

# Research on Hyper-Connectivity Element and its Utilization on Consumer Performance Expectancy: A Literature Analysis

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**Abstract**—It is becoming increasingly difficult to ignore the research models about advancement in information technology acceptance have grown substantially. In this paper, we view core determinants of user acceptance and use: performance expectancy in UTAUT model. Previous research may not cover the issues involved in hyper-connectivity element as an important component in the climate system. This paper seeks to remedy these problems by analyzing the literature of the ‘state-of-play’ of research in this field. Applying a systematic and comprehensive review of 100 peer-reviewed articles from key research outlets, this study was exploratory and interpretative in nature reveals theories and methods used to study hyper-connectivity element and its utilization on user performance expectancy in core determinants of user acceptance and use. Among other things, the findings indicate dimension and issues which have been well or under-researched, conceptual frameworks and principles which have been lightly or substantially-discuss upon, as well as research methods which have been heavily or under-utilized. In order to advance research in hyper-connectivity and core determinants of user acceptance and use, future researchers should consider diversifying their theoretical and methodological approaches using the new development uncovered in our findings.

**Keywords**—Consumer Behavior; Hyper-Connectivity; Information Technology; Performance Expectancy; Technology Adoption; UTAUT Model.

**Abbreviations**—Mobile Services (M-Services); Short Message Services (SMS).

## I. INTRODUCTION

**M**OST studies in the field of consumer acceptance of technology have only focused on accelerated information technology in electronic-channel marketing, that affect on both personal and organizational behavior. The fast pace of technological development and breakthroughs makes foresight difficult, but the technology revolution seems globally significant and quite likely.

Recent developments in the field of information technology have led to a renewed interest in life will be revolutionized by the growing effect of multidisciplinary technology across all dimensions of life: social, economic, political, and personal. The contribution of these exploratory

paper will enable us to identify, understand, manipulate, improve, and control living organisms (including ourselves).

The revolution of information availability and utility will continue to profoundly affect the world in all these dimensions. Effects of hyper-connected element as facilitating condition in business environment may leads significant improvements in human quality of life and life span which facilitate new user performance expectancy with accompanying prosperity and reduced tension.

More recently, literature has emerged that offers contradictory findings about this condition because the actual realization of these possibilities will depend on a number of factors, including local acceptance of technological change, levels of technology and infrastructure investments, market drivers and limitations, and technology breakthroughs and

advancements. Since these factors vary across the globe, the implementation and effects of technology will also vary, especially in developing countries. The motivation of this paper is to review recent research into the matter need to establish. Nevertheless, the overall revolution and trends will continue through much of the developed world.

## **II. RELATED WORKS: HYPER-CONNECTIVITY ELEMENT AND ITS UTILIZATION ON CONSUMER PERFORMANCE EXPECTANCY**

Hyper-Connectivity environment state an issue for service base organization that engage to electronic channel marketing because any individual can connect them self to everything, anywhere, all the time, with anybody [Amer et al., 2014]. The development in internet established itself as a tool that not only changes the way customer communicate, but also they engage with business [Philipp 'Phil' Klaus, 2013]. This state should be an incredibly fertile one for those in the business of propagating ideas and influence. But underpinning it is the sense that any connected network has the property of behaving as if it has a common purpose, as if it is a homogeneous entity. Typically the dimension that promotes by the hyper-connectivity environment has the potential to influence the result of electronic channel marketing functions which engage the consumer to the business process and providing direct access to services firm resources [Trainor et al., 2011]. Hyper-connected world are define as things that involve Internet Of Thing concept, M2M, ambient intelligence, embedded computing and mesh network [Phillipa Bigs et al., 2012].

