Social Media and Public Policy Process in Africa: Enhanced Policy Process in Digital Age

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Abstract

In recent times, civic engagement in policy process has been emphasized globally, but channels to facilitate public participation in the policy process in Africa remain unexplored. Given the conservative nature of policy process in most of Africa countries, the study examines levels of social media use for civic engagement among government/policymakers and propose a model to enhance policy process in a digital community using Easton’s theory of political analysis. The study employs case studies, and descriptive and correlation analysis covering 53 African countries. Findings revealed that social media use has taken new shape with respect to citizens’ engagement in the electoral process, but its use for civic engagement in policy process is very low (and below the global average); increased investment in telecommunication infrastructures is yet to have a significant effect on human capital ICT literacy in Africa. Investment in ICTs should include the building of human capital ICT literacy, and the government/policymakers should explore online citizens’ engagement and adjust policies to incorporate technology in sub-regional and national development plans.

Keywords: Social Media, Public Policy, Civic Engagement, Soft Power.

1. Introduction

Conventional instruments of public policy are becoming inadequate for addressing phenomena present in the digital age. It seems there is a “missing rib” for which the traditional policy process seeks to complement as the world goes digital. The unprecedented proliferation of social media engendered by the internet boom has provided a novel platform for virtual connection that permits civic engagements in social, economic, and political life. Social media has emerged as a fundamental game changer in that it connects governments, citizens, and their ideas across the most complex of geographical divides. The new technological tools provide an opportunity to gather real-time insight: much of government policy is based on out-of-date information, with yesterday’s questions answered today. Hence, there is a need for real-time instruments to address social, political, and economic phenomena in the digital age.

In recent times, citizens’ engagement in policy process has been globally emphasized. At the United Nations Conference on Sustainable Development, the General Assembly Resolution 288 of 2012 entitled The Future We Want, states in
paragraph 13: “We recognize that opportunities for the people to influence their lives and future, participate in decision-making and voice their concerns are fundamental for sustainable development” (ECOSOC, 2012). To strengthen the resolution on civic engagement, the 51st Session of the United Nations on Social Development concluded that: “the empowerment and participation of all members of society in social, economic and political life is critical to achieving sustainable development” (ECOSOC, 2013). Hence, governments need sophisticated real-time tools to drive civic engagement and establish mechanisms for effective policy implementation and feedbacks in digital age.

Recent statistics show that 1.32 billion people of the world population make use of social media for social, political, and economic purposes (WIS, 2014). More than 66 percent of Americans are online and the use of social media is increasing in triple folds year after year (WIS, 2014). In the Arab World, about 71 million people make use of social media among 135 million people on the internet and social media has been used increasingly to promote good governance and Arab social integration (MBRS, 2013). In China, the use of social media has become instrumental to public diplomacy and social transformation (Lagerkvist, 2005), though popular social media like Facebook and Twitter were barred and replaced with locally developed ones (like Sina Weibo) for online engagement (Mou, 2011).

Africa is a growing market region for mobile technology adoption and the use of social media has been on credible increase (Dalberg, 2013). Recent statistics indicates that internet users in Africa comprise about 8.6% of the World’s internet users, with an exponential increase in active users of social media every month (WIS, 2014). In the past decade, the number of Africans engaging in online activity was relatively few, but the numbers have increased dramatically to about 240 million with social media holding the highest proportion of online engagements (Ipsos-Markinor, 2012; ITU, 2012). Recent revolutions in Egypt and Tunisia drew governments’ attentions to the potential of social media tools in Africa (Khair E., 2011). Such revolutions have resulted in a subsequent shift in social media use towards political and activist agendas in various countries of Africa. (Ishengoma, 2013; Salanova, 2012).

Additionally, social media can be seen as a platform and an incubator for business development, and as such, Makinwa (2012) comments on the potential for the African continent’s economic growth. In a similar vein, Yu-Shan (2013) opines that social media technology has the capability to connect the African public and translate to a strong political tool on the continent.

