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**UNIVERSITY OF NOTTINGHAM**

**The Global Rise of Social Media: A Study of how Social  
Networking Sites influence Diffusion of Innovation**

**BY**

**OSAHON OLOTU**

**A Dissertation presented in part consideration for the degree of  
Master of Business Administration Degree  
2012**

## **ABSTRACT**

This paper explores the diffusion of innovation and behaviour of adopters towards the growth of social networks while understanding the role of innovative firms. The process by which innovation diffuses from its invention point to its adopter or end users can be defined as Diffusion of innovation (Robertson, 1967). The rise or growth of digital media has brought about intense competition for competitive firms in their quest for audience revenues while harnessing the potential of the internet through incremental and radical innovations. The growing literature on the contribution of innovative firms and new product development makes it unblemished that evidence about consumer behaviour on social networking platform to product innovation is a perilous input.

Drawing on the present studies that explores consumer behaviour in light of motivational factors, home communication technology infrastructure, existing media use level and demographic attributes, research with digital media firms is drawn on to explore the overlapping twin logics of diffusion of innovation and behaviour of innovative firms towards product development. Over the last 60 years, researchers have studied the spread of new ideas and in thus explaining the factors in innovation processes and activities. Also, theory on the diffusion of innovations has been placed under scrutiny based on performance outcomes, adoption and diffusion patterns.

The postulation underpinning this research is that, due to the recent global rise of digital media, it is however not arbitrary to take on that we might expect to see the diversity of attributes being patterned into distinct configurations. Drawing upon recent experience with internet start-ups and established internet social networking firms, the paper analyses the consumer behavioural constraints on the rapid diffusion of new innovations. Having examined processes and practices of product innovation in digital media, the article turns to some of the critical issues around firms and industry conventions towards how consumers adopt innovative product.

This research stands to present a combinative methodology to the research of consumer behaviour founded on the adoption hypothesis of the innovation rather

than the effects that it portrays. The task for innovative firms that this article intends to address is the ability to manage and balance the diffusion pattern of innovation, the elimination of waste of time when considering market segmentation of new products and the cultural imbalance that disrupts adoption of innovation while understanding how consumers of social media reacts to diffusion of innovation. This complex sorting of the understanding displays a stronger assessment of connection concerns between innovative firms, its consumers and the innovation.

## **ACKNOWLEDGEMENT**

This dissertation and the MBA programme gave me an opportunity to revive my knowledge and thus, the experience and journey to this day have been completely priceless.

I will like to thank my supervisor and personal tutor, Mr. Chris Mahon for his tremendous support and encouragement throughout this programme. I am very much grateful.

And most especially my parents for giving me the foundation to make me who I am today and making me believe that with God and hard work all things are possible. Thank you very much.

And lastly, a big thank you to my awesome sisters, Edna, Ivie, Isoken, Evbusogie, Uwaila, Izehiese, Osayamen and Efeomo for their continuous support and encouragement throughout this programme.

God bless you all.

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## **CHAPTER ONE Introduction**

### **1.0 Introduction**

The growth of Social Media has resulted in a new model of diffusion of innovation for organizations with social media itself considered as the latest wave of technologically-based innovation. Business executives in order to enhance the prospects of engaging with their customers more strategically are placing the conception of social media as a priority on their agenda. Making profitable use of applications such as Facebook, Twitter, Youtube and Twitter through identification of relevance are avenues which decision makers within organizations are placing emphasis on. However, definitions for social media are vague but social networks like Facebook and LinkedIn, are considered social media as well as content-orientated platforms such as Flickr and YouTube.

Social networking overtime has become obvious to be one of the dominant artistic phenomena in this evolving digital era. Due to low barriers to entry in terms of participation and a very simple business model, a host of large organizations and start-ups have identified social media as a smart business tool in order to evaluate their business processes through constant interaction with their customers and potential customers.

Even though there is considerable research done on diffusion of innovation, there is not much research available on social media in particular. However, not much is known about characteristic factors that influence consumer's intention and attitude towards adopting new innovative ideas or products through social media. This study, therefore, will try to identify significant concepts or factors that affect consumers' intent towards adoption and sum up a robust business model that may in thus increase the firms' performance and as well as analyze consumers' behavioural intention towards adoption of innovative idea or product innovation

Social media are an innovation when determining the threshold models of diffusing innovations; therefore, providing an overview on social media on this study with a focus in leading social networking sites will be considered appropriate. This chapter

will also give an explanation with an overview of the social media industry with a particular focus on Facebook as well as explaining the operating concept of social networking sites. And lastly, for the purpose of this study, this chapter will also provide an overview of social networking enthusiasts and level organizations have adopted social media, their current consumption behaviour and concerns and extent organizations

### **1.1 Evolution of Social Media**

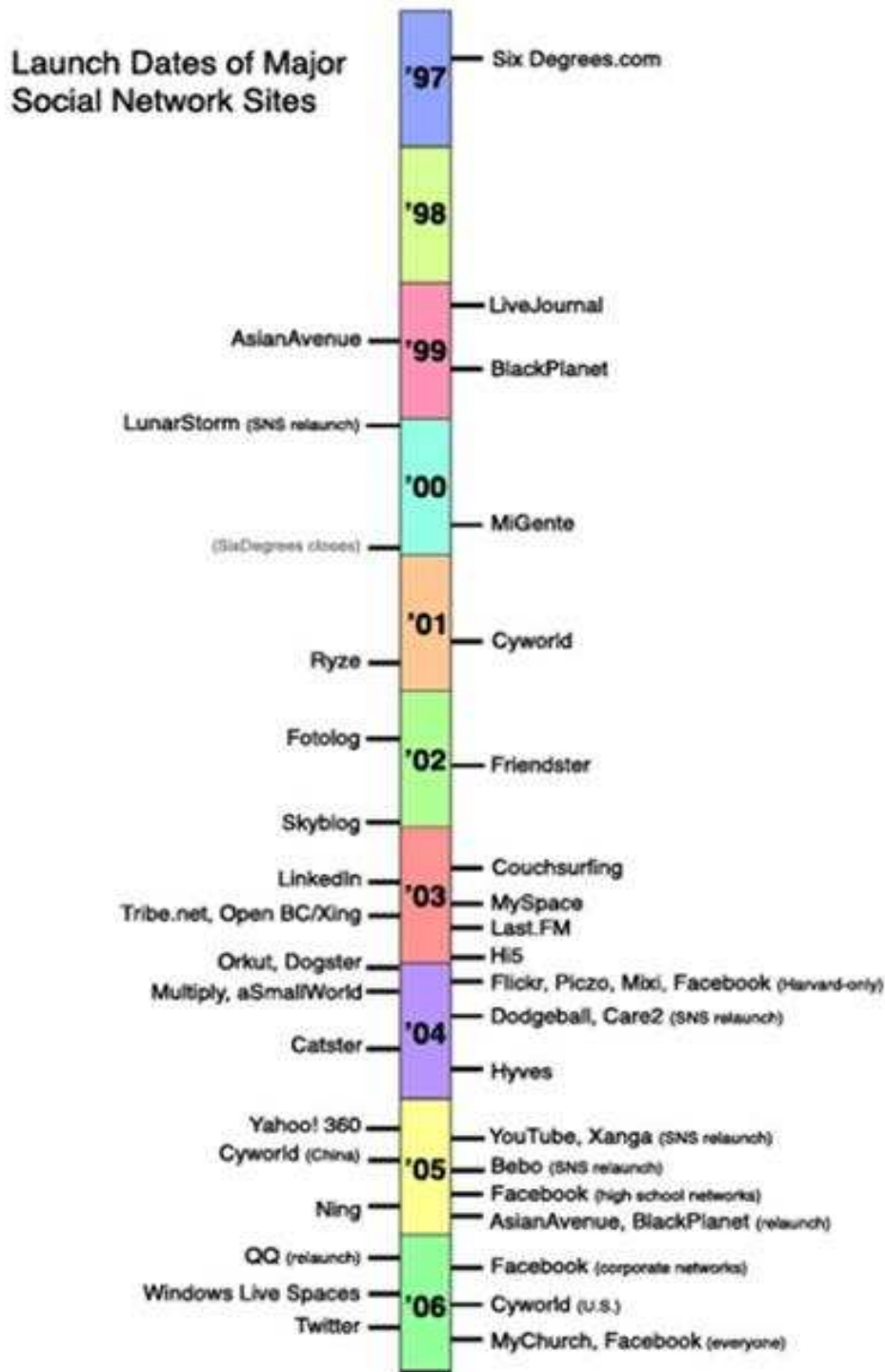
Social media has evolved and become an essential aspect of the global environment. It noteworthy to acknowledge that for so many people, the global upsurge has risen to importance in their everyday life as well as its global impact. According to Daniel Nation's social media article on About.com, "*Social media* can be defined as a social instrument of communication". Social media are social networking sites where people interact freely, share and discuss information about each other and their lives, using a multimedia mix of personal words, pictures, videos and audio.

According to Datamonitor (2010), "the use of Internet technology to support social networking has been long established – indeed, such direct peer engagement was central to the vision of the founders of the Internet". Ever since its inception, social media has continued to gain importance worldwide. The development of businesses intended as platforms specifically to support and structure this social network interaction is newer (Datamonitor, 2010). To date, loads of social networking sites continue to be launched based on available statistics; Figure 1 illustrates the launch dates of the major networks, up to and including Twitter and the opening of Facebook to all, and thus the advent of the present competitive environment.

Social networking sites are a type of virtual community that has grown tremendously in popularity over the past few years (Dwyer et al, 2007). The development of social networking up to 2010, and Facebook's success in particular, now suggests a clear systematic behaviour of how social networking sites behave with factors affecting its operation which includes a clear community purpose and culture, design interface, user engagement, transactional opportunities, privacy safeguards, localization and

segment alignment. Unique user numbers are set to more than double to 1,971m by 2015 (Datamonitor, 2010).

Figure 1: Launch dates of major social network sites  
Source: Datamonitor International



Social networking sites have their origins in the bulletin boards of the early days of the internet. MySpace was one of the first to reach extensive media attention but their earlier success has been subverted by Facebook. In 2010, Facebook reached its 500 million user mark and social networks overtook search as the most popular activity on the internet.

## 1.2 Social Media Landscape

The next big change for social media is the move towards mobile internet. This is considered as a step in the right direction because the ownership of smartphones is rising and internet access and use is enabled through 'all you can eat' data packages. Their popularity is causing problems for the mobile networks who are introducing 'fair use' policies. Figure 2 depicts the 2012 social media landscape in terms of future trends in social media industry.



Figure 2: Social Media Landscape  
Source: Fredcavazza.net (2012)

### **1.3 Traditional Media vs. Social Media**

Social media which come in the form of new media are not replacing traditional media but are being used in concert with them (Roberts and Foehr, 2008). While some forecast that social media will replace traditional media, the reality is more complex than what is been reported. Some of the most popular sites are those of traditional media; the BBC, CNN and the New York Times all operate in the social media space, linking their content to the networks as well as maintaining their own profile and fan base. A clear understanding of the subject matter which focuses on social media will be considered in this research rather than pay much emphasis on the comparison on both spectrum.

