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OPERATIONS, INFORMATION & TECHNOLOGY | RESEARCH ARTICLE

The relationship between electronic readiness and corruption reduction: Countrywide data analysis

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Abstract: This study analyzed whether or not there is any correlation between the level of electronic readiness (e-readiness) and corruption in countries. The study was guided by the theory of network society, the Unified Theory of Acceptance and Use of Technology (UTAUT) as well as Technology Acceptance Model (TAM). The study opted for secondary data from 147 countries of the world for both measures of e-readiness (Global Information Technology) and corruption perception index (from Transparency International) for 2014. Statistical analysis was done using correlation and regression analyses. Four sub measures for e-readiness included networked readiness index, environment readiness index, society readiness index, and usage readiness index (independent variables). Results from the study showed there is correlation between the two variables. Based on the objective of this study, it is concluded that the higher the e-readiness, the low the corruption. This implies that one way of combating corruption is to attain good e-readiness index.

Subjects: Governance; e-Business; Information/Knowledge Management; I.T. Research

Keywords: e-readiness; corruption

1. Introduction

Despite the availability of many examples of successful use of information technology to fight corruption, there is a debate on its effectiveness in combating corruption. Despite the advantages, for

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PUBLIC INTEREST STATEMENT

Corruption is one of the major problems facing societies and countries today, however, corruption hurts more poor than rich people. There are a number of ways of combating this problem. This study covers one of them, how ready the countries are in embracing and using information and communication technologies that can act as middle men in many business processes. This research evaluated whether or not there is any relationship between level and probability of adopting information and communication technologies and corruption level using already available data. Data used were for country level. The work has been able to show that, to a great extent, the higher the country is ready to embrace information and communication technology, the lower the level of corruption in that country. This means that information and communication technology can act as one of the good tools to fight corruption.

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example, of automating tax collection systems and digitize public services, without taking local context may make all efforts to computerize not effective. Unfortunately, even technology to fight corruption can be corrupted and hence increase corruption. It is even possible to abuse instead of using technology in combating corruption (ReSPA, 2016).

There are some arguments that extending provision of information and services electronically will combat corruption as it increases transparency. However, countries which need to benefit more from information technology are lagging behind in terms of usage. There are two schools of thoughts regarding the impact of ICT on development. One school believe that ICT will make developing and under developing countries to leapfrog, jump some stages of development because of ICT, while the second one thinks that ICT will make developing and underdeveloped countries to suffer due to lack of good ICT infrastructure. There are a number of concepts in ICT, but this work dwells on the role of e-readiness on corruption reduction.

1.1. Statement of the problem

Before ICT development, most businesses were done on personal to personal contact and such pattern created an ideal condition for corruption. With readily available ICT facilities, low cost of acquiring and maintaining, it is hypothesized that when countries are ready to adopt these technologies, the facilities may assist to lower if not eliminate corruption (Oye, 2013). The reason for this assumption is that ICT promotes and raises transparency, accountability, and civic participation; as well as reduces face-to-face interaction (in many cases, face-to-face interaction is required for corruption to take place). Oye (2013) said that in this digital era, there is considerable progress in use of ICT worldwide. A well-designed system may physical interactions when government service is being delivered to a citizen. E-readiness benefits are increasing in governments and to anti-corruption practitioners. E-readiness has been also used as a transformation tool. However, few researches have been done to evaluate the role of e-readiness on corruption. As countries/organizations continue to use ICT, corruption level still seems to increase. One may wonder whether or not use of ICT has any impact on corruption level. In due regard, this study strived to unravel aspects in e-readiness application in the wake of the fight against corruption.

The objective of research aimed to study the relationship between influence of e-readiness in corruption level in a country. Specifically, the study wanted to:

(a) Evaluate relationship between networked readiness and corruption level;
(b) Evaluate relationship between environment readiness and corruption level;
(c) Evaluate relationship between society readiness and corruption level; and
(d) Evaluate relationship between usage readiness and corruption level;

In addition, the research wanted to check whether or not the same results would be obtained if data are done by geographical locations as well as economic strength of countries.

