

The Contribution of ICTs to Women Empowerment: A Capability Perspective

Full Paper

Naima Hafiz Abubakar
American University of Nigeria
naima.abubakar@aun.edu.ng

Salihu Ibrahim Dasuki
American University of Nigeria
salihu.dasuki@aun.edu.ng

Ago MacGranaky Quaye
American University of Nigeria
aquaye@aun.edu.ng

Abstract

This paper examines the developmental impact of ICTs on African society by concentrating on the use of WhatsApp; a mobile social media platform. Specifically, we investigate the promise of empowerment associated with the use of WhatsApp by Women in the remote city of Kano, Nigeria. We employed the five instrumental freedoms of the capability approach to evaluate how WhatsApp has empowered women by concentrating on the opportunities provided for expanding their freedoms to participate in social, economic and political activities. Our analysis shows that WhatsApp can contribute to the empowerment of women by enabling their freedoms to participate in developmental activities, however some contextual factors impede the ability of the women to take full advantage of these developmental opportunities WhatsApp offers. The paper concludes with some implications for policy makers advancing an agenda for “ICTs for Development”.

Keywords (Required)

ICT, social media, development, women, Nigeria.

Introduction

The potential role of ICTs in empowering the disconnected rural majority particularly women in Africa has long been discussed, however relatively little is known about how, when, and why such empowerment occurs (Wheeler, 2008). The notion of “*digital divide*” has been vital in describing the social and economic inequality with regards to access to, use of, and impact of ICTs. It has informed the creation of policies by regional leaders in politics and international development to promote social inclusion and women empowerment (Mbarika et al., 2007). Nevertheless, very little empirical evidence exists to show that ICTs do ultimately contribute to women empowerment (Dasuki, Abbott and Azerikatoa, 2014). The few that exist are lacking rigor, clarity and solid underpinning around research methods (Heeks, 2010). Also the developmental agendas that dominate many of these ICT4D interventions are usually ignored and need to be paid attention to (Walsham, 2010). In the paper “*ICT Research in Africa*”, Thompson and Walsham (2010) noted that despite the growing literature about ICTs in Africa, majority of the work can be termed as implementation studies; the study of the “*point*” of implementation of a particular technology or approach within a specific context. There is little work in much of the mainstream IS research that seeks to inform policy concerning ways in which ICT can serve more strategic and broader developmental goals in Africa. The acute lack of research focused on understanding how ICT is able to make a vital enabling contribution to development within the African continent is very disturbing given that the poorest nations of the world reside within the African continent (Mbarika et al., 2007). Thus, there has been a call for more emphasis in examining the contextual and social elements that characterize the applications of ICT4D (Walsham, 2007).

Building on this line of research, the study attempts to examine the question: How have women responded to and have been empowered by the use of ICTs in Developing Countries? To examine this question, this study presents evidence of how some Nigerian women are using WhatsApp; a mobile social media platform to empower themselves. Using interviews and focus groups with women from the remote city of Kano, this study provides case narratives through which we can understand how these women interpret the empowerment opportunities and freedoms technology has provided to them. This research does not aim to explain the overall social media experiences of all the women in Nigeria not even majority of Nigerian women but instead to concentrate on the social media enhanced experiences of women living in Kano. The data gathered for this study are limited though significant. This is due to the fact that this study provides a contribution to the mounting concern within the ICT4D domain on the need to shift beyond measuring access to, to investigating the use and development impact of ICT, specifically on the lives of women (ITU, 2006). The subsequent section discusses the relevant literature on the notion of empowerment. This is followed by a discussion on the relationship between empowerment and ICTs. This is followed by a section providing details of CA and some selected key concepts upon which the authors will draw from to evaluate the contribution of social media to women empowerment. The research method, research setting and the analysis of the case are then presented. The final section concludes the paper and demonstrates implications for research and practice.