Today the development of hyper-connected element allows more participation and transforms both personal and organizational behaviour. Due to this new facilitating condition people expect more and faster services with higher quality; so attracting new customers and retaining current ones requires an efficient and effective management at all aspects of organizations with emphasis on hyper-connected element adoption and responds. Thus, the purpose of this paper is to explore the effects of hyper-connected element on consumer performance expectancy. Totally, 100 peer-review past research were collected and analyzed for the final conclusion and recommendations for further research, which the results from the review indicate dimension and issues which have been well or under-researched, conceptual frameworks and principles which have been lightly or substantially-discuss upon, as well as research methods which have been heavily or under-utilized. In order to advance research in hyper-connectivity, future researchers should consider diversifying their theoretical and methodological approaches using the new development uncovered in our findings.

Therefore in order to achieve effective utilization of hyper-connected element on consumer performance expectancy extensive, attractive and insightful exploratory

research will be conduct to discover hyper-connected element utilization on consumer performance expectancy. Also with respect to positive and significant effect of hyper-connected element on facilitating conditions, it is recommended that infrastructure e.g. computers and high-speed and affordable internet required in this field is provided to all social classes.

## **III. RESEARCH METHOD**

There research is an established tradition in electronic channel marketing research of examining the research literature itself to better understand the 'current development' of research in the field, and to review patterns in the development of the field by adopting management information system literature methodology propose by Alavi & Carlson (1992). Listing a broad set of the existing literature on electronic channel marketing at the hyper-connectivity element perspective will facilitate future debate on theoretical and methodological research perspectives in this field.

Thus, following the information systems research tradition, the subsequent steps were followed:

- Identifying, reviewing and analyzing the existing literature on the adoption and utilization of electronic channel marketing and tools at the hyper-connectivity element;
- Identifying theoretical and methodological approaches commonly used to investigate the effect and utilization of such applications and tools at the hyper-connectivity element;
- Identifying research gaps within the existing literature which addresses the different and utilization of electronic channels marketing and their associated applications of hyper-connectivity element.

Since the utilization of consumer performance expectancy at the individual level have been researched across various disciplines, this research anticipated that relevant articles would be spread across various disciplines such as information systems, decision support systems, electronic commerce, information technology, finance, management and marketing. In order to cover a broad range of journals, we explored the bibliographic databases shown in references.

A keyword search was conducted on these databases in order to identify relevant papers. The search strategy included keywords such as adoption/acceptance/ performance expectancy, as well as always on, information rich, interactive, trust, not just about people, always recording internet marketing, mobile marketing and cloud storage. This research limited the search to peer reviewed articles more than two pages in length. To cross-check and confirm the relevance of the results, the articles' abstracts were reviewed.

The next step was to scrutinize articles found in the initial search for additional references in the related field. Articles that did not focus on the hyper-connectivity element and its utilization on consumer performance expectancy (e.g., articles which concentrated on other three major core

determinants of user acceptance and use: effort expectancy, and social influence in UTAUT model) were excluded from the study. Similarly, articles that studied the moderating and mediating variable of UTAUT model from a technical aspect were also not included. The search yielded in 70 peer reviewed research publications.

## IV. FINDINGS

### 4.1. Overall Research Output

A large and growing body of literature has investigated the rise of hyper-connectivity promotes simultaneous use of multiple means of communication where telecommunication technologies are able to connect people more rapidly and efficiently than in the past, overcoming temporal and spatial boundaries affecting traditional electronic channel marketing [Amer et al., 2014]. Performance expectancy is defined as the "degree to which an individual believes that using the system will help him or her attain gains in job performance" [Venkatesh et al., 2003]. According to Venkatesh et al. (2003), the researchers assumed that there is relationship between performance expectancy and behavioral intention and in this study propose that the rise of hyper-connected element that represent the facilitating condition will be mediated by performance expectancy towards behavioural intention. Previous researcher claimed that new information systems development such as hyper-connected element in facilitating condition will have positive relationship with behavioural intention with the positive effect of performance expectancy existence [Amer et al., 2014].

