



Pathak, R. D. Singh, G., Belwal, R., Naz, R. & Smith, R. F. I. (2008). E-governance, corruption and public service delivery: A comparative study of Fiji and Ethiopia, JOAAG, Vol. 3. No. 1

## **E-Governance, corruption and public service delivery: A comparative study of Fiji and Ethiopia**

**R D Pathak<sup>1</sup>**

**Gurmeet Singh<sup>2</sup>**

**Rakesh Belwal<sup>3</sup>**

**Rafia Naz<sup>4</sup>**

**RFI Smith<sup>5</sup>**

### **Abstract**

Many developing countries are now realizing the need for e-Governance in order to provide customer-focused, cost effective, and easy to use services for citizens and businesses and to improve the internal workings of government. Fiji and Ethiopia are two such countries where, in spite of political instability and other governance related problems, e-Governance initiatives are in progress. This study, using a structured questionnaire, explores the perceived role of e-Governance in reducing corruption amongst 400 respondents each from Fiji and Ethiopia. The results of the study support the hypothesis that e-Governance is positively related to improved government–citizen relationships and corruption reduction. The study also suggests that while e-Governance initiatives can make important contributions to improving public services they can best do so by helping improve overall relationships between governments and citizens.

**Keywords:** E-Governance, Corruption, Government-citizen relationships, Principal-agent, Ethiopia public sector, Fiji public sector

---

<sup>1</sup> Professor, School of Management & Public Administration, The University of the South Pacific, Suva, Fiji. Email: pathak\_r@usp.ac.fj

<sup>2</sup> Senior Lecturer, School of Management & Public Administration, The University of the South Pacific, Suva, Fiji Email: singh\_g@usp.ac.fj

<sup>3</sup> Assistant Professor, Department of Management, Addis Ababa University, Addis Ababa, Ethiopia. Email: rakesh.belwal@gmail.com

<sup>4</sup> Research Scholar, School of Management & Public Administration, The University of the South Pacific, Suva, Fiji. E-mail: Naz\_r@usp.ac.fj

<sup>5</sup> Honorary Senior Research Fellow in the Department of Management, Monash University, Australia. E mail: rfsmith@ozemail.com.au



Pathak, R. D. Singh, G., Belwal, R., Naz, R. & Smith, R. F. I. (2008). E-governance, corruption and public service delivery: A comparative study of Fiji and Ethiopia, JOAAG, Vol. 3. No. 1

## Introduction

Corruption is rampant in many countries. Transparency International's (TI) Corruption Perceptions Index (CPI) 2004 ranks a record, 146 countries as prone to high corruption. Corruption is perceived to be most acute in Bangladesh, Haiti, Nigeria, Chad, Myanmar, Azerbaijan and Paraguay, all of which have scores of less than two. The poorest countries, most of which are in the bottom half of the index, are in greatest need of support in fighting corruption (Transparency International, 2005). The poorest countries are also those that mostly incur the huge costs of corruption. In this regard, the Ethiopian and Fijian public sectors are no exception.

A recent report by Transparency International shows that corruption is evident in the South Pacific (Larmour & Barcham, 2004) and is a particular problem in the public sector (Crocombe, 2001; Larmour, 1997). A survey by Toatu (2004) shows that corruption has had a deleterious effect on the growth performance of South Pacific economies thereby, reducing gross domestic product (GDP) growth rates by approximately two percentage points. The results highlight a very strong relationship between the level of corruption and the level of public investment and/or the size of the public sector in the South Pacific Countries including Fiji. The recent coup in Fiji (5 December 2007) proposed a clean up campaign against perceived wide spread corruption in public services including the judiciary<sup>6</sup>. Similarly, the African Union estimates that corruption accounts for 25% of Africa's annual GDP and is limiting the continent's chances of taking off economically.

Initiatives to combat corruption propose that e-Governance will help. However, effective implementation of e-Governance initiatives demands sound ICT (Information and Communications Technology) infrastructure and sustained strategic commitment. For these reasons the potential of e-Governance in developing countries remains largely unexploited (Ndou, 2004). Overall, this research assesses the impact of e-Governance (independent variable) on reduced corruption (dependent variable). This study using a structured questionnaire reports the results of a survey of 800 respondents from Ethiopia and Fiji and supports the hypothesis that e-Governance initiatives are positively related to improving relations between governments and citizens and cutting corruption. It is further suggested that while e-Governance initiatives can make important contributions to improving public services and reducing corruption, they can best do so by helping improve overall relationships between governments and citizens. And this is a topic of growing practical and academic interest.

## Corruption: An Outcome of Faulty Governance

Corrupt actions are so diverse and the concept of corruption so generic that any precise definition of institutional corruption is difficult to frame. Corruption can be broadly defined as the abuse of public power for the benefit of private individuals (Rose-Ackerman, 1999).