Literature Review

Notion of Empowerment

The definition of “*empowerment*” is highly debatable. This could be due to the various interpretations of power and the conflicting conceptualizations on the centrality of power for the development process (Gigler, 2004). Parpart et al. (2002) noted that the term “*empowerment*” is a very unstable notion because it is “*often unpredictable, and requires attention to the specificities of time and place*” (p. 4). In its simple form, empowerment can be referred to as any process where by people can gain increased control over their lives either independently or mutually (Somerville, 1999). Narayan (2005, pg. 3) on the other hand defines empowerment as a process that enhances “*self-confidence, self-direction, autonomy, and self-worth*”. However, Cornish (2006) cautioned that vaguely conceptualizing empowerment simply as anything that can be enhanced or as state that can be captured usually omits instead of showing the numerous and conflicting natures of powers and disempowerment that individuals enact or experience.

For the purpose of this paper, we embrace Kabeer’s (2001, pg. 19) definition of empowerment as “*the expansion in people’s ability to make strategic life choices in a context where this ability was previously denied to them*”. Here empowerment is not viewed as something to measure or as an increase in control or self-confidence. Rather empowerment is seen as the ability to take an action and as something to be qualitatively specified in terms of a concrete domain of action (Dasuki, Abbott and Azerikatoa, 2014). The emphasis here is on the process of change, instead of its outcome, and on the agency of individuals in this process (Oreglia & Srinivasan, 2016). In this context, agency can be understood as the human capacity to make choices and impose those choices on the world (Buskens, 2010). This view of empowerment concentrates on enabling individuals to develop their full range of human capabilities (Gigler, 2004), and resonates with Amartya Sen’s (1999) capability approach, that sees development as the process of expanding the real freedoms that people enjoy to lead the lives they have reason to value. Sen (1999, pg. 18) also emphasizes the empowerment of the poor by stating “*greater freedom enhances the ability of people to help themselves and to influence the world, and these matters are central to the process of development*”. In “*Development as Freedom*”, Sen noted that the “*extensive reach of women’s agency is one of the more neglected areas of development studies, and most urgently in need of correction.*” He emphasizes “*an adequate recognition of political, economic and social participation and leadership of women*” to be a crucial aspect of the capability approach (Sen, 1999, p. 203). In this paper, we study the expansion of capabilities that are available to women as a result of their everyday use of ICT.

Empowerment through ICTs

Information system (IS) research has highlighted that a relationship exists between ICT and human empowerment. Some researchers have argued that ICTs have direct relationship with empowerment and ultimately contributes to it via the provision and access to ICT tools (Badran, 2015; ITU, 2005; Maier and Nair- Reichert, 2007). Studies showing this direct linkage between ICTs and human empowerment have usually been conducted at the country and organizational levels (Roztocki and Weistroffer, 2015). Research directed at the individual level to show these linkages are usually rather scarce. Dasuki, Abbott and Azerikatoa (2014) challenge this technological deterministic approach to argue that there is no direct relationship between ICTs and the empowerment of the poor, but suggest that a dynamic relationship exists between ICTs and the social, economic, cultural and political context that sustains it (Walsham, 2010). This perspective highlights that empowering the poor by solely providing access to ICT is problematic as impediments still exist that hinders those who have access to ICTs from taking full advantage of the opportunities it offers (Warschauer, 2003). Trauth (2013) posited that women in particular are affected by these impediments which may be quiet subtle and are easily left out of actively participating in the information society. Following Kabir's view of empowerment as the expansion of abilities to lead a life they value, we believe ICTs can contribute to women empowerment, in which a certain set of conditions are required to be taken into consideration. The social conditions that influence how an individual can convert the ICT in order to empower him or herself is more crucial than ensuring the accessibility of ICT.

Within the African continent, women are gradually participating in the information society and are doing so in various ways, and the social changes the use of ICTs have resulted in are also slowly becoming visible all over (Buskens and Webb, 2009,2014). Also, we believe that prospects of ICTs and the empowerment of women are very promising taking into consideration the socio-cultural context. However women stories about their experiences using ICTs are not documented and shared to the world (Trauth, 2013): Is the use of these ICTs changing their lives for the better? If yes, in what ways are they changing? What are the challenges they face? These are the questions this paper aims to answer using a case study of women in the remote city of Kano, Nigeria. Using the theoretical lens of the capabilities approach, the paper specifically explores how ICTs can enhance the freedoms of women to determine their own development as they incorporate these technologies into their daily lives. We believe that the perspectives of African women on the use of ICTs needs to be reported and this knowledge needs to be shared to the world by researchers in Africa.