#### 4.1.1. Interactive

Initial arguments for the move to hyper-connected electronic channel marketing were based largely on expected to the myriad means of communication and interaction and its impact on both personal and organizational behavior, of interaction between trading partners [e.g., Chen & Chiang, 2011; Shankar et al., 2011; Chung et al., 2012]. For instance, Chung et al., (2012) mentioned that hyper-connectivity, by enhancing the interaction of market-based coordination, would lead to increased use of hyper-connected electronic channel marketing. This facilitating condition indicated that interactive factor in hyper-connected network boost up consumer performance expectancies in information technology usage [Index, 2010]. However, interactive, as conceptualized in hyper-connectivity attributes, need to incorporate dimensions beyond just the efficiency of interaction, moreover the limitations of time and space has largely been overcome. These additional characteristic are looked less applicable on the current performance expectancy context of B2B electronic channel marketing.

In the context of B2B electronic channel marketing, interactive improvement in consumer performance expectancy leads to reducing the transaction costs of market-based coordination: Shankar et al., (2011) who are eagerly embracing innovations in the different aspects of shopper

marketing found that innovation in electronic channel marketing involve interactive aspect in performance expectancy contribute in reducing the transaction costs of market-based coordination.

Beside individual user, companies as an organization are likely to measure such monetary transaction costs rather consider how interactive contribute to the increase of users performance expectancy. Chen & Chiang (2011) use direct sales, indirect sales, and quasi direct sales to measure the financial performance result. Shankar et al., (2011) concluded that consumers who involve in electronic-channel marketing are interactive oriented and they are looking for better result of transaction compare to the traditional non interactive electronic channel marketing. Thus, to avoid the connotation of the broader aspects of interactivity in user performance expectancy, the research used the term interactivity to refer to a customer's perception of the efficiency of interaction with a seller. Interactive, which were define as the time and effort required to interact through a channel, is likely to be an important consideration for consumers performance expectancy across both the individual and organization internet user.

#### 4.1.2. Trust Not Just About People

Previous study show online user performance expectancy significantly relate to the trustworthiness of individual or organization involvement as web-based vendors, many of them are unfamiliar with the people involve, as well as about the reliability of the web in general, many explanations publicized potential for theft of private, sensitive data transmitted over the Internet. A number of studies have examined the factors that affect of trust on user performance expectancies on web and web based company [e.g., Hwang 2010, Gabrielsson & Gabrielsson, 2011, Chung et al., 2012; Barnes & Vidgen, 2012; Neill & Richard, 2012] and concluded that trust among people positively influences consumers' intent to engage in e-commerce which leads to the increase of user performance expectancy on the online services. The previous research also indicate that trust among people were multidimensional construct.

Chung et al., (2012) distinguish between dispositional, institutional, and interpersonal user trust. A majority of studies on trust in B2C e-commerce [e.g., Hwang, 2010; Neill & Richard 2012; Barnes & Vidgen 2012] have focused on interpersonal trust, that is, a user's belief that a specific people that involve as web vendor has worthy attributes such as competence, honesty, or benevolence [Chung et al., 2012]. This makes the user willing to depend on a vendor [Barnes & Vidgen, 2012], for instance, by making purchases from the trusted vendor.

In this study, researcher suggested focus should not only to deal with a specific trust factor within people or vendor but also on trust between people-to-machine and machine-to-machine communications directly improve user performance expectancy relationship adoption of hyper-connected electronic channel marketing in general, so the relevant aspect of trust involve not only people trust but also cover

institutional trust, that is, a user's beliefs about the institution of the channel itself.

For institutional trust, the researcher further distinguished between two major aspects will directly increase user performance expectancy. The first may be termed people-to-machine communication trust, that is, a user's beliefs about the reliability, credibility, and accuracy of information gathered through the electronic channel. For instance, studies of online recommendation agents [Gabrielsson & Gabrielsson, 2011] referred trust as beliefs about the recommendations provided by these tools. Further, information quality is an important factor in B2C e-commerce [e.g., Gabrielsson & Gabrielsson, 2011; Barnes & Vidgen, 2012; Neill & Richard, 2012]. Although labeled in multiple ways (e.g., as reliability of information [Chung et al., 2012], an important aspect of information quality is whether the information is credible, accurate, and believable will directly influence user performance expectancy. The second dimension of institutional trust is termed machine-to-machine communication trust [Chung et al., 2012]. This refers to compatibility and reliability in tool or gadget involve [Barnes & Vidgen, 2012; Neill & Richard 2012] and the technological underpinning the electronic channel marketing.