The study provides empirical evidence on further understanding of ICT particularly influence of e-readiness on corruption level countrywide data analysis and establish an empirical link between them. For policy-makers, results from e-readiness assessment in relation to corruption level can act as a starting point in participating for planning and dialog to provide information or resources to policy-makers, national as well as international organizations that will enable an institution or government to make better corruption accountability and prepare a national action plan in the fight against corruption. While a number of studies have been done, this work cements further the work given the current development in ICT, use current data, and clears the issues which were not conclusive in previous works.

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2. Literature review

2.1. The concept of e-readiness

Electronic readiness (e-readiness) has become a vital policy tool for almost all countries because it enhances trust by citizens by applying principles of good governance (Hassan & Fatimah, 2014). It is becoming highly accepted at the level of governments, organizations, and citizens especially in the growing global open market. E-readiness and its applications have brought about positive changes in economic development (Arce & Hopmann, 2002). E-readiness is considered an important tool to promote transparency, accountability, and as well as to reduce corrupt practices (Wickberg, 2013). E-readiness, in form of websites, mobile phone applications, and the like has been used to facilitate reporting of corruption, access to official information, monitoring efficiency as well as integrity of social services and to make financial information transparent (Oye, 2013). A study that aimed analyzing relationship between e-government and corruption revealed that the more the level of e-government, the less the corruption level (Krishnan, Teo, & Lim, 2013). The more the access to information system, the less the level of perceived corruption (DiRienzo, Das, Cort, & Burbridge, 2007). Despite all these studies, no study had been done to evaluate the influence of e-readiness on corruption reductions.

Following formation of Global Information Technology (GIT) and the e-readiness index some years ago, decision-makers and investors adopted business and financial strategies that allowed them to develop in the context of a fast-moving economy through use of information and communication technology (Osorio, Dutta, Geiger, & Lanvin, 2013). They further said for more than a decade, e-readiness has provided decision-makers with a useful conceptual framework to evaluate the impact of information and communication technology (ICT) at global level. As long as countries benefit from e-readiness and are afraid from being left further behind by Global Society, an increase in digital divide stimulated each country to be part of Global Information Society (Payam, Mohammed, & Mohsen, 2009).

E-readiness of a country refers to the degree to which a country and its economy have developed an ICT infrastructure that has been adopted by individuals and firms operating in that country. It is also stated as a measure of quality of a country's ICT, infrastructure and the ability of its consumers, businesses, and governments to use ICT to their benefit. A country's e-readiness is evaluated based on data published by various organizations. According to the published data, countries across continents show remarkable improvement in terms of networked readiness, environment climate readiness, society readiness, and usage readiness. The GIT published a scale to be used as the score to measure the country's e-readiness. A country or territory's score indicates the readiness index on a scale of 1–7 such that a score at 1 indicates the worst while a score at 7 indicates the best. In this case, the use of GIT data as indicators for e-readiness assessment was paramount to this study. Normally the indices are composite of several indices. GIT provides these indexes:

(a) *Networked readiness index*: According to Osorio et al. (2013), it is defined that the networked readiness measures the environment for ICTs; readiness of a society to use ICTs; the actual usage of all main stakeholders; and, finally, the impact ICTs have on other dependent variables such as economic level, poverty level, corruption level, and other variables that impede society's development.

(b) *Environment readiness index:* Osorio et al. (2013) define that environment readiness gauges friendliness of a country's market and regulatory framework in supporting high levels of ICT.

(c) *Society readiness index:* Society readiness measures the degree to which society is prepared to make good use of an affordable ICT infrastructure and digital content and it includes the infrastructure, affordability and skill (Osorio et al. 2013).