Capability Approach (CA)

The Capability Approach (CA) is a broad normative framework for assessing societal changes in terms of the enrichment of individual wellbeing (Sen, 1999). This framework openly critiques the opulence and functional conceptualization of development that are dominant in the economic development discourse. The CA emphasizes on "*human freedom*" which means the effective opportunities available to individuals to improve their wellbeing. The CA constitutes of two distinct features namely capabilities and functionings. According to Sen (1999) capabilities are the freedoms individuals have to achieve a set of functions while functionings are beings and doings that people value. Robyens (2005) noted that the difference between capabilities and functionings is between the freedoms on the one hand and achievements on the other. Although, Alkire (2005) argues that it is significant to concentrate more on capabilities rather than functionings because individuals value choices from which they can select.

In his well-known book "*Development as Freedom*", Sen (1999) argues the expansion of freedom as both the primary end and the primary means of development. Sen (1999) proposes five distinct instrumental freedoms that directly or indirectly enable the overall freedom available to people to live a valuable life. They include: political freedom: freedom of expression and participating; economic facilities: freedom to participate in economic activities; social opportunities: entitlements to health and education; transparency guarantees: freedom to interact with one another under guarantees of disclosure; and lucidity and protective security: social safety nets for preventing the affected population from being reduced to abject misery. In addition, Sen (1999) argues that the degree to which the five instrumental freedoms are tenable is explanatory about the extent of empowerment of a person or community. Researchers within the IS domain and specifically the ICT4D research community have recognized the potential of Sen's approach by drawing on the Capability Approach (CA) to understand the relationship

between technology and development (Dasuki and Abbott, 2015; Kleine, 2011,2013; Gallivan & Tao,2013; Walsham, 2017).

In this paper, we examine how Sen's instrumental freedoms might be adapted to the context of WhatsApp usage by women in Nigeria to ascertain its contribution to their empowerment. The "incompleteness" of the CA is viewed as a strength for this study as it allows the application of the approach to be used in various context without misplacing its philosophical richness (Robeyns, 2005).

Methodology

The research adopted a qualitative research method to understand the social context of the information systems in use (Oates, 2006). The research was broadly interpretive (Walsham, 2006) and employed the case study method which is essentially appropriate when the phenomenon under investigation is not clearly theorized and involves several actors (Yin, 2014). The study took place in Dorayi ward, a small community in Gwale local government, Kano state in December 2016. The ward has a population of about 8000 people. Two set of focus group sessions were conducted with women of the community who used WhatsApp application for their daily livelihood activities. The first focus group session was made up of 18 women and lasted for about an hour and a half. The second focus group session was made up of 23 women and lasted for about two hours. Out of the 41 women selected for the study 3 had a university degree,14 had no formal certification,10 had secondary school education,10 had attended primary school and 4 had diplomas. Their ages ranged from 20 to 45 and marital status varied from single to married, married with children, divorced and widows and all of them were unemployed. Some of the women co-financed their homes and some were the sole providers of their homes.

Later on, semi structured interviews were conducted with 6 participants who were administrators of major WhatsApp groups which had large number of members. The focus groups and interview sessions were conducted in Hausa language and transcripts were later translated into English. The data collection and analysis were influenced by Sen's (1999) instrumental freedoms which have been discussed in the previous section. Notes were taken during the interviews and focus group sessions. In total, 19 page notes of qualitative data were gathered, categorized and analyzed using Braun and Clark (2006) principles of thematic analysis. This included cautious reading and re-reading of the data in order to get a summary of the key themes discussed by the women. Next, a set of themes were produced in relation to Sen's five instrumental freedoms, but with careful attention given to emergent topics.

Case Study

Context

Kano state was created in May 27, 1967 and is situated in North Western Nigeria. Kano state has 44 local government areas with an estimated population of approximately 13 million based on the 2006 census report (National Population Commission, 2006). Kano state has been a leading commercial and agricultural hub in Northern Nigeria, its popular for cotton, groundnut, hide and skin. Despite Kano state being one of the major urbanized states in Nigeria, it is faced with severe poverty as a result of illiteracy, unemployment, poor infrastructure, inadequate health facilities and food insecurity. The National Bureau of Statistics (2006) reports that an estimated 72.3% the population of Kano State were living on less than \$1 per day. The rate of poverty has been on the increase after the 2012 January insurgency attack by the terrorist group Boko haram which resulted in loss of lives and properties in the state. Since then, there has been a widespread insecurity situation.