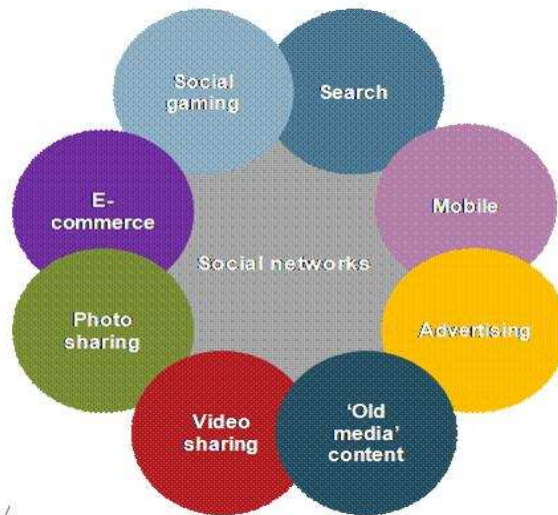
Social media runs across all other channels – whether web, mobile, phone or physical stores (Lu et al, 2005). This is a highly enclosed environment where the most unlikely contributors can be celebrities, social influencers or opinion leaders while unlike traditional media, opinion leaders and various degrees of contributors are not easily identified (Lu et al, 2005).

### **1.4 Social Networking Sites**

Social networking sites, a subclass of social media, have recently become a widespread phenomenon in the online world. Social networks have always been a part of our everyday life and integral aspect of start-up to large organizations. The internet basically transformed the extent and ease with which people can connect with a wider network of people but it remains to be seen whether this will radically change the nature of how to interact or just the scale of our networks (Euromonitor, 2010).

Social networking sites may turn out to be the bellwether of broader changes – as radical as mobile music seemed in the 1980s or the invention of teenagers in the 1950s and 60s (Datamonitor, 2012). Technology is transforming how we live and thus, online social networks reflect the wider changes in society. Society has always

relied on social networks and our knack to connect; online networks are changing the way we connect as well as speed and spread of our networks.



**Figure 3: Structure of Social Networks**  
Source: Euromonitor International

For the purpose of this study, social networking sites will be the term used because it is the most widely used term in the industry.

### **1.4 Social Networking Sites Consumers' Behaviour**

According to a recent publication by PWC, “it pointed out that regardless of the platform focus, putting user value before network value – that is, creating an experience that begins with user needs rather than business needs is the key to a social media effort that is vibrant and active rather than barren and stale”.

Mintel’s consumer research (2012) cites “that 16% of social network users say they are using mobiles to access social networks more than on computers, rising to 29% of 25 to 34 year old social network users”. Furthermore, social network services has propelled due to the increase in popularity of the use of smart mobile devices making leading social networks to optimize their services for use across a number of screens,

from traditional computers and smartphones to televisions and e-readers (Mintel, 2012).

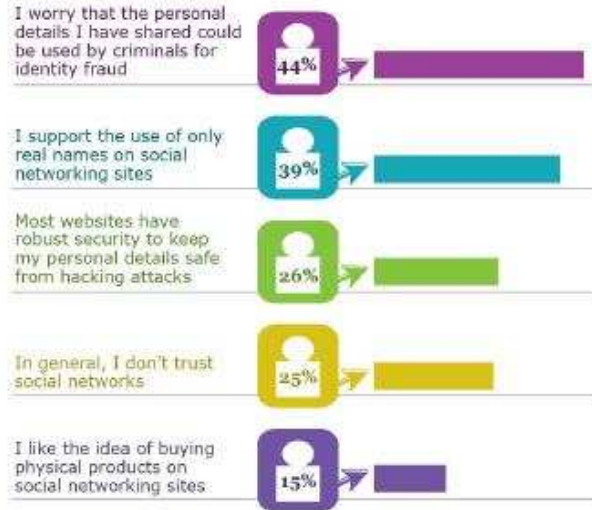


Figure 4: Attitudes towards and behaviours regarding social media services  
Source: GMI/MINTEL 2012

Significant amount of social network users (25%) claim they don't generally trust social networks. Distrust is more common amongst the older social network users. The only possible way to alleviate suspicions towards social networks could be through the required use of real names during registration with a four in ten (39%) social network users are in support of using real names (Mintel, 2012).

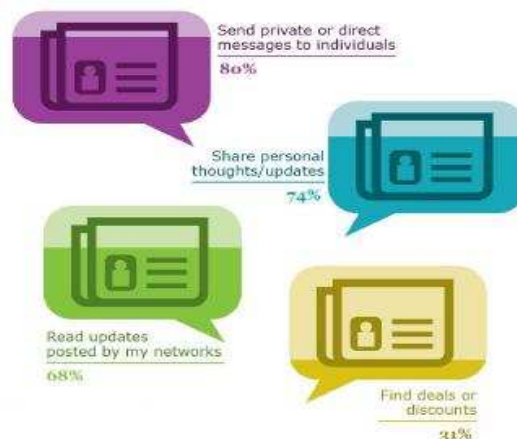


Figure 5: Activities normally performed on any social network  
Source: GMI/MINTEL 2012



With regards activities performed on social networks, sending private messages is the most performed activity on leading social network, Facebook. According to GMI/Mintel (2012), only 12% of Twitter users in the UK are using the micro-blogging site to find deals or discounts. LinkedIn users appear to have a higher tendency to read updates posted by members of their networks (31%) than contributing personal thoughts/updates (8%) which is represented in the Figure 6.

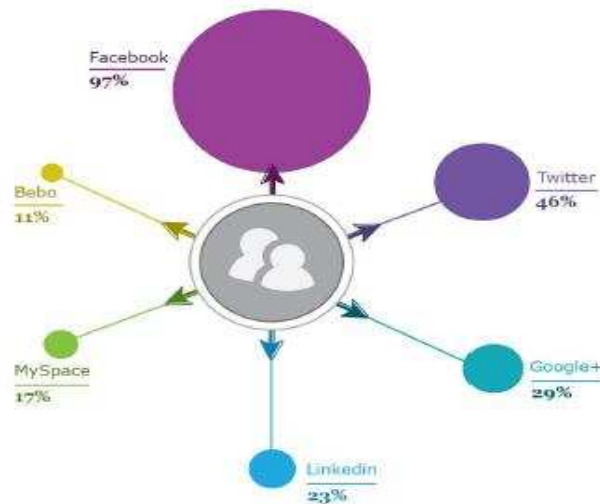


Figure 6: Social networks ever visited, February 2012  
Source: GMI/MINTEL 2012

According to a recent consumer research conducted by Mintel (2012), “it stated that internet users are more likely to consume rather than contribute content on the social web”. Figure 4 show that the majority of internet users (83%) have used at least one, while less than half as many, 37% have contributed their own content.

You will also find from the survey that the most visited social media websites are those including videos (71%), wikis such as Wikipedia (61%), and review websites (47%). Internet users are most likely to contribute personal content as videos (16%), reviews of products or services (16%), and discussions on forums (16%), followed by photos and digital art (11%), Mintel (2012).

Base: 2,000 internet users aged 16+

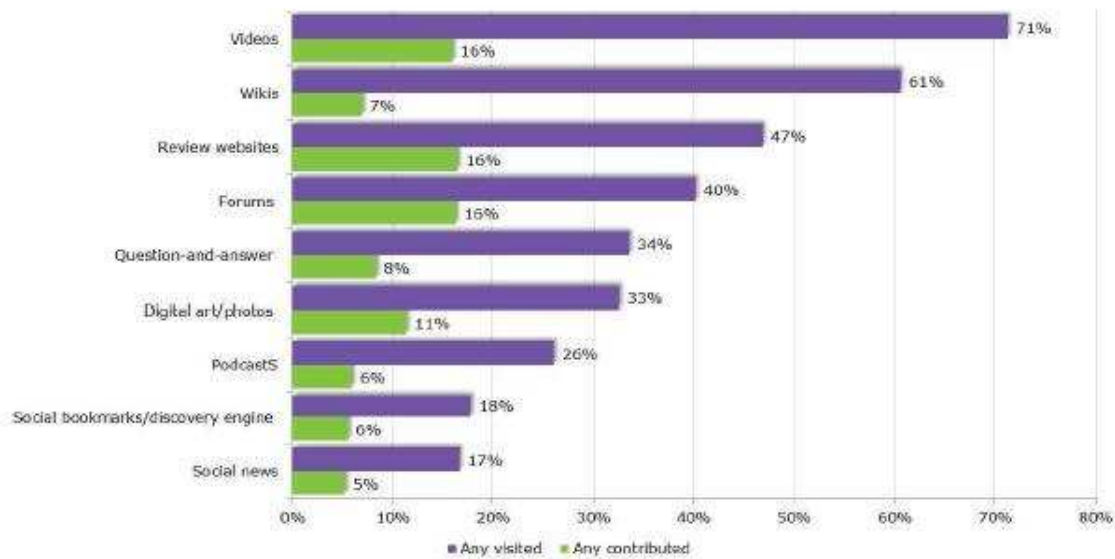


Figure 7: Visits and contributions to social media websites, February 2012  
Source: GMI/MINTEL 2012

Nevertheless, from the perspective of overall social networking sites structure, a quarter of social network users (25%) claim they don't trust social networks generally. This feeling of distrust is more common amongst the older social network users as indicated in Figure 8; with 39% of the over-55s sharing this view compared to 21% of social network users aged 16-54.

Base: 1,525 social network users aged 16+

	All %
I rarely pay attention to adverts on social networking sites	67
I worry that the personal details I have voluntarily shared (such as name, address, etc.) on social media services could be used by criminals for identity fraud	44
I support the use of only real names on social networking sites	39
I only use social networks because my friends do	35
I think there are too many social networks to choose from	31
Most websites have robust security to keep my personal details supplied during registration (such as address, credit card details, etc.) from hacking attacks	26
In general, I don't trust social networks	25
I am using social networks less than I did last year	24
I use my mobile to access social networks more often than on a computer	16
I like the idea of buying physical products on social networking sites (ie things consumed outside of social networks, such as clothes or music)	15
None of these	3

Figure 8: Attitudes towards and behaviours regarding social media services, February 2012  
Source: GMI/MINTEL 2012

The use of real names during registration is a possible way to alleviate suspicions towards social networks. Mintel's consumer research which is outlined in the Figure above has found that four in ten (39%) social network users are in support of using only real names on social networking sites, with nominal variation across gender, age, or other demographics. Nevertheless, the use of real names would also need to be accompanied by robust security by social networking sites in order to ensure that personal details could not be stolen by hackers.

### **1.5 Organizations adoption of Social Media**

According to a recent survey by PWC, "firms such as HTC, Coca-Cola and Starbucks have been using social media mechanisms to grow awareness of their brand and products and to build customer loyalty and retention". The report also indicates that for constructive results in customer commitment, initiatives are been put in place by several companies by leading the way with social media. With the surge in social networking sites, the importance of engaging and charming customers through social media are quite a few ways leading organizations have recognized and in thus, embraced it by increasing their vibrant presence in the enclosed environment.

Social networks disrupt and reflect many of the broader fluctuations we experience in society presently. Their speedy growth can be compared to economic growth in emerging markets. Social media disrupts how many can interact, how we interact and the spread of interactions.

The global rise of social media is an indication that there is vacuum in the way we currently connect. Organizations need to embrace this social form of communication in order to bridge the gap of connecting people and building relationships across boundaries of geography or discipline. The challenge for organizations is proper utilization of information garnered from their respective customers through interaction in social networking sites and translating it into a viable strategy for long-term success.