---

<sup>6</sup> "Military commander Commodore Frank Bainimarama, who appointed an interim government with himself as prime minister after ousting elected leader Laisenia Qarase on December 5, has promised to call elections to restore democracy, but not until he has completed what he calls a campaign to clean up graft, which he alleges was allowed to fester." Accessed February, 5 2007 from: <http://breakingnews.iol.ie/news/story.asp?j=31671465&p=3y67y57z>

Corruption includes both monetary and non-monetary benefits. Common forms of corruption are bribery, extortion, influence peddling, nepotism, fraud, and opportunism. Garcia-Murillo and Vinod (2005) identify the main drivers of corruption to be economic, political, and cultural factors, which vary from country to country. Identification of the origins of these causes/drivers of corruption can be traced to the work of Rose-Ackerman (1978, 1994, 2004) and Klitgaard (1995). Kaufmann, Kraay and Mastruzzi (2003, 2005) and Lambsdorff (2001) have identified the drivers of corruption as: (i) monopoly of power; (ii) discretion; and (iii) lack of accountability and transparency.

It is useful to distinguish between types of corruption and to identify those which e-Governance can most readily fight. The first group of corrupt practices is petty bureaucratic corruption (i.e. low-level administrative corruption). The second group of corrupt activities consists of strategies aimed at self-serving asset stripping by state officials (state capture). The third group of corrupt activities consists of large political corruption (grand corruption) (Shah & Schacter, 2004). It is suggested that all types of petty bureaucratic corruption can be diminished through the increased transparency achieved by using modern electronic media. Generally, employment of the Internet minimizes the opportunities for public officials to monopolize access to relevant information and to extract bribes from their clients. Reference can be made to a number of Latin American or Indian states (Bhatnagar, 2003; Sarah, 2003) or Korea (Cho & Choi 2004; Kang, 2001) where petty corruption was reduced by employing e-Governance. Further, use of ICTs in government can also foster the anticorruption struggle against 'self-serving asset stripping' by state officials (Cisar, 2003; Dorotinsky, 2003, 2005; Talero, 2005; Yum, 2003, 2005) and ICTs may potentially play an important role in preventing some types of grand political corruption (Pralhad, 2005).

### **E-Governance – A Way to Modernize Governance**

Governments now realize that e-Governance is more than just floating government web sites on the Internet. The definition for the purposes of this paper is to characterize e-Governance as a process to make simpler and improve democratic government and business aspects of governance through an application of electronic means in the interaction between citizens and government and businesses and government and also in internal government operations (Backus, 2001). E-Governance represents a significant opportunity to move forward with qualitative, cost effective government services and a better relationship between citizens and government (Fang, 2002).

The potential benefits of using ICT in government include, but go beyond, efficiency and effectiveness. By making available interactive access to and use of information by people who use government services e-Governance initiatives hope to empower citizens (Gage, 2002) and improve relationships between governments and citizens by helping build new spaces for citizens to participate in their overall development (Gasco, 2003). Online systems have not only helped achieve efficiency gains by cutting overall time to process applications but also made transactions more traceable, transparent and easier to access (Bhatnagar, 2003). However, if e-Governance initiatives are to curb corruption then the design of such systems needs an appropriate conceptual framework and needs to be understood by policy makers and public managers (Cisar, 2003; Mahmood, 2004; Tangkitvanich, 2003). Within the principal-agent framework there are three dimensions of

institutional structure as the most critical in bearing on opportunities for corruption: (1) the monopoly power of officials; (2) degree of discretion that officials are permitted to exercise; and (3) degree to which there are systems of accountability and transparency in an institution (Klitgaard, 1988, 1995; Rose-Ackerman, 1978, 1994).

E-Governance, reformers aspire to reinforce the connection between public officials and communities thereby leading to a stronger, more accountable and inclusive democracy. The success of e-Governance requires fundamental changes in how government works and how people view the provisions through which government is helping them. Governments need to undertake e-Governance initiatives actively, strategically and resourcefully (Moon 2002).

### **E-Governance Initiatives and Corruption in Ethiopia and Fiji**

Ethiopia and Fiji provide very different contexts in which to study e-Governance and corruption prevention. In scale and location they are very different. Ethiopia has a population of 74 million while Fiji has less than one million; Ethiopia is landlocked and has a long history as an exception in a diverse and underdeveloped continent while Fiji is the largest country in an oceanic region of micro states. However the physical barriers to communication in both countries make improvements highly attractive. Further, despite repeated government instability, corruption that seems to grow progressively and poverty in both countries, they have made significant investments in ICT.