Women account for the majority of victims of poverty in Nigeria (Usman, 2015). In the northern city Kano, poverty has further been increased due to the prevailing culture that requires women not to work but rather stay and keep the home, hence denying them political and educational opportunities which leaves them in a hopeless and helpless condition of poverty. Many of these women have resolved to begging, chopping of woods, and petty trading, thus exposing them to society risk such as political thuggery, drug peddling, and prostitution to cater for themselves and their families in a bid to alleviate poverty. This could be one of the many reasons HIV/AIDS cases are very prevalent among women in the rural communities. To take themselves out of this structural disadvantaged group, women in Dorayi ward in Gwale local government area of Kano, Nigeria have decided to take up the use of social media to

emancipate and empower themselves by renegotiating their personal wellbeing and autonomy towards social, economic and political freedom.

Analysis and Discussion

We used the Sen's (1999) five instrumental freedoms as pillars for the case study analysis with the aim of understanding the developmental opportunities associated with the usage of WhatsApp by women for their daily livelihood activities.

Political Participation and Transparency Guarantees

In our study, WhatsApp enabled the women to voice their opinions and political views. In every community, there are usually various WhatsApp forums that are formed by the women leaders of the communities. These women leaders are female representatives of a political party in a specific electoral ward and they distribute messages aimed at mobilizing political support for their party. They deal directly with female voters and serve as an intermediary between the voters and the respective candidates. The WhatsApp forum provides an avenue for the woman leader to share updates about programs and projects being executed by the politicians. As a member of the forum, a person is allowed to voice out their opinion about issues in the ward that need to be addressed by the concerned official as shown in the quote below:

“Initially I always wondered how to communicate with elected officers especially those located in Abuja. We only saw them during the election period but now this online group allows me to interact with them more frequently using the women leader as the intermediary”

The women used the group to also hold the elected officers accountable for all promises made during election campaigns. However, many of the women mentioned despite their demands for the stewardship of the political office holders, they usually are never gotten back to from the women leader as shown in the quote below:

“We have asked for an account of stewardship from our senator since he got elected, but no feedback up until now. The women leaders keep telling us they will get back to us when they meet up with the elected officials....we are yet to hear from them”

Access to political representatives in Nigeria is very difficult since a majority of them devote a significant amount of time lobbying for business contracts and deals which they have vested interest in instead of attempting to solve the problems faced by their constituents. Also, many of these political representatives hardly feel any sense of obligation to serve their constituents since many of them got elected via an electoral process that has always been marred with corruption and voting malpractices. Additionally, some women noted cases of being blocked or removed from the group because they criticized some of the elected representatives. According to one woman, she noted that:

“Each time we watch the sitting of the national assembly on the television, we never see our representative. This is his second term and he has never passed any bill since he got elected. I criticized him for that and told him to wake up in the group and as a result I got blocked and removed from the group. The so-called women leaders prefer we praise their political jobbers rather than put them on their feet to work. Many women feel threatened to join these groups”

In Nigeria citizens are usually scared to voice out their opinions or criticize political office holders. There are several cases where people have been arrested, victimized, beaten and remanded in jail for criticizing elected officials on social media platforms. The findings of this study suggest the need for reforms in the freedom of expression and speech act to enhance the right of opinion without government sanctions.

Social Opportunities

By allowing people to share information in an inexpensive manner, WhatsApp has empowered the women to share educational information. As far as health education is concerned, the women have been using the WhatsApp group to share information on sanitary practices, family planning, sexual health, disease outbreaks and warnings about any fake or adulterated products in the market. The findings of the study showed that whenever some of the women who were enrolled in educational programs had problems with their courses, they usually share problems on the group chats for help. Women who couldn't understand their children's home assignments also asked members of the group for help on how to go about guiding their children on their assignments. A majority of the women interviewed also used WhatsApp for "virtual Islamiyah" (Islamic Studies Centre). This involved them being part of a group where the "Muallims" (Islamic Scholars) were the administrators of the groups. The conditions for joining the group were that you had to be a graduate from any Islamiyah that is, a person had already learnt the entire Holy Quran. Four different subjects: Hadith, Sirah, Fiqh and Tauheed were assigned to the four days of a week. On the day assigned to a particular subject, the Muallim would post the necessary material for example "Hadiths" (Traditions of the Prophet Muhammad SAW) and then would discuss its meaning and teachings. If a student had a question she would post it and receive immediate answers from the specific Muallim. Debates also referred to as "Muhawara" were also a part of the activities carried out. According to one of the women:

"When I got married and left home, one of the things I missed the most was going to Islamiyah. As a housewife I found it difficult to find time to go Islamiyah. But with this group now I am learning from the comfort of my own home".