Without any doubt, social media is steadily on the rise. Advocates may even argue in extreme cases that social media are transforming our lives and our very natures. Organizations have started to recognize and embrace the importance of social media because of its constant global increase in user base and at the other end of the spectrum are those who worry that these changes mean that society is under pressure, young people will lose the ability to converse face to face, damage their social skills and lead to the disintegration of society. Social networks are continuously changing how people stay in touch, but certainly cannot replace the desire for face to face contact. According to a recent survey by Euromonitor, the challenge for businesses is how best to respond to online social networks. The most engaging organizations that have adopted social networks create strong emotional links and create an environment where business objectives of 'innovation diffusion' of ideas or new products and 'ROI' seem appropriate at best.

This chapter will provide an overview and adoption level of social media by consumers and innovative firms. Also, for this purpose of this study, explaining the consequence of social media with an overview of the industry, with a particular focus on Facebook.

## 1.6 Facebook

Social networking sites essentially help people interact efficiently with more of a focus on communication services while helping businesses leverage their assets. According to Daniel Garrett, US Health Information Technology leader, *"Social media is another source of business intelligence that provides information at the aggregate level, not only about what consumers 'like,' but what they need, how they behave and when their experiences demand an immediate response"*.

Best known amongst social networking sites is Palo Alto, California based Facebook, launched in 2004. The 500 million mark was ascertained in July 2010 by Facebook which doubled its user base within a year. According to PWC in its publication, "it is the most widely used social network globally". The initial purpose of Facebook was to simplify the sharing of photographs amongst friends within an elite network for

Harvard students. However, over time it has evolved into a platform for social networking by providing blogging facilities, real time chat forums, application development, and polling functionality. Facebook has now overtaken Google as the most visited site in the world and is a major platform for communicating with customers (Datamonitor, 2010).

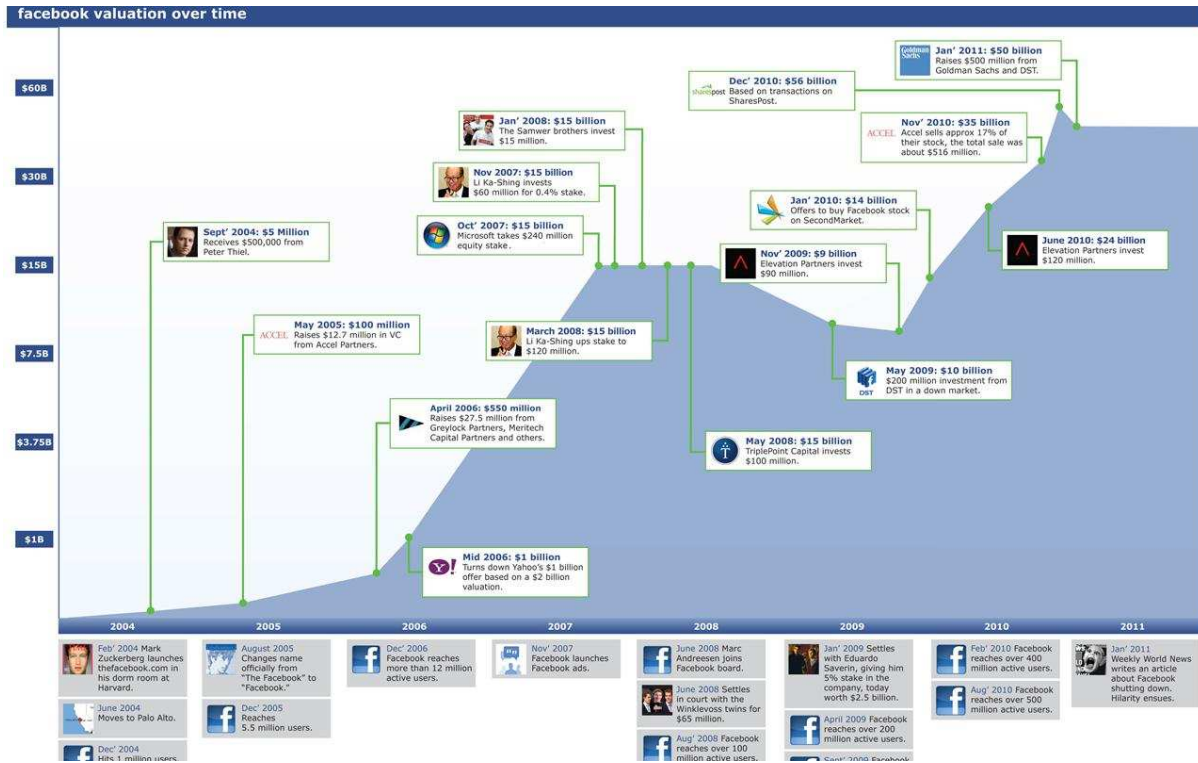
**Table 1: Facebook key metrics, Q1 2012**  
Source: Datamonitor, 2012

Number of users: 500m, 195m monthly updaters
Established: 2004
Ownership: Publicly Traded company
Revenues (2009): \$150m
Profitability status (2009): estimated \$10m loss, debts of \$3bn
Major markets: US, UK, Australasia, Western Europe
Growth markets: Western Europe, Central & Eastern Europe, Latin America
Monetization strategies: Advertising; Apps revenue share

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Facebook initially opened up to college students in September 2005 within the United States and eventually to people with an email address. It has emerged as the largest online social networking site in the world, with corporations and celebrities, and other organizations well represented, as well as 500 million individual users according to company's official user statistics. Facebook is briskly gaining global ubiquity, with a few national gaps in China, Japan, Korea and Russia with a valuation of \$100 billion. According the WSJ (2011), the Palo Alto, Calif.-based social network was valued at \$15 billion in October 2007 when Microsoft Corp. invested in the company. By this January 2011, Facebook commanded a \$50 billion price tag when Goldman Sachs Group Inc. led a \$1.5 billion funding round in the company. However, the company has marched on to a \$100 billion valuation after it went public in 2012.

Figure 9: Facebook Valuation Over Time  
 Source: TechCrunch (2011)



The business model of social networking sites is quite easy to copy with regards its low switching cost and extremely low barriers to entry which makes it a popular start up in the online industry. However, there several social networking sites competing with Facebook with in most cases with different business models.

According to comScore, audience reach (the proportion of all internet users) of social media websites fell to 96% in March 2012, from a high of 99.6% in November 2010. The decline is partly attributed to a fall in the proportion of internet users visiting blogs (such as Blogger and Wordpress which host user generated content) over the period, although the percentage of unique visitors to social networks has been level at 95% for the year to March 2012 (Mintel, 2012).



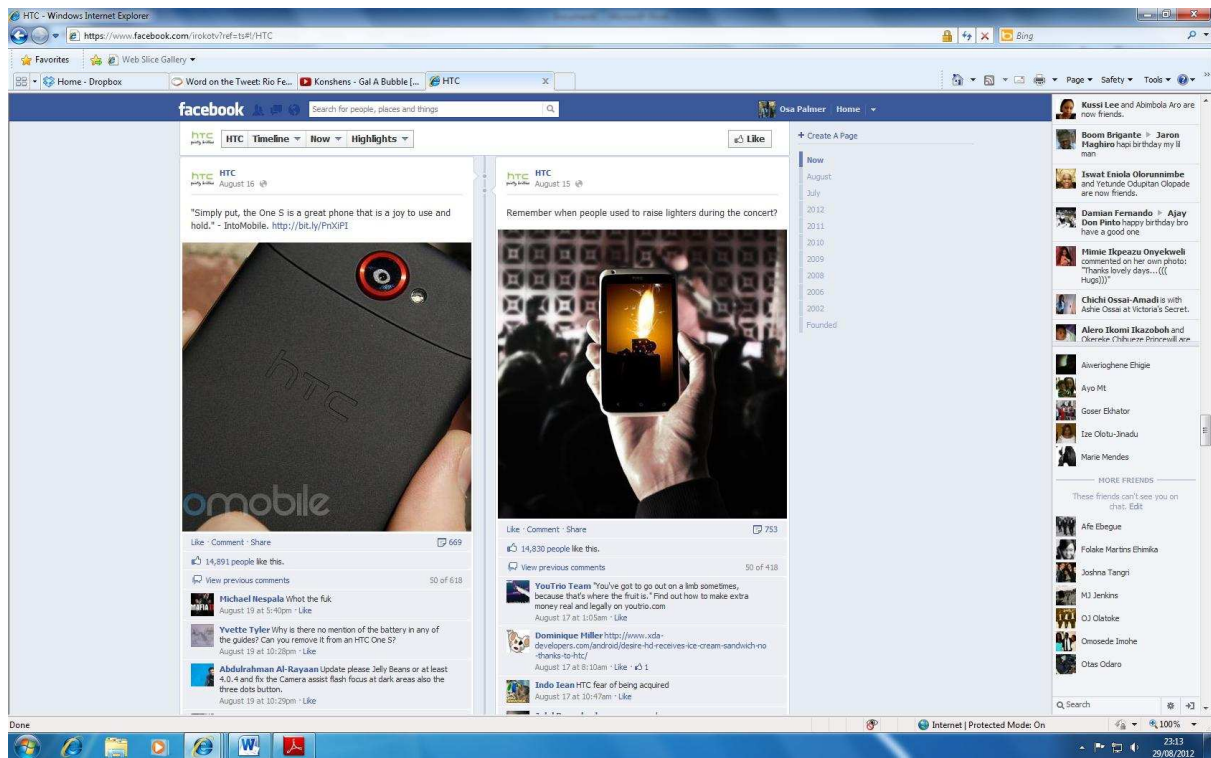
Figure 10: An example of a Facebook User Web Page diffusing Information  
Source: Facebook Website (2012)



Facebook's rapid progress as a conventional platform has been based upon its provision of access to innovative interface, as well as its sharing applications such as its integration of article sharing that enables users to comment and share ideas. It continues to use cutting edge sharing deployment, which enables and makes it easy for organizations to diffuse innovation accurate and effectively.

The factors analysed are considered to be relevant to the concept of social networking sites. Website characteristics will not be looked into in this research. Influencing factors from a consumer and organization viewpoint will be looked at in this study with relevance and relations to diffusion of innovation in social networking sites in particular.

Figure 11: An Example of How Organizations (HTC) Diffusing Innovation through Facebook  
Source: Facebook Website (2012)



## 1.7 Research Background and Objectives

This research is drawn from past studies on Diffusion of Innovation. Characteristics of innovation adoption and factors that influence diffusion of the innovation have been argued in the past. Two adoption models, Technology Acceptance Model and Diffusion of Innovation Theory in this study will be used to assess factors that are considered to be playing significant roles in users' behavioral intent to adopt innovative ideas or products.

More importantly, this study will explore important factors that influence users' of social networking sites behavioral attitude towards adoption of innovation and what variables are relevant to the factors chosen for the purpose of this research.

The research questions for this study are -

- What factors have an impact on adopters' behavioral intention to adopt innovation diffused on social networking sites?



- What key factors affects 'opinion leaders' within social networks in the process of innovation diffusion?
- At what stage of product innovation diffusion, do organizations notice collective response from consumers within social networking sites?

In conclusion, the research objective for this study is:

- To identify the factors influencing adopters' behavioral attitude to adopt innovation.
- To examine the key factors that triggers opinion leaders to diffuse innovation within social networks.

### **1.8 Summary**

With the groundwork for this research completely stated in the introduction, the literature review of this study will be explicitly explored in the next chapter to lay the groundwork for this research.