(d) *Usage readiness index:* Usage readiness index assesses an individual, business, and government in their capacity to use ICTs as well as their actual use in their day-to-day activities with other agents. An individual usage pillar measures ICT penetration and diffusion at an individual level (Osorio et al. 2013).

2.2. The concept of corruption

There are several definitions of corruptions. All in common agree that corruption involves misuse of public position for private benefit(s), which include but not limited to bribery, influence, influence and/or nepotism. Corruption is usually defined as "the transgression of formal rules governing the allocation of public resources by officials in response to offers of financial gain or political support." Corruption may be petty one (normally done by junior public staffs) or grand in nature (which can only be concluded by senior public officials). Many governments would prefer to be seen as fighting corruption in order to reduce if not eliminate completely. That is the reason systems like ethics, compliance standards, service level agreements, and regulations are introduced. Yet, corruption is still being considered as one of the main problem in economic gains. The World Bank provides various corruption indicators. Some of these are abnormal cash payments and in various forms; by-passing normal tendering/contractors' procedure(s); invoices being agreed in excess of contract without reasonable cause; and company procedures or guidelines not being followed. Nevertheless, a question to ask "can these be eliminated through an increase in e-readiness level?" Through analysis, the study shows the significant influence of e-readiness on corruption reductions.

There is a debate on the manner corruption impacts on people. There is almost general consensus that corruption impacts more negatively on poor than rich people. Corruption has negative consequences on poverty reduction (Ampratwum, 2008) and cost of doing business (Rose-Ackerman, 1999). Despite availability of many corruption measurements, the Transparency International's Corruption Perception Index (CPI) seems to be the most common because it combines a number of perceptions by multinational corporations (Quah, 1999, p. 3). Abdulai (2009) argues that it is a challenge to control corruption because those who are supposed to control corruption may be tempted to be involved in corruption, especially top political elite.

2.3. Theoretical review

This study was guided by the network society, Unified Theory of Acceptance and Use of Technology (UTAUT) as well as Technology Acceptance Model (TAM). The theory of network society says the more the information is available to the citizen, the more the control they have on a number of activities (Castells, 2000). Soper (2007), translating the theory in ICT terms, says that ICT will provide more information which will counteract corruption occurrence. The theory posits that a well-networked society is riskier to have government corruption than non-network society (Yong Hyo & Byung-Dae, 2004). The network society is said to be possible through e-government (Bhuiyan, 2010; Pathak, Singh, Belwal, & Smith, 2007). Technology in this case reduces face-to-face contact (Mahmood, 2004) and thus reduces chances of negotiations (Shim & Eom, 2008). In addition, whistleblowers can anonymously report the corruption incidences (Salbu, 2001). This forces the-would-be-corrupt-officials to be aware that their conducts can easily be captured and once reported they will deter their behavior (Brunetti & Weder, 2003; Garcia-Murillo, 2010).

UTAUT explains better use of technology such that performance expectancy, effort expectancy, and social influence all directly affect the level of behavioral intentions and other facilitating conditions and molds the actual use behavior of the technology (Venkatesh, Morris, Davis, & Davis, 2003). Thus, behavioral intentions, along with several individual characteristics, are posited to moderate the impact of the four key constructs on usage intention and behavior. UTAUT has been used in many studies including Koivimäki, Ristola, and Kesti (2008) who applied UTAUT to study perceptions of individuals toward ICT. They (*ibid*) found that time spent using the devices did not affect consumer perceptions, but familiarity with the devices and user skills had an impact on perception on the service.

Eckhardt, Laumer, and Weitzel (2009) applied UTAUT on intention to adopt technology in Germany. The study showed that there was an impact of social influence on information technology adoption. Curtis et al. (2010) applied UTAUT on adoption of social media in the United States of America (USA) by non-profit organizations whereby results revealed that organizations with offices that handled public relations had higher chances of adopting social media technologies and use them to achieve

their organizational goals rather than those without. Furthermore, Verhoeven, Heerwegh, and De Wit (2010) applied UTAUT to study computer use frequency in Belgium. The study revealed that UTAUT predicts computer use (*ibid*).

