study that follows. The qualitative study involving focus groups is covered in Chapter 7.
6. ANALYSIS & DISCUSSION – ONLINE SURVEY

6.1. Introduction
The aim of this chapter is to analyse and interpret the findings of the online survey of social media users. This survey was conducted as the initial part of the explanatory sequential study, designed to address the second research sub-question, ‘How do the adoption decisions of users affect their participation in social media-based communication with Australian banks?’

In relation to the overall research design, the intention of the online survey was to determine broader factors governing social media adoption. The intention of the focus groups was to gather information directly from social media using public relating to how broader adoption decisions affect their participation in communicating with Australian banks.

The findings of the online survey data analysis were used for interfacing, as per the discussion in section 4.3.2.4, in the most appropriate manner with the subsequent design, data gathering and analysis of focus groups. The expectation of this approach is to make the final interpretations of the research findings relevant to the overarching research question.

In this regard, the analysis of the online survey data included the following three distinct but interrelated phases of descriptive analyses:

- Explaining the descriptive statistics of the relevant survey data;
- Descriptive Analysis – Data Reduction;
- Descriptive Analysis – Determining Differences.

These phases would help determine linear combinations of the measured variables using Principal Component Analysis that would lead to identifying themes from which further discussions relating to social media adoption were to be conducted. Following this, attitudinal differences towards these adoption themes based on demographic data using the Mann-Whitney U test (Nachar, 2008) was conducted that ultimately informed design and conduct of subsequent focus groups. The following sections discuss more of these phases in detail.

6.2. Explaining Descriptive Statistics of Relevant Survey Data
The primary aim of this phase of the analysis was to determine the potential composition of focus groups that were to be used following the online survey in this explanatory sequential
study. More information relating to the use of quantitative data in the design of the qualitative study, as well interfacing two data types, is presented in sections 4.3.2.1, 4.3.2.3, and 4.3.2.4.

Tables 6.1 and 6.2 explain descriptive statistics for age group and gender relevant to online survey analysis and are presented as the initial step associated with the data analysis.

Table 6.1: Tabular representation of respondent age groups

<table>
<thead>
<tr>
<th>N (Valid N)</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>261</td>
<td>2.79</td>
<td>1.452</td>
<td>.607</td>
</tr>
<tr>
<td>Gender</td>
<td>261</td>
<td>1.62</td>
<td>.502</td>
<td>-.315</td>
</tr>
</tbody>
</table>

The values presented demonstrate that gender is moderately negatively skewed, meaning there are more of one gender (60% and 39% female/male ratio) and in regards to the age nearly half of the participants were from the 18-34 age group. Both indices indicate a flatter distribution with negative Kurtosis values.

6.2.1. **Descriptive Analysis – Data Reduction**

The objective of this analysis phase was to determine the appropriateness of the basic groupings, named as use, audience, social, and contextual factors. The determination is made in relation to their continuing relevance to factors that drive the adoption of social media by the Australian public to communicate with Australian banks. The overarching need was to make adjustments to the theoretical conceptual model presented in Chapter 3 (see section 3.5).

The outcome of this analysis phase determined whether the initial set of variables could be explained with one, more or all of these factors or groupings of theoretical foundations. The
results were also to be used to undertake further analysis to determine attitudinal differences between different demographics towards such factors.

6.2.2. Procedure Selection

As explained in section 4.3.4.1.2, fifteen self-descriptive attitudinal questions were considered in this analysis. The questions relate to the theoretical foundations associated with each of the four factors identified in the conceptual model component relating to the social communication aspects. The fifteen variables that represented attitudinal questions are presented in Table 6.3.

Table 6.3: Variables representing attitudinal questions used in this study

<table>
<thead>
<tr>
<th>Statement/Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>v2 (Q2.1): Social media gives me the feeling of having control over the flow of my communications.</td>
</tr>
<tr>
<td>v3 (Q2.2): Social media allows me to improve communication efficiency since it saves me time/money.</td>
</tr>
<tr>
<td>v4 (Q2.3): Social media allows me to improve my communication efficiency by providing uninterrupted access.</td>
</tr>
<tr>
<td>v5 (Q2.4): Social media allows me to put myself in the spotlight.</td>
</tr>
<tr>
<td>v6 (Q2.5): Social media is a status symbol for me.</td>
</tr>
<tr>
<td>v7 (Q2.6): Social media allows me to find the information that I am looking for.</td>
</tr>
<tr>
<td>v8 (Q3.1): I am willing to ignore known deficiencies of social media in order to achieve the benefits that it offers.</td>
</tr>
<tr>
<td>v9 (Q3.2): I am confident of overcoming any technological issues associated with using social media.</td>
</tr>
<tr>
<td>v10 (Q3.3): I enjoy the novelty of social media that allows me to collaborate with others on issues that concern me.</td>
</tr>
<tr>
<td>v11 (Q3.4): I have the knowledge and skills required to use social media.</td>
</tr>
<tr>
<td>v12 (Q3.5): I am able to put in the required time and effort to make social media important for me.</td>
</tr>
<tr>
<td>v13 (Q3.6): Social media increases my work efficiency because it gives me faster access to information I am after.</td>
</tr>
<tr>
<td>v14 (Q3.7): Social media saves my time because it reduces my need to travel to meet friends and relatives.</td>
</tr>
<tr>
<td>v18 (Q4.3): If I find out about problem(s) with my day-to-day banking, I will get in touch with the bank as a concerned customer using social media.</td>
</tr>
<tr>
<td>v20 (Q4.5): If I find out about problem(s) with my day-to-day banking, I will get in touch with my friends, colleagues or relatives using social media.</td>
</tr>
</tbody>
</table>
The primary principle governing the selection of the appropriate procedure was driven by the need to simply present variables and also to determine the presence of any invisible groupings or themes that represent a different principal or organisation of variables.

Therefore, a Principal Component Analysis (PCA) as a variable-reduction technique was used to reduce this larger set of variables into a smaller set of ‘artificial’ variables (or principal components) that account for most of the variance in the original variables. PCA is widely used in research associated with social networking/media (Venkatesh and Davis, 2000; Ross et al., 2009). Considering that there had been no necessity to discuss latent factors causing observed variables in the context of this research component, PCA was given precedence over factor analysis.

The PCA supports this activity in three ways. Firstly, it allows the elimination of any superfluous or unrelated variables by clustering together all variables that load on the same component. Secondly, PCA supports the reduction of redundancy in a set of variables by loading correlated variables into a single artificial variable called a principal construct. Thirdly, with its ability to eliminate the presence of multicollinearity between two or more variables, PCA groups such variables together to generate a component score which can be used to replace original variables (Field, 2013). Mathematically, PCA will search for linear projections of the survey data by preserving the majority of information data contained.

IBM SPSS software (version 22) was used to conduct PCA and the approach taken in this regard is discussed in the next section and is based around technicalities with the analysis, supported by previous research.

6.2.3. Analysis of Results

IBM SPSS Statistics software was used to conduct the PCA. In the analysis, the selection of the type of rotation to be used was given special consideration due to a higher possibility of known correlations between variables since they have grouped together as factors (i.e. similarities between expectancy value theory and uses and gratifications theory, grouped together under use factors) taking into account their similarities as discussed in section 3.4.3.

This issue was argued by Tabachnick and Fiddell (2007, p.646, cited in Brown, 2009) who say, “perhaps the best way to decide between orthogonal and oblique rotation is to request oblique rotation”. This argument was driven by the suitability of ‘direct oblimin’ rotation in
situations where there are grounds to consider a potential correlation between variables that have been grouped together.

Taking this into consideration, the following approach was applied to PCA.

As suggested by Brown (2009), ‘direct oblimin’ rotation was used in the initial iteration with ‘forced factor extraction’, and with the value being set to four to reflect the number of factors identified in the conceptual model component governing social communication aspects. Having established the potential behaviour of the variables considering their correlations, further iterations were conducted using Varimax rotation while conducting the extraction based on an Eigenvalue greater than 1. Also, correlation coefficients with an absolute value of less than 0.4 were suppressed (Brown, 2009).

In the first 5 iterations, 5 variables were removed from the analysis owing to them generating complex structures (when a variable has a high loading, .4 or greater on more than one component) or for returning a value of less than .5 in communalities. A sixth variable was later removed after conducting the initial validation using split-sample analysis, explained in section 6.3.5.

In the final solution, the final four components explain 74.186% of the total variance. Therefore, the cumulative proportion of variance criteria can be met with four components to explain 60% or more of the total variance.

Table 6.4 presents the components extracted, and associated variables that are used to further explore the components extracted and identify potential themes based on similarities that are associated with those variables that load onto the same factor.

Three variables that load highly on the first component do relate to outcomes that social media users expect to achieve by using social media. Therefore this component was labelled *Expectancy Value*. As per the ICTA model (Lin, 2003) classification of theoretical foundations governing the adoption of a communication medium, this component was grouped under the broad category name Use Factor. Use factors encompass theoretical foundations driven by the user’s need to achieve a specific outcome, i.e. find information.
Chapter 6: Analysis & Discussion-Online Survey

Table 6.4: Social media adoption (factor extraction)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>[v3]</td>
<td>.849</td>
</tr>
<tr>
<td>[v4]</td>
<td>.833</td>
</tr>
<tr>
<td>[v2]</td>
<td>.765</td>
</tr>
<tr>
<td>[v5]</td>
<td></td>
</tr>
<tr>
<td>[v6]</td>
<td></td>
</tr>
<tr>
<td>[v11]</td>
<td></td>
</tr>
<tr>
<td>[v9]</td>
<td></td>
</tr>
<tr>
<td>[v18]</td>
<td></td>
</tr>
<tr>
<td>[v20]</td>
<td></td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalisation.
Rotation converged in 5 iterations.

The second component contains two variables that load highly onto it and they both seem to relate to people’s behavioural aspects concerning the real, implied, or imagined presence of actions of other individuals in an online social setting. This relates to the social impact theory advocated by Latane (1981). Hence, this component was labelled Social Impact. This theme, however, was not specifically identified in the discussion relating to the ICTA model components discussed in Lin (2003) that primarily focused on the adoption of mediated communication technologies in an organisational setting. However, considering the closeness of the items identified in the component to ‘socialisation’, this component was grouped under Social Factors driving the adoption of social media as a means of communication.

With regard to the third component, the two variables that load highly onto it relate to users’ beliefs about their ability to succeed when social media is used as a communication method. Hence, this component is named Self-efficacy. As per the ICTA model (Lin, 2003), the component can be identified under the broad category Audience Factor. In Lin (2003), audience factors have been identified as a group of theoretical foundations that govern the adoption of a communication medium driven by users’ personal characteristics.

Finally, the two variables that load highly onto the fourth component can be associated with specific situations relating to users’ day-to-day banking when social media is considered as a means of communication. Therefore, this component is identified under the broad category
Contextual Factors. As per the discussion in section 3.4.2.7, the fourth component, relating to contextual factors, has been identified as *Situational Crisis Communication* considering its reflection on the adoption of social media by users during times when banks have problems with their customer-facing technologies.

These four factors provide the foundation for the remainder of this research study as they describe themes that drive the public’s adoption of social media as a communication method.

### 6.2.4. Using Themes as Social Media Adoption Factors

The previous section explained the themes extracted as a result of the PCA, which have been named accordingly based on their similarities, as Use, Audience, Social, and Contextual Factors. They drive the adoption of social media by the Australian public.

As had been highlighted in Chapter 2 (Literature Review), social media adoption by the Australian public precedes involvement in the social media-based online communities of Australian banks. Therefore, as per the explanatory sequential research design involving the online survey and focus groups, these extracted themes are now considered as the basis for discussion on the focus group design, data interpretation and analysis. This was discussed in detail in section 4.3.2.4 and identified with items 2, 3, and 4 in Table 4.5.

Apart from being used as the potential ‘thematic map’ for subsequent focus conduct and discussion, these four extracted themes are also used to determine theoretical sampling to identify the most appropriate focus group participants in the context of their attitudes to such themes. Further descriptive analysis is conducted in this regard and discussed in section 6.4.

### 6.2.5. Addressing Validity and Reliability of Analysis Findings

In order to select appropriate constructs and make certain that the results obtained were reliable and valid, consideration was given to the following aspects relating to principal component analysis.

#### 6.2.5.1. Assumptions

In regard to the statistical test selected, two key assumptions were considered. The assumptions and brief outline of how they were tested are given below:
Variables are linearly related: Considering the potential presence of a large number of possible relationships between 20 different variables, scatter plot observation was used to conduct visual observations to test the linearity between randomly selected variables.

Absence of outliers: An outlier test was conducted once the initial solution was found, by eliminating the cases with an absolute loading value factor of less than 3 in the components extracted (Field and Hole, 2003) prior to undertaking further iteration.

The extracted components did not identify the presence of any outliers.

6.2.5.2. Content Validity
The following actions were taken to maintain the content validity of the constructs when formulating the questions for the survey questionnaire.

Firstly, the constructs used were formulated based on the research studies relating to user participation in social networks (Foster et al., 2010), adoption of social media for public relations in not-for-profit organisations (Curtis et al., 2010), and choosing the appropriate analytical approach (Brown, 2009).

Secondly, each question in the survey questionnaire was given to an expert for detailed analysis. The expert focused on various aspects of the questions, including their essentiality, usefulness, and relevancy in measuring respective constructs under study. Finally, a pilot was conducted by making the survey questionnaire available online to a panel consisting of the supervisory team, fellow researchers and staff from the Department of Information Systems and Business Analytics at Deakin University, Australia. Data collected were used to conduct the preliminary analysis. Their feedback was used to make appropriate changes to the wording in the questions in order to make them understandable to the general public.

6.2.5.3. Sampling Adequacy
Principal Component Analysis requires a large sample size to produce results that carry greater reliability. Literature suggests a multiple of the number of variables with 5-10 cases per variable (Field, 2013). Tabachnick and Fidell (2001, p.588), citing Comrey and Lee (1992), suggest ten observations per variable as a rule of thumb to avoid computational difficulties associated with data reduction strategies such as principal component analysis. They categorise sample sizes as very poor, poor, fair, good, very good, and excellent based on
sample sizes of 50, 100, 200, 300, 500, and 1000 respectively. Table 6.5 demonstrates the sampling accuracy of individual variables.

Table 6.5: Sample size (accuracy)

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>[v2]</td>
<td>213</td>
<td>.23</td>
<td>.88</td>
</tr>
<tr>
<td>[v3]</td>
<td>213</td>
<td>.57</td>
<td>1.091</td>
</tr>
<tr>
<td>[v4]</td>
<td>213</td>
<td>.31</td>
<td>.975</td>
</tr>
<tr>
<td>[v5]</td>
<td>213</td>
<td>.29</td>
<td>.966</td>
</tr>
<tr>
<td>[v6]</td>
<td>213</td>
<td>-.83</td>
<td>.951</td>
</tr>
<tr>
<td>[v7]</td>
<td>213</td>
<td>.17</td>
<td>1.041</td>
</tr>
<tr>
<td>[v8]</td>
<td>213</td>
<td>.34</td>
<td>.981</td>
</tr>
<tr>
<td>[v9]</td>
<td>213</td>
<td>.54</td>
<td>1.035</td>
</tr>
<tr>
<td>[v10]</td>
<td>213</td>
<td>.57</td>
<td>.982</td>
</tr>
<tr>
<td>[v11]</td>
<td>213</td>
<td>1.12</td>
<td>.771</td>
</tr>
<tr>
<td>[v12]</td>
<td>213</td>
<td>.08</td>
<td>.997</td>
</tr>
<tr>
<td>[v13]</td>
<td>213</td>
<td>-.4</td>
<td>1.14</td>
</tr>
<tr>
<td>[v14]</td>
<td>213</td>
<td>-.18</td>
<td>1.185</td>
</tr>
<tr>
<td>[v18]</td>
<td>253</td>
<td>.7</td>
<td>1.305</td>
</tr>
<tr>
<td>[v20]</td>
<td>253</td>
<td>.54</td>
<td>1.233</td>
</tr>
</tbody>
</table>

Based on this information, a sample size of 213 used in the analysis of 15 self-explanatory statements presented earlier in section 6.2.2 can therefore be considered adequate in general terms and fits within the rule of thumb. Similar guidance was also suggested by Tabachnick and Fidell (2001). The measure of sampling adequacy for all of the individual variables included in the analysis on the first iteration was greater than 0.5, thereby supporting their retention in the analysis. The values are illustrated in Table 6.6.
Table 6.6: Sample size (values)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Anti-image Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>[v2]</td>
<td>.869</td>
</tr>
<tr>
<td>[v3]</td>
<td>.845</td>
</tr>
<tr>
<td>[v4]</td>
<td>.846</td>
</tr>
<tr>
<td>[v5]</td>
<td>.629</td>
</tr>
<tr>
<td>[v6]</td>
<td>.772</td>
</tr>
<tr>
<td>[v7]</td>
<td>.812</td>
</tr>
<tr>
<td>[v8]</td>
<td>.851</td>
</tr>
<tr>
<td>[v9]</td>
<td>.773</td>
</tr>
<tr>
<td>[v10]</td>
<td>.843</td>
</tr>
<tr>
<td>[v11]</td>
<td>.743</td>
</tr>
<tr>
<td>[v12]</td>
<td>.905</td>
</tr>
<tr>
<td>[v13]</td>
<td>.886</td>
</tr>
<tr>
<td>[v14]</td>
<td>.866</td>
</tr>
<tr>
<td>[v18]</td>
<td>.588</td>
</tr>
<tr>
<td>[v20]</td>
<td>.683</td>
</tr>
</tbody>
</table>

The Kaiser-Meyer-Olkin (KMO) measure, an index for comparing the magnitudes of the observed variables (Norusis and Inc, 1994), was used as an index to determine the availability of sufficient data to account for all aspects of the analysis (Morse et al., 2008). This outcome is presented in Table 6.7.

Table 6.7: KMO results for sampling adequacy

<table>
<thead>
<tr>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</th>
<th>.681</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bartlett’s Test of Sphericity</td>
<td></td>
</tr>
<tr>
<td>Approx. Chi-Square</td>
<td>426.333</td>
</tr>
<tr>
<td>Df</td>
<td>36</td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
</tr>
</tbody>
</table>

KMO values greater than 0.8 are considered as significant (Foscht et al., 2009); however, a value closer to .7 (KMO = .681) meets the minimum requirement stipulated by Field (2009). Also, considering the explanatory nature of this study, a value of .681 can be considered adequate.
6.2.5.4. Internal Consistency

When Likert-type scales are used, Cronbach’s alpha coefficient is calculated to determine internal consistency (Gliem and Gliem, 2003). Table 6.8 presents Cronbach’s alpha reliability coefficient for four components extracted in the PCA.

Table 6.8: Cronbach’s alpha coefficient for internal consistency of components

<table>
<thead>
<tr>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
<th>Component 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach’s α</td>
<td>No. of Items</td>
<td>Cronbach’s α</td>
<td>No. of Items</td>
</tr>
<tr>
<td>.786</td>
<td>3</td>
<td>.662</td>
<td>2</td>
</tr>
</tbody>
</table>

Even though in the greater scheme of events Cronbach’s alpha coefficient of $0.7 > \alpha > 0.6$ is considered questionable (Gliem and Gliem, 2003), considering the exploratory nature of this research component, $\alpha > 0.6$ can be considered acceptable.

6.2.5.5. Test of Generalisability

The ‘test of generalisability’ of the findings based on principal component analysis was conducted through a second research study on the same data set to determine whether they greatly deviate from the initial findings.

In this regard, the “split-half method”, advised by Field and Hole (2003, p.48) as the “simplest statistical technique”, was used. Here, the data set was randomly split into two and the analysis conducted on each half. The understanding was to stimulate a condition to represent a study and a replication.

If the communalities and the factor loadings relating to each split-half identify similarly with the results of the full data set, it can be regarded as evidence to the effect that the findings are generalisable and valid.

To split the sample into two halves, a random variable was generated that indicates which half of the sample each case required to be placed in.

As mentioned in section 6.3.2, when the communalities and factor loading were examined after the first split-case analysis and matched for patterns, a complex structure was observed associated with one of the split-cases relating to the variable v12. Therefore, a second validity
test was conducted after eliminating this variable from further analysis. The resulting comparisons of communalities and factor loadings are presented in Tables 6.9 and 6.10.

6.2.5.5.1. Comparing Communalities
Comparing communalities was done using split-half analysis and its outcomes are presented in Table 6.9.

Table 6.9: Comparing communalities of split-cases

<table>
<thead>
<tr>
<th>Variable</th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>[v2]</td>
<td>1.000</td>
<td>.697</td>
</tr>
<tr>
<td>[v3]</td>
<td>1.000</td>
<td>.764</td>
</tr>
<tr>
<td>[v4]</td>
<td>1.000</td>
<td>.796</td>
</tr>
<tr>
<td>[v5]</td>
<td>1.000</td>
<td>.774</td>
</tr>
<tr>
<td>[v6]</td>
<td>1.000</td>
<td>.787</td>
</tr>
<tr>
<td>[v9]</td>
<td>1.000</td>
<td>.671</td>
</tr>
<tr>
<td>[v11]</td>
<td>1.000</td>
<td>.768</td>
</tr>
<tr>
<td>[v18]</td>
<td>1.000</td>
<td>.794</td>
</tr>
<tr>
<td>[v20]</td>
<td>1.000</td>
<td>.734</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

Only cases for which Dummy variable to Split cases = 0 are used in the analysis phase.