#### 4.1.3. Always On

Broadband, defined as an always-on internet access with transmission speeds equal to or exceeding 256 Kbps for downstream connections and 64 Kbps for upstream connections [Cisco 2010], is currently the most common mode of Internet access involve in hyper-connectivity connection which expected to change user performance expectancy. Broadband is widely discuss as a critical enabler of marketing activity which encourage change in user performance expectancy because it directly or indirectly generate innovation, productivity, employment, economic growth, and, ultimately, government delivery competitiveness [Ericsson 2011]. Therefore, many electronic marketing channel base companies have established ambitious targets, strategies, and measures for facilitating its development.

It is adapted from Mao-Shong Lin & Feng-Shang Wu (2013) original framework, which was based upon a number of past studies focusing on always-on internet access behavior [Kamaleldin Mohamed & Duminda Wijesekera, 2012; Son et al., 2012; Kao et al., 2012]. It includes two key components: (1) broadband, (2) ubiquitous mobile devices, which is enable people to be connected to family, work, friends, avocations, obsessions, and more 24/7 through means of social media, this hyper-connectivity has a distinct semantic structure which involve improvement in user performance expectancy. The 24/7 or always on connection which in large part determines the representation of the hyper-connectivity connection through the electronic channel marketing features, search result rankings, metadata, and paid links and, as a result, it will influences the customer perception and decision making and forecast directly increase performance expectancy among users.

This element of hyper-connectivity element is useful in resolving the complexity of the different between hyper-connected electronic channel marketing and the traditional electronic channel marketing online and the dominance of always on connection. An always-on internet access to a great extent, define the practical boundaries of the online business domain and dictate the way it is represented [Coursaris et al., 2012; Srinuan & Bohlin, 2013; Rajabiun & Middleton, 2013; Cui & Honkala, 2013].

Particularly, general-purpose of always on connection such as broadband and ubiquitous mobile devices is to resolve traditional limitations in representing a complex decision making like purchasing technical product, leading to a series of information search for suppliers that can meet customer requirement in a coherent way [Sung & Mayer, 2012; Gerpott et al., 2013].

Always on connection can be seen as a development in information space where businesses in the organization today compete for attention of online customer 24/7 [Suominen et al., 2014], because the representation of the domain is largely based upon always connected connection and will be influenced by contingent factors such as the presence of online advertisements by online base company [Huseyin Bicen & Senay Kocakoyun, 2013; Cui & Honkala, 2013; Niu et al, 2014;]. Within this element, the relationship between hyper-connectivity in electronic channel marketing will particularly provide new avenue for user performance expectancy to flourish.

Consequently, electronic channel marketing face fierce competition from hyper-connectivity element because the social practice such customer internet usage factor and customer internet purchase process can lead millions of customer to hyper-connected electronic channel marketing content pages that can influence change in user performance expectancy, awareness, trial, and loyalty levels [Zhong, 2013]. As innovation in electronic channel marketing strive to know how to provide attractive, persuasive, and technologically sustainable marketing programs online that can deal with future user performance expectancy, marketers must also compete with always-on internet access as hyper-connectivity element. This is because the very presence of always-on internet access potentially erodes the audience pool, impact, as well as reach of a company web-based marketing programs, and can uphold significant effect on the company branding efforts.

#### 4.1.4. Information Rich: Efficacy of Information Acquisition

A number of researchers have reported Media richness [Palvia et al., 2011; Klitmøller & Luring, 2013] and social presence [Shin 2013; Remesal & Colomina 2013; Felnhofer et al., 2014] theories agree that, for a high impact communication, the richness of the chosen medium need to match the equivocality of the information deliver [Shankar et al., 2011]. The ability to communicate equivocal information rely on rich media which can offer face-to-face interactions features are more appropriate meanwhile media perceived as low in richness such as e-mail are more suitable for

transmitting low equivocality information [Chen et al., 2012; Li & Meshkova 2013]. Most electronic channel marketing web base company sites perceived as lacking provisions for socially rich exchanges [Lin et al., 2011].