From UTAUT, one can access the level of e-readiness based on the fact that system performance is at the standard and yields positive results. In due regard, individuals become used to the system (effort expectancy) as well as people get attracted by others to use the system. From this model, one can conclude that if all these factors are observed and the individual addicted to use the system, the impact assessment should be undertaken. ICTs use in governments, like tax collection and judiciary, can improve efficient and transparency (Wickberg, 2013). A number of studies on corruption and ICT have been done using UTAUT (Olasina, 2014; Rana, Dwivedi, Williams, & Weerakkody, 2016; Salim, 2012; Weerakkody, El-Haddadeh, Al-Sobhi, Shareef, & Dwivedi, 2013).

TAM stipulates that the perceived ease of use and perceived usefulness will increase intention to use and finally use the systems (Davis, 1989). During computerization, there is standardization of the processes (ease of use) and in many cases, users of systems will perceived that usage of the system will make user at full control of the system (usefulness). Perceived usefulness is defined as the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989). Perceived ease-of-use is defined as "the degree to which a person believes that using a particular system would be free from effort" (Davis, 1989). For technology to be useful, it should be free to act without limitation and provide freedom to act (Bagozzi, Davis, & Warshaw, 1992). In due regard, enterprises decide to invest in information systems (IS) for many reasons that include pressures to cut costs, pressures to produce more without increasing costs, and to improve the quality of services or products in order to stay in business. Despite considerable investments in IS, a study performed in 1998 by the Standish Group 1 found that large company projects are completed on time and within budget with all requirements fulfilled (Paul, John, & Pierre, 2003). TAM has been extensively used in a number of researches that link ICT and corruption (Hamner & Qazi, 2009; Neupane, Soar, & Vaidya, 2012; Xinli, 2015).

2.4. Empirical studies

The study conducted by Abu-Shanab (2013) examined the relationship between transparency and e-government development. The study used secondary data from international reports, the corruption perception index (CPI), and the open budget index (OBI) and were regressed to see their prediction power for e-government readiness index (EGRI). Both relationships were significant and indicated a high prediction power of the e-government development level (Abu-Shanab, 2013).

Another study was done by Oye (2013) in Nigeria on reducing corruption in African countries. Oye's (2013) study examined relevance of e-government with use of ICT. It was found that ICT can reduce corruption by improving enforcement of rules, lessening the discretion of officials and increasing transparency (Oye, 2013). Study done in Pacific Asia by Krishnan et al. (2013) on the role and contribution of e-government to levels of corruption using public archival data to explore the relationships among them, with the help of correlation and regression analysis, results in a substantiated significant relationship between e-government maturity and corruption. It was suggested that e-government maturity value could be realized indirectly via its impacts on corruption (Krishnan et al., 2013).

The study conducted by Jamshed and Jalal (2012) aimed at analyzing relationship between e-government and corruption. The study, with the help of regression model to test the validity using data of corruption perception index and e-government index, revealed that as e-government increases, corruption decreases (Jamshed & Jalal, 2012). The other study carried out by DiRienzo et al. (2007) aimed at exploring the general relationship between access to information and the level of perceived corruption within a country using regression analysis. The results indicated that the greater the access to information, the lower the corruption levels. Therefore, bridging the digital disparity across countries can also serve to lessen national corruption levels (DiRienzo et al., 2007).

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These studies related to an undergoing study in the sense that it also investigated the relationship, predictive, and influence level of e-readiness to corruption. This study, like other studies, used regression as the method of data analysis method to investigate the relationship. All the studies appreciate the relationship between e-government usage, ICT, and the level of corruption, contribution of e-government to levels of corruption. None of the presented literature shows the influence of e-readiness in corruption reduction.