Table 6.9 demonstrates near identical values, an indication that it can be presented as part-fulfilment of evidence that the findings are generalisable and valid.

6.2.5.5.2. Comparing Factor Loadings
Table 6.10 illustrates factor loadings based on the split-half analysis, which demonstrate near identical values. The fact that variables loaded on the second component in the first split-case analysis loads onto the third component in the second split-case analysis, and vice versa, does not invalidate the overall findings. Therefore this outcome can also be presented as part-fulfilment of evidence that the findings are generalisable and valid.
### Table 6.10: Comparing factor loadings of split-cases

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>[v4]</td>
<td>.853</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v3]</td>
<td>.844</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v2]</td>
<td>.780</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v6]</td>
<td>.873</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v5]</td>
<td>.870</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v18]</td>
<td>.881</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v20]</td>
<td>.812</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v11]</td>
<td></td>
<td>.866</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v9]</td>
<td></td>
<td></td>
<td>.756</td>
<td></td>
</tr>
</tbody>
</table>

**Extraction Method:** Principal Component Analysis.

**Rotation Method:** Varimax with Kaiser Normalisation.\(^{a,b}\)

- a. Rotation converged in 5 iterations.
- b. Only cases for which Dummy variable to Split cases = 0 are used in the analysis phase.

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>[v3]</td>
<td>.855</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v4]</td>
<td>.804</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v2]</td>
<td>.744</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v9]</td>
<td>.875</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v11]</td>
<td>.851</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v18]</td>
<td>.863</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[v20]</td>
<td>.825</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Extraction Method:** Principal Component Analysis.

**Rotation Method:** Varimax with Kaiser Normalisation.\(^{a,b}\)

- a. Rotation converged in 5 iterations.
- b. Only cases for which Dummy variable to Split cases = 1 are used in the analysis phase.

Considering the outcome of the two analyses of communalities and factor loadings, representing a study and a replication, it is evident that the findings in their entirety are valid and generalisable.

#### 6.2.6. Discussion

The findings of the online survey confirm the appropriateness of the factors selected based on the ICTA model components when applied to social media as a means of communication. Therefore, this research component has captured the complex communication environment discussed in section 3.4.3, created by social media as a result of its users being given permission-free participation in the communication conducted within that environment.
This new communication environment largely consists of users with multifaceted individual necessities who are driven towards adopting social media to satisfy such necessities. Businesses wanting the participation of these individuals with varied necessities in their respective social media-based communities must therefore carefully consider such factors.

In the context of subsequent research components associated with this research study, the findings of this research component carry considerable importance in the application of social media strategies towards encouraging users to participate in social media-based online communities.

The use, audience, social, and contextual factors could therefore form the foundation for discussions associated with subsequent research components that together form the mixed-methods approach of answering the overarching research question. They are placed on a sound theoretical footing considering the established theoretical foundations of their underlying components, such as self-efficacy, expectancy value, and social impact. When more insightful data, consisting of users’ own perceptions on the subject, are analysed as part of this explanatory sequential study, their findings can build upon the factors determined in this empirical study.

As a precursor to such qualitative analysis, the following section explores whether different demographic factors generate any attitudinal differences to such factors. A descriptive analysis was conducted in this regard.

### 6.3. Descriptive Analysis – Determining Differences

The principal component analysis in the previous section describes four factors that drive the adoption of social media. Three of the four factors, namely use, audience and social factors, have all contained a component each backed by established theoretical foundations. They are expectancy value, social impact, and self-efficacy theories. The fourth, contextual factors, has confirmed the use of social media by users as observed in the longitudinal study of Australian banks’ use of social media, to discuss specific issues relating to a given situation. In the context of this research, these relate to the use of social media to deal with banking issues. Together they demonstrated the appropriateness of their selection in the conceptual model component explaining the social communication aspects of the factors driving users’ social media adoption.
These findings lead to the question of whether there are any factors that drive differences among different demographics, such as gender or age groups. The aim of this section is to expand this discussion around these factors by conducting a descriptive analysis to unearth those factors that drive differences.

A similar analysis was previously conducted by Correa et al. (2010) who examined the role played by gender and age in the dynamics of social media use. They studied groups’ relationships to three of the five dimensions of the Big-Five model proposed by Goldberg (1990). The model, consisting of extraversion, neuroticism, openness (to experiences), agreeableness, and conscientiousness, observed how they differed by gender and age. As a result, the study identified personality traits driving social media use being related to demographic variables.

The findings of this descriptive analysis would add another dimension to the discussion that would be conducted subsequently, based on qualitative responses gathered from users of social media. The expectation is that these findings would strengthen the applicability of the conceptual model in the adoption of social media by Australian banks to communicate with the public. The overall outcome would be beneficial to the study as it captures the point of view of practitioners in a background where Australian banks identified a younger population age group of 18-34 (Foscht et al., 2009) as a potential growth segment.

6.3.1. Test Selection
A Mann-Whitney U test was conducted with these four factors as dependent variables to determine whether attitudes towards them differ based on the gender-/age-group identified here as predictors. The Mann-Whitney U test is commonly used for testing differences between groups and it looks for differences in ranked positions of scores in the two groups (Field and Hole, 2003). In the context of this analysis, factor scores identified in the PCA are used to determine how they differ between groups, with hypothesis tests. When saving factor scores post-PCA, the regression method was used, as its procedure involves maximising the validity of estimates (DiStefano et al., 2009).

6.3.2. Test Assumptions
Using the Mann-Whitney U test requires meeting four assumptions, three relating to the design and the fourth reflecting the nature of the data. The three design assumptions are: one
dependent variable measured at the continuous or ordinal level; one independent variable that consists of two categorical independent groups; and the presence of independent observations. The assumption relating to the nature of the data is that the distribution of scores for both groups of the independent variable are “stochastically equal” (Nachar, 2008).

6.3.3. Data Preparation
In order to determine the differences between two groups, three sets of groups were created. This included the gender group and two sets of age groups, 18-34 and 18-25. In the selection of the age group 18-34, the emphasis was on Australian banks’ identifying people in this age category as a growth category. The age group 18-25 was also given consideration as they were considered as high social media users. Mann Whitney U test was then conducted to determine opinion differences between the following groups for four factors determined in section 6.2.3. These groups are, Gender: Men/Women, Younger (18-25)/Older (18 and above), and Younger (18-34)/Older (34 and above).

6.3.4. Hypothesis
Four null hypotheses are formed based on the four components extracted, as in section 6.2.3 above. They stipulate that the two groups come from the same population, which is true in the context of the data used in this study. The alternative hypothesis against which the null hypothesis is tested stipulates that data distributions from the first group differ from those of the second group (Nachar, 2008). These four null hypotheses are presented in the following sections under each of the factors:

\[ H_{0U}: \] Expectancy values (a Use factor) driving the adoption of social media is the same across categories (gender and age groups);

\[ H_{0A}: \] Self-Efficacy (an Audience Factor) driving the adoption of social media is the same across categories (gender and age groups);

\[ H_{0S}: \] Social Impact (a Social factor) driving the adoption of social media is the same across categories (gender and age groups);

\[ H_{0C}: \] Situational Crisis Communication (a Contextual factor) driving the adoption of social media is the same across categories (gender and age groups).

Note: The letters U, A, S, and C represent use, audience, social, and contextual factors respectively.
6.3.5. **Analysis of Results**

Mann-Whitney U tests were able to establish dissimilar distributions, and hence failed the data assumption of similarly shaped distributions. Therefore, interpretations were conducted to determine those groups with higher or lower values by comparing the mean ranks of each distribution score. This has resulted in losing some of the descriptive power that can be achieved by comparing the median. However, considering the explanatory nature of this study, it would not be considerably disadvantageous as it enables deriving valuable information about the two groups in relation to the four dependent variables.

Taking the above into consideration, the following sections endeavour to explain: (1) whether there was a statistically significant difference in the mean ranks of the two groups belonging to any of the three types of demographic data; and (2) interpretation of Mann-Whitney U test outputs taking into consideration key parameters of the output, such as mean ranks, \( U \) score, \( z \) score, and \( p \)-values. An example of the test result (for expectancy value) from which the above values are obtained is presented in Figure 6.1.

![Figure 6.1: An example of a Mann-Whitney U test output for gender group](image)
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Figure 6.1 illustrates the outcome of the Mann-Whitney U test for gender. Its graph indicates that two distributions have different shapes, hence the Mann-Whitney U test is used to compare their mean ranks (Dinneen and Blakesley, 1973), which were calculated separately to make comparisons.

6.3.5.1. Use Factor (Expectancy Value)
A Mann-Whitney U test was run to determine if there were differences in the expectancy value scores between males and females. Distributions of the scores for males and females were not similar, as assessed by visual inspection. Expectancy value scores for males (mean rank = 105.12) and females (mean rank = 104.12) were not statistically significantly different, $U = 5,046.5, z = -.116, p = .907$.

However, the test that was run to determine if there were differences in expectancy value scores between younger (aged 25 or younger) and older people did return a statistically significant result that rejected the null hypothesis. Expectancy value scores for younger people (mean rank 128.98) were statistically significantly higher than for older people (mean rank 95.70). Here again, when visual inspection was conducted, distributions of the expectancy value scores for younger and older people turned out to be dissimilar, $U = 2,861.0, z = -3.517, p < .001$.

The distributions of expectancy value scores for younger (aged 34 or younger) and older people were not similar when Mann-Whitney U test results were visually inspected. Expectancy value scores for younger (mean rank = 108.34) and older (mean rank = 99.66) people were not statistically significantly different, $U = 4,890.5, z = -1.033, p = .301$. This outcome indicates attitudes towards expectancy values driving the adoption of social media change when age group changes from 18-25 to 18-34.

6.3.5.2. Audience Factor (Self-Efficacy)
In determining whether there were differences in self-efficacy scores between males and females, distributions of the scores presented for males and females were not similar, as assessed by visual inspection. However, engagement scores for males (mean rank = 117.02) were statistically significantly higher than for females (mean rank = 96.83), $U = 4,106.5, z = -2.348, p = .019$. Therefore, the null hypothesis was rejected.
When self-efficacy scores between younger (aged 25 or younger) and older people were determined, the results were also statistically significant, resulting in the rejection of the null hypothesis. Self-efficacy scores for younger people (mean rank 124.89) were statistically significantly higher than for older people (mean rank 97.17). Here again, when visual inspection was conducted, distributions of the expectancy value scores for younger and older people turned out to be dissimilar, $U = 3,086.0$, $z = -2.929$, and $p < .003$.

In determining whether there were differences in self-efficacy scores between younger (aged 34 or younger) and older people, distributions of the self-efficacy scores returned dissimilar values as assessed by visual inspection. Self-efficacy scores for younger (mean rank = 117.53) were statistically significantly higher than for older (mean rank = 88.07) people, $U = 4,890.5$, $z = -1.033$, $p = .301$. Therefore the null hypothesis was rejected. This outcome indicates attitudes towards self-efficacy driving the adoption of social media is different for each of the three groups analysed.

6.3.5.3. Social Factors (Social Impact)

A Mann-Whitney U test was run to determine if there were differences in social impact scores between males and females. Distributions of the social impact scores were not similar, as assessed by visual inspection. Social impact scores for males (mean rank = 109.56) and females (mean rank = 101.40) were not statistically significantly different, $U = 4,495.5$, $z = - .949$, $p = .342$.

The test was also used to determine the presence of potential differences in social impact scores between younger (aged 25 or younger) and older people. However, the test did not return a statistically significant result, indicating that social impact scores for younger people (mean rank 109.18) and older people (mean rank 102.82) were not statistically significantly different. Here again, when visual inspection was conducted, distributions of the expectancy value scores for younger and older people turned out to be dissimilar, $U = 3,950.0$, $z = -.673$, and $p = .501$.

When the Mann-Whitney U test was run to explore the presence of any differences in social impact scores between younger (aged 34 or younger) and older people, their distributions for younger and older people indicated dissimilarities, as assessed by visual inspection. Social impact scores for younger (mean rank = 108.29) and older (mean rank = 99.72) people were
not statistically significantly different, $U = 4,896.5$, $z = -1.019$, $p = .308$. This outcome indicates attitudes towards social impact driving the adoption of social media is same across all groups.

6.3.5.4. **Contextual Factors (Situational Crisis Communication)**

A Mann-Whitney U test was run to determine if there were differences in situational crisis communication scores between males and females. Distributions of the expectancy value scores for males and females were not similar, as assessed by visual inspection. In this regard, scores for males (mean rank = 107.74) and females (mean rank = 102.52) were not statistically significantly different, $U = 4,839.5$, $z = -.608$, $p = .543$.

A Mann-Whitney U test was also run to determine if there were differences in situational crisis communication scores between younger (aged 25 or younger) and older people. Distributions of the expectancy value scores were not similar, as assessed by visual inspection. Situational crisis communication scores for younger people (mean rank = 96.49) and older people (mean rank = 107.38) were not statistically significantly different. When the visual inspection was conducted, distributions of the expectancy value scores for younger and older people turned out to be dissimilar, $U = 4,648.0$, $z = 1.151$, and $p = .250$.

However, when the test was run to determine if there were differences in situational crisis communication scores between younger (aged 34 or younger) and older people, the results indicated a statistically significant result, and therefore the null hypothesis was rejected. Distributions of the situational crisis communication scores for younger and older people were not similar, as assessed by visual inspection. Situational crisis communication scores for younger people (mean rank = 116.00) were statistically significantly higher than for older people (mean rank = 92.00), $U = 6,499.5$, $z = 2.699$, $p = .007$. This outcome indicates attitudes towards situational crisis communication driving the adoption of social media change when age group changes from 18-25 to 18-34.

Based on these Mann-Whitney U test analysis findings, it was possible to observe certain themes that drive variations among different demographic groups. The following section further elaborates on these results and explains the implications of the findings for the subsequent qualitative phase of the explanatory sequential study.
6.4. Discussion

The findings of the Mann-Whitney U tests highlight that four themes, underpinned by components with established theoretical frameworks, do not drive considerable differences amongst gender groups. However, the information presented post-analysis identifies age as a major contributor in the creation of differences.

The social media adoption factor that did not generate any difference between the three demographic categories was the social impact where test results have determined that they were the same across all demographic categories. On the other hand, self-efficacy turned out to be the factor that drives most of the differences within all three demographic categories. Interestingly, expanding the age group from 18-25 to 18-34 to cover the younger generation belonging to Generation Y, considered as those born between 1980 and 1992, has made a change in the factors that drove differences amongst three of the four factors. These changes do provide reasons to gain an understanding of the phenomena that drive such differences. In effect, they do provide reasons to consider the importance of the age group in the discussions associated with the conceptual model. With regard to the overall research study, these findings imply upon the conduct of this mixed-methods research study, as discussed in section 4.3.2 (Mixing Methods).

Firstly, there is a developing necessity to consider the importance of obtaining more insight into the attitudes of the younger generation towards their social media adoption. Hence, descriptive analysis findings have affected the design of the next phase of the explanatory research study. In effect, these findings can drive appropriate theoretical sampling, thereby assisting with the subsequent qualitative phase of the explanatory sequential study focus groups. This theoretical sampling, in which participants of the focus groups are selected in order to inform on the researcher’s developing understanding of the area of investigation, is often used in the grounded theory research in order to develop a theory throughout the research process itself (Glaser, 1992). Furthermore, Breckenridge and Jones (2009) consider theoretical sampling as “pivotal” in building theoretical insights.

According to Glaser and Strauss (1967), theoretical sampling is defined as:

“the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyses his data and decides what data to collect next and where
to find them, in order to develop his theory as it emerges” (Glaser and Strauss, 1967, p.45).

The underlying issue here is that such an approach would enable the researcher to collect qualitative data from people who can provide the most appropriate and relevant information relating to his or her generation.

From the practitioner’s point of view, the ensuing discussion has positively impacted upon Australian banks as a result of them being explained through the lens of a specific segment of the Australian population. The result is that Australian banks are more likely to target this particular popular segment in order to benefit from their social media presence.

Secondly, these findings relating to broader social media adoption can inform the subsequent discussion relating to using social media to communicate with Australian banks, considering the adoption of social media as a precursor to using it as a way to communicate. The themes identified in this quantitative study that can be associated with established theoretical foundations would provide a solid foundation in the creation of categories, based upon which focus groups analysis could be conducted. Hence, the four themes identified can be used as the ‘thematic map’ to drive focus group discussion and interpretation of its findings. As a result, these findings act as a means to interface between two contrasting research approaches while facilitating a broader discussion around the second research sub-question.

It must also be noted that there are broader implications of these findings from practitioners’ points of view, who are interested in the most effective administration of their social media presence. In this regard, practitioners are provided with findings from empirical research based upon which they will be able to easily identify a specific segment of the online community where their social media-based messages should be targeted. The inclination of Australian banks to use social media to specifically focus their attention on the younger generation in the 18-34 age group was previously discussed in the literature review chapter. This group has also been identified with an inclination to share information via social media. Therefore, these findings add value to improving banks’ overall social media strategies.

Finally, the findings of this quantitative phase (online survey) of the explanatory sequential study augment the interpretation of the overall research findings. They can be used to explain
the dynamics of the conceptual model component relevant to users’ adopting social media to communicate with Australian banks.

A summary of key findings relevant to this research study is presented below.

6.5. Summary of Key Findings

The research component involving the online survey has contributed to the overall research study in the following manner.

*To facilitate the design of the focus group phase of the explanatory sequential study:*

As noted in section 6.3.3, descriptive analysis conducted on the four themes relating to broader social media adoption has provided the useful information required for subsequent focus group design. This includes:

- Identifying people in the age group 18-34 who demonstrated a marked difference in their attitudes towards the four social media adoption themes extracted from the analysis of survey data as the theoretical sample for subsequent focus groups;
- Formulating the pre-focus group online questionnaire that volunteer focus group participants have filled in as the precursor to their voluntary participation and to provide prior consent for their intended participation;
- Formulating semi-structured questions for the focus group interview that would initiate further, open discussion on the relevant issues.

*To facilitate analysis of focus group data and their interpretation in the context of the explanatory sequential study:*

- As previously noted in section 6.3.3, the four social media adoption themes correspond with factors that drive the adoption of social media by the public to communicate with Australian banks. These factors, which group together established theoretical foundations based on their similarities relating to the adoption of communication technologies, provide a strong basis in the analysis and interpretation of focus group data. As stated earlier, these themes have formed the ‘thematic map’ for analysis of focus group data and interpretation of its findings.
6.6. Conclusion

The outcome of the online survey has in general terms confirmed the appropriateness of selecting the four factors in the conceptual model, namely use, audience, social, and contextual factors. Furthermore, based on the values of the components extracted from the PCA, a further descriptive analysis was made possible, the results of which have implicated upon the refinement of the conceptual model.

The results, which confirm that certain adoption factors drive differences among certain demographics, also had implications for the focus group design. Based on the observations made with regard to certain adoption factors, these are more sensitive towards the age groups than towards gender; participant age was identified as a major factor in deciding the subsequent focus group composition.

This quantitative study was able to achieve its expected broader outcome of informing about the subsequent qualitative study within the parameters of explanatory sequential design. Hence, these findings facilitated the continuation of the research study to achieve its objective of answering the overarching research question of how social media could be adopted by Australian banks to communicate with the public.

In essence, the next chapter concentrates on the analysis and interpretation of the focus group that built upon the findings of this quantitative study. With qualitative data gathered from users of social media, the conceptual model is to be revisited in order to determine whether it requires any further modifications prior to validation.
7. ANALYSIS & DISCUSSION – FOCUS GROUPS

7.1. Introduction

The discussion in the preceding chapter based on the analysis of online survey data was able to determine four key themes that drive users’ social media adoption. Following this, descriptive analysis was undertaken to determine the presence of any factors that drive differences among different demographics, such as gender or age groups. This outcome has enabled initial discussion around gathering information through a qualitative data-gathering exercise that adds value to the study. Consequently, focus groups were designed and semi-structured questions were formulated to strategically reflect upon the discussion so far as part of the explanatory sequential study. Its flow, as explained in Chapter 4 (Methodology), stems from the fact that the adoption of social media is a compulsory precursor to participation in social media-based online communities.

The overarching aim of this chapter is to expand the discussion of four adoption factors, identified as the basis for social media adoption as a method of communication. These factors that group together similar, established theoretical foundations were used as the thematic map in support of the analysis of focus group participant responses and in the interpretation of the findings.

Two focus group sessions, participated in by users of social media as experts on the given topic, have expanded the discussion based on key adoption themes. Following this, the relevancy of these emerging themes was also discussed in the context of them using social media to communicate with Australian banks. The information gathered was collated, categorised, analysed, and interpreted based on predetermined as well as emerging themes using NVivo qualitative data analysis software (version 10).

The outcome of this analysis was used in the modification of the conceptual model component relating to social communication aspects of the conceptual model presented in section 3.5.