Recent evidence suggests that information rich are highly important aspect consider by customer within the requirements determination and vendor selection stages in customer internet purchase process, customers view the channel are very significance in information gathering. Thus, the efficacy of the channel (hyper-connected electronic channel marketing versus traditional electronic channel marketing) as a medium for information acquisition is a relevant consideration for enhancing user performance expectancy.

Yet, this factor has been largely ignored in B2C ecommerce studies, that pay more attention on the product sourcing, and cooperate with the delivery supplier to provide a higher delivery quality such as correct order, on time, and safety package, likely due to be the focus of most prior studies primarily on the transaction stages of the purchasing process in customer internet purchase process (exceptions include Lin et al., (2011) and Chen et al., (2012). According to the previous article this research define efficacy of information rich as customer perceptions of a channel's ability to deliver information and clear understandable explanations to educate the user on the product.

This factor may be particularly important in discussing user performance expectancy when considering more complex transactions, such as the acquisition of financial services, or the purchase of products with complex usage and multiple, configurable attributes. For such complex products, result from previous research show that customers will vary in their knowhow of product and, hence, in their perceptions of the equivocality of the information needed to determine exact specification.

Therefore, customers will differ in perceptions of efficacy of hyper-connected electronic channel marketing and traditional electronic channel marketing for information rich. In traditional electronic channel marketing efficacy of information rich usually considered a salient factor. As noted above, though, this factor is relevant only during the requirements determination stage, particularly for a complex product; but the exchange of information such as prices is typically became more important to customer due to the rise of hyper-connectivity connection with in digitization environment.

Factors found to be influencing user performance expectancy have been explored in several studies and finding summarizes the previous research discussion and presents the dimensions of hyper-connectivity relevant to each stage of the purchase process and involve different degree of user performance expectancy. Because the activities and objectives at each stage of the purchase process differ, the researcher highlight different dimensions of hyper-connectivity may be more or less salient at different stages. For instance, while efficacy of information rich may be dominant in the requirements determination stage, which

focuses on information gathering, learning, and assessment, convenience may important to the consumers' assessment of hyper-connectivity at the purchase stage, which involves transaction execution. Indirect empirical support for this is provided by Li & Meshkova (2013) stated that because of hyper-connectivity element different antecedents of customer attitude exist whereby only one dimension of relative advantage is significant during any stage of the purchase process are no longer relevance and relative significance of each dimension of hyper-connectivity and degree of user performance expectancy will vary at all stage of the purchase process.

#### 4.1.5. *Readily Accessible*

A considerable amount of literature has been published on hyper-connected element conclude a universe of mobile devices and personal computers links people and organizations together; these connections are increasingly available at any time and in any location widely embraced the development of technological devices in the in information technology development. Almost every part of the world today observed the people lifestyle and user performance expectancy are redefine involving the usage of mobile phones, from making general phone/video calls or using Short Message Services (SMS) till playing mobile games, downloading music, accessing the Internet and much more.

Such advanced mobile device applications are generally known as mobile services (m-services) in electronic channel marketing shift user performance expectancy to a new view and hope. In this paper, an adapted definition of m-services derived from Watson et al., (2013) has been adopted. According to Watson et al., (2013) m-services are any application service accessible from mobile device through wireless and mobile communication networks. M-services incorporate a range of applications. It involved applications that focus on allowing users from seeking pleasures (e.g., application downloads), perform government online services transactions (e.g., Myeg), or even gathering and comparing information (e.g., news alerts, mobile maps) which will involve development in user performance expectancy.