#### *Ethiopia*

Ethiopia has seen repeated political upheavals. Recently the incumbent government has declared good governance to be a priority. To increase civil service productivity, by dramatically cutting the time for the processing of information and regulatory implementation, and through the wide implementation of e-procurement Ethiopia spends one tenth of its GDP every year on ICT. The government plans to invest some \$US100 million in computers for the public sector over the next five years and equip hundreds of government offices and schools with broadband internet connections. By 2007 it was proposed to provide Ethiopia's 74 million people with broadband access points. According to government sources, the backbone of this network, 4,000km of optical fibre had already been laid and would soon be fully commissioned. In comparison, Singapore spent US\$100 million per year on ICT and found that every dollar spent on this program generated US\$2.70 returns through expanded productivity and reduced operational costs. As a result 1,500 jobs were eliminated from the public payroll and an additional 3,500 jobs were reoriented towards more productive outputs (Grace, 2001).

To showcase the value of ICT for facilitating information delivery in local administration, recently the Economic Commission for Africa (ECA), in collaboration with the Information Technology Centre for Africa (ITCA), launched a multimedia touch-screen kiosk in Amharic (the national language of Ethiopia) at the Nefa Silk Lafto Sub-City of the Addis Ababa Municipality. The kiosk is part of the Development Information Services Division's (DISD) input to the cooperation framework established in 2003 between ECA and the Mayor of Addis Ababa. The centre, one of six UNESCO supported telecentres in Ethiopia, offers five Internet connected PCs, access to digital photography, scanning and printing equipment.

The availability of Internet broadband facilities in major cities, even with varying degrees of penetration, and its non-availability in rural areas itself creates problems. It shifts power but still leaves it in the hands of a few. Therefore the use of ICT for removal or reduction of corruption in Ethiopia appears to be limited, not because of the failure of technology but because of the limits to its reach among citizens generally. The wealth accumulated through corrupt means seeks safer destinations and moves out of the country. Government agencies do not seem to be motivated to distribute information online, and automate processes that are subject to corrosive and corrupt influences. Most government websites developed to show the government's commitment to e-Governance have become dysfunctional or obsolete. Bureaucracy remains opaque. Therefore, it becomes essential to identify specific targets in Ethiopia where ICT can be successfully applied as a tool in curbing corruption and improving the quality of public services for the mass of citizens.

### *Fiji*

Due of its size Fiji has developed its Internet policy with an eye to regional as well as national development. As Hassall (2005) observes: Fiji 'has aspired to lead digital commerce in the region...In addition to having one of the largest economies in the South Pacific, Fiji is the host nation to a number of regional inter-governmental agencies, and this combination of national and regional interests is driving the rapid elaboration of ICT policy and utilization' (Hassall, 2005: 1).

The use of ICT within government in Fiji developed gradually and without an overall guiding strategy. Information Technology and Computing Services began as a small unit in the Ministry of Finance. It has since expanded to become the official ICT department for the whole of the Fiji government (ITU, 2004). Policy development for e-Governance began slowly. It was also hindered in the late 1990s by the shortage of experienced ICT professionals. For three decades it was principally concerned with providing server capacity to government departments and agencies. The sectors making use of computing services during the 1990s included Customs and Inland Revenue, Education, Treasury, Taxation, Electoral Commission and the Criminal Justice System (Hassall, 2005). Operational pressures limited efforts to plan ahead; 'Pressures from providing day to day services to government, as well as the need to address the 'Year 2000' issue prevented any activity on ICT Policy during the period 1997 to 1999'(Hassall, 2005: 2). However, by 2000 ITC had connected most ministries and departments in Suva to the Internet through the government network GOVNET (ITU, 2004).

In 2001 the IT Advisory Council (ITAC) was set up to advise the Minister of Communications on policy. The Council included representatives of key government ministries, the academic community and the private sector. A draft policy prepared by ITAC proposed 'to harness Fiji's ideal geographic location, competent workforce and world-class information technology infrastructure to promote Fiji's international competitiveness and create a dynamic, vibrant and well connected e-society' (ITAC, 2003). By 2004 policy perspectives had expanded to include development of an information economy. Key objectives included: unleashing the potential and use of ICT utilizing world best practice; improving the quality of life, education and work for the people of Fiji with particular emphasis on bridging the 'digital divide'; joining the world scene; strategizing for private sector investment via strategic partnerships and new alliances

in business with particular focus on specific interest groups; and maximizing economic gains and niche market opportunities (OCED, 2004). The government then embarked on a three year e-Governance Business Solution Program and Government Information Infrastructure (GII) Program. ICT services planned to host these applications with mirror sites offshore to ensure availability. The main aim of this business solution was to improve service delivery and productivity by promoting the public sector's 'Service Excellence' (Government of Fiji, 2005). The objective for companies and individuals was to: (1) save time; (2) transact over internet and (3) transact faster and assure turnaround time. Regional e-Governance alliances to allow small countries to pool resources and gain greater efficiency at building their infrastructures were supported (Fiji Country Report, 2005).

However analysis at the University of the South Pacific suggests caution about actual impacts. Hassall (2005) reports that the university identified lack of human capital and ICT networks has problems. Earlier, Toland and Purcell (2002) had identified that limited ICT infrastructure and access was leading to a sharp division between rural and urban areas in Fiji. This paralleled other studies that have found a strong urban bias in internet use in all developing countries (UNDP, 2001). Hassall (2005) concluded that the geographical reality in the South Pacific caused distinct transport and communication challenges, thus ICT policies needed reduce rather than multiply the digital divide. A further challenge is the inflexibility arising from continuance of a telecommunications monopoly.