If we are to realise the dreams of the internet pioneers, then we need to challenge the context and demand a fresh set of proposals to empower public oversight of and participation in online networks (Duncan 2012).

However, the credibility and sufficiency of social media as a tool for policymaking remains controversial among scholars, policymakers, and governments globally. As a consequence of these mixed views, this study assesses levels of social media use for civic engagement in Africa, (2) and examines the potential of social media to inform public policy process in Africa (3) in order to to propose a model to enhance policy process in a digital community.
2. Literature Review

2.1 Conceptualizing Social Media and Public Policy

The development of social media tools over the last decade has altered modes of communications between governments and citizens. Social media has opened ways for greater political participation, thereby creating a new social dynamic. It is an internet-based tool that unifies geographically dispersed individuals on virtual platforms through user-generated content. Leavey (2013) defines social media as a social structure made of nodes comprised of individuals or organizations tied by one or more specific types of interdependencies, such as values, ideas, financial exchange, friendship, kinship, dislike, conflict, or trade. In reality, the innovative tool brings together people of common value systems, visions, and aspirations to collaboratively form opinions on issues of concerns in virtually-connected environments. Pinzón (2013) posits that social media is part of a wider trend in a communication landscape that is characterised by mass collaboration; it is responsible for a significant portion of time expended online. In the context of this study, social media refers to the online tools that permit real-time interactions and feedbacks (for instance, Web 2.0); it is a broad term that extends beyond Facebook, Twitter, and LinkedIn to include e-government.

Social media can also be seen as a productive tool that relives social struggle. The concept of public policy was developed in response to heightened social struggle and duties of governments to ensure citizens’ welfare (Nyong’o, 1998). Public policy is concerned with how societal issues are defined, constructed, and approached on a political level, and is used to examine the effects of a government’s actions or inactions. Although the inclusion of inaction may seem counterintuitive, public policy encompasses all aspects of a government’s decision-making process.

Public policy covers a wide range of issues which affect the public; it includes economic, social, and political issues that are subdivided into strata such as education, health, environment, security, agriculture, finance, etc. According to Smith (2003), policy moves through six steps: agenda setting, policy formulation, decision making, implementation, evaluations and termination. However, policy process is not restricted to a linear timeline: it can be improvised or tailored in a predefined manner by actors or the dictates of some set objectives. Research into the policy process is designed to ask how problems and policy solutions come to be defined, by whom, and with what effect. IDS (2006) states the following characteristics of policy process:

- Policy-making should be understood as an analytical or problem-solving process;
- Policy-making is incremental, complex, and messy—it is iterative and often based on experimentation, learning from mistakes, and taking corrective measures. Therefore, there is no optimal policy decision;
- Policy process involves overlapping and competing agendas which may not allow total consensus among concerned parties over what the essential policy problem is;
- Policy process includes some perspective at the expense of others.

In each stage of policy processes, technology has an important role to play in the digital age. The policy process requires quality inputs, decision making,
and feedback mechanisms to be successful. One important quality of enhanced policy is wide participation in the policy process. Social media thereby presents an opportunity to incorporate a multitude of opinions or alternatives during policy processes. Citizen engagement is crucial in directing policy to the most pertinent issues within the receiving locality (Imurana, 2014). A recent study on online activity in social media for public policy, social, and political issues of some selected countries reveals that developing countries seem to have the highest proportion of engagement in online public policy and social and political issues (Ipsos-Markinor, 2012). The argument was based on the assertion that the democratic history and experience of a country play a role on the magnitude of online engagements and extent of social media use. That is, a grown-up democratic country tends to have a more organized system of channels for citizen to air their views than do emerging economies. Therefore, social media might provide more of a focal point in African countries than other developed countries. The argument supports findings that social media has the highest proportion of online engagement in Africa (ITU, 2012; WIS, 2014).