2.5. Work conceptializations and hypotheses

The concept involved the influence of e-readiness to corruption level; whereby four hypotheses were involved: H1, H2, H3, and H4, and variables included; networked readiness, environment readiness, society readiness index, usage readiness, and corruption measured in index. The conceptualization assisted identifying an appropriate path to predict corruption level if all of the hypotheses addresses corruption level.

On the basis of the conceptualization, the main hypothesis was developed from this study, "the high the e-readiness the lower the corruption level." In order to test this, the following four issues were addressed.

H1: The higher the networked-readiness the low the corruption level;
H2: The higher the environment readiness the low the corruption;
H3: The higher the society readiness the lower the corruption level;
H4: The higher the usage readiness the low the corruption level

Note: The lower and higher corruption levels are indicated by higher and lower CPI, respectively.

3. Research methodology

This study employed descriptive design to present a situation between variables (e-readiness to corruption level).

3.1. Research design

Quantitative research approach involves generalization of data in quantitative form, which can be subjected to rigorous quantitative analysis. This study adopted quantitative research approach where data were analyzed and hypotheses were subjected to descriptive tests. The study used only secondary data and the reason for this was easier to analyze and economical to use in term of money as well as time. The GIT had database containing record of electronic readiness measured in readiness index and that of TI measured in CPI score. The data were extracted and analyzed using correlation analysis.

3.2. Sample, sampling frame, and sampling procedure

For the purpose of getting sufficient data to make propositions, 147 countries out of 174 across all continents were chosen since they had a huge data base of electronic readiness and corruption level in each country. Purposive sampling was employed to select data from Global Information Technology (GIT) and Transparency International (TI). The reason is that relating such data would provide the snapshot for the study. It was easy to access data from the GIT and those of TI because they were available and in digital form. It was also convenient to choose data of 2014 due to the fact that relation can be drawn.

3.3. Validity and reliability

Validity refers to trustfulness in that it tells the test measure what it is supposed to measure (Mehrens & Lehman, 1987). The issue of validity was taken into account by understanding that sources are credible. For the purpose of this work, Global Information Technology for Readiness and that of Transparency International for Corruption have set indices and standards to measure what is intended to be measured. They set the level of electronic readiness and level of corruption to each country.

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3.4. Data analysis plan

The countrywide data analysis was the main unit of analysis. GIT and TI are internationally recognized organizations for measuring the level of e-readiness and corruption, respectively. These helped to examine the relationship between predictor variable, namely, e-readiness in relation to criterion variable corruption. For precision, data were analyzed through reliability and the accuracy through validity. The statistical analysis was done using regression analysis to explore influence of e-readiness on dependent variable (corruption).

3.5. Operationalization of concept

This defines variables into measurable factors and thus e-readiness concept (ERI) was measured empirically and quantitatively by readiness index (1 being the worst—7 being the best). Corruption was determined and measured by CPI (0 being the most corrupt country and 100 being the cleanest country). The relationship was observed as per formulated hypotheses.

In information systems development research, the concept of readiness is widely studied and is considered as one of the benchmarks that assist in identifying potential blockages to the effectiveness of new system implementation (Stewart, Milford, Jewels, Hunter, & Hunter, 2000). E-readiness assessment tools purport to show how ready the nations of the world are to exploit the potential of new information and communication technologies (Luyt, 2006).

E-readiness may be assessed on a number of issues. Some studies evaluated based on technical aspects only (Alghamdi, Goodwin, & Rampersad, 2011) or a combination of technical and non-technical factors and even government performance like bureaucracy, accountability, and transparency as well as lack of citizen participation in e-government process (Elsheikh, Cullen, & Hobbs, 2008). This study used the four indicators of e-readiness, which were networked readiness index (NRI); environment readiness index (ERI); society readiness Index (SRI); and usage readiness index (URI) (Osorio et al., 2013).

4. Data analysis and interpretation of the findings

4.1. Sample characteristics

The data were acquired from all countries of the world for both measures (ERI and CPI). For the purpose of getting sufficient data to make propositions, 147 countries were involved in the study. This is more than two-thirds of all countries in the world. This study utilized the latest secondary data for the year 2014 through international reports published by well-established organizations GIT and TI. For sample characteristics of data see Table 1.