In 2001 Fiji had a teledensity of 112 per 1,000 people which is more than East Asia and Pacific, which had 110. International telecommunications outgoing traffic (minutes per subscriber) for Fiji 2001 was 180 and East Asia/Pacific amounted to 49. These figures suggest that the challenges for ICT development (in terms of internet access) in Fiji are due to low internet usage (ITU, 2002).

### **Objectives and Methodology**

The objective of this study is to investigate the potential of e-Governance applications in the Ethiopian and Fijian public sectors to increase efficiency, responsiveness, accountability and transparency. The study hypothesizes that e-Governance initiatives are positively related to improvements in government-citizen relationships and corruption reduction.

The paper presents the outcomes of a study conducted through a structured questionnaire with 800 citizens in major regions of Ethiopia and Fiji. Respondents were selected using stratified random sampling technique. Strata were gender and selected areas in Fiji (Nausori, Suva, Navua, Nadi, Lautoka, Ba, Labasa) and Ethiopia (Akaki, Arada, Gulele, Kirkos, Kolfe, Lideta, Nifasilk, and Yeka in Addis Ababa). The advantage of this approach was that it "added an extra ingredient to random sampling by ensuring that strata within the population are each sampled randomly.....It offers increased possibility of accuracy...." (Burns, 1996: 83).

Table 1 presents the demographic profile of the 800 respondents (N=800) selected for the study. The paper also incorporates material from in-depth interviews with officials, decision-makers and other interest groups involved in e-Governance initiatives.

**Table 1. Summary demographic profile of respondents in Fiji and Ethiopia**

Demographics	Fiji %	Ethiopia %	Demographics	Fiji %	Ethiopia %
<b>Age</b>			<b>Education</b>		
Under 25	39.5	55.5	Secondary	19.75	3.8
26-39	45.75	17.8	University	44	78.8
Over 40	14.75	26.8	Professional	9.5	15.8
			Others	26.75	1.8
<b>Marital Status</b>			<b>Job Status</b>		
Married	49.25	28.0	Business	2.75	14.3
Unmarried	50.75	70.3	Housewives	5	0.8
Widowed/Divorced		1.8	Others	51.75	2.3
<b>Gender</b>			Service	31.75	62.0
Female	47.25	16.0	Students	7.75	19.3
Male	52.75	84.0	Unemployed	1	1.5

The study used the following research hypotheses:

**Hypothesis 1:** e-Governance initiatives are positively related to government–citizen relationships and corruption reduction.

**Hypothesis 2:** Improvements in government-citizen relationships account for more corruption reduction as compared to other variables.

The reliability of this questionnaire was calculated using Cronbach’s Alpha and the value depicted that the measure was reliable (Cronbach’s Alpha = .7768).

**Results and Discussion**

*Magnitude of public service corruption in Ethiopia and Fiji*

In the view of respondent’s corruption incidence/experience, the Fijian and Ethiopian public services is widespread and large majorities (79.3% in Ethiopia and 80.5% in Fiji) were of the view that corruption is increasing in public service agencies (Table 2). Only a small percentage (8.5 % in Ethiopia and 19.5% in Fiji) felt otherwise. A small percentage (12.3% in Ethiopia) was unable to say anything with regard to increase or decrease in corruption as far as public service agencies were concerned.

**Table 2. Magnitude of public service corruption in Ethiopia and Fiji**

	Frequency		Percent	
	Fiji	Ethiopia	Fiji	Ethiopia
Yes	322	317	80.5	79.3
No	78	34	19.5	8.5
Neutral	-	49	-	12.3
Total	400	400	100.0	100.0

### *Range of public service corruption in Ethiopia and Fiji*

A sizeable majority of respondents (34% in Fiji and 39.8% in Ethiopia) rated public service corruption as either fairly high or very high (Table 3). A small percentage of respondents (13.5% in Fiji and 6.3% in Ethiopia), however, rated it fairly low. Perceptions about public services appear to be negative because of high corruption.

**Table 3. Range of public service corruption in Ethiopia and Fiji**

	Frequency		Percent	
	Fiji	Ethiopia	Fiji	Ethiopia
Fairly High	136	159	34	39.8
Fairly Low	54	25	13.5	6.3
Medium	0	143	0	35.5
Low	24	0	6	0
Very High	186	73	46.5	18.3
Total	400	400	100.0	100.0

### *Experience of time and cost factors in public service delivery and corruption*

A sizeable majority of respondents from Ethiopia and Fiji considered time and cost factors to be a major problem in dealing with public service delivery (Table 4). Time and cost factors' refer to the cost to service users of time spent in going to government offices and awaiting results. Only a small percentage of respondents considered time and cost factors in dealing with public service delivery as not important. However, almost 2.3% in Fiji and 15.5% respondents in Ethiopia preferred to remain neutral on the issue. On the basis of these responses time and cost factors are the biggest obstacle in dealing with public service delivery and a major cause of concern in Fiji and Ethiopia. The majority of respondents said that they found it difficult to get grievances redressed in time. Reduction in corruption and favoritism alone could substantially reduce the time and costs of concern to respondents.