However, some other group of women complained that some of the Muallims were promoting and teaching extremist views on the WhatsApp group, hence breeding extremist followers. It should be noted that WhatsApp allows people to share information on a platform that is not easily monitored by state or government agents. Also, findings of this study have shown that the WhatsApp has helped some of the women improve their writing and language skills especially when they make wrong spelling mistakes and they are corrected by the AutoCorrect function. By texting, sending voice notes, taking and sharing pictures and videos, WhatsApp has enabled these women to be more media literate.

Economic Opportunities

The WhatsApp group forum has enabled the women to conduct business sales by marketing their products and services. These entrepreneurs usually send photos of the products and services to prospective clients to have a precise image of what they are planning to buy. A customer is allowed to choose the method of payment and also the method of delivery, that is, pay beforehand or after delivery:

"I post pictures of my products on the WhatsApp group, people go through the pictures and choose the items they want. Next I send them the price of the selected item(s). If they are ok with it we discuss the method of payment and delivery".

These businesswomen have also used this forum to reach out to their customers on changes in prices. With the current economic situation in the country, market price fluctuations occur on a daily basis. The women used the forum as avenue where they post and discuss changes in market prices. This included the prices of the various items they sold as shown in the quote below:

"I use WhatsApp to keep my customers informed about changes and likely changes in prices of products. This helps me avoid inconsistencies with my customers".

When asked how all this had affected their businesses, they stated that it gave them access to more customers as they could now sell their products to customers that were located miles away and sometimes even different regions and states of the country. One of the women stated that:

"I met a lady that lives in Yola (910 kms away from Kano) through WhatsApp and now she has become one of my most trusted and loyal customers, I send her products worth thousands of naira and I have never met her physically before".

More customer reach and more sales resulted in larger profits for them. With the expansion of the scale their businesses some of them who had previously seen the idea of having a bank account as unimportant had a change in perception:

“.... I always saw having a bank account as only useful for people that worked. However, now that I have customers in different parts of the city and country thanks to WhatsApp, mobile banking has made it possible for me to receive payment for my products in the shortest time. I now have 2 bank accounts that I use for my business”.

Postings about jobs and vacancies was also formed part of the discussion in these WhatsApp groups. These jobs included household jobs, events and catering. Those who were interested usually contact the employers and interviews were arranged using WhatsApp voice and video calls.

“My niece got a job as a hairdresser using this forum. One of the ladies posted the advert and I indicated interest for my niece. I gave her my phone and the interview was conducted via the WhatsApp video call”.

However some of the women complained that sometimes fake job were being posted on to the forum. Others complained of fraudulent people joining the WhatsApp group to defraud the women of their money as shown in this quote:

“I met the random women online and she shared some of her products....I agreed to buy from her... I sent her the money and I never got my products...the admin of this group need to find a way to verify members' else scammers would keep on defrauding members”.

Considering the findings collectively despite complaints of fraud the use of these WhatsApp forums has afforded these women with the opportunity to conduct and expand their businesses, make greater profits, save money, seek employment and retain customers.

Protective Security

In our study, the WhatsApp forums allowed members discuss security situations within their communities. As a result of past bombings of Kano by Boko Haram terrorists, each community has an organized neighborhood security watch group saddled with the responsibility of protecting the community. These groups all have a WhatsApp group where each and every household is required to be a member. Updates from the police, watch lists, areas to avoid and points on how to spot suspicious behavior were part of the information posted on these groups. According to one of the women who is in the security watch group, she noted that:

“We usually have curfews in the community, from 10pm there is no movement within our neighborhood until 5am in the morning, however if members are expecting visitors in the night, they usually post the details of their visitors on the group and we verify them when they come in. Also, we usually post message on update of security reports from government and curfew times”.