7.2. Focus Group Overview

The aim of focus groups as the next phase of the explanatory sequential design, and as explained in section 4.3.4.2, is to capture information relating to the adoption of social media by the public to communicate with Australian banks. In this regard, two focus group sessions
were conducted, with the participants of each focus group being selected based on the sample selection strategy described in section 4.3.4.2.1. The use of two focus groups, apart from facilitating broad-ranging views, has enhanced the effectiveness of validating the collected data. The focus group details are as follows:

**First Focus Group**

- Date: 3rd April 2014
- Location: Deakin University, Burwood, Victoria, Australia
- Participants: 3
- Age group: 18-34

This group is identified as Group 1 in the analysis of individual responses.

**Second Focus Group**

- Date: 3rd April 2014
- Location: Deakin University, Burwood, Victoria, Australia.
- Number: 4
- Age group: 18-34

This group is identified as Group 2 in the analysis of individual responses.

Both focus groups have been independently moderated. Uniformity was maintained in the manner that semi-structured questions were formulated for both focus groups, except for one minor adjustment made to the second focus group. This adjustment led to the inclusion of the topic for discussion, ‘Sponsored advertising on social media’, which was initiated by one of the first focus group participants.

7.3. **The Analysis Approach**

In selecting the analysis approach, key aspects were considered that enhance the outcome of qualitative research by aiming for a higher level of credibility, and which honour philosophical and methodological roots (Caelli et al., 2008). The following sections describe these key aspects in more detail.
7.3.1. **Theoretical Positioning of the Researcher**

Caelli *et al.* (2008, p.5) describe theoretical positioning as “the researcher’s motives, presuppositions, and personal history that leads him or her toward, and subsequently shapes, a particular inquiry”.

In the context of this qualitative aspect of the overall research study, the findings of the preceding online survey that confirmed the appropriateness of the four factors with theoretical foundations, have shaped this particular inquiry. Together, they form the ‘thematic map’ (Braun and Clarke, 2006) for the focus group data analysis that guides, but does not determine, the outcome of the overall analysis. In this analysis, the thematic map is articulated by the factors identified in the preceding quantitative study. These factors, namely use, audience, social, and contextual factors, are influenced by the themes identified in the analysis of quantitative data.

7.3.2. **Establishing Rigour in Qualitative Research**

As the fundamental requirement is establishing rigour in the design as well as evaluation, philosophical assumptions were considered and discussed in section 4.3.4.2.

Criteria that need to be considered in order to achieve rigour in quantitative studies are determined through internal validity (truth value of the inquiry or evaluation), external validity (applicability), consistency (reliability or replicability), and neutrality (objectivity) (Lincoln and Guba, 1986).

Morse *et al.* (2008, p.17) consider verification as “the process of checking, confirming, making sure, and being certain” and the researcher needs to assure that mechanisms of verification are integrated into the research design itself. Based on the recommendation of Morse *et al.* (2008), the following verification strategies were discussed and integrated with the research design to ensure the validity of the focus groups and reliability in their outcome. These three strategies are in agreement with the argument put forth by Creswell and Clark (2011) to qualitative researchers who subscribe to the validity of the research:

1) Methodological coherence to ensure having a method that matches the research question, and that subsequently matches it with the data and appropriate analytical procedures. A detailed discussion on this issue was conducted in section 4.3.4.2.
2) Selection of an appropriate sample that represents a specific user segment that is best placed to provide the evidence required and are qualified to provide information in the given context. Two focus groups consisting of social media users have been used to discuss issues relating to their use of social media to communicate with Australian banks. Collecting and analysing data concurrently creates a repetitive interaction between data and analysis and in turn provides the essence of reliability and validity. In the second focus group some modifications were made to the manner in which questions were asked in order to get the participants more engaged in the discussion. This has resulted in gathering data that was more relevant to the overall inquiry.

3) Theory development/establishment is an outcome of the research process rather than a framework to move the analyses along. As a result, applying the process of informing based on empirical research findings makes the theories valid and therefore can be considered as a template to further development of theory.

With these stringent verification strategies implemented, the outcome of this research component can be considered as meeting the requirements of rigour expected in qualitative research.

7.3.3. Identifying Analysis Lenses

As indicated in the previous section, thematic map components were used as analysis lenses. They were continuously revisited with participant responses to identify the basis of their adoption decisions and how such decisions have affected their participation in social media-based communication with Australian banks. Accordingly, this thematic map only provides the guidance to the overall analysis. It does not determine the outcome of the analysis of data relating to user communication with Australian banks using social media.

According to Braun and Clarke (2006), the researcher’s judgement is the underlying factor determining whether or not a particular aspect should be considered as a theme, and a certain level of flexibility was retained.

“A theme captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set. An important question to address in terms of coding is what counts as a pattern/theme, or what size does a theme need to be? This is a question of prevalence
both in terms of space within each data item, and prevalence across the entire data set. Ideally there will be a number of instances of the theme across the data set, but more instances do not necessarily mean the theme itself is more crucial. As this is qualitative analysis, there is no hard-and-fast answer to the question of what proportion of your data set needs to display evidence of the theme for it to be considered a theme. It is not the case that if it was present in 50% of one’s data items, it would be a theme, but if it was present only in 47%, then it would not be. Nor is it the case that a theme is only something that many data items give considerable attention to, rather than a sentence or two. A theme might be given considerable space in some data items, and little or none in others, or it might appear in relatively little of the data set” (Braun and Clarke, 2006, p.9).

The coding process was conducted with the aim of unearthing the theory or theories relating to communication that could potentially be applicable to social media as a means of communication. Thematic analysis, a form of qualitative data analysis was used that enabled “comparison of pieces of data judged to belonged to a particular theme, in an effort to recognise the common feature of that theme” (Tuckett, 2005, p.75).

The following section that discusses the participants’ responses from the two focus groups has strived to apply these fundamentals of the thematic analysis.

7.4. **Focus Group Findings**

This section qualitatively analyses focus group participants’ responses consisting of deep and insightful information gathered from a group of social media users. The underlying presumption for this qualitative analysis is that social media adoption precedes it being used by Australian banks and the public to communicate.

In the analysis, participants’ responses were at first compared pieces of data, judged to belong to an emerging theme associated with any of the four themes identified in in section 6.2.3. The four themes in this analysis have provided with a ‘thematic map’ and considered as the foundation of such determination, as described by Tuckett (2005).

“The aim was to develop a set of logical themes and associated characteristics (exemplified by sub themes which together formed a ‘story’). Ongoing developmental
analysis meant that the themes became guides for further analysis of data as the themes in
turn were integrated through theorising” (Tuckett, 2005, p.76).

Guided by this information, focus group participant responses were subjectively analysed
while giving attention to their positivity or negativity relating to their participation in social
media-based communication with Australian banks. This analysis process was previously
explained in detail in section 1.3.2 and presented in Table 4.6.

7.4.1. Audience Factors

The audience factors in the context of this research component are considered as themes
identified in the analysis that refers to social media users’ personal characteristics in relation
to their communications with Australian banks using social media. Two substantial themes
emerged in the analysis attributable to audience factors, namely self-efficacy and reasoned
action.

7.4.1.1. Self-Efficacy

The focus group discussion demonstrated instances of self-efficacy driving users to make
positive or negative decisions relating to communicating with Australian banks, depending on
their knowledge of the technology. Their detailed understanding of the functionalities of
different social media technologies has enabled them to decide on the most appropriate manner
for the technology concerned to be used.

Examples in their responses demonstrate their ability to stick with private forms of messaging
available within certain technologies, such as Facebook and Twitter, by allowing messages to
reach the recipient directly, hence bypassing the public network. They understand that raising
issues in a public forum is not necessarily the best possible way to find a solution. Participant
responses have indicated that even in situations that raised negative emotions they tended to
follow this approach. Participant 1 of Group 1 explained this with an example involving a
product from a well-known supermarket chain that raised concerns.

Self-efficacy of the unwritten etiquette employed by social media users when they
communicate with businesses was demonstrated again by Participant 1 of Group 1 who
presented how the situation was handled when a cockroach was found in one of the ready-to-
eat vegetable packs. Not wanting to be part of a discussion that could lead to ruining the
associated supermarket brand, the participant decided to use the private messaging facility available in some social media technologies.

Participant 1 of Group 1 indicated her intention to “monitor how Australian banks communicate with their online audience” is driven by her knowledge of the technology associated with her professional commitments. Even though this participant did not engage in communicating proactively with her bank using social media, she had used alternative technologies for communication purposes.

Meanwhile, participants who considered themselves high social media users, depending on the frequency of their social media use, demonstrated a higher level of self-efficacy in the technologies concerned. They demonstrated this knowledge by using the technologies to become informed only on issues that they needed to know about. In this regard, they filtered out unwanted messages that appeared on their social media page, i.e. Facebook wall or Twitter timeline. Examples were provided by certain participants to the effect that they deliberately used sharing functions to force the source to customise information accordingly. According to Participant 2 of Group 1,

“I prefer to get information that is customised for my needs. I don’t enjoy that I get additional information that I do not need and that is not relevant to me”.

Users’ self-efficacy also has a positive effect on their decisions on matters relating to their communications with Australian banks using social media. It was observed that participants of both focus groups who have been more receptive to the idea of using social media to communicate with banks have even volunteered advising others that no one should be using social media to share their bank account details in their communications with banks. They presume that personal information can be revealed through communicating issues pertaining to loans or other matters that are personal to each individual in a public forum such as social media.

Participants were knowledgeable enough to understand that hiding their identity is also not the solution when dealing with banks or any other entity. To demonstrate this, Participant 1 of Group 1 indicated various advantages of presenting actual self on social media, such as developing relationships for future employment purposes, and indicated her inclination to follow a leading IT company. Some focus group participants agreed that hiding one’s online
identity behind a ‘fake’ name could potentially devoid them from gaining benefits as a result of useful communications with banks. However, this view was not shared by everyone in the focus groups, with Participant 4 of Group 2 expressing her unwillingness to contribute to social media as she considers it tantamount to ‘revealing’ themselves.

The above analysis describes instances where users’ self-efficacy drives their use of social media to knowingly achieve outcomes which are beneficial to them, in their communications with Australian banks. At the same time, their self-efficacy of the technologies concerned keeps them out of harm’s way by withholding their personal or financial information in their communications with Australian banks.

Apart from the effects of self-efficacy on the overall use of social media to communicate with Australian banks, the analysis has determined the effect of reasoned action on the part of the users effecting the same.

7.4.1.2. Reasoned Action

The analysis of focus group responses established instances where the majority of the participants’ communication or non-communication with Australian banks using social media was driven by reasons personal to every participant. However, a general consensus was observed across both focus groups, of treating Australian banks differently to other organisations or businesses when they consider communicating with them using social media.

The following underlying reasons were given to justify their claims in this regard:

1) Necessity and frequency of the continuing communication;
2) A sense of longer waiting periods to receive a response;
3) Content associated with social media-based communication is freely available in the public domain for anyone to access;
4) Content associated with social media communication is highly personal in nature and that makes users reluctant to share this with such audiences;
5) A sense of negativity surrounding the financial institutions.

By highlighting these reasons behind their decision-making, the focus group members have provided real-life comparisons to highlight the differences between Australian banks and other businesses.
According to Participant 2 of Group 1, a certain ongoing online relationship is being developed between a service or product provider and the user of the said service or product, notwithstanding whether the item concerned is a car or a pair of shoes. This remains the case if it is a one-off purchase; this online relationship could lead to subsequent purchases at a later date. However, the participant indicated that he saw no reason to engage in communication with the provider on a daily basis, as is generally the situation with the banks. A user of banking services may need 24-hour access to banking information and therefore an App\textsuperscript{1} or social media could be treated as convenient tools. They provide another way for users to keep in contact with Australian banks, as one of many different options available to them.

The majority of the participants in the second focus group expressed their unwillingness to use social media to initiate communications with Australian banks. Based on their past experiences with more traditional communication mediums, such as telephone or email, they argued the immediacy of them connecting with a bank’s representative using such mediums. However, they expressed their reservations about having the same experience had they used social media to communicate with Australian banks. Participant 3 of Group 1 highlighted a potential scenario that “may require waiting longer for a response and not to mention other people also being able to read my communications with the bank”.

Most participants have expressed their agreement with this comment and Participant 3 of Group 1 again had the following to add in this regard:

“To be honest, if it is a bank, I would say it is confidential and I wouldn’t want any of the others in the community to see any of my communications. I would like them to be confidential, but it would be different if it is a supermarket.”

Hence, Australian banks need to explore the possibility of following up important issues with the participants of their respective social media-based communities and develop direct links to them, bypassing the public forum.

In response to certain questions, participants preferred to make comparisons with well-known Australian brands to explain the reasons for them treating Australian banks differently. Identifying supermarket chains by their brand names, Participant 3 of Group 2 was of the view

\textsuperscript{1} Common word used for Applications used in mobile devices, such as tablets and smart phones.
that his online relationship with banks was purely for informational purposes. This participant’s statement explains the reasoning:

“If I take Coles, for example, the information their social media presence contains, such as groceries, cannot be considered as high priority for me. However, when it comes to banking services – it’s totally different”.

Participant 2 of Group 1 highlighted the general sense of negativity surrounding the financial sector institutions, including insurance companies, as another reason for treating Australian banks differently to other brands or businesses. This participant apparently felt comfortable in dealing with retailers when compared to banks as they “did not deal with money”.

This analysis has facilitated determining how users of social media reason their adoption of social media to communicate with Australian banks. It has provided definitive insights into how this reasoning drives perceptions, and the potential long-term effects. Their special consideration given to banks is a reflection of the importance they attach to them when communicating with them via social media. In this regard, as providers of an important service to the public in facilitating their day-to-day activities, banks are constantly in the public eye for both positive and negative reasons. At the same time, social media with its ability to disseminate information across a wider section of the public, therefore has the capability to disseminate information that potentially undermines the credibility of the bank concerned.

In order to change these perceptions, Australian banks are required to initiate action to create a positive impression of them using the same medium that provides them with direct access to their intended audience. Hence their proactive communication with the public is important.

This discussion has so far, confirmed the effect that self-efficacy and reasoned action have on the part of the audience (social media users) in relation to their communications with Australian banks using social media. It also confirmed Lin’s (2003) arguments about their relevancy in adopting communication technologies by applying the concept to the adoption of social media as a form of communication, based on empirical findings.

In addition to audience factors, this analysis has also seen themes relating to use factors, as identified in the Lin (2003) model of integrated communication technology adoption.
7.4.2. Use Factors

Use factors consist of themes that relate to outcomes users expect to achieve by participating in social media-based communication with Australian banks. The analysis of empirical data established two key themes, namely expectancy value, and uses and gratifications. The following discussion around these themes includes a description of the individual parameters detected under each of these two themes.

7.4.2.1. Expectancy Value

The focus groups exposed how the value that users expect to achieve by using social media affects their participation in social media-based communication with Australian banks, and is related to both their personal and professional lives.

Participant 3 of Group 1, who lived away from her closest friends, mentioned that she used “social media, mainly Facebook, or even LinkedIn just for fun, to catch up with friends and family”. This participant, who considered herself a “lazy” person, preferred obtaining all relevant information about her family and friends via her social media account. Participant 1 of Group 1 explained how certain values expected from social media have tied up with her academic and professional expectations. This participant, who is a researcher, wanted to monitor the activities that companies and brands undertake by following them on their respective social media presence. According to this participant, following Australian banks on social media allowed her to understand the specifics relating to their communications with their online audience.

In addition to the three social media technologies described in this study, namely Facebook, Twitter and YouTube, some participants indicated their inclination to use other technologies to achieve their social media expectations. Instagram, a social media technology where discussion revolves around still images posted by users, is one such example. Participant responses have indicated that in some instances social media value expectations varied depending on the specific technologies they preferred. For example, Twitter and Instagram users expect to receive up-to-date information from those they follow on the respective technologies, and in that regard they did not mind others initiating communications with them.

Other expectancy values included receiving product updates that have relevance to them, such as special credit card offers, and news updates. Participant 1 of Group 2 indicated that he was
open to receiving special or free offers from Australian banks and, if received, to consider such offers if beneficial. Professional services and financial advice were also mentioned, and by financial services participants identified such services as investment advice, information about savings products, and information about different funds to invest in.

Some participants have started using social media as ‘information seekers’ at the outset, but the openness they have demonstrated in seeking added value through their presence has later led to ongoing social media-based engagement with banks.

Overall, with regard to using social media to communicate with Australian banks, participant expectancy values varied and they can be identified with underlying motives driving such communications. Some participants of both focus groups indicated how their value expectations had been tied to the reasons that could drive them towards communicating with banks via social media; others were more specific. Taking these findings into consideration, it is evident that users’ value expectancies drive their adoption decisions governing their communications with Australian banks on social media.

While the expectancy-value related issues describe values social media users attach to their participation in social media-based communication with Australian banks, uses and gratifications takes a different view. In the context of this research study, it explains why people use specific mediums of communication and what purposes they use them for.

7.4.2.2. Uses and Gratifications

In the analysis of overall participant responses, it was possible to determine how and why users actively seek (or do not seek) the adoption of social media to communicate. These responses mostly relate to negative sentiments that influence their non-participation in social media-based communication with Australian banks.

The analysis identified that the majority of focus group participants passionately expressed opinions about certain aspects that concern them when considering adopting social media to communicate with Australian banks. To highlight the underpinning sensitivities of those opinions, several direct quotes have been included in the discussion. These concerns primarily relate to security, privacy and trust issues.
The first part of this discussion (sections 7.4.2.2.1 – 7.4.2.2.3) covers user concerns associated with their decision-making over the use of social media to communicate with Australian banks. Meanwhile the second part of the discussion (sections 7.5.2.2.4 – 7.5.2.2.7) explains specific mediums of communication that users consider to overcome their concerns around the use of social media to communicate with Australian banks.

User concerns in this respect closely relate to the differentiation they attach to Australian banks compared to other businesses operating in the social media environment, as discussed in section 7.4.1.2. These concerns are primarily driven by the perceptions associated with the potential content involved in users’ communication with Australian banks. The idea of conducting any communication with banks in the public domain is therefore entangled with scepticism about the technologies’ reliability.

Participants from both focus groups expressed their general agreement on their concerns associated with security, privacy and trust issues. They relate such concerns to the openness of the communications taking place in a public forum about issues that they consider to be highly personal for them. In highlighting their concerns, participants have provided reasons to consider their financial issues differently to other mundane day-to-day activities. The following sections discuss these concerns more in detail.

7.4.2.2.1. Security

Focus group participants have also raised their concerns associated with the possibility of “hacking” into people’s accounts, though they did not elaborate on how this could happen as a result of them communicating with banks. However, Participant 3 of Group 1 explained this by making comparisons with Australian banks’ official websites. This participant has considered banks’ websites to be more secure as a result of the public connecting with them via a ‘secure connection’ with an indirect reference to social media not providing the functionalities required to making such connections. The comment made by this participant explained how online security-related issues often discussed in the literature (Everett, 2010; Cosoi, 2011) affected people’s decision-making about adopting the said technology. According to Participant 3 of Group 1:

“I don’t trust Facebook in the same way as I do other things on the Internet. I think it is easier to ‘hack’ people’s accounts as it is very often easy to see. I think bank
websites provide more security because it is all protected, where we have secure connections”.

Considering the efforts made by developers of social media to tighten security around their respective technologies, this opinion was driven by a lack of knowledge of the technology concerned. As it became clear later in the focus group, this participant referred to the security offered in Internet banking and used this to compare with the lack of security for communications conducted through social media. Therefore, this lack of understanding users have about the technology negatively affects their use, especially when considering social media to communicate with banks.

Participant responses with regard to security issues when communicating with Australian banks indicated that the most important issue that concerns them is the sensitivities associated with their banking and related personal information. Participants in this regard were in unison with this interpretation as demonstrated when they highlighted their reasons for limiting the use of social media to communicate with Australian banks. The following comment made by one of the participants further articulates these perceptions:

“I would not really share my bank details over Facebook because it is not a secure platform. In case if you want to ask a particular question about my bank account or something, I would definitely be interested to know that my privacy is protected and my personal (data).”

What is evident here is the low level of trustworthiness amongst users about the ability of social media as a technology to provide the required level of security to securely conduct communications with Australian banks.

7.4.2.2. Privacy

Apart from security concerns, privacy too can be considered as a major cause of ambiguity amongst users about communicating with Australian banks on a public platform.

In this regard, most participants of the two focus groups agreed that they could entertain the idea of communicating with Australian banks about general matters, for example how banks go about doing their business. They are also adaptable towards engaging in communications with banks to assist them with changes to their interface, to make them more user-friendly.
However, as a group everyone was against including banking or personal information in their communications with Australian banks.

Participant 3 of Group 1 explained the reasons for not using social media to communicate, however qualified the response to specific issues, such as obtaining loans. This participant did not want friends in her social network to know she was looking for a loan or wanting to buy a house. This comment meanwhile has encouraged others also to contribute with their own experiences, and offered similar responses. According to Participant 2 of Group 1:

“I would definitely feel uncomfortable to share my bank details or my personal details. I am very concerned about my privacy. So, I don’t think it is a good idea to get banks to use Facebook for that kind of user-specific information. Just something general is OK”.

Meanwhile, others are more concerned about their socially shared information appearing when public searches of information are made, for example as a result of a Google search. Most users felt strongly about this as per the response given by Participant 2 of Group 2:

“If you post something on, just for example, the Commonwealth Bank Facebook page, and then if you search your name later on Google, then you can find your question again. So, I don’t like that to happen”.