2.2 Social Media and Political Change in the 21st Century

Political strategies are increasingly based on social media principles: dialogue, and participation (MCGirt, 2009). United States President, Barrack Obama, employed social media to drive public opinion and gain support of electorates with about two million personal profiles and 35,000 groups by simply creating mybarackobama.com. The political campaign strategy has been recognised as the most successful social media campaign (Leavey, 2013; Nnanyelugo, 2011). The success of Barrack Obama’s strategies facilitated the use of social media tools for political campaigns in other countries of the world.

"The genius of democracies is seen not in the great number of new words introduced but even more in the new ideas they express (Alexis, 1969)."

However, the use of social media as a fundamental game changer to bring political change and inform the development of public policy process remains controversial among scholars, practitioners, and policymakers. Morozov (2011) contends that the internet boom does not automate democratization in that social media tools can be employed in helping political activists realize their demands as powerfully as they can back up authoritarian regimes. Deibert (2014), supporting Morozov (2011), argues that internet control mechanisms are advancing and that more governments use more sophisticated methods to filter and monitor web-based contents and websites of opposition movements. Thus, social media tools can also have an adverse effect: its use by state actors could lead to completely opposite outcomes called the “dyadic nature of social media.” Pragmatically, the new technological tool can produce dyadic effects: it can promote democratization or strengthen authoritarianism or despotism. More often than not, governments are known for their late adoption of technology when compared to private institutions and citizens who are in a better position to pursue their interests tactically. The barring of network connections during the 2011 revolution in Egypt strengthened activist initiatives to devise alternatives using the same social media (Khamis, 2012; Muller, 2012).

Furthermore, some scholars have jettisoned social media as leaderless tools. Hassan (2011) argues that events fostered through networkable
technologies lead to a “power vacuum” because there are no roots to back up an online social movement—social media has neither visible leadership nor power for real change. Lynch (2011), similar to Hassan (2011), submits that online activists cannot defend their interests because there is no visible leader present during the negotiation process and hence, they become frustrated.

There is probably no substitute for intimacy that forms when individuals are physically drawn together (Putnam, 2000).

In support of Putnam (2000), Rusciano (2001) argues that the internet prompts people to lose sight of the ability to share and form physical relationships with one another. In another words, Wellman (2001), using the concept of “networked individualism,” emphasizes that new technologies are shifting the core communities from physically-fixed and bounded groups to social networks. Arguably, the development of social media was driven to bridge a divided world by connecting people who are geographically separated.

On the contrary, Etling (2009) submits that social media might be the only means left for citizens in authoritarian regimes to influence government, fight corruption, or defend their rights. Of course, this happened during the 2011 revolution in Egypt, when the activists relied solely on social media for information supplied to the international community (Cottle, 2011; Salanova, 2012). Information provided on social media often triggers actions and provides directions during negotiation processes, however invisible online activists seem to be. Social media remains the fastest and richest tool to drive results in a despotic regime.

Despite arguments against social media, it remains powerful as a tool to bring about democratic changes in Africa, as evidenced in Tunisia, Egypt, Libya, Ghana, Nigeria, Zambia, Uganda, Kenya, and South Africa (Issaka, 2011; Kasozi, 2011; Khair E., 2011; Muller, 2012; Mwilu, 2011). Two exceptional cases, Nigeria and Gambia, provide interesting scenarios of political participations through social media. During the 2011 presidential elections in Nigeria, President Goodluck Jonathan strategically utilized social media to declare his presidential candidacy on Facebook in around September 2010 to over 217,000 Facebook followers. By April 2011, which was the month of the election, the number of Jonathan’s followers on Facebook was rounded to a million. Some civil society groups, political parties, and the Independent National Electoral Commission (INEC) also used social media to monitor electoral process and engage voters (Nnanyelugo, 2011).