## **CHAPTER TWO Literature Review**

### **2.0 Introduction**

Examining the existing literature on diffusion of innovation is the aim of this chapter in order to understand adoption models and key factors to be pooled in this study. Recent analysis of social media has suggested that the digitalization of information has led to the rise of digital media thus erasing the boundaries that traditional media and online technologies (Boczkowski and Ferris, 2005). This thesis addresses the connection of two underexplored themes of product innovation within social media in studies of digital media; the role of innovative organizations and the processes that shape consumer adoption towards diffusion of innovation. Previous researches have been conducted on the diffusion of innovation and consumer adoption models. Material used for the foundation of this study will be garnered from existing literature on diffusion of innovation. An outline of theoretical models based on diffusion of innovation theories is the genesis of this chapter. As well as the hypothesis and conceptual model to be researched in this study, along with a summary of the literature review will be harnessed in this chapter.

As earlier indicated in the introduction of this study, social media has become integral for organizations with regards Diffusion of Innovation. However, innovative firms tend to focus on product development in terms of matching rival products without much emphasis on how consumers will perceive the risk associated to adopting the new product or idea. Recent research indicates that, consumers that are satisfied with existing product or idea consider it as a risk in adopting a new idea or product. Technology Acceptance Model and Diffusion of Innovation will lay the foundational model in this research that will drive the theoretical models and factors that will be used in this analysis.

### **2.1 Theoretical Models and Framework**

From a consumers' perspective, social networking sites will be considered and studied as a singularity of diffusion under innovation. Research on innovation diffusion has thus evolved from the conventional adoption categorization according Valente (1996). Most of the theories and models on diffusion model in which

individual consumers adopt an innovation are based on the idea that if an individual risk-adjusted utility exceeds a reservation utility threshold. The threshold in question may be a function of innovativeness and existing product holdings (Valente, 1996).

For the purpose of this research, the Diffusion of Innovation Theory (Rodgers, 1995; Valente, 1998) will be closely looked at for understanding the factors of innovation adoption on social networking sites. Also, factors of Technology Acceptance Model (Davis, 1989) will be considered.

### 2.1.1 Technology Acceptance Model

Technology Acceptance Model was formulated from the Theory of Reasoned Action (Fishbein and Ajzen, 1975) which specifies the relationships between beliefs, attitudes, and behaviours. In their theoretical model, Fishbein and Ajzen suggested that an individual's overt behavior is determined by the individual's intention to perform that behaviour (Kautz & Pries-Heje, 1996). They however elaborated that, behavior intention in turn is a function of two factors factors; one's attitude towards performing the behaviour itself and one's subjective norm. Subjective norm is twisted from one's motivation to comply with what one believes others expect one to do.

The first original model Technology Acceptance Model as proposed by Davis (1985), where he proposed that system use is a response that can be explained or predicted by user motivation, which, in turn, is directly influenced by an external stimulus consisting of the actual system's features and capabilities as depicted in Figure 12.

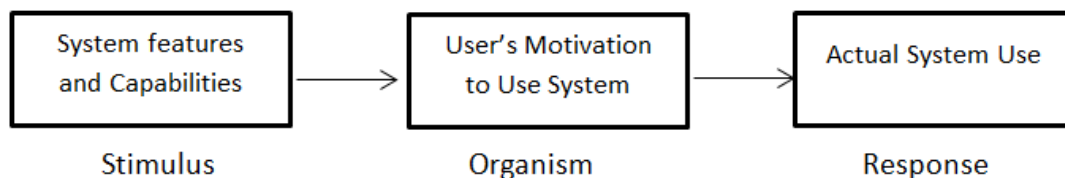


Figure 12: Conceptual Model for Technology Acceptance (Davis, 1985)

Davis (1986) further refined his conceptual model where he suggested that user’s motivation can be explained by three factors: *Perceived Ease of Use, Perceived Usefulness, and Attitude Towards Using the system*. The model suggested that the attitude of a user toward a system was a major determinant whether the user will actually use or reject the system.

During later experimentation stages, the model to include other variables and modification of the relationships as formulated by Davis were later refined by Venkatesh and Davis (1996). In their version, two variables; attitude and intention to use, in a single construct as a number of studies (Mathieson, 1991; Hu et al., 1999) indicated that “attitude to use” relates to “intention to use” as represented in Figure 13.

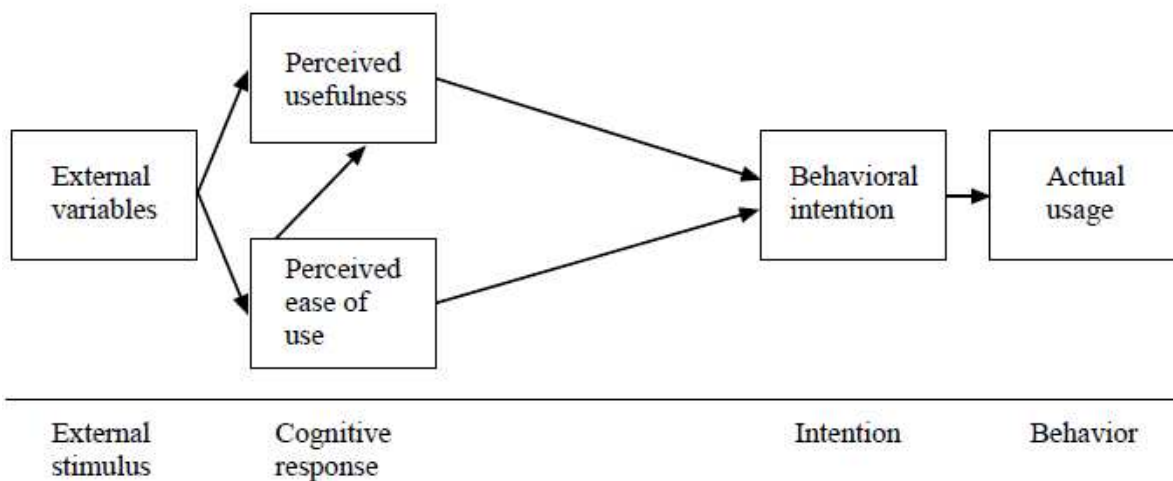


Figure 13: Revised version of Model for Technology Acceptance (Venkatesh & Davis, 1995)

With the growing importance of the Technology Acceptance Model, the model has been studied extensively by researchers. The model was further criticized for meanness, that even though it was non-specific to acceptance decision-making by design but extensively by research conducted on the study (Venkatesh, 2000; Hu et al., 2003). With support to perceived ease of use, some other constructs from related theories (marketing and behavior) were an inclusion in the model of technology

acceptance in order to extend the argument of decision making by design were attempted by others (Taylor and Todd, 1995; Venkatesh, 2000).

Without any doubt, Technology Acceptance Model is a well-researched model for predicting and explaining technology usage (Gong & Xu, 2004; Bohara, 2011). The model's ability to predict consumer adoption of innovation has received immense backing through extensions, application and replications. The only theoretical drawback for the model is its limited variables where it is examined that the intention towards adopting innovation by consumers' is by far alleged to be the outcome of social and personal factors and points to the fact that Technology Acceptance Model is not associated to it.

Further research have been carried on Technology Acceptance Model in order to test its possible weakness and limitations by comparing it with other models such as the Theory of Planned Behavior and the Theory of Reasoned Action (Chuttur, 2009) as well as extending the model to include other variables such as subjective norm, extrinsic and playfulness. Vankatesh & Davis (2000) in its revised Technology Acceptance Model found that cognitive and subjective norm are instrumental processes are all determinants in acceptance of new technologies that aligns it with the Theory of Reasoned Action. In conclusion, an explanation of the factors of technology acceptance that explains user behaviour with regards end-user information technologies and user populations have been provided by the Technology Acceptance Model (Davis et al, 1989; Lee et al., 2011).

### **2.1.2 Diffusion of Innovation Theory**

The first issue discussed in the literature review is diffusion of Innovation. The diffusion of innovation is "the aggregate of the individual adoption process whereby an individual passes from knowledge, to formation of an attitude, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of the decision" (Rogers, 1983). Start-up and established firms are tilting to social networking sites in order to disseminate information, gather ideas and diffuse innovation more effectively with consumers, thus bringing the Diffusion of Innovation Theory to proper scrutiny.

The rate and sequence at which innovations diffuse are concepts in which Theories of innovation diffusion were primarily based and exclusively focused upon. Bandwagon processes were identified in some of these theories which includes; a positive feedback loop in which increases in the number of adopters create stronger bandwagon pressures, and stronger bandwagon pressures, in turn, cause increases in the number of adopters (Abrahamson and Rosenkopf, 1997). Abrahamson and Rosenkopf (1997) proposed that “both the number of network links, as well as small, seemingly insignificant peculiarities of their structures, can have very large effects on the extent of an innovation’s diffusion among members of a social network”.

Collective action and the diffusion of innovation by Valente (1996) were threshold models that have been assumed as one of many explanations for possible cause of success or failure. Valente (1996) his research indicated that “instead of solely relying on the system-level analysis suggested by previous researchers, that network threshold can be used (1) to vary the definition of behavioural contagion, (2) to predict the pattern of diffusion of innovations, and (3) to identify opinion leaders and followers”. Furthermore this assumption, Ryan and Gross (1943) suggested that the adopter categories of social network threshold model of the diffusion of innovations should be based on the following factors; early adopters, early majority, late majority and laggards. Established on previous research on threshold model of diffusing innovation, the patterns of temporal diffusion do not vary across centuries, cultures, and artefacts: slow growth at the beginning, followed by accelerating and then decelerating growth, culminating in saturation or a full niche (Grubler, 1996).

The process whereby a certain percentage of a social system initially adopts an innovation can be regarded as the process of diffusion of innovation. And then over time as the innovation emanates, the innovation spreads from its original spot of invention till it gets to the end users or adopters (Robertson, 1967; Valente, 1993).

According to Granovetter (1978), research on collective behavior has over the years concentrated on threshold models critical mass models and opinion leaders models (Marwell et al., 1988; Oliver et al., 1985; Valente and Davis, 1999), and attempts by researchers have been made to apply these models to the diffusion of new products

and ideas (Livingston and Brake, 2009; Ashton, 2011). A collective behaviour is the proportion segment of adopters in a system prior proceeding to an individual's adoption (Valente, 1996). According to Valente, "the only difficulty with applying the concept of collective behaviour threshold to adoption behaviour is that individuals may not accurately monitor the adoption behaviour of everyone else in the system". On critical mass models, Oliver et al (1985) argued that critical mass plays very different roles in producing different kinds of collective and thus deserves a central place in collective action theory. The investigation of this study will use the threshold concept to provide innovation adoption on social networking sites.

According to Mangold and Faulds (2009), social media can be argued to comprise of a wide range word of mouth and online platforms which could be company sponsored forums, service rating websites or blogs. Under this categorization, social networking websites and blogs are inclusive. Communication, rapport or supports among a social circle within a social system are factors that can be used to analyse the pattern of a social network (Johnson, 1986; Valente, 1996). The network approach to diffusion of innovation is one of many studies that was done to foresee the pattern of innovation as well as determining the critical mass that relates to collective behavior. And lastly, to understand opinion leaders and followers in order to bring about clarity in the two step flow hypothesis (Valente, 1996). "Opinion leaders were defined as those individuals with the highest number of nominations, and were theorized to be a significant influence on the rate of adoption" (Valente, 1996). Opinion leaders tend to play a vital role in scenarios where social contacts and social interaction were important influences on the adoption of new behaviors.