**Table 4. Time and cost factors in dealing with public service delivery and corruption**

STATEMENT	Frequency		Percent	
	Fiji	Ethiopia	Fiji	Ethiopia
Time and Cost is not a problem - Totally Agree	10	5	2.5	1.3
Time and Cost is not a problem - Mostly Agree	38	8	9.5	2.0
Time and Cost is not a problem - Somewhat Agree	19	13	4.8	3.3
Okay-Time and Cost Factor makes no difference	9	62	2.3	15.5
Time and Cost is a problem -Somewhat Agree	14	90	3.5	22.5
Time and Cost is a problem – Mostly Agree	156	111	39	27.8
Time and Cost is a problem – Totally Agree	154	111	38.5	27.8
Total	400	400	100.0	100.0



Pathak, R. D. Singh, G., Belwal, R., Naz, R. & Smith, R. F. I. (2008). E-governance, corruption and public service delivery: A comparative study of Fiji and Ethiopia, JOAAG, Vol. 3. No. 1

*Experience of Red tape procedures in public service delivery and corruption*

Public red-tape procedures are seen to involve more than one agency and also more than one step. This gives important insights in judging the importance of initiatives in citizen-centered government, including one-stop shops and measures to cut major problems arising from centralization of decision-making. A large percentage of respondents in Fiji and Ethiopia agreed that public red tape procedures are a major problem because of excessive centralization, corruption and favoritism based on their experiences in service delivery (Table 5).

**Table 5. Experience of Public red tape procedures involving more than one agency and more than one step**

STATEMENT	Frequency		Percent	
	Fiji	Ethiopia	Fiji	Ethiopia
Public Red-tape procedures are not problematic - Totally Agree	10	13	2.5	3.3
Public Red-tape procedures are not problematic – Mostly Agree	38	7	9.5	1.8
Public Red-tape procedures are not problematic - Somewhat Agree	19	26	4.8	6.5
Public Red-tape procedures- Make No Difference	9	31	2.3	7.8
Public Red-tape procedures are a major problem- Somewhat Agree	14	116	3.5	29.05
Public Red-tape procedures are a major problem - Mostly Agree	157	110	39.3	27.5
Public Red-tape procedures are a major problem - Totally Agree	153	97	38.3	24.3
Total	400	400	100.0	100.0

Overall, the survey confirms that time and cost factors and public red-tape procedures in public service delivery are perceived as major problems in Fiji and Ethiopia.

**Hypothesis Testing**

The results of hypothesis testing are as follows:

**Hypothesis 1: (H1)** e-Governance initiatives are positively related to government–citizen relationships and corruption reduction.

Analysis of the information in Table 6 indicates that e-Governance and government-citizen relationships (how public service agencies relate to citizens) are significantly correlated (.159\*\* for Ethiopia and .878\*\* for Fiji) at 0.01 level ( $p < 0.01$ ). The result for Fiji, since it is high, shows positive correlation, with IT initiatives explaining nearly 77.09 percent of the variance in the government-citizen variable.

**Table 6. Hypothesis 1 Results - Correlations for Fiji and Ethiopia**

		e-Governance initiatives		Government citizen relationships		Corruption reduction	
		Fiji	Ethiopia	Fiji	Ethiopia	Fiji	Ethiopia
e-Governance initiatives	Pearson Correlation	1.000	1.000	0.878**	.159**	0.995**	.204**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
Government citizen relationships	Pearson Correlation	0.878**	.159**	1.000	1.000	0.867**	.220**
	Sig. (2-tailed)	.000	.000	1.000	1.000	.100	.000
Corruption reduction	Pearson Correlation	0.995**	.204**	0.867*	.220**	1.000	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
N		400	400	400	400	400	400

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

E-Governance is also positively related to corruption reduction (.204\*\* for Ethiopia and .995\*\* for Fiji) at .01 level ( $p < 0.01$ ). Similarly, nearly 99.03 percent of the variance in Corruption Reduction is also explained by IT initiatives in the case of Fiji due to which the significance value stands at 0.995. On this basis we can say that Hypothesis 1(H1) is accepted. It may be inferred that government-citizen relationships can play an important role in reducing corruption in Fiji and Ethiopia and that it would be worthwhile to strengthen e-Governance initiatives in both the countries.

**Hypothesis 2:** (H2) Improvements in government-citizen relationships account for more corruption reduction as compared to other variables.