In 2011, the Zambian presidential election illustrated an increased use of social media (especially Facebook and Twitter) by citizens, which was further encouraged by Bantu Watch, a civil society group that encourages voters to report incidents involving election-related violence and corruption via the online link, “zambialections.” Citizens participated in the electoral process, and the election went peacefully (Mwilu, 2011). Social media strengthens advocacy, activisms and increases protests against economic hardships, government repression, and corruption. Tunisia’s ‘Jasmine Revolution’ and Egypt’s revolution were mainly organised and facilitated through social media. Citizen engaged in Facebook and Twitter to mount protest against government corruption and the authoritarian regime during 2010/2011 (Muller, 2012).

In 2011, Ugandans also adopted social media to advocate and protest against economic hardships and high inflation of commodities prices (Kasozi,
2011). Issaka (2011) reveals that violent protests in the United Kingdom mid-2011 were driven by Facebook, Twitter and BlackBerry Messenger. Iran, China, UK, and the United States have used social media for public diplomacy (Crouch, 2012; Salanova, 2012; Scherer, 2012; Yu - Shan, 2013). Social media was adopted as an active tool to spread news of Haiti’s earthquake to millions of internet users who subsequently donated to disaster relief. The digital endeavours positively affected lives and forged volunteer efforts (Leavey, 2013). Social media re-energises government, making it more efficient, transparent, accountable, and open to the active participation of the citizens it serves.

3. Social Media and Public Policy Process in African Countries

Within Africa, social media practices have appeared in extraordinary magnitudes. They have led to revolutions (Egypt, Tunisia and Libya), strengthened and monitored best practice during elections (Nigeria, Ghana, Botswana and Zambia) and contributed to wider growth on the continent (Dalberg, 2013; Lesch, 2011; Nnanyelugo, 2011). In the past decade, the number of Africans engaged online was relatively few compared to about 240 million today (WIS, 2014). But today, social media holds the highest proportion of online engagement in Africa (Issaka, 2011). Dalberg (2013) examines the impact of the internet on development in Africa and found that public opinion is increasingly internet based but its use within the African continent as a policy negotiation tool remained untapped.

Generally, public policy processes in Africa are very conservative, with no contributions or inputs from larger communities directly or indirectly affected by policy (Imurana, 2014; Makinwa, 2012; Obasi). This poses serious omission given that public policy is an influential tool for understanding and solving social problems (Nhema, 2004). A recent study on public policy process in Africa reveals that the social dichotomy between policymakers and citizens, inadequate information, politicization of policy implementation, and weakened feedback mechanisms are factors responsible for the formulation of unrealistic policies in the continent (Imurana, 2014). Social media has emerged as a fundamental game changer to complement the shortfalls of traditional public policy process by connecting governments or policymakers directly to citizens. Smith (2003) posits that citizen engagement must be employed to achieve policy directions that are expected to have a major impact on them. Engagement of citizens during the policy process provides an opportunity to address conflict with values or difficult policy choices, and investigate emerging issues that need considerable learning to reach consensus by reconciling competing interests. Social media provides a platform for common citizens’ inputs, in the form of opinions or in some cases expert opinions, during policy negotiation processes.

4. Enhanced Public Policy Process in a Digital Community

Using David Easton’s theory of the political system, public policy is divided into several parts: policy environment, inputs process, a conversion process (decision-making system), policy outputs, and feedback mechanisms
At each stage of the public policy process, factors such as social distance between policymakers and the general public, information asymmetry, the politicisation of policy implementation, and weakened feedbacks mechanism have been identified as challenges of public policy processes in Africa (Imurana, 2014; Obasi). Africa is one of the fastest growing regions in technological adoption, and prior studies show that social media holds the highest proportion of online engagements in Africa (ITU, 2012). Notwithstanding, the use of social media within the African continent as a policy negotiation tool remains unexplored. Following David Easton’s theory of political system, a framework was developed to enhance the public policy process in the digital age as shown in Figure 1 below.