### **2.1.3 Technology Acceptance Theory and Diffusion of Innovation Theory**

Technology Acceptance Model and Diffusion of Innovation Theory are alike in terms of constructs and sometimes complement each other in the study of adoption of Innovation (Lee et al., 2011). Perceived ease of use, usefulness and intention to use are innovative characteristics that need to be taken into consideration when comparing both theories. Lee et al (2011) suggested that "with appropriate modifications, both theories could successfully be generalized to acceptance within

an organizational context by adding compatibility, complexity, relative advantage, and the ability to try and observe as additional research constructs to increase the credibility and effectiveness of the study”.

In retrospect to Lee et al. (2011) suggestion, earlier studies by Carter & Belanger (2005) have indicated that Technology Acceptance Model and Diffusion of Innovation Theory exhibits a certain degree of overlap when applied to understand innovation adoption and consumer’s attitude.

Without further doubt, both Technology Acceptance Model and Diffusion of Innovation Theory are both important because they share similar characteristics and factors that affect technology and innovation.

#### **2.1.4 Innovation Adoption**

Tornatzky & Klein (1982) explain that innovation characteristics research describes the relationship between the attributes or characteristics of an innovation and the adoption or implementation of that innovation. Where they further indicated in their study that compatibility, relative advantage, and complexity are innovation characteristics are the most consistent relationships to innovation adoption.

Individuals within a social system adopt new products and ideas at different times and can be categorized consecutively according to the relative order in which they adopt. According to Rodgers (1983), adopter groups are identified as innovators, early adopters, early majority, late majority and laggards or non-adopters.

Adopter groups can be described by their peculiar characteristics and exposure to communications. Therefore, innovative firms should develop specific strategies to target each consumer category separately based on their characteristics. (Vrechopoulos et al., 2001). For instance, innovators are considered as those adopters who first adopt the new innovative idea within their social circle. They tend to be few in number and considered to be non-social. With regards influencing others to adopt the innovative idea, they serve a limited role.



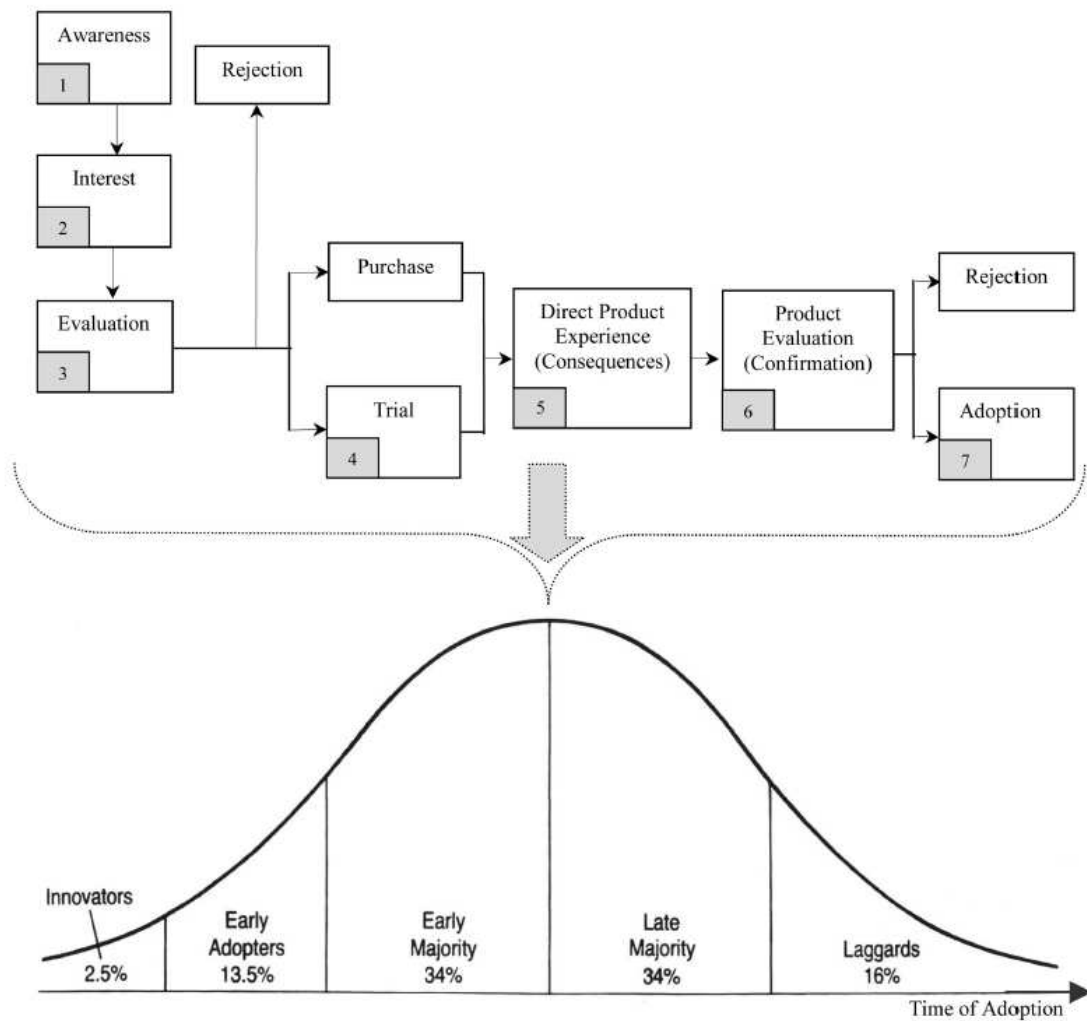


Figure 14: The innovation adoption and diffusion of innovation processes  
 Source: Vrechopoulos, Siomkos, and Doukidis (2001)

The early adopters are considered to be more socially integrated in their social network than innovators as they are often considered to be opinion leaders. Vrechopoulos et al., (2001) described them as “typically younger, more educated, belong to a higher social class, and read much more specialized magazines about new products and innovations than the average consumer”.

The early majority group are considered to be above average economically and they imitate the early adopters. Early majority rely on mass communications for their source of information and are considered to think more than others before they decide to adopt an innovation which implies that they rely severely on early adopters. The late majority are considered to imitate the early majority as well as

others in the late majority because they are wary of new ideas. But they eventually adopt the idea after they sense a strong social pressure within their social circle (Rodgers, 1983).

And lastly, laggards (non-adopters) tend to be older within this spectrum. They decide to adoption the idea or product when the product or idea is most likely close to extinction or it close to substitution with other innovative idea or product.

## **2.2 Factors Influencing Adoption of Innovation on Social Networking Sites**

Based on the literature represented thus far, factors that necessitate adoption of innovation within social networking sites seem appropriate to elaborate with regards the utility of each variance. For the purpose of this study, various factors have been considered to influence the adoption of innovation.

Considering the fact that they are many factors that could potentially influence the adoption of innovation on social networking sites, but only factors that have direct effect on consumer's behaviour will be looked into for the purpose of this study.

### **2.2.1 Demographic Profile**

Innovation adoption and behavior are believed to be associated with demographics (Chan-Olmsted & Chang, 2006; Rhee & Kim, 2006), as adopters of new innovation are inclined to be better educated, younger and more upscale than non-adopters. Studies on innovation adoption also supported this argument by stating that younger people are inclined to be more thrill-seeking when it comes to adoption new innovative ideas or products (Rodgers, 1995; Rhee & Kim, 2006; Atkin & LaRose, 1994). Demographics have been believed to play important roles in the adoption of innovative idea or product. For instance, studies on personal computer indicated that younger and better educated adopted the new wave in technology more than others, and most they were more affluent (Lin, 1998; Rhee & Kim, 2006). The empirical findings basically support Rodgers' (1995) findings that socio economic categorization about early adopters which stated that they have a higher income than non-adopters and in some cases better educated.

In addition to this study, Chan-Olmsted & Chang (2006) supported by confirming that early use of innovation with regards demographic variables have a clear existence of gender gap. Lin (1998) supported the argument with his study of communication technology adoption that age was negatively related to adoption. More studies on early adopters indicated a constructive connection between income or in some cases, ethnicity and adoption (Lin, 1998; Atkin & LaRose, 1994).

As for demographic elements affecting the adoption of innovation and online technology, the Mintel Consumer Research (2012) found that “those aged 16-24 are less likely than older consumers to partake in many types of online transactions (auction sites and booking holidays) other than downloading of music and film despite their higher levels of browsing”. Age and urbanicity clearly do have effect on familiarity with innovation adoption on social networking sites based on the Mintel consumer research.

### **2.2.2 Personality Traits**

Literature on personality traits have been studied from different perspectives. Personality in this context discusses the affective structures alongside rational sustained by persons to assist alterations to people, situations and events (Chan-Olmsted & Chang, 2006; Gough, 1976). Many variables of personality traits as stipulated by Ostlund (1974) for predicting the adoption of innovation have appeared literature of innovation diffusion as predictors of innovativeness (Rogers and Shoemaker, 1971).

Rogers (1995) in his Diffusion of Innovation Theory defined innovativeness as ‘the degree to which an individual or other unit of adoption is relatively earlier in adopting an innovation than other members of a social system’. In addition, Rogers (1995) in regarded adopters level of innovativeness into five different groups which include innovators, early adopters, early majority, late majority and laggards as earlier stated in this literature.

Several theories on innovativeness have been conceptualized differently. Midgley and Dowling (1978) defined the same concept with regards innovativeness as ‘the

degree to which an individual is receptive to new ideas and makes innovation decisions independently of the communicated experience of others'. Supporting Midgley and Dowling's (1978) theory, Flavell (1977) gave empirical evidence to elaborate the theoretical peculiarity between 'actualized innovativeness' and 'inherent innovativeness'. Chan-Olmsted & Chang (2006) concluded that these two separate theoretical factors can be reasoned to clarify why a strong need for innovativeness might not interpret the immediate adoption action.

Drawing upon the distinction, Agarwal and Prasad (1998) argued that individuals develop beliefs about new technologies by synthesizing information from a variety of media (Lu et al., 2005). Agarwal and Prasad (1998) tendered the belief that factors related to the adopter are related to the adopter's cognitive interpretations with regards information technology. In addition, 'personal innovativeness' in their study was described as the indicating risk taking inclination that exist not in everyone but in certain individuals. This influential personal trait variable in their research was named Personal Innovativeness in Information Technology (PIIT) with regards innovation adoption behavior. Lu et al. (2005) defined PIIT 'as the willingness of an individual to try out any new information technology'.

In summary, for adoption of an idea or new product innovation through social networking sites, most people are considered not to have any experience or much knowledge to assist them forming flawless observation on beliefs (Lu et al., 2005).

### **2.2.3 Social Influence**

Social influence in this research refers to alleged forces within social networks to initiate a certain behavioral decision and in some cases may not make initiate. Studies on social network have been used in past studies to understand and explain a variety of organizational behavioral occurrences such as job-related rewards (Granovetter, 1974; Burt, 1980). However, past studies on social network interpret networks as proper social networks in work and organizational settings.

Social influences are considered to be a pivotal element in innovation diffusion literature (Laudon, 1985; Triandis, 1971). Opinion leaders play important roles on

what decision a potential adopter chooses to take because individuals adopt their behaviors, attitudes and beliefs to their social context (Rogers, 1995; Lu et al., 2005; Salancik and Pfeffer, 1978). For example, innovation creates uncertainty about its expected consequences for potential adopters (Burkhardt and Brass, 1990; Katz and Tushman, 1979; Katz, 1980).