To test the above hypothesis, standard method of regression (enter method) was performed taking corruption reduction as the dependent variable over two independent variables—e-Governance model and Government Citizen Relationship. From the regression output from the information in Table 7 the equation for Ethiopia is:

$$\text{Corruption reduction} = 36.705 + 0.225 (\text{Government-citizen relationships}) + 0.110 (\text{e-Governance initiatives}).$$

**Table 7. Hypothesis 2 results-Regression (Coefficients)**

Model	Unstandardized Coefficients				Standardized Coefficients					
	B		Std. Error		Beta		t		Sig.	
	Ethiopia	Fiji	Ethiopia	Fiji	Ethiopia	Fiji	Ethiopia	Fiji	Ethiopia	Fiji
1 (Constant)	36.705	0.008	3.891	0.002			9.432	3.535	.000	.000
Government-citizen relationships	0.225	-.023	0.056	.008	.195	-.030	3.991	-2.990	.000	.003
e-Governance initiatives	0.110	1.729	0.031	.017	.173	1.022	3.553	102.506	.000	.000

Note: 1. Dependent Variable: Corruption reduction. 2. Adjusted r square for Ethiopia = 0.074  
3. Adjusted r square for Fiji = 0.991

The results for multiple regression showed that the model helped to explain 7.4% (r square equals 0.074) of the variance in perceived corruption reduction (dependent variable). The beta values in the study showed that e-Governance initiatives equal 0.173 while cutting government citizen problems equals 0.195. The variable which makes the strongest unique contribution to explaining the dependent variable - corruption reduction - is improved government-citizen relationships. The beta value for e-Governance initiatives implies these made less of a contribution. To identify the variables making significant contributions, the significance values for the two variables were compared (0.000 and 0.000 < p value 0.05) and therefore, H2 was accepted (Table 7). It can be concluded that overall, the e-Governance model which alters government citizen relationship, can have at the most 7.4% stake in corruption reduction in Ethiopia.

The results for multiple regression show that the model helped to explain 99.1% (r square equals 0.991) of the variance in perceived corruption reduction (dependent variable). The beta values in the study showed that e-Governance initiatives equal 1.022 while cutting government citizen problems equals 0.30 which makes the strongest unique contribution to explaining the dependent variable - corruption reduction- is e-Governance initiatives. The beta value for cutting government citizen problems is -0.30, implying it made less of a contribution. To identify the variables making significant contributions, the significance values for the two variables were compared (0.003 and 0.000 < p value 0.05) and therefore, H2 was accepted (Table 7). It can be concluded that e-Governance initiatives which alter government-citizen relationships in Fiji can have a 99.1% stake in corruption reduction.

Overall, in the perceptions of respondents, government agencies in Ethiopia and Fiji do not seem to be motivated to build sound government-citizen partnerships. Citizens can see little of the internal workings of government. Bureaucracy is more or less opaque and very little attention has been paid to improving transparency, including through the use of e-Governance processes. Time, cost and red-tape procedures are major constraints in public service delivery. In order to realize efficiencies and improve the resources available to citizens, governments need to develop citizen-centric models that involve increased participation of key stakeholders outside government. Governments need to take cautious steps to ensure better reach and access otherwise disparities in access will only increase problems of corruption and social and economic injustice. Thus investments in ICT need to be integrated into broader development agendas in Ethiopia and Fiji.

## Conclusion

While e-Governance holds great promise in many developing countries including Fiji and Ethiopia, substantial challenges need to be faced. Many ICT projects fail because of insufficient planning capacity and political instability. In order to overcome these challenges, successful implementation requires matching the right technologies with capable and progressive reformers and government systems. The surveys in Ethiopia and Fiji reported in this paper show that corruption is perceived to have significant adverse effects and that public sector red tape is the biggest hurdle in the way of improved government-citizen relationships.



Pathak, R. D. Singh, G., Belwal, R., Naz, R. & Smith, R. F. I. (2008). E-governance, corruption and public service delivery: A comparative study of Fiji and Ethiopia, JOAAG, Vol. 3. No. 1

It is suggested that e-Governance initiatives can help in weeding out corruption and also in fostering so under government-citizen relationships in developing countries. While e-Governance initiatives cannot cure all the structural factors that breed corruption in states and societies, strategic implementation of such initiatives can help improve the critical variable in combating corruption—government-citizen relationships.