For group members that were not fond of listening to the radio, the forum served as a medium for them to receive vital information on security.

“..... I liked going out a lot and was not a fan of listening to the radio. With the insurgency attacks in Kano I was really scared of going out and was not sure what to look out for. The group provided me with information that made me feel safer and better informed while going out....”.

Insecurity led to a rise in criminal activities such as kidnappings and burglary. Whenever, a person goes missing, members post pictures of the missing person. Furthermore, when the security share pictures of wanted criminals, the information is also shared on the WhatsApp group. According to one of the women, she noted that:

“Recently, a wanted criminal was caught here in our community by the youths and that is because his pictures have been going around all neighborhood security WhatsApp groups and as such people were vigilant. This has been so helpful to our community in this difficult time where we have been faced with rise of criminal activities”.

However, the WhatsApp forum has not been completely effective in tackling security issues. According to one of the members:

“Once an ongoing robbery was taking place at a neighbor’s place, the lady did not have credits to call and she posted messages on the WhatsApp group, but due to network issues, the message came very late. By then the robbers had already concluded their operations”.

Recently, the Boko Haram terrorist have been bombing telecommunication infrastructures across Northern Nigeria and also as result of low bandwidth connection, there has been poor mobile network coverage.

Conclusion

In this paper, we examine how WhatsApp; a social media platform is empowering women in the remote city of Kano, Nigeria. This study was informed by Sen’s (1999) five instrumental freedoms, hence we used some concepts of development economics as a theoretical lens to understand the extent to which WhatsApp, as a communicative space is enabling Nigerian women to participate in developmental activities. The study findings provide evidence of social media’s capacity to improve women’s wellbeing via collective dialogue and engagement. Overall WhatsApp served as a tool that contributed to the instrument freedoms of women to participate in social, economic and political activities. Also, several contextual factors such as poor network coverage, online fraudsters, ineffective monitoring mechanism, government censorship and lack of free speech gave rise to the capability deprivation of the women to fully empower themselves. Hence, ICTs alone cannot ultimately contribute to human development unless arrangements are available to allow users convert this tool in ways that will enhance their freedom to participate in social, political, and economic activities. These findings are in line with the discourse on women empowerment/gender issues and ICTs within the ICT4D literature where evidence has suggested that the use of ICTs does not necessarily enhance women empowerment. Rather there are socio-cultural factors that deter women from leveraging these technologies for empowerment. The findings of this study have implications on educational and socio-economic policies targeted at women empowerment in developing countries. Particularly in Nigeria, reports have shown high rates of illiteracy and poverty amongst women, with the government implementing programs to tackle these issues. Thereby, understanding how and when empowerment occurs as well as factors hindering empowerment of women enables policy makers to implement policies that would significantly enhance women empowerment and development. In proposing areas for potential ICT4D research, the limitation of this study is acknowledged. This study was limited to a single case study and was carried out under a severe time frame. Although there is scope for conducting a longitudinal study on the basis of the existing result in order to provide more insight on how WhatsApp is affecting development in Africa.

REFERENCES

- Alkire S 2005. Why the capability approach. *Journal of Human Development* (6)1: 115–133.
- Braun, V. and Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), pp.77-101.
- Badran, M.F., 2015, May. Empowering Female-Owned SMEs with ICT in A Group of Selected Arab Countries and Brazil. In *International Conference on Internet Science* (pp. 30-48). Springer International Publishing.
- Buskens, I., 2010. Agency and reflexivity in ICT4D research: Questioning women’s options, poverty, and human development. *Information Technologies & International Development*, 6, pp.pp-19.
- Buskens, I. and Webb, A., 2009. African women and ICTs. *International Journal of Gender, Science and Technology-GST*.
- Cornish F (2006) Empowerment to participate: a case study of participation by Indian sex workers in HIV prevention, *Journal of Community and Applied Social Psychology*, 16: 301–315.
- Dasuki, S.I., Abbott, P. and Azerikatoa, D., 2014. ICT and empowerment to participate: a capability approach. *Information Development*, 30(4), pp.321-331.
- Dasuki, S. and Abbott, P., 2015. "A socio-technical analysis of ICT investments in developing countries: A capability perspective". *The Electronic Journal of Information Systems in Developing Countries*, 67