Many individuals and organizations today expect that mobile device service providers could access plenty of benefits by offering such advanced mobile services to their user and community. However, the mobile industry in Malaysia are supported by the Malaysian government have been pursuing a long-term plan with the ambition of achieving high-income status by the end of the decade, with ICT as one of the development strategy which involve mobile device as critical role. Most government-related indicators reflect this commitment, and Malaysia ranks 6th in the government usage pillar reported by The Networked Readiness Index 2012. A recent report released by the World Economic Forum 2012, The Global Information Technology Report 2012 highlighted that these government-led efforts seem to be starting to have a transformational impact on the economy (31st) and on society at large (15th). On a less

positive note, Malaysia ranks an average 47th in the individual usage pillar of mobile device.

In an endeavour to understand this unexpected user performance expectancy growth pattern in Malaysia, it is imperative to focus on the driving factors behind Malaysian consumers' intentions to use m-services. Beside the positive growth of mobile user patterns in Malaysia, the use of mobile service device worldwide has become increasingly popular, there by influencing a number of researchers to conduct research into this area. Past researchers have explored the implications of consumer perceptions toward mobile advertising [Liu et al., 2012] perceived ubiquity in mobile services and exploring convenience in mobile commerce [Okazaki & Mendez, 2013].

Some researchers have also focused on the adoption of mobile commerce services [Kowatsch & Maass, 2010; Varnali & Toker, 2010; Chen & Cheng, 2010; Yang et al., 2012; Tojib & Tsarenko, 2012; Kaplan, 2012; Zhou, 2013; Watson et al., 2013; Fernández-López et al., 2013]. However, there is a dearth of research that focuses on readily accessible as one of hyper-connectivity element effect on performance expectancy as one of the construct in core determinants of user acceptance and use in UTAUT model. As such, this literature study aims to contribute to this study by suggesting that a formal investigation on the relationship between the factors that determine technology performance expectancy shift and concomitantly satisfaction which contribute an intention to continue using mobile device services for future studies. Exploring these issues is crucial as it not only provides a comprehensive understanding of the development of user performance expectancy of electronic channel marketing consumers but it also assist practitioners in better formulating their marketing strategies to better promote their product offerings.

The rapid development of mobile device technologies has created a new challenge for electronic channel marketing players in determining user performance expectancy. The latest technological developments in mobile device allow permanent internet access through mobile devices such as smart phones or PDAs. These advances bring up new avenues for marketers and marketing researchers to bridge the gap between user expectation and service delivery specifications. Marketing through mobile devices (m-marketing) allows for innovative forms of customer relationships and is expected to lead to the development of numerous mobile commerce-based services [Kowatsch & Maass, 2010; Watson et al., 2013; Okazaki & Mendez, 2013A] which will enhance user expectations.

The mobile device user view this gadget not only as “portable entertainment player but also a new marketing tool for retailers and manufacturers, a multichannel shopping device, a navigation tool, a new type of ticket and money, and a new mobile intranet device” [Kowatsch & Maass, 2010]. At the same time, the mobile device has also become an interesting readily accessible channel for transmitting advertising messages to consumers. According to The Global Information Technology Report 2012 defines wireless

marketing activities as sending any marketing information through mobile devices involving readily accessible connection such as mobile phones or PDAs through the wireless network. The function of the Short Messaging Service (SMS) to access customers through their readily accessible handheld devices, in particular, has been very successful [Yang et al., 2012; Watson et al., 2013].

Therefore, it is important for electronic channel marketing base company wirelessly to improve their accessibility readiness and immediate response of the hit they receive in terms to meet user performance expectancy. This literature study suggest electronic channel marketing operators to always focuses on examining the factors influencing consumers' decisions about accessible readiness among their customers.