Table 2 presents statistics for some selected countries, with the highest or lowest values for indicated variables. From the data, all countries with CPI more than 80 have all e-readiness indices above 5, while all countries with low CPI have e-readiness indices less than 3.2. This is early evidence that there is relationship between e-readiness and corruption level.

Table 1. Sample characteristics					
	NRI	**ERI**	**SRI**	**URI**	**CPI**
Mean	4.01	4.04	4.55	3.84	46.13
Minimum	2.22	2.40	2.16	2.12	18.00
Maximum	6.04	5.87	6.61	6.06	92.00
Standard deviation	0.91	0.75	1.14	1.00	19.09
Number of observations	147	147	147	147	147

Source: GIT (2014) and TI (2014).

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Table 2. Selected countries' e-readiness and corruption indices

Country	NRI	ERI	SRI	URI	CPI
Finland	6.04	5.62	6.61	6.01	89
Singapore	5.97	5.87	6.2	5.87	84
Sweden	5.93	5.45	6.39	6.06	87
Denmark	5.5	5.19	6.06	5.75	92
Libya	2.75	3.17	3.23	2.56	18
Myanmar	2.35	2.68	2.16	2.22	21
Burundi	2.31	2.73	2.28	2.12	20
Chad	2.22	2.4	2.24	2.18	22

Source: GIT (2014) and TI (2014).

Table 3. Correlation for CPI and e-readiness indices

		CPI	NRI	ERI	SRI	URI
Pearson correlation	CPI	1.000**	.852**	.887**	.701**	.857**
N	CPI	147	147	147	147	147

Source: GIT (2014) and TI (2014).

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

4.2. Data analysis and interpretation

The following four measures were reported: networked readiness index, environment readiness index, society readiness index, and usage readiness index as independent variables. The four measures were correlated to CPI (see Table 3). The work attempted to find if from these four variables can be factor analyzed using principal components analysis. It was bit possible to retate and extract more than one variable. Table 3 shows relationship between ERI and CPI.

The study sought to check whether or not the same results could be obtained if analysis is done by level of income of countries. Table 4 provides the correlation analysis by the four income levels as

Table 4. Correlation analysis by country's income level

Income level		CPI			
		High income	Upper middle income	Low middle income	Low income
NRI	Pearson correlation	.814**	.432**	.398*	.481*
	N	54	37	36	20
ERI	Pearson correlation	.893**	.565**	.562**	.721**
	N	54	37	36	20
SRI	Pearson correlation	.614**	.207	.288	−.067
	N	54	37	36	20
URI	Pearson correlation	.790**	.451**	.343*	.447*
	N	54	37	36	20

Note: Italic values are not correlated at 5%.

Source: GIT (2014) and TI (2014).

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

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

suggested by the World Bank Group (2011). World Bank proposes four income levels, which are high income, upper middle income, low middle income, and low income. For high income countries, the correlation is high and above 0.6, the highest in comparison with other income level countries and significant for all variables, that is, there is correlation between e-readiness and corruption. Low-income countries have the second largest correlation coefficient and then followed by middle income countries. Only for high-income countries, SRI is correlated with e-readiness. The results imply that the e-readiness has a higher impact to low- and high-income countries than middle-level income countries.

Further analysis was done based on regions. The regions in this case were Sub-Saharan Africa, East Asia and Pacific, Europe and Central Asia, Latin America, South Asia, Middle East, High-Income non-OECD and High-Income OECD. Table 5 provides the correlation coefficients. For Europe and Central Asia as well as South Asia, there is no significant correlation between e-readiness and corruption. However, these data need to be interpreted cautiously due to small sample size for some groups. This is in line with previous results, which showed that high income countries (whether OECD or non OECD) and Sub-Saharan Africa had correlations between e-readiness and corruption. There is no correlation in Europe and Central Asia as well as South Asia regions.