Figure 1: Enhanced public policy process in a digital community. (Source: Authors, 2015).

In order to embark on successful public policy decisions, governments or state actors need to influence citizens through effective media tools in order to realize gains. This kind of emotional and psychological influence is called “soft power” (Jing, 2012). Social media can be a useful tool for obtaining soft power. China adopted soft power in its foreign policy to gain access to developing countries, especially Africa and South Asia. In the early stages, there was resistance from African leaders to the interests of China in Africa. Tactfully, China penetrated Africa through hospitality and interactions (i.e. the continuous visiting and hosting of their leaders until a cordial relationship was established). Today, China has successfully established bilateral relations with most African countries (Yu-Shan, 2013). These relations have led to the development of infrastructure such as super highways, airport constructions, hydro electric plants etc. in Angola, Kenya, Republic of Congo and other parts of African countries.
Hence, governments or state actors need to identify effective media tools in order to get citizens involved in the policy process.

Citizens have to be engaged to understand problem situations (environment). It is possible that policymakers have shadow knowledge of the phenomena that prompted the policy initiation process. In this situation, citizens become material evidence to transform shadow knowledge and bridge the knowledge gap. Citizens’ engagement through social media lends policy process too much flexibility as indicated by the open space with dotted arrows (Figure 1). Imuruna (2014) emphasizes the importance of citizens’ engagement during the policy process so as to direct policy to the satisfaction of the receiving locality.

Figure 1 explains the policy process in a digital community. In countries where there is no civic engagement (both online and offline), a conservative policy process is usually adopted. Few selected cliques participate in the public policy process. This is indicated by a direct movement from a black rectangular box (governments or policymakers) to the (policy) environment. The cliques are part of the government that have shadow knowledge of problem situation. The movement continues until the feedback stage. In the event of no productive outcome, the cliques can manipulate feedback reports given that citizens’ opinions are not valued. The conservative policy process makes no provision for civic engagement during the policy process. Hence, the possibility of formulating unrealistic policy is apparently feasible.

In countries where citizens’ engagement is valued, the public policy process is usually democratic and consultative. A consultative policy process makes for quality inputs, better decision-making processes, and effective implementation and feedback mechanisms. Social media promotes a consultative policy process. In Figure 1, the policy process starts from preliminary discussion of the problem situation on a real-time basis through the engagement of citizens online or both online and offline as depicted through the triangle. The triangle connects governments to citizens, both online and offline. Citizens are engaged right from the agenda setting (environment) to the feedback stage. Civic opinion can inform the progress, withdrawal, or altering of policy at any state to ensure that enhanced policy is formulated. The consultative policy process enjoys much flexibility since one stage is logically interlinked to another (Figure 1).

It is important, however, to note that the model in Figure 1 does not capture the factors that aid online engagement, the influence of leadership style on civic engagement (online), or how to select from pools of public opinion on social media. Social scientists are still in search of best scientific methods to ensure the credibility of evidence obtained from social media. Auer (2011) argues that social media could be a potential danger owing to the large quantity of what is transmitted, thereby leading to misinformation—sorting out information from junk on social media networks until they gain reputation poses a challenge. Whatever the case, it is important to identify online communities where citizens exchange relevant information to enhance policy process. In fact, the ability of governments to develop an electronic portal that permits online interactions with citizens on a real-time basis makes for the easy recognition of online users.

5. Analysis and Discussion

In the context of the study, social media refers to online tools that permit real-time interactions and feedbacks (for instance, Web 2.0); it is a broad term that extends beyond Facebook, Twitter, and LinkedIn to include e-government.
Generally, several variables measure the level of social media use for civic engagement. In the analysis of the impact of social media on Arab region, MBRSG (2013) used the internet penetration rate, Digital Access Index (DAI), Income (GDP per Capita), social media penetration (Facebook), internet freedom, and other development indicators like the Global Gender Gap Index and Human Development Index. This study adopted the United Nations’ model of the Electronic Government Development Index (EGDI) to assess the extent of social media use for civic engagement among 53 Africa governments. EGDI is a composite indicator which measures the use of information communication technology to deliver public service at national level. The component of EGDI include: the Online Service Index (OSI), Telecommunication Infrastructure Index (TII) and the Human Capital Index (HDI). Added to these variables was Facebook penetration to establish a relationship between social media and internet penetration in Africa.