The reasons given by the focus groups’ participants have demonstrated their apprehensiveness about becoming entangled in a network that they did not wish to be a part of. The possibility of revealing their personal information to people unknown to them was something they found difficult to fathom. Some are not using social media as frequently as others, purely driven by their concerns about the privacy and security of their information.

It is apparent from the above responses that there is a lack of trust that has gone into their thinking about negativities around social media as a technology, and prevents them from using social media to communicate with Australian banks. Also, users do not believe that at some point sensitive information would not be made available to the public beyond the ‘personal online social network’ they initially decided to be part of.
7.4.2.2.3. **Trust**

Having analysed both of the focus group discussions, it is clear that users of social media are very distrustful about the level of privacy social media technologies provide to them when engaging with Australian banks, and this leads to a lack of trust.

As indicated earlier, most of the concerns about privacy and security are driven by the lack of trust users place in social media when it is considered as a technology to communicate with banks. To a certain degree this mistrust relates to individual experiences encountered while using social media for various purposes. Participant 2 of Group 1 highlighted the messages seen when accessing a social media App through their profile, which appeared as a request to share information. It appears that similar incidents, even though they have no direct correlation to using them to communicate with banks, have resulted in generating this general mistrust in users’ minds that eventually forced them to keep away from social media being used for specific purposes. One participant who expressed the issue in a very brief sentence, “I do value trust more than social media” explains how seriously they look at the issue of trust attached to the technology.

While highlighting trust as a major concern, some focus group participants consider that Australian banks need to do more in order to encourage users to trust in social media as a way to communicate with them. They as social media users have developed a general sense of understanding about the advantages associated with its unique features while at the same time have become cautious about the potential adverse effects on personal information. Some participants have suggested that banks be more proactive in building users’ trust in them prior to communicating what they intend to offer, while others are more explicit. In this regard, Participant 4 of Group 1 wanted banks to initiate trust-building measures by proactively reaching users of social media, for example by sending detailed information about their offers. The general consensus amongst the majority of the focus group participants from both focus groups was that they are prepared to accept banks’ communications.

This part of the analysis revealed that specific issues, mainly those concerning the confidentiality of their information, keep users away from using social media to communicate with Australian banks. These issues reflect on them being less confident about their use of social media and have been exaggerated by knowing that similar issues have always being
concerning for users of web-based technologies. Also, they are not confident about whether Australian banks have taken tangible measures to alleviate their concerns in this regard.

Meanwhile, users of social media have identified their own strategies to address their concerns about security, privacy and trust issues relating to specific areas of their communications with Australian banks. They have been actively considering alternative methods to communicate information that they consider as sensitive. The following section aims to analyse focus group participants’ responses regarding their selection of the most appropriate means of communicating with Australian banks in such situations.

Participants identified several ways they would prefer to communicate with Australian banks in the absence of trust in social media. These include Apps, banks’ own official websites, direct messaging using social media, and also some of them indicated their readiness to walk into a bank branch to discuss any issues that are personal in nature.

This focus group analysis has observed that participant responses are generally clear and definite about their preferred way of communicating with Australian banks on issues affecting personal information. Participant 2 of Group 1 was adamant about not wanting to contact the bank via social media if faced with banking issues, but indicated readiness to phone the bank or even visit a branch. This view is shared by the majority of the participants belonging to both focus groups and is a factor for them to seek alternative technologies for information search or communication in order to protect the confidentiality of personal information. As indicated in the previous section, most participants’ preferences in this regard are banks’ official websites and telephone. Email was also mentioned by one participant, notwithstanding that it is being considered as an insecure medium for communication purposes. Foo and Chin (2004) have further highlighted the challenges associated with using social media as a communication method.

This is a substantial deviation from the findings of the online survey where it was identified that a propensity of users of social media do so to communicate with others including banks in situations relating to difficulties gaining access to banking services. The following sections describe some of the alternative strategies suggested by the focus group participants and the reasons guiding such suggestions.
7.4.2.2.4. Mobile Apps

It was evident in the analysis how some participants were driven by one technology over another, with Participant 2 of Group 1 referring to the use of mobile Apps on several occasions during the discussion. This highlights the growing importance of mobile Apps as a platform for communicating with the public. Also, this has the potential to impact upon growth in the use of social media for communication purposes as the technology evolves, as it always has done since its inception. The consideration given by the participant was that having access to banking services is a round-the-clock requirement. Hence, they expect immediate attention from their respective bank if something is not right.

This particular participant also indicated the necessity to have several options instead of depending on just one; however, the use of private messaging capabilities available in some technologies was not considered as an option. The underlying reason for selecting an App or communicating via a website-based chat utility with a person providing customer services was the need to have a one-on-one discussion and therefore receive immediate attention to any issues the participant is concerned about. Inadvertently, participants have indicated their unease at not being able to conduct one-on-one discussions should social media be used as the method of communication. The general consensus was that Apps provide a more secure way of communicating compared to social media. This is a perfect example of how concerned users are about the security of conversations with Australian banks and how they are driving the selection of the communication medium.

Notwithstanding that the scope of this study did not specifically cover mobile Apps, their increasing exploitation by the developers of social media to cater to the growing number of social media users is an indication of the potential for further growth in the use of social media by businesses to communicate with the public. The improved mobility and availability will provide users of social media with a powerful tool to communicate without the inconvenience of using a computer.

7.4.2.2.5. Direct Contact (Phone/Email)

Most participants of both focus groups highlighted several mediums apart from Apps that provide them with direct access to someone within the banking customer service department, to bypass the dangers of communicating within a public forum such as social media.
Participant 2 of Group 1 was very convincing in this regard and demonstrated the urgency that users attach to having direct access. This participant said, “if I had a customer complaint or something like that, I probably wouldn't contact them through social media, I would call them up or even go to a store”.

Participants 1 and 3 of Group 2 also indicated that they would use email if faced with a problem, with the exception of using social media only in a situation where receiving web-based information was required. Participant 2 of Group 1 meanwhile expressed a slightly different view and was very specific about the need to create contact with a “single person”. According to this participant, it is only then he would be satisfied he was receiving proper attention, “rather than having to send emails back and forth or just personal messaging on their Facebook page”. The reason is that if any other medium were used, the issues would have to be attended to by many people and “pushed around various departments or something”, causing delays.

7.4.2.2.6. Australian Banks’ Official Websites

Websites have also been mentioned by the focus group participants as a reliable source of information rather than using social media to gain access to banking information.

Another general consensus observed amongst the participants is their consideration that social media has yet to gain universal acceptance as a reliable source of information. In this regard, they continued to make comparisons with the banks’ official websites as the alternative to obtaining more reliable information. Surprisingly, Participant 3 of Group 1 had the confidence to use her bank’s website-based ‘chat’ facilities, and considered the ‘chat’ operator as being “very helpful” in attending to her needs, and saved her valuable time. Another reason for participants to consider banks’ websites was their resentment at being “bombarded” with advertising when on social media. This comment however was not supported by further evidence to determine whether such “bombardment” of offers related to banking or any other business. Some have indicated that the websites, apart from being trustworthy, offer rich and detailed information. To demonstrate this, Participant 3 of Group 2 referred to the availability of savings and interest calculators as well as balance sheets to manage their finances and financial decision-making, which they considered “important and useful”.

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Participant 4 of Group 1 did not hesitate to denounce engaging social media for banking-related issues in its current form as “a little bit of nonsense”. Participant 2 of Group 1 meanwhile pinpointed the scarcity of such information being available via social media. Notwithstanding that the focus group participants demonstrated reluctance to communicate with banks using social media, they are also privy to some of the advantages social media offer. One advantage that had driven them to use social media was their preference of contacting the bank instead of the bank contacting them, indicating that any potential communication is purely need based. Highlighting another potential benefit, Participant 1 of Group 1 was of the view that social media provides the ability to have private conversations with Australian banks.

7.4.2.2.7. Private Messaging Using Social Media

The users of social media who have a higher level of self-efficacy indicated their use of private messaging that is available on certain social media technologies, as evidenced by their understanding of the capabilities of such technologies. They demonstrated their ability to switch to the ‘private’ mode of social media communication as and when such need arose.

The general consensus within the focus groups was not to publicise their concerns using social media. Giving as an example a supermarket chain, Participant 1 of Group 1 highlighted their reluctance to irritate a business or a brand by posting on social media, even in a situation where the participant was the aggrieved party. This participant had instead used the private messaging available on some forms of social media, adding “it is easier than looking for contact details or sending an email”. However, no such examples were provided relating to similar problems with Australian banks. This participant also indicated their reluctance to use social media to make public comments, and highlighted that the process of following up comments made was “time consuming”. She saw no value in doing so, hence the use of private messaging available on social media.

These findings from the focus group discussions confirm the uses and gratifications of social media. However, users’ concerns still remain with the adoption of social media to communicate with banks, and participants have unequivocally expressed these concerns. The findings also demonstrate the areas of value creation that social media provide to the user community, as users find their own niche area to use.
7.4.3. **Social Factors**

Users’ adoption of social media as a communication technology that operates primarily in a social setting with little or no control over the dissemination of information, creates risks for any business. Australian banks are not immune despite their standing amongst other businesses, therefore social factors have become an important aspect to consider when communicating with Australian banks using social media.

As further confirmation, the analysis of focus group participants’ responses captured emerging themes that could be categorised under social factors as determined in the Lin (2003) model. In this context, it had become evident that participants’ adoption decision-making was also driven by the presence of others within their own social networks on social media. This analysis captured three such emergent themes identified as ‘social factors’, namely opinion leadership, two-step flow of communication, and social impact.

7.4.3.1. **Opinion Leadership**

The effect of opinion leadership was evident in the focus group findings, with participants acknowledging how they value other people’s insights and opinions, which sometimes entice them to research products that they had previously not heard of. The effect on them was so strong that opinion had the potential to lead them towards taking further actions, such as following their brand on social media, thereby opening up the particular brand or product.

Also, the majority of the participants in both focus groups indicated their regular investigation of posts that their friends had suggested on their respective social media presence for others to see. Even though in most instances they had not gone any further than clicking on any links with the aim of gathering information, there was a possibility of them doing more than that, depending on the strength of the social link to the person who made the suggestion.

A good example is the situation that led Participant 3 of Group 2 to become a participant of the social media-based online community of Commonwealth Bank. Here, the participant concerned, having noticed that one of the members was a participant of Commonwealth Bank’s online community on Facebook, had become a participant himself in that community, after testing the link to the bank’s Facebook page. Therefore, the evidence presented in this research component suggests that Australian banks with their use of social media have quite implicitly become an opinion leader.
This focus group analysis has revealed two important aspects of opinion leadership as it develops within the social media environment. Firstly, the structure of the social media environment facilitates anyone to express an opinion within their own network, and potentially beyond the network. Secondly, as was demonstrated earlier in the example relating to the participation in Commonwealth Bank’s network, opinion leadership can be gained quite implicitly.

These facts demonstrate that the evolving communication technology environment led by social media is redefining the traditional understanding of opinion leadership. In this new environment, individuals, businesses, and brands with their own online social networks have the capability to become opinion leaders. Lyons and Henderson (2005) explored this by comparing the roles of opinion leaders in a traditional marketplace and in the environment created by new media. This study resulted in laying claim to a new term ‘online opinion leaders’ that they suggest marketers should engage in to achieve enhanced reach.

### 7.4.3.2. Two-Step Flow of Information

Two-step-flow of communication (Wu et al., 2011) in the theoretical sense is identified when individuals (opinion leaders) who pay close attention to the mass media and its messages pass on that information with their own interpretations in addition to the actual media content. Two-step flow and opinion leadership operate in a similar manner; however, the two can be differentiated by the fact that in two-step flow the person who pays close attention to information attaches ‘personal influence’ to the reprocessed message in addition to the content. It can be considered as the process intervening between the media’s direct message and the audience’s ultimate reaction to that message.

In the context of this analysis, two-step flow posits that social media users who acknowledge advertisements that come via businesses’ or brands’ social media presence that they follow on social media or via a trusted member in their own network or sponsored social media advertisements, pass on that information.

The discussion around this theme was initiated with a question posed by the moderator in acknowledgement of one of the participant’s expressed annoyance about the appearance of unwanted posts in her newsfeed. Responding to this moderator’s question, Participant 3 of Group 2 indicated his acceptance of a sponsored advertisement through a suggestion made by
one of the members in his own network. Participant responses were also attributed to the advertisements that appear prior to running a YouTube clip having a similar effect on the users. General consensus amongst the majority of both focus groups was not to dislike such advertisements, with the likelihood of their positive impact on them. They also indicated the likelihood of viewing such adverts if suggested by someone from their own social network.

However, universal agreement to sponsored advertisements was not evident, with Participant 3 of Group 1 identifying them as “annoying” and wanting to filter them in order to have them removed from the newsfeed. Meantime, those who had even unwillingly seen such sponsored advertisements indicated developing an affinity to what was presented in the advertisement.

These findings demonstrate the presence of two-step flow communication in the social media environment and its effect on the users. An instance of Australian banks using this strategy was brought up for discussion by Participant 3 of Group 2, which led to a discussion on how this is being craftily exploited by some brands and businesses to capture unsuspecting users’ attention towards their brand. This is an indication of how effective the two-step-flow of information is in preparing the user to adopt social media to communicate with banks.

7.4.3.3. Social Impact

The social impact theme implies situations where one’s action or psychological status that leads to such action is a result of the presence or actions of others. The presence of social impact was confirmed by the findings of the focus groups analysis of participants’ responses. Interestingly, this was also identified as a theme in the analysis of factors that drive the public to adopt social media.

In this regard, Participant 2 of Group 2 indicated how he became interested in following Commonwealth Bank after seeing an advertisement from them on his Facebook newsfeed. The participant concerned noticed others in his network also following this bank, and decided to do the same. This action is an example of the impact that social media users have on the other users’ decision-making in an online social setting.

In contrast, Participant 2 of Group 2 acknowledged to others the visibility of the content of a particular discussion that, if engaged in, prevented their further participation in the discussion. The majority of participants in both groups resented the idea of others in the network, including friends, being able to see that the person concerned wanted to, for example, buy a house or
obtain a loan had they communicated the need with their respective bank. They were more concerned about such information being divulged to people they do not know (and therefore do not trust). All participants of both groups expressed their reluctance to engage in social media discussion, again driven by the fear that the contents of the discussion reflect poorly on them as they are visible to others in their own network.

However, participants who have been privy to social media relished such engagement in order to grab the attention of businesses they wish to associate with in the future. Their expectation in this regard was to translate this association into obtaining more tangible benefits, for example furthering their career with such businesses.

### 7.4.4. Contextual Factors

Focus group participants also focused on specific crisis situations that may drive them to use social media, as indicated in the outcome of the online survey data analysis. However, the focus group analysis observed no feedback relating to a theme that could be identified under contextual factors.

The moderator-driven role-plays conducted in this regard received negative responses to the effect that people use social media to communicate with Australian banks in specific situations, for example when customer-facing banking technologies fail, such as ATMs or Internet banking. In these situations, participants offered no interest in using social media and provided various reasons to avoid this, including trust and security. Some participants indicated their lack of interest in engaging follow-up activities relating to others within the community making their comments on the issue. However, the most common answer was their preference for using an alternative medium, and prioritised resolving the issue rather than making it public.

In this instance too, participants reaffirmed the likelihood of them considering alternative technologies such as Apps, Phone, Email, Web Chats, or even walking to a bank branch.

This qualitative analysis of focus group responses, as part of an explanatory sequential study, enabled the expansion of discussion around the themes relating to the manner in which they affect the adoption decisions of users, as well as their participation in social media-based communication with Australian banks. These themes were then categorised into three groups by putting similar themes together. A similar approach was taken by Lin (2003) when
proposing an integrated communication technology adoption model for further research discussion. The focus groups participants have also demonstrated their broad knowledge of social media as evident in the answers provided. This has justified their selection as the subject matter specialists to discuss the issues around the use of social media as a method of communication, especially with Australian banks.

7.5. Discussion

As per the research design presented in section 4.3.2.5, this section converges the findings of this explanatory sequential study with that of the longitudinal study discussed in Chapter 5. The aim of this discussion is to determine the effect of the empirical findings of the research conducted so far on the conceptual model of social media adoption proposed in section 3.5. Going back to the discussion that led to the conceptualisation of the social media adoption model in Chapter 3, this discussion endeavours to explore both the social communication and technological aspects of the model. This is conducted with the expectation of providing an opportunity to make adjustments if necessary to the proposed social media adoption model.

This discussion is therefore conducted in a manner critiquing Australian banks’ use of social media functionalities identified in the longitudinal study when evaluated alongside users’ decision-making on their adoption of social media to communicate with Australian banks. It is organised in accordance with the users’ social media adoption themes identified in the focus group analysis. Consequently, the importance and relevance of the adoption model is further confirmed through the empirical research findings.

7.5.1. Audience Factors

Audience factors explain situations where the adoption of social media is used to achieve a specific outcome, for example to find information. In this regard, self-efficacy and reasoned action have contributed towards most of the discussion associated with audience factors.

Analysis of focus group participants’ responses has identified issues concerning users of social media that Australian banks need to focus their attention on when they consider using social media technologies and their specific functionalities. They are:

1) Social media users tend to enhance their self-efficacy around social media technologies as they continue to use these technologies. The level of self-efficacy differs based on
their individual needs and expectations that drive them to use social media to communicate with banks;

2) Social media users value their time and prefer listening to or participating in only those discussions that address their expectations;

3) Users prefer to communicate with Australian banks only if they feel confident that such communication will not sacrifice their information privacy and integrity;

4) When it comes to social media communications, users consider Australian banks as different from any other businesses they expect to communicate with. This is primarily associated with the highly personal nature of the potential topics of communication.

Taking these into consideration, Australian banks cannot implement a single strategy with a “one size fits all approach”. They need to engage in conversations to elicit such information rather than merely focusing on one-way communication. To this effect, Australian banks are required to devote more resources to devising a broader communication strategy that has the potential to bring together the public with varying interests into a single online community. Furthermore, they need to understand the key functionalities associated with one or more social media technologies and identify their effect at the inter- and intra-technological levels.

The longitudinal study that explored social media functionality use by Australian banks has identified that the four largest Australian banks are well ahead of their counterparts in the efforts they put in by creating and sharing content more regularly. The findings of the longitudinal study show that Australian banks that are inclined to create and share more content tend to attract more participants to their respective social media-based online communities. However, more information and further research is required to confirm whether regular engagement attracts more participants to their respective communities.

Notwithstanding their continued engagement in social media, Australian banks need to adapt to the changing environment and take a proactive approach to address users’ specific expectations, as the focus group outcome informed that such expectations vary from person to person. In this regard identifying common expectations is important and this analysis was able to identify them. One such expectation relates to accurately presenting Australian banks’ identities on social media and, if possible, enhancing them with further reputation-building measures available in social media technologies considered in this study as separate functionalities.
7.5.2. Use Factors

Use factors explain situations where the adoption of social media is driven by users’ personal characteristics, for example the values that users attach to their overall expectations when communicating with Australian banks. As per the outcome of the analysis presented in section 7.4.2, two major themes have been identified as value expectancy and uses and gratifications. Below are brief descriptions of specific issues that have been identified under use factors:

1) Users have varied expectancy values that they attach to using social media when communicating with Australian banks in personal, social or professional capacities.
2) Most users tend to use more than one technology with varied expectations attached to each social media technology. For example, Twitter and Instagram have been singled out by some participants as technologies that enable them to achieve contrasting outcomes.
3) Most social media users are inclined or would prefer to be able to customise communications they would like to receive, for example filtering out unwanted information or giving preference to communications specific to them.
4) Further to the special consideration that users attach to their communications with Australian banks when compared to their communications with other businesses, they expects higher levels of privacy. Social media users prefer not to discuss specific banking issues that they consider highly personal in a public forum enabled by social media.
5) Social media users demonstrate overwhelming reluctance to use social media to communicate matters they consider requiring privacy, and seek alternative technologies such as telephone or walking into a branch. Interestingly, email gets preference over social media, even though that in itself is considered an insecure form of communication in the broader sense of information security.

This explains why, when Australian banks make a social media presence, it is essential to adopt strategies that cater to users with varying personal characteristics. However, considering the magnitude of user numbers involved, addressing such expectations is difficult. Therefore, Australian banks are required to adopt a multi-pronged strategy to cater for such varied expectations.
The most feasible of these is the use of multiple social media technologies to broaden the reach. The longitudinal study outcome demonstrates a higher return on social media investment in participant numbers when multiple social media technologies are employed. Similarly, Australians can create content such as video clips that has the potential to be shared across social media technologies identified with such content, such as YouTube, so that more users have access to the message communicated by Australian banks.

Users of social media who are in effect either existing or potential customers of Australian banks, tend to give special consideration to banks compared to other businesses. Banks must therefore focus on understanding and addressing issues that makes them special in users’ minds. This includes taking action to further enhance their online credibility while raising awareness of the benefits associated with social media-based communication, for example easy to reach banks’ representatives, and the manner in which privacy or security concerns are addressed. In this regard, Australian banks can focus on employing credibility-enhancing measures, such as linking their social media presence through their respective official websites that most participants have considered as a secure platform. Furthermore, constantly applying relevant technological improvements would also facilitate gaining user confidence in adopting social media to communicate with banks. These include online identity-building measures, such as the use of logos and appropriate colours that encourage users to trust their validity. In addition to this, the four largest Australian banks have applied reputation building measures such as obtaining ‘verified accounts’ to give interested users a sense of security about who they are actually communicating with.