Studies on Technology Acceptance Model and Theory of Reasoned Action have incorporated this construct to explain consumer's innovation adoption threshold and found some empirical support to regard social influences to be equivalent to subjective norm in their theories (Taylor & Todd, 1995; Lu et al., 2005; Venkatesh & Davis, 2000). Taylor & Todd (1995) "defined this construct as other people's opinions, superior influences, and peer influences in their studies". Furthermore to their study, Taylor & Todd (1995) highlighted that in the initial phase of innovation implementation, behavioural intent has far less effect on social influence.

Users of social networking sites are believed to belong to various social circles. Without doubt, many people consider their social image as critical. For example, many adopters of social networking sites like Facebook may regard these platforms as a way to display their social status, and adopt these technological innovations to elaborate their importance (Sarker and Wells, 2003). Facebook's main traffic emanates from word-of-mouth and various social circles.

Furthermore to the study on social influences, it may also help to shape an individual's estimation of his or her confidence in or ability to use a system well (Lu et al., 2005). In line with the psychological categorization, an adopter's perceived ease of use before any direct involvement can relatively be associated with social influences.

#### **2.2.4 Media Use**

Studies on adoption of innovations habitually examine the link of adoption to media use. Studies of videotext adoption which is a precursor to day's online services indicate that the level of media use activity (magazines, newspapers, radio, television and video camera) appear to be fundamentally irrelevant to the potential adoption of

videotext (Lin, 2002) while some earlier studies found that cable television subscribers spend more time with other media (Chan-Olmsted & Chang, 2006; Rothe et al., 1983).

Furthermore, studies have reported that television viewing time was reduced by a fraction by internet users (Crispell, 1997). For example, Butler (2000) validated these findings by suggesting that internet users are inclined to adapt to the habit reading more newspapers and books than non-users.

Online media content are perceived to efficiently complement traditional media use. Lin (1994) defined 'functional supplementation' mechanism as "an extension of the media substitution construct, which suggests that a newer and more functionally efficient medium can displace an older medium, if the necessary economic and social conditions for such displacement are met". For example, cassette players have been displaced by MP3 players. The route of extinction is rarely the case for media technologies, bringing up to date their content offerings are ways they can endure extinction (Lin, 2002).

Social networking sites are changing the rules of advertising by targeting specific customers by observing behaviour and social circle of a particular consumer which is in lieu with online services' and capability. Online media content are considered to have the potential to complement traditional media content but not displacing it by supplying wide-ranging content choices.

Furthermore to this study, the relevance of Media Use will be researched to examine the link for innovation adoption towards social networking sites.

### **2.3 Research Model Hypothesis**

Summary of findings from existing literature based on factors that are important in adoption of innovation through social networking sites that are deemed relevant to this study were attempted

This study uses the Diffusion of Innovation Theory as the foundation model to analyse the innovation adoption behaviour of consumer's on social networking sites.

However, findings proved that neither Roger's (1995) Diffusion of Innovation Theory nor Davis's (1985) Technology Acceptance Model are endowed enough in demonstrating and assessing factors of consumer's adoption intentions towards social networking sites. Therefore, only constructs that are related to user innovation adoption through social networking sites based several studies and articles were examined.

Furthermore, due to the nature of consumer's consumption of content on social networking sites, the 'adoption intent' construct, as proposed in Diffusion of Innovation Theory, is the dependent variable of this study based on its relation to behavioral adoption intention of consumer's on social networking sites.

Five key factors of innovation diffusion towards the adoption of innovation on social networking sites are what this study will assess. Factors that were considered include Demographic profile, Social Influence, Media Use and Personal Traits.

The key factors that are considered relevant to consumer's 'Adoption Intention' on social networking sites based on the objective of this study include;

- i. The relationship between demographic profile and adoption intention on social networking sites will be examined.
- ii. The relationship between social influence and user's adoption intention on social networking sites will be examined.
- iii. The relationship between personal traits and adoption user's intention on social networking sites will also be examined.
- iv. And lastly, the relationship between media use and user's adoption intention on social networking sites will be examined.

The hypothesis designed for this study includes;

- H1. Demographic profile has a partial effect on user's adoption intention on social networking sites.
- H2. Personal traits have a positive effect on user's adoption intention on social networking sites.

- H3. Social Influence has a positive effect on user's adoption intention on social networking sites.
- H4. Media Use has a negative effect on user's adoption intention on social networking sites.

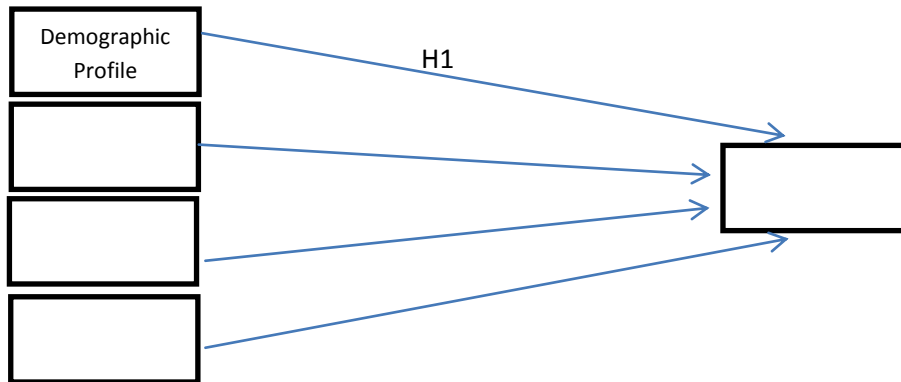


Figure 15: A Conceptual Framework for Consumer's Adoption Intention on Social Networking Sites

## 2.4 Summary of Literature Review

The literature review has provided groundwork into behavioral factors related to social networking sites. Four constructs in particular have been focused on based on the theoretical framework of Technology Acceptance Model and Diffusion of Innovation Theory. These four factors, Demographic profile, Social Influence, Personal traits and Media Use will be melted into a questionnaire for further discussion in the next chapter of this present study.



## **CHAPTER THREE - Research Methodology**

### **3.0 Introduction**

This chapter comprises the research methodology and theoretical framework for this study. Two data collection methods were employed to facilitate the hypotheses outlined in the previous chapter as well as the conceptualized model.

### **3.1 Primary Data**

Qualitative and quantitative approaches are methods used to achieve initial data in order to accomplish the research process for this study. Situations where data are harnessed through a large group to make concrete judgement using an established and well defined tool can be referred to as qualitative approach while harnessing of information through an unstructured manner within an area of research can be referred to as quantitative approach. The main essence of qualitative research is to validate behaviors and market factors. Furthermore to validating behaviors and market factors, to as well test various types of hypotheses.

#### **3.1.1 Telephone Interview**

Qualitative measurement is judged by a wide variety of methods. Since research on Innovation Adoption on social networking sites are not relatively available, an unstructured interview with founders of three start-ups (Gbedu.fm, Gpay Africa and Onepage) was conducted as the first step of this research. Based on gathering much primary data as much as possible, the interview was conducted in order to explore possible consumer behavioral factors for this research.

A 55 minutes unstructured telephone interview was conducted with the Founder & CEO of Gbedu.fm, Osita Nwoye. Gbedu.fm is a music sharing and distribution platform for Afro music. Mr. Nwoye also happens to be a co-founder of Onepage, a start-up that attempted a fresh approach to exchanging business cards virtually by creating unique QR Coded Virtual business cards. Mr. Nwoye founded Gbedu.fm in 2011 and has remained at the helm since inception (See Appendix 1 for detailed write up of interview). Another unstructured telephone interview was conducted

with the Founder & CEO of Gpay Africa, Mr. Edmund Olotu. Gpay is a start-up technology front end processing company in Nigeria. (Appendix 2 depicts the write up of the interview).

The interview displayed the potential factors that affect user's decision to adoption innovation that are diffused on social networking sites. The interview brought about clarity to the objective question raised in this study.

### 3.1.2 Questionnaire Survey

The quantitative approach was also utilised to garner primary data for the basis of this study. Survey monkey ([www.surveymonkey.com](http://www.surveymonkey.com)), a web-based survey site which makes available necessary apparatuses for possible questionnaire survey was customized for the basis of this research with regards assisting in data collection. Since Facebook has the highest user base in the world, I deemed it fit to be the best because of speed, ease of dissemination and appropriate medium to engage users by sending a detailed messages explaining the essence of this survey together with a web link <http://www.surveymonkey.com/s/YV27FRD> was sent to friends within the author's social network on Facebook. The target for the purpose of this research was to collect at least 100 completed surveys but only 75 were successfully completed.

However, 13 were incomplete from the returned responses. These 13 were eliminated due to non-completion of the online survey conducted and was considered to be vital for analysing data. The online based survey was a fast and easy way to disseminate the information needed for this survey.

### 3.1.3 Questionnaire Structure

Ensuring that data captured is essential for this study was the primary objective of this research. The questionnaire and email sent to respondents are attached in the Appendix.

The primary objective of this research was to identify the association between variance towards user's innovation adoption intent to adopt innovation diffused through social networking sites. The five-point likert scale was judiciously used to

give sufficient ease by survey participants to the manner in which the questionnaire is structured. Survey participants were requested to reveal their views on the proposed likert scale where 1 represented 'strongly disagree' and 5 to strongly agree.

The questionnaire designed for this study was structured along five sections, of which the first and second sections were based on the general background of the intended participants.

### **3.2 Operational Definitions**

*Demographics* - The questionnaire captures data related to demographics such as gender, age, education, income level (starting from no income to \$2,001 and over) and occupation. Demographic profiling which is supported in this study's literature review was solicited to gain an insight into relationship between consumer demographics and consumers' adoption intent.

*Personal Traits* - Respondents were asked to indicate their dependence on internet by asking about their awareness level of social networking sites as well as how often they use the Internet.

*Social Influences* – Explanation regarding categories of adopting innovation on social networking sites were provided to respondents. They were asked to indicate how comfortable they were with adopting new innovative products or ideas diffused through social networking sites and how significant it was establishing their adoption level based on recommendation on friends or family.

*Media Use* – The media usage pattern of respondents was measured by engaging them on how they receive innovation about new products or ideas as well as their dependence on friends or family within their social network for information.

Statements related to personal traits, media use and social influences are exactly the same in the questionnaire to some extent.

### **3.4 Summary**

The research methodology of this study lays the groundwork for the research result outlined in the data analysis and findings of this study.

## **CHAPTER Four - Data Analysis and Findings**

### **4.0 Introduction**

This chapter outlines the examination of data retrieved from respondents based on the online survey conducted. As indicated in the research methodology of this study, a total of 75 online surveys were successfully completed. Statistical Package for Social Sciences (SPSS) version 20.0 was used for interpretation of findings based the data retrieved from respondents.

### **4.1 Demographic Profile of Respondents**

Table 2 represents the demographic profile, awareness of social networking sites and internet usage pattern of the 75 respondents. The gender distribution of respondents indicates 42 males and 33 females. Majority of the respondents are in the age category of 30-39 (38.7%) and 40-49 (36%).

Based on the findings from respondents, they demonstrated to have a high level of education with 58.7% of them having a degree and next in line were respondents with postgraduate degree with 21.3%. Furthermore to the demographic profile conducted, it indicated that majority of the respondents are professionals (42.7%).

The income level indicated that respondents were drawing monthly income on an even distributed spectrum used for the survey with \$201 - \$1,000 (29.3%), \$1,001 - \$2,000 (19%) and \$2,001 and \$3,000 (37.3%). Usage of internet indicated that respondents regularly use the internet with the data garnered stating that 64% of the respondents used the internet regularly and 29.3% of indicating that they used it moderately.