Readily accessible has been pointed out consumer performance expectancy as one of the obvious criteria in offering mobile device services, driven from portability and immediate accessibility factor [Fernández-López et al., 2013]. Readily accessible can be defined as agility, accessibility, and availability of a service, which promotes flexible in time and location within electronic channel marketing. The mobile device is essentially a ubiquitous device and enables a consumer to be entertained at any time, in any place, 24/7. At the same time, this literature study suggested the readily accessible dimension predicted to be crystallizes as the core utilitarian values of mobile devices: simplicity in design, functionality in technology, and practicality in use. In this study context also, researcher also found that, previous researcher highlight that perceived usefulness, consisting of simultaneity, speed, and search ability that determines the levels of perceived convenience were widely discuss to define readily accessible [Chen & Cheng, 2010; Kaplan, 2012; Tojib & Tsarenko, 2012; Zhou, 2013].

#### 4.1.6. *Always Recording*

Cloud computing is a dynamic technology platform that addresses always recording features that promotes a wide cyber-infrastructure to maintain and extend information storage capabilities which will enhance performance expectancy. Cloud computing provides access to software and hardware without large capital outlays and provides easier access to applications and services that can be realized with minimal service provider interaction [Ratten, 2012; 2013]. This has enabled cloud computing to develop as a technological innovation that can handle large amounts of information that are transferred and stored via electronic applications that perform always recording function [Sultan, 2013]. The increased usage worldwide of the internet has resulted in cloud computing providing immediate access to resources without high upfront costs that can promotes innovation in electronic channel marketing and afforded better scalability of technology services [Lin & Chen, 2012].

Always recording features that reflect cloud computing is a service-oriented technology that incorporates both hardware and software delivered on-demand through a network

regardless of time, space and location [Sultan, 2011]. A number of different services are integrated within cloud computing including infrastructure as a service, platform as a service, software as a service, utility computing and web services [Marston et al., 2011]. Always recording in cloud computing enables multiple applications as single application software services multiple people and usages. This presents a comprehensive computing platform to users of cloud computing making the technology better utilized as the digital ecosystem of information is constantly changing [XU Ying-Ying et al., 2012]. Cloud computing has changed the way information technology services are developed and maintained as it allows for updating of information that can be readily deployed to multiple users due to its always recording criteria [Gupta et al., 2013]. These finding indicate that always recording will open a new challenge for information technology researcher and practitioner to cater shift in user performance expectancy and align it towards the services specification offers.

## V. DISCUSSION AND CONCLUSION

The explosion of information technology capabilities available to all citizens via the Internet and mobile computing has forever changed individuals and organization user performance expectancy in communicating with each other and with providers of goods and services. Information “on demand” now needs to forecast, plan and act accordingly towards user performance expectation shift due to the vast development in information technology infrastructure. This is a new avenue for an information technology researcher and practitioner to research on, so that the ability to transact both work and personal business “anytime, anywhere” will be optimize. These trends have resulted in tremendous changes not only to what individual performance expectancy but also organization in terms of customer service as well as how they expect to manage their own work life and daily performance. As conclusion researcher high light this presents huge challenges and opportunities in terms of how hyper-connected element as technology development delivers great user performance expectancy to eligible beneficiaries and how it empowers its effect performing their daily activities and transactions.

New and emerging information technologies capabilities such development of hyper-connected element must delivered certain aspect to meet user performance expectancy shift so that the development enable each user to manage their relationship with potentials audience in a unified manner, with both the user and the potentials audience serving them able to access and maintain a holistic view of the potential audience complete profile along with services or products entitled, available, and provided. Beside that a new and emerging information technologies should enable user and eligible beneficiaries, potentials audiences and trusted partners with the ability to access authorized their information “anytime, anywhere.” in terms to meet the user performance expectancy shift.

Future researcher and practitioner need to focus on enabling potential audience employees with the flexibility to take advantage of emerging technologies to increase alternative work arrangements such as online information dissemination in meeting user performance expectancy. Inherent in these hyper-connected element capabilities is recognizing the need to continually evaluate and address concurrently emerging information security challenges. Safeguarding organization computer systems and supporting critical information technology infrastructure need to be an ongoing organization concern. Increased information sharing and use of mobile computing also serve to highlight the need to strengthen information security in maintaining user performance expectancy.

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