As the findings of the longitudinal study have demonstrated, only the four largest Australian banks have taken definitive action in this regard by enhancing their online credibility over the period of the study. Also, the use of more secure ‘private messaging’ available on certain social media technologies can be considered.

7.5.3. Social Factors

Social factors explain situations where the adoption of social media is driven by users’ awareness of the presence of other users.

Three major themes can be associated with social factors, namely opinion leadership, two-step flow, and social impact. They explain how the presence of other users within the social media-
based community and their specific actions affect users’ participation in social media-based communications with Australian banks.

Three key issues emanated from the analysis of focus group responses in this regard:

1) Users tend to observe/monitor what others within their network do. If such activities generate enough interest, they follow the actions of those who are most likely to receive the most attention.

2) Rather than making their decisions about participating in a particular social media-based community based on their own research, users tend to seek recommendations from others in their network. Some of these recommendations are made explicitly by users, but not targeting a specific user/group. However, some users traverse through the social media profiles of others in their network, seeking such recommendations on specific businesses or brands, including Australian banks.

3) Users are more likely to become participants of the social media-based online communities of their own bank(s) rather than any bank.

These findings further explain how the social networks of individuals enable growth in terms of participant numbers of social media-based online communities. Therefore, it can be argued that the growth in online community participant numbers needs to be given a higher priority in Australian banks’ social media strategies. Larger online communities were identified earlier as a success factor that this research study intended to focus on.

In this regard, banks are encouraged to implement strategies to identify active users or those with larger networks as opinion leaders to enhance the reach. Also, banks are required to focus on frequent users of social media as well as those with larger online social networks of their own to further facilitate diffusion of information and further growth in their respective social media-based online communities.

At the same time, Australian banks also need to devise plans to manage growth sustainability. Therefore, considering the possibility that unsustainable growth of participant numbers has the potential to negate the personal nature of the online relationship, both banks and users should strive to achieve by communicating via social media.

Based on the outcome of the analysis of the longitudinal study, it is evident that the majority of Australian banks with a social media presence are using social media functionalities
accordingly to facilitate continuous growth in participant numbers. Focus group participant responses have also indicated the reasons for four large Australian banks having larger numbers of participants in their respective social media-based online communities when compared with the communities of smaller banks. As the focus group discussion pointed out, this is a result of social media users being inclined to follow their own bank on social media rather than any Australian bank.

7.5.4. Contextual Factors

Contextual factors explain situations where adopting social media is driven by specific situations that arise in a given context, for example problems relating to public-facing technologies providing banking services.

As per the focus group analysis, no themes that can be categorised under contextual factors have been observed. When provided with a use-case scenario relating to the above example, none of the responses have indicated such situations to be a factor for them to adopt social media to communicate with Australian banks using social media.

As a result it was possible to establish that specific situations may not necessarily drive users’ adoption decisions to participate in social media-based communication with Australian banks. This is contrary to findings from the online survey that established users’ potential consideration of contextual factors in their adoption of social media in general.

Through discussion, this interpretation of findings facilitated by the convergent parallel design of the research study has enabled the comparison of user expectations against the three selected social media technologies that banks are engaging in. Based on this discussion of empirical research findings, the refined conceptual model for social media adoption by Australian banks to communicate with the public is presented for further research discussion through its validation by users of social media.

7.6. Presenting the Refined Social Media Adoption Model

The research outcomes achieved based on the findings of individual research components that formed the convergent parallel design have so far presented the empirical data required to update the conceptual model presented in section 3.5. These outcomes are presented in Figure
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7.1, which is based on an illustration of the overall research process previously presented in Figure 4.2.

Figure 7.1: Mapping empirical research outcomes to update conceptual model

The empirical research findings have unified the contrasting technologies and social communication aspects that govern when social media is used to communicate with Australian banks. These outcomes have contributed to creating an adequate understanding of the complex social media environment. The updated conceptual model, as presented in Figure 7.2, was therefore taken to another focus group for validation.

Figure 7.2 highlights with a dotted line the ambiguity associated with situational crisis scenario involving people’s communication with Australian banks using social media, identified as a contextual factor. This ambiguity was identified when the overall findings of the entire explanatory sequential study, which consisted of an online survey and focus group discussions, were taken into consideration. This finding relating to contextual factors is in contrast to the
findings of the online survey where they were identified as a key theme driving users to adopt social media for communication purposes.

![Updated social media adoption model for Australian banks to communicate with the public](image)

As per this discussion based on focus group responses, it became evident that apart from contextual factors all other adoption factors together with the specific functionalities of various social media technologies have an effect on the overall adoption of social media as a method of communication.

In Figure 7.2, the technological and social communication aspects of the model are identified with contrasting red and green colours to make it easier for focus group participants to identify them accurately. Furthermore, in Figure 7.2, all seven key social media functionalities identified in section 3.3.1 are presented, notwithstanding that only five of them were specifically discussed in the longitudinal study. This allowed focus group participants who
validated the model to think beyond the limited number of technologies, namely Facebook, Twitter, and YouTube, used in the longitudinal study.

At this stage of the study, the model facilitates participants of the focus group discussion to envisage its theoretical and practical implications.

From a theoretical perspective, this refined model can be presented as the preliminary step in addressing the gap in research on the issue of Australian banks adopting social media to communicate with the public. Even though not specifically mentioned in this chapter, the role played by the adapted Honeycomb Model in identifying, organising, and presenting key social media functionalities has added further value to this discussion.

From a practical perspective, the findings explain that the technological and social communication aspects associated with the adoption model as a whole facilitate effective use of the technology to achieve the expected business outcomes. Therefore, for practitioners, this conceptual model has acted as a viable tool in making specific strategic interpretations to improve Australian banks’ chances of achieving their business objectives aligned with their social media presence. In essence, Australian banks will be introduced to a model that is designed and tested through empirical research, enabling them to improve their social media strategies.

7.7. Conclusion

The focus of this chapter was on the social communication aspects of the social media technology adoption model discussed in section 3.5. This chapter has analysed qualitative data gathered from focus groups that ensued discussions on how the adoption decisions of users affect their participation in their communication with Australian banks using social media.

The emerging themes from the analysis of focus group responses were then categorised based on the thematic map consisting of four social media adoption factors identified in the preceding chapter. Overall, the focus group analysis was able to unearth information significant enough to understand the underlying issues associated with social media as a method for the public to communicate with Australian banks.

With the completion of all research components identified in the convergent parallel design and the availability of factual information based on their findings, this chapter has also
discussed and amalgamated their findings. This has enabled the interpretation of available information and presented it in a manner that also confirmed the relevance of most of the components in the conceptual model presented in section 3.5. This amalgamation has also resulted in establishing that there is a gap between user expectations in regard to their communications with Australian banks and the strategies Australian banks have employed to engage with the users of social media.

The findings have also established the weak association of contextual factors in relation to users’ participation in social media-based communications with Australian banks. This has led to making amendments to the adoption model presented in the previous section.

The next chapter will focus on the validation of the modified version of the social media adoption model for Australian Banks to communicate with the public. It covers broader analysis and interpretation of responses gathered in a third focus group in which the modified version of the model was taken up for discussion and validation. The validation process involves triangulation of data in which users’ responses about the model will be further analysed to determine the overall validity of the model and its components.
8. MODEL VALIDATION

8.1. Introduction

The aim of this chapter is to describe the analysis outcomes of the focus group responses, to validate the proposed social media adoption model for Australian banks to communicate with the public, as presented in Chapter 7. Hence, this discussion focuses on determining whether this model accurately explains all relevant aspects when Australian banks and users communicate using social media.

The discussion begins by explaining the importance of focus groups in establishing research rigour to protect against bias and to enhance the reliability of findings. The ensuing discussion includes a critique of participant responses during the semi-structured focus group discussion leading to validation and presentation of the final version of the model.

Having presented the finalised model structure, the discussion then focuses on the model’s components from a theoretical perspective to ensure that the theoretical implications of the social media adoption model for Australian banks to communicate with the public has been fully explored. The discussion will also focus on the model’s constraints in regard to its practical application.

8.2. Focus Group Overview

Amongst researchers undertaking qualitative research, member-checking during the process of model validation is a frequently used approach (Creswell and Clark, 2011). Here, the researcher takes the summaries of findings, which in the context of this study is the model that has been refined based on previous discussions with the focus group members and participants in the study for feedback, comments and suggestions.

The following sub-sections will explain the practical aspects associated with using focus groups as a means to validate the model.

8.2.1. Purpose

As explained in section 4.3.5, the intention of this focus group is to validate the proposed model following completion of the preliminary research components that were included in the convergent parallel design (section 4.3.2.5). Also, the expectation was to add rigour to the
Chapter 8: Model Validation

qualitative research involving focus groups. The reason for taking the proposed adoption model back to the key participants of the two previous focus groups, who are privy to social media, is to determine whether the model is an accurate reflection of their expectations and experiences relating to their communications with Australian banks, using social media.

8.2.2. **Composition and Details**

This researcher has determined that users of social media are experts in their own right in relation to their expectations and experiences associated with their communications with Australian banks. Therefore, they are considered as the most suitable participants and better prepared to provide such feedback on the proposed model, leading to its validation.

The focus group participants were randomly selected from a group of participants who had expressed their willingness to participate in further research activities involving this research study, and their availability to attend the focus group at the given date and time. See section 4.3.5.1 for information on sample selection.

The details of this focus group were as follows:

- Date : 8th August 2014
- Location : Deakin University, Burwood, Victoria, Australia
- Participants : 4
- Age Group : 18-34

As with the previous two focus groups, this focus group, formed to validate the model, was independently moderated. The chosen composition of the focus group consisted of previous focus group participants who had expressed their willingness to participate in further research activities involving this research study, and their availability to attend the focus group at the given date and time. See section 4.3.5.1 for information on sample selection.

8.2.3. **Approach to Analysis**

The focus group was semi-structured as explained in section 4.3.5.2 and guided by questions based on empirical research findings discussed in Chapters 5, 6, and 7, and aimed at eliciting participants’ impressions of the model. These impressions were expected to go beyond merely the model structure and to cover a robust analysis of how different components associate with each other.

The approach to the analysis taken in this regard is identified as triangulation, where the conceptual model was formulated using multiple means, including a literature review and
empirical studies, and validated by another focus group consisting of social media users. The semi-structured nature of the questions was meant to draw upon different points of the overall research study of convergent parallel design and assist in interfacing the outcomes of the diverse research components. The moderator-driven process has further strengthened the triangulation process as a result of its participants raising similar questions in a different way (Branthwaite and Patterson, 2011) to a different audience.

The model validation process was assisted by using NVivo software. It enabled the identification of key themes emanating from the focus group discussion that was driven by structured questions and topics arising as part of the discussion between the moderator and the focus group members. All the feedback received was given equal attention in determining the final model for social media adoption by Australian banks to communicate with the public, as explained in the following sections.

8.3. Model Validation

This section presents the validation analysis of the social media adoption model for Australian banks to communicate with the public, with its main purpose being to evaluate the purpose of the model based on focus group participants’ responses as data (section 4.3.5).

This data was then organised by conducting a thematic analysis using NVivo software (version 10), as part of an iterative process. Thematic analysis, as previously explained in section 7.3.3 was employed to align pieces of data with either technological or social communication categories. The results included the identification of key themes (which are discussed in detail in the following sections) that were then organised under the topics of technology and social communication. These were confirmed as relevant in the research context by the participants of the focus groups. The following discussion will further explain the specific issues identified during this analysis.

8.3.1. Validation of Technological Aspects of the Model

In response to the structured questions relating to the technological aspects of the model, the participants’ responses overwhelmingly singled out the ‘identity’ and ‘reputation’ functionalities as the most important components. “Because it is a bank” was the short answer given by one of the participants to highlight banks’ importance in relation to their participation in social media-based communication with Australian banks.
Notwithstanding this, the majority of the focus group participants indicated their confusion over the online identities Australian banks have presented. Even those participants who considered themselves as being familiar with social media technologies “in a casual sense”, found it difficult to determine the credibility of their bank’s identity presented on social media. Participant 1 linked this with various social media promotion campaigns and “scams” that were carried out by unscrupulous elements. This participant also pointed out that it is the respective bank’s responsibility to alleviate the fears of ordinary users, and lamented the lack of online credibility, which made the participant mistrust information presented by them. As a resolution, participants were in agreement with the need to adhere to identity confirmation, such as using the logo and corporate colours of the respective bank. This is also in view of Participant 4’s “we will be able to tell right then” readiness to consider communicating with banks.

From the users’ point of view, this has further emphasised Westerman et al.’s (2012) research findings that linked online Web reputation with the credibility of the information presented. As for Australian banks, these participant observations are in line with the importance of identity when operating within the social media environment, and are highlighted by Zhao et al. (2008), as well as the challenges associated with their creation (Kuikka and Äkkinen, 2011).

With regard to online reputation, participants were unanimous in its importance to Australian banks’ presence on social media. To quantify the importance, the word ‘reputation’ was mentioned 29 times during the discussion, with every participant expressing their opinion about this functionality. For Participant 3, reputation came ahead of other functionalities, such as sharing, and banks are required to work towards encouraging customers to trust them. Participant 2 meanwhile linked online reputation to credibility of information, thereby confirming the importance of both identity and reputation for online credibility as a further indication to the premise mentioned in section 5.4. O’Keefe (2002) stated that both identity and reputation support judgements made by a perceiver concerning the believability of a communicator. This also confirms the definition of reputation provided in section 3.3.3 as ‘The action taken by Australian banks to further strengthen their online identity with the aim of enhancing the online credibility of their social media-based online communities’.

The importance of credibility was also identified by Participant 1 who inquired about the necessity to determine the “real” bank prior to any engagement via social media. This same
participant indicated his knowledge of verified accounts espoused by specific social media technologies he is familiar with. As per the given responses to the suggestion made by the moderator that online reputation is a reflection of the respective banks’ real-life reputation, the majority of the participants were in agreement.

Participants were however not entirely in agreement with the presence or absence of any relationship between identity and reputation. For example, Participant 1 found it difficult to notice any such relationship; however, Participant 4 saw a definite relationship between the two.

Yet, not all participants were privy to this idea that online credibility alone is enough to facilitate all their communications with Australian banks. Participant 4 was adamant that under no circumstances would he consider communicating with Australian banks on matters pertaining to sensitive information, such as banking details. This participant went on to stress the importance of alternative web-based tools of communication that can be trusted, while indicating that a bank’s official website is an option.

This focus group session, convened to validate the model, also identified a few issues with some participants requesting further clarification about different functionalities and functionality interrelationships with the technological aspects of the model. Participant 2 wanted to know whether these functionalities needed to be interconnected considering, for example, how online reputation affects sharing. Participant 3 was not entirely clear about ‘group’ functionality and wanted to know whether it relates to groups within the community.

As is evident in the focus group participants’ comments regarding the technological aspects of the social media adoption model, and the explanations provided, the outcome explains the growing necessity to present them in a manner that allows the reader to understand them easily.

Overall, the discussion about the technological aspects of the model, especially identity and reputation, have unearthed similarities to the findings of Haas and Wearden (2003) who discussed the effect of technological, social, and psychological factors driving the audiences’ decision-making about source credibility. One of the clearer outcomes of this discussion had been the confirmed direct positive association that identity and reputation functionalities have with the relationship functionality. This association was earlier left unconfirmed due to a lack of confirming evidence based on the longitudinal study findings discussed in Chapter 5. These
focus group findings were able to clear such ambiguity. Furthermore, they have affirmed the significance of the mixed-methodology approach taken in this study as it enabled expansion of the discussion around a complex model that integrated contrasting technological and social communication aspects of the phenomenon studied.

8.3.2. Validation of Social Communication Aspects of the Model

The difficulty in solely relying on the technological aspects when communicating with Australian banks using social media was summed up by Participant 1, who highlighted the connectedness of social and technological aspects. This comment emphasised the importance of viewing the adoption model as an integration of technological and social communication aspects. As a result, the manner in which Australian banks expect to present themselves to their intended audience (i.e. the public in the context of this research study) cannot be considered in isolation without taking into consideration the social communication aspects that drive users to communicate with banks.

Apart from strengthening the argument in favour of the integrative aspect of the model, the participants’ feedback has strengthened the relevance of the components associated with the social communication aspects. As a consequence, this feedback as a whole facilitated the determination of adoption decisions affecting users’ participation in social media-based communication with Australian banks.

On the whole, social factors have received heightened participant attention with more references being made than for any other model component. The majority of the participants also identified this as the most important component relating to their adoption of social media in the context of communicating with banks. Participant 2 had gone further than anyone else by suggesting consideration of “social responsibility”. To further justify this, the participant indicated the potential positive impact that social responsibility could have on online source credibility. Even though social responsibility is a process that can be categorised as an internal activity of respective banks that could bring banks major benefits (McDonald and Rundle-Thiele, 2008), the comment has relevance with regard to using such information to enhance banks’ online identities and reputations.

This discussion also focused on how social factors prevent user participation in communications with Australian banks using social media. Participant responses from this
focus group also confirmed findings of the preliminary focus groups concerning how their adoption decision-making is affected by the sensitivities of the information exchanged relating to communication with banks. Participant 2 gave a qualified statement to the effect that communication depends on the purpose, and that “you are not going to communicate online via social media with your sensitive information” has highlighted personal concerns influencing their participation. This same participant was also of the view that banks’ websites need to provide a better option for communication rather than just social media, due to the sensitivities associated with the information concerned.

The use and audience factors of the model were mostly discussed implicitly when the participants made comments relating to the purpose of using social media, or their abilities in taking appropriate decisions to overcome a related scenario. On the same matter, the use of banks’ official websites in situations where they considered their data security and privacy could be potentially compromised. Likewise this also grew in prominence during the discussion, as it had previously with the preliminary focus groups.

As for contextual factors, the explanatory sequential study was able to gather adequate evidence to justify its existence within the model. This was one of the major issues that confronted preparation of the model for validation, the ambiguity around the contextual factors as explained in section 7.6, and therefore the reason for presenting it with a dotted line in Figure 7.2.

However, having considered a practical scenario of banks’ marketing campaigns brought to discussion by Participant 2 (to be further discussed in section 8.3.3.5), there are grounds to consider the possibility of such situations driving the user adoption of social media to communicate with Australian banks. This is considering the inclination of the majority of participants (Participants 1, 2, and 3) to participate in banks’ promotional campaigns on social media. Meanwhile, the model validation process was able to confirm that situations, such as technology glitches causing customer-facing banking services to fail, do not necessarily drive users to adopt social media to communicate with relevant Australian banks. On the other hand, such situations drove users to search for alternative communication strategies involving other more ‘trusted’ technologies.
8.3.3. General Critique of the Model

Even though the participants were provided with a copy of the model and a general explanation by the moderator about the key model components, participants raised several requests for further clarification relating to some of the components. As the participants familiarised themselves with the model, their follow-up questions had a positive effect on the group dynamics, thereby encouraging all participants to get actively involved in the discussion. Their responses in general have demonstrated a better understanding of the model, and as a result there was an increased exchange of views with the moderator as well as with other participants regarding the model.

This included questions requesting clarification, which then turned into comments and suggestions related to various aspects of the model. There were also instances where participants emphasised their own suggestions and that these suggestions should be used to make modifications to different components of the model. For instance, Participant 4 saw the necessity to leave out factors that were considered as belonging to banks’ internal decision-making environment. These comments, suggestions and requests for clarification, were all given careful consideration in relation to the model structure and its presentation. If they required further scrutiny of the research findings, the relevant model formulation aspects of the research study were revisited and verified.

Identified in the following sections is a discussion around these critiques that were presented as comments, suggestions and requests for clarification. It is expected by the researcher that an ensuing discussion around these critiques would consolidate the model structure as well as its components.

8.3.3.1. Critique: Present Model Components in a Different Way

In response to the question relating to the overall impression of the model, Participant 3 posed a counter-question; the participant wanted to determine the possibility of combining both social media and Australian banks’ decision-making environment to create one large system. To further demonstrate the meaning of what was said, the participant drew a picture of the model on a blank sheet of paper that put the social media environment within the internal decision-making environment.
It is evident that the participant concerned has overlooked the unique features of social media and that it operates beyond the control of Australian banks. The fact that social media is a technology driven by users’ participation and their ability to create and consume content cannot be brought under the complete control of the banks’ decision-making environment. Therefore, contrary to this participant’s views, social media runs independently of organisations’ technological infrastructure and its users are not bound to adhere to organisational guidelines, procedures or policies relating to information dissemination. Hence the manner of the decision-making environment as presented within the model is appropriate and justifiable.

8.3.3.2. Critique: Interconnect Social Media Functionalities

Participant 3 meanwhile inquired whether linking various social media functionalities was required as they all relate to each other, to which Participant 2 also agreed. According to Participant 2, they need to be interrelated considering one functionality has an effect on the other, for example “identity would have affected the reputation, and the reputation would have affected the sharing”. These comments have created an impression that there is an ambiguity as to how the seven functionalities have been illustrated in the model, and highlighted the need to present them in an easily understandable manner.