This study utilised data from WIS (2014) and UNDESA (2014). Internet penetration and social media penetration was obtained from WIS (2014) and EGDI, OSI, TII, and HCI from UNDESA (2014). The study employed descriptive statistics and correlation analysis through SPSS version 21.

Figure 2 depicts logical interlinks of variable measures of the level of social media use for civic engagement in Africa. Movement between the development status of information telecommunications (TII) and the scope of online service (OSI) shows that Africa has invested in information telecommunication technology beyond the global average, but this has translated little into online engagement. However, movement between human capital (HCI) and TII projects are different case—level of investment in TII is not commensurate with inherent human capital. Overall, Africa’s EGDI is below the global average.

Table 1 shows results on the level of social media use for civic engagement in Africa. Africa’s EGDI (0.02661) falls below the world average of 0.4712 with a standard deviation of 0.01242 (t-statistics 12.135, p-value <0.001). Compared to other regions of the world (Table 3, Appendix 1), Africa has the lowest electronic government development index. This implies that the level of
social media use for civic engagement is very low in Africa. The scope of online services (t-statistics 11.292, p-value <0.001) and the development status of telecommunication (t-statistics 20.902, p<0.001) were above the world average, but inherent human capital (t-statistics 0.962, p (0.340) > 0.001) was below average. By implication, increased investments in telecommunication infrastructures have not imparted much on human capital ICT literacy in Africa. ICT illiteracy is still at a very high rate despite rising investments in ICTs by governments. The level of human capital literacy in a country might facilitate a degree of online engagement by its government. The result represents Africa on average; individual countries have different results: some better and others worse off. Morocco and Mauritius have been identified as leaders in the online engagement of citizens in Africa (UNDESE Survey, 2014).

Table 2 reveals the results of the relationship between internet penetration and social media use in Africa. Holding constant other factors influencing internet penetration, internet penetration and social media are highly positively correlated (0.837**) at the 1% significance level. This implies that the internet penetration rate aids social media use in African countries. The result was similar to that of Dalberge (2013), who found that social media holds the highest proportion of internet users in Africa. As citizens continue to have more access to information telecommunication and the level of human capital ICT literacy increases, social media use for making intelligible decisions would increase in Africa countries.

6. Conclusion and Recommendations

The emergence of social media over a decade has altered the dimension of communication between governments and citizens. Social media has opened channels for a more participatory government, new social dynamic, and a more inclusive civil society. Globally, civic engagement in policy process has been emphasized and governments need sophisticated real-time tools to drive civic engagement and establish mechanisms for effective policy implementation and feedback. In order to facilitate empowerment and citizens’ participation in social, political, and economic life, a model was developed to enhance policy processes in a digital age using Easton’s theory of the political system. It is worth noting that the model does not capture the factors that aid online engagement, influence leadership style on civic engagement (online), or how to select from pools of public opinions on social media. Nonetheless, it provides a model for technology-driven citizens’ engagement in a digital age.