With regards the awareness level of social networking sites, research indicated that 57.3% of the respondents were very active on social networking sites and 26.7% indicating that they signed up to social networking sites were not particularly active in terms of usage. This implies that awareness on social networking sites is very high amongst respondents. With reference to demographics, the research delivers provision for the upscale adopter profile characteristics of past research on diffusion.

**Table 2:** Factor analysis for demographic profiles, internet usage patterns and level of experience with social networking sites

Demography	Variables	Frequency	Percentage
Total		75	100%
Gender	Male	42	56.0
	Female	33	44.0
Age	21-29	8	10.7
	30-39	29	38.7
	40-49	27	36.0
	50-59	7	9.3
	60 and above	4	5.3
Education	Primary school	1	1.3
	Secondary school	5	6.7
	Diploma	9	12.0
	Degree	44	58.7
	Postgraduate degree	16	21.3
Occupation	Student	11	14.7
	Professional	32	42.7
	Business owner	20	26.7
	Retiree	5	6.7
	Others	7	9.3
Income	Below \$200	6	8.0
	\$201 - \$1,000	20	26.7
	\$1,001 - \$2,000	19	25.3
	\$2,001 and \$3,000	22	29.3
	\$3,001 and above	8	10.7
Internet usage	Regular	31	28.0
	Moderately	23	30.7
	Infrequently	21	28.0
Usage of SNS*	Aware but not signed	12	16.0
	Signed up but not active	20	26.7
	Signed up and very active	43	57.3

\*SNS – Social Networking Sites

## 4.2 Descriptive Analysis

The descriptive statistics of the variables under study in this research is discussed in this chapter. The mean and standard deviation of every segment of the questionnaire from respondents was calculated. Using a specific variable for the research based on the average response to a specific question the mean value was calculated. The calculated summary of the mean and standard deviation of all variables is collectively represented in Table 3. In the representation depicted in the table below, the

standard deviation value was used to determine the difference in responses between the respondents.

**Table 3:** Descriptive statistics of statements of constructs

<b>Variables</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Demographics</b>		
Education level	5.04	1.005
Income level	3.08	1.147
Occupation	2.53	1.119
Age	2.60	0.986
<b>Personal Traits</b>		
Internet usage	2.72	1.673
Awareness of SNS	3.58	0.755
<b>Media Use</b>		
Radio listening	2.18	0.800
Television viewing	1.91	0.756
Internet usage	1.87	0.827
Newspaper reading	1.97	0.821
Word-of-mouth dependence	2.05	0.820
<b>Social Influence</b>		
Economic social image	3.0	1.174
Technical image	3.45	1.094
Sociable image	3.61	1.149

### 4.3 Reliability Analysis

Reliability analysis based on Likert statement, an in-depth analysis of data collected from respondents was conducted. According to Mlahotra (2007), there are generally three ways to analyse reliability, (a) test-retest (b) internal consistency, and (c) alternative-forms reliability. Furthermore to Mlahotra (2007) statement, he indicated that to assess the reliability of the survey, the amount of total variations in a scale can be assessed by assessing the connection among the numbers required from different administration of scale. Cronbach alpha was used to measure internal consistency in cases with attitude or intention instruments that use the Likert scale. Results for reliability are presented in Table 4.

**Table 4:** Descriptive statistics of statements of constructs

<b>Construct</b>	<b>No. of items</b>	<b>Cronbach Alpha Value</b>
Demographics profile	4	0.373
Social Influence	3	0.022
Personal Traits	2	0.173
Media Use	3	0.052

#### 4.4 Regression Analysis

Based on the internal consistency generated through reliability statistics of the constructs of this study, a regression analysis was conducted. Behavioral intention to adopt innovation was examined to determine the predictors of innovation adoption on social networking sites. Before conducting the multiple regression procedure, a variable reduction step as suggested by Chan-Olmsted & Chang (2006) in their study was conducted to reduce the number of predictor variables because of the large number of predictor variables proposed in the study. The under listed innovation adoption variables used in this study were found not to be significantly to behavioral adoption intent new product or idea (innovation) on social networking sites.

- Personal Traits
- Media Use

The independent variables of the study are Demographic factors, factors affecting Social Influence, Personal traits factors and Media Use factors. The results of regression analysis are presented in Tables 5, 6, 7 and 8.

Table 5 shows the results of Demographic factors which include Age, Income level, Education level and Occupation of respondents. From the data ( $R^2= 0.053$ ; Adj.  $R^2= -0.001$ ;  $F=0.985$ ; Sig.  $F=0.000$ ), it does partially contribute and predict the variation in innovation adoption. This results does not support the hypothesis H1 (Demographic profile) of innovation adoption on social networking sites.

**Table 5:** Characteristics for Demographic Profile

Variables	Beta	t-value	Significance
Age	0.190	1.252	0.215
Income	-0.079	-0.603	0.549
Education	-0.130	-0.866	0.389
Occupation	-0.189	-1.397	0.167

( $R^2= 0.053$ ; Adj.  $R^2= -0.001$ ;  $F=0.985$ ; Sig.  $F=0.000$ )



Furthermore to the data derived, Table 6 illustrates those factors of Social influence such as Economic social image, technical image and Sociable image of respondents. The results from the data ( $R^2= 0.200$ ; Adj.  $R^2= -0.041$ ;  $F=0.988$ ; Sig.  $F=0.000$ ) does not contribute and predict the variation in innovation adoption. This results also does not support the hypothesis H3 (Social Influence) of innovation adoption on social networking sites.

**Table 6: Characteristics for Social Influence**

Variables	Beta	t-value	Significance
Economic social image	-0.153	-1.242	0.218
Technical image	-0.153	-0.911	0.218
Sociable image	-0.092	0.126	0.469

( $R^2= 0.200$ ; Adj.  $R^2= -0.041$ ;  $F=0.988$ ; Sig.  $F=0.000$ )

The results in Table 7 demonstrate that innovation adoption characteristics on social networking sites like Internet usage level and awareness on social networking sites does not contribute significantly ( $R^2= 0.053$ ; Adj.  $R^2= -0.001$ ;  $F=0.985$ ; Sig.  $F=0.004$ ) and anticipate the variation in adoption of innovation on social networking sites. This results also does not support the hypothesis H2 (Personal traits) of innovation adoption on social networking sites.

**Table 7: Characteristics for Personal Traits**

Variables	Beta	t-value	Significance
Awareness of SNS	0.140	0.803	0.424
Internet Usage	0.188	0.980	0.33

( $R^2= 0.053$ ; Adj.  $R^2= -0.001$ ;  $F=0.985$ ; Sig.  $F=0.004$ )

Lastly, the results in Table 8 demonstrate that factors of innovation adoption characteristics of Media use that encompasses sources of innovative products or idea which include Word-of-mouth, Radio, Television, Newspaper and Internet does not contribute significantly ( $R^2= 0.020$ ; Adj.  $R^2= -0.007$ ;  $F=0.738$ ; Sig.  $F=0.004$ ) and anticipate the variation in adoption of innovation on social networking sites. This results also does support the hypothesis H4 (Media Use) of innovation adoption on social networking sites.

**Table 8:** Characteristics for Media Use

Variables	Beta	t-value	Significance
Radio	-0.200	-1.036	0.304
Internet	0.069	0.386	0.701
Newspaper	0.031	0.164	0.871
Television	-0.053	-0.27	0.788
Word of Mouth	0.299	1.588	0.117

( $R^2= 0.020$ ; Adj.  $R^2= -0.007$ ;  $F=0.738$ ; Sig.  $F=0.004$ )

In terms of multiple regressions that were carried out to find out the predictors of innovation adoption on social networking sites, results are presented in Table 9.

**Table 9:** Multiple regression analysis predicting Innovation adoption on social networking sites

Hypotheses	Independent Variable	Dependent Variable	Regression Analysis	Significance	Relationship	Support
1	Demographic profile	Innovation adoption level	0.053	0.000	Partial relationship	Yes
2	Social Influence	Innovation adoption level	0.040	0.000	Partial relationship	No
3	Personal Traits	Innovation adoption level	0.020	0.004	No relationship	No
4	Media Use	Innovation adoption level	0.058	0.001	No relationship	Yes

In terms of the model predicting behavioral adoption of innovation on social networking sites, two variables (Internet usage and social image) remain in the final model,  $R^2$  of 0.2 and an adjusted  $R^2$  of -0.012. The dependent variable used for the model is Innovation adoption level of respondents.

#### 4.5 Summary of Findings

This chapter entails the summary based on the relationship between the hypothesis and the conceptual model of the study will be developed.

The findings indicate that the regression analysis in Table 8, 9, 10 and 11 does not demonstrate that H2 (Personal Traits), H3 (Social Influence), and H4 (Media Use) have significant positive effect on adoption of innovation through social networking sites. However, it does demonstrate hypothesis H1 (Demographic Profile) has partial effect on innovation adoption.

- **H1. Demographic profile has a partial effect on consumer's adoption intention on social networking sites.**

This hypothesis is partially supported as data analysis indicates that Demographic profile has partial significant positive effect on adoption of innovation through social networking sites.

- **H2. Social Influence has a positive effect on consumer's adoption intention on social networking sites.**

This hypothesis is partially supported as data analysis indicates that Social Influence has partial significant positive effect on adoption of innovation through social networking sites.

- **H3. Personal traits have a positive effect on consumer's adoption intention on social networking sites.**

Findings indicate that Personal Traits does not have any effect on adoption of innovation through social networking sites. Therefore, the hypothesis is not supported.

- **H4. Media Use has a negative effect on consumer's adoption intention on social networking sites.**

Findings indicate that Media Use does not have any effect on adoption of innovation through social networking sites. Therefore, the hypothesis is not supported.

## **CHAPTER Five Discussion**

### **5.0 Introduction**

This chapter is set out to discuss the key issues of results from the survey based on the findings available from the analysis conducted on this study. Therefore, latent explanations for the fallouts alongside providing sanctions for start-ups and existing firms with regards using social networking sites to diffuse innovative products or ideas are included in this chapter.

### **5.1 Discussion of Major Findings**

Based on the findings from the data analysis, major findings were observed on each individual factor which will be discussed in this chapter. Providing a model for factors that impact social networking sites user's intention to adopt innovation diffusion was achieved in this study based the Technology Acceptance Model and Diffusion of Innovation model. Factors used for this research were derived from previous study of innovation adoption and the telephone interview with Mr. Edmund Olotu and Mr. Osita Nwoye.

#### **5.1.1 Demographic Profile**

Findings from this research indicate that demographic profile does not have significant positive influence towards consumers' behavioral intention towards innovation adoption of innovative products or ideas on social networking sites. This result is consistent with the findings of Roger's (1985) as discussed in the literature review. However, consumers' intention to adopt cannot be attributed to age, education, and income level of adopters of innovation.

According to Mr. Nwoye, 'Onepage' which was one of his numerous start-ups that have since been considered as a failed start-up because of the following reasons; (1) the innovative product or 'idea' was considered to be radical at the time of launch and consumers did not see any reason to adopt at that point in time and (2) the opinion leaders within his social circle on social networking sites like Facebook and Twitter, did not adopt the idea as anticipated irrespective of their educational level

and age. And lastly, he added that 'Critical Mass' approach was needed for the innovative idea or product to forge ahead but could not be achieved from a start-up approach because it needs support from all stakeholders hence the failure of 'Onepage'. He further stated that in his new venture, the success to date can be attributed to 'opinion leaders' within his social circle because he has designed a product to match their requirements because they are considered high priority. His statement supports Roger's (1985) assumption that early adopters are essential to innovation diffusion.