## References

- Backus, M. 2001. E-Governance and Developing Countries - Introduction and Examples. IICD Research Report No. 3.
- Bhatnagar, S. 2003. Administrative Corruption: How Does E-Government Help? Global Corruption Report 2003, Transparency International.
- Burns, R.B. 1996. *Introduction to research methods*. (3rd ed.). Addison Wesley Longman Ltd, UK. pp. 83
- Cho, Y. H. & Choi, B.D. 2004. E-Government to Combat Corruption: The Case of Seoul Metropolitan Government, *International Journal of Public Administration*, Vol. 27(10), pp. 719-735.
- Cisar, O. 2003. Strategies for Using Information Technologies for Curbing Public-Sector Corruption: The Case of the Czech Republic (CR). Budapest: Open Society Institute.
- Crocombe, R. 2001. *The South Pacific*. Published by the Institute of Pacific Studies of the University of the South Pacific. Suva, Fiji.
- Dorotinsky, B. 2003. Technology and Corruption: The Case of FMIS, Presentation delivered at International Anti Corruption Conference Seoul Korea, 26 May 2003.
- Dorotinsky, B. 2005. IFMIS, PEM, and Anti-corruption, Presentation delivered at Anti Corruption Thematic Groups One Day Clinic on Building ICT Applications for Combating Administrative Corruption, 21 April 2005, Washington, DC.
- Fang, Z. 2002. E-Government in Digital Era: Concept, Practice and Development. *International Journal of the Computer*, Vol. 10(2), pp. 1-22.
- Fiji Country Report. 2005. Regional Workshop on E-Government 23 - 25 February 2005, Hanoi, S.R. of Vietnam. Ministry of Information, Communication & Media Relations.
- Gage, J. 2002. Some thoughts on How ICTs Could Really Change the World. In *The Global Information Technology Report 2001-2002: Readiness for the Networked World*, Center for International Development, Harvard University.
- Garcia-Murillo, M. & Vinod, H.D. 2005. Opening to the World: The Effect of Internet Access on Corruption. Available from <http://web.si.umich.edu/tprc/papers/2005/478/ppr%20corruption%200.pdf> (Accessed 23 January 2007).
- Gasco, M. 2003. New Technologies and Institutional change in Public Administration. *Social Science Computer Review*, Vol. 21(1), pp. 6-14.



Pathak, R. D. Singh, G., Belwal, R., Naz, R. & Smith, R. F. I. (2008). E-governance, corruption and public service delivery: A comparative study of Fiji and Ethiopia, JOAAG, Vol. 3. No. 1

Government of Fiji. 2005. 15th January 2005. eGovernment Business Solutions. Version: 2.0. Available from [www.itc.gov.fj/eGovtBusinessSolutions/RFI.pdf](http://www.itc.gov.fj/eGovtBusinessSolutions/RFI.pdf) (Accessed 23 January 2007).

Grace, J., Kenny, C., Zhen-Wei Qiang, C., Liu, J. & Reynolds, T. 2001. Information and Communication Technologies and Broad-Based Development: A Partial Review of the Evidence, The World Bank, Working Paper, February.

Hassall, G. 2005. *ITC Policy and Practice in the Fiji Islands: National and Regional Dimensions*. Encyclopedia of Developing Regional Communities with ICT. Available from [http://www.piasdg.usp.ac.fj/fileadmin/files/Institutes/PIASDG/governance\\_papers/hassall\\_itc\\_fiji.pdf](http://www.piasdg.usp.ac.fj/fileadmin/files/Institutes/PIASDG/governance_papers/hassall_itc_fiji.pdf) (Accessed 23 January 2007).

ITAC (Information Technology Advisory Council). 2003. Policy Directions and Strategies for the Development and Growth of Information and Communication Technology. Draft October 2003. Available from [www.itc.gov.fj](http://www.itc.gov.fj) (Accessed August, 14 2004).

ITU. 2002. Internet from the Horn of Africa: Ethiopia Case Study. Available from <http://www.itu.int/osg/spu/casestudies/ETH%20CS1.pdf>

ITU. 2004. Bula Internet: Fiji ICT Case Study. Available from: [http://www.itu.int/ITU-D/ict/cs/fiji/material/CS\\_FJI.pdf](http://www.itu.int/ITU-D/ict/cs/fiji/material/CS_FJI.pdf) (Accessed 23 January 2007).

Kang, H. 2001. Cleaning Up the City Government of Seoul: A Systematic Approach Pp 43. Presentation Delivered at The Anti-Corruption Symposium 2001: The Role of On-line Procedures in Promoting Good Governance. Seoul Institute for Transparency, Seoul.

Kaufmann, D., Kraay, A. & Mastruzzi, M. 2003. Governance Matters III: Governance Indicators for 1996-2002. Available from [http://siteresources.worldbank.org/INTWBIGOVANTCOR/Resources/govmatters3\\_wber.pdf](http://siteresources.worldbank.org/INTWBIGOVANTCOR/Resources/govmatters3_wber.pdf) (Accessed 23 January 2007).

Kaufmann, D., Kraay, A. & Mastruzzi, M. 2005. Governance Matters IV: Governance Indicators for 1996-2004. Available from <http://www.worldbank.org/wbi/governance/pdf/GovMatters%20IV%20main.pdf> (Accessed 23 January 2007).

Klitgaard, R. 1988. Controlling Corruption. In A.W. Goudie & D, Stasavage. 1997. Corruption: The Issues. OECD Development Centre. Working Paper No. 122.