Therefore, the discussion based on the findings of the longitudinal study was revisited to determine whether the model can be presented in a manner that gives a better understanding to the intended audience. As a result, it was determined that notwithstanding the established associations between relationship functionality and four other functionalities in encouraging participants towards an online community, the findings do not warrant physically connecting them. It was determined that the best way to present these functionalities was to use the adapted Honeycomb Model (Figure 5.9).

8.3.3.3. Critique: Connect Technology Factors with Social Communication Aspects

Technological factors featured in the discussion and there had been suggestions that highlighted the possibility of them also driving user participation. In this regard, Participant 4 argued that technological factors be included alongside the social communication aspects of the model.
Notwithstanding the justification provided and the consideration of social communication aspects highlighting factors that drive user adoption, the model however reflects the needs around the adoption of social media by Australian banks to communicate with the public. As a result, the research explores the use of technological functionalities by Australian banks in consideration of factors that drive users to communicate with them using social media. Therefore, technological factors are to remain intact as presented in the model.

Furthermore, the opinion of Participant 4 contradicts the opinions expressed by the participants of previous focus groups who indicated that technological options, such as computers or smartphones, are not affecting their decision-making about communicating with Australian banks using social media. On the contrary, users are inclined to consider alternative technologies to communicate with Australian banks in situations where there is a possibility of compromising the privacy and security of, to them, sensitive information.

8.3.3.4. **Critique: Link Internal Decision-Making Environment with the External Environment**

The presence of an internal decision-making environment, even though it was not part of this research study, seemed to have confused Participant 2. According to the participant, the internal decision-making environment of the bank needs to be linked with the external social media environment. This participant also indicated that the model as presented had created a distraction, leading to confusion in properly understanding the model.

While there is validity in this comment in terms of its clarity to an ordinary user, from the researcher’s point of view, the presence of the ‘internal decision-making environment’ as explained in Chapter 3 is primarily to facilitate the overall understanding of the model. By presenting the model in this manner, the reader gets the overall picture around model application from a theoretical or practical viewpoint. Also, technological factors included in the internal decision-making environment of Australian banks act as the interface between the bank concerned and the users in the social media environment, thereby addressing the participant’s initial concern.

8.3.3.5. **Critique: Consider Model Applicability in a Practical Scenario**

During the focus group discussion, inquiries were made in relation to overall applicability of the model. Participant 2 had posed a question to determine how the model would function in
a marketing campaign during which an Australian bank targets a particular demography. This participant had then described how the campaign starts in the internal decision-making environment and flows via technological factors to be made visible to users.

In this situation, the flow of content (marketing campaign information) through technological functionalities provides users with the information. The scenario therefore had the potential to filter through the online networks of people who are inclined to participate in such marketing campaigns, and thereby gain the attention of others to start communicating with respective banks via social media.

This scenario has also spawned a discussion on the potential reverse flow of information where Australian banks gain access to users’ responses relating to their marketing campaigns through the same technological functionalities. This outcome has also confirmed the link between the internal decision-making environment and the user community via technological functionalities in the model that was discussed in section 8.3.3.4, while strengthening the model.

### 8.4. Model Consolidation

The model validation process that considered focus group participant responses, addressed participant concerns, applied practical scenarios to test its applicability, and highlighted scenarios around the model’s applicability, has also provided significant insights that warrant making worthwhile adjustments. Amongst numerous issues that were covered in the discussion, two key adjustments to the model have been identified.

#### 8.4.1. Confirm Contextual Factors as a Model Component

This adoption model validation process was able to establish evidence that drove users to adopt social media to communicate with Australian banks in specific situations, such as marketing promotions and cultural issues. This has confirmed the relevance and importance of contextual factors as an integral part of the model presented in section 3.5.2.2 based on the findings of the exploratory study conducted to learn how Australian banks use social media and presented in section 7.6. The scenarios considered during this initial exploratory study, such as glitches to customer-facing banking technology, have however failed to draw the attention of the initial focus group participants who explored the circumstances that drive the adoption of social media to communicate with Australian banks.
8.4.2. Use Adapted Honeycomb Model to Illustrate Social Media Functionalities

The model validation process has provided an opportunity to further explore themes that have been part of previous discussions associated with individual research components, such as the longitudinal study. Additionally, the outcome achieved through validation using focus groups has also confirmed the findings of the longitudinal study that initially indicated a positive association between identity and reputation functionalities with the relationship functionality. As per the discussion in section 5.5 based on the findings of the longitudinal study, only a ‘potential’ positive association was identified between these functionalities.

The first issue relates to higher user-numbers observed in the social media-based online communities of Australian banks. The discussion in section 5.4.2 was unable to confirm the reason for the four largest Australian banks accounting for 92% of all social media users who participate in banks’ social media-based online communities. However, based on the findings of the initial focus group responses as well as the responses of the focus group that validated the model, it can be confirmed that the skew is driven primarily by the fact that these four banks account for 67% of the Australian banking market. This judgement was based on participant responses indicating their intention to communicate with the banks that they currently do their banking with, rather than any other bank, with identity and reputation functionalities being used to support their decisions.

The second issue relates to the association that identity or reputation functionality had with the relationship functionality. The responses associated with the initial focus groups have provided insights into identity and reputation functionalities. In this instance, with discussion not being directly focused on Australian banks’ participants, they have together singled out the importance of the identity and reputation of a social media presence as a key concern for them when adopting social media as a communication method. This was further confirmed based on the responses gathered in the focus group convened to validate the model that focused the discussion on adopting social media to communicate with Australian banks. As a result of the model validation process confirming positive associations that identity and reputation functionalities have with the relationship functionality, they are now presented in dark blue.

The adapted Honeycomb Model illustrated with colours presented earlier in section 5.4 is therefore re-evaluated and illustrated in Figure 8.1.
The third issue is associated with focus group participants’ comments relating to how the technological functionalities are presented in the adoption model. During the focus group discussion that validated the model there had been two instances where participants questioned the manner in which the functionalities were presented in the model and the need to present them in a way that enabled their understanding of their relevancy to various social media technologies. To provide clarity on this matter and acknowledge the importance of the contribution of the adapted Honeycomb Model in this research process, it was decided to include Figure 8.1 in the adoption model presented in Figure 8.2. Furthermore, this adds to the
openness of the model with regard to adding or removing functionalities as the technologies evolve, thereby providing technological independence to the model.

Hence, this adapted model representation is formed on the findings of a longitudinal study that had taken into consideration three social media technologies, namely Facebook, Twitter, and YouTube. Therefore, it must be noted here that this representation of the functionalities could have been different if other types of social media technologies were considered.

8.5. Validated Social Media Adoption Model

As per the discussion regarding model validation (section 8.3) that led to specific action identified in the model consolidation (section 8.4), the social media adoption model for Australian banks to communicate with the public is presented in Figure 8.2. This takes into consideration the use of Facebook, Twitter, and YouTube.

Figure 8.2 illustrates the adoption model that explains the adoption of social media by Australian banks to communicate with the public. It is formulated to provide better insight into complex adoption scenarios created with the integration of the technological and social communication aspects of communication technology adoption.

From the Australian banks’ perspective, this model consists of two sections that explain the entire adoption environment – the internal decision-making environment and the social media environment. While the internal decision-making environment was presented in the diagram to facilitate the understanding of the entire environment, this entire research study was focused on the social media environment to gather empirical data.

Arrows in the diagram indicate the flow of content in both directions; however, this research study, apart from counting instances of content creation, such as Facebook Wall Posts and Twitter Tweets as part of the longitudinal study. The vertical arrows explain the flow of content from the social media environment to the internal decision-making environment of Australian banks and vice versa. The bi-directional horizontal arrow meanwhile explains the flow of content from Australian banks to participants in online communities on respective social media technologies and vice versa. It must be noted here that the analysis of content that transpired across this arrow was not covered in this study. The flow of communication between the participants of social media-based online communities and Australian banks occurs
through the technological functionalities illustrated with the Honeycomb Model as indicated with bi-directional arrows connecting internal and external (social media) environments.

The red and blue colours as described using Figure 8.1, indicate the functionalities, effectively used by Australian banks to communicate with the public when they use Facebook, Twitter, and YouTube.

Figure 8.2: The social media adoption model for Australian banks to communicate with the public
Individual components associated with the technological and social communication aspects of the model were previously explained in sections 3.5.2.1 and 3.5.2.2. These broad-ranging factors and functionalities governing the sociotechnological nature of the phenomenon of social media as a communication method, and presented as model components, explain all relevant aspects relating to the adoption of social media for communication between Australian banks and the public.

8.6. Conclusion

The aim of this chapter was achieved with the presentation of the adoption model with minimal modifications made after taking it through a validation process. This process included some participants of the initial focus group discussions that explored factors that drive users to communicate with Australian banks using social media. The model validation process was assisted by NVivo qualitative analysis software facilitating the identification, categorisation and analysis of themes relating to the technological and social communication aspects of the model.

This analysis process included enquiring into various comments, suggestions, opinions, and requests for clarification made by focus group participants in response to the model presented for validation, relating to their classification, analysis and interpretation. Apart from confirming the validated model, this process was also able clarify two ambiguities relating to Australian banks’ social media-based community participant numbers and the associations that the relationship functionality had with identity and reputation functionalities.

The expert opinions about the model and its components have been provided by the focus group participants, who as users of social media have acted as subject matter experts in this regard. As a result, the overall findings have strengthened the model while confirming its reliability through an established validation mechanism involving a focus group.

Overall, the model validation process has resulted in two minor modifications to the model presented for validation. These modifications 1) defined the contextual factors, and 2) provided clarity towards understanding key functionalities by representing them in the validated model using the adapted Honeycomb Model.

This has brought the research discussion towards determining the broader research implications that are addressed in the next chapter.
9. DISCUSSION

9.1. Introduction

In the preceding chapter, a re-evaluation of the social media adoption model for Australian banks to communicate with the public was conducted based on an analysis of participants’ responses from the focus group convened to validate the model.

This has resulted in incorporating minor modifications to the model that resolved ambiguity around contextual factors and enhanced the clarity of the model through the representation of functionalities using the adapted Honeycomb Model.

The aim of this chapter is to discuss the overall research implications with a focus on both theoretical and practical implications.

9.2. Research Contributions

This research study focused on Australian banks as an appropriate study sample to represent businesses, taking into consideration the wide-ranging adoption issues they would encounter when adopting social media to communicate with the public. These issues, including social media users’ lack of confidence about banks taking adequate measures to address their concerns and their specific concerns about banks compared to other businesses, were discussed in section 7.4. Overall, the study was able to identify a gap between social media strategies adopted by Australian banks and user expectations associated with their use of social media to communicate with banks.

The outcome of this study was based on the empirical findings obtained through all its individual research components and is presented as the social media adoption model for Australian banks to communicate with the public. From a theoretical perspective this outcome enhanced the possibility of further research with a focus on other business sectors or considering different geographical scenarios. The validated social media adoption model also has the potential to provide improved visibility to implement coherent social media strategies or make changes to existing social media strategies in line with broader business expectations.

The focus group sessions that validated the model have provided sensible information from the social media users’ perspective relating to their decision-making, which has further
strengthened the circumstances for model applicability. Participants’ impressions about the model were positive, with Participant 3 describing it as “an interesting model and I think it fits in this context properly”, while Participant 2 attributed the model’s benefits to the potential advantages that the model could provide in the context of the business value it could generate for Australian banks. According to this participant, the model brings several advantages in this regard:

“based on the fact that there are so many people using social media and what they (Australian banks) want to do is to transfer social media interest into actual customers”.

Participant 4 meanwhile emphasised the model’s benefits by highlighting its application potential. According to this participant, users’ suboptimal experience with factors associated with the social communication aspects of the model results in below-par enjoyment of their communication with Australian banks. This is a further testimony of the model’s significance in questioning the existing social media strategies and thereby their optimisation in the context of achieving the Australian banks’ business objectives expected from their social media presence.

The benefits that the adoption of the model could bring to Australian banks were captured by different participants in different contexts. Participant 3 remarked on the model’s value in getting as many people as possible to participate in their respective banks’ social media-based online communities.

This participant’s opinion encapsulates the importance attached to formulating and maintaining an online community for Australian banks to communicate with the public. In this regard, the model provides a basis to obtain an understanding of community participants’ expectations when they associate with the respective social media-based online community. As a result, Australian banks will be able to optimise user experiences, thereby creating an opportunity to establish sustainable communities.

The following section will broadly discuss the implications of social media adoption for Australian banks to communicate with the public – both in theory and in practice. Section 9.2.1 will explore the broader theoretical implications of the research study and section 9.2.2 will discuss the model’s implications in practice.
9.2.1. Contribution to Theory

Past research on social media has focused on various aspects relating to social media as an emerging phenomenon. However, no research studies have been conducted on the use of social media-based online communities as a method of communication by businesses, as previously discussed and based on a review of literature in Chapter 2 of this thesis. This led to the formulation of the overarching research question that was divided into two research sub-questions. These two research sub-questions have focused on the technological and social communication aspects to encompass a complex adoption scenario created by the sociotechnological nature of the social media environment, as discussed in section 2.8.

A further review of the literature was conducted to expand the research discussion grounded in these two research sub-questions, resulting in the creation of two social media adoption model components as presented after the discussions in sections 3.3 and 3.4. These two model components were then integrated to form the conceptual social media adoption model for Australian banks to communicate with the public.

The determination of individual research components was to conceptualise, finalise and validate the model through a review of data, extracted within the boundaries of the dynamic social media environment. This resulted in the identification of the mixed-methods research that contained both quantitative and qualitative methodologies and data-gathering techniques. This research study has also identified popular social media technologies, namely Facebook, Twitter, and YouTube to be closely explored due to the emerging presence of Australian banks on these technologies. Its individual research components were converged to a parallel design that included quantitative and qualitative research components. The findings of each component were presented and interpreted in the context of addressing the overarching research question, ‘How can social media be adopted by Australian banks to communicate with the public?’ and discussed in Chapters 5, 6, and 7.

Based on the outcome of these findings, the conceptual model presented in section 3.5 was refined and presented for validation to a focus group consisting of Australian social media users in the age group 18-34. The final validated adoption model is illustrated in Figure 8.2.

The model answers the overarching research question and provides a significant contribution to research as it fills a gap in the knowledge associated with the adoption of social media as a
novel communication method. The use of Australian banks as the study group has generated
discussion that adds a valuable contribution to the overall research findings. Importantly, it
adds significance to the academic discussion around the technological and social
communication aspects governing the use of social media as a means of communication.

The social media adoption model for Australian banks to communicate with the public
represents the significant research contribution envisaged. The model fills the research gap by
explaining a range of factors across the diverse technological and social communication
aspects used when Australian banks and the public communicate. These individual adoption
factors when grouped together established theoretical foundations previously discussed in the
research associated with mediated communication technologies.

According to Shoemaker et al. (2003, p.111), the purpose of any theoretical model is “to
describe and imagine” and it “does not explain or predict anything”. This is in comparison to
an understanding of the theory as “a set of systematically related generalisations suggesting
new observations for empirical testing” and therefore its purpose is to “explain or predict”.

What had been accomplished in this research study is to validate and present a social media
adoption model for Australian banks, taking into consideration the intertwined relationship of
technology and social communication associated with using social media as a communication
method. Using the Neuliep (1996) description of the relationship between theory and models,
the adoption model, even though it is not theory, can be used to represent theory. Shoemaker
et al. (2003, p.112) explain this relationship between theory and models as “symbiotic”, where
theories nourish models, which may then cultivate theories. However, model building needs
to be viewed as a “means to an end and not an end in itself”.

A common criticism of models, as Harvey and Reed (1996) explain, is that models are so
simplistic that they appear to devalue that which they appear to model and model builders on
their part consider that models can be refined on the basis of research findings. However, the
validated social media adoption model describe range of factors without overly simplifying
the complexities associated with sociotechnological considerations. Furthermore, the adoption
model, presented as a set of systematically related components, has the potential to make a
significant contribution to theory by facilitating further research discussion on the adoption of
novel communication technologies.
From the perspective of importance to the research community, this social media adoption model for Australian banks to communicate with the public can be presented as the first of its kind that aims to establish social media as an emerging mainstream form of communication. The following sections will begin by discussing potential instances where this model can be considered as a means to cultivate theories.

9.2.1.1. Use Factors

Use factors, as explained in section 2.7.1, bring together theoretical foundations associated with communication technology adoption factors that are driven by the user’s need to achieve specific outcomes. Even though Lin (2003) identifies three theories associated with mediated communication technologies, in the context of this research study involving social media, only two of these theoretical foundations turned out to be relevant. They are: 1) expectancy value theory, and 2) uses and gratifications theory.

As a result of the findings of this study, the continuing importance of the Expectancy Value Theory is an established theoretical foundations widely discussed as an integral part of technology adoption models since its introduction to such model (Davis, 1989) was established. As stated previously, likely estimations about certain experiential (i.e. happiness) or instrumental (i.e. information) needs have proved to be antecedents for social media adoption.

Uses and gratifications theory is based on individuals’ motives and uses for adoption and is also identified as a key theory driving social media adoption as a communication method (Quan-Haase and Young, 2010). However, the discussion themes have focused considerably on the concerns relating to users’ reluctance to use social media to communicate sensitive information as a result of the individuals’ presumptions about the technology concerned.

Communication flow theory or associated themes were not featured in the focus group discussion that explored the social communication aspects of social media adoption, even though it was featured in the Lin (2003) model. The ubiquitous nature of social media as a technology, and its disruptive flow, may have had an effect on this outcome.
9.2.1.2. **Audience Factors**

As per discussions in section 2.7.2, audience factors group together theoretical foundations that are driven by a particular user’s personal characteristics.

Two themes linked to the theoretical foundations, namely self-efficacy theory and the theory of reasoned action, were featured in the focus group discussion on the communication aspects of social media adoption. These are two closely related theories as per Lin’s (2003) observation, with self-efficacy having a role in subsequent reasoned action, and this study has confirmed their relevance in social media adoption driven by how an individual approaches goals, tasks, and challenges. The findings of the explanatory sequential study associated with self-efficacy theory also confirmed previous determinations around social cognitive theories about how experience can enhance individuals’ self-efficacy when driven by knowledge-sharing behaviours (Hsu et al., 2007). It can therefore be concluded that easier accessibility to social media facilitated by its unique features as explained in section 2.3.1 has greatly improved users’ self-efficacy and resulting actions driving their adoption of social media as a means of communication.

Similarly to use factors, there have been omissions from the list of theoretical components proposed by Lin (2003) relating to communication technology adoption. Adoption driven by theories associated with innovativeness is not a theme that featured in the focus group discussion on social communication aspects. The conclusion that could be drawn in this regard could be that public access to social media as a form of communication has made it less attractive for consideration as an innovation. This is in agreement with past research discussed in section 2.10.3 that links to beliefs regarding the influence that possessing the requisite resources has on creating opportunities for producing a given behaviour.

9.2.1.3. **Social Factors**

In the context of this research study, social factors group together theoretical foundations that are associated with users’ need to interact, share and collaborate with others. Themes associated with the social factors have been discussed by focus groups in relation to the social communication aspects of the adoption model. However, the findings of this research study regarding social factors have been markedly different to the theoretical foundations discussed
in Lin (2003) relating to communication technology adoption. In this regard, two new themes were identified that could be grouped under social factors.

The underlying theory of opinion leadership is that people form their opinions under the influence of opinion leaders who are privy to the availability of processing and disseminating this new information, and have gained relevance with social media. Furthermore, Lyons and Henderson (2005), who compared the roles of opinion leaders in a traditional marketplace and in the environment created by new media, have coined a new term, ‘online opinion leaders’.

While the themes linked to opinion leadership have been featured in both the ICTA model and proposed social media adoption model, two new themes relating to theories associated with the two-step flow of information and social impact have added new dimensions to this discussion.

The two-step flow of information as a theory in the context of social media, differentiates from opinion leadership as it understood in communications, as a result of the presence of an intermediate layer between the source of information and the intended destination (Katz, 1957). In the context of social media, this intermediate layer can also be occupied by opinion leaders; however, due to the social media network structure, any information-savvy person can facilitate a two-step flow of information without being considered as an opinion leader.

Similarly to two-step flow communication, social impact theory also did not feature in Lin’s (2003) ICTA model discussion of social factors. However, social impact is a theme that featured in the adoption of social media, as well as its relevance to decisions that affect users’ participation in social media communications with Australian banks. Consequently, with millions of users adopting various forms of social media technologies, their actions seem to be increasingly affected by the social environment created by social media. The social impact theme relates well to the social impact theory.

Social impact as a theory was first proposed by Latane (1981). According to Latane (p.343), theory refers to “any of the great variety of changes in physiological states and subjective feelings, motives and emotions, cognitions and beliefs, values and behaviour, that occur in an individual human, or animal, as a result of real, implied, or imagined presence or actions of other individuals”.

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9.2.1.4. Contextual Factors

This research started with an exploratory study that observed Australian banks’ presence on Facebook, Twitter, and YouTube. The study has observed above-average increases in the number of social media users participating in Australian banks’ social media-based communities during times when banks have encountered glitches to customer-facing banking technologies.