As perceived in the literature review of this study that demographic profile has a positive effect towards innovation adoption. Mr. Edmund Olotu of Gpay Africa, indicated that demographic profile factors can be attributed to their diffusion approach on social networking sites. Demographic profile factors been age, education and income level of consumers are essential to their approach towards diffusing their technological innovative product on social networking sites. His statement supports the Mintel Consumer Research (2012) that stated that those aged 16-24 are less likely than older consumers to partake in many types of online transactions.

### **5.1.2 Social Influence and Personal Traits**

Previous literatures on social influence indicate users of social networking sites have a positive effect towards adoption intention of innovative products or ideas. However, findings from this study indicate that social influence has partial effect on behavioral intention to adopt. Hence, hypothesis H2 is not supported.

The reason for this non-existence of relationship could be that respondents in this survey do place emphasis on social and economic image with people in their social networks which basically means it does not affect their decisions when adoption innovation. However, the Mr. Nwoye of Gbedu.fm indicates that within his social network on Facebook, early adopters have been helpful with regards diffusion of their product which has helped them in cost reduction as a start-up company. The literature review of this study indicated that 'opinion leaders' play important

influence on what action a potential adopter chooses to take because individuals adapt their behaviors, attitudes and beliefs to their social context (Rogers, 1995; Lu et al., 2005; Salancik and Pfeffer, 1978).

Based on the research, personal traits has no influence on consumers' behavioural intention to adopt innovation that are diffused through social networking sites, hence hypothesis H3 is not supported. However, in the unstructured interview with Mr. Edmund Olotu, he indicated that most people in his social circle within social networking sites hardly respond when the innovations involves financial participation. In also stated that, in their process of diffusion innovation through social networking there completely and entirely focus on the essential properties of the product itself. His statement gives qualitative evidence to the finding of this research which however does not support hypothesis H3 that personal trait has a relationship with users' behavioral intention to adopt new innovative idea through social networking sites.

### **5.1.3 Media Use**

Media Use from past research did not demonstrate any relationship with innovation adoption. However, for the purpose of the study, it had a negative effect towards consumers' intention to adoption of innovative products or ideas diffused using social networking sites.

This however, did not come as a surprise to the author. Empirical findings based on the findings of this research completely supported the hypothesis H4. A possible reason why the findings of this research could be justified is that adopters of innovation on social networking sites hardly pay attention to trying new concepts based on what people within their social networks places emphasis on.

## **5.2 Conclusion**

In conclusion to this section, innovation adoption techniques on social networking sites are relatively new and in its early stages. Therefore, organizations need to attract more consumers on social networking platforms and tap extensively with users on how to innovative or upgrade ideas or products. It is believed that merely

introducing or diffusion innovative ideas or products are not adequate to boost user participation towards adoption. Possible area of engagement for organizations should be placed on key factors that influence users to adopt innovation.

## **CHAPTER Six Conclusion**

### **6.0 Introduction**

In conclusion, further research opportunities within innovation adoption have been identified in this chapter. Also, limitations of this study are included.

### **6.1 Further Study Recommendations**

Because not much academic studies are yet to provide data on overall social media adoption, this research in addition lays the ground work for future research in this area. Whilst this research has helped in producing snapshot into factors influencing factors influencing consumers' adoption intention on social networking sites, there are still abundant opportunities to pursue. Social media with regards social networking sites does not have much academic literature with regards this study.

The conceptual model based on the hypothesis from the research effort has an accepted variance of 42% while the other 58% is not explained. This clearly indicates certain characteristics or factors do exist with regards users' adoption intent to adopt innovative products or ideas on social networking sites. The Technology Acceptance Model with reference to 'perceived ease of use' is noteworthy for further research. Technological innovations are considered in most cases are considered to be cumbersome during initial launch. 'Perceived ease of use' should be applied to harness how consumers of social media assess perceive these innovations.

Also, 'perceived benefit' is a factor that is worthy for further research. Consumers of social networking sites are most likely not going to adopt innovation based on engagement with 'opinion leaders' in their social circle.

### **6.2 Implication for Researchers**

This research provides an essential groundwork for organizations looking for efficient and smart ways of using social networking sites to diffuse innovative ideas or products to assist in the design of their operational strategy.



Furthermore, the importance of opinion leaders within social circles have been provide with insight when strategizing on how to best to harness their behavioural characteristics when developing innovation diffusion strategy.

### **6.3 Limitations of the Study**

Time constraints with regards the collection of data necessary for this study form the basis of the research. Large sample of respondents needed for this research was not possible due to resources and time constraints.

### **6.4 Conclusion**

The primary purpose of this research was to identify factors that influence consumers' behavioural intention to adopt innovation through social networking sites. This has been successfully achieved with the use of the Diffusion of Innovation Theory to examine the four factors considered to be important and relevant towards innovation adoption.

However, results showed partial relevance and importance of two out of the factors. Demographic profile and social influence were relevant while personal traits and media use did not have any relationship with consumers intention to adopt, it is suggested that they should not be eliminated for future studies.

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## APENDICES

### Appendix 1 – Telephone Interview with Mr. Osita Nwoye

Find below the transcript of unstructured telephone interview with Mr. Osita Nwoye, Founder & CEO of Gbedu.fm conducted on August 31<sup>st</sup>, 2012.

**Q. How has social media (Facebook, Twitter etc) so far helped you in the process of diffusing your innovative product?**

**A.** Social media itself is relatively a new tool that we are trying to adapt to as a start-up company. And of course, with regards diffusing innovation we have no choice but to utilize social media effectively, under this context we can call it social networking sites. Because of the nature of our product, the consumers of music are young people and stylish people. And we all know that Facebook and Twitter have completely taken over the digital space. I believe when diffusing innovation using these social networking sites, you need to understand your product or idea before you pick which social networking sites consumers to bombard with your product. When we founded 'Onepage', a digital business company, it was relatively a disaster because we tried diffusing it using the likes of Facebook and Twitter but the response was not encouraging. LinkedIn most probably would have been a better platform to diffuse such product but then LinkedIn itself was not embraced by many as it is today.

**Q. Do you consider social media has an important tool in the process of innovation diffusion?**

**A.** As I earlier indicated, I consider social media as an ally to the process of diffusing innovation. When using social media to diffuse innovation, I believe it depends on your target audience. For example, users of Facebook and Twitter are considered young and modern to some extent and LinkedIn are for corporate individuals. And yes, I will say social media is an important tool in the process of innovation diffusion.

**Q. Do you consider 'opinion leaders' within your social network as key allies in the process of innovation diffusion?**

**A.** That is a valid point. Yes, till date because of our size with regards brand awareness and market share we rely heavily on opinion leaders within our social circle to help effectively diffuse our product update or information.

**Q. Do you think opinion leaders have effect in your process of diffusing innovation within your social circle?**

**A.** Yes they do. We rely heavily on them because of our size. Honestly, without them I don't think we will be where we are today.

**Q. At what stage of product innovation diffusion, do you tend to notice collective response from consumers within your social network?**

**A.** For us as young start-up, I think we are yet to achieve collective response with regards our growth potential. But however, I think this depends on the amount of opinion leaders you have within your circle before that can be achieved.

## [Appendix 2 – Telephone Interview with Mr. Edmund Olotu](#)

Find below the transcript of unstructured transcript of telephone Interview with Mr. Edmund Olotu, Founder & CEO of Gpay Africa conducted August 21<sup>st</sup>, 2012.

**Q. How has social media (Facebook, Twitter etc) so far helped you in the process of diffusing your innovative product?**

**A.** It depends solely on your target market. 80% of our time is about engaging our users about our reliable product and regards cultural factors; gaining trust with the locals is our biggest challenge. Facebook and Twitter are free enterprise that once in a while we try to engage effectively. Social media is a global space while our product for now is a regional product. So it will be difficult to determine how it has helped our thus far. But with regards brand awareness, social networking sites are playing a vital role.

**Q. Do you consider social media has an important tool in the process of innovation diffusion?**

A. As I stated already, it depends on your target audience.

**Q. Do you consider 'opinion leaders' within your social network as key allies in the process of innovation diffusion?**

A. Opinion leaders are leading the way for us. But I will like to take this context out of social networking sites. Because we believe that paying customers are only a fraction from the likes of Facebook and Twitter. So I know opinion leaders within my social circle are regarded as key allies because they help us trying the brand through word of mouth.

**Q. Do you think opinion leaders have effects in your process of diffusing innovation within your social circle?**

A. Yes. As I indicated in the last question, the effect is extraordinary.

**Q. At what stage of product innovation diffusion, do you tend to notice collective response from consumers within your social network?**

A. I would say we started noticing collective response from our users when we started responding to their needs. Feedback played a key role in this process. We obviously can't know every customer by name or face but what we do know is our opinion leaders. They help us drive our innovative product and we receive feedback from them and vice versa till we arrive at the same point.



## Appendix 3 – Questionnaire Survey



**Osa Olotu**

August 17

I am conducting this survey as part of my MBA dissertation. The purpose of my research is to examine factors that affect user's adoption intent to adopt innovation that are diffused through social networking sites like Facebook, Twitter etc.

I would greatly appreciate your time and effort in completing the questionnaire with is available in the link provided below;

<http://www.surveymonkey.com/s/YV27FRD>

Please be assured that data collected is strictly for academic purpose only and your response will be confidential.

Please feel free to contact me via email (osahonolotu@gmail.com) for any queries that may occur.

Thank you very much.

Yours sincerely,

Osahon

**Innovation adoption on social networking sites Survey**  
[www.surveymonkey.com](http://www.surveymonkey.com)

Share

## Appendix 4 – Questionnaire Survey

### Innovation adoption on social networking sites

#### 1. What is your gender?

- Female
- Male

**2. Which category below includes your age?**

- 21-29
- 30-39
- 40-49
- 50-59
- 60 or older

**3. What is the highest level of education you have completed?**

- Did not attend school
- Secondary school
- Diploma
- Degree
- Post graduate

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**4. Which of the following best describes your current occupation?**

- Student
- Professional
- Business owner
- Retiree

Other (please specify)

**5. What is your approximate income per month**

- Below \$200
- \$201 - \$1000
- \$1,001 - \$2,000
- \$2,001 and \$3,000
- \$3,001 and above

**6. How often do you use the internet?**

- Regularly
- Moderately
- Infrequently

**7. Kindly indicate your awareness level of social networking sites**

- Aware but not signed
- Signed up but not active
- Signed up and very active

**8. Have you ever signed up for a new product or idea pending its release date?**

- No
- Yes I signed up but never did a follow up
- Yes I signed up and did follow up

**9. How did you hear of the new product or idea? (Please select more than one if applicable)**

- Word-of-mouth (Friends, family etc)
- Newspaper
- Radio
- Television
- Internet

**10. kindly indicate the extent you agree with the following statements:**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I feel comfortable with new innovative product/idea I come across on social networking sites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel comfortable as long as friends within my social network have adopted the product/safe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I always want to be the first to try out new product/idea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A significant amount of friends within my social network have tried out the idea/product before I adopt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I adopted an idea/product because of comments I saw on social media eg. facebook, twitter, linkedIn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I consider it risky to be the first to adopt a relatively new idea/product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel comfortable adopting innovative ideas/products on social networking sites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>