Klitgaard, R. 1995. National And International Strategies For Reducing Corruption. Paper Presented To The OECD Symposium On Corruption And Good Governance, Paris. In A.W. Goudie & D, Stasavage. 1997. Corruption: The Issues. OECD Development Centre. Working Paper No. 122.

Lambsdorff, J.G. 2001. How Corruption in Government Affects Public Welfare: A Review of Theories. Center for Globalization and Europeanization of the Economy Discussion Paper 9, Göttingen, Germany.

Larmour, P. & Barcham, M. 2004. National Integrity Systems Pacific Islands: Overview Report 2004. Transparency International. Available from <http://www.transparency.org> (Accessed October, 14 2005).



Pathak, R. D. Singh, G., Belwal, R., Naz, R. & Smith, R. F. I. (2008). E-governance, corruption and public service delivery: A comparative study of Fiji and Ethiopia, JOAAG, Vol. 3. No. 1

- Mahmood, R. 2004. Can Information and Communication Technology Help Reduce Corruption? How So and Why Not: Two Case Studies from South Asia, *Perspectives on Global Development and Technology*, Vol. 3(3), pp. 347-373.
- Moon, M.J. 2002. The evolution of e-government among municipalities: rhetoric or reality?, *Public Administration Review*, Vol. 62, pp.424–433.
- Ndou, V.D. 2004. E-Government for Developing Countries: Opportunities and Challenges, *The Electronic Journal of Information Systems in Developing Countries*, Vol. 18 (1), pp. 1-24.
- OCED 2004. Fiji Brief: Sub-regional Symposium On ICT For Development In Pacific Islands Developing Countries 6-9 December 2004 - Suva, Fiji, Ministry of Information, Communications And Media Relations. Available from [http://www1.oecd.org/daf/asiacom/pdf/str\\_fijiislands.pdf](http://www1.oecd.org/daf/asiacom/pdf/str_fijiislands.pdf) (Accessed 23 January 2007).
- Prahalad, C.K. 2005. *The Fortune of the Bottom of the Pyramid. Eradicating Poverty through Profits*. Wharton School Publishing, United States of America.
- Rose-Ackerman. S. 1978. *Corruption: A Study in Political Economy*. Academic Press, New York.
- Rose-Ackerman. S. 1994. Reducing Bribery in the Public-Sector. In Duc V.T. (ed). *Corruption and Democracy: Political Institutions, Processes and Corruption in Transition States in East-Central Europe and in the Former Soviet Union*. Budapest: Institute for Constitutional and Legislative Policy.
- Rose-Ackerman. S. 1999. *Corruption and Government: Causes, Consequences, and Reform*. Cambridge University Press, United Kingdom.
- Rose-Ackerman. S. 2004. The Challenge of Poor Governance and Corruption. Copenhagen Consensus Challenge Paper. Available from [http://www.copenhagenconsensus.com/Files/Filer/CC/Papers/Opponent%20notes/Opponent\\_Note\\_-\\_Governance\\_-\\_Andvig.pdf](http://www.copenhagenconsensus.com/Files/Filer/CC/Papers/Opponent%20notes/Opponent_Note_-_Governance_-_Andvig.pdf) (Accessed 17 January 2007).
- Shah, A. & Schacter, M. 2004. Combating Corruption: Look Before You Leap. Finance & Development, December. Available from [http://www.adb.org/Documents/Conference/Fight\\_Corruption/part1.pdf](http://www.adb.org/Documents/Conference/Fight_Corruption/part1.pdf) (Accessed 17 January 2007).
- Tangkitvanich, S. 2003. Designing E-government Services to Combat Corruption in Developing Countries. The ASEM Conference on Globalisation and ICT. 10–12 March, Malmö and Helsingborg, Sweden Session IIB, March 1. Thailand Development Research Institute, Thailand.
- Talero, E. 2005. Reducing Corruption through Electronic Procurement, Presentation delivered at Anti Corruption Thematic Groups One Day Clinic on Building ICT Applications for Combating Administrative Corruption, 21 April, 2005.
- Toatu, T. 2004. Corruption, Public Investment and Economic Growth: Evidence from Pacific Island Countries. Pacific Institute of Advanced Studies in Development and Governance PIAS-DG Governance Program Working Paper, University of the South Pacific, Suva, Fiji Islands.



Pathak, R. D. Singh, G., Belwal, R., Naz, R. & Smith, R. F. I. (2008). E-governance, corruption and public service delivery: A comparative study of Fiji and Ethiopia, JOAAG, Vol. 3. No. 1

Transparency International. 2005. Corruption Index, Available from: <http://www.transparency.org> (Accessed June, 10 2005).

Yum, J.H. 2003. Enhancing Public Procurement Transparency through ICT. Anti Corruption Conference (IACC) Seoul, Korea Workshop 26th May, 2003.

Yum, J.H. 2005. Enhancing Transparency through Government e-Procurement System. 11th International Anti-Corruption Conference. 25-28 May 2003 Seoul, Korea.