Table 6 shows results of regression analysis for each variable. For all four variables, analysis indicates that various indicators of e-readiness have impact on corruption. Almost all indicators of e-readiness predict around three quarters of corruption reduction.

4.3. Hypotheses testing
Based on Tables 3–6, Table 7 was created. Table 7 shows that all null hypotheses were rejected indicating that alternative ones were accepted. It means that the higher the e-readiness the lower the corruptions.

Table 5. Correlation analysis by regions									
		CPI							
		Sub-Saharan Africa	East Asia and Pacific	Europe and Central Asia	Latin America	South Asia	Middle East	High income non OECD	High income OECD
NRI	Pearson correlation	.621**	.867**	.267	.614**	.540	.835**	.714**	.824**
	N	34	11	15	18	6	9	22	32
ERI	Pearson correlation	.718**	.794**	.500	.468	.778	.611	.841**	.933**
	N	34	11	15	18	6	9	22	32
SRI	Pearson correlation	.435*	.778**	.166	.500*	.599	.877**	.371	.669**
	N	34	11	15	18	6	9	22	32
URI	Pearson correlation	.603**	.862**	.244	.640**	.327	.811**	.697**	.778**
	N	34	11	15	18	6	9	22	32

Note: Italic values are not correlated at 5%.

Source: GIT (2014) and TI (2014).

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

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

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Table 6. Summary of regression analysis for each variable

(a) NRI

Regression statistics

Multiple *R*	.852
R^2	.726
Adjusted *R*^{2}	.724
Standard error	10.024
Observations	147

ANOVA

	df	SS	MS	F	Significance F			
Regression	1	38,659.359	38,659.359	384.758	.000			
Residual	145	14,569.185	100.477					
Total	146	53,228.544						
	Coefficients	Standard error	t stat	p-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	−25.296	3.734	−6.775	.000	−32.676	−17.916	−32.676	−17.916
NRI	17.819	.908	19.615	.000	16.023	19.614	16.023	19.614

(b) ERI

Regression statistics

Multiple *R*	.887
R^2	.787
Adjusted *R*^{2}	.786
Standard error	8.832
Observations	147

ANOVA

	df	SS	MS	F	Significance F			
Regression	1	41,916.743	41,916.743	537.309	.000			
Residual	145	11,311.802	78.012					
Total	146	53,228.544						
	Coefficients	Standard error	t stat	p-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	−44.605	3.982	−11.203	.000	−52.474	−36.735	−52.474	−36.735
ERI	22.472	.969	23.180	.000	20.556	24.388	20.556	24.388

(c) SRI

Regression statistics

Multiple *R*	.701
R^2	.491
Adjusted *R*^{2}	.488
Standard error	13.664
Observations	147

ANOVA

	df	SS	MS	F	Significance F	
Regression	1	26,156.105	26,156.105	140.092	.000	
Residual	145	27,072.440	186.706			

(*Continued*)

Table 6. (*Continued*)								
Total	146	53,228.544						
	Coefficients	Standard error	t stat	p-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	−7.153	4.641	−1.541	.125	−16.326	2.019	−16.326	2.019
SRI	11.706	.989	11.836	.000	9.751	13.660	9.751	13.660
(d) URI								
Regression statistics								
Multiple R	.857							
R^2	.734							
Adjusted R^2	.733							
Standard Error	9.875							
Observations	147							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	39,088.117	39,088.117	400.821	.000			
Residual	145	14,140.427	97.520					
Total	146	53,228.544						
	Coefficients	Standard error	t stat	p-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	−17.009	3.257	−5.222	.000	−23.447	−10.572	−23.447	−10.572
URI	16.442	.821	20.021	.000	14.819	18.065	14.819	18.065