While the online survey conducted as part of this study was able to establish the relevancy of specific situations towards users’ social media adoption, the following focus groups discussion that expanded upon this finding could not determine such relevance. However, during the model validation process when the research was focused towards adoption in the Australian banking context, contextual factors such as promotions were featured prominently, thereby establishing its relevancy to users’ adoption of social media to communicate with Australian banks.

9.2.1.5. Technology Factors

As explained in sections 2.7.4 and 3.4.2.4, within the social media environment, technology factors are identified as technological aspects and presented in the validated adoption model (Figure 8.2) using seven social media functionalities.

Identification of these technological functionalities was assisted by the availability of the adapted Honeycomb Model that brought together these functionalities to illustrate their relevance to modern-day social media technologies. As a result, the relevancy of this adapted Model in the study of social media technologies was considerably enhanced and therefore can be considered as a major theoretical implication emanating from this research study. The adapted Model’s ability to present social media in an organised manner to reflect their functional foundations has made it social media technology independent, enabling it to be applied to new social media technologies.

Notwithstanding the recent increase in research studies relating to social media, there has been no research that concentrated on the fundamental technological aspects that emphasise the increased take-up of social media by the public. A review of literature undertaken that provided a foundation to this research study, has traversed through the existing research literature to determine these technological aspects and present them in the form of social media
functionalities. This has resulted in continuing research discussion enriched by the empirical findings of its research components leading to strengthening technological aspects of the social media adoption model for Australian banks to communicate with the public.

The discussion in sections 9.2.1.1 – 9.2.1.5 describe the breadth of contribution to theory that can be derived from this research study in the form of theory development, with this model as its foundation. As a result, the adoption model as a whole, having been nourished by previous research, has the potential to cultivate further research. Interesting new research findings in the form of individual theoretical foundations driving social media adoption have also contributed to the theory.

9.2.2. Contribution to Practice

The social media adoption model for Australian banks to communicate with the public encapsulates the technological and social communication aspects that govern the complexities of the social media environment, such as its sociotechnological character that makes it unique compared to other established forms of communication technologies. The model can be effectively used to empower decision-makers of Australian banks in their quest to implement appropriate social media strategies. This can be achieved by employing adoption model components to gain value from the insights provided through a mixture of technological functionalities and public attitudes and beliefs. The following sections will describe how the adoption can be employed to empower various aspects of strategy formulation.

9.2.2.1. Social Media Strategy Formulation/Recalibration

As already demonstrated, the adoption model contains two important components governing the technological and social communication aspects of the social media environment.

Technological aspects contain seven key social media functionalities that have been elicited based on the literature review and illustrated using the adapted Honeycomb Model. The usability of these aspects was demonstrated in the longitudinal study by reflecting on the use of five of the seven functionalities, studying the presence of Australian banks on three selected social media technologies. It identified that social media functionalities are used when the public and the Australian banks communicate. From a strategic perspective the technological aspects of the model can be used for a multitude of purposes of a strategic nature. These include, but are not limited to:
• Determining the most effective social media technologies that assist achieving a pre-defined success factor, such as attracting X number of community participants;

• Determining the most effective functionality or functionality-mix to realise the key business objectives of the social media presence;

• Undertaking a periodic review of social media presence to make social media strategic re-alignment if necessary, for example in a scenario of changes to business objectives.

The social communication aspects meanwhile contain four key factors that encompass the fundamentals relating to adopting the decisions of users that affect their participation in social media-based communication with Australian banks. While three of these factors, namely Use, Audience, and Social, were elicited from the integrated communication technology adoption (ICTA) model, contextual factors were derived from an exploratory study and were confirmed through empirical studies.

From a strategic perspective, social communications can also be used for a multitude of purposes. These include, but are not limited to:

• Improving the content shared to address users’ particular interests that affect their decisions relating to their participation in social media-based communications;

• Addressing users’ concerns relating to their use of social media.

The dual-focus nature of the model encompasses a broader range of adoption-related issues, making it beneficial for practitioners wanting to maximise benefits from their social media presence.

9.2.2.2. Maintaining the Flexibility of the Social Media Strategy

The model is social media technology independent as a result of functionalities being identified with social media fundamentals. Hence, the model provides continuity and stability to social media strategies of the respective Australian banks notwithstanding the potential changes in social media technologies. This technological independency of the model provides required flexibility in a scenario where a change in strategic focus is required for a multitude of reasons.

For example, if sharing content (sharing functionality) needs to be considered as the focus of the new social media strategy rather than participant numbers (relationship functionality), the usefulness of each technological functionality in this regard can be determined seamlessly.
Meanwhile, the effectiveness of such changes on the users’ decisions affecting their communications can also be measured by undertaking research that is more focused on these changes based on the social communication aspects as a guiding template. By capturing and organising relevant information as per this template, practitioners will be able to consider further strategies to maximise the return from their business objectives.

Also, the technologically independent nature of the model allows for incorporating new social media technologies as well as new technological functionalities, thereby facilitating a new social media strategic focus.

Additionally, in a situation where ground-breaking new social media functionalities are developed at a future date, the model can also be adjusted to incorporate any new functionality. In this regard, the model is developed and capable of supporting ‘open architecture’.

9.2.2.3. Determining Gaps in the Current Social Media Strategy

The discussion in section 7.5 explained how this model can be used to determine gaps in Australian banks’ existing social media strategies. Taking this into consideration, the social media adoption model will be useful as a research template if and when Australian banks expect to undertake further research in order to recalibrate their overall social media strategies as an ongoing process.

This section has discussed contributions to theory as well as practice. However, researchers need to be aware of accompanying constraints in order to make such contributions useful and realistic.

9.3. Adoption Model Constraints

Several potential constraints can be identified that may affect the use of the model for theoretical or practical purposes. The purpose of this section is to expand the discussion to identify these constraints with the expectation that researchers and practitioners alike would make informed decisions. These model constraints can also be used to further expand discussion around the model and encourage its broader implementation.
9.3.1. **Theoretical Constraints**

The social media adoption model for Australian banks to communicate with the public had undergone general evaluation through the lens of its “testability” (Shoemaker *et al.*, 2003) by taking the model through several stages of empirical research.

However, the use of this model as the basis to nourish further theory would require undertaking further evaluations in given situations, in order to understand the model better. These constraints include operationalisation of variables or the choices of measurements (Kulka, 1982) and theory being low in reality and high in general – “scope versus precision dilemma” – as described by McGrath (1981, p.193). The broad-ranging focus of the model has resulted in identifying more than one theoretical foundation to describe the social communication aspects of social media adoption. As a result, if a researcher focuses on this model to create a statistical model and try to explain as much variance as possible, this may lead to selecting certain problems while ignoring others (Shoemaker *et al.*, 2003).

Apart from these theoretical constrains, practitioners also need to be aware of the practical constraints.

9.3.2. **Practical Constraints**

The adoption model has practical implications with Australian banks gaining the capability to adapt from generalised research findings, for example in the scenario of exploring potential model implementation in different organisational or geographical settings. However, the following constraints have been identified that may limit or inhibit this capability as they could affect Australian banks’ or any other organisation’s consideration of the model to guide their adoption of social media as a method of communication.

9.3.2.1. **Time**

Social media as a technology evolves rapidly as had been mentioned and identified on several occasions in this research project. Even though this researcher strived to identify seven core functionalities, as identified in the model that can be independent of different social media technologies in the present context, this cannot totally discount the fact that another social media functionality innovation might take this discussion to another level. Such a scenario has the potential to invalidate the model.
9.3.2.2. Regulatory Measures

Considering the public nature of the discussion that social media facilitates, and specifically in the context of using social media to communicate with the public, it cannot be discounted that certain regulatory measures must be taken into account which will affect the use of social media as a means of communication. Concerns highlighted by users of social media and the actions they have taken to overcome the exposure of sensitive information to the public domain may prevent drastic measures being taken by regulatory bodies in this regard.

However, contrary to taking a potentially negative approach, Australian bodies that regulate a country’s banking system have taken a conciliatory approach towards the use of social media, as discussed in section 2.8.2.

9.3.2.3. People’s Beliefs and Attitudes

The explanatory sequential study that focused on the adoption decisions of users affecting their participation in social media-based communication with Australian banks, considered the opinions and beliefs of users belonging to the 18-34 year age group, as explained in section 6.3. However, it cannot be discounted that such beliefs and attitudes of Australian adults may not change for those users belonging to other age groups.

It must also be noted here that the social media environment is beyond any organisation’s complete control, as is the case with traditional media, and is driven by its users whose beliefs and attitudes are subject to change over time. As a consequence of these changes, modifications to the model may be warranted. Ongoing technological changes could also pose similar changes to users’ perceptions that would affect the model.

However, it is important to recognise that individuals’ beliefs and attitudes become even more relevant if the model is to be considered in a different geographical or organisational setting, especially those components relating to themes associated with Use Factors. This is another potential avenue for further research that will be covered in the next chapter.

9.3.2.4. Organisation-Specific Constraints

In addition to the above constraints, the following can be identified as having research as well as organisational implications.
To determine research implications around organisational constraints, this research study can be further expanded to include the internal decision-making environment that was not part of this research. This further research opportunity and others will be discussed in more detail in the next chapter.

With regard to organisation-specific constraints, the following can be highlighted that need to be addressed for successful adaptation or implementation of the model.

9.3.2.4.1. Management

To achieve success in either adapting or implementing the model at the organisational level requires management buy-in of the model, who would naturally expect to have a clear understanding about the potential return on investment.

The longitudinal research component of this study has observed varying levels of success in terms of social media-based online community participant numbers. Strategies to overcome this as a constraint include identifying a user-case scenario based on one or more business objectives an organisation expects to achieve through its social media strategy.

9.3.2.4.2. Financial Resources

This research study was able to determine varying levels of effort put in by different Australian banks in presenting themselves on social media in a manner that attracts potential participants to their respective online communities. As was determined based on the findings of the longitudinal study, there is a growing disparity between the four largest Australian banks and the rest of the banks in the manner that they use social media, with the former being proactive in their use of social media. This has reflected upon their higher community participant numbers and the frequencies of their use that made their social media-based online communities a reliable place for potential participants to gain access to reliable and up-to-date information. The level of presence of other banks varied from no presence to a more reasonable presence on all three social media technologies, but with fewer social media update frequencies.

However, unlike any other information system, with the availability and accessibility of social media, the multitude of businesses, as well as lower upfront costs associated with its adaption, it is possible to overcome this constraint.
9.3.2.4.3. Human Resources

This directly relates to constraints associated with financial resources. As indicated, depending on the complexities around expected social media presence, the human resources required could differ.

9.4. Conclusion

The discussion undertaken in this chapter, having established the implications of the validated model in addressing the gap in the research, has explored its broader implications on theory and practice.

From a theoretical perspective, it associated key functionalities and factors presented in the model as model components with relevant theoretical foundations relating to the technological and social communication aspects of the phenomenon studied.

From the perspective of the practitioners, the discussion focused its attention on the broader benefits that the adoption model could bring to Australian banks and for businesses in general. In this regard, this discussion covered model constraints in detail, enabling interested practitioners to adapt accordingly.

The following chapter will provide concluding remarks to the overall outcome of this discussion while introducing the reader to potential openings for future research.
10. CONCLUSION

10.1. Introduction

The previous chapter presented an analysis of research implications associated with the model by exploring both theoretical and practical implications. The aim of this chapter is to bring the research study to a conclusion by providing an overview of the study.

This discussion corresponds with the structure that was introduced at the start of the thesis detailed in Chapter 1 (Introduction). In accordance with this structure, the study has gone through five stages, which are listed below, to conceptualise and validate the adoption model for social media adoption by Australian banks to communicate with the public:

- Stage 1 – Evaluating Existing Research;
- Stage 2 – Conceptual Representation of the Topic;
- Stage 3 – Analysis of Body of Research Methods and Principles;
- Stage 4 – Moving from Concept to Theory & Practice;
- Stage 5 – Discussion of Research Outcomes.

As per this structure, this chapter focuses on Stage 5, discussion of the research outcomes and the future prospects that would take forward the findings from this research study.

10.2. Research Summary

This project has addressed the issues pertaining to the adoption model for Australian banks to communicate with the public by focusing on the stages described earlier. It has produced the following:

- A literature review that explored the contemporary communication environment driven by online communities based on social media as a qualitative extension of online communities developed since the inception of Web 2.0 (Chapter 2). This has resulted in determining the underlying complex sociotechnological nature of the communication environment created by social media owing to its unique characteristics and formulation of the overarching research questions and sub-questions (section 2.9).
- A continuation of the literature review, with a specific focus on two contrasting research sub-questions relating to the technological and social communication aspects, had resulted in the development of two conceptual model components (sections 3.3 and 3.4 respectively). These model components describe: 1) the social media functionalities used when the public and Australian banks communicate, and 2) how adoption decisions affect their participation in social media-based communication with Australian banks. The two model components integrate to create the social media adoption model for Australian banks to communicate with the public (section 3.5).

- The underlying complex research issues associated with the research environment have driven the research design to take a mixed-methods approach (section 4.3). This approach led to the determination of the research process (section 4.3.2.5). The mixed-methods approach had a convergent parallel design that consisted of an explanatory sequential design (with an online survey that was followed by focus groups) and a longitudinal study.

- The analysis of the longitudinal study using data gathered over a three-year period revealed how Australian banks use various social media functionalities when they communicate with the public (section 5.5).

- Data collection in relation to the entire explanatory sequential design was conducted over two years. Findings based on the online survey data analysis have introduced the themes (section 6.2.3) that drive the public to adopt social media to communicate, and confirmed the groupings of theoretical foundations previously identified in the discussion in section 2.7. Further descriptive analysis conducted in the online survey analysis findings determined the potential composition of the focus groups required to achieve expected research outcomes (section 6.3).

- The two focus group sessions were successful in gathering rich qualitative data on the use of social media by the public in their communications with Australian banks. The themes identified following the online survey data analysis, were turned into a ‘thematic map’ (section 7.3.1), provided the basis for the analysis of focus group participant responses. The ensuing discussion expanded upon the thematic base to identify specific themes discussed in section 7.4.
• The discussion in section 7.5 presented the overall findings associated with the convergent parallel design by amalgamating the findings of both the longitudinal study and the explanatory sequential study. This led to further confirmation of key social media functionalities (identified in the three social media technologies used in the study) used when the public and Australian banks communicated. As a result of presenting the overall findings of the research covering the convergent parallel design, the social media adoption model for Australian banks to communicate with the public was refined based on empirical research findings (section 7.6).

• The refined social media adoption model for Australian banks to communicate with the public was then taken up for validation in a focus group environment. Upon analysis of the focus group participants’ responses, the final social media adoption model was presented (section 8.4). This was followed by a discussion that focused on the model’s contribution to theory (section 9.2.1) and practice (section 9.2.2).

The aforementioned outcomes can be used as a guide to draw meaningful conclusions that link with overall research outcomes and answer the overarching research question/sub-questions.

10.3. Summary of Key Research Findings

The aim of this section is to revisit the overarching research question/sub-questions to confirm key research findings. The overarching research question as presented in section 2.9 is:

“How can social media be adopted by Australian banks as a method to effectively communicate with the public?”

Based on the arguments presented in the literature review (section 2.2) that established the sociotechnological characteristics governing social media adoption by Australian banks to communicate with the public, two research sub-questions were formulated.

The first research sub-question is:

“What social media functionalities are used when the public and Australian banks communicate?”

The first research sub-question addressed technological aspects involving social media functionalities that led to the determination of seven key functionalities and the adaptation of
the Honeycomb model to represent them in the model. The seven key functionalities are, identity, relationships, reputation, sharing, conversation, presence, and groups.

Use of these functionalities by Australian banks was observed longitudinally by monitoring and gathering quantitative and qualitative data associated with respective Australian banks’ social media presence on three selected social media technologies, namely Facebook, Twitter, and YouTube. The adapted Honeycomb Model was used in the hypothesis formation, data categorisation, and analysis.

The findings of the longitudinal study (Chapter 5) followed by focus groups (Chapter 7) and model validation (Chapter 8) have confirmed the use of five of the seven key functionalities by Australian banks to facilitate their communications with the public for the three technologies employed in the study. The five functionalities are, identity, relationships, reputation, sharing, and conversation.

The second research sub-question is:

“How do the adoption decisions of users affect their participation in social media-based communication with Australian banks?”

This second research sub-question provided the basis for a continued review of literature pertaining to the communication aspects that drive the adoption decisions of users and their participation in social media-based communication with Australian banks. As a result, the ICTA model components, namely use, audience, and social as well as contextual factors were identified as relevant to the communication technology adoption by users.

Findings of the explanatory sequential study consisting of an online survey (section 6.2.3) and two focus groups (section 7.5) have pointed to the emergence of four themes closely associated with use, audience, social, and contextual factors were identified as relevant to the adoption of social media by the public to communicate.

Taking into consideration the outcomes of the research study that consisted of a longitudinal study (that addressed first research sub-question) and the explanatory sequential study (that addressed the second research sub-question), the conceptual model for adoption of social media by Australian banks to communicate with the public was refined and presented for validation.
The validated social media adoption model for Australian banks to communicate with the public based on the participants’ responses in the focus group included the following empirically explained determinations made as per discussions in sections 8.4.1 and 8.4.2:

- Confirmed the relevance of contextual factors in driving users to adopt social media to communicate with Australian Banks;
- Established the reasoning for an unusually large number of relationships that the four largest Australian banks have accumulated;
- Established the association that relationship functionality maintains with identity and reputation functionalities;
- Determined the visual illustration of the model to accommodate its optimal understanding.

Overall, two research sub-questions have paved the way to determining answers to the technological and social aspects of communication involving social media have played an important role in determining the research outcomes. Taking these into consideration, the validated conceptual model was presented as the answer to the overarching research question.

10.4. Research Outcomes (Contributions)

The primary research outcome that addressed the gap in the research was achieved by presenting an original and significant empirical study. The study was guided by two well-articulated sub-questions each encapsulating one of the important dimensions of the model that explained the adoption model of social media by Australian banks to communicate with the public. A carefully planned and executed research design involving mixed methods approach was then used to test the appropriateness of the social media adoption model. There are broader theoretical and practical contributions emanating from this model.

10.4.1. Contribution to Theory

The primary aim of the conceptual model for Australian banks to communicate with the public, formulated in section 3.5 was to address the gap in the research, determined after a review of literature on the subject area by answering the research question posed in section 2.9. This was facilitated through the determination of two research sub-questions each of which encapsulated complex adoption issues of a sociotechnological nature associated with social media, an emerging and novel form of communication. To address these two research sub-questions,
multiple methods of data gathering and analysis were considered in a convergent parallel research design with the findings of one method driving the other.

Previously published literature consisted of research involving online communities, social media and its functionalities, technology adoption, and communications. However, this research study required encapsulation of established theoretical foundations associated with online communities, technology adoption, communications research, and social media technologies.

The social media adoption model for Australian banks to communicate with the public addresses the gap in the knowledge through its technological and social communication model components that individually address each of the two research sub-questions. In the process of addressing the two research sub-questions, this model adds to existing knowledge by bringing together contrasting theoretical foundations associated with technology adoption and communications, discussed in section 8.4.1.

Furthermore, as a result of the successful adaptation of the Honeycomb model to accommodate the technological aspects of social media and its subsequent empirical testing, the relevant research outcome can also be attributed as a theoretical contribution in itself.

Overall, the social media adoption model for Australian banks to communicate with the public can be used to improve theory and to derive theoretical statements based on individual model components.

10.4.2. Contribution to Practice

From a practitioner’s point of view, the social media adoption model for Australian banks to communicate with the public facilitates the exploration of the influence of different types of demographics in different organisational and geographical settings relevant to adoption decision-making involving social media.

As this model encapsulates technological and social communication aspects that govern complexities within the social media environment, it has the potential to become an effective tool that empowers decision-makers of Australian banks in their quest to implement appropriate social media strategies. This can be achieved by employing adoption model components to generate better insights from the social media environment consisting of a
mixture of technological functionalities and public attitudes and beliefs. The following sections describe how this adoption model can be employed to empower various aspects of strategy formulation.

10.5. Research Limitations and Future Prospects

There are some limitations in the present study that warrant caution in interpreting the results of the study.

First, this research study was conducted in the Australian context and only Australian residents were considered when deciding on the most appropriate participants for the online survey and subsequent focus groups. The decision to use Australian residents in the survey was driven by the likelihood of their association with Australian banks. Similarly, the decision to include Australian residents from the 18-34 age group was based on the inclination of Australian banks to consider people belonging to this age group as a potential growth segment, and their varying attitudes towards adoption factors (section 6.3.5).

This limitation has created further opportunities for researchers to apply this model in different demographic, organisational or geographical settings. In this regard, social communications aspects have a definitive role to play as such situations change people’s beliefs, attitudes, and expectations in relation to social media-based communications.

**First potential research question:** “How can social media be used by not-for-profit organisations to effectively communicate with potential donors?”

Second, only three social media technologies, namely Facebook, Twitter, and YouTube have been employed in the study to observe Australian banks’ social media presence. The selection of these three technologies however resulted in overlooking ‘presence’ and ‘group’ functionalities that relevant Facebook Pages, Twitter Profiles, and YouTube Channels are not providing.