- Gallivan, M. and Tao Y, 2013. "A Longitudinal Scientometric Analysis of Research Published in IFIP 9.4 (2002-2013)" (2013). *GlobDev* 2013. 12.
- Gigler, B.S., 2004. Including the Excluded-Can ICTs empower poor communities? Towards an alternative evaluation framework based on the capability approach. In 4th International conference on the capability approach.
- Heeks, R., 2010. Do information and communication technologies (ICTs) contribute to development?. *Journal of International Development*, 22(5), pp.625-64
- ITU, 2005. ITU Internet Reports 2005: The Internet of Things, URL:// <https://www.itu.int/net/wsis/tunis/newsroom/stats/The-Internet-of-Things-2005.pdf> Accessed (31/02/2016).
- ITU, 2015. Measuring the Information Society Report 2015, URL:// <http://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2015/MISR2015-w5.pdf> Accessed (31/02/2016).
- Kabeer, N. 1999. Resources, agency, achievements, reflections on measurements of women empowerment. *Development and Change*, 30 (3): 261–302.
- Kleine, D. (2013). *Technologies of choice? ICTs, development, and the capabilities approach*. MIT Press.
- Maier, S. and Nair-Reichert, U., 2007. Empowering women through ICT-based business initiatives: An overview of best practices in e-commerce/e-retailing projects. *Information Technologies & International Development*, 4(2), pp.pp-43.
- Mbarika, V.W., Payton, F.C., Kvasny, L. and Amadi, A., 2007. IT education and workforce participation: A new era for women in Kenya?. *The Information Society*, 23(1), pp.1-18.
- Narayan, D. 2005. Conceptual framework and methodological challenges. In D. Narayan. *Measuring empowerment: cross disciplinary perspectives*. Washington DC: World Bank
- National Bureau of Statistics, 2006. National Core Welfare Indicators Survey 2006, URL:// <http://www.nigerianstat.gov.ng/nada/index.php/catalog/30> Accessed (31/02/2016).
- National Population Commission, 2006. The 2006 Census report, URL:// <http://www.population.gov.ng/index.php/censuses> Accessed (31/02/2016).
- Oates, B, J. 2006. *Researching Information Systems and Computing*. London, Sage.
- Oreglia, E. and Srinivasan, J., 2016. ICT, Intermediaries, and the Transformation of Gendered Power Structures. *MIS Quarterly*, 40(2), pp.501-510.
- Parpart, J., 2002. Lessons from the field. Rethinking empowerment gender and development from a post (post-?) development perspective.
- Robeyns I (2005) The capability approach: theoretical survey. *Journal of Human Development and Capabilities* (6)1: 93–117
- Roztocki, N. and Weistroffer, H.R., 2015. Information and communication technology in transition economies: an assessment of research trends. *Information Technology for Development*, 21(3), pp.330-364.
- Somerville, P. 1999 Empowerment through residence. *Housing Studies* (13)2: 233–25.
- Sen, A. 1999 *Development as freedom*. Oxford: Oxford University Press.
- Trauth, E.M., 2013. The role of theory in gender and information systems research. *Information and Organization*, 23(4), pp.277-293.
- Usman, U.S., 2015. Women and Poverty in Nigeria: Agenda for Poverty Eradication. *Women*, 5(3).
- Walsham, G., 2006. "Doing Interpretive Research". *European Journal of Information Systems*, (25), pp. 320-330.
- Walsham, G., Robey, D. and Sahay, S., 2007. Foreword: Special issue on information systems in developing countries. *MIS Quarterly*, pp.317-326.
- Walsham, G., 2010. ICTs for the broader development of India: An analysis of the literature. *The Electronic Journal of Information Systems in Developing Countries*, 41.
- Walsham, G 2017. ICT4D research: reflections on history and future agenda. *Information Technology for Development*, 23(1), 18–41.
- Warschauer M. 2003. *Technology and social inclusion: rethinking the digital divide*. Cambridge: MIT Press.
- Wheeler, D.L., 2007. Empowerment zones? Women, Internet cafés, and life transformations in Egypt. *Information Technologies & International Development*, 4(2), pp.pp-89.