Table 7. Hypotheses testing		
	Hypotheses (Note these are alternative hypotheses, while we test null hypotheses)	**Results**
Based on specific objectives		
H1	The higher the networked readiness the lower the corruption level	Rejected null hypothesis and concluded that the higher the networked-readiness the lower the corruption level
H2	The higher the environment readiness the lower the corruption	Rejected null hypothesis and concluded that the higher the environment readiness the lower the corruption
H3	The higher the society readiness the lower the corruption level	Rejected null hypothesis and concluded that the higher the society readiness the lower the corruption level
H4	The higher the usage readiness the lower the corruption level	Rejected null hypothesis and concluded that the higher the usage readiness the lower the corruption level
Based on general objective of the study		
	The higher the e-readiness, the lower the corruption level	Data supports the assertion that the higher the e-readiness, the lower the corruption level

Source: GIT (2014) and TI (2014).

5. Conclusion, implication, and recommendations

This part explains the summary of the findings obtained from the data collected from GIT (predictor) and TI (outcome). The study was initiated based on data availability and the fact is that the researchers were also interested in the topic. The aim of the study and hypotheses were stated, data were analyzed using regression analysis and finally, results and findings were used to draw conclusion and recommendation. The study aimed at finding the influence of e-readiness on corruption reduction basing on countrywide data analysis. Literature review was used to develop a conceptual framework on corruption level and e-readiness by data record of the year 2014 from 147 countries out of 174 countries across all continents while 27 among countries were left because their data were incomplete.

5.1. Conclusion about hypotheses

The main hypothesis was to test the influence of e-readiness on corruption reduction. Results indicated that the test was significant. This tells us that the higher the e-readiness the lower the corruption level. The study concludes that there is sufficient evidence to support the assertions.

5.2. Implication to theories

The study found that there was a relationship between e-readiness and corruption thereby meaning that the more the country is e-ready, the less the corruption. The findings were in line with UTAUT and theory of network society in the sense that the system performance is at the standard and yielding positive results, users becoming used to the system as well as individuals are being influenced by others to use the system hence users become addicted to the system (use behavior). From this the study concludes that user behavior influence on corruption level.

The fact that the study found relationship between e-readiness and corruption, the findings were in line with TAM by showing how the user comes to accept and use a technology (usage being useful). The theory tells that technology can be accepted provided with its perceived usefulness, easy to use and there is attitude toward using the system. This situation results to behavioral intention to use the system or not. The study concludes that the behavioral intention of using the system influence on corruption.

Furthermore, the results support the theory of network society, meaning that the more the society is connected and networked, the more they will have a major control of their destiny.

5.3. Implication to policy-makers

Findings from the research inform policy-makers of World Economic forum, World Bank, International Monetary Bank, Transparency International, Government Institutions, civil societies, and other related agencies in respective countries to make better corruption accountability Policies and Management Information System Policies by establishing website for reporting bribery and petty corruption, citizens to report for whistle blowing the corrupt acts.

Policy-makers should make sure that society is prepared to make good use of an affordable ICT infrastructure and digital content including the infrastructure. Also they should ensure affordability and skill through increasing the number of mobile phone subscriptions, individuals using the Internet, households with a personal computer (PC), and households with Internet access, both fixed and mobile broadband subscriptions, and use of social networks because all contribute to a country's e-ready.

5.4. Implication to practitioners

Bodies responsible for administering evaluation of e-readiness should rely heavily on its impact on corruption, in particular, such that it should be easy to come up with mechanism for monitoring the system and even harking the system used for corrupt deals in order to access the impact well.

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Furthermore, practitioners should keep gauging the friendliness of a country's market and regulatory framework in supporting high levels of ICT and maximize the potential impacts of ICTs on boosting competitiveness and society's well-being including the political and regulatory environment, business and innovation environment.

5.5. Limitation of the study and areas for further studies

The researchers found challenges in the course of conducting this study. The first one was the sample size. The study involved data published by well-known international organizations, GIT and that of TI of the year 2014 in 147 countries. This made the researcher to extract few countries rather than the entire world.

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