In Africa, social media use has taken new shape in terms of citizens’ engagement in the electoral process (Zambia, Ghana, Libya and Nigeria), revolutions (Tunisia, Egypt, and Libya), and protests and advocacy (Uganda). But, the level of social media use for civic engagement in the policy process is very low (below the global average with significant deviation). Increased investment in telecommunication infrastructures is yet to have significant impact on human capital ICT literacy in Africa. There are high records of ICT illiterates in Africa, which affects the choices of adoption of online civic engagement. Investment in telecommunications should include the building of human capital ICT literacy. To achieve this, governments at all levels should encourage public-private partnerships in ICT industries to afford ordinary citizens opportunity to acquire practical ICT skills. Policymakers should also explore citizens’ engagement online and adjust legislation and policies to incorporate technology
in sub-regional and national development plans. Further research is required to explore the level of social media use for civic engagement in individual countries or sub-regions of Africa continent. It is also reasonable to assess the impact of investment in telecommunications on human capital ICT literacy in African countries.
Bibliography


**Appendix A: Tables**

Table 1: Degree of social media use for civic engagement in Africa

<table>
<thead>
<tr>
<th>Variables</th>
<th>Africa</th>
<th>World</th>
<th>Std. Deviation</th>
<th>t-statistics</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGDI</td>
<td>0.2661</td>
<td>0.4712</td>
<td>0.1242</td>
<td>12.135</td>
<td>53</td>
<td>0.000**</td>
</tr>
<tr>
<td>OSI</td>
<td>0.5074</td>
<td>0.3919</td>
<td>0.1758</td>
<td>11.292</td>
<td>53</td>
<td>0.000**</td>
</tr>
<tr>
<td>TII</td>
<td>0.4951</td>
<td>0.365</td>
<td>0.1137</td>
<td>20.902</td>
<td>53</td>
<td>0.000**</td>
</tr>
<tr>
<td>HCI</td>
<td>0.4086</td>
<td>0.6566</td>
<td>0.1678</td>
<td>9.62</td>
<td>53</td>
<td>0.340</td>
</tr>
</tbody>
</table>

** Significant at 1%


Table 2: Correlations between internet penetration and social media use in Africa

<table>
<thead>
<tr>
<th>Variables</th>
<th>Internet Penetration rate</th>
<th>Social Media Use (Facebook penetration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet User (Penetration)</td>
<td>Pearson Correlation</td>
<td>Pearson Correlation</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>.837**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>58</td>
</tr>
<tr>
<td>Facebook (Penetration)</td>
<td>Pearson Correlation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.837**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>58</td>
</tr>
</tbody>
</table>

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


Table 3: Top 20 countries in Africa (Electronic Government Development Index)

<table>
<thead>
<tr>
<th>Country</th>
<th>Level of Income</th>
<th>EGDI</th>
<th>EGDI 2014</th>
<th>Rank 2012</th>
<th>Rank Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tunisia</td>
<td>Upper Middle</td>
<td>0.539</td>
<td>75</td>
<td>103</td>
<td>28</td>
</tr>
<tr>
<td>Mauritius</td>
<td>Upper Middle</td>
<td>0.5338</td>
<td>76</td>
<td>93</td>
<td>17</td>
</tr>
<tr>
<td>Egypt</td>
<td>Lower Middle</td>
<td>0.5129</td>
<td>80</td>
<td>107</td>
<td>27</td>
</tr>
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</table>
### Table 4: Regional Groupings (Electronic Government Development Index)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
</tr>
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<tbody>
<tr>
<td>World</td>
<td>0.4712</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Africa</td>
<td>0.2661</td>
<td>0.2011</td>
<td>0.1478</td>
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<td>0.7202</td>
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<td>Asia</td>
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<td>0.3584</td>
<td>0.6615</td>
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<td>0.6936</td>
<td>0.5695</td>
<td>0.6678</td>
<td>0.8434</td>
<td></td>
</tr>
<tr>
<td>Oceania</td>
<td>0.4086</td>
<td>0.2621</td>
<td>0.2564</td>
<td>0.7073</td>
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</tr>
<tr>
<td>World</td>
<td>0.4712</td>
<td>0.3919</td>
<td>0.3650</td>
<td>0.6566</td>
<td></td>
</tr>
</tbody>
</table>

Source: UNDESA (2014)