Therefore, there are further research opportunities in considering numerous other social media technologies that are available at present, such as LinkedIn and FourSquare, and have strengths in these two functionality traits. A researcher could potentially exploit this to further enhance the value of the model for theory as well as practice. In this regard, the adapted Honeycomb Model can be further tested by using it to test presence and group functionalities.
Second potential research question: “What social media functionalities are used when the public and the organisations in the consumer service industry (i.e. food and beverages) communicate?”

Third, with regard to the longitudinal study, a smaller than ideally required number of cases in the study sample limited the statistical tool employed in the analysis. This is as a direct consequence of the finite number of Australian banks registered with the Australian Prudential Regulatory Authority. Even though this had the potential to create construct validity and external validity issues associated with the outcome, this researcher is confident that the number of tests conducted based on data collected over three years and three different time intervals has negated any detrimental effects (sections 5.2 and 5.3). This was displayed in the change in the scatter plots that demonstrated satisfaction of the critical test assumption relating to the presence of monotonous relationships between variables, increasing with time over the period of the study.

In this regard, the model can be further tested in an environment where there is a larger homogenous group of organisations, such as the retail sector. With online retailing becoming more popular, these companies may require novel technologies to connect and communicate with their existing and potential customers.

Third potential research question: “How can social media content be effectively used by SMB’s when they communicate with the public?”

Fourth, one of the key outcomes of this research study is the identification of Mobile Apps as a potential medium for communicating with Australian banks, considering their ease of use and easier accessibility through mobile devices, such as smart phones and tablet devices. Further research on Mobile Apps has the potential to provide better awareness into public use of technologies to communicate with Australian banks in an era of increasing use of mobile and other technologies to gain access to day-to-day banking services.

This research, if conducted by focusing on the internal decision-making environment of Australian banks could potentially identify the relevancy of system and adoption factors thereby further expanding the model.

Forth potential research question: “How do Australian banks select technologies to communicate with the public?
Fifth, this research study did not focus on the internal decision-making environment of Australian banks, illustrated in the upper section of Figure 8.2 with the black background. While this has not affected the overall outcome of this study, it would be beneficial from the perspective of continuing research to determine internal decision-making processes that encourage businesses to make strategic decisions relating to their social media presence.

**Fifth potential research question:** “What drivers effect Australian banks’ selection of social media technologies to communicate with the public?”

Sixth, social media functionalities by themselves do not lead to adoption. There should be other antecedents that either moderate/mediate the relationship. This area needs further exploration through future supported by a comprehensive review of literature.

**Sixth potential research question:** “What antecedents (or combination of) drive the selection of a social media technology?”

### 10.6. Conclusion

This research project has achieved its primary objective in making a significant contribution to research by presenting an empirically tested social media adoption model for Australian banks to communicate with the public (section 8.4) to fill a predetermined research gap.

In the process, this research was also able to demonstrate the importance and relevance of the Honeycomb Model to both theory and practice, thereby strengthening its overall research contribution.

Furthermore, as a result of the consideration of Australian banks in the study for their inherent complexities associated with the implementation of communication technologies in the public domain, the proposed adaption model could prove flexible when considered for other business organisations. Furthermore, the use of appropriate research approaches while maintaining rigour and credibility have added to the trustworthiness of the outcome.
References


Farrell, K. L. (2010). "Facebook and Twitter are nice, but are they compliant?". *ABA Bank Marketing*, 42, 26.


Robards, B. (2012). "Leaving MySpace, joining Facebook:‘Growing up’on social network sites". Continuum, 26, 385-398.


APPENDIX A – ETHICS APPROVAL LETTER

13 August 2013

Dear Vindaya,

BL-EC 28-13: Adoption of Social Media by Australian Banks to Communicate with the Public

Thank you for submitting the above project for consideration by the Faculty Human Ethics Advisory Group (HEAG). The HEAG recognised that the project complies with the National Statement on Ethical Conduct in Research Involving Humans (2007) and has approved it. You may commence the project upon receipt of this communication.

The approval period is for four years. It is your responsibility to contact the Faculty HEAG immediately should any of the following occur:

- Serious or unexpected adverse effects on the participants
- Any proposed changes in the protocol, including extensions of time
- Any changes to the research team or changes to contact details
- Any events which might affect the continuing ethical acceptability of the project
- The project is discontinued before the expected date of completion.

You will be required to submit an annual report giving details of the progress of your research. Failure to do so may result in the termination of the project. Once the project is completed, you will be required to submit a final report informing the HEAG of its completion.

Please ensure that the Deakin logo is on the Plain Language Statement and Consent Forms. You should also ensure that the project ID is inserted in the complaints clause on the Plain Language Statement, and be reminded that the project number must always be quoted in any communication with the HEAG to avoid delays. All communication should be directed to katrina.fleming@deakin.edu.au

The Faculty HEAG and/or Deakin University Human Research Ethics Committee (HREC) may need to audit this project as part of the requirements for monitoring set out in the National Statement on Ethical Conduct in Research Involving Humans (2007).

If you have any queries in the future, please do not hesitate to contact me.

We wish you well with your research.

Kind regards,

Katrina Fleming
BL-HEAG Secretariat
Appendices

APPENDIX B – ONLINE SURVEY QUESTIONNAIRE

Q1.1 Plain Language Statement (Online Survey)

Full Project Title: Australian Banks adopting Social Media to communicate with the public
Student Researcher: Vindaya Senadheera
Research Supervisors: Professor M. Warren, Assoc. Prof. Dr. S. Leitch, Dr. G. Pye.

This statement has been developed to protect the interests of people who agree to participate in an online survey. You are invited to take part in it, but your participation is entirely voluntary. If you do not wish to take part you are not obliged to. Deciding not to participate will not affect your relationship to the researchers or to Deakin University. The survey is anonymous. Once the survey questions are answered and submitted it will be impossible to identify individual responses. Also, individuals participating in this survey will not be identified in any publication since its results will only be published in aggregate. The survey will take approximately 10-15 minutes to complete.

Research Benefits

The primary benefit of the survey is to get a clearer understanding of the social media adoption factors and the outcome potentially cover the areas of formulating of adoption frameworks/models. Such frameworks/models could also become a base to model for technology adoption decisions by Australian organisations with regards to new forms of media as a whole while contributing towards producing inclusive policies and practices.

Possible Risks
Since the survey is anonymous, there are no major risks associated with participating in this research project except for discomfort related to the disclosure of some personal information, such as gender, age, profession, type of employment, and salary-range. If you have any concerns with regards to these issues contact the principal researcher whose contact details are given below.

Privacy, Confidentiality and Disclosure of Information

The researcher aims to minimise any risk and discomfort by ensuring anonymity to participants. No names will be recorded on your questionnaire. The researcher will only use de-identified data. The data collected online from the completed questionnaire is stored with an organisation that provides the highest level of privacy standards and data security and will
be stored in secure servers maintained by Deakin’s Information Technology Service Department in adherence to Deakin University guidelines to maintain research integrity. Post processing, all media containing information is kept in a locked filing cabinet for six years after final publication of the thesis to comply with government requirements. After this time, the data will be destroyed.

**Publishing of Research Outcomes**

While the primary purpose of the study is to present the findings in a PhD thesis, reports emanating from the study may also be submitted for publication in external media. In all such situations information will be provided so that individual participants or organisations they represent will not be identifiable. Only aggregated and de-identified data will be reported.

**Ethical Guidelines**

The entire research project will be carried out according to the National Statement on Ethical Conduct in Human Research (2007) produced by the National Health and Medical Research Council of Australia. The ethical aspects of this research project have been approved by the Human Research Ethics Committee of Deakin University.

**Complaints**

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about your rights as a research participant, then you may contact:

The Manager - Office of Research Integrity  
Deakin University, 221 Burwood Highway, Burwood Victoria-3125, Australia  
Telephone: (03) 9251 7129  
Facsimile: (03) 9244 6581  
Email: research-ethics@deakin.edu.au  

Please quote project ethics ID number BL-EC 4-12.

**Further information, queries or any problems**

If you require further information or if you have any problems concerning this project, you can contact the principal researcher. The researcher responsible for this project is:

Vindaya Senadheera  
PhD Candidate, School of Information Systems, Faculty of Business and Law  
221 Burwood Hwy, Burwood Victoria- 3125, Australia  
Telephone: +61 3 9251 7721; E-mail: vsenadhe@deakin.edu.au
Appendices

If “Disagree” is selected, then skip to end of survey.

**Q1.2. Are you 18 years or older?**

- Yes (1)
- No (2)

If No Is Selected, Then Skip to End of Survey

**Q1.3. Where do you live at this moment?**

- In Australia (1)
- Outside Australia (2)

If Outside Australia Is Selected, Then Skip To End of Survey

**Q1.4. Do you have a social media presence using any of the following services? Facebook; Google+; MySpace; Twitter; YouTube**

- Yes (1)
- No (4)

**Q2.1. Given below are few statements on your selection of social media (i.e. Facebook, Twitter). Select the most appropriate response. Social media gives me the feeling of having control over the flow of my communications.**

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

**Q2.2. Social media allows me to improve communication efficiency since it saves me time/money**

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
Q2.3. Social media allows me to improve my communication efficiency by providing uninterrupted access

Q2.4. Social media allows me to put myself in the spotlight

Q2.5. Social media is a status symbol for me

Q2.6. Social media allows me to find the information that I am looking for
Q3.1. Given below are few statements about you in relation to social media as a tool to communicate. "I am willing to ignore known deficiencies of social media in order to achieve benefits that it offers"

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Q3.2 "I am confident of overcoming any technology issues associated with using social media"

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Q3.3 "I enjoy the novelty of social media that allows me to collaborate with others on issues that concerns me"

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Q3.4 "I have the knowledge and skills required to use social media"

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree
Q3.5 "I am able to put in required time and effort to make social media important for me"

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Q3.6 "Social media increases my work efficiency because it gives me faster access to information I am after"

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Q3.7 "Social media saves my time because it reduces my need to travel to meet friends and relatives"

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Q3.8. Why did you start using social media? Choose all that apply.

- People/groups that influence me use social media
- People/groups whose opinion I value encouraged me to use social media
- I was influenced to use social media by a product or service that I use
- I have an affinity for a particular social media service
- I was encouraged by innovativeness of a particular social media service
- Out of curiosity to understand why millions of other users use social media
- Involvement in a social media allows me to easily interact with people I know
Q4.1. As a customer of an Australian Bank*, what are your major concerns in relation to day-to-day banking? Please click all that apply (You need not identify the Bank).*List of Australian Banks, AMP Bank, Australian and New Zealand Banking Corporation (ANZ Bank), Bank of Queensland, Bank of Western Australian (Bank West), Bendigo and Adelaide Bank, Commonwealth Bank, Heritage Bank, Macquarie Bank, Mecu Bank, Members Equity Bank (me Bank), National Australian Bank (NAB), QT Mutual Bank, Rural Bank, Suncorp-Metway Bank, Westpac Bank

- Breach of Privacy (of my personal information)
- Non-availability of Internet Banking when I need
- Banking computer malfunction affecting my day-to-day life/business
- Non-availability of Automated Teller Machine (ATM) services when I need
- Online Fraud
- Customer Service
- Cost of Banking
- Other, Please Specify ____________________
- I am not a customer of any Australian Bank

If I am not a customer of any ... Is Selected, Then Skip to End of Block

Q4.2. If your day-to-day banking is affected, how do you think you would most likely to find out about that problem?

- Bank contacting me directly
- Traditional news media (TV, Radio, Newspaper)
- Social Media, i.e. Facebook, Twitter
- Friend(s) letting me know using conventional communication medium (face to face, telephone)
- Friend(s) letting me know using online communication medium (email, social media)
- When I try to carry out my day-to-day banking activity
- Other, Please Specify ____________________
Q4.3. If I find out about problem(s) with my day-to-day banking, I will get in touch with the bank as a concerned customer using social media?

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Q4.4. If you are to get in touch with the bank, what is the most likely medium that you would use? Click all that apply.

- Social Media, i.e. Facebook, Twitter
- Email
- Telephone/Fax
- Bank website
- Other, Please Specify ____________________

Q4.5. If I find out about problem(s) with my day-to-day banking, I will get in touch with my friends, colleagues or relatives using social media?

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Q5.1. Now a few questions about yourself. What is your gender?

- Male
- Female
- Prefer not to say

Q5.2. How old are you?

- 18-25
- 26-34
- 35-44
☐ 45-54
☐ 55-64
☐ 65 or over
☐ Prefer not to say

**Q5.3. Please indicate your occupation:**

☐ Management, professional, and related
☐ Customer Service
☐ Sales and office
☐ Farming, fishing, and forestry
☐ Construction, extraction, and maintenance
☐ Production, transportation, and material moving
☐ Government
☐ Information Systems/Technology
☐ Teacher/Lecturer
☐ Postgraduate Student
☐ Undergraduate Student
☐ Retired
☐ Other, Please Specify ____________________

**Q5.4. What is your annual income range, A$?**

☐ Below $20,000
☐ $20,000 - $49,999
☐ $50,000 - $79,999
☐ $80,000 - $99,999
☐ $100,000 and above
☐ Prefer not to say

**Q5.5. How did you come to know about the link to survey?**

☐ Social Media
☐ Email
☐ Informed by a friend via email
☐ Letter
Q5.6. Completion of the survey entitles you to enter yourself into a draw to win one of 5 double movie passes. If you agree to participate, please enter your email address so that we can contact you should you be the winner. Your email address will not be used for anything else other than for above mentioned purpose. Once the intended purpose is achieved, information you enter here will be permanently removed from systems they stored in.

Enter your email address:
APPENDIX C – PRE-FOCUS GROUP QUESTIONNAIRE

Q1.1. Plain Language Statement (Focus Group Participants)

Full Project Title: Australian Banks adopting Social Media to Communicate with the Public
Student Researcher: Vindaya Senadheera
Research Supervisors: Professor M. Warren, Asso. Prof. Dr. S. Leitch, Dr. G. Pye

This statement has been developed to protect the interests of people who agree to participate in a Focus Group interview earmarked to study focuses on the perceptions of the Australian Public about the effectiveness of Australian Banks communicating with them using social media. You are invited to take part in it, but your participation is entirely voluntary. If you do not wish to take part you are not obliged to. Deciding not to participate will not affect your relationship to the researchers or to Deakin University. If you agree to participate, a consent form will be provided to get your consent. The focus group responses will be kept anonymous. Once your recorded responses are transcribed it will be impossible to identify individual responses. Also, individuals participating in this focus group will not be identified in any publication since its results will only be published in aggregate. The focus group will take approximately 60-75 minutes to complete. Participants are expected to have a reasonable ability to express their ideas in English Language. Indicative focus group questions include:

Engagement questions

- What is your favourite social media technology?
- What businesses you follow/like/subscribe to using social media technology of your choice?

Exploration questions

- What makes you to follow/like/subscribe to (or not) those businesses?
- What do you think following/liking/subscribing to communities of interest (will be explained at the beginning) created and moderated by Australian Banks would give you?
Exit questions

- Is there anything else that you would like to say about communicating with Australian Banks using social media?

Research Benefits

The primary benefit of the Focus group interview is to get an understanding of the factors that influence you to get involved in social media as a medium to communicate. Your responses will be analysed against a conceptual framework describing social media adoption leading to effective communication. Such frameworks could become a base to model for technology adoption decisions by Australian organisations with regards to new forms of media as a whole while contributing towards producing inclusive policies and practices.

Possible Risks

Since the focus group is anonymous, there are no major risks associated with participating in this research project. However, if you have any concerns with regards to answering questions relating to gender, age, profession, and type of employment you may raise a ‘revocation of consent’ form and discontinue your participation in the Focus Group.

Privacy, Confidentiality and Disclosure of Information

The researcher aims to minimise any risk and discomfort by ensuring anonymity to participants. No names will be recorded when the notes are taken or responses recorded in audio format. The researcher will only use de-identified data. All audio recordings and transcribed data are stored within a digital environment that provides the highest level of privacy standards and can only be accessed by the researcher. The data storage and servers are maintained by Deakin’s Information Technology Service Department in adherence to Deakin University guidelines to maintain research integrity. Post processing, all media containing information is kept in a locked filing cabinet for up to five years after final publication of the thesis to comply with government requirements. After this time, the data and recording material will be destroyed.

Publishing of Research Outcomes

While the primary purpose of the study is to present the findings in a PhD thesis, reports emanating from the study may also be submitted for publication in external media. In all such
situations information will be provided so that individual participants or organisations they represent will not be identifiable. Only aggregated and de-identified data will be reported.

**Ethical Guidelines**

The entire research project will be carried out according to the National Statement on Ethical Conduct in Human Research (2007) produced by the National Health and Medical Research Council of Australia. The ethical aspects of this research project have been approved by the Human Research Ethics Committee of Deakin University.

**Withdrawal of consent/information**

All participants will be allowed withdraw their consent to participate or any specific information from being published by submitting a ‘Revocation of consent Form’.

**Complaints**

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about your rights as a research participant, then you may contact:

The Manager  
Office of Research Integrity  
Deakin University  
221 Burwood Highway, Burwood Victoria-3125, Australia  
Telephone: (03) 9251 7129  
Facsimile: (03) 9244 6581  
Email: research-ethics@deakin.edu.au

Please quote project ethics ID number BL-EC 28-13.

**Further information, queries or any problems**

If you require further information or if you have any problems concerning this project, you can contact the principal researcher. The researcher responsible for this project is:

Vindaya Senadheera  
PhD Candidate, School of Information Systems, Faculty of Business and Law  
221 Burwood Hwy, Burwood Victoria- 3125, Australia  
Telephone: 0425 792959  
E-mail: vsenadhe@deakin.edu.au
Appendices

Q1.2. Are you 18 years or older?
- Yes (1)
- No (2)
- Prefer not to say (3)

If “No” is selected, then skip to end of survey. If “Prefer not to say” is selected, then skip to end of survey

Q1.3. Where do you live at this moment?
- In Australia (1)
- Outside Australia (2)
- Prefer not to say (3)

If “Outside Australia” is selected, then skip to end of survey. If “Prefer not to say” is selected, then skip to end of survey

Q1.4. Where in Australia do you live (select the closest city)?
- Adelaide (1)
- Brisbane (8)
- Canberra (7)
- Darwin (4)
- Hobart (2)
- Melbourne (3)
- Perth (5)
- Sydney (6)
- Other (15) ________________

Q1.5 Do you have a presence (an account/handle) on any of the following or other social media technologies? Facebook; Google+; Twitter; YouTube
- Yes (1)
Q2.1. You have indicated that you are a social media user. Please identify other social media technologies you are active on.

- Facebook (1)
- Google+ (2)
- Twitter (3)
- YouTube (4)
- Instagram (5)
- Pinterest (6)
- Four Square (7)
- MySpace (8)
- Vine (9)
- Other (10) ____________________

Q2.2. Why do you use social media (use a comma as a separator if you have more than one compelling reason)?

Q2.3. Now for few questions about you. Answering following questions would allow the researcher to identify the most suitable focus group for you. They will also assist in focusing findings on particular demographics. Your gender?

- Male (1)
- Female (2)
- Prefer not to say (3)

Q2.4. What year were you born in?

- Before 1945 (1)
- Between 1945-1963 (2)
- Between 1963-1980 (3)
- Between 1981-1994 (4)
- After 1994 (5)
- Prefer not to say (6)
Q2.5. Please indicate your occupation:

- Management, professional, and related (1)
- Customer Service (2)
- Sales and office (3)
- Farming, fishing, and forestry (4)
- Construction, extraction, and maintenance (5)
- Production, transportation, and material moving (6)
- Government (7)
- Information Systems/Technology (8)
- Teacher/Lecturer (13)
- Postgraduate Student (9)
- Undergraduate Student (11)
- Retired (12)
- Other, Please Specify (17) ____________________

Q2.6. What is your annual income range, A$?

- Below $20,000 (1)
- $20,000 - $49,999 (2)
- $50,000 - $79,999 (3)
- $80,000 - $99,999 (4)
- $100,000 and above (5)
- Prefer not to say (6)

Q2.7. How did you come to know about the link to survey?

- Social Media (1)
- Email (2)
- Informed by a friend via email (3)
- Printed Letter (4)
- Other, Please Specify (5) ____________________

Q2.8. The proposed Focus Group session is scheduled to be held in Melbourne at the Burwood Campus of the Deakin University. If you live away from Melbourne and unable
to be there physically but wish to be part of the Focus Group, would you be happy to do so via Internet, i.e. Google Hangout?

☑ Yes (1)
☑ No (2)

Q2.9. In order to get in touch with you and to inform you about the date, time, and place of the Focus Group session that you have volunteered to participate, please provide your email address. Your email address will not be used for anything else other than for above mentioned purpose. Once the intended purpose is achieved, information you enter here will be permanently removed from systems they stored in. Note: The Focus Group session will have 8-10 participants and will be audio-recorded for accurate interpretation. By providing your email address below, you are agreeing to the use of an audio-recorder at the session. No participant will be identified in the Focus Group transcription. Once transcribed, all audio-recordings and related notes will be stored securely for 5 years for compliance purposes, after which they will be destroyed.

My preferred email address is: