2012

Government-to-Government E-Government: A Case Study of a Federal Financial Program

Olu Faokunla
Walden University

Walden University

COLLEGE OF SOCIAL AND BEHAVIORAL SCIENCES

This is to certify that the doctoral dissertation by

Olumide Faokunla

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Anne Hacker, Committee Chairperson,
Public Policy and Administrations Faculty

Dr. Lori Demeter, Committee Member,
Public Policy and Administrations Faculty

Dr. Tanya Settles, University Reviewer,
Public Policy and Administrations Faculty

Chief Academic Officer

Eric Riedel, Ph.D.

Walden University
2012

Abstract

Government-to-Government E-Government: A Case Study of a Federal Financial Program

by

Olumide Adegboyega Faokunla

MS, University of Maryland University College

MS, Obafemi Awolowo University, Nigeria

BS, University of Ibadan, Nigeria

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

February 2012

Abstract

The problem with the study of the concept of electronic government (e-Gov) is that scholars in the field have not adequately explored various dimensions of the concept. Literature on e-Gov is replete with works on the form of government to consumer e-Gov. Much less work had been done on the government to government (G2G) e-Gov. This qualitative case study was predicated on the concepts of intergovernmental relations and intergovernmental management, and it sought to fill the gap in the literature by providing a clear understanding of G2G e-Gov by exploring a federal program in the United States. The central research question determined how G2G e-Gov enhanced accountability, efficiency, and public service value. Data were collected using face to face and email interviews, documents, and archival data. Data were analyzed with a modified content analysis technique. Findings from the study indicated that improvements in communication, process, technology, and legislative proposals are linked to programmatic success in G2G e-Gov. The study has implications for social change as the knowledge of G2G e-Gov is useful to governments because of its emphasis on accountability, efficiency, collaboration, and information sharing. It also has the potential to assist public policy officials and academics to better understand the importance of G2G e-Gov for public service delivery, and help developing countries in their e-Gov implementations.

Government-to-Government E-Government: A Case Study of a Federal Financial Program

by

Olumide Adegboyega Faokunla

MS, University of Maryland University College (UMUC)

MS, Obafemi Awolowo University, Nigeria

BS, University of Ibadan, Nigeria

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

February 2012

Dedication

This study is dedicated to God Almighty, the Father of my Lord and Savior Jesus Christ who is the author, perfecter, and finisher of my faith and my best and committed friend. It is also dedicated to the memory of my mother, Ruth Ibijoke Faokunla who slept in the Lord on July 14, 1994.

Acknowledgments

As I complete this long and arduous journey of a Ph.D program, I want to express my gratitude and thankfulness to God who gave me the life, strength, knowledge, and good health through the course of the program. I also want to thank my wife, Courtney and my children: Olukole, Olukunle, and Olukemi for their love, understanding, and patience throughout the process. 'Kemi was just three months old in the summer of 2007 when I started the program. To think that she turned five on the last day of my last quarter in the program (2/26/2012) was an amazing feeling. I praise God for all of you.

My thanks also go to my dissertation committee chairperson, Dr. Anne Hacker who when I turned to her in May of 2010 that she be my chairperson, as I was switching from another faculty, was willing to take me on. I am thankful for her forthrightness in feedback, candid suggestions, support, and encouragement. I could not have done it without her. I am also thankful to Dr. Lori Demeter for accepting in October, 2009 to serve on the committee as a member; for her time, prompt, and productive feedback on my submissions. I thank Dr. Tanya Settles, the University Research Reviewer who ensured that my study was in compliance with the university's research standards and Dr. Melanie Brown for her thorough and rigorous editing of the draft of the study.

Equally appreciated are the eight participants (who for confidentiality reasons cannot be named) and other "gatekeepers" from different organizations who enabled me to conduct this study. Even though many did not know me before hand, yet they sacrificed their time, efforts, kindness, and support for the success of the study. I am forever indebted to you.

I thank God for my parents, both of whom were teachers, for instilling in me very early in life the value of education when they enrolled me in an elementary school 42 years ago - when I was barely five years old,. They supported me morally and financially through my first Master's degree. Indeed, it was my father, Mr. J.O. Faokunla, along with two friends in Nigeria, Adeleke Odewade and Akindele Ogunranti who around the same time in 2006 reminded me of my competence and ability to complete a Ph.D. Your encouragement was a great motivation in enrolling for the program. Thank you.

I wish to also thank my siblings: Folake Akanni, Odunola Adeshina, Olatunde Faokunla, and Oluwaseun Faokunla for their words of encouragement during the program and always. Thanks for cheering me on. I equally acknowledge the encouraging words at different times from my relatives: 'Laoye Faokunla, 'Sanmi Olajubu, Dr. 'Deola Olorunnishola, and 'Bola Oduntan.

To my pastor, Dr. Larry Rickard who often checked on how I was doing in the program and other members of Paramount Baptist Church, Hagerstown, Maryland, USA; I am appreciative of your encouragement. To my very good friends: 'Dayo Alagbe, Ope Blaize, Ayo Oladipo, Franklin Ajanaku, Leslie Cross, 'Bisi Adewale, Dr. and Mrs. Babalola, Mrs. Suzy Tiery-Stevenson, Mrs. Comfort Adesina, 'Bimbola Ogunyankin, Ahmadu Diop, Owoyele Agbi, 'Kayode Sofela, Becky Igyuse, Ayo Fadipe, 'Demola Afolabi, 'Debola Aderibigbe, and 'Remi Odunayo. I thank you all for your friendship.

After 16 full quarters (48 months) and having taken 17 courses and seminars at Walden University, written one Knowledge Area Module (KAM) on Governance, attended four Residency sessions, and completed this dissertation, there are so many

people at the university who contributed to my success, to all whom I am grateful. However, there are some specific faculty at the School of Public Policy and Administration (SPPA) that I will like to acknowledge. These people are: Dr. Joyce Haines for her gentleness in teaching and wisdom, Dr. Elizabeth Hagen and Dr. Anthony Leisner for recognizing my potentials early on and for their encouragement, Dr. Frances Goldman for her push for excellence and candid assessment, and Dr. Patricia Ripoll who accepted to be my mentor, supervised my only KAM, and was the initial chairperson of my dissertation committee. Outside the SPPA, I am appreciative of Dr. Gary Buckholder for his knowledge and humility in assisting other doctoral students and me in understanding the mechanics of dissertation at two of the Residencies that I attended.

I could not have gotten to this height of scholarly learning though without a solid background and positive impact on my academic and professional life by countless of people in the last 28 years or so. I recognize my lecturers at the Department of Political Science, University of Ibadan, Nigeria who gave me outstanding foundation in academics and research from 1985-88 for my Bachelor of Science degree. The people at this matchless Ibadan School of Politics included Dr. O.B.C. Nwolise who supervised my first scholarly thesis on Iran-Iraq War in 1987-88, Prof. Adigun Agbaje, Prof. 'Bayo Adekanye, Prof. Eghosa Osaghae, Dr. Jimi Adisa, Prof. Alex Gboyega, Prof. Peter Ekeh, and Dr. Fred Onyeoziri. At the Department of International Relations, Obafemi Awolowo Univeristy, Ile-Ife, Nigeria, for my first Master's degree were Dr. Emeka Nwokedi who in 1990 supervised my thesis in foreign direct investments in Nigeria, Ambassador Olu Sanu who deepened my knowledge in International Organizations, Mr. Steven Ayo

Amale, Prof. ‘Kayode Soremekun, and Prof. ‘Sola Ojo. The list also included my instructors for the second Master’s degree in Computer Systems Management at the University of Maryland University College (UMUC), Adelphi, Maryland, USA, Dr. Leslie Pang and Dr. Mary Hoferek. You all provided me with a solid background.

Professionally, I thank my cousin Mr. ‘Leye Olajubu who gave me my first job at 18 as a teacher and my cousin, Mr.‘Bayo Alagejuyigbe who facilitated my National Youth Service as a research assistant at the reputable Nigerian Institute of International Affairs (NIIA), Lagos in 1988-89. I acknowledge the academic influence of Prof. ‘Bayo Olukoshi on me during and after my service at NIIA. I am also thankful to many other people whom God had used along the line to recognize my knowledge, skills, competence, and abilities and provided me with the professional opportunities to succeed. These people included John Kopec, Darnell Pinkney, Janelle Simms, Janice Lucas, Barry Firebaugh, Rick Gassaway, Patti O’Connell, Mr. Fidel Odum, Malam Shehu Dauda, Mr. ‘Tunji Oseni, Malam Yaya Abubakar, and Jason Gapco.

I am also grateful to my colleagues and friends on my current job for their encouragement and support. These are Carla Epps, Dr. Brian Easley, Ola Banjo, Godfred Amphonsah, William “Chip” Peterson, Tina Marshburn, Valerie Spinner, Carolyn Allen, Gavin Jackson, Vicki Fleming, Latonia Williamson, Hazel Kennedy, John Benoit, Michael Cummings, Janice Wallace, Eric Most, and Percy Lazarous. To my friends at Walden who currently are at various stages of the program, it is my wish and prayer that you will soon experience the joy of completing the program as well.

You have all contributed to my success and achievement and may God bless you.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Background

The action plan resulting from the National Performance Review led by former Vice President Al Gore in 1993 stated that the Clinton Administration would create a strategic plan for the use of information technology (IT) in the United States federal government. It noted that "agency information resource management plans aren't integrated...Modernization programs tend to degenerate into loose collections of independent systems solving unique problems" (Gore, 1993, p. 91). In essence, with the National Performance Review report, the government recognized IT as a key tool among others needed by federal workers to effectively and efficiently perform their duties.

In its own e-Government (e-Gov) initiatives as contained in the 2002 President's Management Agenda, the succeeding Bush Administration improved on the observations of the Clinton Administration (Office of Management and Budget [OMB], 2003). It promised to initiate IT performance focused projects that transcended agency boundaries in procurement, grants, regulations, and signatures. A proposed task force was instructed to create a one-stop shop for citizens to access government services and alleviate the burden on businesses to report their activities. The task force was also to encourage expedient information sharing among federal, state, local, and tribal governments as well as fostered automation of agency internal processes for cost reduction and dissemination of best practices across government. Section 2 of the e-Government Act (Government Printing Office [GPO], 2002) indicated that the federal government's Internet services were isolated from one agency to the other instead of being collaboratively integrated across agencies based on functions. It recognized that integration was cumbersome to

execute among these similar, but dispersed systems because of a shortage of funding sources.

Nevertheless, the quests for integration of governmental information and communication technologies (ICTs) as part of e-Gov were not insular. There were other aspects of e-Gov as well. Prominent among these was the focus on giving the general public Web access to government services or what is generally called government to consumer/citizen (G2C). As noted above, the first assignment of the task force created by the 2002 President's Management Agenda was to ensure accessibility to the members of the public. Four approaches to e-Gov often recognized are G2C, government to business (G2B), government to government (G2G), which stressed the integration of government systems and collaboration of agencies on ICT, and internal efficiency and effectiveness (United Nations, 2003; Isaac, 2007).

Despite these various aspects of e-Gov, the focus of academic researchers and practitioners continued to be primarily on the G2C component to the neglect of other aspects. Literature on the concept of e-Gov revealed considerable and pervasive emphasis on e-Gov towards citizens. While this concentration of studies on G2C is understandable given the need in the public service for transparency and accountability to the people, there was an apparent gap in the literature regarding study of G2G integration and interoperability.

There were many areas which featured G2G e-Gov at the national, state, and local government levels. These areas included security and terrorism, education, health, and finance, among others. This study used the TOP, a financial debt collection system of the United States government, to illustrate and understand G2G. TOP is a statutorily

established program which is centrally administered by the U.S. Treasury's Financial Management Service (FMS) to collect delinquent debts on behalf of the federal and state governments (FMS, 2009). FMS disburses payments on behalf of payment agencies like the Internal Revenue Service (IRS) to private citizens and businesses, and such payments may be reduced or taken in its entirety to offset delinquent debts owed and submitted by creditor agencies like the Department of Education and certified as qualified for collection in TOP. Prior to the disbursement of a qualified payment, the name and tax information number on payment vouchers supplied by the payment agencies for the payee are compared with similar information in the TOP delinquent debtor database. If a match is discovered, the payment is partly or wholly offset legally by the disbursing official. The amount collected is transmitted to the creditor agencies, and related information to the debt is maintained in TOP. This information allows FMS to continue to offset eligible federal payments for the delinquent debt until the activity is either suspended by the creditor agency as a result of a bankruptcy action or terminated due to full payment, compromise or discharge of the debt. TOP thus provided an apt illustration for G2G e-Gov because of its electronic database managed by a federal agency and used for financial transactions with and among other government agencies.

Problem Statement

The area of inquiry for the proposed research was the G2G form of e-Gov. The preponderance of research studies and projects concerned G2C, which focused on providing Web services to the citizens while neglecting G2G e-Gov. While there were some limited studies done on some aspects of G2G (Bloomfield & Hayes, 2009; Scholl & Klischewski, 2007), these were limited in frequency. Most scholarly research studies

focused on G2C. This study aimed to provide an indepth study of G2G with the goals of addressing the apparent gap that existed in the literature on the concept of e-Gov and extending the understanding of G2G form of e-Gov.

Purpose Statement

The purpose of this study was to provide a clear understanding of the dimension of G2G within the concept of e-Gov using TOP as a case study. The TOP system provides an integrative and collaborative mechanism for offsetting debts owed to the federal and state governments. This research offers the potential of contributing to social change as it is anchored on the theory of intergovernmental relations (IGR; Anderson, 1960; Wright 1978, 1988, 1990) and the concept of intergovernmental management (IGM; Agranoff, 1996; Agranoff & McGuire, 1999), both of which promote information sharing and collaboration among government agencies. Contemporary works in IGR and IGM are reviewed in Chapter 2. The research also sought to contribute to the body of knowledge and help to fill the apparent gap in the literature by focusing on gaining an understanding of G2G e-Gov. It aimed at assisting scholars and practitioners in better understanding the importance of G2G e-Gov to public service delivery. Public administrators and public policy practitioners at all levels of government could benefit from the results of the study, which showed the potentials for cooperation and information sharing among government agencies. There are also the possibilities that the study could be of value to other constituents in private and nonprofit sectors whose organizations may be minor partners, through consulting services or networks, in the collaborative efforts by government agencies. These other sectors may also use the study as a benchmarking model for G2G e-Gov services.

Nature of the Study

The tradition of inquiry used for this study was the qualitative case study analysis of the FMS TOP financial system. The main aim of conducting a qualitative case study can be to describe an agency or an organization (McNabb, 2008) or provide an indepth explanation about an event in an organization (Babbie, 2007). Because this study sought to explore how an agency implemented G2G e-Gov in its financial system, qualitative case study analysis was more appropriate than quantitative analysis. Unlike quantitative studies, which involve describing objects and things with numbers and statistically analyzing the data gathered (McNabb, 2008), qualitative studies tend to describe the case, themes, and cross themes of the case (Creswell, 2007). Yin (2009) also alluded to the pervasive influence of case study research method in all social science fields and asserted that the rationale for the method was borne out of the quest to discern complex social conditions. Qualitative studies thus allow researchers to collect and understand traits of actual human events at the individual, group, organizational, communal, and societal levels. Because the issue that was studied in this research is the G2G e-Gov and the goal was to illustrate that phenomenon with TOP, instrumental single case study was utilized over both the collective or multiple and intrinsic case studies. This design allowed for a thorough understanding of the G2G phenomenon at the organizational level.

Eight participants were involved in this study. Two of the participants were from FMS and the other six were from other organizations that use TOP. Data were collected from all the participants using face to face interviews and email responses to same interview questions. Data were also collected through existing public records, documents,

and archival documents. This methodology and other strategies for conducting the study such as data collection and data analysis methods are extensively discussed in Chapter 3.

Research Questions

The central research question for this study was as follows: How can G2G approach to e-Gov bring about efficiency, accountability, and value to service delivery? The study was also guided by the following subquestions:

1. What is the nature of G2G e-Gov implementation of FMS' Treasury Offset Program (TOP)?
2. What are the challenges confronting G2G E-Gov implementation in the U.S. government?
3. What are the specific problems confronting the implementation, management, and usage of TOP within the context of G2G e-Gov?
4. How can G2G e-Gov be improved as an integral part of e-Gov?

Conceptual Framework

This study was rooted in the public administration concepts of intergovernmental relations (IGR) advanced by Anderson (1960) and Wright (1978, 1988, 1990) and intergovernmental management (IGM) located in the work of Agranoff (1996) and Agranoff and McGuire (1999). It was also based on the conceptual framework of e-Gov as it related to G2G approach.

Anderson (1960) couched IGR in a supplemental study of the United States federal system as "working relations" of the national and state governments in the day to day administrative activities. For him, IGR pointed to the interactions generated during the execution of duties among different officials at various levels of governments as

governmental relations were corrected and modified through these official engagements. IGR involved the legislative, executive, and judicial branches of government as well as the central, state, and local governments, and the relations are both vertically and horizontally defined. IGR thus was a term used to describe significant interactions among branches of government and three levels of government in a federal system.

In the same vein, Wright (1988) argued that IGR also involved citizens and public officials and all forms of government entities of every size and at every location. The relations were pervasive in the political and civil service machinery. Although these interactions could be located in the past, they equally had implications for current and future activities. In terms of public policy, Wright (1988) traced the origins of IGR to President Franklin Roosevelt's New Deal and his attempts to stem the adverse effects of Great Depression in the1930s in the face of legal opposition by the Supreme Court. Most importantly, the author attributed the escalated research and practical interests in IGR from the 1930s to the intense clamor to effectively and efficiently deliver public services and, in the process, provide satisfaction to the targeted clients, such as interest groups or/and citizens. Consequently, beyond welfare programs, IGR was evident in other federal government programs like education aid, urban development, and civil rights. It was also seen in the participation of citizens in social activities that affected them and public service delivery systems created for efficiency and effectiveness.

Thus, the distinctive features of IGR were, first, the legal element of all governmental units. That is, IGR not only involved national-state relations pervasive in federalism, but the concept also embraced all forms and combinations of interactions that existed among the units of government in the United States federal system. Second, the

notion of IGR involved the human element of officials' actions and attitudes. Public officials, through deliberate and purposeful actions and perceptions of other actors within the same government or at another level of government, tended to have strong bearing on IGR. Third, there were regular and consistent contacts among these officials which usually engendered practical working relationships and sustenance of action patterns as well as all types of public officials including elected, appointed, and selected individuals. Finally, there was the pervading feature of policy issues inherent in IGR, which centered on finance issues of revenues, expenditures, and debt as well as policy formulation implementation and policy content of distribution, regulation, and compliance and redistribution.

With IGM, emphasis was on the crafting of relationships among government units for technical and programmatic activities (Agranoff, 1996). IGM was conceived as an extension of IGR as it dealt with the daily routines of the latter and managers, and other officials tasked with managing public service programs were considered IGM primary actors (Agranoff & McGuire, 1999). Wright (1990) located the origin of IGM concept in the 1970s and attributed its popularity to three significant factors. These factors were the policy activism at the national level in the 1960s and 1970s that brought about effects associated with management, the implementation difficulties that attended management of several intergovernmental programs, and the existing gap between career public officials and political appointed ones.

Agranoff (1996) categorized IGM strategies into three areas: adjusting arrangements, building capacity and leveraging resources. The components of adjusting arrangements as an IGM strategy included making direct personal contacts with program

analysts or managers in another government agency or level for advice, information, or approval. Adjusting arrangements also entailed negotiating waivers or creating program prototype, and special programming. The goal here was to seek disparate treatment among government jurisdictions for those efforts that otherwise were not within allowable standards, policies, rules, and regulations. The final attribute of adjusting arrangements was managing and negotiating regulatory programs whose purpose was to transcend waivers and obtain changes to regulations and standards.

On the IGM strategy of building capacity, the focus was to enhance decision making processes and utilization of resources. The components of these strategies were strengthening government and efficiencies of scale. With a strengthened government capacity, there was also the propensity for positive change, informed and sound policy decision making, recruitment, retention, and management of quality resources as well as assessment of present conditions with the aim of shaping future decisions. Efficiencies of scale presupposed cooperation and collaboration, and tended to involve consolidation of government services such as education, health facilities, transportation, and so on and decentralization of services aided by communications technology. These efficiencies of scale also involved “mutual services agreements between jurisdictions, purchase of services and contracting for services, and reorganization and consolidation of government units” (Agranoff, 1996, p. 226).

The last IGM strategy of leveraging resources pointed to the financial arrangements such as direct grants and tax exemptions between the giving governments at the national and state levels to the receiving local authorities. These arrangements generally required that the latter demonstrate their stake through financial participation.

The leveraging opportunities also encouraged that the elected and administrative officials exhibit their initiative and ample discretion in interpreting and managing intergovernmental programs. The steps to leveraging resources in IGM involved the program manager having access to wealth of information about many sources of and opportunities for funding and clarifying with the necessary government officials of appropriateness of strategies. Next steps encompassed horizontal networking with key contacts who could assist and guide with financing procedures, packaging the leverage strategy, and obtaining approval to proceed from the appropriate officials.

With regard to e-Government, Brown (2005) broadly defined it as an all encompassing concept which employed the use of ICTs to shape and make the functions and activities of the government. Specifically, Brown saw e-Gov as a means of bringing government and the public closer using ICT as well as creating linkages among the elements of democracy, governance, and management of public services that existed within the state and its public administration. The first survey report in 2003 by the United Nations that assessed e-Gov readiness among various member nations attributed the rapid interest of governments in e-Gov to two mutually reinforcing factors. These were increased globalization which brought nations closer to one another through trade, and financial interactions and innovations in ICTs, which offered new trends in the integration of systems across multiple borders.

The elements of the conceptual framework are discussed in greater detail in Chapter 2. A review of the contemporary literature on the concepts of IGR and IGM sought to establish a relationship between these concepts and G2G e-Gov.

Operational Definitions

E-Government: Refers to the general use of information and communication technologies (ICTs) to conduct operations at every level of government with the goal of becoming more transparent to the public, improving efficiency, and promoting interagency and intergovernment cooperation and collaboration (D. Brown, 2005; Tambouris, Gorilas, & Boukis as cited in AlAwadhi & Morris, 2009; World Bank, 2010).

E-Government interoperation: Shows the effective and coordinated working operation of wholly autonomous information systems or their parts owned by different government agencies under established agreements (Scholl & Klischewski, 2007).

E-Government interoperability: Defined as the "technical capability for e-Government interoperation" (Scholl & Klischewski, 2007, p. 901); reveals the ability of different e-Government information systems which previously were not connected, to effectively transmit and exchange data unhindered.

Government to government (G2G): Refers to the integration of systems and services among government agencies with the aim of reducing costs and achieving synergy of services (United Nations, 2003).

Government to client/consumer (G2C): Refers to the use of ICT to dispense government services to the citizens and members of the public (United Nations, 2003).

Government to Business (G2B): G2B points to the use of ICT to dispense government services to the private industry and business community (United Nations, 2003).

Information communication technologies (ICTs): These refer to an amalgam of technologies used to provide electronic information and communication to a vast

majority of people. ICTs consist of the equipment and services that enable the storage, processing, showing and relay of information (Torero & von Braun, 2006). It includes computing components of hardware, software, networks, the Internet; digital data processing and output equipments such as cash registers, calculators and copiers; telecommunications services like land line and mobile telephones, instant messaging; and audiovisual products and services of television, radio, video, compact disks (CD) and so on (Torero & von Braun, 2006).

Intergovernmental relations (IGR): This public administration theory points to the various interactions that are generated amongst different officials at various levels and branches of governments in the course of implementing or during execution of their duties (Anderson, 1960). It involved citizens and public officials and all forms of government entities of every size and at every location (Wright, 1988). IGR also emphasizes cooperation and collaboration (Mason, 2008).

Intergovernmental management (IGM): The concept refers to the creation of relationships among government units for technical and programmatic activities using the strategies of adjusting arrangements, building capacity, and leveraging resources (Agranoff, 1996). Like IGR, cooperation is also germane to the success of IGM and this is what Stever (2005) classified as Type 2 IGM of lateral relations, consensus or collaboration, and networking.

Internal efficiency and effectiveness: Refers to the conduct of government's business internally at each agency, bureau, and office on behalf of the people in the most judicious and effective manner for the purpose of promoting and sustaining public good and trust (United Nations, 2003).

New public management: Refers to a public service reform movement made popular in the 1980s and 1990s that sought to introduce private sector management principles such as performance measurements and benchmarking, among others, into the public sector management with the aim of improving efficiency and customer service (Brown, 2005; Morgeson & Mithas, 2009).

Service delivery: Generally refers to the rendering of services to the public, businesses, or other agencies. It points to the proximity of public agency officials to the local community as well as the communication and willingness to render to that community customer service and flexible use of technical and social expertise to desirable circumstances (Hernes, 2005).

Tax identification number: A unique number used in the United States by the tax administrative authorities at the federal, state, and local governments for effective administration of taxes may be assigned to individuals by the Social Security Administration as a Social Security Number or by the IRS as an Individual Taxpayer Identification Number issued to legal or illegal aliens (IRS, 2010). It may also be issued by IRS to employers, businesses, government agencies, and nonprofit organizations as a federal employer identification number or to potential adopted parents of a U.S. citizen or resident child without available Social Security Number to file taxes as adoption taxpayer identification number and to paid tax return preparers as a preparer taxpayer identification number

Transparency and openness: Refer to the twin values often used to describe efforts to discourage unnecessary secrecy and corruption in governments and to make unclassified government information available to the members of the public. It is

believed that improved transparency and openness in government serve as a check on public officials and politicians in the exercise of their duties not to be oblivious to the interests of the public as well as encourage the latter's participation in civil affairs (Kotaro, 2003).

Assumptions, Scope, and Limitations

One of the assumptions of this study was that e-Gov approaches represented one of the most efficient and effective ways of providing government services to the citizens. It was also assumed that TOP presented the integrative and collaborative features of G2G approach to e-Gov. Additionally, it was assumed that participants in the study possessed deep experience in TOP and an indepth knowledge of the program and that they will be willing to honestly discuss and provide insights about the system.

The scope of the research was limited to TOP as an illustrative case study of G2G e-Gov. No attempt was made to study any other system or compare TOP with another system except where that other system interfaced with TOP and when there was a need to refer to it. Although there were sporadic references to other forms of e-Gov (i.e., G2C, G2B, and internal efficiency and effectiveness), the primary focus of the study was on G2G e-Gov.

Limitations of the study included generalizability issues. Focus on a single case study of one system limited how the study could be generalized for other government agencies. Indeed, it was impossible to see a single case study as capable of providing a holistic and exhaustive analysis of a study by itself (Yin, 2009). Another limitation of the study was in the very fact that effort was being made to differentiate among four forms of e-Gov, which even though appeared separate were actually mutually reinforcing, and in

the process emphasized the importance of G2G type. A third limitation rested in demonstrating the relevance of the chosen federal system as a true illustration of G2G form of e-Gov. Additionally, although the selected case study unit analysis, TOP is a financial program, the study did not focus on the financial and accounting principles that surround the operation of the program. Where there were financial figures shown, they were only referenced to demonstrate the nature, challenges or problems, and improvements to the program. The primary focus was to demonstrate how G2G e-Gov was effected using the program.

Beyond these, it is noteworthy that although references were made to some tools and technologies that can enable G2G e-Gov; the study was not conducted from the technology standpoint. Instead, the subject was essentially examined from a policy perspective. Consequently, the aim of the study was not to recommend technological strategies nor to emphasize various technologies for implementing e-Gov in organizations. Technology references were only made with the goal of determining how participants were coping with the constant changes in technology environment.

Significance of the Study

This study aimed at filling the apparent gap in the e-Gov literature, which favored G2C e-Gov while neglecting the G2G e-Gov approach. Its goal was also to assist scholars and practitioners of public policy and administration see the importance of e-Gov from another perspective other than G2C. For the scholars, the expectation was that the findings from the research could stimulate academic interest in the importance of e-Gov to intergovernmental collaboration and the need to expand research and discourse beyond just concentrating research work on only the customers' dimension of the concept.

Additionally, it was expected that the results generated from this study could provide further variables for added research. As for the practitioners, the results derived could assist them to see the inherent strengths in pooling and integrating their resources for efficient and effective delivery of public services and that G2G can actually be beneficial to their implementation of G2C.

The current state of the economy, increasing national public debt, and deficits have led to greater emphasis by governments at every level to cut their operating costs and improve efficiency while maintaining the same level of service delivery. The focus on the integration of government business processes and electronic systems among government agencies in this study will assist governments' cost cutting measures through G2G e-Gov. The findings from the case study will also be beneficial to agencies, public policy practitioners, and administrators on the inherent benefits, opportunities, challenges, and problems of integrative systems. The case study has the potential to help demonstrate G2G e-Gov in action to practitioners and provide them with an example in TOP on how to conduct better assessments of their own environments, perform cost benefit and alternative analyses, and make informed decisions.

Lessons learned from this case study could also prove invaluable to developing countries, many of which are still struggling with the implementation of their e-Gov initiatives. For instance, the 2008 United Nations survey results revealed that the e-Gov readiness rankings of developing regions of Asia (0.4470), Oceania (0.4338), and Africa (0.2739) were all below the world ranking average of 0.4514. The results also showed that the top 35 ranking countries have no representation from the developing regions of Africa, Caribbean, Central America, Central Asia, South America and Southern Asia.

The top three countries in the survey were Sweden, Denmark, and Norway with readiness indexes of 0.9157, 0.9134, and 0.8921 respectively. One crucial reason attributed to this sluggish readiness in developing countries was the prohibitive cost of enabling infrastructure deployment for e-Gov. The cost crisis was even more exacerbated by budget constraints brought about by other important social needs in the areas of health, education, and gainful employment. Focus on G2G e-Gov in this research was intended to offer insights into how the developing world can transform their governments towards building and sustaining integrated and consolidated ICT infrastructure.

Summary

This study examined the G2G approach to the concept of e-Gov with special focus on the FMS' TOP financial system as a case study. In Chapter 1, the background, rationale, and the conceptual framework for the study were provided. The chapter also provided a number of assumptions on which the study was based, its scope, and known limitations. It presented the significance of the study to public policy practitioners and scholars as well as its influence on social change in terms of cost savings for governments and model for developing countries.

Chapter 2 will present a review of the literature on the concept of e-Gov in general, the importance of G2G e-Gov, and the nexus between the latter and the theory of IGR and concept of IGM. Chapter 3 concerns the qualitative research as a type of inquiry for the study, provides justification for the choice of case study analysis as a method of inquiry, and offers strategies and procedures for sampling, participant selection, data collection, as well as data analysis and interpretation. Chapter 4 shows the analysis of data that were collected and provides the results, findings, and narration of the patterns,

relationships, and themes in those results and findings. Chapter 5 discusses the interpretation of findings and presents conclusions and recommendations for action and further study.

Chapter 2: Literature Review

Introduction

The concept of e-Gov, which has become pervasive in the public sector administration, began in the 2000s. However, its seeds were sown in the early 1990s with the National Performance Review report of the Clinton Administration. The succeeding Bush Administration continued e-Gov initiatives with its IT performance based projects (OMB, 2003). Earlier on, the E-Government Act (2002) had been passed by Congress and signed into law by the president.

Currently, the preponderance of research studies and projects is on the G2C e-Gov, which is focused on the provision of Web based services to the citizen. As a result of this focus, there has been little research on G2G e-Gov. While there have been limited studies done on some aspects of G2G such as inter and intradepartmental integration of systems (Bloomfield & Hayes, 2009; Scholl & Klischewski, 2007), many of the studies on e-Gov have focused on the G2C type. This literature review will examine studies centered on e-Gov as well as those exploring G2G. Also, in practice, efforts have been concentrated over the years on building websites and portals to provide services to the citizens. According to the United Nations (2008), the predominant focus of global e-Gov initiatives had been on G2C, and this meant that platforms for the delivery of those services were isolated and duplicated.

It is against this backdrop and in the apparent gap in the literature that this study was based. Its purpose was to gain a deeper understanding of the G2G form of e-Gov with a case study analysis. The conceptual framework for the study was an amalgam of public administration concepts of intergovernmental relations (IGR) advanced by

Anderson (1960) and Wright (1978, 1988, 1990), intergovernmental management (IGM) made popular by Agranoff (1996) and Agranoff and McGuire (1999); and the general concept of e-Gov as it relates to G2G approach.

Apart from the introduction, the review of the literature is composed of five sections. A definition section seeks to create meaning for the concept of e-Gov by providing an analysis of various definitions available in the literature. A section on the origin of e-Gov places the concept in historical perspective by emphasizing the role of ICTs in the business and art of government. A section on forms and stages of e-Gov distinguishes G2G from other types and identify different stages of e-Gov implementation. The rationale for e-Gov section includes syntheses and analyses of the literature on the arguments for e-Gov in terms of its inherent benefits, legal basis, public sector values, and integration in and collaboration of agencies and other sectors. The final section on the assessment of the concept and practice of e-Gov critically examines and synthesizes the literature on how the concept of e-Gov has been researched and practiced. The goal of this study was to address the research problem, which posited that much more emphasis has been placed on the G2C form of e-Government to the neglect of G2G. Goals also included presenting a case for the latter and comparing the concepts of IGR and IGM to G2G.

The scope of the literature review focused on the use of peer reviewed journal articles. The rationale behind this focus was that they are rigorously researched and subjected to high level of scrutiny before they are published. The inherent rigor and scrutiny make them more evidentiary and credible than popular media articles. There was also a limited use of documents produced by the government and international

organizations, such as the United Nations Organization and Organization for Economic and Cooperation Development. The rationale for using literature from these sources was because they help to lend further credence to the analyses and syntheses of the review. Very rarely were texts used as part of the review of the literature. Wherever texts were used, they were edited texts composed of contributions from writers or other texts on the concept or specific themes of e-Gov, and they placed the concept and themes in historical context.

Journal articles were identified and selected by searching through many public policy and administration oriented databases available in the Walden University Online Library. The databases included Academic Search Complete, Dissertation and Theses at Walden and other institutions, Education Research Complete, Political Science: A SAGE Full Text Collection, ProQuest Central, ScienceDirect, SAGE Premier 2010, Business Source Complete, and Lexis Nexis Academic. Other databases and services used were Annual Reviews, Computers and Applied Science Complete, Political Science Complete, Google Scholar, Walden document delivery service, and the Thoreau Walden Library Virtual Catalog, which allows for the search of multiple databases.

The search keywords used included *e-Government, integration, collaboration, connected governance, partnership, intergovernmental relations (IGR), intergovernmental management (IGM), interoperability, new public management,* and *ICTs*. Other keywords used were *government to business e-Government, government to consumer e-Government, government to government e-Government, qualitative research, case study method,* and *interviews*.

Definition of e-Government

There are as many definitions of e-Gov as there are many authors and scholars with interest on the subject. For instance, e-Gov has been defined as the use of information technologies by government organizations for the purpose of transforming relations between them and the citizens, businesses and other government agencies (World Bank, 2010). In the same vein, e-Gov was also defined by the European Commission as the utilization of ICT, organizational change and innovative skills in public sector to enhance public service delivery, improve democratic governance, and bolster support for public policy (as cited in Ferro & Sorrentino, 2010). Given these two definitions, the concept of e-Gov can be seen as a means used to provide citizens with government services and information, enable interactions with the business community, and efficiently manage government operations. It can also be perceived as a tool for bridging the gap between citizens and their government.

An expanded and progressive view of e-Gov sees the concept as that in which ICT is continuously used to change both the internal and external relationships of government agencies with the focus on how best to deliver services, encourage citizen participation and promote governance (Roy, 2006). Emerging from this definition are four interrelated transformational dimensions of delivery of services, security, transparency, and trust which are located in one form or the other in the pervasive and burgeoning electronic infrastructure of ICT and Internet.

Other definitions of e-Gov found in the literature included the one by Fountain (as cited in Brown, 2007), which saw e-Gov as the use of ICT to produce and deliver information and services to the citizens. Abuali, Alawneh, and Mohammad (2010)

conceived e-Gov as a constellation of initiatives by the government geared towards providing citizens electronic access to its services with the objective of achieving cost savings, bureaucratic reforms, and remediation of failed policies. Tambouris, Gorilas, and Boukis (as cited in AlAwadhi & Morris, 2009) defined e-Gov as a transforming tool for governmental efficiency, effectiveness, openness, and accountability at all levels, and for communication between the latter and the people and businesses who in turn are empowered through access to and use of information. For Cordella and Iannacci (2010), these inherent goals of public sector efficiency, accountability, effectiveness, and transparency in e-Gov provides a framework for the same salient reforms that are envisaged in the concept of new public management.

Furthermore, the concept of e-Gov has also been located within the concept of human and social development as championed by the United Nations. The United Nations Public Administration Network (2010) conceptualizes e-Gov as a combination of the capacity and the willingness of government institutions to use ICT to enhance the knowledge of the citizens by empowering them with useful information. Capacity in this regard points to the capability of the governments to provide the necessary financial and human resources, as well as necessary infrastructures, administration, legal regimes, and systems to effectively deploy the ICT. On the other hand, willingness demonstrates the commitment of governments to enable the dissemination of information and knowledge to the citizens. It is thus the opinion of the United Nations that a country's e-Gov development ought not be determined by the state of its readiness alone. Instead, e-Gov also has to be assessed by the developmental state of the country's technological and

telecommunication infrastructures, the human resource development and other salient factors related to national development.

Broadly, Brown (2005) saw e-Gov as that which "relates to the entire range of government roles and activities, shaped by and making use of information and communication technologies (ICTs)" (p. 242). Using digital technologies like computing, Internet, messaging, wireless, and so on, e-Gov facilitates the fusion of two elements that were previously isolated. These elements were the combination of governmental internal and the societal external environments in combination with the client/citizen and single window convergence management models on the one hand; and the model of state and public administration with their inherent democratic, governance, and public management values on the other. This broad definition further explains the location of e-Gov in the four domains of governance and public administration.

First, e-Gov is situated within the authority of the state, the roles of the state, and its various interactions within the socio economic environment. Creating enabling conditions for economic development and prosperity, and social cohesion are the two crucial purviews of the state and in the knowledge driven economy, access to information is of paramount economic importance and technology is the driving force for disseminating that information. It is therefore incumbent on the government to use e-Gov to facilitate the creation of enterprise and innovation through regulations, various programs, and national technological infrastructure.

Allied with the economic concerns are other policy issues related to the socio cultural conditions. The quest for knowledge by the citizens creates the need for innovative skills and investments in human resource development which in turn brings

about the need for informal, expanded, and consistent learning. This new and innovative environment also offers fresh methods of showing and displaying cultural beliefs and e-Gov provides new methods of storing and disseminating cultural information. In this new environment, e-Gov is also expected to help dismantle the economic and social tensions created in the knowledge based economy that is further exacerbated by the problem of the digital divide.

Second, e-Gov is seen within the context of the state as a legitimate entity and the sustenance of that legitimacy is through its relationships with the people ensuring that its actions are not outside the rule of law (Brown, 2005). Electronic technologies are used in this regard to promote e-democracy and e-governance through activities such as e-voting and other electronically induced measures that engage the public to participate in the decision making processes of the government. Digital technologies are also used to enhance the relationships between the citizens and their governments through innovative ways of encouraging self service to public services and in the process, empowering the people.

Given these new relationships between the people and the state and the necessity for sharing and collecting personal information respectively, it is imperative under the guidance of the rule of law that the state maintains the integrity of the information that is collected in order to ensure privacy. To this end, the state is obligated to institute security measures and legal regimes to safeguard privacy, protect salient personal information, and enforce and punish electronic crimes such as hacking, identity theft, and other similar fraudulent activities that are bound to occur as a result of electronic activities.

The third domain in which e-Gov is situated is in state institutional operations (Brown, 2005). Public administration activities such as internal working environment, recruitment, hiring and retention of skilled employees, budgeting and finance, contracting, and a host of other administrative procedures are all affected by the influence of the ICTs. In other words, not only does e-Gov has an impact on the relationships between the state and the people, it also influences the relationships with the employees of the private sector for which it often relies to supply the new electronic technologies and supplement its own internal IT personnel needs.

The fourth domain of e-Gov recognized by Brown (2005) is the state relationships in the international environment. Within this context, electronic technologies influence state relationships with other countries' public sector actors at all levels and their citizens, international organizations, and their actors as well as other private and nongovernmental organizations and their actors. Similarly, international public sector organizations like the United Nations and European Union are able to influence their member countries and other private and nongovernmental transnational institutions and actors are also able to interact with governments and their interested citizens globally.

Some aspects of these domains roughly align with the four dimensions of e-Gov which are service delivery, security, transparency, and trust (Roy, 2006). For instance, service delivery and security dimensions concern the changes that agencies need to make to adjust their decision making apparatuses to the threats and opportunities presented by the use of electronic technologies in the external environment. Just as in Brown's (2005) second domain, here the security dimension also calls for a reliable and secure architecture for effective interaction between government agencies and the customers.

The security argument is however extended to its politicization since the 2001 terrorist attacks on Trade Center in New York. For Roy (2006), the security dimension of e-Gov has transcended from purely technical enhancer to service delivery to it being the major focus of the public sector business.

Similarly, just as the second domain stressed e-democracy and e-governance, transparency and trust dimensions in Roy (2006) focused on the emerging democratic environment which in turn was bolstered by the use of the electronic technologies for the government agencies. These technologies, especially the Internet, have provided opportunities for increased participation of the citizens in state affairs. Democratic legitimacy however is predicated on the dimension of trust.

Apparently, the four domains and the four dimensions of e-Gov presented above fail to include the relationships that ICTs enable within governmental agencies at every level despite G2G forming integral part of many of the general definitions of e-Gov. Clearly, e-Gov can be located within the domain of collaborative and integrative efforts among governmental agencies as well as in the way they conduct public policy. There are inherent opportunities in the sharing of electronic information and knowledge electronically and in integrating their infrastructures for cost saving, and efficiency reasons. As many of the definitions presented have shown, the central focus is that which sees e-Gov purely in terms of governments' relationships with the citizens using ICT, especially the Internet. While it is understandable and not inconceivable that such an overwhelming focus is placed on the G2C in the definition literature of e-Gov; it is also appropriate that attention be given to the G2G. This gap in the literature, even in the one that seeks to define the concept of e-Gov, provided a justification for the study at hand.

Origin and Factors Influencing e-Government

In the United States, the evolution of e-Gov is traceable to the evolution of the Internet Architecture itself. From the beginning, the United States Government was at the epicenter of developing enabling technologies that will facilitate the use of the Internet. An agency of the U.S. Department of Defense, Defense Advanced Research Projects Agency had developed a wide area network, called ARPANET in 1969 (Kahn & Cerf, 2007). ARPANET facilitated internetworking of computers between universities and other research institutions and select countries in the North Atlantic Treaty Organization, a military alliance of democratic states in Europe and North America. Then, in the early 1970s, encouraged and supported the merger of packet switching technologies of synchronous satellites, also known as SATNET, and ground based packet radio, known as PRNET with the existing ARPANET. This merger, facilitated by the collaboration of Kahn and Cerf (2007), led to the development of the Internet program which provided an architecture that will allow for easy interconnectivity of autonomous computers without altering the fundamentals of the composite networks.

One cornerstone of the interconnectivity of these networks was the need to use gateways (routers) that will enable communications between the group networks. The gateways in turn required the use of Internet addresses, which were analogous to telephone numbers in telephone communications. Consequent upon this need, Defense Advanced Research Projects Agency contracted with Cerf's group at Stanford, Bolt Beranek and Newman (BBN), and University College London to develop, test and refine the Transmission Control Protocol/Internet Protocol, known as TCP/IP. TCP/IP which enables communications between disparate networks into an Internet was approved by

the Department of Defense as a standard in 1980 and on January 1, 1983, ARPANET adopted the protocol suite as its standard host protocol.

Apart from the influence of the Department of Defense in the development of the Internet, another governmental organization that influenced the development of the Internet was the National Science Foundation (Kahn & Cerf, 2007). National Science Foundation provided funds for the Computer Science Network, also known as CSNET, to link universities in ARPANET with those that were not part of the network and by the mid 1980s, the Foundation built a more robust high speed network called NSFNET, which became the cornerstone of the Internet. NSFNET helped to further enhance connections for the science and education institutions and complement the existing ARPANET. The developers of NSFNET also developed intermediate level networks to connect other science and education institutions not commissioned by the U.S. Government to the NSFNET.

While the U.S. Government was very active in all these developments toward the creation of the Internet, it also restricted the use of the medium for commercial purposes. But the rapid development of computing and telecommunications coupled with the accelerated personal computing, distributed computing, and client server models such as workstations, UNIX operating system, and local area networking in the 1980s (Kahn & Cerf, 2007; Brown, 2005); all stimulated the equally rapid use of the Internet. There were also calls by public administration scholars such as Simon (1997) for the design of information processing systems capable of facilitating effective critical thinking, providing solutions to problems, and decision making in the corporate world and in government. The confluence of these digital developments and calls for better

information processing methods signaled that the restriction will no longer be necessary. By 1991, Congress enacted a legislation that allowed the National Science Foundation to open NSFNET for commercial purposes (Kahn & Cerf, 2007).

As the private industry was tapping into the commercial opportunities that attended the new Internet phenomenon in the early 1990s, the potentials of IT for electronic governance were not lost on the new Clinton Administration. In the September 1993 National Performance Review report, government recognized IT as one of the key tools needed by the federal workers to effectively and efficiently perform their duties. The report was a product of a six month study of the federal government which was commissioned by President Bill Clinton in March 1993 and was led by Vice President Al Gore. The report recognized the capability of IT to dismantle barriers between organizations, expedite delivery of government services, improve performance, and provide public sector transformation (Gore, 1993).

By 1994 when the World Wide Web Consortium, an international standards development organization for the lasting growth of the Web was formed, increased graphics and text materials began to be ported on the Internet (Brown, 2005). Subsequently, government websites were developed to provide access to public information and deliver services to the citizens. Indeed, Kraemer (1996) had predicted, rather correctly that the most significant influence on the use of information systems in public service organizations was going to be the establishment of the national information infrastructure and the quest to port public services online.

Equally important in the 1990s were a series of Year 2000 (Y2K) projects that stimulated attention of policy makers to be more cognizant of the magnitude of

government's IT assets and human resources. The recognition in turn created the awareness about the relationships between the public and private sectors and the relationships between both sectors and the people (Brown, 2005).

E-Gov adoption by the Government of Canada began in 1994 when it created a blueprint for Renewing Government Services Using Information Technology (Charih & Robert, 2004). The blueprint called for the adoption of modern IT tools for efficient delivery of government services and cost reduction. The plan also emphasized collaboration and cooperation between programs, internal and external networking, and partnership arrangements among organizations. To this end, the goal of the Canadian government was to transparently and seamlessly provide a self serviced single portal that encouraged G2G delivery of services and between the government and other external parties. It also sought to eradicate duplicate programs, develop shared technologies, and institute standard tools that were not only automated but also linked.

The blueprint was followed by the creation of the Government of Canada's website in 1995. By the end of the 20th Century, the website had matured amidst the strong official commitment to make the Canadian government the most recognized government entity globally in providing electronic connection to its people (Kumar, Mukerji, Butt & Persaud, 2007). To further amplify its commitment, the government also budgeted 880 million Canadian dollars over a six year period (2000-2005) to support e-Gov initiatives.

In light of these twin commitments of vision and money by the federal government of Canada, at the dawn of the 21st Century in 2000, it launched Government-On-Line or "Connecting Canadians" program (Charih & Robert, 2004). The centerpiece

of the “Connecting Canadians” program was to use IT through one Web portal to deliver all public sector services to the country’s citizens, businesses, and foreign partners. There were three related phases to the Government-On-Line project. These were the creation of a Web portal that will provide online presence for the federal government, online provision of federal programs, and services to the people and integration of service delivery processes among the provincial, municipal, and federal levels of government. The expectations for each tier were unique and deliberate in approach. In the first phase, it was anticipated that government information will be clustered by common themes and subjects. With the electronic delivery of services, it was expected that by the end of 2004, all departments and agencies will have ported their services online. Lastly, another objective was to institute collaborative and cooperative initiatives among other levels of government and other community based groups in the delivery of services. Although the goal of Government-On-Line was to place government services online, the intention nevertheless was not to have the project supplant the legacy forms of service delivery such as personal service, telephone, mail service, and so on, but to complement the initiative (Charih & Robert, 2004).

E-Gov initiatives and innovations continue to evolve in Canada and the efforts by its federal government towards this end continues to be recognized by private industry assessment and auditing companies as well as by international organizations like the United Nations (Kumar, Mukerji, Butt & Persaud, 2007). For instance, Canada continues to maintain its preeminent position in the United Nations “Top 10” e-Gov development index since the survey index first began in 2003. In the 2010 index, Canada placed third

among all the nations of the world, just behind the Republic of Korea and the United States (United Nations, 2010).

In Britain, though predominantly located within government organizations, e-Gov had been evolving since the 1950s when computers were first introduced into the operations of large transaction processing departments like the Post Office (Margetts, 2006). In actuality, the influence of digitization in government as a policy undertaking is traceable to the vision espoused by the defunct National Physical Laboratory in 1952/53 (Organ, 2003). In its report, the laboratory foresaw the potentials of computerization, not only to public administration but also of greater importance to the commercial and economic development of the country. In an attempt to support the evolving British computer industry along the line of this report, the government of Prime Minister Harold Wilson believed that computer development could be more effectively done by the industry than by the public sector. To provide this support, the government created the Ministry of Technology and National Computer Center as successors to the NPL. However, the British computer industry could never compete with the perceived superiority of the American computer technology even among the British commercial and government organizations. Despite the consolidation of many of the companies into International Computers Limited in 1968, it continued to be propped up by the government which eventually implemented a takeover of the company in 1984; International Computers Limited could never thrive and it collapsed in 2001 (Organ, 2003).

While the British computer industry struggled, the public sector continued to buy and use computer systems for its operations to the extent that they became pervasive in

the structures, process, and cultural environments of various departments (Organ, 2003). Thus, concerted efforts for coordination and integration were taken towards a unified procurement process for computer equipment and the applications that run on them. These efforts culminated in the creation of the Central Computer Agency within the Civil Service Department in 1972. When the Civil Service Department ceased to exist, Central Computer Agency was moved to the Treasury department in 1984 and was renamed Central Computer and Telecommunications Agency. By this time, contrary to the original intention, Central Computer and Telecommunications Agency had become powerless over the coordination of computer procurement and application processes by the departments as the prevailing political atmosphere now favored power devolution to the departments. Despite its impotency and many moves and absorptions between 1984 and 2001, Central Computer and Telecommunications Agency, in the face of public sector computer project failures, continued to offer the departments needed advice and developed guides and standards for better projects. One such standard was the development of PRojects IN Controlled Environments, otherwise known as PRINCE, for IT project management in 1989. Indeed, Central Computer and Telecommunications Agency owned and controlled all the computer systems in the central British government until 1984, and until the end of 1990s, managed the information systems that preceded e-Gov (Margetts, 2006).

With the global influence of the Internet, the Central Information Technology Unit was formed in 1995 and was located within the highly visible Cabinet Office (Organ, 2003). The new unit was charged with analyzing and exploring the potential of creating ICT interconnectivity among departments and establishing an Internet portal that

would provide a link between the government and the people as well as leverage private sector expertise. IT was now being perceived as a conduit for executing public sector transformation rather than as a mere operational tool or mechanism to procure equipment and manage projects.

By the late 1990s, the incoming Labor government of Tony Blair had unambiguously committed itself to coordinate IT activities and operations of various departments for service delivery to the citizens and businesses. To better realize this, two new offices were created, Office of the e-Envoy in 1998 and Office of Government Commerce in 2000 and they respectively absorbed the Central Information Technology Unit and Central Computer and Telecommunications Agency. The strategic goals of Office of the e-Envoy were to enable a conducive e-commerce atmosphere in Britain, encourage Internet accessibility to all and by 2005, and attain 100 percent of service delivery to the British citizens and businesses. On the other hand, Office of Government Commerce was responsible for the enhancement and integration of governmental processes for procurement and bidding. At the height of its operations in 2001, Office of the e-Envoy was staffed by about 250 people with operating costs of about 50 million pound sterling (E50) and was committing more resources to e-Gov initiative than other similar industrialized countries at that point (Margetts, 2006). But there were indications that results and performance did not match the expended resources and by 2004, Office of the e-Envoy had been replaced by e-Government Unit with a drastically reduced operational budget. The strategic focus of the e-Government Unit titled Transformational Government and announced in the Fall of 2005 centered around government's focus on

the citizens, development and utilization of shared services by the departments as well as the development of IT professionals.

There was a belief that the increased efforts by the Blair government towards establishing rapid interconnectivity between the departments, creating many communication links, and providing services to the citizens were aimed at stifling bureaucracy (Bloomfield & Hayes, 2009). This paradigm shift sought to dismantle the old bureaucratic environment, and in the process, break the existing perceived barriers inhibiting cooperation and collaboration among the departments and between the local authorities and the citizens.

Other Historical Factors that Influenced the Development of e-Government

Apart from IT, what are the other historical factors that helped stimulate the development of e-Gov? One of these factors was the emergence in the 1980s of new management approaches geared towards public sector reform under what is coined as the new public management (Brown, 2005; Morgeson & Mithas, 2009). The consensus was that the adoption of e-Gov formed part of the quest to use private sector principles to correct many perceived anomalies of the public sector, and in the process engender effective customer service and efficiency. In a nutshell, new public management sought to fuse private sector management principles such as performance driven outcomes, decentralization, managerial freedom and flexibility, performance benchmarking, and new approach to customer service delivery across the entire government with the public sector management. The concept also saw players in the private and nonprofit sectors as viable partners to help deliver public goods. Added onto this was the increasing use of private sector management consultants with varied experiences in many management

oriented areas in the public sector. Along the line, the consultants contributed their expertise in areas such as project management, change management of acquisition, and procurement process. They also helped to sow and grow private industry concepts like client focused service delivery, customer relations management, supply chain management, business process reengineering and IT governance. For instance, business process reengineering that was introduced in early 1990s advocated “that IT needed to be repositioned to a more central location in the business model of organizations” (Organ, 2003, p.27). Rather than being a tool for automating manual processes, IT was now positioned as a viable conduit for implementing bureaucratic reforms.

Another set of factors that spurred the development of e-Gov were native to the public sector itself. These factors included the increasing pulls and demands by the state of the economy, members of the public and other social forces, and the quest to provide appropriate responses to those pressures. They also revolved around the potential that IT offered for efficiency, proximity of government to the citizens, cost reduction, and the intrigue they generated in the policy makers. Furthermore, e-Gov was stimulated by the hiring of skilled IT employees and the transfer of skills garnered from their private lives to the workplace, as well as by the large, complex and difficult public sector environment which necessitated the utilization of leadership skills of the inhouse managers.

As the historical analysis presented above has demonstrated, even in its evolution and early adoption in the developed countries of United States, Canada, and Britain, the primary attention of policy makers on e-Gov was in providing citizens of those nations access to public services delivered by the government. The modest initial attempts at the integration and coordination of governmental electronic activities in the United States

and Britain were soon supplanted by the desire for service delivery and providing access to the citizens. Noble as these latter goals were, it was still equally significant to explore the understanding of G2G e-Gov, which in turn has the potential of being a worthy complement to the delivery of services to the citizens and granting access to government activities. This study sought to do that with an indepth analysis of G2G.

Forms of e-Government

The first type of e-Gov, G2B concerns the online conduct of business activities and provision of services tailored toward the business communities (OMB, as cited in Park, 2007; United Nations, 2003). The goal here is the need to use the power of IT to ease the burden that is usually placed on businesses by government agencies. An example of G2B would be a request by an agency to businesses to place bids for a contract. This type is also illustrated by the IRS' online provision of information and services to small, mid sized and large businesses on wide array of issues such as starting, operating, and closing a business as well as collecting employment taxes (IRS, 2010). There is also a portal, *business.gov*, owned by the U.S. Small Business Administration (SBA) agency to assist small businesses with regard to locating available services at all levels of government and helping them with a myriad of legally binding business operations requirements.

G2C encompasses governmental efforts put in place to enable and encourage people to participate and interact with their governments at every level. These interactions and participation are carried out through accessible and flexible public electronic portals. The portals are devised to deliver public services for the citizens' procurement and consumption, as well as for their involvement in the decision making

process (OMB, as cited in Park, 2007; United Nations, 2003). For instance, many federal agencies in the United States, through federal mandates, now place unclassified information related to strategic plans, budgets, leadership, and other similar services online. Similarly, several state and local governments have created websites that allow residents to exercise their duties and obligations without leaving the comfort of their homes. Citizens in these jurisdictions are now able to register their vehicles, pay their traffic fines, file state taxes, and check driver's records online.

G2G is about IGR within and across the same level of government and between levels of governments. G2G stresses intra agency and inter agency communication and collaboration at the federal level and between the federal government and the state and local authorities. At the center of this form of e-Gov is the sharing of electronic data exchanges among public sector players. According to the OMB, (as cited in Park, 2007), G2G has the potential to enhance the required reporting process activities for the states and allow the latter to assist the federal government in rendering public services to the citizens. This type of e-Gov also has the propensity to engender the use of performance measurements for the way the states managed the grants given by the federal government. The demonstration of cost savings and efficiency benefits, coupled with better service delivery as a result of availability of reliable data had the potential of providing other levels of government the impetus to adopt e-Gov.

Apart from the proposed case study illustrated in this study, one other succinct example of G2G is the Federal Bureau of Investigation's (FBI) Terrorist Screening Database (TSDB) which provides one central repository location for all known or suspected terrorist individuals (FBI, 2010). This database affords every government

agency representative at every level tasked with the responsibility of screening for potential terrorists and the opportunity to easily obtain the needed information. One serious security flaw recognized in the aftermath of the terrorist attacks in New York, Washington DC, and Pennsylvania on September 11, 2001 was the uncoordinated information sharing and collaboration among federal and state security agencies (FBI, 2010). Information about real or potential terrorists was fragmented throughout several agencies and levels of government. The authority and responsibility for accessing that information was not concentrated in one single agency. The creation of the FBI Terrorist Screening Center, the custodian of TSDB, by the mandate of Homeland Security Presidential Directive (HSPD) on September 6, 2003 changed that situation. It provided that a single overarching watchlist of known and suspected terrorists be made available for all government screeners in and out of the United States.

The focus of internal efficiency and effectiveness is to encourage within government agencies the efficient utilization of cutting edge ICT together with better management practices such as the business process management, financial management, total quality management (TQM), and knowledge management (United Nations, 2003). With IEE, it is expected that a combination of ICT and these management practices will bring about cost savings and enhanced delivery of public services. As a result of this nexus, many organizations have now placed their internal operations online, either internally on their individual Intranets or externally by tapping and buying into the resources of sister agencies with mature managed services. Some of the management services that have been ported online in many agencies are payroll, travel, employee records, time and attendance, policy and procedures, and administrative governance. Also

in this regard is the new movement in the government towards the use of collaboration tools such as wikis, chat rooms, blogs, and forums.

While these types of e-Gov have different characteristics and features, the common thread constant through all is the quest for efficiency, reduced costs, and effectiveness in the way government business is conducted, and in the way its services are delivered. Nevertheless, there are still unique differences in the way they are expected to be implemented and studied. In particular, G2C and G2G have different focuses and characteristics. Whereas the primary focus of G2C is to deliver public services to the citizens, make government activities transparent, and in the process facilitate participation in the democratic process; G2G is concerned with the collaboration and information sharing within the government itself.

Despite the distinctions between G2C and G2G and the importance of both forms of e-Gov, the trend continues to be that the whole concept of e-Gov is virtually equated with the G2C. Study after study continues to be based on how well the content, aesthetics, accessibility, and ease of use of government websites are to the citizens. Indeed, in its first survey of e-Gov readiness, the United Nations (2003) seemed to be conscious of this gap when it rationalized why it failed to consider G2G. For the international organization, its focus on the measurement of G2C among nations of the world was also an implicit analysis of G2G among them. Just like the scholars and practitioners of e-Gov, subsequent surveys by the United Nations in 2004 and 2005 continued to emphasize G2C to the exclusion of G2G. The respective titles for these subsequent reports were *Towards Access for Opportunity* (United Nations, 2004) and *From E-Government to E-Inclusion* ((United Nations, 2005). As the titles show, readiness

continued to be measured in terms of people's access to government websites and opportunities for their participation and inclusion in governmental affairs with little or no emphasis on G2G. It was not until the 2008 report titled *e-Government Survey 2008: From e-Government to Connected Governance* (United Nations, 2008) that the organization focused on the importance of G2G features such as integration, collaboration, and partnerships.

Stages of e-Government

Previous studies such as those of Park (2007), and Isaac (2007), have provided useful information about the stages of e-Gov. For instance, the study by Isaac (2007) provided Gartner's four phases of presence, interaction, transaction, and transformation; the United Nations' five stages of emerging, enhanced, interactive, transactional, and seamless. The researcher also identified Layne and Lee four stages cataloguing, transaction, vertical integration, and horizontal integration; World Bank's three phases of publish, interact, and transact; and International Business Machines' (IBM) four phases of automate, enhance, integrate, and on demand. These stages and their sponsoring organizations are depicted in table 1.

Table 1

Stages of E-Government and Sponsoring Organizations

Sponsoring Organization	Gartner	United Nations	Layne and Lee	World Bank	IBM
Stages/Phases					
1	Presence	Emerging	Cataloguing	Publish	Automate
2	Interaction	Enhanced	Transaction	Interact	Enhance
3	Transaction	Interactive	Vertical Integration	Transact	Integrate
4	Transformation	Transactional	Horizontal Integration		On Demand
5		Seamless			

Note. Adapted from "*Performance measurement for the e-Government initiatives: A comparative study*," by W.C. Isaac, 2007, (Doctoral dissertation). ProQuest database. (AAT 3283471). Copyright 2007 by ProQuest.

It is instructive to note that the phases and stages in all these approaches closely align with the five stages in the United Nations (2003) approach which is briefly described below. In the United Nations approach, the five stages of e-Gov are emerging, enhanced, interactive, transactional, and networked presences. In the emerging presence stage, government agencies were to offer members of the public limited, basic information on their websites. The emerging presence was also to include a national information portal, and links to other websites of various levels and branches of government.

Enhanced presence transcends the provision of limited and basic information in the emerging presence stage to the provision of databases, current and old documents like

policies, legal information, reports and others to the public. Stage III of interactive presence allowed for the ability of citizens to download documents, electronically sign documents, access public information using multimedia technology of audio and video and contact government officials using email in addition to the traditional methods of fax, telephone and postal mail (United Nations, 2003).

Transactional presence allows members of the public, government contractors (current and prospective) to carry out electronic transactions on government websites such as payment of traffic fines, taxes and fees, using credit and debit cards, and submitting tenders for government contracts (United Nations, 2003). At the final networked presence stage, it is envisioned that there will be an integration and interconnectedness of government agencies to provide information, documents, and services to the public. The crucial element of this stage is to encourage citizen participation and to obtain feedback from them through online forms. To this end, members of the public are provided with information about government and invited to participate in upcoming government events.

Given this brief description of the stages of e-Gov in the United Nations approach, to what extent is G2G accounted? As described above, at the heart of G2G form of e-Gov is the collaboration and sharing of electronic data exchanges between government officials vertically and horizontally at every level for efficiency and cost saving purposes. In almost all the stages of e-Gov identified however, agencies were expected to start out with creating websites that will promote G2C. Even in the last phase of networked presence stage which advocates for integration and interconnectedness of

government agencies, the purpose was not to render services to one another but to the members of the public.

Rationale for e-Government

This section of the literature review provides the rationale and justification for the concept of e-Gov. The first part of this section is examined from the premise of the potential benefits that attend its adoption by governments. The second section is focused on the legal regimes and policy guidelines that have helped to shape its adoption.

Potential Benefits of e-Government

Benefits of e-Gov available in the literature are often juxtaposed with the traditional public sector values of access to the government, openness and transparency of governmental affairs, citizen participation and engagement in the political process, accountability and responsiveness of government officials, public trust in the government and, efficiency and cost savings in government operations and service delivery. Additionally, e-Gov also has the potential to engender inter agency and inter sector information sharing, integration, and collaboration.

Access, openness, and transparency. Due to the ready availability of information in an e-Gov environment, governmental affairs are in turn potentially accessible to the members of the public (McNeal, Hale & Dotterweich, 2008). The constant flow of information and communication between the government and the citizens will enhance the capacity of government agencies; facilitate the transparency and openness of governmental affairs; and develop a well informed civil society capable of projecting its own interests (Von Haldenwang, 2004). Improved political communication and dialogue, renewed atmosphere of policy debate, better expression of interests, as well

as increased sources of useful information and knowledge are all by products of attendant innovating technologies of e-Gov.

In the government financial management operation, fiscal transparency and direct participation by members of the public are equally germane to the budget processes, decisions, allocations, and overall management (Justice, Melitski & Smith, 2006). Prior to the commonness of e-Gov, upholding this necessary public value was often challenging partly because of general inhibitors to openness and accessibility in the public service, and specifically because of the intricacies of public budgeting and financial management. E-Gov offers the possibilities of breaking some of these barriers. Among other things, financial information is now available to the citizens 24 hours a day since they are not bound by distance and time to accessibility; presentation of that information is equally more intelligible as they are available in multiple formats such as navigational aids, graphics, menus, and so on. In addition to these, there are also possibilities for relevant, flexible, and accurate financial data; and availability of notices of events and hearings, transcripts, summaries, video, or audio of those hearings.

Citizen participation. With increased access and transparency offered by new technologies in e-Gov, it is envisaged that the citizens will be encouraged to be more engaged, involved, and participate in the affairs of the government in what is generally described as e-participation or e-democracy. Democratic implications of e-Gov are explored in the literature. For instance, Dahl's (as cited in Brewer, Neubauer & Geiselhart, 2006) evaluation criteria of democratic processes, effective participation, voting equality, enlightened understanding, and access to alternative information were aligned with the stage four networked presence of e-Gov. These criteria were further

expressed in the policy participation of individual rights of association, expression, and participation in public policy. Citizens can also participate in the governmental budget processes by creating and communicating expectations that can be executed to public officials (Justice, Melitski & Smith, 2006). In order to achieve citizen participation in the budget process, criteria of representativeness, bi-directional communication between participating citizens and administrative officials, and display of true preferences of the people among others ought to be present. These criteria also included the utilization of mutually acceptable processes for discussion between the citizens and the officials, reasonable time for early participation that will actually influence allocation as well as availability of accurate, prompt, and tractable financial data.

Because public deliberation and discussion of political and administrative issues are considered central to Western democracy, ICT then has a role in facilitating these processes (Macintosh, Gordon & Renton, 2009). As a result, online deliberation and participation portend that citizens have access to information predicated on facts, craft and offer their own opinions consequent upon the views expressed by other participants in the discussion forums and justify their ideas and opinions based on logic arguments.

E-Gov thus offers agencies the opportunity to facilitate individual or collective digital communication with the members of the public as a method of achieving democratic value of effective participation and also to forestall negative influences on the people by political fanatics and activists. Adoption of e-Gov mechanisms by public officials has the potential to encourage citizen participation, engender cross fertilization of ideas, channel broad spectrum of outcomes for the safeguard of public good, and enhance large public interest (Brewer, Neubauer & Geiselhart, 2006).

Despite the argument in favor of e-Gov by the scholars and public service practitioners that it has the potential to bring about benefits of access, transparency and openness, and citizen participation, practical evidence has not lent sufficient support in this regard. The quest for access, transparent, and open public service and government is more likely to favor the privileged in the society to the detriment of those who do not have access due to the limited access to the new technology, unbalanced knowledge, skills, and abilities among the citizens at poverty levels (Von Haldenwang, 2004).

The United States and members of the European Union (EU) are not doing better in deploying ICT systems that will enable citizen participation in policy making. In a 2005 study of 611 planning departments of municipalities with 50,000 or greater population in the United States, Evan-Cowley and Conroy (2006) used McMillan's model of interactivity composed of monologue, feedback, responsive dialogue, and mutual discourse. Monologue consists of public official providing citizens necessary information and the latter has no control over that information. Feedback involves citizens' control over information provided and includes sending an official an email to which the official may choose to respond or not to respond. In responsive dialogue, the official responds to the communication, for example email, triggered by the citizen. Finally, mutual discourse provides both the citizens and the public official control over the communication as both could send and receive messages. The study showed that the planning departments of the municipalities effectively employed the interactive tool of monologue by providing documents online thereby fulfilling the access and transparency benefit of e-Gov. However, virtually all the municipalities failed to offer the citizen participation interaction tools. Only three percent of the municipalities provided

discussion forums and none of the 611 municipalities had chat rooms, interactive meetings or blogs.

Although the results were not as bad as the municipalities in the United States, the situation was not excellent in Europe either. In a study conducted of the 27 EU member states in 2009, Radu (2009) found out that whereas 93 percent of the members scored high in access and transparency in education policy making, only 32 percent of Web sites surveyed were successful on the public outreach dimension. Instructively, there were no significant differences between the low standards of citizen participation observed between the Western Europe members of the Union and newer members from Eastern Europe.

Another reason why the benefit of transparency and openness in e-Gov has been slow in being widespread could be attributed to the perception of some politicians and administrative officials that the more immediate phase of e-Gov, service delivery, and customer service, is of greater importance to the public than access and transparency (Roy, 2006). Consequently, emphasis is often placed on result oriented and efficiency parts of e-Gov than on enabling a deliberate atmosphere online that will encourage direct citizen engagement and involvement.

There is also the ambiguity about where in the organization the function of promoting citizen participation should be placed. Given that leadership of IT in government organizations tends to concentrate on enabling and reforming internal operations for better service to the citizens, public outreach and involvement responsibilities are in most cases, still left with the communications and public affairs departments. This may be disadvantageous because old forms of communication through

media houses may continue to thrive to the detriment of direct engagement of the citizens using IT.

Other barriers to citizen participation and interactivity involve challenges in administrative matters, technical areas, public education and accessibility (Evan-Cowley & Conroy, 2006). Administrative barriers include lack of buy in from politicians and executive level managers to the idea of investing in the interactive tools. Technical barriers include availability of skilled personnel and the advanced nature of the technology and programming required for development. The challenge in public education surrounds the necessity of having to inform and train citizens on the tools of engagement and interaction after development. Finally, the accessibility issue has to do with a failure to factor in people with disabilities or people who are not able to communicate in English language.

Accountability and responsiveness. Along with the public sector values of access and transparency as well as citizen participation, e-Gov also provides the opportunity for the citizens to hold administrative officials accountable and responsive. Because of the open access and opportunities for interaction, accountability, and responsiveness on the part of the administrative officials are further strengthened. Officials would not only consider the wishes and interests of the citizens, they would also need to inform them about the decision making processes. In the traditional view of accountability, hierarchical, legal, political, professional, and market types of accountability prevail (Page, 2006). Hierarchical accountability refers to the superior and subordinate relationships; legal accountability involves the obligations of the public officials to comply with the rules and regulations of legislative and other rule making

bodies; and citizens enforce political accountability on administrators through interest groups and their representatives in government. Professional accountability involves education, training, and licensures of the public officials and market accountability is targeted towards those agencies who offer goods and services in a competitive market. A distinction has also been made between informal and formal forms of accountability (Forrer et al., 2010). Informal accountability involves administrative officials reporting to their superior elected officials, interest groups, members of the media, and other customers. Formal accountability consists of reporting to other governmental institutions, reporting to superiors within the established hierarchy, and influence by impersonal standards.

With regard to the public financial management, accountability, rewards, and sanctions are assessed on the officials by aligning the actual behavior of officials in managing accounts with the pre stated expectations (Justice et al., 2006). The procedure for obtaining accountability and responsiveness thus involves the formation and communication of achievable expectations between the citizens and administrative officials and comparing those expectations with the performance.

Client service nature of e-Gov provides the opportunity to alter, practically and in principle, the dynamics of the relationships among the citizens, public servants, and the elected representatives of the people in terms of accountability and management (Brown, 2005). There is the propensity that the political form of accountability to the people will be more intensified than the hierarchical accountability of the subordinate officials to their superiors. Traditional public service management is predicated on hierarchical accountability, and the new public management sought to build on this by encouraging

the empowerment of the subordinates. E-Gov promises to reinforce this vision as the subordinates are better positioned than their superiors in providing the leadership and innovation needed for the deployment of the technologies that will enable e-Gov.

Efficient and quality public service delivery. Because of the constant pressure from the citizens, their representatives and other interest groups, public servants have always sought for the ways to improve the efficiency and quality of service delivery. This quest dated to the Founding, the Progressive Era, the New Deal, and the post-World War II periods (Bumgarner & Newswander, 2009). It also informed the new public management movement which in the 1980s and 1990s sought to apply business practices of the private sector to the public service for the purposes of attaining efficiency and performance (Brown, 2005; Morgeson & Mithas, 2009; Hernes, 2005).

Empirical evidence points to e-Gov adoption as a stimulating influence for enhanced administrative efficiency and quality. This is due to the increasing use of ICT which offer significant improvements in public service delivery to both the private individuals and businesses (Von Haldenwang, 2004). Administrative officials are aided by ICT through the collection, bundling and giving of information, interaction with the private citizens and businesses, and rendering of transaction in administrative processes. Collection of information is enhanced through network construction, pooling data from various sources including the Internet, and the synthesizing and aggregating of data and information collected. E-Gov also allows public officials to conveniently bundle and provide information such as available services, hours of operation, important organizational activities and links to other important organizations, and services using websites and Internet portals. Interaction occurs through online filing or filling or

download of official documents. E-Gov is equally germane to the conduct of transaction of administration services, especially to the private businesses in tax administration, contract and procurement services, billing and payment, and other services.

There is a credible evidence in the literature that points to the various levels of governments providing online services that previously took several hours, couple of days, and some travel time to provide in real time. For instance, Internet portals owned by municipal governments in the United States and Canada were reported to be offering a myriad of online services such as business license application, permits' application, property registration, tax payments, registration of pets, fines and fees payment, voter registration, placing reservations for recreational facilities, employment opportunities and applications, and other services (Brown, 2007; Roy, 2006).

Despite the increased portability of government services online, the question of how effective they are for those they are meant continue to be studied. In a study that compared the effectiveness of in person and e-Gov service delivery options at the Georgia Office of Consumer Affairs, respondents, by overwhelming majority considered in person service delivery options of obtaining services more effective than e-Gov service delivery options (Streib & Navarro, 2006). The three e-Gov service delivery options of Web form, email access, and downloadable online forms all ranked lower in effectiveness among respondents than the in person service delivery options of in person contact, forms available in a public place like the Library and toll free phone contact. Also, as age of the respondents increased up to 37, the effectiveness ranking of the e-Gov options also increased. But beyond this age, the ranking began to decline.

Trust and confidence in government. As a consequence of the previously identified potential benefits of e-Gov, the protagonists of the use of ICT for the conduct of government business argue that people's trust and confidence can be enhanced. Studies show that trust at all levels of government in the United States has been declining since the mid 1960s. Compared to 1958 when about 75 percent Americans surveyed expressed their trust in the federal government to consistently do that which was right, only 21 percent expressed the same level of confidence in 1994 and 40 percent in 2002 and the average has been revolving around 40 percent since the mid 1960s (Donovan & Bowler, as cited in Tolbert & Mossberger, 2006).

The belief is that citizens ought to be motivated to participate in the affairs of the government where confidence in its institutions prevails, especially, through voting participation and electioneering campaigns (Almond & Verba; Finifer, as cited in McNeal, Hale & Dotterweich, 2008). Perhaps nothing exemplifies the lack of confidence in the government than the perennial low turnout among registered and eligible voters during various elections. Other factors that have been identified as causing a decline in the citizens' trust in the institutions of government included policy or electoral outcomes and the perception of lack of responsiveness from government officials and politicians (Tolbert & Mossberger, 2006). Lack of confidence undermines the legitimacy and stability of the government as it discourages compliance to the various laws and regulations and ultimately could jeopardize the rule of law.

However, public distrust is not considered to be at a crisis point in the United States. It has always been considered to be implicitly an integral part of the nation's political system. This was evidenced by the entrenchment of the twin concepts of

separation of powers and checks and balances in the constitution by the founding fathers who were spurred to do so to forestall abuse of power by public officials (Kim, 2005). At the same time, the framers of the constitution were not unmindful of the need for administrative flexibility to assure efficient administration. But this has produced a paradox in that the consequent procedural rules and regulations from the principle of checks and balances have constrained officials from being efficient. The five factors affecting the trustworthiness of government are: credible and consistent commitment, benevolence, honesty, competency, and fairness. It is argued that the higher the perception of these factors among citizens, the higher their level of trust and confidence in their government and the reverse will produce higher incidence of public distrust.

Thus, the argument is that e-Gov could help to improve the citizens' trust and confidence in the government because of the perceived benefit of constant access to the people almost at anytime, every day of the week, and through the improvement in the delivery of services (McNeal, Hale & Dotterweich, 2008). Two conceptual approaches: entrepreneurial and participatory are found in the literature on how e-Gov could improve citizens' trust (Tolbert & Mossberger, 2006). These two approaches reflect on the other benefits previously identified above. The essence of the entrepreneurial approach lies in the efficient and quality service delivery, customer service, and cost reduction. With these, people's confidence in their government is presumed to likely increase. Similarly, in the participatory approach, the possibilities of e-Gov improving government responsiveness, people participation and accessibility have the tendency to generate process based trust in the public. The display of transparency, responsibility, and effectiveness may also engender institutional based trust by the citizens.

Furthermore, other propositions which theorized that the higher levels of citizens' trust in the state government agency institutions in the United States and in the reliability and security of the Internet were both correspondingly related to their use of e-Gov services provided by those state government agencies were tested and supported (Carter & Belanger, 2005). Although at a lower rate than the state service agencies, there was also some observed evidence about the citizens' disposition to trust the e-Gov service agencies and the structural assurance of the Internet in the U.S. federal government (Lee & Rao, 2009). A comparison of the questionnaires administered to the users of a state vehicle/license service domain at the New York Department of Motor Vehicle (NYDMV) and the federal government tax service domain at the Internal Revenue Service (IRS) revealed that the effects of disposition to trust were significant on both variables of trust in e-Gov agent and structural assurance of the Internet. Other findings in the United Kingdom compared to the results in the United States equally demonstrated that a lack of trust by members of the public in both the Internet and governmental institutions was likely to result in lower intention to use e-Gov services (Carter & Weerakkody, 2008).

On the other hand, evidence in the literature regarding the prospects of actual e-Gov adoption by governments at all levels leading to trust in their institutions have at worst been non existent and at best scant. For example, in an analysis of the Pew Internet and American Life telephone survey of 2,925 Americans conducted in July 2003, McNeal, Hale and Dotterweich (2008) did not find any significant relationship between the three initiated contact measures of e-mail to government official, search for online information and application for benefits online by the citizens and trust in the

government. Even though the online measures may not have been considered traditional determinants (such as providing useful solutions to problems, public satisfaction with policy outcomes, feelings of fair and equitable policy process) of trust and confidence in government; yet the authors argued that the measures that were used implicitly provided opportunities for the demonstration of some of these traditional measures. To illustrate, they surmised that a direct contact with an administrative official through an email provides the propensity for the citizens' perception of fairness and equitable treatment. More importantly, they attributed the absence of correlation between the citizen online contact measures and trust to the goals of achieving efficiency and reduction of cost rather than emphasis on transparency and trust at the onset of e-Gov adoption in the United States.

Earlier on, Tolbert and Mossberger (2006) also found little evidence that shows a correlation between e-Gov and trust in the government. Their conclusion emanated from the analysis of the data obtained from the same Pew Internet and American Life survey of 815 government website users conducted two years earlier in September 2001. While the respondents found local government e-Gov implementation to be accessible and responsive, only the responsiveness part was found to be related to trust in the government. This possibly was as a result of the proximity of local authorities to the citizens at that level. In contrast, those surveyed positively rated the U.S. federal government on government processes, a situation due to the extensive utilization and technical capacity of information and communication technologies at that level. But these positive ratings did not translate to corresponding level of trust in the federal government by the respondents. Rather than being influenced by e-Gov, trust in the federal and state

governments was more likely to be influenced by other variables like age, party affiliation, gender, and ethnic origin. At the same time, there was no relationship found between the attitudes of citizens towards elements such as transparency and openness and trust in the three levels of government.

Interagency and inter sector cooperation and collaboration. Whereas the previously identified perceived benefits of e-Gov are geared towards the citizens and help to bolster the positions of the protagonists of G2C e-Gov; the argument that e-Gov encourages inter agency and cross sector cooperation and collaboration amplifies the call for G2G e-Gov. Cooperation and collaboration in organizational and management studies and other related social science disciplines are generally used interchangeably to describe an action directed towards a mutual objective (Ferro & Sorrentino, 2009, p.18). These combined terms of cooperative and collaborative e-Gov are also generally described as government information sharing (Gil-Garcia et al., 2009) through e-Gov integration, interoperation, and interoperability (Scholl & Kilschewski, 2007).

While inter agency and inter sector collaboration as a benefit of e-Gov integration, interoperation, and interoperability is explored in detail later in this review of the literature, it is imperative to recognize here the importance of this benefit to e-Gov in general and G2G form in particular. It has been argued that cross agency collaboration is a requirement for e-Gov because of the extensive effort, skill, and knowledge needed for the implementation which may prove cumbersome for agencies to process and deploy individually, the need for uniform process across agencies as well as the inherent benefits (Bin-Sharf & Lazer, 2008). The attendant advantages of inter agency collaboration in digital information sharing include better output and productivity, enhanced decision

making process, reduced and avoidance of duplicate costs, effective management, improved quality of information, and consolidation of services (Gil-Garcia et al., 2009).

Worthy as the prospects of agency cooperation are, they are not without their challenges and constraints which include constitutional/legal, organizational, managerial, cost, technological, and performance constraints (Scholl & Kilschewski, 2007).These challenges and constraints are discussed later in this review.

Legal Regimes and Policy Guidelines for e-Government in the U.S. Government

Office of E-Government and Information Technology in the Presidency's OMB recognized five enabling laws as relevant to the implementation of e-Gov in the federal government of the United States (OMB, 2010). These are the Government Performance Results Act (GPRA) (1993), Federal Acquisition Streamlining Act (FASA V) (1994), Clinger-Cohen Act of 1996, Government Paperwork Elimination Act (GPEA) (1998), and the E-Government Act (2002). In addition to the brief description of each of these laws and their relevance to the rationale for e-Gov in the U.S. federal government, the review will also discuss e-Gov implementation initiatives of the Bush Administration (2001 -2009) and the succeeding Obama Administration (2009 – present).

Government Performance Results Act of 1993

In passing GPRA (1993), Congress determined among others that waste and inefficiency had undermined the citizens' trust and confidence in the federal government and in the process hamper the latter's ability to attend to the needs of the people (Faokunla, 2009; GPO, 1993). The lawmaking body also found out that administrative efficiency and accountability were unattainable because of the ambiguous definition of

organizational goals and inadequate information on the performance of programs by the agencies.

GPRA sought among others to correct these findings with the goal of improving people's trust in the government, institute process that will reform program performance, enhance the effectiveness of public programs and public accountability, and empower program managers to be more committed to service delivery improvement process.

The first three main provisions of GPRA called for agencies to create strategic plans, submit annual performance plans and reports to the president and Congress, and enable managerial accountability and flexibility. To this end, federal agencies are required under this law to state their goals and objectives and how they are going to achieve them given operational processes and available human and capital resources. They are also mandated to prepare annually, objective, quantifiable, and measurable performance goals with measurement indicators that will help in determining the true outcomes of planned goals.

GPRA provides a rationale for e-Gov since the goals of the law: promotion of accountability and performance in the federal civil service and the enhancement of citizens' trust and confidence in the apparatuses of office. As shown above, these same goals constitute the basis for the proponents of e-Gov in the United States.

Federal Acquisition Streamlining Act of 1994

The main purpose of FASA V (1994) is to revise and streamline the laws that guide and govern the acquisition processes in the Federal Government (GPO, 1994). Specifically related to the use of ICT for acquisition purposes, Section 9001, subsection 30 of the law calls for the establishment of the federal acquisition computer network

architecture (FACNET). The expectation was that FACNET would allow for the exchange of information related to the electronic procurement between the federal agencies and the private sector contract businesses on the one hand, and among federal agencies on the other. For extensive and broadened use and ease of use, FACNET was expected to employ national and international data format and it was required to allow for universal user convenience via any point of entry.

FACNET required that executive agencies utilize the system to electronically solicit contract opportunities publicly from the private sector businesses; obtain responses to the publicly sought solicitations and related requests for information; and publicly disseminate notice and pricing of contracts awarded. Also, where practicable, agencies were to electronically use FACNET to receive questions on the contract solicitations, issue orders and make payments to contractors by bank card, electronic funds transfer (EFT) or other automated methods; and archive data for each procurement action.

For the private sector users, the system allowed them to access, review, and respond to solicitations for contract opportunities from the agencies. It also enabled them to receive orders, access contract award information, and receive payments for the goods and services provided.

Given the electronic requirement of this provision in FASA V, it underscores the importance of ICT for conducting public service business with the private sector and other federal agencies. It also provides an ample illustration of the G2B and G2G forms of e-Gov. The law therefore constitutes a valid legal rationale for the e-Gov concept and implementation in the United States.

Clinger-Cohen Act (1996)

Clinger-Cohen Act (1996) has had a significant influence on e-Gov implementation in the United States (Guijarro, 2007). This public law originally was part of the National Defense Authorization Act for Fiscal Year 1996 and it was titled Division E - Information Technology Management Reform (GPO, 1996a). It then came to be known as Information Technology Management Reform Act (ITMRA) and was later renamed Clinger-Cohen Act (1996) after its sponsors.

Clinger-Cohen Act (1996) seems to reinforce FASA V and GPRA. Title LI, Section 5101 of the Act for instance rescinds the authority of administrator of General Services and its Subtitle B, Section 5112 confers on the director of the Office of Management and Budget (OMB) the responsibility to administer the acquisitions of IT for the federal agencies. Given that responsibility, OMB director is required to perform Capital Planning and Investment Control for the procurement, use and disposal of IT in federal programs, leverage the budget process to assess, monitor and evaluate risks and outcomes of capital IT investments by agencies, and oversee the crafting and execution of standards for the federal IT systems by the Secretary of Commerce. The director is also charged with promoting the development and use of the most excellent methods of acquisitions of IT; analyze other models for managing IT from other sources such as the nongovernmental organizations and the private sector; and track IT training needs of the employees of the agencies.

With regard to its affirmation of GPRA, Section 5123 of Subtitle B of Clinger-Cohen Act defined the role of the heads of the executive agencies as that of ensuring performance and results based management of federal IT. It thus mandated the setting of

effective IT goals that will seek to enhance the efficiency and performance of agency operations and public service delivery; create and submit annual performance progress report to Congress on steps being taken to achieve those goals as part of the budget process, and define performance measurements that determine how IT supports agency programs. The law also calls for benchmarking of agency performance processes in terms of efficiency, effectiveness, outputs, and outcomes against similar processes in public and private organizations as well as the continuous assessment of agency mission processes prior to committing IT investments to support those processes.

One other provision of the Clinger-Cohen Act is the creation and designation of the position of the chief information officers of the agencies. The chief information officers will among others develop, maintain, design, and facilitate IT architecture and processes for the agencies, and define responsibilities for promoting and preserving the efficiency, security, and privacy of the federal computer systems.

Government Paperwork Elimination Act of 1998

GPEA (1998) compliments the provisions of the Clinger-Cohen Act (1996) as it directs the OMB director to make available other information technologies as substitutes to the use of paper for submitting, maintaining, and disclosing information by the executive agencies within five years of enactment (OMB, n.d.). Those alternative technologies are to facilitate the utilization and acceptance of electronic signatures (e-Signatures) and the OMB director is required to develop procedures that will guide agencies in using them as such. Moreover, the law requires that procedures be created to guide private employers on how to electronically keep information related to their employees with the agencies. Additionally, the law calls for the continuous study on the

best approach for the use of e-Signature to enhance paperwork reduction and e-Commerce, privacy of participating persons, and integrity and accuracy transactions. This is to be done in collaboration with the National Telecommunications and Information Administration (NTIA).

The E-Government Act of 2002

E-Government Act (2002) sought to bolster and promote the management and use of e-Gov services and processes in the federal government and to establish "a broad framework of measures that require using Internet-based information technology to enhance citizen access to Government information and services…" (GPO, 2002, p. 1). In promulgating this law, Congress acknowledged the transforming power of ICT, especially the Internet, on the various sectors of the society, the inadequate use of ICT by federal agencies for efficient service delivery and functions, and citizens' access to information and participation. Congress also found that Internet services of the agencies were dispersed and not integrated; that funding mechanisms were insufficient to support inter agency cooperation on Internet services; and that strong, effective organizational leadership and improved cooperation among agencies were germane to the use of Internet for government performance.

Consequently, the aims of E-Government Act include the promotion of the use of ICT for citizen participation, encourage inter agency collaboration and integration of services and processes for effective and efficient service delivery, and reduce costs to businesses and the government. The purposes of the law also are to assist policy makers in making better and informed decisions, enhance access to government information and

services, and in the process promote transparency and accountability in the federal government (GPO, 2002).

To achieve these goals, the law provides for the creation of the Office of E-Government in the OMB to be headed by an administrator who is appointed by the president. The functions of the administrator include assisting OMB director in the development and administration of e-Gov strategies and initiatives, offering the agencies leadership and guidance on e-Gov implementation, promote ICT innovations for multi agency collaboration, and overseeing the horizontal and vertical development of enterprise architectures within the federal government.

Section 3606 of the law also requires that the Chief Information Officers Council be formed. Chief Information Officers Council is to consist of the OMB deputy director, administrator of the Office of E-government, agency chief information officers, and those of the Central Intelligence Agency, Departments of Army, Navy, and Air Force. Equally established under the law is the E-Government Fund in the Department of Treasury to be managed by the administrator of General Services Administration. The administrator of the E-Government Office is required to ensure that the Fund is properly administered and coordinated and to monitor the distribution of funds from the Fund.

Other provisions of E-Government Act include the maintenance of an integrated federal Internet portal that provides citizens, businesses and other levels of government access to federal services and information, the protection of privacy of personal information, and the development of federal IT workforce. Title III (Subchapter III), Sec. 301 defines Federal Information Security Management Act (FISMA) (2002). FISMA offers indepth policy guidelines to federal agencies to ensure that information security

controls provided over information resources are strong and effective to support federal operations and assets.

Bush Administration's Expanded e-Government Initiative (2002 -2009)

Expanded e-Gov initiative under the Bush Administration (2001-2009) was part of the effort by that administration to reform the federal government under what was called the President's Management Agenda (OMB, 2003; Faokunla, 2009). The agenda itself was informed by the principles that focused on the citizens rather than the bureaucracy, achieving results, and emphasis on the free market orientation and competition. It was broadly divided into government wide initiatives and program initiatives and the expanded e-Gov initiative was part of the government wide initiatives.

The goal of the e-Gov initiative was to optimize benefits from the federal government's massive expenses in IT for increased employee output, openness, transparency and accountability. Beyond this primary goal, the initiative also sought to better utilize IT and e-Gov for other important functions such as procurement, award of grants, rules and regulation, and signatures. In order to realize these goals, the initiative called for the establishment of a task force to create a central portal for citizens to access government services. The portal was also meant to reduce the burden of compliance and reporting on private businesses and encourage cooperation among federal agencies on the one hand, and on the other, between the agencies and other levels of government, foreign governments, and institutions. Furthermore, it requested that internal processes be automated for efficiency, use of Web for flexible citizens' access, utilization of public key infrastructure for e-Signature of all transactions within and outside the federal government.

Obama Administration (2009 – present) e-Government Initiative

At the dawn of the Obama Administration, there was an unambiguous commitment to e-Gov. The first directive issued by President Barack Obama in January 2009 was to all the executive departments and agencies to exploit and maximize the value of ICT for transparency and openness in the U.S. government, encourage citizen participation and promote collaborative efforts (Obama, 2009).

Specifically, the memorandum issued required that the agencies place information about their operations and decisions online and make such information accessible to the American people. The agencies were equally directed to seek for public feedback, encourage public engagement and participation in policy making, and solicit input from the citizens on how best to enhance their participatory role. The agencies are also requested to employ innovative collaborative tools that will facilitate cooperation among federal agencies, between the agencies and other levels of government, and with the NGOs, private sector businesses, and individuals.

The rationale for e-Gov as evidenced by the inherent and potential benefits found in the literature and governing legal regimes point to the relevance of all forms of e-Gov and most especially the G2C and G2G types. Indeed, the analysis of the literature and enabling laws reviewed above points to the mutual reinforcement of both G2C and G2G forms of e-Gov. It does not appear that the inherent benefits of e-Gov can be optimally realized without the interconnectedness and information sharing among agencies which are the cardinal features of G2G. Agency collaboration and information sharing are even considered a requirement for the successful implementation of e-Gov (Bin-Sharf & Lazer, 2008). In order to achieve accountability, transparency, effectiveness, efficiency,

and other potential benefits of e-Gov in the business of government, it is imperative that government resources and processes be integrated and that interoperations exist among all the separate information systems (Gottschalk & Solli-Saether, 2008). The continuous and dominant focus by the academic researchers, policy makers, and practitioners on the G2C is thus insufficient for a thorough understanding of e-Gov. The next section of this review of the literature strives to shed light on the concept, features and challenges of G2G e-Gov.

Government-to-Government e-Government: Features, Benefits, and Challenges

As earlier defined, G2G refers to the intergovernmental relations within and across the same level of government and between different levels of government. It emphasizes intra agency and inter agency cooperation, communication, and collaboration at the central level and between the central government and the state governments (in case of a federal system like the United States) and local authorities. Central to G2G e-Gov is the sharing of electronic data exchanges between public sector players (OMB, as cited in Park, 2007; United Nations, 2003). There are two major types of those electronic data sharing and exchanges among government agencies and organizations in the literature. These are e-Gov integration and e-Gov interoperation and interoperability. These will form the focus of this section of the literature review. The basic benefits of e-Gov integration, interoperation, and interoperability and the challenges which are likely to arise for the collaborating agencies for implementing these features of G2G will also be discussed.

E-government Integration

E-government integration is one feature of G2G and has been defined as the temporary or permanent merger of organizational processes into a bigger entity with the goal of cooperating to electronically share information that promote service delivery (Scholl & Klischewski, 2007). E-Gov integration efforts can center on providing solutions to a particular problem, while other initiatives may strive to create and extend capacity of their system for enduring organizational activities (Gil-Garcia, Schneider, Pardo & Creswell as cited in Garcia et al., 2009). Three forms of e-Gov integration are further distinguished. These are e-Gov federations, project groups or co-ops, and interest groups or loose affiliations.

E-Gov federation involves autonomous government agencies and organizations entering into a formalized contract of limited or permanent duration and access. The contract would strictly govern processes that are being merged or/and the methods and formats adopted for safeguarding utmost quality of information sharing. While federation, which, is the strictest, most complex, and detailed form of e-Gov integration allows the original owners of the processes and information to retain their ownership; it nevertheless provides for the possibilities of processing of transactions across participating agencies. Federations generally take the shape of some-to-some, one-to-some, and some-to-one .

With e-Gov project group or coop, autonomous government agencies and organizations formally agree once in a contract, to execute a particular and determined project, and where the agreement specifies information exchanges among the parties; there is usually no guarantee of high quality for the information that is being shared. E-

Gov project groups and coops often cease to exist once the projects for which they are constituted are completed and they usually emerge as some-to-many, many-to-some, and rarely as many-to-many.

E-Gov interest group or loose affiliation is that type of integration where there is an agreement among autonomous government agencies and organizations to provide one another access to specific information where quality is not guaranteed. They generally take the shape of some-to-many and many-to-some and they infrequently come as many-to-many.

E-Gov integration is considered a critical success factor that promises to move e-Gov from the emerging, informational, and transactional stages to the matured networked level (Lam, 2005). As a result, other concepts have been isolated to further amplify its relevance to e-Gov in general and G2G in particular. One of those concepts is enterprise architecture which is used by an organization to align its IT infrastructure and application portfolio investments with its business processes and strategic goals. Enterprise architecture helps an organization to reduce or eliminate redundancy and in the process foster an integrated and interconnectedness of the infrastructure and applications. Another concept is the enterprise application integration which according to McKeen and Smith (as cited in Lam, 2005) refers to “the plans, methods, and tools aimed at modernizing, consolidating, integrating and coordinating the computer applications within an enterprise” (p. 515). EAI seeks to correct the situation where organizations spend huge financial resources on the development and maintenance of several application interfaces and in the process, helps to efficiently and cost effectively integrate and scale enterprise applications. There is also the business integration idea which

advocates that integration of business processes and context in an organization ought to be the starting point, over and above, integration of technology components of an organization's infrastructure. The final perspective on e-Gov integration is B2B integration which particularly aims to provide an integrated set of standards for the exchange of data and information among organizations. B2B integration allows organizations to effectively arrange workflows at the system level than they would have been able to do at the granular level of data integration.

E-Gov integration has further been conceptualized as e-Gov hybridity which seeks to comingle the things or characteristics that were previously viewed as separate (Bloomfield & Hayes, 2009). The main characteristics of e-Gov hybridity are non binary, political hybridization, organizational/technological hybridization, and work. Non binary as a trait is a perception of interconnectedness through hybridization and thus a repudiation of clusters and oppositions. Political hybridization indicates the coexistence of disparate types of governance or may be those that are even conflicting showing the evolution of new political environments. Organizational/technological hybridization indicates the integration of organizational environment with technology and the mutuality of both for success. In the final characteristic of work, the emphasis shifts from organizational forms onto the actual work processes and practices being performed by people on the job.

E-government Interoperation and Interoperability

E-government interoperation and interoperability connote the technical links and coordination of the e-Gov information systems and their associated parts (Scholl & Klischewski, 2007). Interoperation exists in a situation where autonomous government

organizations enable their two or more separate e-Gov information systems and component parts to be effectively utilized for enabling the merger of processes or information sharing among themselves and with external partners. Technical interoperation of e-Gov information systems is perceived as important to cooperation among government organizations and with outside partners, given the restrictive environment in which they operate.

Interoperability can be said to be a higher form of interoperation in terms of technical systems and capability as it goes beyond smooth interconnectedness between e-Gov information systems and the component parts. In strict technical terms, interoperability points to the leveraging of joint capabilities of a myriad of computer and networking software and hardware owned by independent agencies to transmit useful and coherent information among one another where communication links were previously lacking.

Unlike the e-Gov integration types that often require formalized agreements, collaborating parties involved in interoperation and interoperability mutually state and publicize their commitment to those methods that will govern their activities. The partners may also endorse, expand, and agree to the existing information and communication technology (ICT) standards as the guiding principles for their relationships (Scholl & Klischewski, 2007). One common standard is the European Interoperability Framework. The objectives of European Interoperability Framework include guiding the process of service and system interoperability among European Union (EU) public administrations and between the latter and the citizens and businesses;

assist individual interoperability frameworks of members; and ensure the occurrence of interoperability in various policy areas (Fairchild & de Vuyst, 2008).

Beyond the technical meaning of interoperability however, the impact of social, political, legal, and organizational factors and constraints on e-Gov information systems and performance have also been recognized (Gottschalk & Solli-Saether, 2008; Fairchild & de Vuyst, 2008). Indeed, a distinction is further made between semantic and organizational interoperability. Semantic interoperability refers to the degree of communication obtained among different organizations' information systems using disparate terminologies and organizational interoperability shows the extent of communications derived among collaborating organizations as a result of their separate work processes and practices.

The distinction between the technical and organizational interoperability was given empirical credence in a study that surveyed interoperability policy guidance approaches developed in Europe and the United States (Guijarro, 2006). The results of that survey led to the conceptualization of two phased interoperability roadmap. The first phase which adopts interoperability frameworks as an ideal tool involves efforts at effecting interoperability through the provision of technical standards and policy guidance that will allow useful and meaningful exchanges of information among participating organizations in digital delivery of services. Located in the second phase is the use of enterprise architecture as the tool of operation to fuse administrative processes with technical systems. The purpose here is to engender organizational interoperability among various administrations of partnering organizations. The study gave high marks to

the United States' Federal Enterprise Architecture launched by the OMB under the Bush presidency in 2002 because it had been painstakingly tested and purposefully utilized.

Four stages of e-Gov interoperability were further distinguished as work processes, knowledge sharing, value creation, and strategic alignment (Gottschalk & Solli-Saether, 2008). At the first stage of work process, employees of organizations involved in interoperability strive to align their work processes, at the sub, complete and set processes levels, in a manner acceptable to the partners. Emphasis at this stage is on achieving integration and efficiency in work processes. The goal of the second stage of knowledge sharing is to develop a mechanism for information gathering and knowledge in participating organizations by their respective employees. Accomplishing effectiveness and learning in relationships is considered imperative at this stage.

At the value creation stage, participants seek to identify and maintain linkages between primary activities inherent in various forms of value in e-Gov - value chains, value shops, and value networks. Value chains create value by efficiently producing goods and services using primary activities such as inbound and outbound logistics, marketing, and sales and service. Value shops create value using innovative and creative methods in resolving clients' problems and the primary activities here are identifying the problems, providing solutions, making decisions, executing, and assessment. Connecting subscribers efficiently to the network is the way of creating value in a value network and primary activities of this type are service delivery, maintaining contacts, and infrastructure. Creating added value is germane to interoperability at this third stage of interoperability.

Finally, at the fourth stage of strategic alignment, cooperating government organizations involved in interoperability plan for mutual and reciprocal effort in strategy work by supporting and influencing organizational strategy. Building synergies among partners is germane to relationships at this stage and the stage is devoid of contradictory goals and objectives.

Benefits of e-Government Integration, Interoperation, and Interoperability

Perhaps the most obvious benefit of the two major features of e-Gov integration, interoperation and interoperability is in the sharing of network and computer driven information among agencies and organizations (Klischewski & Sholl, 2006) coupled with the creation of an atmosphere of collaboration and cooperation. It is argued that information sharing among government agencies provides opportunities for sharing of databases as well as make coherent and effective decisions that are guided by exhaustive information (Garcia et al., 2009).

There is also an improvement in organizational and managerial processes as a result of e-Gov integration, interoperation, and interoperability. Given G2G e-Gov, work is better streamlined and coordinated, decision making procedures are improved, operational costs are reduced, greater potentials for return on investment (ROI), and policies are effectively formulated, executed, and assessed (Themistocleous & Irani; Dawes as cited in Garcia et al., 2009). Collaboration and cooperation among participating agencies also improves their strategic management outlook as the focus and attention of organizational leaders transcend their immediate internal environments to the external stakeholders.

Politically, there is a tendency for a better image creation for the agencies before their constituents as there is a high tendency for reduction of paperwork burden on the citizens. There is also a propensity for an increased availability of useful and meaningful public information, enhanced delivery of public services and goods, and opportunity to hold public officials more accountable for their actions.

From a technical perspective, there is the possibility for a high incidence of data, object and process integration as well as integration and sharing of systems, platforms, applications, and infrastructures. Additionally, there is a likelihood that there will be a reduction in duplication and redundancy of data that is gathered, processed, and stored.

With e-Gov integration, interoperation, and interoperability also comes the assemblage, harnessing, and deployment of huge amount of crucial resources due to compliance with formal and informal administrative, processing and management standards, and policies (Ferro & Sorrentino, 2010). There are also gains in economies of scale and optimized negotiating influence with third party players such as the suppliers and other service providers

Overall, implementing the core features of G2G portends for the participating agencies efficiency in and effectiveness of their operations. However, barriers, and challenges to such implementation abound. The barriers and challenges which are discussed below are not only numerous, they are also multidimensional.

Barriers and Challenges to Government to Government (G2G) e-Government

There are several challenges, barriers, and constraints in the literature that militate against the implementation of the G2G features of e-Gov integration, interoperation, and interoperability. Some studies have grouped these barriers and challenges into categories

such as strategic, technology, information and data, policy, legal and regulatory, organizational and managerial, and institutional and environmental (Gil-Garcia & Pardo, 2005; Lam, 2005). Others have provided a myriad of constraints that range from constitutional/legal to performance (Sholl & Klischewski, 2007). Yet others have honed in on isolated issues such as identification and data sharing (Otjacques, Hitzelberger, & Feltz, 2007); freedom of information and data protection (Batista & Cornock, 2009); and information quality (Klischewski & Sholl, 2006).

With the first category of strategy barriers in the study by Lam (2005), the author found that these barriers were characterized by incoherent and different goals and objectives by the participating government agencies which in turn led to ambiguity, confusion, and disagreements over roles, assignments, and ownership. Adding to and related to this dysfunctional situation was the absence of executive sponsorship by agency leaders, lack of accountable and effective governance procedures, and dearth of implementation guidance for the cooperative projects. The study which involved structured interviews with 14 e-Gov consultants across four countries, found that another strategy barrier was the setting of unrealistic e-Gov strategic milestones and a disconnect between those milestones and the actual implementation schedule for the deliverables. The impact of this barrier can be exacerbated by the complexity, as well as a recreation and restructuring of organizational processes and structures that generally attend large e-Gov integration projects. Strategically, there was often the shortage of funds for the cost intensive integration projects in terms of budgetary allocation and funds' management and release. Unpredictable budget constraints thus have the propensity of adversely

affecting the implementation of e-Gov interoperation projects (Sholl & Klischewski, 2007).

Another set of challenges relate to the use of information and data (Gil-Garcia & Pardo, 2005) which together form the common denominator in e-Gov in general and e-Gov integration and interoperation in particular. The processes of gathering, managing, utilizing, transmitting, and sharing of information and data in e-Gov are all susceptible to quality problems. Thoughts in information quality concept in e-Gov integration and interoperability were further extended with the isolation of its eight dimensions (Klischewski & Sholl, 2006). These dimensions are, accuracy which stresses that collaborating government agencies put in place procedures that ensure that they accurately access, disseminate, and obtain information; and objectivity or comprehensiveness which harps on consistency and completeness. There are also the clarity of scope of needs/wants of the agencies and the currency of information and data, which differ from one integration arrangement to another. Other dimensions are cognitive authority of information which presupposes credibility of information and data and their sources; assurance or reliability which rests on user's past experience with the information and its source; and relevance (to needs), precision and recall which further bear on how users view the information as useful, credible and reliable. The two final dimensions are timeliness and perceived value of information obtained. Timeliness has to do with the speed in information access and retrieval and perceived value significantly affects the degree in which information is held and used.

Apart from the information quality issues that may attend the access, transmitting and retrieval of transactional information and data; there may also be the unwillingness

and the reticence among agencies to collaborate in sharing information that they perceive as belonging to them (Lam, 2009), and thus consider strategic to their individual organizations (Scholl & Klischewski, 2007).

Closely aligned with the information and data challenges are technology barriers. Differences in the information systems platforms and network infrastructures of agencies are more likely to inhibit the agencies' efforts at e-Gov integration and interoperation. Other barriers include differences in architecture implementations for the application integration, absence of compatible data and technical standards such as the inability of one application to interpret data format of another application, and rigid structures of the legacy systems, coupled with the absence of meaningful documentation (Lam, 2005). Added onto these are the complexities that often attend new technologies to be used for e-Gov integrative and interoperability projects, performance degradation with several involving partners (Scholl & Klischewski, 2007), and a shortage of skilled, knowledgeable, and qualified IT personnel to master those new technologies (Gil-Garcia & Pardo, 2005).

Furthermore, there are organizational and managerial constraints confronting e-Gov integration and interoperability (Scholl & Klischewski, 2007) which in turn pose serious challenges for the G2G e-Gov collaboration efforts. Given the tendency for differences in processes and resources of organizations, there is a likelihood that there will also be differences in the extent of motivation and readiness for collaboration. It was further shown that the relative newness of e-Gov to agencies meant that the concept and its implementation strategies are still being learned at the agency level and agencies may thus not be ready to engage in data sharing and collaborative arrangements with other

agencies (Lam, 2005). Slow pace of implementing government reform, lack of executive sponsor or champion for e-Gov initiatives, and the entrenchment of old processes are some other constraining organizational factors for agency collaboration and information sharing in e-Gov. There could also be other inhibiting factors such as the divergence between organizational strategic goals and e-Gov projects, several prevailing and possibly conflicting agency goals, and the resistance to change borne out of personal interests and attitudes (Gil-Garcia & Pardo, 2005).

Scholars have equally pointed to some constitutional, legal, regulatory, and policy challenges that confront G2G implementation. Governmental organizations generally operate under the enabling law and their actions are guided by the restrictive laws, rules, and regulations enacted and issued by Congress and other accountability bodies like the OMB. One area of regulatory restrictions is in the budget allocations which are generally limited to annual execution. This constraining time limit obviously is not advantageous to large and long term e-Gov integration projects. Similar legal concerns for data sharing were found to be prevailing in other parts of the Western World. For instance, Batista and Cornock (2009) in a survey conducted of the departments in the United Kingdom central government found that uncertainty in legal provisions continued to be a major hindrance to better utilization of data. Among other EU countries, it was equally revealed that data sharing among governmental organizations is subjected to the authorization of laws (Otjacques et al., 2007).

The questioning of the constitutionality of e-Gov integration and interoperation is borne out of the federal nature of the United States Constitution (Scholl & Klischewski, 2007). The U.S. constitution which divides government among three levels: federal, state,

and local is further strengthened by the inherent principles of separation of powers and checks and balances which recognize the three core branches, executive, legislative, and judicial and limits to powers of each arm.

The concern of the policymakers about maintaining the privacy of individuals continues to be considered an impediment to the implementation of e-Gov integration and interoperability efforts that are the features of G2G e-Gov (Lam, 2009). Such concerns revolve around open sharing of data by agencies with other agencies while being cognizant of the need to protect the identity and privacy of private individuals. Apparently, there is a dilemma among policy makers on how best to balance the quest for information and data sharing and the necessity of assuring the security, privacy and preservation of information stored by agencies (Batista & Cornock, 2009).

Mitigation Strategies to Challenges to G2G e-Government

A number of proposals have been advanced to address some of the barriers identified above. These strategies include the retention of the autonomy of the participating agencies, creation and implementation of an effective governance structure, development and assurance of strategic collaboration arrangements, and sharing of IT resources (Garcia et al., 2009). The strategies also involve efforts to produce long term and detailed planning, build business process understanding, derive sufficient commitment for funding, as well as secure strong executive leadership, sponsorship, and Congressional buy in and support.

Other organizational strategies that have been identified include the joint determination of the requirements that will guide the integration projects and formalizing agreements on the data, their corresponding data dictionaries, and where necessary

produce mapping tables to guide different data elements (Klischewski & Sholl, 2006). It is also imperative to adopt common guidelines on the credible open standards.

Technical interoperability methods equally need to be constructed and applied for both the front end and backend. At the front end, assurance of technical interoperability is needed for data presentation and exchange, data access, guidelines for the design of interfaces, multiple access points, and so on. Technical operability assurance for the backend would involve among others, fields such as data integration and middleware, Web Services, Network Services, Extended Markup Language, generally known as XML, standards, and distributed application standards.

G2G e-Government, IGR, and IGM

Seminal writings on the concept of IGR envisioned vertical and horizontal relations and interactions among the three arms of government – legislature, executive, and judiciary as well as among the three levels of government – federal, state, and local (Anderson, 1960). Features of IGR were also isolated in those earlier works as the legal elements of all forms and combinations of interactions among all units of government; human element of actions and attitudes of government officials; regular and consistent contacts and relationships among the latter; and the prevailing policy issues of finance, expenditure, formulation, implementation and so on (Wright, 1988). IGM concept expanded on IGR by emphasizing the creation of relationships among managers and program managers in the government units for technical and programmatic activities (Agranoff, 1996; Agranoff & McGuire, 1996). Thus, the three strategies of IGM were adjusting arrangements, building capacity, and leveraging resources.

Given these general definitions of IGR and IGM, there is a close semblance and affinity between the two concepts and G2G form of e-Gov. G2G as previously defined emphasizes communication, collaboration and electronic data exchanges between public sector players within and among agencies at the central government level, as well as between the center and the state and local authorities (United Nations, 2003). In the United States, it was envisaged by OMB that through G2G, the states will assist the federal government in the provision of public services to the citizens (OMB, as cited in Park, 2007). The expectation also was that G2G would enable the use of performance measurements for managing grants given by the federal government for service delivery, and bring about overall cost reduction and efficiency which local governments could model.

Contemporary literature on IGR and IGM have generally focused on redefining American federalism (Nathan, 2008; Metzenbaum, 2008) and been shaped by the two major events of the 2000s centered on homeland security and national emergency (Stever, 2005; Kapucu, 2006; Wise & Rania, 2008). These events were the terrorist attacks of September 11, 2001 and the hurricane Katrina national disaster at the Gulf coast in August 2005. Yet, other research studies in IGR and IGM have specifically focused on issues such as program performance management and evaluation (Rivera & Heady, 2006; Radin, 2008) and bargaining and negotiation (Agranoff & McGuire, 2004). Nevertheless, a review of these recent writings on IGR and IGM still illuminate many of those characteristics that inform the choice of these concepts as the apt framework on which G2G e-Gov is grounded.

One central characteristic is the emphasis on cooperation, collaboration, and coordination among principal actors in IGR and IGM, which also are the hallmarks of G2G. This feature emphasizes what Stever (2005) classified as type two IGM of lateral relations, consensus or collaboration, and networking. Unlike type one IGM of executive centered models which relies on the clout and resources of the federal government to coordinate programs managed at the lower levels of governments; type two IGM of coordination and cooperation are not imposed, but mutually governed by the three levels of government. In this latter type, various governments in the arrangement are treated as equals in the policy implementation and they cooperate through agreements to achieve those things they cannot by themselves achieve outside multilevel efforts.

Four factors are identified as germane for cooperation to exist in IGR. The first is that the state and local jurisdictions are potentially harmful to policy cooperation in IGR (Mason, 2008). The second factor recognizes the urgent nature of the problems, perception of cost reduction, and access to information, as well as the technical and financial support as the basic conditions for IGR cooperation. The two other factors are the effect of the participants' political image and their clamor for disparate goals and how seeking those varying goals can adversely impact cooperation (Mason, 2008).

Cooperation in IGR and IGM has been argued to be important and critical for preparing and responding to emergencies (Caruson & MacManus, 2006). The New York Police Department and Fire Department of New York were indicted to have failed to communicate with each other during the September 11, 2001 attacks. Communication failures and total failure of IGR were also attributed to the inefficient recovery efforts and management of hurricane Katrina (Kapucu, Arslan & Collins, 2010). For instance, the

two elements of National Response Framework and National Incident Management System that were cited out of four for the comprehensive national security response planning stressed the importance of coordinating efforts of the federal government and other levels of government for cooperation and collaboration (Wise & Nader, 2008). The importance of flexible communication and coordination that is devoid of rigid bureaucracies was similarly found to be the crucial elements necessary for effective management of emergency response to disasters (Kapucu, 2006). Additionally, Caruson and MacManus (2006) found out in their study of the Florida Association of Counties and Florida League of Cities, that the majority of city and county officials in Florida reported that the enactment of homeland security preparedness and cooperation legislations by the federal and state governments, have helped to improve, rather than degrade intergovernmental cooperation.

Closely aligned with the feature of cooperation and collaboration in IGR and IGM in recent studies is information sharing, a feature central also to the success of G2G in particular and e-Gov in general. The importance of information sharing for the management of various government agencies involved in homeland security has attracted a lot of focus from policy makers (Wise & Nader, 2008). But just as the concern to balance the need for information sharing and protecting the privacy of individuals is considered an issue in e-Gov integration and interoperability, it remains a major concern in IGR as well.

Additionally, bargaining and negotiation among participants are two other characteristics of IGM which are relevant to G2G. As has been previously demonstrated, some forms of e-Gov integration and interoperability require formal or informal,

temporary or permanent agreements among the participants. Certainly, these agreements could not have been reached by the parties involved without engaging in bargaining and negotiation. Apart from the use of bargaining and negotiation in IGM, it is equally argued that the tools provide the basis and context for collaboration and cooperation in the administrative management of public agencies (Agranoff & McGuire, 2004). The nature of functionally managing across governmental boundaries often requires that agencies bargain and negotiate details that are mutually approved for working agreements. Bargaining and negotiation for IGM are further justified by the design of the United States' federal system. Federalism provides an impetus for using bargaining to make intergovernmental adjustments as well as the caution to ensure that the tools used by the managers transcend the usual focus on grants for programs to other intergovernmental activities such as the influence of regulations, contracts, and audits.

Another area of emphasis in IGR and IGM in contemporary literature and that which provides relevance to G2G e-Gov is accountability and performance outcomes from participants. Since the Government Performance Results Act (GPRA) (1996) forms part of the enabling laws for e-Gov in the United States, it also features prominently in IGR and IGM. As the federal agencies rely on state and local actors for the delivery of services to the citizens, they are requested to take on both the roles of learners and leaders (Metzenbaum, 2008). Rather than just provide oversight on grants allocated to these lower levels of government, federal agencies were advised to lead in providing enabling conditions which will focus on the use of goals, measurements, and incentives with emphasis on outcomes and evidence. In turn, such a favorable environment is expected to engender intergovernmental performance and accountability. There have been similar

calls for more integrative approaches to the performance reporting by the federal and state governments, broad and inclusive performance driven systems, and innovative ways to evaluate and assess cooperative and conflicting aspects of IGR (Rivera & Heady, 2006).

Even in the homeland security IGR and IGM, the importance of performance and accountability is considered paramount (Wise & Nader, 2008). There continues to be a need to balance the quest for increased funding for the national homeland security capacity and the demand for accountability. It is thus cautioned that a failure to meet acceptable performance thresholds may portend reduction in financial support for states and local authorities. In the same vein, creation of unsuitable standards and measures to local realities may impede support and participation by the state and local governments.

There are other strategies that have been employed by federal agencies to maintain states' flexibility in IGR and IGM and at the same time assure that the states strive for performance outcomes. These are creation of performance partnerships, negotiated performance measures, establishment of standards, and granting of waivers to states (Radin, 2008).

There have also been other cited advantages of IGR and IGM for the delivery of public services which are analogous to the potential benefits of e-Gov integration and interoperability. These benefits according to Metzenbaum (2008) are economies of scale, expert skill specialization, and sharing of risks, problems, costs, benefits across many jurisdictions, and among several participants.

Methodology and Method: A Review

The purpose of this section of the literature review is to analyze and synthesize recent studies found in peer reviewed journals as they relate to the qualitative methodology and case study method of inquiry that are proposed for this study. A more detailed presentation of qualitative research methodology and how case study method will be used to conduct the study, data collection procedures, including interviews, and evidence of quality for the study is given in Chapter 3.

Qualitative Research Methodology

Qualitative research methodology seeks to elicit comprehensive information from individual or group study participants through conversation, observation, studying artifacts and archival documents and recording various contexts in which they are located (Kuper, Reeves & Levinson, 2008). As a result, data collection methods that are commonly used within qualitative research are interviews, focus groups, observation of events, and analysis of current and archival documents.

Unlike quantitative research which is based on the theoretical framework of positivism, qualitative research methodology is predicated on constructivism. Whereas positivism presupposes an absolute truth or reality where knowledge is considered as objective and neutral; constructivism locates knowledge and reality within the historical and social contexts in which people live. Indeed, the differences between the quantitative and qualitative research methodologies are often explained through the premises of these two fundamental theoretical approaches. To this end, while fundamental questions in positivism are often causal in nature, such as “what” and “why,” constructivist approach focuses on the explanatory questions of “how” and why. In the positivist framework, the

underlying approach is experimental, researcher stance is detached, sampling techniques are random, and data analysis is deductive. On the other hand, in constructivism, they are respectively naturalistic and exploratory, situated and involved, purposive and theoretical, and inductive (Kuper et al., 2008).

However, dominant in recent studies on qualitative research are the questions of validity, rigor, quality and trustworthiness. Cho and Trent (2006) noted the high incidence of focus by scholars and practitioners on the validity question in research in the United States and abroad. They stated that the increased focus in the United States was informed by the demand by some federal government agencies' for research predicated on scientific rigor and testing. For them, the traditional view of validity in qualitative study revolved around the extent to which claims made by the researchers on knowledge were reflected on the reality that was being studied.

An attempt was made to further extend the meaning of validity in qualitative research by Onwuegbuzie's *qualitative legitimation model* (as cited in Onwuegbuzie & Leech, 2007). The model is composed of threats to internal credibility and external credibility. The term internal credibility is seen "as the truth value, applicability, consistency, neutrality, dependability, and/or credibility of interpretations, and conclusions within the underlying setting or group" (p. 234). Some of the threats to internal credibility of qualitative research include ironic legitimation which assumes multiple realities of a phenomenon, voluptuous legitimation (embodied/situated validity) which seeks to discern the extent of divergence between a researcher's interpretation from the available data, and the descriptive validity which points to the accuracy of the textual account by the researcher. These threats also include observational bias which is a

shortage of sampling behaviors or words from the participants, researcher bias which reflects a researcher's personal biases, which may be inadvertently transferred to the participants, and causal error which refers to the failure by researchers to verify interpretations prior to explaining and attributing causes for behaviors and attitudes that were observed.

On the other hand, external credibility is defined as "the degree that the findings of a study can be generalized across different populations of persons, settings, contexts, and times…pertains to the confirmability and transferability of findings and conclusions" (p. 235). The threats to external credibility include catalytic validity which refers to the extent to which a study empowers and emancipates the research community, action validity which points to whether the findings of the study are utilized by the practitioners and other stakeholders, and evaluative validity which is the degree to which an evaluative frame of reference can be used for the study. Other threats to external validity include reactivity which poses a threat to the generalizability of the findings of the study, order bias which refers to the effect that the order of interview questions or observations have on dependability or confirmability of the results, and effect size which is oblivious to the influence of size or the meaning of an interpretation.

Two current approaches to validity in qualitative research that have been recognized are: transactional and transformational (Cho & Trent, 2006). These approaches regarded other thoughts on validity outside these two as inadequate. Perspectives such as that of Creswell and Miller (as cited in Cho & Trent, 2006) which predicated validity on the paradigms of inquiry were rejected.

Transactional approach involves the use of member checking, triangulation, and bracketing to establish active engagement between the researcher, the object of his or her inquiry, and the participants. The goal here is to attain high level of accuracy and agreement by reassessing data that was initially collected and analyzed. Emphasis is thus placed on the techniques or methods that are used to correct any misunderstandings and in the process achieve accuracy as the validity of the text and account is highly regarded. Nevertheless, certain aspects of this approach, such as the researchers' reconstructions and interpretations will continue to be contentious.

Conversely, the transformational approach is considered a more radical approach aimed at using the entire research process to achieve a social change. This is exhibited through a demonstration of strong understanding by the researcher of the participants as he or she conducts the research. Unlike the transactional approach, the proponents of the transformational approach questioned and rejected the notion that validity could be achieved in qualitative research using certain techniques or methods. Rather, they advocated for a much more radical and transformational approach to validity such as using research exercise itself to achieve among others, social justice, empathy, and much more expansive visions. One notable issue with this approach is the ambiguity surrounding the question of how best to analyze and interpret realities in practice. There seems to be a dearth of working definitions for many of the examples contained in the approach.

In an effort to further clarify the issue of quality in qualitative research, Collingridge and Gantt (2008) appeared to be towing the transactional path in their analysis. They isolated four common research evaluation criteria of reliability, validity,

sampling, and generalizability and compared them across quantitative and qualitative studies. On reliability, they argued that unlike the quantitative research, the goal in qualitative studies was not to achieve the same definite results, regardless of the controlling environments. Instead, reliability in qualitative studies consistently stresses that identical quality in outcomes of similarly conducted research exercises are obtained. With validity, the authors believed that the views of both qualitative and quantitative methodologies are identical since they both seek to produce valid results. They argued that through accurate presentation of experience, theory and culture, construct validity is obtained in qualitative research; content validity is gotten through interviews and observation; and criterion validity is derived with outcomes that mesh with other measures of the same event or occurrence. Moreover, whereas random sampling is a common technique used to select participants for a quantitative study with the purpose of achieving generalizability of the results; purposive sampling is used in a qualitative study to meet a particular study objective. Various types of purposive sampling were adjudged to be rigorous as random sampling in application. Lastly, with the generalizability question, it was further argued that even though qualitative sampling often adopts the use of purposive sampling instead of random sampling; generalizability could still be attained in many ways in qualitative studies. One of such ways is through analytical generalization exemplified by the proximal similarity model. Proximal similarity defines generalizability according to the degree of similarities between the context in which the study, such as place, people, and setting is conducted and the natural context, like the external environment of the event that is being studied. The greater the dissimilarities

between the two contexts, the lower the possibility for generalization, and the reverse would be the case with a high degree of similarity between the contexts.

The position of the transformational approach appears to be reflected in the analysis by Rolfe (2006) on quality in qualitative research. The analysis rejected creating any new set of criteria for judging qualitative research. In this rejection, there was a recognition that three positions continued to endure on this issue. The first position involves those who call for the same quality criteria used in quantitative studies to be used for qualitative research. The second position advocates for a new class of criteria, and the third position challenges the usefulness of using any set criteria for judging quality in qualitative research. While rejecting the use of any set criteria to determine quality and validity, the author argued that there was a need to recognize the individuality and uniqueness of each study. To this end, it was concluded that emphasis must be placed on the importance of reflexivity in research. With reflexivity, researchers go beyond presenting the rationale, decisions and the process of the research to advising, self examining, and taking moral, social, and political stance.

Similarly, Meyrick (2006) faulted thoughts on qualitative research rigor which were often rendered within the context of the general debate between the proponents of quantitative and qualitative research methodologists. The author equally rejected the approach often taken on quality criteria based on the use of techniques. Consequently, a pluralistic approach to establishing rigor disregarding using set criteria and quality framework for qualitative research was developed. The framework is hinged on two major principles of transparency and “systematicity.” These two principles are divided under the four broad categories of researcher epistemological/theoretical stance, process,

analysis, and results/conclusions. These categories roughly coincide with the stages of qualitative research. The categories are respectively further subdivided into objective and reflexive; methods, sampling and data collection; transparent pathway data to conclusions; and findings grounded in data (illustrated). Below these subdivisions are many other branches showing qualitative themes which can allow the reader of a study to make an informed judgment about the quality of that study.

Also, within the transformational approach is found the contributions of Kuper, Lingard and Levinson (2008) to studying rigor and quality in qualitative research. Rather than using evaluative criteria and strategies to determine the trustworthiness of qualitative research, the authors presented six questions that they believed can guide readers in their assessment of a qualitative research. For them, the questions revolved around the relevance of the sample used in the study to the questions it sought to answer, the reliability of the data gathering process, and how properly was the data collected analyzed. Other questions that the readers can use for evaluation seek to determine if the results derived are transferable, if sufficient steps to address ethical issues were taken, and if the clarity of the entire research is assured.

What can be deduced from this brief synthesis of the recent literature on qualitative research is that the questions of rigor, quality, and trustworthiness would continue to dominate the interests of the researchers. It is also argued that inasmuch as the debate between the proponents of qualitative and quantitative research methodologies continue to subsist, the debate between the advocates of the transactional and transformational approaches to defining quality of qualitative research would equally continue to rage.

Qualitative Case Study Method of Inquiry

Qualitative case study is traditionally seen as a research method where a variety of data sources are used to facilitate an indepth and thorough understanding of an event or a phenomenon within its context (Baxter & Jack, 2008). Cases could be accounts of historical importance (Eisenhardt & Graebner, 2007). However, there is a tendency that the cases are going to describe recent events. It is stated that the use of various data sources in a case study research guides against the exploration of the issue or event at hand from just one premise, but ensure that it is done from a variety of perspectives which in turn ensures a multifaceted revelation and the understanding of that event or issue (Baxter & Jack, 2008). In order to determine what the case will be, the researcher ought to be able to resolve if the unit of analysis will be an individual, a program, a process or a comparison between organizations. Once the case is ascertained, it is equally important to delineate the scope, limitations and boundaries for the case so as to forestall having a study that is too broad. Other considerations that a researcher may need to bear in mind while using the qualitative case study include what type of case study to use, propositions (Yin as cited in Baxter & Jack, 2008), and issues (Stake as cited in Baxter & Jack, 2008), conceptual framework, data sources, data organization for independent assessment, type of data analysis, style of reporting the case study, and strategies for attaining quality and trustworthiness of the study.

There was also an attempt by VanWynsberghe and Khan (2007) to redefine case study apart from its traditional definition. In their refurbished definition “case study is a transparadigmatic and transdisciplinary heuristic that involves the careful delineation of the phenomena for which evidence is being collected (event, concept, program, process,

etc.)" (p. 2). In other words, a case study is considered transparadigmatic because it is still relevant irrespective of what research paradigm is used, either positivism or postpositivism; transdisciplinary regardless of whatever discipline the subject under study is located, social science or applied science; and heuristic because it is an approach which emphasizes formulation, exploration, and resolution of problems during the learning process.

Moreover, the VanWynsberghe and Khan (2007) provided a prototype which showed seven features or characteristics of what a case study is. These features according to them were small sample size, detailed and contextual analysis of the case, uncontrollable natural and complex settings, and an indepth analysis of a particular time, place, and space boundary. Others were opportunity to create working hypotheses and derive lessons learned during the collection and analysis of data, multiple data sources for triangulation, dependable and accurate results, and the potential for a reader's understanding of a complex situation that is explored and thereby extend his or her experience. Contrary to the general definitions, they refuted the notion that the case study method was a method, or a methodology or a research design. They suggested instead that the focal point of a case study ought to be about the unit of analysis that was being discovered and built and not about the revelation of the case itself.

Part of the justification for the redefinition offered by VanWynsberghe and Khan (2007) were the five myths of the traditional meaning of the case study method that was provided earlier on by Flyvberg (as cited in VanWynsberghe & Khan, 2007) and reasserted in the five misunderstandings of case study (Flyvberg, 2006). As it is shown below, using the latter as a justifying premise may not be the most appropriate since the

motive was to isolate misunderstandings and oversimplifications of the case study research rather than redefining the method itself.

The first misunderstanding was recognized as that which elevated context independent predictive theories as more important than context dependent, concrete, and practical knowledge as exemplified by case study research. This, they revised as "Predictive theories and universals cannot be found in the study of human affairs. Concrete, context-dependent knowledge is, therefore, more valuable than the vain search for predictive theories and universals" (p. 224). The second misunderstanding had to do with the inability to generalize on the basis of a single case and thus the failure of the case study research to contribute to the scientific inquiry. Among other arguments used to debunk this assertion was the rejection of the call for using large or single cases as the measure of scientific progress. In their rejection, they saw such a view as overrated. To this end, the second misunderstanding was revised as:

> One can often generalize on the basis of a single case, and the case study may be central to scientific development via generalization as supplement or alternative to other methods. But formal generalization is overvalued as a source of scientific development, whereas "the force of example" is underestimated. (Flyvberg, 2006, p.228)

Related to the second misunderstanding on the generalizability question is the third oversimplification of case study. The argument was that the method was most relevant for generating hypotheses in the first stage of the research process rather than for hypothesis testing and theory building as other methods (Flyvberg, 2006). The rebuttal

provided pointed out that the case study method was relevant for generating and testing of hypotheses and that it is not constrained to these two activities alone.

Because there is a direct relationship between the second misunderstanding (generalizability) and the third (hypothesis testing) and the question of case selection; generalizability may be enhanced by the strategic selection of cases rather than by random sampling which may not be the best ideal sampling method in case study research. Typical cases are often not endowed with the rich information as atypical cases which reveal more actors and essential mechanisms in the event that is studied.

Indeed, the assumption that the cases in case study research should be representative of some population as in experimental and hypothesis testing studies was seen as a faulty one (Eisenhardt & Graebner, 2007). It was argued that the goal of case study research was to inductively develop a theory rather than to test it. Thus, the theoretical sampling which stresses the selection of cases based on their suitability for extending and elucidating relationships and reasoning among constructs becomes important.

Another misunderstanding is that which alleges that case study research is generally guilty of subjective bias as it seeks to confirm preestablished notions of the researcher and compared to other research methods, it liberally accommodates the subjective and unilateral judgment of the researcher (Flyvberg, 2006). The argument against this misunderstanding contended that the efforts towards confirming the researcher's preset conclusions were no greater in case study research method than in other methods. If anything, the case study research is characterized by a high degree of favoritism towards falsification of preestablished notions rather than towards

confirmation because, the research method presents the researcher a real time first hand opportunity to directly test preestablished views, assumptions, and concepts through the views expressed by participants and key informants.

The final misunderstanding or drawback often put forth by the antagonists of case study research posits that it is cumbersome to synthesize and generate theoretical propositions based on particular case studies. However, to a case study researcher instead of seeing rich narrative as being problematic, it is perceived as a revelation of a rather significant phenomenon. While the difficulty of providing summaries of case studies is acknowledged, applying the argument to case outcomes is refuted. It is asserted that the problems of summarizing case study narratives are borne out of the characteristics and features of the event that is studied rather than from the research method itself. Besides, it is important to note that the belief that the whole narratives of case studies be wholly read as summaries is distorting.

Even then, as Eisenhardt and Graebner (2007) have shown, despite the challenges that confront building theory from cases, opportunities still abound. According to the authors, case study theory building "is a research strategy that involves using one or more cases to create theoretical constructs, propositions and/or midrange theory from case-based, empirical evidence" (p. 25). They placed replication logic which sees each case as a unique unit of analysis at the center of theory building in case study research and they attributed its popularity to its position as a best option for bridging detailed evidence in qualitative research to the positivistic deductive research. The authors concluded that challenges to theory building in case study method can be mitigated among others by succinct and concise language and diligently crafted research design, limited informant

interview bias, use of tables and appendixes to present evidence, and stating theoretical arguments and positions unambiguously.

In the same vein, there exist other perspectives which have seen the emergence of trends that are leaning toward convergence between the case study method and quantitative research instruments and methods (Bennett & Elman, 2006). For instance, case studies can benefit from statistical analysis as the latter can help to isolate outliers that can be analyzed by case study researchers for fresh or previously omitted variables for generalizability testing. In turn, statistical studies can gain from case study analysis by presenting typical cases (that based on random sampling) from statistical correlations, for possible erroneous deductions and ascertain if the hypothesized propositions can be said to be effectively operational. Moreover, fresh variables identified in case studies, through statistical analysis can be methodically established in models and formalized models in statistical studies can also be tested using case study research.

Conclusion

A critical analysis and synthesis of the literature on the concept of e-Gov reveals what appears to be a continued interest in the United States at all levels of the government, in other countries abroad and at the multilateral level of international organizations like the United Nations and the European Union. The majority of the e-Gov studies in the literature focused on the G2C form while neglecting other types of e-Gov such as G2G and G2B types. This is inspite of the fact that policy makers often acknowledged and generally stated from the outset that G2G was a core component of their e-Gov initiatives. From the way e-Gov is conceptualized and defined, to the rationale for its adoption, especially in terms of the potential benefits that could be

derived; G2C is very dominant in the literature. An assessment of the proffered e-Gov benefits such as access, openness and transparency, citizen participation, accountability, and responsiveness, efficient and quality public service delivery, and citizens' trust and confidence in the government, provided credence to this.

Still, few studies are found in the literature that discussed certain features, benefits and challenges of G2G e-Gov. The characteristics of G2G e-Gov analyzed were integration, interoperation, and interoperability. One central benefit of e-Gov in general and the only one that is specifically associated with G2G is inter agency and inter sector cooperation and collaboration. Other benefits are improved organizational and managerial processes, better image for the agencies, and data, object, and process integration. However, the implementation of G2G is faced with a myriad of challenges such as strategic, technology, legal, data quality, privacy, and so on. A number of mitigation strategies are isolated to address these challenges and they included maintaining the autonomy of the agencies, adopting an effective governance structure, strategic collaboration arrangements, and sharing of IT resources (Garcia et al., 2009).

Though the few studies on G2G provided useful information on the characteristics, benefits, challenges, and mitigation strategies, a gap that transcends the overwhelming focus on G2C in e-Gov studies still exists in the literature. What is lacking in the G2G studies is a practical demonstration of how G2G works. The study sought to fill this gap by focusing on a case study that demonstrates the implementation of G2G in a U.S. federal agency.

Apart from the overall concept of e-Gov, the study was also grounded in IGR and IGM. The foregoing review of the literature established a link between G2G e-Gov and

IGR and IGM. In particular, one central emphasis on cooperation, collaboration, and coordination among principal actors in IGR and IGM is equally seen as a very important element of G2G.

The final section of this literature review examined recent studies on the qualitative research approach and case study method as well as the type and method of inquiry to be used respectively for the proposed study. A dominant feature of works on qualitative research continues to be on quality, validity, and trustworthiness. Two schools of thought exist: the transactional and transformational approaches. Transactional approach emphasizes techniques and criteria for assessing quality in qualitative research. The transformational approach rejects the use of techniques and criteria but stresses the importance of the context of the research and the ability of the study to effect social change.

Chapter 3 will expand on how the qualitative research methodology and the case study method are going to be used in the design of the study. In essence, it shows a detailed discussion of the research design, sampling strategy and participant selection, the researcher's role, data collection procedures, data analysis and interpretation processes, evidence of quality, feasibility and appropriateness of the study, informed consent, and ethical considerations.

Chapter 3: Research Methods

Introduction

Chapter 3 of this study describes the research design, sampling strategy and participant selection, the researcher's role, data collection procedures, as well as data analysis and interpretation processes. It also shows evidence of quality, feasibility, and appropriateness of the study, describes the informed consent process, ethical considerations, and summary. The purpose of this qualitative case study was to provide an indepth understanding of G2G dimension to the concept of e-Gov in the United States' federal government. FMS' TOP system, which provides an integrative mechanism for offsetting debts owed to the federal and state governments, was used as the focus of study. The research aimed at assisting scholars and practitioners to better understand the importance of G2G e-Gov for public service delivery. The study was guided by the following research questions.

The central research question focused on how G2G e-Gov can ensure efficiency, accountability, and value to service delivery. The subquestions of this central research question are as follows:

1. What is the nature of G2G e-Gov implementation of FMS' Treasury Offset Program (TOP)?
2. What are the challenges confronting G2G e-Gov implementation in the U.S. Government?
3. What are the specific problems confronting the implementation, management and usage of TOP within the context of G2G e-Gov?
4. How can G2G e-Gov be improved as an integral part of e-Gov?

Research Design

In this section, I discussed the research design employed for the study. Specifically, I identified the tradition of inquiry as the qualitative research, provided the philosophical traditions that informed the research method, and why it was chosen for this research. The section also provided the rationale for the case study used for this research.

Type of Inquiry

The type of inquiry for the study was a qualitative case study which focused on G2G approach to e-Gov. Qualitative research is the use of nonstatistical techniques and methods to collect data and information about observable social facts or events (McNabb, 2008). Qualitative data collected for qualitative studies include words, pictures and images, and other materials that are not numeric in nature. They have the capability of providing, beyond mere description of events and occurrences, an in-depth understanding, thorough interpretation and informed analyses of those events and phenomena.

Qualitative research is predicated on the five philosophical assumptions of ontology, epistemology, axiology, rhetoric, and methodology (Creswell, 2007). In ontological assumptions, reality is perceived by the study participants as varied and subjective and evidence of variations in opinions is shown with quotes and themes. Epistemological assumptions demonstrate the attempt by the investigator to develop closer proximity with that which is being studied through collaboration. The philosophical assumption of axiology posits that the researcher is conscious of the

tendency for biases and the value laden nature in a study and in the process analyzes with his or her interpretations as well as those of the participants.

With the rhetorical assumption, the investigator employs literary and informal writing style as well as the language of qualitative research. In the philosophical foundation of methodology, inductive logic, contextual analysis, and emerging design are used and details of the context are described prior to making generalizations. The study is aligned with the methodological assumption as the procedures that would be used are going to be inductively created from ground up, emerging, and informed by the data gathering and analysis experiences of the researcher.

Qualitative research thus involves induction, generating theories, and it is both subjective and nonpositivistic in its approach (McNabb, 2008). Conversely, quantitative research uses numeric and statistical data for deduction, testing theories, and it is objective and positivistic in nature. Its investigators hold and affirm to the single and objective world and consequently deliberately develop insular character away from the study group with the goal to avoid making value judgments about thoughts, associations, attitudes, inclinations and attitudes. Whereas qualitative studies are also amenable to changes because of absence of guiding assumptions, quantitative research is generally informed by preset hypotheses prior to the data collection process and these hypotheses are rigorously tested during analysis. Quantitative studies are also more generalizable than qualitative research because the goal is to predict future activities and behaviors as well as apply results derived to other circumstances.

McNabb (2008) has further classified qualitative research into three categories. These are explanatory research, interpretive research, and critical research. Explanatory

research studies seek to investigate and determine the cause of some social phenomenon through one or more dimensions such as politics, socio economic, and environment, and so on. Because of its simplest approach in understanding and application, a critical objective of the explanatory research is to inductively build theories applicable to a phenomenon and which are predictive of identical future behavior or situations.

An interpretive research category came as a result of the thinking that explanatory research studies were limited and insufficient to explain human events or circumstances. Rather, the investigator ought to be able to develop subjective meanings and interpretations of social phenomena. The primary goal of interpretive research is to describe and interpret human experiences in a multifaceted manner by looking at the way those experiences and events are discerned and understood as they occur and unfold and not when they follow a pre planned sequence. The assumption on which interpretative research studies are based states that reality can be learned from meanings associated with observable social event or facts like language, shared experiences, artifacts and so on. But Sayer (1992), while discussing the concepts of hermeneutics (discipline associated with interpretation of meaning) and *verstehen* (an approach dedicated to giving understanding to human actions) cautioned against taking meanings of social phenomena lightly because many of the inherent interactions do not consistently relate logically and conceptually.

With the third type of qualitative research, critical research studies, the focus is to provide a critique that illuminates on a social condition considered detrimental or alienating. The objective here is to eradicate the causes of such harmful conditions and in the process liberate the society from their negative consequences (McNabb, 2008). The

goal of a critical research is to assist and make people aware of the ramifications of their perceptions, attitudes and actions regarding some harmful conditions with the ultimate purpose of changing those perceptions, attitudes and actions. This type of research is predicated on the assumption that a societal crisis exists.

Given the overarching purpose of this study which aimed at deriving a thorough understanding of G2G e-Gov, interpretive qualitative type of inquiry was an apt choice over both the explanatory and critical qualitative research studies as well as quantitative approach to inquiry. This was even more logical considering the study's theoretical framework anchored on the concepts of IGR, IGM and e-Gov. The goal of this study was not to determine the cause of G2G as would have occurred in explanatory research, nor was the goal to point out harmful conditions of the concept as critical research would have offered. The purpose of the study transcended a mere description and explanation of the concept of G2G as would have been expected in explanatory research to interpreting the concept for the reader. More importantly, the research questions developed for this study were not tailored to test any hypotheses for the concept of G2G in line with the philosophical foundation of quantitative research. Instead, the goal of the study reflected some of the key principles of interpretive research such as hermeneutic circle, contextual nature of the studied phenomenon, interaction between researchers, and the subjects they study, and multiple interpretations (McNabb, 2008). For instance, the hermeneutic circle enables the development of understanding for complex concepts and phenomena from the meaning and relationship of their component parts. Similarly, this study offered an indepth understanding of the concept of G2G.

It is important to note, however, that there have been several studies conducted on the subject of e-Gov using the quantitative approach. Much of these quantitative research studies were concentrated in the assessment of government websites. They closely aligned with what Babbie (2007) calls evaluation research and whose purpose is to find out if a social intervention has generated the expected result. For instance, Justice, Melitski and Smith (2006) employed a set of criteria to evaluate a sample of 104 state and local governments' websites on the extent to which their e-Gov implementations were being used to propagate budget information, report financial data and encourage the participation of individual citizens in the allocation of resource processes. Similarly, Sachdeva (2006) cited a Brown University study that used variables such as online publications, security features, protection of individual privacy, disability, digital signatures and so on to rate 1,503 websites in all the 50 states in the United States, 61 federal legislative, executive and judicial websites.

While the use of quantitative research was the most appropriate in these studies geared toward assessment and evaluation of websites, employing the same type of inquiry for an indepth understanding of G2G e-Gov at a particular agency was not deemed to be the most effective approach. Qualitative research was considered to be more suitable for this particular study as the focus was on getting an indepth understanding of G2G e-Gov. The next section provides a rationale for case study as the tradition of inquiry.

Rationale for Case Study

Having honed in on the qualitative type of inquiry, the instrumental single case study was selected as the tradition of inquiry. Trochim and Donnelly (2007) described

case study method as a deep study of a particular individual or context. Case study has also been defined as a qualitative method in which a researcher uses a combination of sources of information such as interviews, archival records and documents, and observations over a period of time to explore a single or multiple cases (Creswell, 2007). Case studies strive to develop a thorough description and analysis of one or more cases, ideal for problems or issues that require an indepth exploration, and the unit of analysis is usually a study of an event, issue, concern, program, or activity, and involves analyzing input from many individuals.

Going beyond these definitions, Yin (2009) wrote that a case study method allowed "investigators to retain the holistic and meaningful characteristics of real-life events such as individual life cycles, small group, organizational and managerial processes, neighborhood, and the maturation of industries" (p. 4). While the author acknowledged some traditional biases against the case study method, a powerful case was equally made for the tradition. One particular argument against case study is the absence of research rigor often characterized by the failure to adhere to systematic procedures and the susceptibility of the research work to biases or/and tentative evidence. Antagonists of the case study method also faulted it on its inability to offer premise for generalization; because it is time consuming, generates large and indiscernible documents, and the renewed influence of field trials which seeks to produce causal relationships in fields such as education.

The defense against these critical arguments countered that experimental research is equally susceptible to biases and that case studies are generalizable to theoretical propositions rather than to the entire populations (Yin, 2009). Additionally, case study

method does not need to be time consuming or lengthy as some of its common methods of data collection techniques such as interviews and documentation can now be done in a practical manner using the Internet or the telephone. It could actually be complementary to experimental research which is generally deficient in explaining the how and why of an experiment the way a case study could.

As a result of this rebuttal, a case study analysis in its scope of definition is considered useful when the goal is to have a thorough understanding of a real life phenomenon within its contextual environment. According to Yin, (2009, p. 18), the method also

- Copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as a result
- Relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
- Benefits from the prior development of theoretical propositions to guide data collection and analysis

Other writers such as VanWynsberghe and Khan (2007) have tried to redefine case study apart from its traditional definition. For them, “case study is a transparadigmatic and transdisciplinary heuristic that involves the careful delineation of the phenomena for which evidence is being collected (event, concept, program, process, etc.” (p. 2). Case study is transparadigmatic irrespective of research paradigm – positivism, postpositivism and so on; transdisciplinary regardless of whatever discipline the subject under study is located – social science, applied science, and so on and; heuristic as an approach which emphasizes formulation, exploration and resolution of problems during the learning

process. Consequently, contrary to the general definitions of a case study method, the authors refuted and justified that case study was not a method, nor a methodology nor a research design.

Creswell (2007) further distinguished among three types of a case study method. These are the single instrumental case study, the collective or multiple case study, and the intrinsic case study. Whereas the focus in the single instrumental case study is on a single issue or concern with one bonded case as an example, the collective or multiple case studies also emphasize one single issue, but illustrate that issue with many case studies. The intrinsic case study focuses on the issue, program, or concern itself rather than illustrate with a case study.

Seven characteristics of a case study have been identified. These are small sample size because of its indepth focus on a unit of analysis, very detailed contextual analysis, and natural settings because it is devoid of control over the case being studied. Other features are detailed description of a temporal or spatial boundary and generation of working hypotheses and derivation of lessons learned. Case study is also characterized by the use of multiple sources of data that enables triangulation for validity and accuracy as well as its ability to extend a reader's understanding and experience of a phenomenon (VanWynsberghe & Khan, 2007).

Since the issue that was studied in this research was the G2G e-Gov and the goal was to illustrate that concept with TOP, it was only logical that I employed the instrumental single case study over both the collective or multiple and intrinsic case studies. The choice closely aligned with one of the five rationales provided by Yin (2009) for designing single case studies. That rationale alluded to the single case representing the

critical case in affirming a theory that has already been well formulated. Based on the stated conditions of that theory, a single case can then be used to affirm, counter, or build on the theory. In this study, the theory of IGR as well as concepts of IGM, and G2G e-Gov have been established. The single case of TOP is only being used to extend those concepts.

Apart from the case study analysis, other qualitative traditions considered were ethnography, phenomenology, grounded theory, and narrative analysis. In spite of the consideration, case study still stood out as the best approach to use in this particular study. In ethnography for instance, using active participant observation approach, in which the researcher is fully engaged in the study, the focus of study is on a phenomenon in its cultural context and it requires taking extensive notes (Trochim and Donnelly, 2007). The unit of analysis in ethnography is thus the study of a culture sharing group. The goal of this study however, was not to study the culture of any particular group. Rather, a financial program was studied with the goal of having a better understanding of G2G e-Gov in the United States federal government. The use of ethnography in this instance would divert attention to the group of people involved in using G2G e-Gov instead of studying and gaining a solid understanding of the approach itself through the lens of a program. Using a case study analysis was therefore best suited for the research, and using ethnography would have been inappropriate because of the concern with the culture of a group of people.

With the phenomenology type of study, the goal is to describe and show the experiential effects of a phenomenon on respondents and those that are participating in a research (Trochim and Donnelly, 2007). Again, the purpose of this research was not to

study several individuals who were commonly engaged by their experience of G2G e-Gov phenomenon. Neither was there any plan to understand nor describe the respondents' personal experiences of the phenomenon. The primary purpose instead was to elicit responses aimed at providing a better understanding of the concept itself. Whatever experience was captured was done at the organizational level rather than at the individual level. Case study analysis offers this type of advantage over phenomenology.

In the qualitative grounded theory method, the investigator sets out to develop a theory rooted in observations and data collected from the participants in the field of study. It involves the study of phenomena of interest including a process, action, or interactions among many people (Trochim & Donnelly, 2007; Creswell, 2007). Although the qualitative type of inquiry has generally been seen as being inductive in nature because it involves building theory from bottom up (McNabb, 2008); care should be taken not to confuse this with the grounded theory tradition. In an inductive reasoning, the researcher makes some specific observations with the goal of detecting patterns and regularities; formulate initial hypotheses, and ultimately develop some theories. At any rate, using grounded theory for this research is not ideal as the purpose is not to generate theories through observation of participant interactions. Instead, research participants will be interviewed on TOP with the goal of gaining a better understanding of the concept of G2G e-Gov.

Finally, the qualitative research tradition of narrative research seeks to explore the life of an individual with the aim of relaying stories about the experiences of that individual. Using narrative research for this study was inappropriate as the focus of the research was on the understanding of a concept of G2G e-Gov using a case of a financial

system. The focus was not on any particular individual or individuals, but to provide a thorough description and analysis of a concept using a program. Using a case study analysis was more plausible to employ.

Sampling Strategy and Participant Selection

The concept of purposeful sampling is employed in qualitative research and sampling can be done at the site, event or process, or participant levels (Creswell, 2007). Purposeful sampling indicates that the goal of the researcher is to select key informants and locations in the sample as a result of their knowledge and understanding of the subject and event that is being studied. Purposeful sampling is a form of nonparametric sampling which does not involve random sampling as parametric sampling does (McNabb, 2008; Trochim & Donnelly, 2007) and it is also called judgmental sampling (Babbie, 2007). In this case, the investigator's sample is based on the knowledge of a population, its features, and the purpose of the study. Rather than using more positivistic randomization, the expertise and knowledge of the sample are used as substitutes (McNabb, 2008) and the samples are selected because they do not represent the population. In particular, Trochim and Donnelly (2007) recognized expert sampling as just one form of purposive sampling among others. The author argued that two reasons informed the use of expert sampling. First, expert sampling offers the best approach to obtain the views of individuals with a particular expertise and second, it validates for another sampling approach that has been employed.

Although the term sampling has been generally accepted in social sciences as a method of getting participants for qualitative studies, some writers such as Polkinghorne (2005) have cautioned against lax use of the term because it presupposed that those

chosen for participation are a sample or representative of a population as in quantitative studies. The preferred term for describing the choosing of participants by Polkinghorne (2005) would have been selection. The author submitted that the choice of participants in qualitative research could only be predicated on their ability to offer meaningful value that will support a particular phenomenon that is being studied and that experience is the primary focus in qualitative research, not the people nor the groups to which they belong.

Furthermore, purposive sampling can take several forms. Indeed, Creswell (2007) recognized a total of 16 forms: maximum variation, homogeneous, critical case, theory based, confirming and disconfirming cases, snowball or chain, extreme or deviant case, typical case, intensity, politically important, random purposive, stratified purposeful, criterion, opportunistic, combination or mixed, and convenience. With maximum variation, diverse variations as well as common patterns that distinguish the sites and participants from one another are shown at the outset. The critical case study allows for the ability to logically generalize and optimally apply information to other cases and confirming and disconfirming cases which expands on initial analysis, explore opportunities for the contrary, and variations. Snowball or chain strategy involves people who provide information about cases of interest as well as people who possess knowledge of cases rich in information. Opportunistic purposeful sampling takes advantage of new leads and the unexpected.

Against this background, I used in this study the nonparametric purposeful sampling which takes the form of expert or judgmental sampling. Consequently, participants drawn from the program management team of TOP at the hosting bureau, FMS; and those from two other major federal agencies, and the State of Maryland that

use the program were interviewed. These technical experts, serving as key informants through their knowledge and expertise, provided useful information that was invaluable to the study. Also interviewed were other stakeholders from other federal and state agencies who supported and used TOP to enter and update debtor information to offset debts owed to the U.S. Government and states by private individuals and businesses. Through these interviews, the external stakeholders confirmed or provided contrary opinions about TOP program. Appendix B shows the letter of invitation sent to potential participants. Appendix C and Appendix D show the interview protocols for both FMS participants and for the representatives of the creditor agencies that used TOP.

Eight participants were interviewed for the study. Two hailed from FMS, and the remaining six participants came from other organizations that used TOP. The latter group was composed of one participant from Office of Child Support Enforcement (OCSE), Administration for Children and Families, U.S. Department of Health and Human Services; three from Financial Student Aid (FSA), U.S. Department of Education (ED); and two from the Maryland Comptroller's Office. Because the intent in qualitative study is not to generalize findings, but to provide a clear understanding of a phenomenon, event, or program (Creswell, 2007), this size was considered sufficient to provide useful data for a good understanding of TOP program as an illustration of G2G e-Gov. While differentiated data sources provide meaningful depth in research, Crouch and McKenzie (2006) argued that "small sample sized" interviews were better suited for qualitative studies. For them, intensity and persuasion at the conceptual level were more crucial to those studies than using enumeration to extend the research for the purpose of convincing

readers. Extensive detail would also be derived about the study through documentation and archival records.

The Researcher's Role

I solely conducted the study in its entirety by interviewing the participants and gathering relevant documents and archival records, analyzing the data collected, and writing the report and discussion. I transcribed the contents of the interviews manually using Microsoft Media Player, and I coded and analyzed the data using HyperRESEARCH software. This effort aligned with the description of qualitative researchers as key instruments by Creswell (2007). Unlike the quantitative researchers who often relied on questionnaires or instruments developed by others, investigators in qualitative studies collect the data through documentation, observation, and interviews.

Logistically, I sought and recruited key participants interviewed using communication channels of telephone and email. I created the interview protocols and the interview questions and conducted the interviews using a combination of email system and face to face methods. Appendix C and Appendix D show the two interview protocols that were used. The first protocol was targeted toward the managers of TOP and the second protocol was geared towards the agencies that used the program. Face to face interviews were digitally voice recorded with OLYMPUS WS-510M recording device, transcripts from the interviews were complemented with handwritten notes, and email responses for followup clarification and debriefing were downloaded and stored. For the email interviews, same questions in Protocol 2 were sent to the three participants from the agencies that used TOP. Publicly available documents and archival data were

collected from search engines like Google, organizations' websites, and from the participants.

Ethically, it was imperative that the researcher be mindful of all the ethical considerations because regardless of what the role of a researcher is in a qualitative research, that researcher ought to allow methodological and ethical considerations to shape his or her work (Babbie, 2007). The ethical considerations for this research included all those requirements contained in the Walden's Institutional Review Board (IRB) form. All participants in the study were provided with the informed consent form as required by Walden which gave them the opportunity to demonstrate their willingness to participate. Striving for objectivity and outright avoidance of biases also formed a core part of the ethical considerations for the research study..

As an IT professional with over 13 years of experience and a public servant for over seven years, I had a personal interest in how well IT could be used to enhance productivity, efficiency, and effectiveness in service delivery. The unit of analysis for this case study, TOP, is also a system hosted and staffed within the organization where I work, which potentially offered me the advantage to have access to those who manage and support the system in the organization. However, these professional circumstance did not degenerate into bringing my personal bias to the study. Data were objectively collected and reported.

Data Collection Procedures

Apart from recognizing the six sources of evidence in qualitative case study research as documentation, archival records, interviews, direct observations, participant observation, and physical artifacts; Yin (2009) equally emphasized three principles of

data collection germane to conducting outstanding case studies. According to the author, the first principle calls for the researcher to refrain from using one single source of evidence. Rather, he or she is encouraged to employ many sources of evidence. The two other principles involve the need to create a case study database and maintaining a chain of evidence. Following the first principle of using multiple sources of evidence, this study depended on more than one source of evidence. It relied on the use of interviews, documents, and archival records.

Interviews

Babbie (2007) defined an interview in a qualitative study as a conversation between the interviewer and the respondent in which the interviewer guides the conversation and expands on the topics raised by the respondent. Unlike a survey in statistical research, the interviewer in a qualitative interview proceeds in an unstructured manner with a general plan of inquiry that includes topics pertinent to the study. Trochim and Donnelly (2007) further distinguished between evidence collected through interviews and that gathered through documentation. Whereas interviews are meant to garner information about the subject of interest from the interviewees, existing written documents are often derived from sources such as books, organizations' websites, and magazines, and so on. Inspite of having a general plan of inquiry, the questions that are raised in a case study interview are possibly not rigid and they are likely free flowing (Yin, 2009).

Three types of interviews have been identified. They are indepth, focused, and survey interviews (Yin, 2009). In an indepth interview, the respondent provides information and viewpoints on an event or phenomenon which may serve as avenues for

a further inquiry. The role of the respondents in indepth interviews may also transcend to that of key informants who not only offer opinions about the case being studied, but may also be sources of information about other potential people who could be interviewed on the subject of interview. These other sources then become either confirmatory or contrary opinion providers on that event or phenomenon. In many cases, indepth interviews occur on more than one occasion. Focused interviews are of short duration of about one hour. Though focused interviews could still be open ended, fluid, conversational, and unstructured, a certain set of questions generated from the case study protocol will still have to be followed. Survey interviews are structured and analogous to those in quantitative research. They are often used to generate quantitative data that will form part of case study evidence.

Creswell (2007) considered interviewing as a procedure which consists of a number of steps. These steps include among others the identification of participants to be interviewed based on one of the purposeful sampling strategies; determination of the form the interviewing will take using telephone, focus group, or one on one; and using appropriate recording devices. They also involve creating and using interview protocol – a form which shows about five open ended questions listed on the same number of pages with enough open spaces to document responses and determining location where the interview will hold.

Interviews are advantageous to qualitative case study research because of their emphasis on targeted and focused topics directly related to a case study or case studies under research (Yin, 2009). Another merit to interview as a source of evidence in case studies is that they elicit perspectives from which causal inferences, explanations, and

conclusions can be drawn by the investigator. Beyond these, given that subjects and participants in qualitative study interviews can object to the researchers' questions and the entire theme of the interview should be a guiding lamp to the researcher to reconsider the original research concepts and explore the theme of conversation (Tanggaard, 2008)

Despite the inherent importance of interviews as sources of case study evidence, it is imperative to be mindful of some challenges that can confront the use of interviews. These are in addition to the general issues related to field access to organizations and potential participants in qualitative studies such as obtaining assurance of participation and response from individuals and establishing trust and credibility (Creswell, 2007). One of such challenges with interviews is the susceptibility of interviewee's verbal reports to the problems of bias, lapses in memory, poor and inarticulate responses as well as insincere responses by the respondent just to satisfy the interviewer (Yin, 2009). Expanding on the latter challenge of reflexivity of the interviewees, Knapick (2006) pointed to the danger it is likely to pose to the ethics and politics of interviews as well as the tendency for the obscurity of the value of interviewees' participation and responses. Other challenges are associated with the techniques involved with the conduct of the interviews such as the behaviors of the interviewee, researchers' ability to create and provide good interview instructions, state and properly negotiate questions, navigate issues that are sensitive in nature, and transcribe accurately (Creswell, 2007).

For the purposes of this study, face to face and email interviews were conducted with email followups for clarification to those participants with whom face to face interviews were conducted. These methods were chosen because of the expectation that it will allow the participants to offer their candid knowledge and expertise about the

management and use of TOP. Participants were drawn from the program management team of TOP at FMS and from the creditor agencies that used TOP. All the participants that were interviewed face to face were provided with the interview questions via email prior to conducting the actual interviews. This was to help prepare them on the questions to expect prior to the face to face interviews. Email was used as a debriefing tool for further clarifications after the interviews were conducted. The digital files for the interviews and the transcripts from them were stored on a computer hard drive with backup copies stored on removable storage device.

Two interview protocols were developed for the projected interviews. The first protocol provided a guide for conducting the interviews with the participants from the program management office for TOP. The second interview protocol targeted the participants from the creditor agencies that used TOP. These instruments are shown in Appendix C and Appendix D. The instruments differed from each other because the questions in the first one addressed themes from the management/owner of the program perspective and the second asked questions from the standpoint of user experience.

Documents and Archival Data

Documents and archival data involved the analysis of internal and external documents using qualitative and quantitative content analysis procedure. They are meant to supplement the evidence gathered by the researcher through participant interviews or through observation (McNabb, 2008). This corroboration and augmentation of evidence from other sources could be in the form of verifying correct spellings of names and titles from an interview or give other details that will support information already derived (Yin, 2009). Inferences can also be made from documents that will lead to further inquiry.

Data analyzed in documents and archival data as case study evidence include official government records, memos, minutes, organizational reports, autobiographies, biographies, external reports or feature articles on an event or phenomena, personal documents, and letters. Others are memoranda, email correspondence, diaries, calendars, notes, and news stories (Yin, 2009; Creswell, 2007; McNabb, 2008). Yin (2009) further distinguished archival records as computer files and records which involve government statistical data like census and other demographic records, service records such as customer service calls, organizational records like budgets and human resources data, and geographical maps and charts.

The strengths of documentation and archival data include their stability which allows for a repeatable review; unobtrusive and nonreactive nature as they were originally created for the purpose other than the case study; exactness and precision as they relate to names, references, statistics, and other attributes of a phenomenon or event; and a wide coverage, in terms of time, number of events, and settings. Among the weaknesses of documentation and archival data evidence are the difficulties in the search, tendency for discriminated biases due to incomplete data collection, general reporting bias of the author, coder bias, and the deliberate denial of access or access denial due to privacy reasons.

Unclassified documents and archival data were gathered for this study primarily from the websites of government agencies. Some participants also provided relevant publicly available documents for the study. They included both quantitative statistical data and qualitative analyses, reports, presentations, and organizational.

Data Analysis and Interpretation

This section shows the methods that were used for analyzing the collected data for this research. The two major components of data analysis in qualitative research are data management and data analysis (Babbie, 2007). The first step of the data management component is providing structure to the collection process and with this study. It involves planning for the study, participant selection and access, and adoption of purposeful single case study of TOP to illustrate G2G e-Gov. Secondly, data management involves methods of storing data collected for the study through interviews and documentation. The transcribed interviews, document and archival data were organized into electronic file formats and placed in Windows operating system (OS) folders (Creswell, 2007). Microsoft Media Player was used to manually transcribe the voice interviews. The final stage in the data management component is the ability to retrieve data for comparison and interpretation purposes (Babbie, 2007). As a result, I used the computer software program HyperRESEARCH for coding and reporting data gathered through the interviews.

The second component for analyzing is data analysis and it also consists of three crucial steps. These are the reduction of data, display of data, and making inferences from the data. Given that every data collected cannot be singularly categorized, efforts at data reduction in this study included deriving categories, themes, and summaries. With data display, graphic displays such as tables and figures were used to coherently and discernibly show research findings for ease of read. Flowing from data display is the third characteristic of data analysis, which is the drawing of logical conclusions.

Various techniques and models of data analysis have been isolated by different qualitative research authors. Whereas Creswell (2007) advanced the Data Analysis Spiral,

Yin (2009) discussed five analytic techniques, while Babbie (2007) brought to fore the 9-step and 12-step data analysis approaches. For the purposes of this study, an eclectic approach was employed to isolate the most appropriate ones out of these techniques, find correlations among them, and use accordingly. The following seven steps show how the techniques were applied:

The first step involved a close study of all the documents gathered and transcribed data from the interviews conducted. At this stage, I reflected on the data, marked and underlined crucial parts, and wrote short notes and memos in the margins to demonstrate important ideas and key constructs. This allowed me to determine how they meshed with the preset initial codes (Creswell, 2007).

The second technique adopted was to conduct initial analysis through pattern matching. This involved repeated sorting of data with the goal of identifying discernible patterns in mind (Babbie, 2007). The technique emerged out of Trochim's concept of pattern matching for construct validity which seeks to determine the extent of correlation between two patterns (2007).

Following plan matching, I provided a detailed description of the case that was studied, TOP and its context. This exercise entailed describing what I observed within the context of the case while I was gathering the data (Creswell, 2007). A detailed description of the case provided a proper context for the analysis of the data that were gathered for the case.

Next step involved the classification and grouping of similar themes and patterns together. The emergent codes were taken directly from the data collected and they included the observation of expected, unexpected, and unusual ones in the data (Creswell,

2007). The HyperRESEARCH software was used for coding the transcribed data from the interviews.

In addition to coding, this step also involved analyzing the data collected for a number of parent categories, clusters, themes and dimensions which can be further sub divided into other smaller categories, themes, clusters, and dimensions. Doing this helped to achieve data reduction for manageability – a process usually referred to as conceptualizing (Creswell, 2007). Running various reports out of HyperRESEARCH assured proper conceptualization.

The next phase of data analysis performed was a comparative analysis of the data collected. The twin objectives were to find, based on appropriate traits and patterns, convergences within the data and to isolate those contrasting evidence that diverged from a set pattern (Babbie, 2007). Detecting identical patterns allows for proper categorization of data and development of fresh clustering codes that align with events that are yet to be classified. On the other hand, dissimilarities put more emphasis on the research problem.

Interpretation and unbundling of the data encompasses the determination of the plausibility of the data clusters developed earlier on as well as the reexamination of individual categories developed to see if other categories can be coded out of the initial category (Creswell, 2007; Babbie, 2007). The interpretative exercise in this study was based on direct, intuitive, and insightful interpretation of the data that were collected with the purpose of deriving meaning from them.

The final step that was taken for data analysis in this study was reiterative analysis. A combination of visual representation and narratives with the goal of identifying and establishing relationships between categories, codes, and themes. As a

result, an indepth picture of the case study was further enhanced with narrative analysis, tables, and figures.

Initial Coding Tree Rationale

In the initial coding tree structure fashioned for this study, there were three major groups of themes and constructs of G2G e-Gov: nature and benefits, problems and challenges, and process improvements. Appendix E displays this structure with preset categories of themes, patterns and constructs. The first two major categories of nature and benefits, and problems and challenges are further subdivided into two more sub levels while the third category of process improvement only has one sub level. The major categories are coded with the capital alpha characters of A, B, and C. The second level themes were coded with the parent alpha character in addition to numbers (for example, B1), and the third level themes were identified with the first level alpha character, the corresponding second level number and a small alpha (e.g. B1a).

Evidence of Quality

Creswell (2007) provided eight validation strategies as evidence of quality in qualitative studies. One of these strategies is prolonged and consistent engagement in the field. Here, I worked to establish confidence and trust with the participants and frequently engaged them through telephone conversations and email communication. Another strategy is triangulation which advocates the use of multiple sources, methods, investigators, and theories. I collected data using interviews and documentation approaches, gathered data from multiple sources by interviewing participants from the program management team of TOP and the program's external governmental stakeholders as well as from related documents and archival records. A peer review or

debriefing will occur with the committee along with other compliance checks provided by Walden University as required. In negative analysis or discrepant information, negative or disconfirming evidence that emerged from the data was accounted.

Furthermore, evidence of quality was shown through a declaration of the researcher's bias right from the beginning of the project. As indicated earlier in the subsection addressing the role of the researcher, the researcher's career in Information IT and Public Service delivery informed his interest in the study of e-Gov for productivity and efficiency in public administration. Member checking as a validation strategy seeks the participants' opinions about the accuracy of findings and conclusions and thus test how believable they are. There is a plan to provide the participants with the analyses, interpretations, and conclusions of the data collected for the research to test their believability. With the thick description as an evidence of quality research, I provided a detailed and thick description of the participants' sites in order to ensure transferability. Given an indepth, clear, and succinct description, readers will be able to decide if it is valuable to transfer research findings and conclusions to other research conditions. Finally, with external auditing that involves the assessment of the accuracy of the process and the overall account, there was no plan to go outside of the controlling measures already in place at Walden University.

Feasibility and Appropriateness

This study was conducted solely by the researcher, who bore all the costs associated with the time, services, and the materials used to conduct the study, collect, and analyze the data associated with the research. The system for the case study is a federal government financial system called TOP located at the U.S. Treasury, FMS. The

most challenging part of the process of recruitment and gathering data was in securing concrete appointments with the participants and getting solid commitments from them. Even after all the participants had agreed to participate, the researcher continued to send gentle reminders to schedule interview sessions or obtain email responses from some participants. This was largely due to the busy schedules of the participants. Eventually, interviews were successfully scheduled and conducted with five participants and email responses were received from three others making a total eight participants, two more than the six originally planned.

No significant costs were incurred in conducting the study given that the face to face interviews were all conducted within Baltimore-Washington metropolitan area, a reasonable commute for me. In addition, three of the interviews were by email. Other costs associated with the research included those for purchasing the digital recording device, batteries, and other accessories as well as traveling to and fro for the data collection points.

Informed Consent and Ethical Considerations

Because human beings were involved in the study through interviews, this research sought for confidentiality and informed consent. Letters of cooperation were requested and received from the organizations that participated. A form was also developed that showed various consent and assent elements such as statement of voluntary participation, statement that the study involved research, procedures, and expectations for participation, and others. Overall, official application to involve human subjects in the study was made to the Walden University's IRB.

For further ethical considerations, advice was sought and received from the Office of the Chief Counsel, FMS, the owner of TOP, and my employer. This was done so as to ensure that organizational ethics were strictly followed. One of the organizational ethical requirements stressed the importance of separating official duties from personal research work.

Summary

The purpose of this study was to derive a thorough understanding of G2G e-Gov using a federal government financial system, TOP. As a result, this chapter justified the use of qualitative research paradigm over quantitative research because of its basic characteristics of induction, theory generation, subjectivity, and nonstatistical nature. It further delineated the chosen approach as interpretive qualitative type of inquiry as opposed to explanatory and critical qualitative studies, given the study's conceptual framework aimed at building on the theories and concepts of IGR, IGM, and e-Gov. Furthermore, the chapter provided the rationale for the choice of instrumental single case study over collective or multiple and intrinsic case studies as well as over other forms of qualitative research. The main purpose was to illustrate the G2G e-Gov concept with a single case of TOP.

The sampling strategy adopted was the nonparametric purposeful sampling in the form of expert or judgmental sampling. The role of the researcher essentially was to serve as the key instrument of research to collect the data through documents and archival data and interviews. Data were analyzed using the process of data management and data analysis. A seven step systematic procedure was used. The procedure involved the techniques of reading and reflection, pattern matching, describing, coding and

categorization, comparison, interpretation, and reiterative analysis and visual representation.

Quality was derived through the validation strategies of consistent engagement with the key informants, triangulation using multiple sources of evidence, and peer review or debriefing using all the controlling channels at Walden University. Informed consent and other ethical considerations were rigorously applied to protect the confidentiality of the participants.

Chapter 4: Data Analysis and Research Findings

Introduction

The focus of Chapter 4 is to analyze the data that were collected and present the findings of the study. It describes the process of data generation, collection, and documentation, and shows systems used for monitoring and controlling the data as well as the emerging patterns. The purpose of the study was to gain a deeper understanding of the G2G form of e-Gov using the TOP as a case study. The study sought to answer the central research question: how can G2G approach to e-Gov bring about efficiency, accountability and value to service delivery? The subquestions from this central question were related to the nature, value, challenges, problems, and process improvement to G2G in a federal program such as TOP.

The first section of this chapter provides the context for the study and the coding technique employed. The next part presents the findings for the central research question while the subsequent sections show the findings for the first to the fourth subquestions of the central research questions of the central research question. The last part is the summary.

Context of the Study

On May 12, 2011, I obtained an approval from the Walden University's IRB to start the process of conducting the proposed research. The approval number for this study is 05-13-11-0118875. Invitation letters for interviews were sent via email to six potential participants who were made available by gate keepers in five community partner organizations. Two of the participants were from FMS, which owns TOP, and one each from three major customer organizations that use TOP: OCSE, FSA, FNS, and the State

of Maryland Comptroller's Office. Another potential participant from FMS who met the criteria for participation was also invited. All seven potential participants agreed to participate. In the course of the interviews with the participants from FSA and the State of Maryland, I was exposed to three other potential participants, and they were invited after receiving approval from Walden's IRB for a change in research procedure. These three also accepted the invitations to participate. All the participants met the preset inclusion criteria of (a) relevant experience with TOP, (b) knowledge and expertise in the management of the program, (c) major stakeholder of the program. In presenting the data garnered from the participants, their identities have been shielded in order to maintain confidentiality. These identities are thus coded in the report as F.M.2., F.M.3., F.S.1., F.S.2., F.S.3., O.C.1., M.D.1., and M.D.2..

The most challenging part of the process of recruitment and gathering data was in securing concrete appointments with the participants and getting solid commitments from them. Even after all the participants had agreed to participate, the researcher continued to send gentle reminders to schedule interview sessions or obtain email responses from some participants. This was largely due to the busy schedules of the participants. Eventually, interviews were successfully scheduled and conducted with five participants and email responses were received from three others making a total eight participants, two more than the six originally planned.

The data that were analyzed and the ensuing findings were derived from interviews, email responses to same interview questions, and existing public records and documents collected between June 2011 and September, 2011. Face-to-face interviews were conducted with the participants in their respective places of work located in the

Baltimore-Washington DC metropolitan area. Four of the interviews lasted between 30 minutes and one hour. Only one interview lasted less than 30 minutes. The interviews were digitally recorded and the researcher manually transcribed the recordings using the playback function in Microsoft Media Player. There was a file format problem with the HyperTRANSCRIBE tool that was initially proposed to be used for transcription. The software could not read the media file in which it was collected, even when Apple's digital media standard Quick Time 7 was installed as recommended by the vendor of HyperTRANSCRIBE. I resorted to using Microsoft Media Player ported with the Microsoft Windows operating system.

Two protocols were developed for the interviews. The first protocol (P1) guided the conduct of the interviews with those who managed and supported TOP at FMS. The second interview protocol (P2) was used to interview the representatives of the creditor agencies that used TOP.

Existing public documents and archival data were obtained from the participants and the websites of the organizations where the participants were recruited. For those documents that were provided by the participants, the researcher requested to know from the participants if these documents were publicly available. They assured me and confirmed that the documents they provided were publicly available. This verification was done to comply with the approved research procedure.

For data management and data analysis, an amalgam of approaches as suggested by Yin (2009), Babbie (2007), and Creswell (2007) was used. This process included reading, reflection, and note writing; initial analysis using pattern matching; and coding,

themes and categories development. Other steps that were taken included describing findings in the case and comparison for similarities and contrasts.

Collected data (transcribed interviews and downloaded publicly available documents) were all organized electronically in folders and file structures on a computer using Microsoft Windows Vista operating system software with backup on a removable disk. Hardcopy public documents provided by the participants were placed in regular board folders. This allowed for a systematic cataloging and tracking of the data.

Prior to the data collection process of this study, the researcher had developed three broad categories of nature and benefits, challenges and problems, and improvements with initial 43 codes that were gleaned from the literature on e-Gov in general and G2G e-Gov in particular. The 43 codes were spread unevenly across the three categories. These preset categories and patterns were created to roughly match the research questions. Appendix E shows the initial coding structure. Armed with the initial codes, the researcher read, reflected, and wrote notes on the hard copies of the transcribed interviews and narrative documents. This allowed for the initial analysis to be conducted by developing and matching patterns. It also allowed for the refinement of the initial categories and codes through an alignment of identical themes, elimination of irrelevant codes, and the addition of other codes from the data that were gathered. This second level of analysis produced six categories of Benefits, Nature1, Nature2, Challenges, Problems, and Improvements. A total of 31 codes identified for the six categories were eventually used for coding the transcribed interviews and guided the analysis of supplemental documents. The actual software coding procedure is discussed in the next section.

Once the coding was complete, each finding was factually described in the light of the case study using the data provided in the interviews and documents, and the relationship to the research question to which it sought to answer. Then, similarities and comparisons of the findings were done with the associated data together with the intuitive interpretation of the findings with the goal of transcending the stating of the facts to the presentation of insightful logic to the data. The last part presented the visual representation of each group of findings for each research question they tried to answer corresponding to the categories and associated codes.

Coding

HyperRESEARCH software, a product of Researchware, was used for coding. The free and limited version of the software was installed on a Windows Vista operating system. In order for the software to be able to read the transcribed interviews that were originally saved in Microsoft Word files, each file was converted to text files. The free and unexpired version of the software allowed for the creation of a total of 75 master codes and 7 categories or what is called cases in the software with a maximum of 50 codes each.

In order to have a good feel for the software, I took a number of tutorial lessons that were ported with the installed copy. Using the tutorials along with the preinstalled studies, I was able to learn how to create cases (categories), codes, and generate useful viewable and printable reports which helped in making the transcribed data more meaningful. Coding was easily done by creating the categories in the case panel; create the codes in the code book, bring up a particular source file – the text file associated with the transcribed data, highlight phrases, sentences, paragraph(s), and apply the code.

Reports were generated for all the cases and codes or a group of cases, or codes could be filtered to produce reports. The software allowed for a report to be generated for a single case or code. The reports could also be exported as text files. HyperRESEARCH was generally flexible to manipulate during the coding process. Cases and codes could be renamed, moved, and deleted.

For manageability of the data, six categories of Benefits, Nature 1, Nature 2, Challenges, Problems, and Improvements were created. These codes closely aligned with the central research question and subquestions 1-4, while others addressed those that could not be readily placed in any of the six categories. Figure 1 below shows the relationship between the central research question, the subquestions, the categories, and the codes. Themes were developed out of the codes for data analysis.

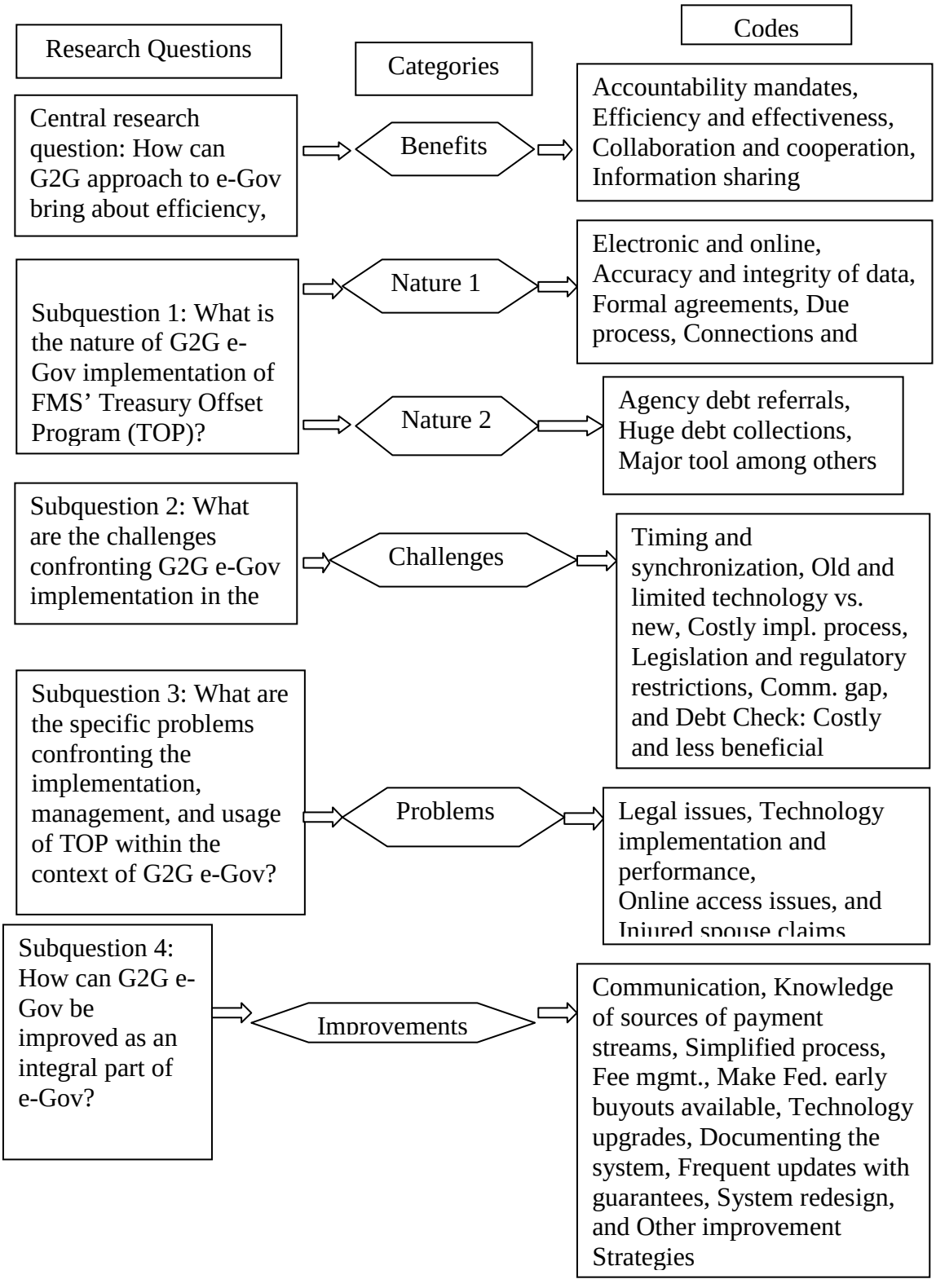


Figure 1. Mapping of research questions to coding categories, codes, and themes.

Findings of the Central Research Question

The central research question sought to know how G2G approach to e-Gov can bring about efficiency, accountability and value to service delivery. The purpose of this question was to determine the extent to which G2G e-Gov, as exemplified by TOP, tallied with some of the core potential benefits of e-Gov concept. These are accountability, efficiency, effectiveness, collaboration, cooperation, and information sharing. Evidence from the data gathered for this study revealed that the purpose, implementation, and management of TOP satisfied these benefits. Through interviews that were conducted and documents gathered, the evidence showed that e-Gov offered an efficient and effective electronic system for federal and state governments to collect debts owed to them. It also provided opportunities for cooperation, collaboration, and exchange of information among participating parties. Table 2 demonstrates the relationship between the central research question, which sought to bring to fore the ways in which G2G e-Gov could engender efficiency, effectiveness, and value to service delivery, the associated interview questions, and protocols.

Table 2

Central Research Question, Interview Questions, and Applicable Protocol

Central Research Question: How can G2G approach to e-Gov bring about efficiency, accountability, and value to service delivery?	
Protocol	Interview Questions
P1	Question 2: How would you describe the extent to which TOP has met the objectives for which it was originally set up?
P1	Question 3: What would you say are the specific benefits that the federal program agencies (FPAs) and state government agencies derive by collecting their delinquent debts through TOP? a. Explain the importance of TOP to collecting delinquent debt on behalf of the FPAs and state governments?
P1	Question 6: What would you say are the advantages of porting TOP online?
P1	Question 7: How has TOP enhance cooperation, collaboration and information sharing among government institutions?
P2	Question 2: Talk about how TOP has been able to serve your agency debt collection objectives? a. Describe the benefits to your agency for using TOP for debt collection instead of your agency directly collecting the debts?
P2	Question 5: Describe other methods your agency use for debt collection? a. How do these other methods compare in terms of effectiveness and efficiency with TOP?

Note: Relationship between central research question, interview questions and protocols.

Accountability and Mandates

The enabling law for TOP is the Debt Collection Improvement Act (DCIA) (1996). Section 3701 of the Act stated that the purposes of the public law included the utilization of appropriate tools to maximize the collection and recovery of delinquent debts owed to the government and the reduction of debt collection costs through merger of similar functions and activities (GPO, 1996b). The law also sought to use interagency collaboration and information sharing to minimize debt management losses through strong vetting of borrowers and accounts' monitoring, regularly inform the public of debt collection activities, and the responsibility to repay debts owed to the government, as well as provide debtors due process rights for claims verification, challenge, and compromise.

As part of the accountability requirements in the law, section 3701, subsection C (6) directed that all federal agencies owed any nontax debt that was 180 days delinquent, including those that were being managed by third party agents on behalf of those agencies to notify the United States Treasury Secretary of those nontax debts in order for them to be targeted for administrative offsets. These types of debts were also referred to as cross servicing. All federal agencies were required by DCIA to participate in cross servicing. Agencies can only be exempted from participation except if they obtained waivers. F.S.1. said FSA was able to obtain a waiver from participation because it already had established debt collection mechanisms in place.

It is important to note that cross servicing and TOP are two different Treasury debt collection methods. Whereas in cross servicing, agencies referred debts they could not collect after 180 days, TOP was deliberately used from the onset by the agencies.

Treasury used a myriad of methods such as direct demand letters, telephone follow up, skip tracing, administrative garnishment, private debt collection agencies, and administrative offset via TOP for collecting debts referred to it for cross servicing (FMS, 2011a).

Following the provisions of the DCIA, President Bill Clinton also issued the Executive Order 13019 (GPO, 1996c) that directed the Treasury Secretary to work with the Secretary of Health and Human Services to create and execute a process that will enable the collection, through administrative offset, of past due child support debts. In an effort to collect these types of debts, the order also provided that the Treasury Secretary may enter into reciprocal agreements with the states. Under this order, debtors of past due child support were also subject to the denial of federal financial assistance in the form of federal loans (except disaster loan), loan guarantee, or loan insurance.

Apart from the DCIA and the Executive Order 13019, there also existed 19 other statutes, 8 Treasury regulations and a host of regulations and guidance rules from other entities such as the Department of Justice, Office of Personnel Management (OPM), and Office of Management and Budgeting (OMB) that governed debt collection (FMS, 2011b).

The laws, statutes, regulations, and guidance rules were applicable to all parties involved in the government debt collection process. For instance, TOP was mandatory for the Department of Health and Human Services' Office of Child Support and Enforcement (OCSE) as states were required to certify non-custodial parents to their agency. According to O.C.1.:

> They are required to certify those non-custodial parents to OCSE if they meet the federal criteria, which for tax refund program is at least $150 arrears for the TANF program which is Temporary Assistance for Needy Families which used to be called AFDC (Aid to Families with Dependent Children). It used to be called Welfare. It's money that is being reimbursed to the states for the financial services that the states provided to the custodial parents on behalf of the family. And then $500 in past due support for non-TANF which is the money that is paid to the family. So if that non-custodial parent meets that criteria, then the state child support enforcement agency is required to certify that debt to us and we in turn forward that case information to Treasury Offset Program so that they can take action if there is a tax refund that is being filed – or return that is being filed – and a person is due a refund and they have past due child support, that money will be matched against TOP and intercepted.
>
> (personal communication, June 20, 2011)

ED's FSA was equally required to comply with the laws and regulations governing the collection of various federal education loans. F.S.1. stated that:

> At a very high level, there are laws and regulations about what we have to do to certify someone to actually do this. We are taking money from somebody without going through a court process. So due diligence is in the laws, is in the regulations and we follow it to the letter.
>
> (personal communication, June 7, 2011)

F.S.1. stated that anytime there was a change in any of those laws and regulations, they had to modify the agency's processes to comply with that change.

Beyond the inclusive nature of the mandates that governed TOP, Treasury agency officials were also accountable to Congress and the Executive Office of the President in the execution of the federal law, statutes and regulations governing TOP. For example, FMS as an organization provided fiscal year reports to Congress for its review under the caption “Fiscal Year (year) Report to the Congress: U.S. Government Receivables and Debt Collection Activities” (FMS, 2011c). In addition to these yearly reports, previous and current commissioners of FMS have appeared before a number of responsible Senate and House committees to present annual reports on Treasury debt collection implementation. The commissioner, through the Treasury secretary also presented annual report to the President of the United States on the implementation of the Executive Order 13019.

Even where there were no specific provisions mandating participation in some aspects of TOP, some federal and state agencies have chosen to be self accountable. This was the case according to O.C.1. with the administrative offsets, the nontax federal payments, where states were not obligated to certify noncustodial parents to OCSE, but about 46 states chose to do so any way. O.C.1. also said the federal payments in this respect could be vendor or contractor payment, or travel reimbursement and the states will submit that noncustodial person to OCSE in a similar fashion that they will for tax refund offset and OCSE will in turn forward the information about that person to TOP where federal payments they were due can be intercepted.

Through the enabling law, mandates, and regulations, as well as the periodic Congressional and Presidential reporting and self regulation, TOP as a G2G e-Gov system fulfilled the accountability component of the e-Gov concept. DCIA is the

enabling law on which TOP activities are based and Treasury issues its own regulations guiding relationships between FMS, creditor agencies, and states. Senior Treasury officials also provide reports and testimonies on debt collection activities to Congress and the President.

Efficiency and Effectiveness

Another finding about TOP showed that it was an efficient and effective tool by which debts owed to the government can be collected electronically. As indicated in the last section, the purposes and provisions of DCIA called for a reduction of debt collection costs and debt management losses. FMS commissioner's testimony in March 2011 before the House of Representatives' Oversight and Government Reform Subcommittee on Government Organization, Efficiency and Financial Management attested to the fundamental change to debt collection by the federal government under DCIA. The testimony stated that through the centralization of "Government's administrative debt collection functions at the Treasury Department, Federal agencies could maximize collections while minimizing the costs of managing duplicative debt collection programs" (FMS, 2011e, p. 1). The implementation and management of TOP is shown to have been in conformance and compliance to the enabling law requirements. As of May 2011, there were 40 federal agencies and departments, 41 states, and the District of Columbia that have collections made through TOP (FMS, 2011d).

Technologically, the program had evolved from a manual process to a fully automated process. F.M.3. said the management and support of TOP was much easier now than it was in the past because when it was first developed, the submittal of the jobs and the output of the jobs had to be manually processed by the IT staff. The manual

processing used to involve about four to five operators periodically checking in the file directories for files to be processed. But as a result of the quest for efficiency, those manual jobs could now be scheduled to automatically take place at certain times with email notifications sent to responsible operators for verification. According to F.M.3., now "we've automated most of the processes. They come in the door on the Mainframe and then they are Connect Directed from the Mainframe to the UNIX server and then they are processed" (personal communication, June 23, 2011). As a result of the automation of its processes, the program was able to process significant number of files and transactions daily and consequently able to collect billions of dollars of debts yearly. F.M.3. added:

> We are able to process - for example PAM sends us 900 files per day. We process those files, plus all the other payment files that come through the system, plus all the online. So we are able to process a lot of files per day. So right now, TOP is a wonderful system. It's well tuned now, I mean we use DB2 and MicroFocus COBOL to do the grunt of the work, I mean we can get things in, things out and during the tax season we are processing, I mean millions and millions of records per day because every tax file comes through TOP. Before the person gets their refund, we see it first and we take ... their refund if they owe a debt. (personal communication, June 23, 2011)

Besides the automation of processes in TOP, the huge number of processed transactions, and the substantial amount of money in debt collections that are made through the system, the commissioner's House testimony equally noted that FMS collected its "debts in a highly efficient manner, collecting $52.42 for every one dollar we spent on debt

collection activities in FY 2010" (FMS, 2011e, p. 1). Moreover, F.M.3. noted that the organization unit that manages TOP was reimbursable, meaning that it did not depend on annual Congressional budget allocation. Rather, it paid for itself using the fees on the debts that were collected to pay for the salaries of its personnel and other support personnel in other organizational units, and those of contractors and consultants.

The external stakeholders and creditor agencies of the program also acknowledged the efficiency, the effectiveness, and value to service delivery that TOP provided to their debt collection objectives and operations. For instance, M.D.1. said TOP had been a valuable resource for the State of Maryland and that they were completely satisfied with it. She said as a result of their satisfaction, the director of their unit was willing to share the positive results and benefits that the state had derived using TOP with other states at conferences such as those organized by the Federal Tax Administration.

O.C.1. also saw significant benefits to his agency as a result of using TOP. He acknowledged that FMS had lived up to its statutory obligations by maintaining the timeliness and accuracy of files on both ends and that there had not been any issues or gaps that were "insurmountable or an impediment to us being able to collect past due child support through the Treasury Offset Program" (personal communication, June 20, 2011). For the participant, the level of accuracy of transactions on TOP compared to their own system had been almost perfect. At the micro level, the agency used TOP Web Client to query individual transactions and in virtually all cases, the results tallied with what existed on their system. Similarly, when they conducted annual year end

reconciliation with FMS for accuracy of about 8 million certified cases on the debtor file in TOP, everything was often synchronized with the same case on their own system.

O.C.1. further observed that tax refund offset program was an effective means of involuntarily collecting delinquent child support funds from noncustodial parents to support custodial parents and families that were deprived of such funds. Additionally, the emergence and implementation of TOP had made their debt certification more flexible and increased the frequency of times they could certify debts in a year compared to when the system was not in existence. According to O.C.1.:

> When we were working with IRS, states could only certify noncustodial parents with new debts one time a year – typically October/November. So if you had a case that opened up in February or March or you had a past due support that was owed in February or March and that case was not part of that certification in October, the state couldn't certify that for tax refund offset or administrative offset until the next October. So when we merged with or when they merged our services and took over that operational part from IRS, FMS allowed for continual submittals of new cases which was huge because states did not have to sit on that debt from February until October. They could submit that debt in February. And as you know tax offset season, the majority of it is going to be in February/March/April. So if they have to wait until October potentially they are going to miss a collection. And missing a collection, you know—if you have just say 15% of your total case load or new cases, 15% times $1100 offset on average it's going to be a lot of money when you are talking about a case load of 7 ½ to 8

> million cases. So that was huge. That was a major benefit for us and a major benefit for the states. (personal communication, June 20, 2011)

O.C.1. further said not only did TOP improve collection but it also improved synchronicity and accuracy of arrears on all the three systems – on the state systems, on the OCSE system, and on TOP and that TOP support personnel at FMS were very supportive of their agency's mission of collecting on cases of past due child support.

Similarly, F.S.3. (personal communication, September 23, 2011) pointed to the efficiency in debt collection operations as a result of using TOP at the ED. According to this participant, when the centralized debt collection was being implemented at the IRS, creditor agencies were required to send due process notices to the borrowers every year because the debt accounts were decertified at the end of each year. With TOP however, there was an improvement as the agencies needed not send the notices to the borrowers each year again. F.S.3. attributed the smooth operations of the program to the several years in which the electronic formats have been in use.

Additionally, F.S.2. (personal communication, September 23, 2011) observed that TOP had been and continued to be an effective debt collection tool for ED. The tool had allowed the department to contact borrowers who previously had been unwilling to respond to other forms of contact. For instance, the required due process notices by TOP could prompt borrowers to initiate communication and even set up repayment plans with the department. Also, due to certification of debts in TOP, borrowers who were considered totally and permanently disabled were able to fill out the debt discharge paperwork which they otherwise would have been reluctant to complete. The totally and permanently disabled were identified by TOP through its 60 day and 30 day notices as

recipients of Social Security disability benefits eligible for offsets. As a result of those notices, these individuals often were more amenable to fill out the loan discharge paperwork and if it was determined that they were qualified after completing the paperwork, their debts could then be discharged.

Again, TOP as an illustration of G2G e-Gov provided the advantages of efficiency, effectiveness, and value to service delivery that are characteristic of the general concept of e-Gov through centralization of debt collection activities of many federal agencies and states, significant number of debt collections, cost reduction, automation of processes, and flexibility of operations.

Collaboration and Cooperation

There was ample evidence of collaboration and cooperation of government agencies as a result of using TOP. This was obvious in the simple process of how the program worked. The creditor agencies submitted their debtors' information to TOP and TOP database matched payments like tax refunds that came with the payee's information such as name and tax identification number. If there was a match, the funds were partly or wholly intercepted for offset. According to the FY 2010 report to Congress on U.S. Government Receivables and Debt Collection Activities of Federal Agencies (FMS, 2011c), TOP in essence "is a program whereby Federal payments are reduced or "offset" to satisfy a debtor's overdue Federal non-tax debt, child support obligation, and/or State debt" (p. 9). Indeed, the success of FMS in implementing TOP hinged on the full support of the agencies that participated in it.

Furthermore, in the spirit of the letter of DCIA, Treasury and the states in the Union were empowered to participate in reciprocal agreements that will assure that

Treasury was able to collect nontax debts on behalf of the states and vice versa. With these agreements, which at the time of data collection involved Treasury and the states of New York, Maryland, New Jersey, and Kentucky, it was possible for the states to collect debts due to the Federal Government that were delinquent and intercept for offset and Treasury was able to collect delinquent state debts by intercepting Federal nontax payments for offsets. Before states could participate in the reciprocal agreements with FMS, their legislative bodies must pass enabling laws and get FMS' Office of Chief Counsel involved (FMS, 2011f). All federal payments, including federal vendor payments were eligible for offset against state debts except those specifically excluded under the law and the reciprocal agreement, federal benefit payments, tax refunds, and salary. Similarly, all state payments as authorized by state legislations and reciprocal agreements were subject to offset against federal debts, including state tax refunds and state vendor payments. In a news release of October 5, 2010, the Comptroller of the State of Maryland was quoted as stating that in 2007, the state became the first to establish a reciprocal agreement with FMS and that through the Federal Vendor Offset Program, the state had collected a total of $51,820,302.87 in four years of participation (Comptroller of Maryland, 2010).

Significantly, there was also cooperation derived in the area of legislative enactments. O.C.1. cited two examples of legislative collaboration that OCSE had with FMS (personal communication, June 20, 2011). The first was the one time $250 economic recovery payments in 2010 to retirees, disabled individuals, and Supplemental Security Income (SSI) beneficiaries from Social Security Administration; disabled veteran recipients from the Department of Veteran Affairs; and Railroad Retirement

beneficiaries (IRS, 2011). He claimed that they were able to work with FMS to include in this legislation that these payments be eligible for offsets and not be treated as benefit payments but as additional funds to the recipients. The rationale for including the legal language in the law was because some of these benefit payments were in of themselves ineligible for offsets. In the end, the cooperation generated about $120 million that the agency, the states, and the custodial families could have missed. Secondly, O.C.1. added:

> We also worked with them on the economic stimulus payment – IRS economic stimulus payments in 2008 and we were able to make sure that there was a language in the legislation that those payments will also be eligible for tax refund offset. And that collected about $850 million – just from these payments alone. (personal communication, June 20, 2011)

Above all, in the spirit of cooperation, O.C.1. said programmatically, their agency enjoyed a good working relationship with the managers of TOP at FMS. The latter have been supportive of OCSE's main objective of collecting past due child support for children and families and ensured that what could be collected through TOP was maximized.

F.S.2. equally pointed to the regular feedback that FSA provided to Treasury for process improvement. One example that was cited was where their agency representatives served as the initial testers for the TOP Web client. Through that participation and collaboration, they were able to notify FMS of some things that needed to be changed prior to porting the Web client for production.

There was also evidence of cooperation in the connectivity set up for integration and access, which in effect produced mutual benefits for both FMS and its partners. In

this respect, F.M.2. said FMS often worked with creditor agencies to establish suitable connectivity methods that fit their budgets given that the prices of these different methods differed. The participant said:

> We try to work with them and come up with solutions, like some creditor agencies cannot afford CONNECT:Direct because it's expensive. Now, we have CONNECT:Enterprise which is much cheaper. You know we try to accommodate and work with them because we know if we get their debts in and that's money for us and it's also money for them. So we try to work out some sort of solution for both sides. (personal communication, June 23, 2011)

F.M.2. equally pointed to the internal collaboration that occurred between the debt management and payment management organization units within FMS that could assure that more federal payments were brought into the program in compliance with the DCIA provisions. Even though the number of payments being collected for offsets had increased, the goal was to increase Non-Treasury Disbursed Offices agencies from the current number of four and bring some other agencies into the Treasury Disbursed Offices. F.M.2. believed internal collaboration with the FMS' sub organization responsible for payment disbursements will ensure this goal was achieved.

In sum, elements of agency collaboration and cooperation germane to the success of e-Gov inhered in the implementation of TOP as a G2G e-Gov program. These were achieved through basic program processing, state reciprocal agreements, and legislative collaboration. These elements were also shown in feedbacks as well as in good working relationships internally with other FMS' subunits, and externally with the creditor agencies.

Information Sharing

Closely allied with the benefit of agency collaboration and cooperation that existed with TOP was also the value of information sharing – another key quality of e-Gov. Study participants pointed to the information sharing that existed between Treasury and the creditor agencies that used TOP. As a result of information sharing between FMS and its creditor agencies, certain best practices that were not initially present, seemed to have been adopted in TOP. F.S.2. provided two examples in this regard. First, was the removal of statute of limitations on Education loans under the Higher Education Technical Amendments of 1991 (P.L. 102-26; personal communication, September 23, 2011). Prior to the amendment, loans over 10 years old could not be collected. In the same vein, Treasury was also able to remove statute of limitations for many of the Federal debts that it was statutorily obligated to collect through TOP and other collection mechanisms. Second example was the Federal Salary Offset Program through TOP. The program allowed the salaries of federal employees who were delinquent in their federal debts to be eligible for offsets. According to F.S.2., prior to the program's adoption in TOP, ED used to conduct similar program by entering into agreements with different agencies before collections could take place. The differences in the way TOP now conducted the program was in the fee charged for each collection and the agreements did not have to be entered with the agencies.

F.S.1. said they frequently discussed with FMS about the process which in turn was helpful for them in getting some ideas on how that process could be improved. He cited the example of when they wanted to create a pilot process to work the non offset report. With that particular example, F.S.1. stated that:

> Treasury gives us a report on a weekly basis that says: here is a Social Security Number and a name, a Name Control - the first four digits of the lastname as we define it and here is a dollar value that you could have gotten. However, you didn't match on Name Control, alright. So the idea behind that is that you are supposed to look at the Social Security Number and a name and see what was – is there a valid reason for us not matching. Because if there is, then you can put in what is called an alias name so that you could match the next time.
>
> (personal communication, June 7, 2011)

This sort of process improvement information can only further help both sides to be more effective in the set goal of maximum collection of students' loan debts owed to the ED.

Still in the area of FSA information sharing with FMS for process improvement, F.S.2. noted the recent meeting and discussion with FMS on the proposed Next Generation project aimed at improving the program (personal communication, September 23, 2011). The forum provided them the opportunity to exchange information on the project from a creditor agency perspective as well as talked about how their needs could be met in future enhancements such as the need for FMS to work with payment agencies to adhere to a standard presentation of data for better matching of borrowers to the payments. With better matching of borrowers to payments, increased offsets could ensue.

For child support debt collection using TOP, information flowed from the states to OCSE to FMS and back from FMS to OCSE and Health and Human Services Program Support Centers (PSC) and back to the states (OCSE, 2010). As O.C.1. described it, 50 states, four U.S. territories of Virgin Islands, Puerto Rico, Guam, American Samoa, and the District of Columbia submitted their case files containing noncustodial past due child

support debt information to OCSE. In turn, OCSE forwarded this case information to FMS which matched it with the information on TOP and if matches were detected, collection file was produced for OCSE. Then, funds were sent to PSC at the Department of Health and Human Services where the funds appropriately distributed and credited to the states and the territories to either pay back Temporary Assistance for Needy Families (TANF) owed from what the states had paid out or disbursed to children and families for non TANF child support. “The state is doing all the case management on its end. What they are doing is that they are just certifying some critical information that we need for the Treasury Offset Program” (personal communication, June 20, 2011). Figure 2 shows the information sharing flow involving states, territories, and DC, OCSE and FMS:

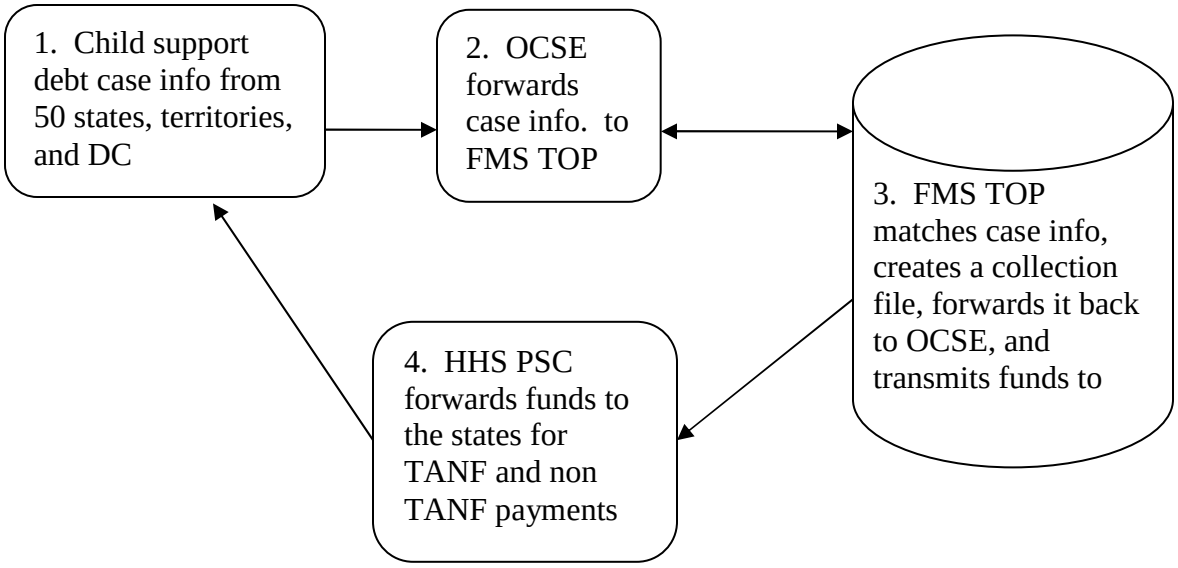


Figure 2. Information sharing between states, OCSE, and FMS to recoup delinquent debts owed by the noncustodial parents for TANF and non TANF payments.

From the program management standpoint, FMS had also adopted a number of measures that promoted information sharing between it and its external stakeholders.

F.M.2. said they recently started webinars which were an improvement over conference calls because information could be projected on the screen for all the participants to see, hear, and ask questions appropriately on the same subject and documents. According to him, they had achieved significant success with the use of webinars, especially with the state reciprocal agreements and the employment compensation program aspects of TOP.

Apart from the opportunity for information sharing offered by FMS organized conferences, F.M.2. said they had begun to participate in conferences organized by the external stakeholders of TOP. The participant referenced the conferences organized by the Federal Tax Administration, a nonprofit organization, on behalf of the states on how best to collect more debts and get into federal debt collection programs. He said their participation in such conferences had afforded them the opportunity to speak to state representatives about joining TOP debt collection process and the TOP participating states were equally willing to share information with the representatives of other states at such forums about the benefits they reaped from their participation. F.M.2. described the approach taken this way:

> We invite other states to the conference also so that they can share the panel with us because not only is it good to hear what we have to say but to hear the other states' experiences in dealing with us … because they collect a lot of money through the program that they originally weren't getting or did not have access to. (personal communication, June 23, 2011)

M.D.1. attested to this approach of spreading the good word for TOP when stating that the essence of State of Maryland participation at the Federal Tax Administration

conference was to inform other states not yet participating, of the revenues they could be getting through participation (personal communication, July 13, 2011).

For information on technology updates and changes, depending on their nature, the information passed by FMS to the agencies could be in the form of providing regular support assistance to the IT personnel of the agencies and issuing TOP technical bulletins to inform the agencies of updates to the system. Where the changes were of higher importance like infrastructure changes or changes to the file transmission formats, F.M.3. said they were usually generated by the organizational unit at FMS responsible for IT to the agency chief financial officers (CFO).

Recap of the Findings of Central Research Question

TOP as an illustrative case study of G2G e-Gov demonstrated the cardinal principles common to e-Gov in general and G2G e-Gov in particular. It offered value to service delivery through accountability of officials, efficiency and effectiveness, inter agency collaboration and cooperation, and cooperation, and information sharing. Accountability was assured through the enabling law, DCIA, on which TOP was created. Other relevant mandates and regulations along with periodic reporting by administrative officials to Congress and the Executive Office of the President, and self-regulation by other agencies further provided an opportunity for accountability in TOP.

The program also allowed for efficiency, value to service delivery, and effectiveness through centralization of debt collection activities of many federal agencies and states, large number of debt collections, cost reduction, automation of processes, and flexibility of operations. Moreover, TOP assured agency collaboration and cooperation through basic program processing, state reciprocal agreements, and legislative

collaboration. Finally, TOP as a G2G e-Gov program provided the benefit of information sharing through process improvement information dissemination, web of information flow among different parties, webinar sessions, conferences, goodwill messages by participating agencies, technical bulletins, and executive level communication.

Findings of Subquestion 1

Subquestion 1 inquired into the nature and characteristics of G2G e-Gov implementation of FMS' TOP. The rationale behind this subquestion was to determine the elemental nature of TOP as a G2G e-Gov example. It attempted to expand on the central research question by examining the operations of TOP itself. Data gathered through interviews and documents showed that it was both electronic and online. The electronic characteristic was demonstrated through batch processing of transactions between FMS and the creditor agencies while the online nature was enabled through the use of the Web. The results in this research question also showed that the program was governed by formal agreements between FMS and its partners, guided by due process, and demonstrated mode of connections and access to its system. They also showed that agencies reported their debts to TOP, huge debt collections were made annually through the program, and that it was one major debt collection among others for creditor agencies. Table 3 presents subquestion 1 related to the nature and characteristics of TOP as being illustrative of G2G e-Gov, the interview questions, and the protocols where they can be located:

Table 3

Subquestion 1, Interview Questions, and Applicable Protocol

Subquestion 1: What is the nature of G2G e-Gov implementation of FMS' Treasury Offset Program (TOP)?	
Protocol	Interview Questions
P1	Question 4: Explain the online characteristics of TOP?
P1	Question 5: How do government agencies go about establishing connections to TOP for debt collection services? a. Describe the sort of agreements that govern the relationships between FMS and the government agencies that use TOP?
P1	Question 6: What would you say are the advantages of porting TOP online?
P2	Question 3: How does your agency system(s) integrate with TOP for debt collection purposes?
P2	Question 4: Explain your organization's experience with the online integration and interoperation with TOP?

Note. Relationship between subquestion 1, related interview questions, and protocols.

Electronic and Online

Evidence from the data collected showed that TOP as a form of G2G e-Gov was both electronic and online in nature. Regardless of other external private entities that the creditor agencies may have partnered with in their debt collection operations, the electronic relationship was purely G2G. The system was neither G2C nor G2B. The first form of transaction processing that occurred between the creditor agencies and TOP was the batch processing and the second was through the Web online processing. Batch processing allowed the agencies to send large number of records in a single transmission while the online processing was one record at a time. F.M.3. described the batch processing as that in which the agencies used CONNECT: Direct through input

management on the Mainframe platform to send the debt records to the UNIX platform at FMS. Transactional jobs were scheduled on the UNIX platform to run every fifteen minutes to pick up the records off the Mainframe. F.M.3. said once they were obtained and processed on the UNIX platform, they were "sent CONNECT: Direct back to the Mainframe and then the results are sent back to the external agencies" (personal communication, June 23, 2011). These results, which usually took the form of weekly collection files, were transmitted to the creditor agencies to inform them how much funds they could expect to receive from the offset.

This batch processing procedure was confirmed by the agencies. According to F.S.1., F.S.2., and F.S.3., the Debt Management and Collections System (DMCS) at FSA created input files generated from internal data and data from their external collection partners, the Guaranty Agencies (GAs). DMCS sent this collective input file to TOP and received weekly output files which showed offsets and reversals back from TOP through a CONNECT: Direct connection established between the two organizations. The output files from TOP were then broken down on DMCS by each GA forwarded to them appropriately. F.S.2. described the process as a "give and take" between ED and Treasury:

> Our Debt Management and Collections System creates files (mostly requests to adjust a balance, change an address, report a refund related to an offset, etc.) and sends them through a secure Connect:Direct portal to Treasury. In turn, Treasury also sends files to Education (related to offsets and reversals for certified debts). Education also acts as a focal point – a conduit – for the guaranty agencies. The GAs send Education information and DMCS then combines the GA information

> with Education information and sends one file to Treasury. The Treasury file is received and DMCS creates separate files, as appropriate, and sends the information to the associated GA. (personal communication, September 23, 2011)

Similarly, O.C.1. said OCSE submitted a weekly file from the states, which contained new case information and updates to existing case information, electronically on Tuesdays to TOP. In turn, they also received back a collection file weekly from TOP which was then reported and submitted back to the states with the goal of updating affected persons' delinquent child support information by the amount of money that was offset. O.C.1. described the process thus:

> We run the states' update information weekly. We concatenate it and send the updates to FMS in two, one file – Agency 01 (TANF) and Agency 02 (non-TANF). We also transmit to FMS the new cases that we have for the week. In addition, we get a collection file from FMS weekly so that when there is a tax refund intercept or administrative offset that gets reported to us in that weekly collection file, we in turn submit those weekly collection files to the states weekly. (personal communication, June 20, 2011)

O.C.1. concluded that since they had large amount of records that they had to transmit, most of their transactions occurred through the batch processing rather than through the online processing.

The State of Maryland which was one of only four states involved with FMS in the reciprocal program within TOP also appeared to be using batch processing. Although M.D.1. did not particularly use the terms batch processing or CONNECT: Direct, what was described pointed to electronic batch processing. M.D.1. said once the program was

set up between their office and Treasury, transactions became automated and not manual and added “We send over the file, the file is matched. They send back the file, they transmit the funds and we then offset the accounts with those funds” (personal communication, July 13, 2011). For the Federal Vendor Offset Program under the state reciprocal agreement with FMS, state debts information was updated weekly by the state and appropriate funds were transferred weekly by FMS through the electronic file transfer method (Comptroller of Maryland, 2011). Similarly, file of pending state vendor payments were sent weekly to FMS to offset federal debts owed by state residents. Funds were then transmitted weekly or next time when update file was sent to FMS.

Accuracy and Integrity of Data

One crucial aspect of the electronic and online nature of TOP was the quest and the need for accuracy and the integrity of the data that flowed in out of its database. O.C.1. described the importance of accuracy in their certification of debt process, beginning from the time the states submitted and updated case information of old and new cases of past due child support obligations to OCSE onto the time it was forwarded to FMS. Furthermore, data synchronization was critical to the organization’s operations because if the data were not synchronized with what the states were submitting to agency and Treasury was not synchronized with their agency; that will be problematic. O.C.1. added:

> So at the time if there is a tax refund or there is a federal payment, that gets matched, it’s very important that the amount is accurate so whatever the amount of money that the person owes at that time – it’s accurate and it is up-to-date. We

won't want it to be $5000 over at Treasury when in actuality the person only owes $500. We wouldn't want to intercept $5000 if they only owe $500.

(personal communication, June 23, 2011)

Nevertheless, O.C.1. noted that the agency had not experienced any problems with tax refunds meant for OCSE being inappropriately distributed to other federal agencies.

Although from another perspective, F.S.2. also recognized the importance of accuracy of data to their operations using TOP. According to the participant, ED was able to identify incorrect data such as incorrect names and Social Security Number through the non offset reports generated from TOP. For example, these reports showed if a payment agency matched on Social Security Number, but not on name. "This report can be reviewed and will sometimes provide us with the ability to identify accounts with incorrect data. This then allows us to investigate the account to determine if we can correct the data" (personal communication, September 23, 2011). For F.S.2., accurate data will offer greater tendency that the applicable debt will be collected.

With the TOP Web client that was created for online processing, F.M.3. said its main purpose was for the creditor agencies to use it to maintain the debts owed to their agency and view their weekly collection information. Because creditor agencies can only maintain one debt at a time, they preferred batch processing because millions of debt records can be updated in less than an hour.

Some of the features of TOP Client as demonstrated by F.M.3. included security warning which was the first notice users received that they were about to access a Federal Government system and should therefore use it in a manner that protected data; Agency ID, debt maintenance, CAN reports, debt and debtor history, and user security (personal

communication, June 23, 2011). Appendix F provides a visual representation of how TOP Client screen looks like.

TOP client offered some advantages other than debt maintenance and inspite of its limited ability to process one record at a time. F.M.2. gave some of these advantages as being an easy way to add a debt to TOP because of its real time processing nature (personal communication, June 23, 2011). For instance, with a successful login by an agency representative, once the debt information was submitted and saved, the offsetting process will begin to occur immediately without any lag in between the time the information was submitted and when the matching for offset will start. F.M.2. agreed with F.M.3. that agencies could also perform maintenance tasks such as match debts, update debt balances, close and activate debts, and bypass some payments online with the TOP client. For F.M.2., the advantage of setting bypass indicators was illustrated as follow:

> For instance, we added the salary program where we offset federal salary to pay a federal debt. Most agencies when we added the federal salary offset did not have the due process already done for salary because we require that whatever payment streams that are coming through, you've notified the debtor that these payments may be subject to offset. Since salary was new, everybody had already done due process for whatever payment streams we already had, they had to redo the due process notices. So we had bypass indicators on all the debts for salaries. So as those due processes were done, they were able to remove those bypass indicators so that they can start collecting on salary. (personal communication, June 23, 2011)

F.M.2. also cited the example of where representatives of creditor agencies such as ED could access the system real time, reduce and adjust how much that was being offset for the agency debtors who were experiencing financial hardships and could not afford the offset amount out of the payments coming to them.

TOP Web Client obviously was a useful tool for the creditor agencies. Apart from the advantages cited by F.M.2. and F.S.2., F.S.3. indicated that ED used TOP Web Client for emergency updates and for responding to inquiries from borrowers and the GAs. For both of them, in situations where the weekly offset and reversal information had not been made available through the batch processing, the information could be gotten through the Web Client. The latter thus allowed the information to be readily provided to the borrowers and the GAs as needed.

F.S.3. corroborated the use of TOP Web Client in emergency situations such as bankruptcy and automatic stay. While acknowledging that manual online processing was rarely used at ED and was impracticable for about 3 million of their accounts in TOP; the online database nonetheless allowed them to access accounts certified by ED and then inactivate those accounts involved in expedient situations as cited, compared to waiting for the weekly batch processing.

To summarize, TOP was both electronic and online in nature. Two forms of processing were available to the creditor agencies: batch processing used for large transactions and online processing using TOP Web client for debt maintenance tasks such as updates to debtor information, activation of debts, and setting debt bypass indicators.

Due Process and Formal Requests and Agreements

It was also found that TOP implementation was guided by due process and a number of agreements between FMS and the creditor agencies. The following is a presentation of these findings. The first section analyzed the due process finding while the second part showed the formal agreements.

Due Process

Due process was a key requirement of the DCIA. The law mandated that the affected debtors or payees be provided due process prior to the occurrence of administrative offset. Subsection 2B (b) (5) of the Act (1996) provided one of the law's purposes thus: "To ensure that debtors have all appropriate due process rights, including the ability to verify, challenge, and compromise claims, and access to administrative appeals procedures which are both reasonable and protect the interests of the United States." To achieve this due process purpose, section 3701, subsection C (7) A of DCIA required the disbursing official implementing the administrative offset to notify the payee in writing that the payment due was slated for administrative offset. The elements of such a notice are as follow:

- The occurrence of the administrative offset to satisfy a past due legally enforceable debt, including a description of the type and amount of the payment otherwise payable to the payee against which the offset was executed;
- The identity of the creditor agency requesting the offset; and
- A contact point within the creditor agency that will handle concerns regarding the offset

Although Subsection C (7) provided a caveat that failing to receive a notice by the payee did not affect the legal status of an administrative offset; it nonetheless required the disbursing officer to provide the debtor the notice, not later than when the debtor was scheduled to receive the payment or as soon as practicable afterwards, but not later than the effective date of the administrative offset.

Perhaps the importance of the due process informed the commissioner's House testimony of March 2011 to stress that the management of TOP afforded debtors fair treatment even while striving for maximum collections. For him, FMS ensured "that debtors are provided with due process, including proper notices and dispute opportunities, as well as the chance to repay debts over time" (FMS, 2011e, p.2). To this end, creditor agencies and states sent notices to the debtors informing them of the agencies' intent to offset their payments 60 days prior to the date the offset was to be effective, and opportunities to dispute the planned offset, and reached repayment agreements (FMS, 2011f). FMS also provided the debtors with post offset notices. In addition to these, various states had provisions in their legislative enactments that further guaranteed the debtors necessary due process for debt collection.

There were no indications that the agencies were unwilling to provide these notices to their payees. For instance, F.S.1. also said FSA strictly followed the due process provisions in the laws and regulations and noted that as result of the state reciprocal agreement program two years ago, the agency had to change the language of their notification letter to reflect the change as well (personal communication, September 23, 2011). The altered notification now informed the payees that not only will the federal

funds be eligible for offsets, but states funds will be subject to administrative offsets as well.

FMS enforced the compliance by the creditor agencies to the due process. Both F.M.2. and F.M.3. said the rules that FMS had in place ensured that agencies could not proceed with the substantive process of collecting delinquent debts until the rules were met (personal communication, June 23, 2011). For instance, F.M.3. said before the agencies could even go into the process of setting up technical agreements, they had to demonstrate that they have implemented the due process procedures.

Formal Requests and Agreements

With the formal requests and agreements, F.M.2. reported that the first step the agencies had to take was to tender a formal request with FMS stating the intention to have the latter collect their past due delinquent debts through TOP. These requests generally stated what type of debts to be collected as all agencies were statutorily required to go through cross servicing which involved debts that were not typically submitted to TOP and which may or may not be referred to TOP because of other collection methods available for cross servicing (FMS, 2011a). If the requesting party was a state, then the request could follow the state reciprocal agreement process where U.S. Treasury was able to collect nontax debts on behalf of the states and vice versa.

After the formal request is made, interested agencies then submitted Agency Profile Form. According to F.M.2.:

> An agency profile form pretty much tells us how that agency is going to do work, whether or not they can pass the fee onto the debtor, whether we can collect the debt all the way down to zero or stop when it goes below $25 or something like

> that? What types of payment we can take: are they for state? State tax debt, they can only get tax refunds, they can't get any other type of payments. For the other state debts, they can get beyond tax refunds. So there are different rules depending on who you are. (personal communication, June 23, 2011)

Other elements on the Agency Profile Form included information about the agency or bureau, agency chief financial officer (CFO) information, primary and alternate contact information, the eligibility of program collection action, and program financial information for fees and bankruptcy.

Once the Agency Profile is completed, then agencies needed to enter into certification agreement with FMS. F.M.2. said the purpose of the certification agreement which was to be signed by the head of the agency was to provide a legal shield for FMS against any lawsuits or legal actions. To this end, participating agencies had to certify that all the debts submitted to TOP for collection were valid and collectible and that those debts currently were not in bankruptcy, forbearance, or foreclosure. Thus, the agencies had to ensure they have satisfied all the necessary legal requirements before submitting debts to TOP and if there were to be any complaints or lawsuits from the debtors, the certification agreement from the agencies could be produced as an evidence to collect and the affected debtors are referred back to the creditor agencies that submitted them to TOP for collection. F.M.2. also noted that the agencies understood the need to have the certification agreement and that there had not been any pushback from them because it was the necessary part of the process.

The last step in the formalized agreement process was to have the agencies complete the Security Access Form and submit to the information system security officer

for Debt Management Service, the organizational unit responsible for managing TOP at FMS. Both F.M.1 and F.M.2. said the Security Access Form showed what roles and what level of access will be granted to the representatives of the participating agencies on TOP system. The information system security officer then submitted a request on behalf of the agency to the IT division to create identities for the representatives of the agency for accessing TOP system.

Due process as entrenched in the DCIA was a requirement enforced by FMS prior to creditor agencies requesting that debtors' payments be offset. Due process ensured that the payees were duly informed of reasons for the offset and provided the opportunity to verify, challenge, or appeal the appeal. Coupled with the due process requirement were a number of formal requests and agreements by the creditor agencies with FMS including submitting and completing Agency Profile Form, certification agreement, and Security Access Form.

Access and Connections

Once the due process was complete and all the agreements endorsed, the agencies were now ready to be setup up for access and connections to the TOP system at FMS. F.M.2. identified three types of connectivity available to creditor agencies for access and integration with the TOP system. The first type was CONNECT: Direct which he described as "an expensive proposal" and can be used by agencies who can afford the expense. The other type of connectivity was CONNECT: Enterprise which apart from the phone charges per each connection, was available to the states virtually free. A third type of connectivity was FRAME Relay which is similar to CONNECT: Direct, but far less expensive.

All the three forms of connectivity were meant for batch processing that allowed the agencies to send large number and size of files in one transaction and allowed FMS to also send collection files back to the agencies. F.M.2. equally said that the agencies were provided with Enhanced Record Layout and TOP Implementation Guide or TOP Agency Guide which had all the necessary forms and "it tells them how the program works, it gives them the rules, gives them the reds, gives them all the layouts in one big document so that they have it for their review any time" (personal communication, June 23, 2011). Besides, FMS program management and technical personnel usually visited or conducted conference calls with the agencies to furnish them with the necessary information and explain the intricacies of how the system worked in order to make the transition into the program less cumbersome.

With the connections established and all the paperwork completed, the agencies were then set up with the TOP test team. F.M.3. said at this stage, testing was conducted with different types of files to be transmitted to and fro between FMS and the creditor agencies such as update files, collection files, and the standard batch files for communicating with the system. As part of the testing, the file formats in which the agencies were sending their batch files also had to be valid in order for them to be acceptable to the system. After successfully testing, the agencies can now be set up in the production environment to begin to send live debt information and receiving live collection files back from TOP.

Agency Debt Referrals and Collections

Another finding on the nature of TOP was on the referrals of debts by the creditor agencies and state governments and collections of those debts. The first section of this

analysis shows the debts, in dollar terms, referred to TOP over the years. The second part shows actual collections over the years by the system.

Agency Debt Referrals to TOP

Given the DCIA provisions which required agencies to refer debts that have been delinquent for over 180 days to Treasury, over the years, considerable number of debts had been referred to TOP for collection by the federal agencies and the states. F.M.2. said the program management team had been able to bring most of the federal nontax and tax debts into the system and that the program had significantly expanded. According to him, FMS was working with the agencies to bring in the remaining few debts into the system. The components of the referrals to TOP were federal income tax debts, federal nontax debts, child support obligations, state income tax debts, and other state tax debts under the state reciprocal agreements with Treasury (FMS, 2011c). Even then, certain debts were ineligible for referrals. These debts included those that were being litigated or appealed, the ones in forbearance, bankruptcy or involved in foreclosure, as well as those owed by sovereign foreign entities.

Analysis of data shown in the yearly reports to the United States Congress by FMS from FY 1998 to FY 2010 showed that a total of $3.32 trillion was referred to TOP. The breakdown of these figures is shown below in Table 4:

Table 4

Total Debts Referred to Treasury Offset Program from FY 1998 to FY 2010

Components	Financial Years and Totals in $ U.S. Billions												
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Federal Tax	N/A	N/A	54.69	82.53	81.16	80.44	105.42	129.53	139.41	156.41	171.59	186.11	203.90
Other State Debt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.06	2.18
State Income Tax	N/A	N/A	0.39	2.37	3.21	4.13	5.26	5.76	6.13	7.92	10.33	9.55	11.45
Child Support	41.20	47.15	52.73	68.37	71.20	75.12	79.63	84.61	88.31	92.89	100.10	107.86	110.16
Federal Nontax	16.92	23.28	26.84	28.78	31.02	31.58	34.34	35.63	37.48	45.05	49.18	67.16	94.54
Yearly Total	58.12	70.43	134.66	182.05	186.59	191.27	224.64	255.54	271.6	302.2	331.2	372.7	422.2
Cumulative Yearly Total = 3003.2													

Note. Collated from the fiscal year reports (1999 – 2010) by the Department of Treasury to the Congress on U.S. Government Receivables and Debt Collection Activities of Federal Agencies. Financial Management Service (FMS), (FMS, 2011c). The Office of Legislative and Public Affairs: Congressional & Executive. Retrieved from http://www.fms.treas.gov/news/congress.html

As shown in the table above, the total number of debts referred by the federal agencies and states had been increasing since the inception of TOP. In its year of inception in FY 1998, the total amount referrals from all sources were $58.12 billion. By FY 2004, the amount had increased to $224.64 billion, and in FY 2010, the referrals totaled $422.2 billion.

Federal tax debts also consistently constituted the largest of the yearly debt referrals by the agencies to TOP since FY 2000. In FY 2005 for instance, federal tax debt number was $105.42 billion. Five years later, that figure was almost doubled at $203.90 billion in FY 2010. A large percentage of the debts referred were also those related to child support delinquencies. Since the inception of TOP in 1998, referrals of child support debts had progressively increased. From FY 1998, child support debt referrals to

TOP increased by almost $69 billion from $41.20 billion to $110.16 billion. It is instructive to note that data were not collected for the other state debt from FY 1998 to 2008 because the state reciprocal agreement program had not taken effect in those years. The first year of implementation for the program was FY 2008.

Huge Debt Collections

As more debts were referred to TOP, the system continued to use the established process to make huge collection of collectible debts for the creditor agencies. FMS commissioner's House testimony reported that from 1996 when DCIA was enacted through the end of FY 2010, FMS had "collected more than 47.9 billion of delinquent debt on behalf of Federal and State agencies. Of that amount, $23 billion represented collection of past due child support obligations" (FMS, 2011e, p.1). The amount referenced in that testimony referred to total delinquent debt collections made through mechanisms available to Treasury under DCIA including TOP, cross servicing, and private collection agencies. Analysis of debt collection activities through TOP alone shows that $43.3 billion was collected through the program from FY 1998 to FY 2010 (FMS, 2011c).

Debt collections through TOP were from administrative offset including child support, federal nontax debts, state income tax debts and reciprocal pacts, and continuous tax levy. Collections were also gotten from tax refund offset for child support, federal nontax debt, and state income tax debt. The administrative offset by continuous tax levy was implemented under the Federal Payment Levy Program and it was enabled by sections 1024-1026 of the Taxpayer Relief Act (GPO, 1997). With the Federal Payment Levy Program, nontax federal payments due individuals that were delinquent in their

federal income tax were subject to continuous levy (FMS, 2011c). Section 1024 (a) (h) (1) stated that “The effect of a levy on specified payments to or received by a taxpayer shall be continuous from the date such levy is first made until such levy is released” The levy also applied to 15 percent of specified payments that due to the taxpayers. Since 2000 when it was started, $2.6 billion had been collected through the Federal Payment Levy Program in TOP (FMS, 2011e, p. 4).

Table 5 presents the financial years and the total amount collected through TOP for each of the financial year from FY 1998 to FY 2010. Conversely, tables 6 and 7 compare monthly debt collections through TOP from January to July 2011 with the corresponding months in 2010 for the respective participating federal agencies and state agencies and District of Columbia. As Table 5 shows, the amount of debt collected using TOP continued to grow each financial year. Except for the FY 2004 where the total amount collected was reduced by $88 million from the $2, 990 million collected the previous year, the total collections have progressively increased, further pointing to the efficiency and effectiveness of the program. The total amount collected in FY 2005 jumped from $3.1 billion dollars by 58.7 percent to $5.3 billion dollars in FY 2010.

Table 5

Total Debts Collected through Treasury Offset Program from FY 1999 to FY 2010

Financial Years	Total Collections in $U.S. millions
1998	2, 030
1999	2, 608
2000	2, 597
2001	3, 117
2002	2, 769
2003	2, 990
2004	2, 902
2005	3, 123
2006	3, 324
2007	3, 640
2008	4, 295
2009	4, 586
2010	5, 314
Total	41, 265

Note. Derived from the fiscal year reports (1999 – 2010) by the Department of Treasury to the Congress on U.S. Government Receivables and Debt Collection Activities of Federal Agencies. Financial Management Service (FMS), (FMS, 2011c). The Office of Legislative and Public Affairs: Congressional & Executive. Retrieved from http://www.fms.treas.gov/news/congress.html

Table 6

Comparison of Calendar Year 2011 and 2010 Net Debt Collections in $U.S. Million through TOP by Month for Federal Agencies

Months	2011	2010	Difference	% Diff.	2011 Year to Date
January	280,040,645	260,990,775	19,049,870	7.30	280,040,645
February	1,690,247,527	1,576,313,677	113,933,850	7.23	1,970,288,171
March	851,058,758	704,028,200	147,030,558	20.88	2,821,346,930
April	883,107,423	780,699,067	102,408,356	13.12	3,704,454,220
May	460,283,513	389,800,379	70,483,134	18.08	3,711,832,097
June	113,943,623	96,115,901	17,827,721	18.55	4,278,957,758
July	134,771,120	109,642,729	25,128,390	22.92	4,413,728,878
	4,413,728,878	3,917,590,728	496,138,150	12.66	

Note. Derived from Comparison of Federal Program Agency Net Collections from the Treasury Offset Program for Calendar Years 2010 and 2011. Financial Management Service (FMS), (2011d). Reports and Statistics. Retrieved from http://www.fms.treas.gov/debt/reports.html

Table 6 compares volume of debt collections through TOP for the months of January through July in CY 2010 and CY 2011 . In March 2010, $704,028,200 million was collected for the federal agencies using the program. Correspondingly, the amount collected in March 2011 was $851,058,758 with a difference of $147,030,558, representing a 20.88 percent increase. Compared to the same point in time in the calendar year (CY) 2010, there was already in July 2011 a total debt collection of $4,413,728,878 through TOP with an increase of $496,138,150 million, a 12.66 percentage difference over $3,917,590,728 that was collected in CY 2010.

Table 7

Comparison of Calendar Year 2011 and 2010 Net Debt Collections in $U.S. Million through TOP by Month for the State Agencies and District of Columbia

Months	2011	2010	Difference	% Diff.	2011 Year to Date
January	22,335,535	23,688,950	-1,353,416	-5.71	20,495,916
February	151,065,833	138,896,335	12,169,498	8.76	173,401,368
March	98,007,489	71,072,900	26,934,589	37.90	279,993,656
April	112,151,975	91,334,839	20,817,136	22.79	392,145,631
May	52,429,380	45,142,517	7,286,864	16.14	444,575,012
June	15,490,534	13,576,295	1,914,239	14.10	460,134,701
July	14,192,963	12,869,883	1,323,080	10.28	474,327,664
	474,327,664	396,581,720	77,745,944	19.60	

Note. Derived from Comparison of State Agencies and District of Columbia Net Collections from the Treasury Offset Program for Calendar Years 2010 and 2011. Financial Management Service (FMS), (2011d). Reports and Statistics. Retrieved from http://www.fms.treas.gov/debt/reports.html

Table 7 shows similar CY comparisons between 2010 and 2011 monthly net debt collections from January to July for the various state agencies and the District of Columbia. From February through July 2011, net debt collections increased each of the months when tallied with similar months in 2010 for the state agencies and the District of Columbia, except for the month of January 2011 where negative net debt collections were made compared to January of 2010. The percentage gains recorded for March, April, and May were 37.90, 22.79, and 16.14 respectively. The total net collections through July were $474,327,664 compared to $396,581,720 in July of 2010 with a positive net difference of $77,745,944 at 19.60 percent.

F.S.2. and F.S.3. justified the importance of TOP to debt collections of the federal and state agencies. According to F.S.2., the agencies through TOP had access to funds they will not otherwise have access outside the program (personal communication, September 23, 2011). The participant illustrated this assertion with the State of Louisiana which prior to using TOP was experiencing grim financial problems. But as a result of collecting delinquent debts owed to it through TOP, the state government, which was in its second year of participation, was able to keep its programs running. F.S.3. agreed with this position and said given the dire budget crises facing many of the states, TOP was helping with the debt collections to help pay for some of their programs (personal communication, June 23, 2011). Similarly, both participants said the yearly collection of billions of dollars in delinquent child support debts and student loan debts helped to keep affiliated programs such as TANF and non TANF running.

The collections were equally appreciated by the participating agencies. O.C.1. acknowledged that OCSE collected a lot of money through TOP and said in the last four to five years, the agency had been averaging about $2 billion a year through the Tax Refund Offset Program and between $8-10 million for the Administrative Offset Program (personal communication, June 20, 2011). For FSA, F.S.1. reported that at the end of FY 2010, $1.4 billion was collected through TOP in delinquent student loans. Table 8 also shows number of vendor offsets and how much the State of Maryland had collected through the Federal Vendor Offset Program since it entered into a reciprocal agreement with FMS in 2008. The total number of offsets and total amount collected year to date were $52,567 and $46,075,273 respectively.

Table 8

Number of Federal Vendor Offsets and Amount Collected through TOP by the State of Maryland under the State Reciprocal Program from 2008 through part of 2011

Year Offsets	Number of Offsets	Gross Total Amount Vendor
2008	5,229	$11,033,125
2009	36,640	$19,844,585
2010	7,185	$11,988,091
2011 (Partial)	3,513	$3,209,472
Year to Date	52,567	$46,075,273

Note. Number and amount for 2011 is partial reporting (no month provided) and it is obtained from Comptroller of Maryland (2011). State of Maryland's Federal Vendor Offsets Program. Presentation at Federation of Tax Administrators conference, Location Unknown

Major Tool Among Others

Even though DCIA sought to maximize the collection and recovery of delinquent debts owed to the government and vested in the U.S. Treasury the authority for centralized debt collection; all the participants representing the creditor agencies explained that TOP was a major tool among several other tools they use for debt collection. This was nonconforming as TOP was assumed prior to the conduct of the study to be the sole debt collection tool used by the agencies.

At OCSE for instance, other tools available to the agency apart from TOP to collect past due child support funds were withholding orders, Federal Passport Denial Program, Multistate Financial Institution Data Match, and Federal Insurance Match Program. With the withholding orders, O.C.1. said they implemented this directly with

the states using the National Directory New Hire and W-4 information provided to the employers to garnish the required funds for either current, or past due child support obligation, or both (personal communication, June 20, 2011). The participant said although TOP could be ranked at the federal level as the biggest enforcement collection tool for child support debts, a lot of more money was being collected at the state level through the withholding orders than through TOP and the latter was second to withholding orders in the overall agency debt collection efforts.

The Federal Passport Denial Program was enabled by Section 370 of the Personal Responsibility and Work Opportunity Reconciliation Act ([PRWORA]; LOC, 1996) and amended starting on October 1, 2006 by Section 7303 of the Deficit Reduction Act ([DRA]; 2005) which provided for the denial of international passport to delinquents of child support obligations in the amount over the $2,500 limit (OCSE, 2010). The law required states to participate in the program through IV-D plan (i.e. Title IV, Part D of the Social Security Act of 1935 authorizing the child support program) and to establish a process that will allow for the certification of delinquents of past due child support in excess of $2,500 to OCSE. The statute thus empowered the Secretary of Health and Human Services to collaborate with the Secretary of State to deny new applications or revoke, restrict, or limit passports already issued to child support debtors. O.C.1. described this collection tool this way:

> If the Passport agency has your passport in hand whether or not you are adding pages or you are renewing passport, your passport can be denied until you make restitution with the state in which you owe past due support to pay your debt. (personal communication, June 20, 2011)

Due process was still applicable to the Federal Passport Denial Program for the protection of debtors. Department of State (DoS) was obligated to provide individuals that were denied passport application, renewal or those whose passports were revoked with reasons for such actions. Due process also required that they be offered opportunities on how the situation can be corrected once the obligations were fully met.

Under the Multistate Financial Institution Data Match program, states were required to promulgate legislations to empower their IV-D agencies to execute every quarter, data matches with financial institutions conducting business in the respective states (OCSE, 2010). O.C.1. stated that the enacted laws differed from state to state in terms of what financial assets of debtors that could be seized or which of their bank accounts that could be taken (personal communication, June 20, 2011). Nevertheless, OCSE was authorized by the Child Support Performance and Incentive Act of 1998 to harmonize data matches with financial institutions operating in two or more states with the purpose of identifying noncustodial parents owing past due child support obligations. OCSE performed multistate data matches with the financial institutions every quarter. Using the same case information provided by the states for TOP weekly since 1999, Multistate Financial Institution Data Match selected debtors' accounts to match with those of the multistate financial institutions' account data and matches were forwarded to the states through the Federal Case Registry.

Finally, the Federal Insurance Match Program was used by OCSE based on the authorization provided by the DRA of 2005 which amended section 452 of Social Security Administration of 1935 to compare information on individuals owing past due child support with that for which the insurers and their agents maintained for claims,

settlements, awards, and payments. The program, which made participation optional for the states and the insurers, on a weekly basis, accessed the OCSE debtor master files with the purpose of selecting those debtors that could be matched with the Federal Insurance Match Program. Only the debtors in the states participating in the program can be used for the data match.

ED also had other tools other than TOP for debt collection. F.S.1. said these tools included repayment plan, private collection agencies, rehabilitation plan, loan consolidations, administrative wage garnishment for non federal workers, federal salary offset, and litigation (personal communication, June 7, 2011). F.S.1. described the process of repayment plan as that in which a welcome letter was sent to the borrowers who were delinquent in their student loans requesting that they entered into repayment plans and that if they failed to do so in 60 days, they will be certified for TOP. Next step that was taken if the debtors failed to go into repayment plans was to send the delinquent debts to private collection agencies with 25 percent added to the outstanding balance to defray the administrative costs incurred by using the agencies. Additionally, there was the rehabilitation plan which provided defaulters the incentive of removing ED's trade line from their credit reports after making nine payments on time in a 10 month period. These rehabilitation plans presented borrowers before potential creditors as if they were never delinquent on their student loans. ED also had loan consolidations which allowed borrowers to consolidate the different student loans they carried into one when they make three on time payments. F.S.1. stated that there were rules governing consolidations and unlike rehabilitation plans, they will not fix credit records of defaulters. Nonetheless, consolidations tended to get people delinquent on their loans out of default.

Administrative wage garnishment was a noncourt ordered tool used by ED to take up to 15 percent of non federal loan defaulters' disposable income straight out of their paychecks. Federal salary offset was the equivalent of administrative wage garnishment for federal government workers with the same 15 percent of disposable income being applicable. F.S.1. provided the last tool for debt collection as litigation. This tool, according to the participant was executed by the Department of Justice, and was generally used to collect debts from independent contractors, doctors, lawyers, and private businessmen because administrative wage garnishment could not be effectively used to collect debts from these types of people. But the Department of Justice could go after their checking accounts, saving accounts, inheritance, and other similar assets.

Table 9 presents total defaulted student debt collections by ED and its Guaranty Agencies in FY 2010, FY 2011 as of 4/30/2011 ending through non-TOP and TOP. It shows FY 2011 collection goals using TOP and a host of other tools for each recovery tool. The table then compares contributions by each tool to the total defaulted debt collections.

Table 9

Total Defaulted Student Debt Collections by U.S. Education Department and its Guaranty Agencies using TOP and Other Collection Tools in FY 2010, FY 2011 4-30-2011 Ending, and FY 2011 Collection Goals

Recovery Tool	FY 2011 Goals	FY 2011 to-date (4/30/11)	FYE 2010 (U.S. Dollars)
Regular Collections	$1,039,960,000	$664,362,622	$1,038,538,675
Wage Garnishment	$980,000,000	$590,126,144	$981,198,013
Consolidations	$3,100,000,000	$1,817,958,391	$2,408,599,552
Rehabilitations	$5,029,000,000	$2,943,947,741	$4,332,389,000
Federal Salary Offset	$500,000	$204,628	$104,171
DOJ Referrals	$9,500,000	$5,197,493	$8,958,811
FMS Collections	$40,000	$595,763	$90,501
Total non TOP	$10,159,000,000	$6,022,392,782	$8,769,878,723
TOP	$1,425,000,000	$1,337,383,586	$1,444,374,365

Note. Derived from the "US Department of Education, Program Management Services/Default Division: Fiscal Year to Date Defaulted Student Debt Recoveries: As of April, 30, 2011," by U.S. Department of Education, Washington, DC.

As table 9 shows, there were various tools available to ED for collecting delinquent student loan debts apart from TOP. The total amount collected using these other tools was over $8.76 billion at the end of FY 2010 and the derived figures for the FY 2011 was on pace to meet or exceed the set goal of $10.15 billion with over $6 billion collected at the end of April 2011. These figures did not by any means diminish the importance of TOP to the debt collection strategy of ED. $1.44 billion was collected using TOP at FY 2010 ending and collections at the end of April 2011 was over $1.33 billion, representing close to 94 percent of the overall set goal of $1.42 billion for TOP by

the agency for FY 2011. Indeed, F.S.I. stressed that TOP had been a major contributor and mainstay to the collection strategy of ED since 1998 and that it had not gotten worse but had gotten better and continued to get better (personal communication, June 20, 2011).

At the State of Maryland, M.D.1. stated that their best tool was to set up payment arrangements with delinquent taxpayers prior to taking any other step (personal communication, July 13, 2011). According to the participant, unless the debtors were unwilling to work with the state, they initially sent them notices about the need to setup payment plans. M.D.2. agreed: "We allow taxpayer to set up a payment plan. If they setup that payment plan, then all of our collection efforts stop as long as the payment plan is active" (personal communication, September 5, 2011). However, if the debtors failed to setup payment plans, other collection options available to the state apart from TOP included salary garnishment, bank attachments, and private collection agencies (PCAs). M.D.2. also said they had the "Caught in the Web" program whereby names of taxpayers' were placed on the World Wide Wed (WWW) and could also file lien of judgment on the debtors. The payment plan arrangements were seen as an effective tool and together with the salary garnishment tool; the state collected appreciable amount of money in delinquent debts. Nevertheless, the use of TOP by Maryland was still an integral part of their debt collection strategy since millions of dollars were being collected through the reciprocal agreement and according to M.D.2.; it was an added bonus for the state.

Recap of Findings of Subquestion 1 of the Central Research Question

TOP was both electronic and online in nature. Due process and formal agreements guided its operations and agencies set up connections with FMS for the transmission of necessary files. Billions of U.S. dollars were referred to the system every year and it collected huge sums as well. TOP system used batch processing for large transactions and TOP Web client for online processing and for debt maintenance tasks such as updates to debtor information, activation of debts, and setting debt bypass indicators. Both processes sought for accuracy of data on all ends.

Due process as required by the DCIA and provided by the creditor agencies to their borrowers was necessary before debtors' payments could be offset. Due process afforded the payees the opportunity to be informed of the reasons for the offsets and to verify, challenge, or appeal the offset. There were also formal requests and agreements needed by the creditor agencies with FMS prior to certifying debtors for offsets. Connection methods at different levels of affordability such as Connect: DIRECT, Connect: Enterprise, and Frame Relay were available to the agencies for batch processing and individual users were granted access for the online processing. Since FY 2006, an average of $340 billion was referred annually from various federal and state agencies. Within the same timeframe, debt collections using TOP continued to increase, averaging about $4.18 billion each FY. Finally, although TOP is central to the debt collection strategy of the participating agencies, it was not the only tool they employed. They used other internally administered tools as well.

Findings of Subquestion 2

The question asked in subquestion 2 was: what are the challenges confronting the G2G e-Gov implementation in the U.S. Government? This subquestion of the central research question sought to determine the challenges that confronted the implementation of G2G e-Gov within the U.S. Government through TOP under analysis. Data gathered largely by interviews revealed a number of challenges such as timing and synchronization, old and limited technology versus new ones, costly information access and implementation, legislation and regulatory restrictions, and communication gap. Table 10 below shows subquestion 2, the interview questions that are tied to the subquestion, and protocols where they are found.

Table 10

Subquestion 2, Interview Questions, and Applicable Protocol

Subquestion 2: What are the challenges confronting G2G e-Gov implementation in the U.S. Government?	
Protocol	Interview Questions
P1	Question 8: Describe past and current programmatic and technological challenges which have confronted the implementation of TOP?
P1	Question 9: How would you describe the effects that these challenges have on operations of TOP?
P2	Question 7: Provide past and current programmatic and technological challenges experienced by your organization as it uses TOP for debt collection? a. How would you describe the effects that these challenges have on your debt management operations?

Note. Relationship between subquestion 2, the related interview questions, and protocol.

Timing and Synchronization

One challenge found with the TOP system was that of timing and synchronization of debt information. This according to the participants was principally due to the number of processes and parties involved in the systematic operation of TOP. O.C.1. provided a number of situations where this had been challenging to OCSE (personal communication, June 20, 2011). First, sometimes there was a lag between the time TOP received tax return and refund information from IRS and the time that information was passed over to OCSE system through a collection file. This could be further compounded by almost a week that it could take before the collection information was posted on the agency's system. Because the offset file was posted on Thursdays and OCSE did not usually receive the file until Wednesdays of the following week, there was a tendency that the information on both sides may not be properly synchronized. O.C.1. explained this situation as follow:

> As far as programmatic challenges, well the timing issues and the timing issues being that we can't be 100 percent in synch all the time because collections come, we haven't received that collection yet and we get it the next week. So in between that time, the state gets a phone call that says why did you take my tax intercept, they call OCSE, OCSE says well, I don't know let me check with FMS and we check with FMS. (personal communication, June 20, 2011)

Investigation with FMS could then show that the intercept occurred a day ago or that it was processed the very day of the inquiry, or the notice from FMS about the money being intercepted went out few days before that. As a result of this circumstance, there was a propensity for the synchronization of information to be adversely affected.

O.C.1. further exemplified the timing and synchronization issue with the unavailability of offset money at the Department of Health and Human Services when they ought to have been there. Although the participant stated that a couple of years back, all the major stakeholders in the TOP debt collection process mitigated the synchronization issue by switching the period in which collection data and deposits were sent to the states for tax and administrative offsets from biweekly to weekly to ensure fast disbursements to affected families. Still, the issue had surfaced again a number of times since because of the delays in the process. O.C.1. extended the impact of the challenge in the following words:

> But we have had issue with the money that is been IPACed to the program support centers' not being available when it should be available. It takes the clearinghouse - HHS' Program Support Center 24 hours – they have to have it available 24 hours before they can actually make the deposit available to states. The way it should work is: The money gets IPACed on Wednesday before 12, which makes the money available to PSC on Wednesday and they can in turn make sure that the states receive it by Friday and the importance of the states receiving it by Friday is even though they already have the collection file, they get the collection file on Thursday before or Monday. Anyway even though they have the collection file, a lot of the states won't do anything to process that file until they get the money or deposit from Program Support Center. Because they want to make sure the money is available before they process the file. So if they don't get that deposit and we are delayed and they don't get it on that Friday they are not going to get it until Monday or Tuesday. Again, that delays the process for a

> week, opens the synchronization issues again, opens the possibility that we might get an intercept we shouldn't get or they don't get an intercept that they should get, whatever it might be. (personal communication, June 20, 2011)

O.C.1. concluded that early in 2011, there was a great deal of inconsistency where OCSE did not know hours after 12 noon on Wednesdays – the time the offset money ought to have been transferred through IPAC to PSC – if the money had been sent by intragovernmental payment and collection method to the PSC for processing and made available to the states.

Addressing the timing challenge from another perspective, F.S.2. inferred that the more the number of payment agencies that were involved in the use of TOP, the greater the propensity that the timing issues will occur (personal communication, September 23, 2011). This inference was illustrated with a likely situation where a federal offset occurred from taxes and another offset from a state was taking place concurrently. This could result in a debtor being over offset and thus the tendency to issue that individual a refund. Thus, with simultaneous offsets occurring, the likelihood that over offsets will also occur was going to increase, which in turn will increase the need to issue refunds to correct the excess offsets.

In sum, with the timing and synchronization challenge that is discussed above, TOP like many implementations of e-Gov in general and G2G e-Gov in particular exhibited some of the quality issues and disparate infrastructures found in the literature and which are shown in the initial coding structure in Appendix E. Timing and synchronization issues manifested in the lag between the time TOP received tax return and refund information from IRS and the time funds were deposited and unavailability of

funds at the required time. The tendency for the number of payment agencies to increase in TOP could also pose timing issues.

Old and Limited Technology vs. New Technology

Another challenge confronting those who support the operations of TOP was how to maintain the balance between the reliability provided by the old, but limited technology on which TOP was built and the uncertainty but modernized features of the new technology. F.M.3. projected this dilemma by saying that TOP had been running on old programming language of COBOL and SHELL scripting since it was developed. It sat on DB2 database and IBM AIX platform (personal communication, June 23, 2011). Since young generation of programmers graduating from colleges did not have knowledge of and skill in COBOL, very few options for support of the system existed. As a result of the nature of the old technology on which TOP was built, upgrading those systems was usually arduous and costly. According to F.M.3.:

> We just went through an upgrade, DB2 upgrade, MicroFocus COBOL upgrade. It was a challenge to upgrade. We had to make sure that the old software that supports MicroFocus COBOL – for example MicroFocus COBOL interface with Checkpoint Restart. Checkpoint Restart is when you have a batch file and then there is a problem with that batch file so that batch file is incomplete, it does not update completely, so the technology that we have is saying that well, it didn't complete successfully, it stopped at row 10. The technology that we have, Checkpoint Restart, it allows us to fix the problem, it will pick up with record 11 versus going back to record 1. You cannot go back to record 1 because we have already updated. So we don't want to duplicate the record again because we could

> be adding money, subtracting money from the debt. That would not be good, right. So with this technology thing, it's important that all the technologies we use for TOP work together. Any time we have an AIX upgrade, that affects DB2, that affects MicroFocus COBOL, that affects Checkpoint Restart. So when we get a new upgrade, when it's mandated that we have a new upgrade from IR, we have to ensure that all these other software still works and when it doesn't it creates a huge problem for us. And what we have to do is sometimes pay additional support for the older version until we can figure out how to make the new version work with the existing code. (personal communication, June 23, 2011)

F.M.3. said billions of dollars were being collected in delinquent debts and that a stoppage of operations was not an option. Stoppage of operations meant that people will not get paid and the situation would not augur well for everybody.

To this end, F.M.3. stressed the importance of keeping up with the new technology and monitoring what skills young programming graduates were bringing out of colleges in order to be able to maintain TOP in the future (personal communication, June 23, 2011). This new thinking informed the impending plan to upgrade TOP to TOP NG (Next Generation) to leverage the use of Cloud computing and Agile development, which according to F.M.3. was unlike the traditional USE Case for software development that sought to define requirements upfront prior to going into development. The participant hoped that the time lag that happened with the system disaster recovery could be addressed with TOP NG. Currently, because of the two disparate technologies used by the payment management system at FMS and TOP for synching production and the disaster recovery environments, it was taking about two hours to perform the synch up.

According to F.M.3., the payment management system used the XRC, that is Extended Remote Control based on disk to disk updates on the Mainframe platform and duration update was about one minute. On the other hand, TOP used the PPRC, that is Peer to Peer Remote Copy, on the UNIX platform and often lasted about two hours. Although this was not an issue in the production environment, it was an issue in the disaster recovery environment.

Having said that, F.M.3. believed TOP was by and large working unhindered on COBOL and that the latter had proven to be reliable for TOP over the years (personal communication, June 23, 2011). The participant wondered if the new technology anticipated with the TOP NG would allow for the processing of huge number of transactions that were currently being processed in the legacy system. This concern was validated by the experience with another in house system which adopted a newer JAVA technology, but as a result of that adoption prevented the batch and the online processes from occurring simultaneously. F.M.3. argued that COBOL provided that option of concurrent online and batch processing in TOP and that the management of the program could not afford not to have both processes running at the same time due to the multi million transactions that occurred daily. It was therefore imperative that as new technology upgrade was anticipated for TOP NG, that the current level of efficiency in debt collection was exceeded or at least maintained.

From the creditor agency perspective, O.C.1. pointed to the limited capacity of current technology to handle the large sizes of their reconciliation files for batch processing (personal communication, June 20, 2011). FMS required that OCSE partitioned those files, with each containing up to 8 million records, into smaller files in

order for TOP to effectively handle them. However, segmenting the files into smaller units presented the agency with a challenge because they could be sorted by FMS in a manner not convenient to OCSE. Additionally, when the reconciliation files were sent back to OCSE, they were not coming in variable filename format. Rather, they were often sent as fixed filenames. This was challenging for the program managers at the agency because they had to go back and rename the files to different names in order to forestall the danger of overlay of the original files. Additionally, renaming the files had also created issues for the agency in the past as they could be run as new files again.

The dilemma over the use of old and limited technology which offered the advantages of being tested and reliable for TOP and the new and easy to maintain technology, but with its attendant uncertainties continued to be a conundrum for the managers of TOP. Its limitations in the current state were equally a concern for at least one creditor agency. One of these limitations required very large files had to be split into smaller and manageable sizes in order for them to be transmitted through batch.

Costly Implementation Process

A number of participants also pointed to the costly implementation process. Regarding the implementation process, F.S.3 noted that one expensive aspect of the program was the creation of the file formats (personal communication, September 23, 2011). At the inception of TOP when FMS was taking over the offset function from IRS, many of the file formats used by the creditor agencies with FMS were completely changed. These file formats included the ones used to refer accounts for offsets, report updates to increase or decrease debtors' account balances on TOP, inactivate and remove accounts for offsets, and issue refunds for offsets. They also included the ones used by

Treasury to report unprocessed records back to the agencies and those for reporting the offsets and reversals on the accounts. Rather than starting all over and replacing the old IRS formats with the new ones, F.S.3. reasoned that it would have been easier for the creditor agencies, if FMS had worked with the old formats by just adding some fields reflecting the new information needed for TOP. ED and its guarantee agencies had to make these changes back in 2000.

Then a few years later, F.S.3. said Treasury had to change the file formats again and this created a concern for ED given the expense, resources, and testing that were involved in making the latest formats acceptable on both ends. The participant put it this way: “It is really not a good idea to make dramatic changes to formats, unless it is absolutely necessary; and we did not feel that it was absolutely necessary” (personal communication, September 23, 2011). Meanwhile, F.S.3. informed that another bridge program for file formats was in the offing and wondered why agencies could not continue to use the bridge program, which will cost money to implement, once it served its initial purpose instead of creating another set of formats.

Apparently, FMS was not oblivious to the concern of the creditor agencies about the cost involved with the changes to the file formats. Empathizing with the cost those changes to the formats will have on the states and federal agencies, F.M.3. said with the impending TOP NG, it was imperative not to impose a cost burden on them to make the changes and proposed that, newer agencies to TOP could be requested to come in with the newer file formats while the older formats could be maintained for the existing agencies in TOP (personal communication, June 23, 2011). This according to him, will further help to improve the process.

Indeed, F.M.2. echoed similar concern on the prohibitive cost of implementation for the states and the creditor agencies (personal communication, June 23, 2011). The participant recognized that funding was tight for the agencies and because Treasury was not obligated to shoulder any part of their implementation costs, they had to individually seek implementation funding from whatever sources they could find it. Nevertheless, he said TOP program management team tried to show through conferences and webinars, the potential returns on the agencies' investments if they chose to certify debtors' information to TOP.

Another aspect of the implementation process cited as costly was budgeting for the connection technology involved for participating in TOP. F.S.1. said it was important to ensure that procurement of needed software and hardware was included in the budget (personal communication, September 23, 2011). Given the elongated budget process in the federal government, if proper budgeting was not done, procuring the necessary technology for connectivity and implementation may not be available on time.

F.S.1. also cited the time consuming efforts involved with the reversals and refunds components of the offset program. Even though both processes were largely automated, officials still had to manually review them to varying degrees to ensure accuracy (personal communication, June 7, 2011). For closed accounts involved in the reversal process, ED manually reviewed them in order to ascertain whether they qualified to be reopened and restart collections on them or whether they qualified for write offs and close them. On the other hand, regardless of whether they occurred in an automated fashion or manually, all refunds were subject to manual review procedures in order to forestall sending checks to invalid addresses. According to F.S.1., there was equally a

need to determine as part of the manual review process if the borrower who was going to be issued a refund owed another debt for which the expected money could be used to pay.

Additionally, F.S.2. judged that obtaining needed information could be expensive and indicated that while "several agencies were accessing the same data for the same purpose, each agency is paying for the information. It would seem more logical to have a central location responsible for obtaining the information and ensuring that only eligible Federal agencies access the data" (personal communication, September 23, 2011). ED representatives made this suggestion at the last workshop organized by FMS on TOP.

Debt Check: Costly and Less Beneficial

Another complimentary aspect of TOP implementation that O.C.1. pointed to as costly with little or no benefit to the creditor agencies was the FMS' Debt Check program (personal communication, June 20, 2011). This program was conceived by FMS to "allow agencies and outside lenders to obtain information regarding whether applicants for federal loans, loan insurance or loan guarantees owe delinquent child support or delinquent non-tax debt to the federal government" (FMS, 2011g, para. 1). Through an Internet based system, agencies ought to be able to search the Debt Check database to determine if those applying for federal assistance owed past due child support or delinquent nontax debt to the federal government.

To O.C.1., Debt Check program had not lived up to its billing as substantial amount of time and resources were expended to implement it about 8 years ago with the understanding that it was going to generate equally substantial number of debtor matches for the agencies (personal communication, June 20, 2011). At the time, OCSE actually established exclusion indicators or bypass codes with the intention of bypassing certain

individuals from being subjected to administrative offset. O.C.1. described the whole effort as needless because, currently there were just about two agencies using the program and offered that there ought to have been more guarantees about which agencies will actually be using the program. Besides, according to O.C.1., Privacy Act was constraining on FMS to provide necessary information, even if debtor matches were found. To exemplify this, the participant cited an event that took place a number of years ago where matches were actually found by OCSE on the system. When some states requested, through OCSE, to know the identifiers on those persons on whom the matches were found so that they could talk to them, FMS could not oblige those requests because of privacy issues. O.C.1. described Debt Check as one of those programs where "the bark was bigger than the bite" (personal communication, June 20, 2011) and thus was not beneficial to OCSE because if the people who were being matched could not be identified, then no action could be taken.

Despite the concern about the implementation cost expressed above by other participants, M.D.2. did not see this as a challenge of concern for the State of Maryland (personal communication, September 15, 2011). M.D.2. said the program had been effective for the state. This participant said since the initial set up cost of under $1 million – approximately $327,000 for the federal offset program and $611,000 for the vendor offset program – in 2000, Maryland had reaped quadrupled returns on the investment.

Certain elements of the implementation process of TOP as G2G e-Gov were found to be costly. These aspects included file formats, manual reversals and refunds, and information access. The Debt Check program was also deemed not to be living up to its

expectations despite the time and resources committed to its implementation by the agencies.

Legislation and Regulatory Restrictions

Another finding shown in this study was the challenge posed by legislation and regulatory restrictions that confronted the managers and stakeholders of TOP. This challenge matched one identified in e-Gov and G2G e-Gov literature. Apart from the mandatory stipulations in the DCIA and other enabling mandates guiding the operations of TOP, there were other legislative and regulatory restrictions that emerged during the implementation of the program.

F.M.2. illustrated this challenge with the enactment of the legislation authorizing the economic recovery payments in 2010 (personal communication, June 23, 2011). The law mandated the offset of those payments for delinquent past due child support obligations and the program management office only had about six weeks to establish the framework for implementing the requirements of the law. Describing the short timeframe for implementation as tough, the participant remembered that the requirement forced those involved to temporarily forgo other work related activities in order to comply with the mandate. Consequently, in situations like this, there was always the urgent need to get things done quickly and juggle competing priorities.

Apart from legislations such as the one authorizing offsets of economic recovery payments, F.M.2. also pointed to the pressures often experienced from Congress and Office of Management and Budget (OMB) on the need to collect more debts (personal communication, June 23, 2011). Sometimes those pressures were informed by information provided to the regulatory body by external entities, and not based on that

provided by the program management office. According to the participant, the externally generated information may not be valid and on occasions they have had to meet with the regulators and tried to correct some of the erroneous information the latter might have received somewhere else by providing more realistic picture of events. F.M.2. added that they were working on improved relationships with the regulators by being proactive in providing them with useful information on debt collection activities to guide against obtaining invalid information somewhere else.

One other aspect of the regulatory restrictions revealed was the negative effect that security regulations could have on effective operations. In particular, F.S.1. and F.S.2. cited that computer matching agreements (CMAs) could be counter productive to debt collection activities. According to a directive by ED to all employees:

> CMAs are required for a computerized comparison of two or more automated systems of records or a system of records with non-Federal records for the purposes of establishing or verifying that the recipients of Federal benefits are in fact eligible to receive such benefits or recouping payments or for recouping delinquent debts under Federal benefit programs. CMAs are also required for a computerized comparison of two or more automated Federal personnel or payroll system of records or a system of Federal personnel or payroll records with non-Federal records. Because CMAs involve the use of personally identifiable information contained in a system of records, the provisions of the Privacy Act of 1974, as amended, 5 U.S.C. § 552a (Privacy Act) apply to the use of CMAs. (U.S. Department of Education, 2007, p. 2)

The directive provided other Congressional authorizations such as the Computer Matching and Privacy Protection Act of 1988 and the Computer Matching and Privacy Protection Amendments of 1990.

F.S.1. said they never had CMA established for TOP operations because some other officials within ED advised that the debt collection unit did not need to establish one (personal communication, June 7, 2011). Yet, in 2011 there was a notice received from another departmental official within ED indicating that unless there was a CMA set up for TOP, they risked debt collections via TOP being shut down. He found this to be unhelpful given that this was not a requirement for their division in the past to operate TOP.

While both F.S.1. and F.S.2. recognized the need for electronic security and the protection of personal identifiable information (PII), yet they criticized some of the security restrictions that were established as hindrances to the debt collection process. As F.S.2. put it: “Since the debts we are talking about are Federal debts, it is in the Federal fiscal interest to use all means and information to collect these debts … Computer Matching Agreements (CMAs) make it very difficult to exchange data” (personal communication, September 23, 2011). F.S.1. agreed and argued that data could be secured to the extent that they cannot be accessed for business and thus become useless.

Communication Gap

The experience of the debt collection unit dovetailed into the next challenging finding. F.S.1. believed that the issue with the CMA they experienced was largely due to “huge communication gap between technology officers and program management officers” (personal communication, June 7, 2011). For the participant, the request for

compliance to set up CMA for TOP within 30 days and the threat of a shut down and thus a stoppage to annual collection of approximately $1.4 billion in past due debts using the program was a total breakdown in communication between the technology officers and program management officers within the same agency.

But beyond the friction on CMA at ED, O.C.1. also alluded to a number of communication lapses between his agency and the TOP program management office at FMS (personal communication, June 20, 2011). The timing and synchronization challenge was attributed to the breakdown of communication between both sides, especially on the information received from FMS. According to O.C.1., there were situations where the processing of the collection files were delayed and no information was received from FMS on why the delays occurred. Until they began to inquired that was when they learned that there had been some problem on the system and told what the problem was.

For O.C.1., the effects of file processing delays can be steep for OCSE. In case of a delay to one of the collection files, the agency was confronted with cascading effects of the delay on the backend as they would be behind schedule in transmitting the collection files to the states and transfer appropriate funds from the PSC to the state accounts. As a result of such delays, the states would also be unable to process the update files and run other jobs and files that were dependent on the collection files from FMS being available. This could literally add an extra week of processing to the schedule.

Moreover, O.C.1. said the TOP bulletins were sometimes late for about one day or so in disseminating the necessary information to OCSE about file processing issues on TOP. The participant recalled an issue which occurred in early 2011 and created major

problems. It involved collection information being in the same file twice. Attempts to get some answers from FMS were fruitless as they could not reach the right people and TOP bulletin was at least two days late in furnishing them the necessary information to proceed. Even then, the information provided by the delayed bulletin was insufficient in offering a plan of action. O.C.1. expressed the frustration experienced as a result of this gap in communication as follow:

> But it's just a domino effect when there is an issue and if it is initiated at FMS and there is an issue, it creates such a cascade over here, if it is something that we don't know to move forward, we don't know how to respond to state child support agencies. What do we tell them? We don't know how it's going to affect … we got files coming in all the time from other places, other areas. You don't know how it's going to affect those? I mean do we stop that? Do we just stop this process now until we figure this out now? Or do we move forward? And the incoming files coming in from the states, especially if there is something we can bleed into, say a week or so and that does happen very, very rarely but if it happens we are three, four, five days; then we are like what are we supposed to do? (personal communication, June 20, 2011)

O.C.1. felt communication initiated by FMS to the creditor agencies in general and to OCSE in particular could be improved and made better in order to effectively collect the delinquent child support obligations and assist custodial parents.

Recap of Findings of Subquestion 2 of the Central Research Question

A number of challenges were found to confront the implementation of TOP as a case study of G2G e-Gov. These challenges were timing and synchronization of data and

the dilemma between the old, limited but reliable technology versus new technology attractive to new generation of IT graduates, but with some uncertainties. There were also the challenges of costly implementation process, legislative and regulatory restrictions, and communication gap.

The timing and synchronization challenge showed that TOP, like many implementations of e-Gov in general and G2G e-Gov in particular exhibited some of the quality issues and disparate infrastructures found in the literature. Also of challenge was the dilemma over the use of old and limited technology which offered the advantages of being tested and reliability for TOP and the new and easy to maintain technology, but with its attendant uncertainties. Some aspects of the implementation process of TOP as G2G e-Gov were found to be costly. These aspects included file formats, manual reversals and refunds, information access, and Debt Check not living up to its expectations despite the time and resources committed to its implementation by the agencies. Equally challenging to both the TOP program management office and some of the stakeholders were the legislative and regulatory restrictions emanating from bodies such as Congress and OMB as well as security stipulations which could be counterproductive to debt collection process. Finally, communication gap between FMS and creditor agencies was found to be a challenge, especially as it relates to dissemination of prompt information about the delay problems on the system which in turn had the propensity to compound schedule delays of debt collection mechanisms.

Findings of Subquestion 3

Subquestion 3 of the central research question sought to know what were the specific problems confronting the implementation, management, and usage of TOP

within the context of G2G e-Gov. Apart from the challenges identified in subquestion 2 above, subquestion 3 of the central research question sought to find out if there were any specific problems that faced TOP as the program was being implemented. This study did not unearth any major problems that could impede the effectiveness of the program and prevent the goals set out for it under the DCIA. Nevertheless, few participants identified problems associated with legal issues, injured spouse claims, technology implementation and performance, and online access issues. Table 11 depicts subquestion 3 on what were the specific problems facing the implementation, management, and utilization of TOP, the interview questions, and protocols where they can be found.

Table 11

Subquestion 3, Interview Questions, and Applicable Protocol

Subquestion 3: What are the specific problems confronting the implementation, management, and usage of TOP within the context of G2G e-Gov?	
Protocol	Interview Questions
P1	Question 10: Describe specific problems that have been encountered with the management and implementation of TOP? a. How would you categorize these problems? Are they strategic, legal, technology, staffing or otherwise?
P2	Question 8: Talk about specific problems that your agency has experienced in terms of strategy, technology, legal, expertise and otherwise as it uses TOP? a. How were these problems handled and resolved – internally and externally by the TOP program management?

Note. Relationship between subquestion 3, related interview questions, and protocol.

Legal Issues and Injured Spouse Claims

In subquestion 3, legal issues and injured spouse claims were two of the few findings related to specific problems confronting TOP as a G2G e-Gov program. The first

part of this section analyzed the data on the legal issues. The second part described the data gathered on the injured spouse claims.

Legal Issues

O.C.1. identified some legal issues between OCSE and FMS regarding certain payments, considered eligible for collection under the statutes for offsets, but which a legal counsel at FMS did not deem as eligible for debt collection (personal communication, June 7, 2011). Specifically, the participant cited the Department of Labor payments which OCSE officials felt they should be able to pursue through the administrative offset program. While O.C.1. acknowledged that on a number of legal issues which both sides disagreed in the past, they worked to resolve them, and wondered if some of the intractable legal issues they were having with FMS had to do with the unfamiliarity of the current legal counsel assigned to their agency with child support issues. According to O.C.1., many of the issues they were dealing with had already been addressed in the past with a previous counsel and now they have had to go back and sort them out again with the currently responsible counsel on why they could do what they planned to do. Engaging in such exercises was considered time consuming and less helpful. The participant said they were part of FMS' Agency Advisory Council workgroup whose goal was to improve debt collection and promised to use the workgroup as a forum to address some of these legal issues.

In contrast, F.M.2. said given the political sensitivity of TOP and legal limitations on what actions the program management of TOP could take as it operated the system, the program management team usually involved the legal department in most of their activities in order to avoid any issues and contradictions to the provisions of the law or

other regulations (personal communication, June 23, 2011). F.M.2. said since the program became operational, they have rarely had any legal issues because they tended to involve the legal department from the onset prior to taking any actions so as to ensure they met all legal requirements.

Injured Spouse Claims

Another legal constraint that both F.S.1. and F.S.2. identified as problematic was the issue of injured spouse claims. These claims, according to them were reversals that IRS authorized with the tax refunds for married couples that were already offset. In its simplest form, injured spouse claim involved a situation where a couple jointly filed annual tax return; one of them owed a federal or state debt and the other did not. An offset was exercised against the tax refund belonging to both parties, and the spouse who was the non debtor filed a claim to get the funds that they were eligible to receive, notwithstanding if they had already been intercepted for offset.

The situation became complicated with the enabling IRS law under which there was no statute of limitations as to when affected spouses could file these claims. This meant that, a claim can be made against an offset that took place several years prior to when TOP came into existence in 1998, thereby reversing the action. Describing this situation as “impossible to manage”, F.S.2. said what they often experienced was that as long as the spouses remained married, they were usually satisfied to have their students’ loans paid off with the refunds that were offset (personal communication, September 23, 2011). Now, if their marriages were to be dissolved, one of the spouses may then file injured spouse claim for a reversal to the refund that was offset to pay off the student loan

in question. It was often very difficult to locate a borrower for a loan that was paid off decades back. For F.S.2.:

> Part of the problem for us right now is some of these offsets happened before FMS was involved in TOP, and therefore, FMS doesn't have the record and the information has to be sent to us manually. Now I have a manual transaction. You are sending an electronic IPAC for the funds, but I have a manual transaction that I have to use to update my system. It's an accounting nightmare.
>
> (personal communication, September 23, 2011)

At any rate, F.S.2. said they have brought the problem to the notice of FMS and that it was an issue between two agencies within Treasury – FMS and IRS – which they will need to resolve.

In sum, there were some legal issues and problems that faced the implementation of TOP as a G2G e-Gov by the creditor agencies that used the program. One of the two notable legal problems experienced was the disagreement on whether some payments qualified for offsets or not. The other was on the injured spouse claims with no statute of limitations on when they could be filed.

Technology Implementation and Performance

The study also found that TOP had experienced some technology implementation and performance problems in the past. One of these problems had to do with the platform usage and sharing. As F.M.2. narrated it, few years back when TOP program management sought to implement TOP Rewrite, the organizational unit responsible for IT management inhouse required that this be ported on the Mainframe platform even though the program staff knew it will not work as expected on the platform (personal

communication, June 23, 2011). Nevertheless, the program was “forced” to be on the Mainframe as a proof of concept and to analyze its viability on the platform. However, TOP was going to share the platform with payment applications and other agencies. This was not going to augur well for TOP as it was a realtime application that could not afford to wait for space to be freed from other applications’ use.

In addition to the problems with platform management, the program had also experienced performance problems which according to F.M.3., involved contention issue where several transactions tried to run concurrently (personal communication, June 23, 2011). This problem eventually resulted in the failure of some of the processes. Specifically, they were performing offline backups which meant that while the backup process was in motion, no other activity, including user or administrator logon could occur on the system. This process alone was causing about four hours of inactivity every night. In order to correct these performance problems, the application IT support team switched the backup event to online backup processing, which allowed for other activities to occur while the backup was occurring. This in turn allowed the program staff to perform some tasks such as running intensely processed accounting transactions at night prior to bringing the system up in the morning and thereby relieved the system of potential bottlenecks.

Nevertheless, F.M.2. still considered the combination of all the maintenance tasks that had to be done on the system as problematic to the huge number of transactions that needed to be processed since they often ran out of time (personal communication, June 23, 2011). For the participant, but for the daily maintenance of the system, the ideal preference would be to conduct transaction processing 24 hours, seven days a week.

Equally problematic for the program was the need to work with the states that participate in the program and conduct individual testing with them. F.M.3. said each state presented its own unique problems (personal communication, June 23, 2011). For instance, there was an incident in which one of the states could not transmit a file format to TOP correctly and it took almost six months before the funds that were offset through the state could be reported to ED. In this particular instance, the program team had to employ a manual stop gap measure in order to have the offsets posted.

Online Access Issues

At least one participant also reported access problems with the TOP Web Client for online processing. In what was called "hit or miss" experiences, O.C.1. said they have not had a lot of success at their agency using the system on a regular basis because of access issues such as suspended accounts (personal communication, June 20, 2011). It was related that both the program team and the support team did not find the Web based application helpful and useful. Even where there had been successful logins, there were still issues in actually getting onto the system to conduct any debt maintenance tasks. For O.C.1., TOP Web Client was:

> difficult to use on a regular basis because again we run into a lot of the suspension issues with the accounts, even though they shouldn't be suspended and it is just more of a headache than it is of benefit to use on a regular basis.
>
> (personal communication, June 20, 2011)

Getting technical support via the phone to resolve the access issues had also not been of good experience. This often involved several phone calls to get any resolution.

Recap of the Findings of the Subquestion 3 of the Central Research Question

There were no major problems militating against the implementation of TOP as G2G e-Gov. A few problems found with the program had to do with legal issues, injured spouse claims, technology implementation and performance, and online access issues. On the problems related to legal matters, there was a disagreement between one creditor agency and FMS' legal office on whether some payments qualified for offsets or not. O.C.1. felt OCSE ought to be able to collect these payments to offset child support obligations but according to the participant, FMS' legal office did not think so. Related to this was the problem cited by F.S.1. and F.S.2. on the injured spouse claims with no statute of limitations by IRS on when they could be filed. Issuing reversals on many of those claims on offsets conducted pre TOP often required arduous manual intervention.

There were also problems with the platform selection for the program which required sharing of resources with other applications. This experiment did not work well for TOP because of its realtime nature. Coupled with this were the performance problems associated with contention of transactions and system maintenance as well as the unique problems generated by working and testing with each state which had the tendency to delay operations.

Findings of Subquestion 4

The question that was asked in this subquestion aimed at finding how G2G e-Gov can be improved as an integral part of e-Gov. The purpose of this subquestion of the central research question of the study was to determine ways in which TOP could be improved as a case study of G2G e-Gov. Data collected through interviews and a document showed that the program could be improved through effective communication,

simplified process which included flexible file layouts, fee management, and making federal early buyout payments available for offset. Other improvement findings were in the area of technology and they involved technology enhancements, documenting the system, frequent updates with guarantees, and system redesign. Other improvement strategies that the data produced included Congressional initiatives, increased call center and collection capacity through the repurposing of Austin Financial Center to a debt collection center, improved phone system, and collaboration and cooperation with the creditor agencies and the states. Table 12 presents subquestion 4 which attempted to address steps that could be taken to improve G2G e-Gov, the interview questions that were used to obtain responses from the participants and the protocols where they could be found.

Table 12

Subquestion 4, Interview Questions, and Applicable Protocol

Subquestion 4: How can G2G e-Gov be improved as an integral part of e-Gov?	
Protocol	Interview Questions
P1	Question 11: Explain some of the process improvement strategies and measures that have been established for TOP?
P1	Question 12: How do you address changes in technology and infrastructure?
P2	Question 9: Describe how your operations can be improved using TOP?
P2	Question 10: What recommendations would you provide to the program management of TOP for process improvement?

Note. Relationship between subquestion 4, related interview questions, and protocol.

Communication

Given the challenge of communication gap finding identified above, it is not surprising that O.C.1. suggested better communication as an important element necessary for improving TOP as a system representative of G2G e-Gov (personal communication, June 20, 2011). For the participant, whenever issues occurred on the system, it would be helpful if the TOP program management team could disseminate the information to them expeditiously. Rather than being left in the dark, it was noted that OCSE would be satisfied to hear from FMS that issues had been detected, that they were being investigated, and further information would be provided once more details were learned about the issues.

Another reason provided by O.C.1. why improved communication channels were essential was because of the huge collections being made on behalf of OCSE by TOP. Describing the agency as the largest customer out of all the participating agencies on TOP, O.C.1. believed TOP program management at FMS, without slighting other agencies, should be responding to OCSE as quickly as questions were asked, even if all the answers were not readily available. Acknowledging that TOP had been very beneficial to their agency; the participant stated that since they began to participate in TOP 15 years ago, $30 billion had been collected cumulatively through tax refund offset with an average of $2 billion a year. According to O.C.1.:

> When there are issues and when we want to move forward and when we want to improve our process, it is really – it's a collaborative effort to improve processes when it comes to tax refund offset and administrative offset collections because it does include FMS. If we can't, you know, if there is a piece missing, then it's not

> going to work right. I do have to say that, you know they have been there and they have tried to make sure that they've done whatever we needed them to do within their power. (personal communication, June 20, 2011)

Nevertheless, the belief was that more could be done to help OCSE in the area of better communication.

Yet there was another method that was recommended by O.C.1. to enhance communication between the two sides, outside the use of email, TOP bulletins by FMS, and the use of phone system for support. The suggested method was the use of a mailbox on the TOP Web Client or placement of the TOP bulletins on the client. Although the participant acknowledged not to know much about the system to really assess the feasibility of this option, still, the thought was that these may be options that could enable them to access information on systemic issues faster.

Knowledge of Sources of Payment Streams

Also in the area of communication, F.S.1., F.S.2., and F.S.3. expressed that ED would like to obtain certain information on TOP such as that related to the payment streams from where offset funds were collected. In particular, F.S.1., mentioned the Social Security payment stream for retirement benefits (personal communication, June 7, 2011). This would assist ED to be more proactive in determining those borrowers such as the low income people who were experiencing financial hardships and thus be able to adjust their accounts to reflect those situations. F.S.2. further illustrated the situation as follow:

> For example, a borrower may claim their SSA benefits are being offset, which is creating a hardship and they complete the necessary paperwork to have it reduced.

> We agree and reduce the SSA offset amount to a lower amount. However, the offsets will continue at the full amount if, in fact, for example, the payments are actually OPM benefit payments. (personal communication, September 23, 2011)

The participant said when they had no knowledge of which payment agency was involved in an offset, they had to depend on the borrowers for such information and the borrowers themselves might be confused where to get that information.

F.S.3. agreed and said the notices provided to the borrowers by FMS generally did not include the payment agencies' codes and that the codes were important for ED to make stops or reductions to the offsets appropriately (personal communication, September 23, 2011). Apart from depending on the debtors to furnish the agency with the needed information or provide them with copies of the notices, ED often had to make calls to FMS to obtain the right payment agency code. F.S.3. also provided an example of a notice that may indicate the payment agency as the Department of Agriculture but which in reality had five different codes listed for it. Such an ambiguity was not right for the debt collection management at ED and needed to change. F.S.3. was however skeptical that this would be changed soon because it was of a lesser priority to Treasury given the issue's indirect relationship to increased debt collections (personal communication, September 23, 2011).

Simplified Process

The quest for a simplified process was another improvement finding for TOP as a case study for providing a thorough understanding of G2G e-Gov. F.M.2. described the current process of matching debtor information with payment information for offset as cumbersome (personal communication, June 23, 2011). Currently, the agencies sent

extract files to TOP on which the program sent back matches; then they sent updates which prompted TOP to transmit acknowledgements. F.M.2. said TOP program management team was exploring ways of making the process better, which in turn could help to forestall the tendency for over collections resulting from time lag.

Furthermore, F.M.2. pointed to the set of layouts which the agencies were currently bound to use to conduct business on TOP as too complex. The proposal was to make the system flexible and amenable to the agencies' own file formats where the current acceptable formats were difficult for them to implement. This, the participant envisaged would be beneficial to the agencies, especially to the Non-Treasury Disbursed Offices that FMS was trying to bring in onto TOP.

On the problem of injured spouse claims where IRS presently allowed the reversals to occur for any offset implemented several years back, F.S.2. implored FMS to lead efforts to implement statute of limitations on the reversals (personal communication, September 23, 2011). The participant noted that Treasury was currently working on effecting a reduction on the number of years that a borrower can file an injured spouse claim. Nonetheless, it was suggested that this ought to be one area of improvement to the program that needed close attention.

Fee Management

Fee management for offsets by FMS was one area where some of the participants from the creditor agencies agreed needed to be improved. This was another discrepant finding that was not really found in the literature and not part of the initial codes. The participants agreed that the amount being charged for each offset was very high. O.C.1. recommended that FMS lowered the amount or at least not increase it again (personal

communication, June 20, 2011). This recommendation was particularly important because many states were currently experiencing budget crises. “To ask the states to pay $16 on each administrative offset and $14.65 against each tax refund offset was a burden that many of them were finding difficult to carry” (personal communication, June 20, 2011). O.C.1. recalled that only few years back, the fee was set at $8 per offset and said the current fees along with the difficulties that many states had in absorbing the significantly increasing fees probably explained in large part why about 8 states were currently not participating in the optional administrative offset program. Participation in the tax refund offset program by the states was a statutory requirement.

Similarly, F.S.2. considered the $17 fee that FMS charged on each offset very high and that the same amount was charged for each offset irrespective of the amount of the debt involved. To buttress this point, F.S.2. stated that:

> This is what I am talking about: they charge $17 on offset. If you get a $17.50 offset, they are going to charge you $17. Now, if they offset $16, they are not going to charge you a fee. Our feeling is that the fee should only be charged if you offset at least twice the amount of the fee. So if the person is offset $35 or less, Treasury shouldn’t charge us a fee. $35 or more, charge the fee. Treasury is getting $17 every time they take an offset.
>
> (personal communication, September 23, 2011)

The participant said the cumulative fees being collected amounted to a lot of money for FMS and that ED was not getting any portion of the $17. F.S.2. added that if ED had to make system changes or take similar actions, that will be out of their budget. To this end,

F.S.2. called for a profit sharing mechanism between ED and FMS on the fees collected. The participant noted however that previous talk in this regard was fruitless. (personal communication, September 23, 2011)

F.S.3. focused on the structure of the fee management itself and reasoned that the amount being offset needed to be reconsidered in the fee structure (personal communication, September 23, 2011). A reconsidered fee structure ought to aim at ensuring that the same fee of $17 was not applied to a debtor with an offset of $25 as well as a debtor with an offset of $5,000. F.S.3. believed that the fee should be proportional to the amount that was being offset and not the same fee across the board.

One other aspect of fee management that was questioned was the lack of transparency about the fees that were being collected. O.C.1. said there was no breakdown on what the fees represented and that it would be helpful to itemize the services for which the fees were being charged and used (personal communication, June 20, 2011). The argument was that this will provide the agencies the assurance that the fees were being collected for a purpose. F.S.1. concurred and explained that like any corporation, one ought to be able to determine, if only at a high level, how much was collected in fees in a particular year and to what the fees were applied (personal communication, June 7, 2011).

Make Available Federal Early Buyouts

Additionally, O.C.1. believed that the process of collecting delinquent child support debts can be improved for their agency and the states if FMS could assist to make federal early buyout information available to the states (personal communication, June 20, 2011). As the situation was explained, OCSE and the states did not participate in the

Federal Salary Offset Program through the administrative offset program because the states already had in place similar mechanism in the form of direct withholding process. They did not have to go through Treasury's administrative offset because they could directly withhold salaries of federal employees who were noncustodial parents resident in the states. If they were to participate in the Federal Salary Offset Program, the process will take longer and be convoluted. Besides, the states would have had to pay the salary payment agency fee each time a payment was taken – an expense they would not need to incur through the direct withholding system.

The problem, as O.C.1. determined, was that the states often received the information about the early buyouts for federal retired individuals from the payment agencies late so that they were unable to directly withhold funds from the buyouts to any delinquent child support obligations they owed by the noncustodial parents. O.C.1. suggested that if the early buyout payments were being issued through FMS by a disbursing agency such as the Department of Defense, those payments could be intercepted for OCSE, even though the agency was not participating in the Federal Salary Offset Program with FMS. It can then pass the funds to the appropriate states. This form of collaborative effort as indicated will allow the states to maximize child support collections on funds they could have missed.

Technology Improvements

Technology improvements represent another finding of subquestion 4. This finding consisted of technology upgrades to the TOP system and improved documentation of activities and occurrences to the system. They also included the

suggestion for frequent updates to files involved in the weekly offset batch process as well as the efforts at system redesign.

Technology Upgrades

TOP as a form of G2G e-Gov is based on computer technologies and like many other IT applications and systems, its platform components often had to undergo upgrades for optimal performance. F.M.3. said whenever the vendors of the operating system, database management system (DBMS), and software development tools provided upgrades; the IT support on the program team usually subjected the upgrades to rigorous testing in the TOP development environment in order to determine their applicability and suitability to the system (personal communication, June 23, 2011). Where the upgrades failed the tests with the system; they communicated this with the vendors who then conducted further analyses on the released versions. The vendors' analyses often tested to see if there were any fixes that could be applied or if there were any prerequisite patches that may be needed prior to the upgrades being performed. F.M.3. exemplified the situation with this statement:

> For DB2 9, we were going to upgrade to DB2 9 first, we found out that MicroFocus 4 didn't work with 9. So guess what, we had to upgrade MicroFocus to 5.1 to work with 9…any time a new technology comes in, we take the old system and upgrade and see what problems we would encounter. Like Checkpoint Restart: is it going to work with this new operating system? We don't know. It's a trial and error kind of thing. Once we identify that it doesn't work, we go out there and try to find solutions. (personal communication, June 23, 2011)

Meanwhile, while the program management was seeking for solutions, support contracts for the older versions of the products remained valid in order to maintain continuity of operations.

Documenting the System

Another technology improvement process cited was called “documenting the system.” F.M.2. recognized that there had not been a thorough and holistic documentation of the occurrences on the TOP system over several years of its existence (personal communication, June 23, 2011). Attributing the reason for this to different team members knowing different components of the system, the participant said it was difficult for one single person to have a full knowledge of the entire system. As a result, the program team was in the process of documenting the activities involved in managing the system in order to create visibility and awareness for the prevailing rules.

In the same vein, F.M.2. said they have also begun a process improvement technique called “using use cases.” This assured that use cases were appropriately updated whenever any fixes were applied to the application. Configuration management procedure was used in implementing this improvement strategy through record keeping of fixes, which in turn assisted in avoiding overlap in how, and sequence in which, fixes were applied and assuring that fixes were methodically tested out before they were applied on top of the previous ones. F.M.2. concluded that “Basic process improvements will make a great deal once you’ve started going through your system and knowing what is there” (personal communication, June 23, 2011). Overall, the participant believed that a clean process of implementing fixes from the development environment onto quality

assurance, user acceptance testing, and production regions would also engender accountability as signoffs were required at each stage.

Frequent Updates with Guarantees

A mitigation strategy that O.C.1. said OCSE was contemplating for the timing and synchronization challenge, which had on occasions caused delays in the debt collection process and disbursement of funds to needy custodial parents, was to implement frequent updates to the batch process as opposed to the current once in a week update (personal communication, June 20, 2011). However, before they could implement such a change, they would like for the implementation to be accompanied with guarantees from FMS. Such guarantees ought to include the assurance that if update files were sent daily by OCSE, they would be acknowledged the next day by FMS. According to the participant, in the absence of such guarantees and if delays continued, reprogramming the agency's debt collection processing as well as the states' processes for frequent updates would be counterproductive. As O.C.1. put it:

> What we really like to see in the future is maybe getting into… maybe not on the collection side but on the update side when we update more than once a week. But we need to have guarantees from FMS' side, maybe we need to do this through an MOU or some other necessary agreement where they are going to guarantee that 99% of the time they are going to process that and return that to us the very next day…we need to have a sort of guarantee that that file is not going to be delayed. (personal communication, June 20, 2011)

The participant believed that frequent updating will yield great dividends for their agency if assurances could be received that response files would be provided expeditiously.

Furthermore, O.C.1. suggested the creation of a portal with direct interface to TOP that would allow for submittal of files. The rationale for this suggestion was the thought that it could help to address the timing issue. However, there may be issues that could attend such an implementation and there was a need to consider other things such as security implications prior to creating such a portal.

System Redesign

One crucial technology improvement underway for TOP was the plan by the program management officials to redesign the system from the one based on old technology to a modernized one called TOP NG (New Generation). According to F.M.3. though the current system, which was developed with MicroFocus COBOL and based on transactional (batch) technology was very effective in the debt collection process; yet it had become outdated (personal communication, June 23, 2011). Though the plan for the new system was still being crafted and its details were not yet known, nevertheless, F.M.3. said a contract had already been procured for the project slated to start in July 2011 and that the contracting company was exploring possibilities of leveraging modern technologies such as Commute Grid, Cloud Services, JAVA, MQ series, and others. Regardless of whatever technologies were chosen, the hope was that the redesigned system would still be capable of collecting debts at the current levels, if not above.

Already, agencies were looking forward to what benefits the new TOP NG would offer them. For instance, O.C.1. hoped that the new system would fix the access problems that they often faced with the TOP Web Client and simplify the ability to logon to the system. Therefore, it became important that FMS improved the client in the new design if the goal was to let Federal agencies utilize it.

Also with the TOP Web Client, F.S.2. said additional improvement measures could be taken to make it better for its users (personal communication, September 23, 2011). As the participant related the current situation, there was no way to determine if an agency refund records were received and processed on TOP. F.S.2. said a counter was recently added to the client to show the receipt and processing of a refund. However, that solution was only useful for small number of refunds and not for situations where several refunds were implemented.

The FMS commissioner's Congressional testimony in March 2011 (FMS, 2011e, pp. 5-7) further revealed the plan to enhance TOP system and processes so as to improve the accuracy of offset match process. For example, this improvement would guide against having a "no match" error message on the system where a debtor has had a change of name on the basis of marriage.

Moreover, O.C.1. expressed the need for the ability to send one file with about 5 million records as they desired instead of the current situation where they had to split one single file into about 8 different files due to a limit on the number of records that could be processed on the system. As the participant pointed out earlier on, splitting their update files into smaller units had caused issues for them in the past and they would like to avoid a repeat of these issues.

In sum, technology enhancements were found to be central to the process improvement of TOP as a case study of G2G. Among those improvement measures suggested by the participants were technology upgrades, documentation of system activities, and fixes coupled with accountability. The others were frequent submission of update files with attendant guarantees and system redesign.

Other Improvement Strategies

There were other improvement strategies geared toward the agency's debt collection operations in general and some specifically addressed TOP that were provided in the FMS commissioner's testimony to the U.S. Congress in March 2011 before the House of Representatives' Oversight and Government Reform Subcommittee on Government Organization, Efficiency and Financial Management (FMS, 2011e, pp. 5-7). The strategies identified were legislative proposals, management reforms, and a number of steps to enhance management of debt portfolio.

With the Legislative proposals, the testimony alluded to the plan in the FY 2012 Budget to rescind the prevailing provision on the Federal Levy Program in TOP which authorized IRS to levy up to 15 percent of a number of payments to a contractor doing business with the federal government or Medicare provider; and replace with up to 100 percent. The expectation was that this change would garner about $1.46 billion in delinquent federal tax debts into the government coffers from contractors and Medicare providers over a 10 year period. Another proposal in the 2012 Budget would also alter the current provision which allowed states, through TOP, to only collect state income tax debts from the resident delinquent debtors, by enabling the states to extend collection to nonresident delinquent debtors as well. It is expected that this change will result in an increase of $1.2 billion in state income tax debts collection over 10 years.

Additionally, 2012 Budget also provided for FMS to review and implement, in alliance with other federal agencies, some management and administrative reforms whose goal was to maximize the collection of delinquent debts by a projected amount of $2.9 billion over 10 years.

The testimony then enumerated a number of other initiatives planned to improve management of the debt portfolio. One of these initiatives aimed at increasing call center and collection capacity to cope with the increased call volume to the TOP Call Center through the conversion of Austin Financial Center to a debt collection center and reinforcing and increasing phone infrastructure. Second, there were efforts to optimize the effectiveness and efficiency of debt collection processes such as extended servicing of collectible debts at FMS prior to referral to a private collection agency, work with creditor agencies to ensure the availability and quality of debt information, and use of process mapping and strong analytical tools for quality and service delivery. Finally, there was an emphasis on cooperation and collaboration with the creditor agencies and states for relationships' building and information sharing on requirements, strategies, and challenges. The cooperative techniques to be employed were vibrant liaison efforts for outreach, new relationship management tools, and debt management services.

Recap of Findings of Subquestion 4 of the Central Research Question

Data collected from study participants as well as those obtained through FMS commissioner's testimony to a Congressional subcommittee pointed to some improvement measures and strategies for the effectiveness and better operation of TOP and which in turn can help enhance the program as an example of G2G e-Government. These strategies and measures were in the areas of communication, simplified processes like flexible file layouts and fee management, technology enhancements, legislative proposals, and strengthened cooperative and collaborative partnerships with the creditor agencies and the states.

Better communication and prompt dissemination of information were suggested to help alleviate the timing and synchronization challenges that have confronted OCSE and the states in the past. Given the fact that delinquent child support debts constituted the largest percentage of total annual collections through TOP, it was only logical that the creditor agency responsible for the debts, OCSE received paramount attention when issues occurred. Participants from ED also requested that better information and having the knowledge of sources of payment streams would be beneficial to their operations.

A simplified process of TOP operations called for flexible file formats to replace the current rigid ones and a reassessment of the fee management structure. The fee structure in its present form was considered high, a flat amount that failed to take into consideration the size of the amount that was being offset, and that which failed to offer any transparency in annual total charges.

There were also technology improvement measures considered germane to the future success of TOP in its G2G relations. System upgrades were often done in production environment after they have been subjected to rigorous testing in all the appropriate lower environments and after determining that all the components within the system will work after the upgrades. At least one participant called for frequent updates in a week that would assure that timing issues sometimes experienced with payments were corrected. There was also the proposed system redesign in TOP NG which sought to replace current old technologies like MicroFocus COBOL and leverage new ones such as JAVA, agile programming, and cloud computing; and place greater emphasis on documentation of processes, upgrades, and fixes.

Finally, a number of other improvement measures were provided by FMS commissioner in a testimony to a subcommittee in Congress. These included legislative change proposals that were projected to increase debt collection amount by a combined total of about $5.5 billion in 10 years. Other measures were increased call center and collection capacity through the repurposing of Austin Financial Center to a debt collection center, improved phone system, and collaboration and cooperation with the creditor agencies and the states.

Conclusion

Chapter 4 showed how data was collected and analyzed and it presented the findings of the study. It described the process used for data generation, collection, and documentation. The central research question sought to determine the extent to which G2G e-Gov, as exemplified by TOP tallied with some of the core potential benefits of e-Gov concept. Data collected through interviews and historical documents revealed the inherent benefits of G2G e-Gov. It was found out that TOP provided the benefits of accountability, efficiency and effectiveness, collaboration and cooperation, and information sharing. Accountability was derived through the enabling law, DCIA, other mandates, and regulations along with the periodic Congressional and Presidential reporting by government officials and self regulation by other agencies. Efficiency and effectiveness were obtained through centralization of debt collection activities of many federal agencies and states, large number of debt collections, cost reduction, automation of processes, and flexibility of operations. The program offered agency collaboration and cooperation through basic program processing, state reciprocal agreements, and collaboration on legislative proposals. TOP as a G2G e-Gov program also provided the

benefit of information sharing through process improvement, information dissemination, web of information flow among different parties, webinar sessions, conferences, goodwill messages by participating agencies, technical bulletins, and executive level communication. All these helped to engender value in service delivery.

The goal of subquestion 1 of the central research question was to determine the nature and characteristics of TOP as a G2G e-Gov example and to extend the central research question by examining the operations of TOP itself. Transcripts of interviews and documents showed that TOP was both electronic and online in nature. Its operations and the set up of connections between the creditor agencies and FMS for transmission of necessary files were guided by due process and formal agreements. Billions of U.S. dollars were referred to the system every year and it collected huge sums as well. TOP system used batch processing for large transactions and TOP Web client online processing for debt maintenance tasks such as updates to debtor information, activation of debts, and setting debt bypass indicators. Both forms of processing sought for accuracy of data on all ends. Due process as required by the DCIA and provided by the creditor agencies to their borrowers were prerequisites for the offset of debtors' payments. Due process afforded the payees the opportunity to be duly informed of the reasons for the offsets and to verify, challenge, or appeal the offset. Formal requests and agreements were also required of the creditor agencies by FMS prior to certifying their debtors for offsets. Connection methods at different levels of affordability such as Connect: DIRECT, Connect: Enterprise, and Frame Relay were available to the agencies for batch processing and individual users were granted access for the online processing. Since FY 2006, an average of $340 billion was referred annually from various federal and state

agencies. Within the same timeframe, debt collections through TOP continued to increase by an average of about $4.18 billion each FY. Finally, although TOP was central to debt collection strategy of the participating agencies, it was not the only tool they used. Nonconforming data pointed to creditor agencies using other internally administered tools as well.

Subquestion 2 of the central research question aimed to determine the challenges that confronted the implementation of G2G e-Gov within the U.S. Government through the TOP case study under analysis. Analysis of data gathered largely by interviews validated some of the quality issues and disparate infrastructures found in the literature on many implementations of G2G e-Gov with the timing and synchronization challenge reported in TOP. There was also the challenging dilemma over the use of old and limited technology which offered the advantages of having been proven and reliable for TOP and the new and easy to maintain technology, with its attendant uncertainties. Some aspects of the implementation process of TOP were found to be costly. These included changing file formats, manual reversals and refunds, information access, and Debt Check not living up to its expectations despite the time and resources committed to its implementation by the agencies. Equally challenging to both the TOP program management office and some of the creditor agencies were the legislative and regulatory restrictions emanating from bodies such as Congress and OMB, as well as security stipulations which could be counterproductive to debt collection process. Communication lapses were also found to be a challenge that existed between FMS and creditor agencies, especially as it concerned the dissemination of prompt information about delays on the system which in turn could compound schedule delays of debt collection process.

Subquestion 3 of the central research question sought to find out if there were any specific problems that faced TOP as the program was being implemented. Interviews with the participants did not reveal any major problems that would have negatively affected the effectiveness of the program and prevented the goals set for it under the DCIA from being realized. However, there were a few problems identified that needed the attention of the program managers. One such problem was legal in nature and it involved disagreements between one creditor agency and FMS' Legal Office on whether some payments qualified for offsets. O.C.1. felt their agency ought to be able to collect these payments to offset child support obligations while according to the participant; FMS' Legal Office did not think so. In the same vein, there was the problem of injured spouse claims authorized by IRS for the taxpayers, with no statute of limitations on when they could be filed. As indicated by F.S.1. and F.S.2., issuing reversals on many of those claims on offsets conducted pre TOP often required arduous manual intervention.

The experiment of sharing platform resources with other applications also did not work well for TOP because of its real time nature. Coupled with this were performance problems associated with contention of transactions and system maintenance as well as the unique problems generated by working and testing with each state which had the tendency to delay operations.

In subquestion 4 of the central research question of the study, the goal was to find out ways in which TOP could be improved as a program illustrating G2G e-Gov. Data collected through interviews and a testimony to a Congressional subcommittee by the FMS' commissioner showed that the program could be improved through effective communication, simplified process, technology enhancements, and other improvement

strategies. Better communication and ontime information dissemination were suggested to help alleviate the timing and synchronization challenges that have confronted OCSE and the states in the past. Providing the latter with needed information promptly was thought to be of greater importance to the program management office given that delinquent child support debts made up the largest percentage of the total annual collections through TOP. Participants from ED also requested that better information and having the knowledge of sources of payment streams would be beneficial to their operations. Additionally, there was a call for a simplified process of TOP operations which included flexible file formats to replace the current ones that may or may not suit the needs of the creditor agencies and a reassessment of the fee management structure. The fee structure in its present form was considered high, seen as a flat amount that failed to take into consideration the size of the amount that was being offset, and it did not offer any transparency in total annual charges.

Certain technology improvement measures were equally considered germane to the future success of TOP in its G2G relations. System upgrades were often done in the production environment after they have been subjected to rigorous testing in all the appropriate lower environments and after determining that all the components within the system will work with the upgrades. At least one participant called for frequent weekly updates that will assure that the timing issue often experienced with payments was corrected. There was also a proposed system redesign to TOP NG whose goal was to replace current old technologies such as MicroFocus COBOL and leverage with new ones such as JAVA and agile programming, and cloud computing, and greater emphasis on documentation of processes, upgrades, and fixes.

Finally, FMS commissioner's testimony to a subcommittee in Congress provided a number of other improvement measures. These included legislative change proposals that were projected would increase debt collection amount by a combined total of about $5.5 billion in 10 years. The measures also included increased call center and collection capacity through the repurposing of Austin Financial Center (AFC) to a debt collection center, improved phone system, and collaboration and cooperation with the creditor agencies and the states.

Overall, data collected through the interviews conducted and the publicly obtained documents revealed that TOP provided the advantages and possessed the key characteristics of G2G e-Gov as noted in the literature. It equally showed that like any G2G implementation, it was also faced with a number of challenges and problems. The study provided a number of improvement measures that could help to address some of these challenges and problems and further enhance the stature of TOP as an example of G2G e-Gov program. Chapter 5 provides the interpretation of the findings, implications for social change, recommendations for action and further study, and a reflection on my experience.

Chapter 5: Summary, Recommendations, and Conclusion

Introduction

The purpose of this research was to gain a deeper understanding of G2G form of e-Gov using TOP as a case study. The study sought to answer the central research question: how can G2G approach to e-Gov bring about efficiency, accountability and value to service delivery? The subquestions from this central question are as follows:

1. What is the nature of G2G e-Gov implementation of FMS' Treasury Offset Program (TOP)?
2. What are the challenges confronting G2G e-Gov implementation in the U.S. Government?
3. What are the specific problems confronting the implementation, management, and usage of TOP within the context of G2G e-Gov?
4. How can G2G e-Gov be improved as an integral part of e-Gov?

The goal of the central research question was to determine the extent to which G2G e-Gov, as exemplified by TOP aligned with some of the core potential benefits of e-Gov concept such as accountability, efficiency, effectiveness, collaboration, cooperation, and information sharing. Subquestion 1 aimed at extending the central research questions by exploring the nature and characteristics of TOP as an illustration of G2G e-Gov. Both Subquestions 2 and 3 of the central research question sought to find out what were the challenges and problems facing TOP as a case study of G2G e-Gov. Finally, the rationale behind Subquestion 4 was to bring to fore the improvement strategies and measures needed for TOP to further fulfill its nature and characteristics as a G2G e-Gov example.

Data that were collected and analyzed through interviews and documents revealed that the use of TOP as a case study for G2G e-Gov confirmed some of the benefits and characteristics often associated with e-Gov in general and G2G in particular in the literature. The program was enabled by the DCIA of 1996 and guided for accountability by a myriad of mandates and regulations. It fostered efficiency and effectiveness, agency collaboration and cooperation, and information sharing. Its nature also showed that it was both electronic and online and was used for debt referrals and collections by the creditor agencies and states. TOP was equally governed by due process and formal agreements as well as enabled by access and connections among participating entities. The study also confirmed that as a G2G e-Gov implementation, TOP was confronted with challenges and problems such as communication gap, old versus new technology, legislation, and regulatory restrictions, and legal issues. Among the improvement measures offered by the participants were effective communication, simplified process, and technology measures.

Interpretation of the Findings

The central research question related to how the G2G approach to e-Gov might bring about efficiency, accountability and value to service delivery. Data collected through interviews and historical documents revealed the inherent benefits of G2G e-Gov. It was found that TOP provided the benefits of accountability, efficiency and effectiveness, collaboration and cooperation, and information sharing. Accountability was derived through the enabling law, DCIA, other mandates and regulations, along with the periodic Congressional and Presidential reporting by government officials, and self regulation by some other creditor agencies where regulations were not specifically spelt out. Efficiency and effectiveness were obtained through the centralization of debt

collection activities of many federal agencies and states, a large number of debt collections, cost reduction, automation of processes, and flexibility of operations. The program offered agency collaboration and cooperation through basic program processing, state reciprocal agreements, and collaboration on legislative proposals. TOP as a G2G e-Gov program also provided the benefit of information sharing through process improvement, information dissemination, a web of information flow among different parties, webinar sessions, conferences, goodwill messages by participating agencies, technical bulletins, and executive level communication. All of these helped to engender value in service delivery.

These findings aligned with some of the potential benefits of the concept of e-Gov identified in the review of literature. TOP fulfilled the informal and formal forms of accountability espoused by Forrer et al. (2010) through periodic reporting to Congress and other governmental regulatory bodies such as the Office of Management and Budget (OMB) at the Executive Office of the President. The findings also lent support to the point made by Von Haldenwang (2004) that increasing use of information and communication technologies (ICT) offered significant improvements in public service delivery to both the private individuals and businesses. Even though the participants pointed to having other debt collection mechanisms outside of TOP, the program nevertheless was found to be central to their agencies' debt collection efforts. This centrality was as a result of the deliberate provisions in DCIA which centralized debt collection efforts in the Department of Treasury. Finally, the findings on agency collaboration and cooperation as well as information sharing matched the thesis that agency collaboration was a requirement for e-Gov due to the extensive effort, skill, and

knowledge needed for its implementation which may prove cumbersome for agencies to process and deploy individually (Bin-Sharf & Lazer, 2008).

Specifically, the findings of the case study on agency collaboration and cooperation and information sharing were congruent with the definitions of G2G e-Gov and the conceptual framework of IGR and IGM in the literature. G2G e-Gov as defined by OMB, (as cited in Park, 2007) and the United Nations (2003) was the IGR within and across the same level of government and between different levels of government with emphasis on cooperation, communication, and collaboration within an agency and among agencies at all levels of government. Similarly, Stever (2005) alluded to type two IGM of lateral relations, consensus or collaboration, and networking in which various governments in the arrangement were treated as equals in the policy implementation and they cooperated through agreements with the goal of accomplishing objectives that were unattainable achieve outside multilevel efforts. If one were going to agree that the emphasis in the concept of IGM was on building relationships among government units for technical and programmatic activities (Agranoff, 1996), then the findings of collaboration and information sharing in TOP are grounded in literature and in the conceptual framework of IGR and IGM.

Another feature of the concept of IGR and IGM found in the literature was information sharing, a characteristic equally central to the success of G2G e-Gov in particular and e-Gov in general. For instance, Wise and Nader (2008) noted that policy makers began to focus more on the importance of information sharing for the management of various government agencies involved in homeland security. Similarly, this study revealed that information sharing was germane for the success of implementing

TOP as a form of G2G e-Gov. Data collected showed the value of information sharing through process improvement, information dissemination, web of information flow among different parties, webinar sessions, conferences, goodwill messages by participating agencies, technical bulletins, and executive level communication.

Subquestion 1 inquired into the nature and characteristics of G2G e-Gov implementation of FMS' Treasury Offset Program (TOP). Here, the study found out through the evidentiary data provided by interviews and documents that TOP was both electronic and online in nature with emphasis on accuracy of data on all ends. The program's operations and the set up of connections between the creditor agencies and FMS for transmission of necessary files were guided by due process and formal agreements. Billions of U.S. dollars were referred to the system every year and it collected huge sums as well. Its electronic feature was provided through batch processing which was used for large transactions and the online processing was implemented through TOP Web client for debt maintenance tasks. Due process as required by the DCIA and provided by the creditor agencies to their borrowers were prerequisites for the offset of debtors' payments and it afforded the payees the opportunity to be duly informed of the reasons for the offsets and to verify, challenge, or appeal the offset. Formal requests and agreements were also required of the creditor agencies by FMS prior to certifying their debtors for offsets. Connection methods at different levels of affordability such as Connect: DIRECT, Connect: Enterprise, and Frame Relay were available to the agencies for batch processing and individual users were granted access for the online processing. Since FY 2006, an average of $340 billion was referred to TOP annually from various federal and state agencies and debt collections through the

program continued to increase averaging about $4.18 billion each FY. Finally, nonconforming data revealed that creditor agencies used other internally administered tools apart from TOP.

Findings about TOP being electronic and online validated the overarching definition of e-Gov which emphasized the use of ICTs to deliver services to various sectors of the society. E-Gov as defined by the World Bank (2010) involved the use of information technologies by government organizations for the purpose of transforming relations between them and the citizens, businesses and other government agencies. Certainly, TOP was built and enabled by the ICTs and its day to day operations with the creditor and payment agencies were equally managed using ICTs.

The findings on the necessary connections and access to TOP by the creditor agencies which allowed for the transmission of debt information and data were also in agreement with e-Gov interoperation and interoperability which were considered central to G2G of e-Gov. e-Gov interoperation and interoperability stressed the technical links and coordination of the e-Gov information systems and their associated parts (Scholl & Klischewski, 2007). Interoperation existed in a situation where autonomous government organizations enabled their two or more separate e-Gov information systems and component parts to be effectively used for merger of processes or information sharing among themselves and with external partners. Seen as an advanced form of interoperation in terms of technical systems and capability, interoperability referred to the leveraging of joint capabilities of computer and networking software and hardware owned by independent agencies to transmit useful and coherent information among one another where communication links were previously lacking.

Moreover, the findings on the formalized agreements that were required before creditor agencies could operate on TOP supported the position by Stever (2005) that agencies involved in IGM cooperated through agreements to achieve certain objectives. They also provided credence to e-Gov federation, a form of e-Gov integration in G2G e-Gov. E-Gov federation involved autonomous government agencies and organizations entering into a formalized contract of limited or permanent duration and access (Scholl & Klischewski, 2007). The contract strictly governed processes that were being merged or/and the methods and formats adopted for safeguarding utmost quality of information sharing. While federation allowed the original owners of the processes and information to retain their ownership, it provided for the possibilities of processing of transactions across participating agencies. These features were equally found with TOP and its participating agencies.

Subquestion 2 reflected on the challenges confronting G2G e-Gov implementation in the U.S. Government. Subquestion 3 equally asked what the specific problems confronting the implementation, management, and usage of TOP within the context of G2G e-Gov were. Analysis of interview transcripts in the study revealed some quality issues of timing and synchronization, dilemma between the continued use of old and limited technology with the benefits of proven reliability for TOP and easy to maintain but uncertain new technology, costly implementation process including changed file formats, manual reversals and refunds, information access, and little or no success with Debt Check system. There were also the challenges of legislative and regulatory restrictions, security stipulations, and communication gap between FMS and the creditor

agencies relating to delayed dissemination of information on issues affecting the system leading to schedule delays in the debt collection process.

Although no major problems were revealed that could adversely affect the effectiveness of TOP, nevertheless, a few problems were identified. These were legal issues surrounding the eligibility of certain payments for offsets and injured spouse claims authorized by IRS for the taxpayers, with no statute of limitations on when they could be filed. Other problems were the unsatisfactory experiment of sharing platform resources with other applications, performance problems associated with contention of transactions and system maintenance, and occasional delayed operations due to unique incompatibility issues with some states.

These challenges and problems with which TOP was confronted confirmed evidence in the literature that showed that potential barriers confronted G2G e-Gov implementations. For instance, studies by Gil-Garcia and Pardo (2005) and Lam (2005) grouped these barriers and challenges into categories such as strategic, technology, information and data, policy, legal and regulatory, organizational and managerial, and institutional and environmental. Sholl and Klischewski (2007) also provided a myriad of constraints that ranged from constitutional/legal to performance to information quality (2006). Issues such as identification and data sharing (Otjacques, Hitzelberger, & Feltz, 2007); freedom of information and data protection (Batista & Cornock, 2009) were also identified in the literature for G2G e-Gov.

The subject of inquiry in Subquestion 4 was on how G2G e-Gov can be improved as an integral part of e-Gov. Data gathered and analyzed largely through interviews and to some extent by FMS commissioner's Congressional testimony showed some

improvement measures and strategies that could be adopted for TOP to be more effective and efficient as an example of G2G e-Gov. The improvement measures suggested for TOP, while not exactly the same, confirmed the need for mitigating strategies for the barriers and challenges to G2G e-Gove found in the literature. Specifically for TOP, better communication, ontime, and useful information dissemination were suggested to help alleviate the timing and synchronization challenges that have confronted OCSE and the states in the past. Better communication could also assist ED in its efforts to identify the sources of payment streams that would be beneficial to their debt collection operations. Secondly, there was a call for a simplified process of TOP operations which included the replacement of the current rigid file formats that may or may not suit the needs of the creditor agencies with flexible ones and a reassessment of the current high, nondiscriminatory, and closed fee management structure.

Related to technology improvements, there were suggestions for continued rigorous testing of system upgrades in all the appropriate lower environments before putting them in the production environment. Also suggested were frequent weekly updates to address the timing issue sometimes experienced with payments, a redesign to TOP NG, and greater emphasis on documentation of processes, upgrades and fixes.

The FMS commissioner's testimony before House of Representatives' Oversight and Government Reform Subcommittee on Government Organization, Efficiency and Financial Management in March 2011 provided other improvement measures such as legislative proposals projected to increase debt collection amount by a combined total of about $5.5 billion in 10 years. Additionally, the testimony noted increased call center and collection capacity through repurposing of Austin Financial Center (AFC) to a debt

collection center and improved phone system in addition to collaboration and cooperation with the creditor agencies and the states.

Implications for Social Change

Findings from this study further amplified how ICTs could be used to effect social change in governmental operations through e-Gov in general and how G2G e-Gov in particular could be used to enhance the principles of the new public management of accountability, efficiency and effectiveness, inter agency collaboration, and information sharing. In the face of current economic crisis and increasing national public debt and deficits, taxpayers continue to demand accountability, efficiency, and effectiveness from their governments and public officials. These demands have led to a greater emphasis by governments at every level on cutting their operating costs and improve efficiency while maintaining the same level of service delivery.

The use of TOP, a G2G e-Gov program, for debt collections by federal agencies and the states assured that costs of debt collections were reduced as many of those agencies and states can supplement their debt collection efforts with the use of TOP rather than expand their debt collection capacity. The program also helped to ensure that delinquent debtors were held accountable for their debt obligations through electronic matching of identifiers with payments due to them and intercept those payments to defray the debts they owed.

The results of the study also demonstrated the importance of cooperation, collaboration, and information sharing among government officials at the federal level on one hand, and between federal and state officials on the other. For instance, the State Reciprocal Program within TOP ensured that the states could collect debts due to the

federal government that were delinquent and intercept for offset and Treasury was able to collect delinquent state debts by intercepting federal nontax payments for offsets.

Overall, the findings of the research on the benefits, nature, challenges and problems, and improvements of TOP could be beneficial to agencies and public policy practitioners and administrators. The case study helps to demonstrate G2G e-Gov in action to practitioners and provides them with an example in TOP on how to conduct better assessments of their own environments, perform cost benefit and alternative analyses, and make informed decisions.

Beyond the borders of the United States, the findings of the research will prove invaluable to policy makers in developing countries that continue to struggle with the implementation of e-Gov initiatives. They may be able to learn from the study's findings on challenges and problems of G2G e-Gov on how to address the issues that confront them as they implement e-Gov in these societies. The findings on accountability, cooperation and collaboration, efficiency and effectiveness, and information sharing as well as improvement measures could also be of value for their e-Gov implementations.

Recommendations for Action

In light of the conclusions that came out of the data for this study, the following recommended actions are made in order to foster the management, operations, support, and oversight of TOP in the world of G2G e-Gov. Some of the recommendations are offered to the executive management of FMS as well as the program management team of TOP, also at FMS. Externally, there are also some recommendation provided for the creditor agencies, U.S. Congress, federal regulatory organizations, and state governments.

FMS' Executive Management

Strategically, it is recommended that FMS executive management strengthen the enabling environment and continue to provide necessary support to the TOP program management team so as to be more effective. Efforts geared towards increased call center and collection capacity and collaboration and cooperation with the creditor agencies and the states were already in the right direction.

At the same time, given the critical role that TOP plays in the debt collection process for the federal and state governments, it is crucial that the organization's leadership be a willing advocate, internally and externally, for a conducive electronic climate for the program to thrive. These efforts could range from the selection of the most efficient and appropriate platform for performance to crafting, revising, and updating policies that could enhance operations, to influencing Congress and regulatory agencies such as OMB for understanding and cooperation.

Another area where the influence of FMS executives can be of benefit is in the restructuring and reform of the fee structure. As the study showed, some of the participants representing the largest participating creditor agencies in TOP were not pleased with the current fee structure and with the fact that amount collected in fees were not transparent to them. A restructuring and reform of the fee system may provide the creditor agencies the assurance they desired in this respect.

TOP Program Management Team

First, it is imperative that the TOP program management team at FMS take concerted efforts to improve communication channels between it and the creditor agencies. As the findings revealed, the agencies sought for timely and useful information

whenever there were issues on the system and on the sources of payment streams for the debts that were offset. This would further enhance the public service values of cooperation, collaboration, and information sharing, which also are the potential benefits of e-Gov implementations.

It is equally important that the program management team continue to engage the creditor agencies as it transitioned the system to TOP NG aimed at leveraging new technologies. As observed, the upgrade of the old technologies had become a virtual necessity. However, as crucial as the decision to upgrade was for the support and performance of TOP, the team should also be mindful of how this change will impact other stakeholders. Sustained engagement would further bolster a sense of collaboration and cooperation crucial to G2G e-Gov.

Furthermore, an upgrade to TOP NG should also be an opportunity to improve the offset process. It is critical that the current file format structure be made more flexible, adaptable, and cost effective for the agencies without neglecting standardization. In the same vein, due considerations should continue to be paid to rigorous testing and documentation of upgrades to the platform and software so as to improve the efficiency, timeliness, and performance of the program.

Creditor Agencies

TOP participating creditor agencies at the federal and state levels of government should also continue to leverage all opportunities available to them to communicate the challenges, problems, and alternative improvement measures to the TOP program management team. Communication is a two way relationship. In order to bridge the communication gap identified in the study, the agencies would also need to engage the

program managers more. Similarly, the agencies should be willing to socialize and disseminate information to other agencies and states that are currently not participating, the benefits they derive with their participation in the program.

Congress, Regulatory Bodies, and State Governments

Since e-Gov is an integral and cardinal part of contemporary public service in the United States and since the collection of delinquent debts owed to governments is crucial in the tightening budget environments, it is paramount that Congress, regulatory bodies such as the OMB, and state legislatures and governments help to strengthen the environment in which TOP operates for success. The implementation of the legislative proposals identified in the 2012 budget projected to increase debt collections by about $5.5 billion in 10 years (FMS, 2011e, p. 5) would be a good beginning. It is also recommended that Congress revise the legislation on IRS provisions on injured spouse claims, currently with no statue of limitations on payments that were offset, as well as review other legislations on security and privacy which though were created with good intentions, but may produce unintended consequences and be counterproductive.

For OMB, it is important that the regulatory body engages more with the TOP program management team for more information. Depending on external sources for information as the study showed could produce invalid and erroneous information. Direct engagement with the program management team would further assure that undue pressure is not placed on the team to execute directives that may be unviable and unrealistic.

It is also recommended that state legislatures and governments that are currently not participating in the State Reciprocal Program aspect of TOP consider joining the

program. This will provide them with the benefits of cooperation, collaboration, and information sharing through the IGR. More importantly, the program also promises to be beneficial to the states that look to shore their revenues in the face of the budget crises that confront them.

Recommendations for Further Research

One area of the study that can be further explored for the understanding of G2G e-Gov is the participation of the payment agencies, both Treasury Disbursed Offices and Non-Treasury Disbursed Offices in TOP. The participants in this current study were drawn from the creditor agencies that have the debts owed to them offset by the payments expected from the Treasury Disbursed Offices and Non-Treasury Disbursed Offices. Studying the participation of the payment agencies in TOP would likely produce different perspectives and results from those of the creditor agencies. A study in this area might seek to find out what implications inhere in TOP through the participation of the payment agencies in TOP as an example of G2G e-Gov?

One noticeable aspect of TOP from the study was the wide differential between the amount of debts in U.S. dollar terms that was referred every year to TOP and the amount that was actually collected. For instance, in FY 2009 and FY 2010, a total of $372.7 billion and $422.2 billion were respectively referred in delinquent debts by the creditor agencies (FMS, 2011c). Correspondingly, $4.58 billion and $5.31 billion dollars were collected for both financial years through TOP. A study that focuses on this wide divergence will be of value to further understanding the challenges of a G2G e-Gov implementation.

Another area that can be explored for further research is the study of the two other forms of e-Gov: G2B and internal efficiency and effectiveness. This study honed in only on the G2G e-Gov with the purpose of filling the existing gap in the literature that tended to focus more on the G2C e-Gov. There is likelihood that different results would emerge from studies that specifically focus on gaining further understanding of G2B and internal efficiency and effectiveness. A potential research might ask, what is the nature of G2B e-Gov at any level of government? What constitutes internal efficiency and effectiveness in e-Gov? How is internal efficiency and effectiveness in e-Gov measured?

Reflection on Researcher's Experience

Based on the review of the literature on the concept of e-Gov, G2G e-Gov, and preliminary analysis of TOP which was used as a case study, the research was predicated on a number of assumptions. It was assumed that e-Gov approaches represented one of the most efficient and effective ways of providing government services to the citizens and to one another. It was also assumed that TOP presented the integrative and collaborative features of G2G approach to e-Gov, that the participants in the study were deeply experienced in and possessed indepth knowledge of TOP, and that they will be willing to honestly discuss and provide insights on the system. Additionally, I had a preconceived idea that TOP was the only debt collection tool available to the creditor agencies from which the participants were drawn.

To a considerable extent, the research confirmed virtually all the initial assumptions made prior to the conduct of the study. E-Gov approaches continued to be the efficient and effective ways used by governmental institutions for providing services to the citizens and to one another. To that extent, leveraging e-Gov services have led to

cost reduction, transparency, participation, information sharing, collaboration, and cooperation. The research also showed that TOP was both electronic and online and that it was exclusively targeted to other governmental institutions rather than to private citizens (G2C) and to businesses (G2B). Indeed, as in the case of ED that used the guaranty agencies (GAs), which are non governmental, as part of their debt collection process; TOP was only enabled to deal directly with ED and not with its GAs.

All the participants provided candid responses to the interview questions that were posed orally and in writing. Data were gathered from all participants in a professional and cordial manner. I would say that the communication between the participants and I was characterized by mutual respect and understanding. Overall, the participants were very helpful and supportive of me in the data collection process.

As for my preconceived idea about TOP being the only debt collection tool available to the creditor agencies, the research refuted this thinking. All the participants from the creditor agencies pointed to other tools that they used apart from TOP. TOP only represented a crucial part of their debt collection process rather than being a sole collection tool available to them. Despite the usage of these other tools however, data related to this finding did not show that the use of other tools diminished the importance of TOP to the agencies' debt collection activities.

For the coding procedure, my experience with the HyperRESEARCH software, a product of Researchware, was very productive. Using the tutorials ported with the software along with the preinstalled studies, I learned how to create cases (categories), codes, and generate useful viewable and printable reports which helped in making the transcribed data more meaningful. HyperRESEARCH was generally flexible to

manipulate during the coding process as cases and codes could be renamed, moved, and deleted.

Conclusion

This qualitative instrumental case study on TOP sought to provide a thorough understanding to G2G form of e-Gov and address the gap in the e-Gov literature, which tended to focus more on G2C e-Gov to the neglect of other forms such as G2G. As the findings on TOP as an illustrative case study of G2G e-Gov revealed, researchers and practitioners need to emphasize the importance of G2G e-Gov alongside with G2C e-Gov to public service delivery. The benefits of accountability, efficiency and effectiveness, collaboration and cooperation, and information sharing in new public management, as well as the elements of access and connections and formal agreements in e-Gov inhere in the implementation of TOP as a G2G e-Gov. These benefits and findings in the study constitute critical pointers to social change in public service management through the use of G2G e-Gov for collections of debts owed to governments.

Just like many other e-Gov implementations, TOP was confronted with challenges and problems such as impaired communication, expensive implementation process for stakeholders, technology changes, legislative and regulatory restrictions, and security and privacy issues. The good news is that the challenges and problems to TOP are not insurmountable. There were a number of improvement measures found that could be helpful in mitigating these challenges and problems. These included strong communication between the TOP program office and the agencies and states, simplified process, enhanced collaboration and partnerships, technology improvements, legislative proposals, and increased capacity.

References

Abuali, A., Alawneh, A., & Mohammad, H. (2010). Factors and rules effecting in e-Government. *European Journal of Scientific Research, 39,* 169-175. Retrieved from the Academic Search Complete database.

AlAwadhi, S., & Morris, A. (2009). Factors influencing the adoption of e-Government services. *Journal of Software, 4,* 584-590. Retrieved from the Directory of Open Access Journals.

Agranoff, R., (1996). Managing intergovernmental processes. In J. L. Perry (ed.), *Handbook of public administration* (2nd ed., pp. 210-231). San Francisco, CA: Jossey-Bass.

Agranoff, R., & McGuire, M. (1999). Expanding intergovernmental management's hidden dimensions. *The American Review of Public Administration, 29,* 352-369. doi:10.1177/02750749922064472

Agranoff, R., & McGuire, M. (2004). Another look at bargaining and negotiating in intergovernmental management. *Journal of Public Administration Research & Theory*, *14*(4), 495-512. doi:10.1093/jopart/muh033

Anderson, W. (1960). *Intergovernmental relations in review*. Minneapolis, MN: University of Minnesota Press.

Babbie, E. (2007). *The practice of social research*. Belmont, CA: Thomson Wadsworth.

Batista, L., & Cornock, M. (2009). Information sharing in e-government initiatives: freedom of information and data protection issues concerning local government. *Journal of Information, Law and Technology*, 1361-4169. Retrieved from the ScienceDirect database.

Bennett, A., & Elman, C. (2006). Qualitative research: Recent developments in case study methods. *Annual Reviews of Political Science, 9,* 455-476. doi: 10.1146/annurev.polisci.8.082103.104918

Bin-Sharf, M. C., & Lazer, D. (2008). A new order of things: Managing novelty and cooperation in e-government projects. Retrieved from http://ksgnotes1.harvard.edu/Research/wpaper.nsf/rwp/RWP08-048/$File/rwp_08_048_lazer.pdf

Bloomfield, B. P., & Hayes, N. (2009). Power and organizational transformation through technology: Hybrids of electronic government. *Organization Studies, 30,* 461- 487. doi:10.1177/0170840609104394

Borenstein, J. (2008). The expanding purview: Institutional review boards and the review of human subjects research. *Accountability in research: Policies & Quality Assurance, 15,* 188-204. doi:10.1080/08989620802201866

Brown, D. (2005). Electronic government and public administration. *International Review of Administrative Sciences, 71,* 241- 254. doi:10.1177/0020852305053883

Brown, M. M. (2007). Understanding e-Government benefits: An examination of leading-edge local governments. *The American Review of Public Administration, 37,* 178-197. doi: 10.1177/0275074006291635

Bumgarner, J., & Newswander, C. B. (2009). The irony of NPM: The inevitable extension of the role of the American state. *The American Review of Public Administration, 39,* 189-207. doi: 10.1177/0275074008315372

Carter, L., & Belanger, F. (2005). The utilization of e-government services: Citizen trust, innovation and acceptance factors. *Information Systems Journal*, *15*(1), 5-25. Retrieved from the Business Source Premier.

Carter, L., & Weerakkody, V. (2008). Egovernment adoption: A cultural comparison. *Information Systems Front*, *10,* 473-482. doi: 10.1007/s10796-008-9103-6

Caruson, K., & MacManus, S. (2006). Mandates and management challenges in the trenches: An intergovernmental perspective on homeland security. *Public Administration Review*, *66*(4), 522-536. doi:10.1111/j.1540-6210.2006.00613.x

Charih, M., & Robert, J. (2004). Government on-line in the federal government of Canada: The organizational issues, *International Review of Administrative Sciences, 70,* 373-384. doi:10.1177/0020852304044262.

Collingridge, D. S., & Gantt, E. E. (2008). The quality of qualitative research, *The American Journal of Medical Quality, 23,* 389-395. doi:10.1177/1062860608320646

Cordella, A., & Iannacci, F. (2010). Information systems in the public sector: The e-Government enactment framework. *The Journal of Strategic Information Systems, 19,* 52-66. Retrieved from the ScienceDirect Journals database.

Cowley, J., & Manta Conroy, M. (2006). The growth of e-Government in municipal planning. *Journal of Urban Technology, 13,* 81-107. doi:10.1080/10630730600752892

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches*. 2nd ed. Thousand Oaks, CA: Sage Publications.

Crouch, M., & McKenzie, H. (2006). The logic of small samples in interview-based qualitative research. *Social Science Information, 45,* 483-499. doi:10.1177/0539018406069584

Dugdale, A., Daly, A., Papandrea, F., & Maley, M. (2005). Accessing e-Government: Challenges for citizens and organizations. *International Review of Administrative Sciences*, *71,* 109-118. doi:10.1177/0020852305051687

Dwyer, S., & Buckle, J. (2009). The space between: On being an insider-outsider in qualitative research. *International Journal of Qualitative Methods, 8,* 54-63. Retrieved from https://ejournals.library.ualberta.ca/index.php/IJQM/article/viewFile/2981/5198

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal, 50*(1), 25-32. Retrieved from http://aom.pace.edu/AMJ/editorials/Eisenhart.Graebner.2007.pdf

Evan-Cowley, J., & Conroy, M.M. (2006). The growth of e-Government in municipal planning. *Journal of Urban Technology*, *13,* 81-107. doi:10.1080/10630730600752892

Executive Office of the President: Office of Management and Budgeting. (2003). The President's Management Agenda. Retrieved from http://www.whitehouse.gov/omb/budget/fy2002/mgmt.pdf

Fairchild, A., & de Vuyst, B. (2008). Governmental collaboration and infrastructural standards in Belgium. *The Electronic Journal of E-Government, 5*(2), 145-152. Retrieved from the Political Science Complete database.

Faokunla, O. (2009). Knowledge area module V: Democratic governance. (Unpublished Doctoral Knowledge Area Module (KAM). Walden University, Minneapolis, MN.

Federal Bureau of Investigation (FBI). (2010). Terrorist Screening Center. Retrieved from http://www.fbi.gov/terrorinfo/counterrorism/tsc.htm

Ferro, E., & Sorrentino, M. (2009). Can intermunicipal collaboration help the diffusion of e-government in peripheral areas? Evidence from Italy. *Government Information Quarterly, 27*, 17-25. doi: 10.1016/j.gid.2009.07.005

Financial Management Service (FMS), (2009). Treasury Offset Program. Retrieved from http://www.fms.treas.gov/debt/top.html

Financial Management Service (FMS), (2011a). Cross-Servicing: Cross-Servicing technical bulletin 05-15 - Hurricane Katrina disaster. Retrieved from http://www.fms.treas.gov/debt/crosserv.html

Financial Management Service (FMS), (2011b). Public laws, statutes, regulations & guidance. Retrieved from http://www.fms.treas.gov/debt/regulations.html

Financial Management Service (FMS), (2011c). The Office of Legislative and Public Affairs: Congressional & Executive. Retrieved from http://www.fms.treas.gov/news/congress.html

Financial Management Service (FMS), (2011d). Reports and Statistics. Retrieved from http://www.fms.treas.gov/debt/reports.html

Financial Management Service (FMS), (2011e). Testimony of Commissioner David A. Lebryk before the House Oversight and Government Reform Subcommittee on

Government Organization, Efficiency and Financial Management. Retrieved from http://www.fms.treas.gov/news/reports/testimony-mar11-2011.pdf

Financial Management Service (FMS), (2011f). State Reciprocal Program. Retrieved from http://fms.treas.gov/debt/top_srp.ppt

Financial Management Service (FMS), (2011g). The Office of Legislative and Public Affairs: Fact Sheets – Debt Check. Retrieved from http://www.fms.treas.gov/news/factsheets/debtcheck.html

Flyvberg, B. (2006). Five misunderstandings about case study research. *Qualitative Inquiry*, *12*, 219 – 245. doi:10.1177/1077800405284363

Forrer, J., Kee, J. E., Newcomer, K. E., & Boyer, E. (2010). Public-private partnerships and the public accountability question. *Public Administration Review*, *70*(3), 475-484. Retrieved from the Business Source Complete.

Gil-Garcia, J. R., Chun S. A., & Janssen, M. (2009). Government information sharing and integration: Combining the social and the technical. *Information Polity, 14,* 1-10. doi:0.3233/IP-2009-0176

Gil-Garcia, J. R., & Pardo, T.A. (2005). E-government success factors: Mapping practical tools to theoretical foundations. *Government Information Quarterly, 22,* 187-216. doi:10.1016/j.giq.2005.02.001

Gore, A. A. (1993). From red tape to results: Creating a government that works better and costs less. Retrieved from http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/14/0a/c1.pdf

Gottschalk, P., & Solli-Saether, H. (2008). Stages of e-government interoperability. *Electronic Government, an International Journal, 5(3),* 310-320. Retrieved from http://www.semicolon.no/EG08%20Gottschalk%20-%20stages%20of%20e-government%20interop.pdf

Government Printing Office. (2002). *E-Government Act of 2002.* (H.R. 2458, Public Law No 107-347 107th Congress). Retrieved from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107_cong_public_laws&docid=f:publ347.107.pdf

Government Printing Office. (1997). Taxpayer Relief Act of 1997 (Public Law No 105-34). Retrieved from http://www.gpo.gov/fdsys/pkg/PLAW-105publ34/pdf/PLAW-105publ34.pdf

Government Printing Office. (1996a). *Defense Authorization Act for Fiscal Year 1996: Division E-Information Technology Management Reform* (Public Law No 104-106 104th Congress). Retrieved from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=104_cong_public_laws&docid=f:publ106.104

Government Printing Office. (1996b). *Debt Collection Improvement Act of 1996.* (Public Law No 104-134). Retrieved from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=104_cong_public_laws&docid=f:publ134.104.pdf

Government Printing Office. (1996c). *Supporting Families: Collecting Delinquent Child Support Obligations* (Executive Order 13019). Retrieved from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=1996_register&docid=fr03oc96-143.pdf

Government Printing Office. (1994). *Federal Acquisition Streamlining Act of 1994 (FASA V).* (S.1587 103rd Congress). Retrieved from

http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=103_cong_bills&docid=f:s1587enr.txt.pdf

Government Printing Office. (1993). *Government Performance and Results Act of 1993* (S.20 103rd Congress). Retrieved from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=103_cong_bills&docid=f:s20enr.txt.pdf

Guijarro, L. (2007). Interoperability frameworks and enterprise architectures in e-government initiatives in Europe and the United States. *Government Information Quarterly, 24*(1), 89-101. Retrieved from the ScienceDirect database.

Hernes, T. (2005). Four ideal-type organizational responses to new public management reforms and some consequences. *International Review of Administrative Sciences, 71*, 5-17. doi: 10.1177/0020852305051680

Internal Revenue Service (IRS). (2010). Taxpayer Identification Number (TIN). Retrieved from http://www.irs.gov/businesses/small/international/article/0,,id=96696,00.html

Internal Revenue Service (IRS). (2011). The Economic Recovery Payment. Retrieved from http://www.irs.gov/newsroom/article/0,,id=204468,00.html

Isaac, W. C. (2007). *Performance measurement for the e-Government initiatives: A comparative study*. (Doctoral dissertation). Retrieved from ProQuest database. (AAT 3283471)

Jos, P. H., & Tompkins, M. E. (2004). The accountability paradox in an age of reinvention: The perennial problem of reserving character and judgment. *Administration & Society, 36*, 255-281. doi:10.1177/0095399704263479

Justice, J. B., Melitski, J., & Smith, D. L. (2006). E-Government as an instrument of fiscal accountability and responsiveness: Do the best practitioners employ the best practices? *The American Review of Public Administration, 36*, 301-322. doi:10.1177/0275074005283797

Kahn, R. E., & Cerf, V. G. (2007, March). What is the Internet (and what makes it work). *Broad Band Internet Services*. Retrieved from http://dr-net-cyber.blogspot.com/2007/03/internet.html

Kamensky, J. M., & Burlin, T. J. (2004). *Collaboration: Using networks and partnerships*. Oxford, United Kingdom: Rowman & Littlefield Publishers, Inc.

Kapucu, N., Arslan, T., & Collins, M. L. (2010). Examining intergovernmental and interorganizational response to catastrophic disasters: Toward a network centered approach. *Administration & Society, 20,* 1-26. doi:10.1177/0095399710362517

Kapucu, N. (2006). Interagency communication networks during emergencies: Boudary spanners in multiagency coordination. *The American Review of Public Administration, 36,* 207-224. doi:10.1177/0275074005280605

Kernaghan, K. (2009). Moving towards integrated public governance: Improving service delivery through community engagement. *International Review of Administrative Sciences, 75,* 239-254. doi:10.1177/0020852309104174

Kim, S. (2005). The role of trust in the modern administrative state: An integrative model. *Administration & Society, 37,* 611- 635. doi:10.1177/0095399705278596

Klischewski, R., & Scholl, H. J. (2006). *Information quality as a common ground for key players in e-Government integration and interoperability*. Proceedings of the 39th Hawaii International Conference on System Sciences – 2006. Retrieved from

http://www.computer.org/plugins/dl/pdf/proceedings/hicss/2006/2507/04/250740072.pdf?template=1&loginState=1&userData=anonymous-IP%253A%253AAddress%253A%2B67.234.17.205%252C%2B%255B172.16.161.5%252C%2B67.234.17.205%252C%2B127.0.0.1%255D

Knapik, M. (2006). The qualitative research interview: Participants' responsive participation in knowledge making. *International Journal of Qualitative Methods, 5,* 1-13. Retrieved from http://search.ebscohost.com.ezp.waldenulibrary.org

Kotaro, T. (2003). Transparency of government (Part 1): Breakthrough for reforming the shape of a nation. *Economics Review, 7*(7). Retrieved from http://www.rieti.go.jp/en/special/economics-review/013.html

Kraemer, K. L. (1996). Managing information systems. In J.L. Perry (Ed.), *Handbook of public administration* (2nd Ed.). (pp 574-589). San Francisco CA: Jossey-Bass Inc

Kumar, V., Mukerji, B., Butt, I., & Persaud, A. (2007). Factors for successful e-Government adoption: A conceptual framework. *The Electronic Journal of e-Government, 5,* 63-76. Retrieved from the Political Science Complete database.

Kuper A., Lingard, L., & Levinson, W. (2008). Critically appraising qualitative research, *British Medical Journal, 337,* 687-692. doi:10.1136/bmj.a1035

Kuper, A., Reeves, S., & Levinson, W. (2008). Qualitative research: An introduction to reading and appraising qualitative research. *British Medical Journal, 337,* 404-409. doi:10.1136/bmj.a288

Lam, W. (2005). Barriers to e-government integration. *Journal of Enterprise Information Management, 18,* 511 – 530. doi:10.1108/17410390510623981.

Larsen, D., Flesaker, K., & Stege, R. (2008). Qualitative interviewing using interpersonal process recall: Investigating internal experiences during professional-client conversations. *International Journal of Qualitative Methods, 7,* 18-37. Retrieved from http://ejournals.library.ualberta.ca/index.php/IJQM/article/view/1617/1155

Lee, B., & Gregory, D. (2008). Not Alone in the Field: Distance Collaboration via the Internet in a focused ethnography. *International Journal of Qualitative Methods, 7,* 30-46. Retrieved from http://ejournals.library.ualberta.ca/index.php/IJQM/index

Lee, J., & Rao, H.R, (2009). Task complexity and different decision criteria for online service acceptance: A comparison of two e-government compliance service domains. *Decision Support Systems, 47,* 424-435. doi:10.1016/j.dss.2009.04.009

Macintosh, A., Gordon, T., & Renton, A. (2009). Providing argument support for E-participation. *Journal of Information Technology & Politics*, *6*(1), 43-59. doi:10.1080/19331680802662113.

Margetts, H. (2006). E-government in Britain: A decade on. *Parliamentary Affairs, 59* (2), 250-265. doi:10.1093/pa/gs1003.

Mason, S. (2008). Regional cooperation in employment and training policy: A matter of collective action or intergovernmental relations? *Community Development, 39*(4), 1-16. doi:10.1080/15575330809489655.

Meyrick, J. (2006). What is good qualitative research?: A first step towards a comprehensive approach to judging rigor/quality. *J Health Psychol, 11,* 799 – 808. doi:10.1177/1359105306066643.

McNabb, D. E. (2008). *Research methods in public administration and nonprofit management: Quantitative and qualitative approaches.* (2nd ed.). Armonk, NY: M.E. Sharpe.

McNeal, R., Hale, K., & Dotterweich, L. (2008). Citizen-government interaction and the Internet: Expectations and accomplishments in contact, quality, and trust. *Journal of Information Technology & Politics, 5,* 213-229. doi:10.1080/19331680802298298

Metzenbaum, S. H. (2008). From oversight to insight: Federal agencies as learning leaders in information age. In Conlan, T.J. & Posner, P.L. (eds.). *Intergovernmental Management for the twenty first century,* Washington, DC: Brookings Institution Press.

Morgeson, F., & Mithas, S. (2009). Does e-Government measure up to e-business? Comparing end user perceptions of U.S. federal government and e-Business web sites. *Public Administration Review, 69,* 740-752. Retrieved from the Business Source Complete.

Moen, T. (2006). Reflections on the narrative research approach. *International Journal of Qualitative Methods, 5,* 1-11. Retrieved from http://www.ualberta.ca/~iiqm/backissues/5_4/HTML/moen.htm

Nathan, R. P. (2008). Updating theories of American federalism. In Conlan, T. J. & Posner, P.L. (eds.). *Intergovernmental Management for the twenty first century*, Washington, DC: Brookings Institution Press.

Obama, B. (2009). Transparency and open government. Retrieved from http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment/

Office of Child Support Enforcement (OCSE) (2010). Collection and enforcement of past-due child support Obligations through the Federal Income Tax Refund Offset, Administrative Offset, Passport Denial, Multistate Financial Institution Data Match, and Federal Insurance Match Programs. Retrieved from http://www.acf.hhs.gov/programs/cse/pol/AT/2010/at-10-04.htm

Office of Management and Budget (2010). *Office of E-Government & Information Technology*. Retrieved from http://www.whitehouse.gov/omb/e-gov/

Office of Management and Budget. (n.d.). *Government Paperwork Elimination Act* (44 USC 3504). Retrieved from http://www.cio.gov/documents/paperwork_elimination_act.html

Office of Management and Budget. (2003). *The President's Management Agenda*. Retrieved from http://www.whitehouse.gov/omb/budget/fy2002/mgmt.pdf

Onwuegbuzie, A. J., & Leech, N. L. (2007). Validity and qualitative research: An oxymoron? *Quality and Quantity, 41,* 233-249. doi:10.1007/s11135-006-9000-3

Otjacques, B., Hitzelberger, P., & Feltz, F. (2007). Interoperability of e-Government information systems: Issues of identification and data sharing. *Journal of Management Information Systems, 23*(4), 29-51. Retrieved from Business Source Complete.

Page S. (2006). The web of managerial accountability: The impact of reinventing government. *Administration Society, 38,* 166-197. doi:10.1177/0095399705285990

Park R. (2007). *Measuring factors that influence the success of E-Government initiatives.* (Doctoral dissertation). Retrieved from ProQuest database. (AAT 3251351)

Polkinghorne, D. E. (2005). Language and meaning: Data collection in qualitative research. *Journal of Counseling Psychology, 52,* 137-145. doi:10.1037/0022-0167.52.2.137

Radin, B. A. (2008). Performance management and intergovernmental relations. In Conlan, T.J. & Posner, P.L. (eds.). *Intergovernmental Management for the twenty first century,* Washington, DC: Brookings Institution Press.

Radu, R. (2009). Citizen empowerment and e-government application: Differences in 27 EU countries. *CEU Political Science Journal*, *4*(3), 326-357. Retrieved from Political Science Complete database.

Rivera, M., & Heady, F. (2006). Comparative program performance evaluation and government accountability in New Mexico: Some applied lessons for intergovernmental relations. *Journal of Public Affairs Education, 12,* 557-562. Retrieved from Education Research Complete database.

Rolfe, G. (2006). Validity, trustworthiness and rigor: quality and the idea of qualitative research. *Journal of Advanced Nursing, 53,* 304-310. doi:10.1111/j.1365-2648.2006.03727.x

Roy, J. (2006). E-government and local governance in Canada: An examination of front line challenges and federal tensions. *Public Administration Quarterly, 30,* 218-255. Retrieved from Business Source Complete database.

Sachdeva, S. (2006). American e-Government state and federal ratings. *I-WAYS, Digest of Electronic Government Policy and Regulation, 29,* 173-174.

Sayer, A. (1992). *Method in social science: A realist approach.* New York, NY: Routledge.

Scholl, H. J., & Klischewski, R. (2007). E-Government integration and interoperability: Framing the research agenda. International *Journal of Public Administration, 30,* 889-920. doi:10.1080/01900690701402668

Scott, K., & Howell, D. (2008). Clarifying analysis and interpretation in grounded theory: Using a conditional relationship guide and reflective coding matrix. *International Journal of Qualitative Methods, 7,* 1-15. Retrieved from http://ejournals.library.ualberta.ca/index.php/IJQM/index

Simon, H. A. (1997). *A study of decision making processes in administrative organizations: Administrative Behavior* (4th ed.). New York, NY: The Free Press.

Srivastava, P., & Hopwood, N. (2009). A practical iterative framework for qualitative data analysis. *International Journal of Qualitative Methods, 8,* 76-84. http://ejournals.library.ualberta.ca/index.php/IJQM/index

Stever, J. A. (2005). Adapting intergovernmental management to the new age of terrorism. *Administration & Society, 37,* 379-402. doi:10.1177/0095399705277138

Streib, G., & Navarro, I. (2006). Citizen demand for interactive e-Government: The case of Georgia consumer services. *The American Review of Public Administration, 36,* 288-300. doi:10.1177/0275074005283371

Tanggaard, L. (2008). Objections in Research Interviewing. *International Journal of Qualitative Methods*, *7*, 15-29. Retrieved from https://ejournals.library.ualberta.ca/index.php/IJQM/article/view/1827/3449

Thomas, C. J., & Streib, G. (2005). E-democracy, e-Commerce, and e-Research: Examining the electronic ties between citizens and governments. *Administration & Society, 37,* 259 -280. doi:10.1177/0095399704273212

Tolbert, C. J., & Mossberger, K. (2006). The effects of e-Government on trust and confidence in government. *Public Administration Review, 66(3),* 354-369. Retrieved from the Business Source Premier database.

Torero, M., & von Braun, J. (ed.). (2006). *Information and communication technologies for development and Poverty Reduction: The potential of communication.* Baltimore: The John Hopkins University Press

Trochim W. M., & Donnelly J. P. (2007). *Research methods knowledge base.* (3rd ed.). Mason, OH: Thomson Custom Publishing.

United Nations Public Administration Network. (2010). E-government overview. Retrieved from http://www2.unpan.org/egovkb/egovernment_overview/index.htm

United Nations. (2010). UN global e-Government survey 2010: Leveraging e-government at a time of financial and economic crisis. Retrieved from http://unpan1.un.org/intradoc/groups/public/documents/un/unpan038851.pdf

United Nations. (2008). UN global e-Government survey 2008: From e-Government to connected governance. Retrieved from http://unpan1.un.org/intradoc/groups/public/documents/UN/UNPAN028607.pdf

United Nations. (2003). UN global e-Government survey 2003. Retrieved from http://unpan1.un.org/intradoc/groups/public/documents/un/unpan016066.pdf

U.S. Department of Education (2011). "US Department of Education, Program Management Services/Default Division: Fiscal Year to Date Defaulted Student Debt Recoveries: As of April, 30, 2011," Washington, DC.

U.S. Department of Education (2007, January 22). Departmental directive: Computer matching agreements [Electronic memo]. Retrieved from http://www2.ed.gov/policy/gen/leg/foia/acsom6105.pdf

VanWynsberghe, R., & Khan, S. (2007). Redefining case study. *International Journal of Qualitative Methods, 6*, 1-10. Retrieved from http://www.ualberta.ca/~iiqm/backissues/6_2/vanwynsberghe.htm

Von Haldenwang, C. (2004). Electronic government (E-Government) and development. The European Journal of Development Research, 16, 417-432. doi:10.1080/0957881042000220886

Wise, C. R., & Nader, R. (2008). Developing a national homeland security system: An urgent and complex task in intergovernmental relations. In T. J. Conlan, & P.L. Posner (eds.). *Intergovernmental Management for the Twenty First Century*, Washington, DC: Brookings Institution Press.

World Bank. (2010). Definition of e-Government. Retrieved from http://go.worldbank.org/M1JHE0Z280

Wright, D. S. (1990). Federalism, intergovernmental relations and intergovernmental management: Historical reflections and conceptual comparisons. In J. M. Shafritz, A. C. Hyde, & S. J. Parkes (Eds.), *Classics of Public Administration*. (5th ed., pp. 517-532). Belmont, CA: Wadsworth.

Wright, D. S. (1988). *Understanding intergovernmental relations*. (3rd ed.). Florence, KY: Brooks/Cole Pub. Co.

Wright, D. S. (1978). *Understanding intergovernmental relations: Public policy and participants' perspectives in local, state, and national governments*. Pacific Grove, CA: Duxbury Press.

Yin, R. K. (2009). *Case study research: design and methods*. (4th ed.). Thousand Oaks, CA: SAGE Publications, Inc.

Appendix A: List of Acronyms

ARPANET - Advanced Research Projects Agency Network

CMA - Computer matching Agreement

DBMS - Database Management System

DCIA - Debt Collection Improvement Act

DMCS - Debt Management and Collections System

ED – Education Department or U.S. Department of Education

E-Gov - Electronic Government or e-Government

FMS - Financial Management Service

FSA - Federal Student Aid

GAs – Guaranty Agencies

G2B - Government-to-Business

G2C - Government-to-Consumer/Citizen

G2G - Government-to-Government

ICT - Information and Communication Technologies

IT - Information Technology

IGR - Intergovernmental Relations

IGM - Intergovernmental Management

OCSE - Office of Child Support Enforcement

OMB - Office of Management and Budgeting

PSC - Program Support Center

TANF - Temporary Assistance for Needy Families

TOP - Treasury Offset Program

Appendix B: Letter of Invitation to Participate

Dear Mr/Mrs…….....

This is to request your participation in my doctoral study titled: Understanding Government-to-Government Approach to E-Government: An Illustrative Study of Financial Management Service's (FMS) Treasury Offset Program (TOP). Your organization is a major stakeholder in the management or use of this program. Your participation will involve providing expert knowledge and experience in the management or/and use of TOP through interviews and providing publicly available documents appropriately.

With your permission, the interviews will be voice recorded using digital audio recorder. Where this is not feasible, you may also provide your responses using the email mechanism. You will also be provided the interview questions prior to the conduct of the interviews to help you better prepare for the session. Your participation will be voluntary and you may decide to withdraw from participating at any time. All information you provide will be kept confidential and your identity will be protected during and after the research. Your information will not be used for any purposes outside of this research project.

For this study, I am seeking someone with expert knowledge and experience in the management and use of TOP for the electronic collection of delinquent debts on behalf of a governmental agency. If you meet this requirement and are willing to participate in this study, please return your acceptance with the slip below to me at olumide.faokunla@waldenu.edu. I may also be contacted at. I will contact you to arrange when the interview can be conducted.

Thank you for your consideration of my request.

Olu Faokunla
Ph.D candidate, Public Policy and Administration.
Walden University

Acceptance of Participation

Yes. I am willing to participate in the research study you described in this invitation letter.
Name……
Organization…….
Title……...
Phone Number……..
Email…….

Appendix C: Interview Protocol 1

Understanding Government-to-Government Approach to E-Government: An Illustrative Study of Financial Management Service's (FMS) Treasury Offset Program (TOP) Federal System

Purpose: This first interview protocol guides the researcher's interview with the program director and program manager for TOP.
Date:
Time:
Name, Title and Agency of the Interviewee:
Interviewer:
Overview of the Study:
Questions:

1. As a starter, can you talk about your experience in managing and supporting TOP for FMS?
2. How would you describe the extent to which TOP has met the objectives for which it was originally set up?
3. What would you say are the specific benefits that the federal program agencies (FPAs) and state government agencies derive by collecting their delinquent debts through TOP?
    a. Explain the importance of TOP to collecting delinquent debt on behalf of the FPAs and state governments?
4. Explain the online characteristics of TOP?
5. How do government agencies go about establishing connections to TOP for debt collection services?
    a. Describe the sort of agreements that govern the relationships between FMS and the government agencies that use TOP?
6. What would you say are the advantages of porting TOP online?
7. How has TOP enhance cooperation, collaboration and information sharing among government institutions?
8. Describe past and current programmatic and technological challenges which have confronted the implementation of TOP?
9. How would you describe the effects that these challenges have on operations of TOP?
10. Describe specific problems that have been encountered with the management and implementation of TOP?
    a. How would you categorize these problems? Are they strategic, legal, technology, staffing or otherwise?
11. Explain some of the process improvement strategies and measures that have been established for TOP?
12. How do you address changes in technology and infrastructure?

Appendix D: Interview Protocol 2

Understanding Government-to-Government Approach to E-Government:

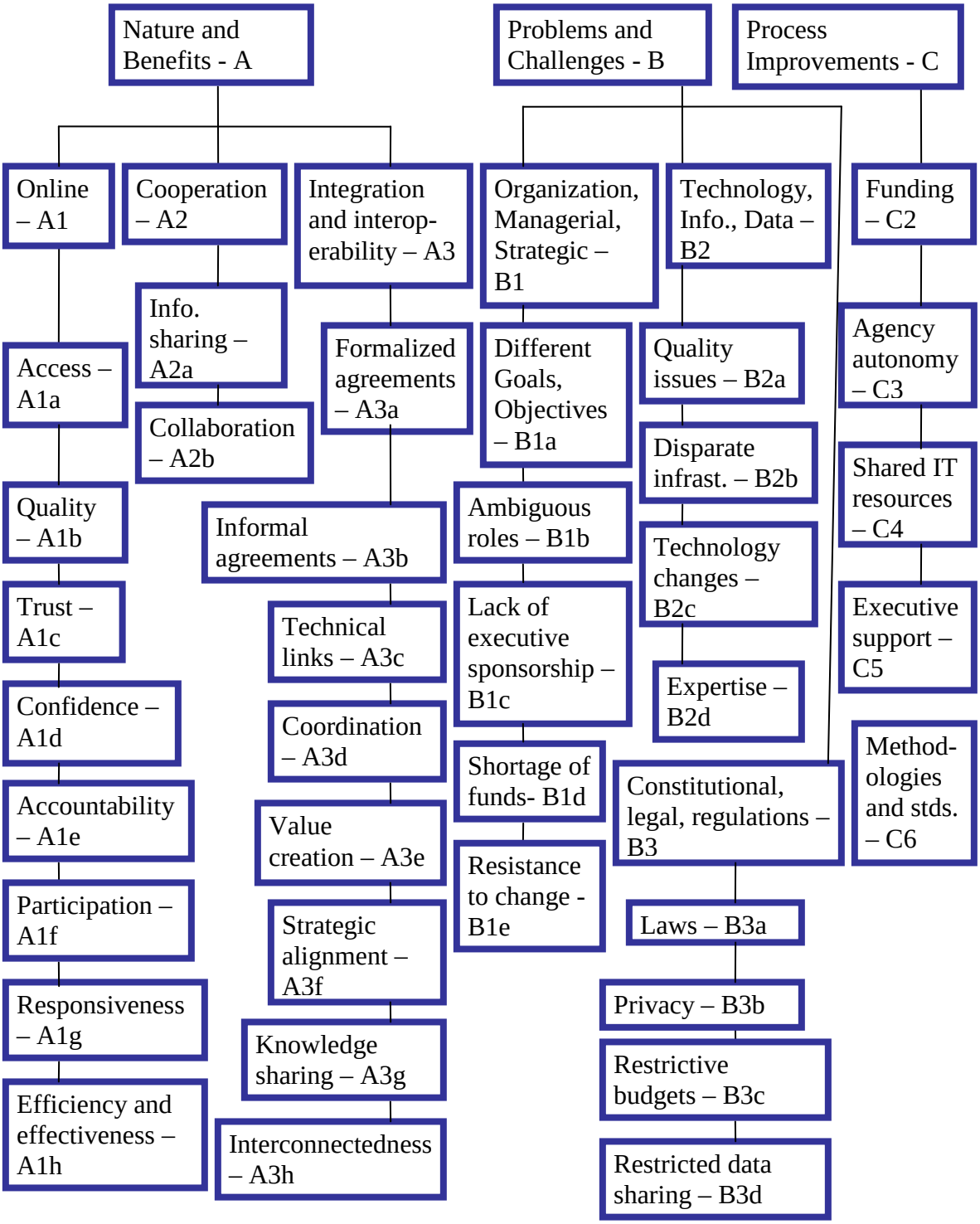
An Illustrative Study of Financial Management Service's (FMS) Treasury Offset

Program (TOP) Federal System

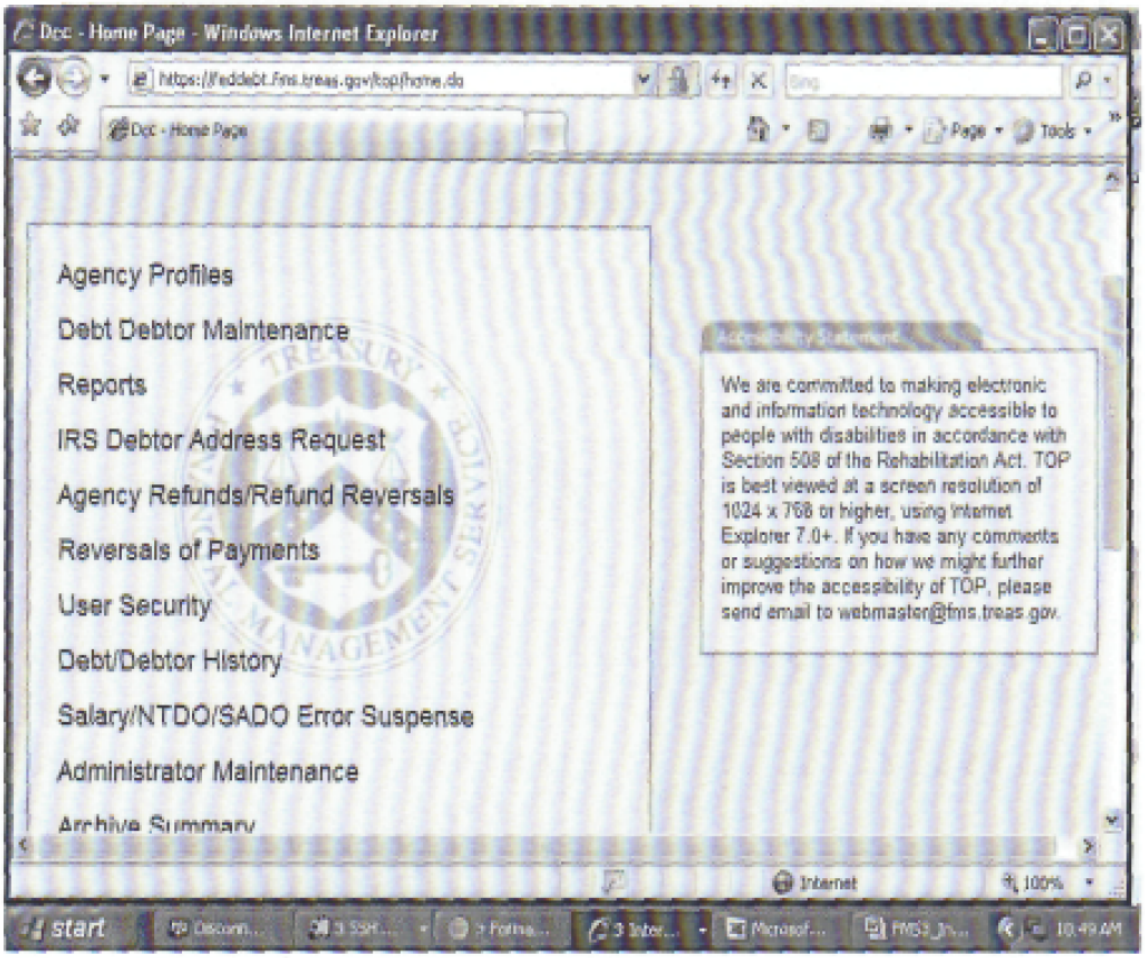
Purpose: This second interview protocol guides the researcher's interview with the representative a creditor agency that uses TOP.
Date:
Time:
Name, Title and Agency of the Interviewee:
Interviewer:
Overview of the Study:
Questions:

1. As a starter, can you talk about your experience in managing and supporting the use of TOP for your agency?
2. Talk about how TOP has been able to serve your agency debt collection objectives?
    a. Describe the benefits to your agency for using TOP for debt collection instead of your agency directly collecting the debts?
3. How does your agency system(s) integrate with TOP for debt collection purposes?
4. Explain your organization's experience with the online integration and interoperation with TOP?
5. Describe other methods your agency use for debt collection?
    a. How do these other methods compare in terms of effectiveness and efficiency with TOP?
6. Describe the gains achieved through cooperation, collaboration, and information sharing between your organization and FMS as a result of using TOP?
7. Provide past and current programmatic and technological challenges experienced by your organization as it uses TOP for debt collection?
    a. How would you describe the effects that these challenges have on your debt management operations?
8. Talk about specific problems that your agency has experienced in terms of strategy, technology, legal, expertise and otherwise as it uses TOP?
    a. How were these problems handled and resolved – internally and externally by the TOP program management?
9. Describe how your operations can be improved using TOP?
10. What recommendations would you provide to the program management of TOP for process improvement?

Appendix E: Initial Coding Tree



Appendix F: TOP Web Client View



Appendix G: Excerpts from Interview Transcripts and Responses

F.M.2.:
Quite simply, the collections. They have access to funds that they originally did not have access to. Outside of the TOP program, these collections will not be available to any of these federal agencies or to the states. So because of TOP and the way we do our debt match, now they have access to funds or they can collect funds that they originally did not have access to. To put that in a context, TOP is like a passive collection system. So you submit your debts to us, we wait for payments to come in through the process as it comes through. So there is a lot to do but there is a basic premise to the process.

……

Initially we started out with adhering to part of the DCIA because of the limitations that we had, we couldn't pretty much adhere to every requirement in the DCIA. But we started the due process rules where the agencies have to submit the due process to all their debtors so that they can – and letting them know that they will submit their debts to TOP. We've gotten in most of the Federal non-tax debts and tax debts in our system through TOP or through cross-servicing project. We've gotten most of that in and we've expanded that program largely. So we have just about every debt that we can almost get. There are still a few I guess that agencies are working on internally and we are working with those agencies – OK, you have worked on that long enough, you can go ahead and turn it over to us so that we can do what we need to do. So that's kind of the thing they felt we are going to work on it for the first 180 days and after that we would send it to you. The law did not say that you had to wait for that 180 days. It says after 180 days, you must. So anytime before that 180 days, they can still submit that debt to us. But most of them wait until that 180 and as you may know, the older the debt, the harder it is to collect. So if we can collect it sooner, we can do a lot better.

……

TOP Client is an easy way to add debt to the program. It is a real time system. Basically, the user logs on to the system and loads the data into the system – load the debtor information into the system. Once it is saved, we immediately start collecting. It's a real time system. So there is no lag as to when – once you save it, it's in the program, we start offsetting – trying to offset for it right away, we start matching it up for offset. They are also able to match their debts fully online, update the debt balances, close and activate a debt. They are able to bypass some payments. For instance, we added the salary program where we offset federal salary to pay a federal debt. Most agencies when we added the federal salary offset did not have the due process already done for salary because we require that whatever payment streams that are coming through, you've notified the debtor that these payments may be subject to offset. Since salary was new, everybody had already done due process or whatever payment streams we already had, they had to redo the due process notices. So we had bypass indicators on all the debts for salaries. So as those due processes were done, they were able to remove those bypass indicators so that they can start collecting on salary. So we have the ability to bypass some payment streams if--. And even in the case of hardship, I know education does it a lot—a debtor may call in saying you are taking too much of my Social Security payment, I can't really afford it. Education would go ahead and bypass that Social Security payment for a period

of time or may even do what we call an overwrite – tell us OK don't take that 15% because that's what we are entitled to take – 15% leaving at least $150 on the check. Education may decide, just take 5% of their money. Just take $50 instead of the full amount that we are eligible for. So we make it really easy for the agencies to manage their debts online or via batch. And the batch file is like they send a file of about a thousand records – a whole bunch of records and we update their debt in TOP with that file.

……

Pretty much they come to us and make a request that we want to start submitting our debts to you. We – they tell us the type of debts they have because by law some agencies have to go through cross-servicing and cross-servicing does not submit debt to TOP. Pretty much, you have to get a waiver for cross-servicing to submit directly to TOP. In those cases, those agencies, they already have private collections in place; they already have their private collections in place so they don't need cross-servicing to do that for them. So those cases, they can come directly to TOP.

They submit the request; they submit what we call an Agency Profile Form. An agency profile form pretty much tells us how that agency is going to do work, whether or not they can pass the fee onto the debtor, whether we can collect the debt all the way down to zero or stop when it goes below $25 or something like that? What types of payment we can take: are they for state? State tax debt, they can only get tax refunds, they can't get any other type of payments. For the other state debts, they can get beyond tax refunds. So there are different rules depending on who you are. For child support, they can get everything, but they choose not to do SSA because they can go directly to SSA. They choose not to do salary because they can get more money directly from the salary paying agencies than they can get through TOP. So each agency has to tell us how they are going to participate in the program. After they fill out the profile, they also have to submit what is called a Certification Agreement. The certification agreement pretty much gets us out of trouble if there is any lawsuit or anything because pretty much we have to provide certification of all the debts that are submitted to us are true and collectible, not in bankruptcy, not in forbearance, not in foreclosure. They've done the due process; they've fulfilled all the legal requirements they need to fulfill in order to submit the debts to us. So they can sign that – the head of the agency signs that saying OK, anything you submit meets these criteria. So if there is any suit or anything, we pretty much produce the certification that the agency certified that what they submitted to us is good, you have to talk to the agency. Pretty much, we get out of the suits they have. That protects us and it keeps us protected and how we doing with the agencies, the agencies have no problem with that because that is part of their process because they have to make sure that what they have is good. So we don't have any pushback from the agencies.

Once they fill out those two forms, they also have to fill out what we call Security Access Request Form and that's also what they have access to, what they can do in the system and after that they get connected to us. We have three basic means of connectivity: one is CONNECT:Direct which you may be familiar with. It's an expensive proposal, so they can do that if they want to. We also have what we call CONNECT:Enterprise which is

pretty much free to the states except for phone call charge at the end of that connection. We also have what is called FRAME Relay, similar to CONNECT:Direct, it's just that it is a lot less expensive. So they can get connected in any of those three ways to send us batch files back and forth. We have the TOP Enhanced Record Layout. So that is given to all the agencies at a time. We also have what we call the TOP Implementation Guide – or TOP Agency Guide which tells them how – It has all the forms, it tells them how the program works, it gives them the rules, gives them the reds, gives them all the layouts in one big document so that they have it for their review any time. And, we go through all that information with them – explain that it has record layouts, help them with—we don't physically help them pay for their implementation but if they have any questions, if they want to come visit to talk to the programmers, to tell them the best way of doing things, we go out and visit or they do conference calls with us. Anything we can do to make this transition easy to get into the program, we pretty work with them to do it. So it is a pretty involved process and they also assign agency liaison that pretty much if they have any questions they can contact them. They agency liaison will put them in contact with the technical person that they need to

……

We've started in the last year with what we call webinars. That pretty much has helped to as far as – because before we would have conference calls. Now, typically it's kind of hard to do conference calls because one person has a piece of paper on one side, you have to make sure that they have the right forms, everybody is flipping together. Webinar, you can put it on screen, everybody sees the same thing at the same time, asks their questions, everybody hears it, everybody knows exactly what we are talking about. That has been really good. We've had really good success, especially with the states reciprocal program and employment compensation program. Implementing those programs with the webinar because people they see – it's visual rather than just on the phone. They can see us, we can see them, ask any questions. So it's been really good. We've liked the webinars.

We've also gone - started - participated in more than local conferences – not just inviting them to our conferences but they will invite us. FTA for instance, Federal Tax Administration, their program, kind of a private entity out there that is for nonprofit to help the states to try to collect more debt in getting into Federal programs. So we go to their conferences to speak to the states about joining TOP- what they can do. Speaking at local conferences has been, is really about getting, putting ourselves out there more so that people know what TOP is and know what it is. Recently, with our Assistant Commissioner, when he came on, he kind of instituted what is called "Tell the DMS Story." So we've been telling the DMS story per se; putting yourself out there, so that people know who you are, about what you do. So like I said, it has been working really good.

……

Not really too much with the overall implementation of TOP except for - as every program goes, we kind of dictated, especially for this program we dictated a lot of what Congress decides. Like when they had the ERP payments – the Economic Recovery Payments – we were mandated to offset those and we were given 6 weeks to get that program in place. So those kind of mandates are realistic times for you to get this stuff

done. Those have really been tough. Of course, you have to drop something in order to get that done and stuff like that. For most of the states that we are dealing with and these other federal program agencies that we deal with, funds are an issue because we can't aid or help them to implement. So we can't pay for any of their implementation. We can't give them any funds to implement. So they have to find funds on their own and as you know, people are strapped for money. So implementing new programs are kind of – we've gone through the process of trying to help the states prove their case so they will send us the list of all their debts that they have and then we would do what we call a debt match, I guess a period to period payment to say that if you were in the program, this is how much you could have collected. They then pass it through their bosses to their legislatures - if we were in the program we could get several million dollars, billion dollars or whatever to help them solve the programs.

……

Process improvements – we are starting to do what we call "documenting the system". Because when you are writing these systems, you don't have documentation on the whole system – on what you currently do. It's kind of hard because some people will know this, some people will know that. Nobody knows the whole system. So, we are in the process of documenting what we do, having it written so that everybody is aware of the rules. Making sure that the implementation of new fixes are well documented in a place where things can get seen as put together. We started a process called "using use cases" - making sure those use cases are updated when there is a fix and going back stuff like that. Basic process improvements will make a great deal once you've started going through your system and knowing what is there. I talked about fixes, how fixes are done. We now have the CM (Configuration Management) process, which in some cases its bad and in some cases its good. But it does document how things are done and it keeps a record of how you want to keep - so that you don't overlap, so that you are not putting a new fix and that fix has been tested out and you are putting on top of another fix that may mess up something else, so making sure there is a clean process of implementing new fixes as it goes from development to QA, to UAT, and then to production and everybody signs off on it before its released. But there is a liability, for a lack of a better word – that somebody is being liable for what is being moved through and that its not just ad hoc going through willy nilly. So putting those processes in has been really good.

F.M.3.:

Managing and supporting TOP is easier now than it was years ago. OK, because when TOP was developed, it was developed as a proof of concept and they turned that proof of concept into production. OK, so when they first developed it, everything was manual – submitting of the jobs, bringing everything was manual and it was manual for years. We had a staff over there in IR (FMS' Information Resources) who will push the button to bring the files in, to process the files back out the door. Since then, since I've been part of TOP, we've automated most of the processes. They come in the door on the Mainframe and then they are Connect directed from the Mainframe to the UNIX server and then they are processed. I can give you – I can show you some stuff, would you like to see that or just keep talking?

……

The TOP Client, the TOP Client is mainly for the credit agencies to go in and maintain their debts and to look at their collections, look at the money they are supposed to receive on a weekly basis. Every week we send a collection file batch file to credit agencies to let them know how much money they would be receiving on a weekly basis. DMS accounting is responsible for transferring the funds to their ALC for the money that we have offset. So the TOP Client is really to maintain, for them to maintain their debts and review the collection information. Now they can only maintain one debt at a time. That's why a lot of the agencies send in the updates batch wise because millions of records can be updated in less than an hour. So it's easier for them to send it in batch wise because they can update multiple records at the same time. TOP Web Client, one record at a time. So most of the agencies send – we get majority of the files in. That's why it's so important for this new redesign to make sure that batch is working properly.

……

First, you got to have an agreement that they have done a due process all of that stuff before they get into the technical part and then as far as the connections, we identify do they have a connection into FMS, if they don't that's when we get (de-identified) involved with the CONNECT: Directconnections and once that's done, we start to identify the types of debts that they have and then we turn them over to (de-identified) which is our test group so that they can start testing with the different types of files that we need to come in like the update file, the collection files, and the standard batch files that we use to come in to the system. With the updates, you send in your debts and debtors' with the updates, OK. We can accept those five days a week, you know multiple times. We have to be able to send you a collection file. Collection file tells you how many files and reversals that happened within that life cycle. A cycle is one week. I mean testing will happen first. The next step will be with (de-identified), making sure that the formats are correct, that they are sending it in the right format. We are sending in the results back to them and you know the – they have to sign an SPR which says that they certify that they have done due process, due process means that you have notified these people that they have debts and give them opportunity to pay these debts off before you submit them to TOP. They have to certify that yes, they have done a due process before they can bring it into TOP. I mean we give them all these legal things that have to happen before we can turn them ON and take action in TOP. OK, once testing and all that is done, like I showed you the agency profile, we have to add an agency profile for them. They would have to send us the debts and the debtors, either they can go online or - but online depends on how many debts you have. If you have 500,000 debts, you don't want to do online, you want to do batch, right. So we have a standard format for them to send in a batch file for us, adding a debt and a debtor and you can have one debt with multiple debtors like an husband and a wife and all of that. So, all of that is tested out in the testing environment before they come into production. OK.

……

OK, like I said we are using COBOL and we have been using COBOL since the beginning of TOP – COBOL and SHELL scripting, OK. We are on AIX platform, we are using DB2 and COBOL. OK, the challenge is that COBOL is a old software product. You don't have many young people come out of college knowing COBOL. So as far as support, you have few options as support because younger generations are not doing

COBOL. So what do you do? You've got to keep up with technology; you've got to keep up with what is coming out of colleges – what kind of skills they have. So one of the challenges is how do you maintain TOP? Currently, with the old technology and also create the new TOP with the new technology and would the new technology allow you to process all these transactions per day. Now, one of the problems we have with the FedDebt system -- FedDebt system, the online and the batch cannot operate at the same time. Well, that's not feasible for TOP. We have to have batch and online going all the time. Well with using COBOL, that's an option. But sometimes when you use JAVA, FedDebt is programmed in JAVA, that's not an option. So, I mean we do millions and millions of transactions per day, we have to have batch and online up at the same time.

……

Well normally when it is a technology enforced change like FISCAL IT, you know that information is generated from IR and technical bulletins are sent out to the CFOs, to let them know that this change is coming and you need to get onboard. I mean same thing about – like PAM interface with TOP, well this is standard format to use PAM, OK. So all the payment agencies out there have to come and conform to using this standard format which TOP had to change to use this format. Right now, there are several types of payment formats, we have RRB, we have OPM, you have vendor, you have SSA, we have TART. You have all these different formats that we currently use in the legacy system, but now with PAM, one format is going to incorporate all those payment streams. And so that came from the TOP CFO sending a letter to all the CFOs in all the agencies saying hey, you must conform by 2013. So things that credit agencies must conform to are from the higher up. It's not dictated from DMS TOP.

Now with this TOP NG, we have standard formats like the weekly updates that we send in the batch files. Now we cannot just dictate that we are changing this format because the states and the federal agencies don't have the money to make those types of changes. So maybe with the new agencies, if we change the format, the new agencies would use the new format, we still have to maintain the old formats for the states and the federal agencies who cannot change. So we cannot just make changes.

……

We have had performance problems, which means so many things trying to run at the same time and what we had to do is we had to look at the schedule and figure out what could run together and what couldn't and how to use the window- 24-hour window wisely. One of the things we had to do is, we had to go to online backup. We were doing offline backup. Offline backup means that the system, no one can be logged onto the system while backup happens. Well, that was eating into our time of processing at least 4 hours per night. So, what we went to, we went into online processing and then we could spread the work out at night and get some of the work done before we could bring the system up in the morning and that allows us to have less contention problem. Contention problem is when two processes are trying to get after the same record, then one fails. OK, so that's what we try to eliminate. So some of the accounting stuff we were running during the day, you know we run at night which relieves the system. I mean, mainly we have to make sure that the system is available for Payment processing and Payment processing starts at 10:30 in the morning until 11:30 at night.

……
Changes in technology, we have to take the application as is and try to – when something new changes, like I said operating system, DB2 you know, we test it in development to see if it works with the current application. If it doesn't, then we talk to the vendors, you know to say hey this doesn't work with this version. They go back and do an analysis and say well you need to upgrade this. For DB2 9, we were going to upgrade to DB2 9 first, OK we found out that MicroFocus 4 didn't work with 9. So guess what we had to upgrade MicroFocus to 5.1 to work with 9. So any time a new technology comes in, we take the old system and upgrade and see what problems we would encounter. Like Checkpoint Restart: is it going to work with this new operating system? We don't know. It's a trial and error kind of thing. Once we identify that it doesn't work, we go out there and try to find solutions. While we are trying to find solutions, we are paying support for the older version until we can upgrade to the newer version.

F.S.1..:
At a very high level, there are laws and regulations about what we have to do to certify someone to actually do this. We are taking money from somebody without going through a court process. So due diligence is in the laws, is in the regulations and we follow it to the letter. Anytime there is a change in any of those laws and regulations, we have to modify our process to work with it. We changed, two years ago we changed, we were asked to change our letters that go out so that we could tell that the borrower not only are we taking federal money, but want or we have the ability to take money at the state level because TOP, because Treasury has started to work at the state level too.
……
We actually have an order. When a borrower goes into a default, there is an order in which we use these tools. The first one is when they come to us, they get what we call a welcome letter. It is a letter to show this is what we are going to do to you if you do not talk to us and get into a valid repayment plan in 60 days, one of the first things we will do is that we are going to certify you for TOP, alright. So alright, it's a tool. The tool is this is what is going to happen to you, if you don't talk to us. That is going to happen. The other thing that is going to happen, we are going to send you to a collection agency and when we send you to a collection agency, 25% of the total outstanding balance is going to be added to your balance because we have to pay the private collection agencies to collect this money. If you don't go there and just go into a payment repayment plan, you are going to save yourself 25% right off the bat.
……
You want a comparison? Let me give you some numbers for the comparison. In—there are basically – one, two, three, four – there are five areas that we kind of watch – regular collections – regular collections means money in the door -- any type of payment, whether it is on a rehab, whether it is one of the repayment plans that is – it is just dollars in the door. Of the $10.2 billion that we collected in FY10, 10.6(%) of that is regular collections, 14.14(%) was the Treasury Offset percent. Administrative Wage Garnishment was 9.61%. The big daddy is loan rehabilitation and the loan rehabilitation is after the 9th payment, the entire loan is – that is the dollar value that we put in – that is the difference between the loan rehabilitation and your regular collections. That is when

they made their 9th payment. The rest of the balance is added to the loan rehabilitation bucket and that is what we get credited to you – it is 42.42% of the balance. And then consolidations make up 23.5%. And I just picked 2010 because that is the last FY we had. In FY2009, we collected $8.8 billion altogether (calculating). It is not off by much in terms of percentages. For regular collections in 2009, 11.87(%), Treasury Offset was 12.7(%), Wage Garnishment was 10.48(%), loan rehabilitation was 39.72(%), consolidation 25.21(%). Slight changes and I don't think they make. The dollar value between the two (Fiscal Years) weren't too much different. It's what was overall collected.

……

I hadn't seen this in FMS, but I have another agreement with another agency that I am trying to work out where two different laws are keeping us from actually doing what a third law says we are supposed to do. And going to Connect:Direct, that's a secure process right? So you have to make sure buying software is added to your budget. And in the budget world, nothing is quick. If you want something added to the budget, it better be an emergency, you better have some money left that you can pull from somewhere. Otherwise, it's in next year budget and it may not even be there. You are not making a change, you may stop a process. We have been doing this exchange with FMS since1986. One of the requirements that came in the last few years is computer matching agreements (CMA). Congress said if you have – if you are going to exchange with – between agencies, you need to have computer matching agreement. Then the computer matching agreement needs to state certain things on how you are doing in a secure manner. Who is responsible for – I'm responsible for this much, you are responsible for this much. Or I'm responsible all the way here and you are responsible from here to here. There is a dual type of stuff. We never had that in place for the system – for TOP. This year, someone said we are going to shut your system down if you don't put in computer matching agreement. And this is how this goes, the people our staff works with said we don't need those, we never had those and they are not important. Here is another person working for the same agency saying I'm going to shut you down if you don't have it. So there is a huge communication gap between technology officers and program management officers. Managing the program? I can manage the program left and right.

……

Well, one of the top things that keep coming up is we would love to know the payment stream from which we got the money. One of the main payment streams we would like to know is the Social Security Administration for retirement benefits. It would assist us in assisting the borrowers with financial hardships knowing which payment streams are coming so that we can be more easily proactive towards people who are retired – low income retirees, that type of thing.

F.S.2.:

We were certainly one of the first agencies to get our statute of limitations removed from our debts. At one point, we had a statute of limitation on our debts that stated once the debt was 10 years old, we couldn't collect it. We got that removed quite a long time ago. The Higher Education Technical Amendments of 1991 (P.L. 102-26) removed the statute of limitations for Education debts. Just recently, Treasury went about doing that for other

debts. So they've gotten rid of the Treasury Offset statute of limitations for many of the other Federal debts. You know with TOP, we did Federal Salary Offset with the different agencies individually a long time ago before the Department of the Treasury (Treasury) started Federal Salary Offset through TOP. We had agreements set up with the different agencies, and it was free for us to do this. However, when Treasury got in the mix, there is a fee now for Salary Offset. So that was kind of, from my perspective since there is now a fee (even though the borrower pays the fee), – I won't say a step backward – but it is a little different from the way we used to do it. The good part of it is that we don't have to have agreements with the agencies now because Treasury handles all that, and that's worth a fee to me.

……

Education does not use TOP **instead** of collecting the debts ourselves. Other agencies may be able to answer that question. We use TOP as one of our tools. I won't say it's the last tool, but it's one of them. I mean, we send our accounts to private collection agencies.

I believe Education has been at the forefront of a number of collection initiatives, which have been subsequently adopted by Treasury as part of their Cross-Servicing program (which includes TOP). This would include their use of Private Collection Agencies (PCA), Administrative Wage Garnishment (AWG) and obtaining/using data from the National Database for New Hires (NDNH) in collecting accounts in Cross-Servicing. When we started TOP, it only involved Federal tax returns and was considered the collection of last resort (i.e., take all other collection steps first, then use TOP as one of the last tools). It has been and continues to be a very effective collection tool for Education.

TOP has allowed us to contact borrowers that have not responded to other forms of contact. Prior to certifying an account in TOP, we have to send a due process notice to the borrower. These notices can prompt a borrower to contact us and sometimes, even get into repayment in order to avoid offset. When a borrower is offset, they have a tendency to contact the creditor agency (the agency that certified the debt and received the offset). In our case, it may be the first time that the borrower has contacted Education. More often, however, we have borrowers who have resolved themselves to the fact that they are going to be offset through TOP. Some borrowers that have no other means of paying off the debt will state that they are in the "TOP repayment plan", as if they volunteered for the offsets. Education has also been able to get borrowers who are totally and permanently disabled (TPD) to fill out the discharge paperwork as a result of being certified in TOP. Usually, the TPD borrowers are not in a rush to fill out the paperwork, because, as they say, there is not much you can do to them. TOP, however, is identifying many of these borrowers as recipients of Social Security Benefits, which are eligible for offset. Treasury sends these borrowers a 60 day and 30 day advance warning before the offset begins. Once notified that offset may begin, the borrowers are only too happy to fill out the discharge paperwork. If they are eligible, this allows us to discharge their debt.

……

Our Debt Management and Collections System (DMCS) creates files (mostly requests to adjust a balance, change an address, report a refund related to an offset, etc.) and sends them through a secure Connect:Direct portal to Treasury. In turn, Treasury also sends files to Education (related to offsets and reversals for certified debts). Education also acts as a focal point – a conduit – for the guaranty agencies (GAs). The GAs send Education information and DMCS then combines the GA information with Education information and sends one file to Treasury. The Treasury file is received and DMCS creates separate files, as appropriate, and sends the information to the associated GA. It's a give and take with Treasury – on a weekly basis we are either pushing or pulling data to or from one another.

……

I would say the biggest problem right now that we are having with TOP is actually a problem with the IRS, and it has to do with the injured spouse claims that they do. These are reversals that they do with the tax returns that have been offset. Basically, it's where a couple files their tax returns jointly and one of them owes a Federal or State debt. An offset is taken against their tax refund and the non debtor can file a claim to get the money rightly due them (even if the offset has already occurred). Right now, the IRS has a law that says you could file that claim forever. This means that, for example, if an offset was taken back in 1986, tomorrow a spouse can request their money and it will be reversed. That's impossible to manage. It is very difficult to find a borrower for a loan that was paid off back in 1986. I mean, marriages just don't last that long and that's what we see. A lot of times, the spouses were fine with paying off the other persons debts while they were married. Now that they are divorced, he or she is going to tell that person that I'm going to get my money back now. We've talked to Treasury about it. FMS Treasury is trying to work on it. So it's really between – within Treasury, they need to figure that out. So part of the problem for us right now is some of these offsets happened before FMS was involved in TOP, and therefore, FMS doesn't have the record and the information has to be sent to us manually. Now I have a manual transaction. You are sending an electronic IPAC for the funds, but I have a manual transaction that I have to use to update my system. It's an accounting nightmare.

F.S.3.:

One of the changes to the program involve the TOP file formats which are used by agencies to refer accounts to Treasury for offset and report updates to increase or decrease the TOP balance, inactivate accounts (remove them from offset), refunds of offsets, etc. and for Treasury to report the unprocessable records back to the agencies and to report the offsets/reversals on the accounts. Most of the formats were changed completely but it would have been a lot easier if Treasury had worked with the existing IRS formats and just added some fields in order to capture the additional information they needed. It is always easier to work that way instead of reinventing the wheel and creating totally new formats with all the fields in new positions. The Department and the guaranty agencies made the changes back in 2000 or so.

A few years ago, Treasury changed the file formats again to a very different format. This was a concern because of the resources and expense involved to make the changes, and

there is a lot of testing that has to be done until you feel comfortable that everything is correct and that you have worked out all the bugs. It is really not a good idea to make dramatic changes to formats, unless it is absolutely necessary; and we did not feel that it was absolutely necessary. It is my understanding that, in the meantime, Treasury was going to use a bridge program; therefore, if Treasury created a bridge program, which costs money, why not just keep using the bridge program. Once you have a bridge program in place, it is there.

Prior to Financial Management Service (FMS), Treasury, the program was administered by the IRS. When it was run by the IRS, it was required that we send a new due process notice to the borrower each year because they de-certified the account at the end of each year. So one improvement was that we do not have to send a new due process notice to every eligible borrower each year, which was helpful.

Another plus is that we are able to access the FMS database and see the information on accounts certified by Education. This means that if we have to inactivate an account in an emergency situation—e.g., a borrower filed bankruptcy and the automatic stay is in effect, we can access the FMS database and manually inactivate the account immediately (vs. waiting for the inactivation record to be generated and sent on a Weekly Update file and Treasury receiving and processing the record). For the most part, since Education certified over 3 million accounts in TOP, including the accounts serviced by the guaranty agencies, the method of manually inactivating an account is seldom used.

……

We merge all the information on the weekly update files received from the guaranty agencies, along with all of Education's information for that week and send a file to Treasury. Treasury processes the file and sends a file containing the unprocessable records (records having an error—in some cases they are just information only errors). We break down the file and send it to the appropriate guaranty agency.

We track all the information on our database, Debt Management and Collections System (DMCS). So when we receive the information from the guaranty agencies, we update our database and then send the information to Treasury. When Treasury reports the offsets and reversals, including the offsets and reversals for the guaranty agencies, we update our database with the information, break down the files by guaranty agency, and send each file to the appropriate guaranty agency.

……

Well, sometimes the problem that FMS has may affect us. For example, in addition to the different agencies, FMS has to work and test with states, but each one may have a unique problem. One problem was that one of the states couldn't get the file format to FMS correctly and it was approximately six months later that the offsets were reported to Education. In this case, manual workarounds were done so that the offsets would post.

……

I would say that the fee structure of $17.00 per offset should be re-examined because I think there may be different ways of approaching the fee. We could get an offset for $25.00 but after applying the $17.00 for the fee, only $8.00 would be applied to the

borrower's outstanding balance. If another borrower gets offset for $5,000.00, the fee is still $17.00, so I think perhaps the amount of the offset should be considered in the fee structure.

M.D.1.:
I would think it is. I mean most of our files like these are interfaced with – when we initially set this up, the programmers worked with whatever components that they had as to how they accept the files, what information was needed, what fields and all that. Then, when the program was established, then if there is any -- with any of our other interfaces, if there is any IT issue, then our programmers with the IT division – The Comptroller has its own IT division that sets up all the programs with the Comptroller and with any of the outside agencies, federal agencies, even some of our own collection agencies. So those interfaces are established. If there is any problem with those, they work together. (de-identified) and (de-identified) basically do the running of the reports and then the offset side of it when it comes back. Again goes in, (de-identified) is that automatically posted to the account, OK. Its automatically posted to the account. So like I said, there is not a whole lot of -- once the program was established, it does not appear that there is a lot of our involvement on this end because it is automated and it is automatic. We send over the file, the file is matched. They send back the file, they transmit the funds and we then offset the accounts with those funds.

……
Just an additional collection tool

And we continue the collection efforts that we've done all along. This is an added enhancement to the collection efforts because we still have all the collection resources in place.

……
And I don't think we've gotten to that point yet because I'm looking through the PowerPoint here and, there is nothing listed here as to any future enhancements, anything like that yet. So I think, you know we are completely satisfied with the program. That's why our director is out there, you know giving a presentation on it because, it has been a valuable resource for us. So I think with her presentation there at the FTA is encouraging. Other states could look at it because it has been beneficial to the state of Maryland. So at this stage I don't think we have any enhancements that are in place or that we are looking to for any other programming change.

That's on the IRS end – something we may want. But apparently unless there is an agreement to do a secondary look, secondary Socials for us, you know we may for now have to stay with the primary when we send over the file. That may be a future enhancement for us, then research the secondary Socials.

M.D.2.:
Well, it's definitely brought in a lot of money for us. It's definitely been beneficial to us. I mean as of October of 2010; we had collected over $46 million between the refund and the vendor offsets. So like I said, it's definitely been a benefit to us. Even though we've

submitted a file to the IRS for an offset, we still continue with our normal collection process. It doesn't stop that because we never know if we are going to receive any money from them. So we still continue with our normal collection process and this is just an added bonus if we get money from it. Even if we have made an agreement with the tax payer to make monthly payments to us, we still would offset any refunds that are due to them. So no matter what actions we've taken, it won't stop us from taking their refund. We continue the collection efforts that we've done all along. This is an added enhancement to the collection efforts because we still have all the collection resources in place.

……

The Comptroller has its own IT division that sets up all the programs with the Comptroller and with any of the outside agencies, federal agencies, even some of our own collection agencies. So those interfaces are established. If there is any problem with those, they work together. Once the program was established, it does not appear that there is a lot of our involvement on this end because it is automated.. We send over the file, the file is matched. They send back the file, they transmit the funds and we then offset the accounts with those funds.

……

We allow taxpayer to set up a payment plan. If they setup that payment plan, then all of our collection efforts stop as long as the payment plan is active. But if they have not established some sort of payment arrangement with us, we do a salary garnishment, we do bank attachments, we send the cases to outside collection agencies, we have a program called "Caught in the Web" where we would put taxpayers' names on the Web, we file a lien of judgment. So I'm going to say – all those, other than the payment plans, all those other collection efforts are ongoing. Our payment plans are very effective. We do set up a large volume of payment plans. But the offset program is a big part of the

……

Well again I'm not familiar with setting up the program. I do have some figures here that show the initial information in the year 2000. The estimated the cost was approximately $327,200. That was just for the Federal Offset program. The Vendor Offset program estimated cost was $611,000. So you are talking not quite a million dollars which we easily will get back in a month.. It's just one of those programs that is very effective.

O.C.1..:

So my experience, we have been communicating with FMS and we've been working primarily with FMS since the merger of the Treasury Offset Program where FMS took over the operational responsibilities from IRS in 1998. Prior to 1998/1999, we worked just with the IRS. It wasn't a function for FMS at that point, So it's been a very good relationship. The guys have been very good to work with. My experience has been that at least from the programmatic side, I can't talk a whole about the technical side because I'm not a technical expert. But on the programmatic side, our liaisons to FMS have been responsive. They have—we've all been pretty much in concert with the objective of our program which is to collect past due child support for children and families. And they have worked with us in a number of areas to ensure that we are maximizing what we can

collect through the Treasury Offset Program. Treasury Offset Program for us, it is mandated. States are required to certify what we call the non-custodial parents; some people call them obligors or payors. They are required to certify those non-custodial parents to OCSE if they meet the federal criteria, which for tax refund program is at least $150 arrears for the TANF program which is Temporary Assistance for Needy Families which used to be called AFDC (Aid to Families with Dependent Children). It used to be called Welfare. It's money that is being reimbursed to the states for the financial services that the states provided to the custodial parents on behalf of the family. And then $500 in past due support for non-TANF which is the money that is paid to the family. So if that non-custodial parent meets that criteria, then the state child support enforcement agency is required to certify that debt to us and we in turn forward that case information to Treasury Offset Program so that they can take action if there is a tax refund that is being filed – or return that is being filed – and a person is due a refund and they have past due child support, that money will be matched against TOP and intercepted.

……

We have a -- a weekly file that we submit to Treasury – to TOP on Tuesdays which contains new case information. It also contains updates to existing case information because in addition to tax refund program and all other enforcement remedies that we have, the states also have at their disposal things like income withholding orders, or the custodial parent can come in and make a voluntary payment. So the amount of past due child support could be increasing or decreasing week-to-week, month-to month because they also may have a current support obligation that they failed to meet for that month. So therefore it raises the amount of past due support that they owe. Or, they might have paid their current support and paid some toward their back child support voluntarily or through a withholding order and therefore they need to submit an update to that past due support to lower it. So at the time if there is a tax refund or there is a federal payment, that gets matched, it's very important that the amount is accurate so whatever the amount of money that the person owes at that time – it's accurate and it is up-to-date. We won't want it to be $5000 over at Treasury when in actuality the person only owes $500. We wouldn't want to intercept $5000 if they only owe $500.

So we submit the file to them weekly based on what the states child support agencies are submitting to us. We run the states' update information weekly. We concatenate it and and send the updates to FMS in TWO one file – Agency 01 (TANF) and Agency 02 (non-TANF). We also transmit to FMS the new cases that we have for the week. In addition, we get a collection file from FMS weekly so that when there is a tax refund intercept or administrative offset that gets reported to us in that weekly collection file we in turn submit those weekly collection files to the states weekly. So that not only do you have your files coming in from the states, which is all your case information and that is being forwarded to Treasury. But then you have your output which is your collection information which we transmit to the states. So it gets reported in that file electronically and submitted it to the states so that they can go ahead and update that person's past-due support by the amount of money that was intercepted. So in kind of a nutshell, that's the process. There are some other parts of it too though. But that's the main part. You have your case information and that has to be updated and accurate and new case that come in

when people pass through child support. And then you have the collections that we receive that we then forward to the states so that they can appropriately credit the accounts and they can take that money and use it to either pay back public assistance or TANF that was owned from what the states paid out or disburse it to the children and their families for unpaid non TANF past due child support. How much do you know about the child support? I mean I'm I preaching to the choir here or do you—is there any question you have about this.

……

Here are a couple of really good examples with the way we were able to work with Treasury. We've worked closely with them on the one-time economic recovery payment, that's the $250 one-time payments that were eligible to Social Security recipients, Black Lung receipients, SSI beneficiaries, etcetera. And, we were able to work with them to include in that legislation that those payments be subject to Administrative offset just like any child support federal payment. So because they were not treated as the benefit payment itself, it was treated as a stimulus payment in addition to whatever benefits the beneficiary was receiving. We were able to intercept those $250 economic recovery payments for families. And, we collected just from these payments; I think it was about $120 million. So that was money that otherwise had we not been able to work with Treasury and had not been able to put that in the legislation that these payments will be eligible payments, that we would have missed, and then in turn states would have missed and families would have missed. So that was key. That was a lot of key communication that we had to do with Treasury to make sure that was included in that legislation since it was Treasury's legislation because a lot of the – some of the – in particular SSI payments by law are not eligible for garnishment or eligible for Administrative offset because of the type of payment it is. There are a number of payments out there that are not eligible for garnishment or eligible for intercept and because the legislation was written that these payments were considered additional payments, additional stimulus payments, in addition to what that person was receiving through their benefits it wasn't going to have any impact on what they were getting in monthly benefits. It was just in addition to. Because that was in the legislation, we were able to match those for intercept. So that was great. We also worked with them on the economic stimulus payment – IRS economic stimulus payment in 2008 and we were able to make sure that there was a language in the legislation that those payments will also be eligible for tax refund offset. And that collected about $850 million – just from these payments alone. So that was great and the management at – again getting back to what I was saying earlier, the management over at FMS and the folks we worked with have been very supportive of the objective of this program which is, you know to collect what we can collect through the offset program for children and families.

……

With the batch file processing, it's been pretty good and when we get to those questions, I can get into a few of the areas we've had. But, with the client, you know, the online TOP system, it's been hit or miss. We really haven't had a lot of success using that on a regular basis because there always seems to be some access issues or you know, suspended account. After two weeks, then we get on the phone and try to talk to someone at FMS and get this resolved and typically it's not as easy as one or two phone calls. So

what we primarily use the TOP client for is just querying. We might want to query case information to make sure that what is on TOP is in synch with what we have on our system for a particular case. 99.9 percent of the time, it is. But we may have a problem which we may need to check something and there are some timing issues that are involved because Treasury is getting tax return/refund information from IRS. Now that's on their system. However, it's not on our system yet until we get that weekly collection file that I mentioned to you. So, sometime there is a timing issue there. But as far as the client itself, I don't find it very helpful —I mean I've used it on occasion. But as far as the support team, I don't think they find it to be very useful because of the difficulty of the account getting suspended and everytime you seem to login, there is a problem with actually getting into the system. So I'm hoping that something that FMS is looking at when they redo, I think they are thinking about redoing TOP, maybe that will for the user—for the online users out there make that process a little simple.

……

As far as programmatic challenges, well the timing issues and the timing issues being that we can't be 100 percent in synch all the time because collections come, we haven't received that collection yet and we get it the next week. So in between that time, the state gets a phone call that says why did you take my tax intercept, they call OCSE, OCSE says well, I don't know let me check with FMS and we check with FMS. And, we see that that intercept, you know, occurred a day ago or that was processed today, maybe the notice from FMS about the money being intercepted went out few days before that. So those are timing issues and there is not a whole lot we can do about it unless we went to where we were able to –like a portal to submit our files to FMS, almost like a direct interface. But I don't know what kind of issues those will introduce, you know. You have the security issues, you have to – there would be a lot of things that will have to happen in order for us to get to that point. So, I kind of see us doing batch processing for sometime. It's a secured transmission. It's, you know it meets all IRS requirements for security, for as far as submitting files.

……

And, lastly is the Debtcheck program. I don't know how familiar you are with the DebtCheck program. We put a lot of time, a lot of resources to get this program off the ground and under the auspices that FMS was going to have a lot matching agencies at this point and I think DebtCheck has been around for 7-8 years and we actually put in place exclusion indicators for DebtCheck. When I say exclusion indicators, those are just like what you call your bypass codes. So it bypasses that person from being matched for debt check or it bypasses that person from being administratively offset or whatever it is. So we have one for DebtCheck and it has to be put at the individual level. Well there is really not much point for it. We don't really need a program for it because at this point there is I think really two agencies that are using – that are using DebtCheck. So I think DebtCheck is one of those things that more guarantees should have been made about which agencies will be using this and then almost guaranteeing that those agencies will be using DebtCheck because when you only have what: Small Business Administration in Kentucky and California only using DebtCheck. And, the Privacy Act doesn't allow FMS to even tell us the information if there is a match. So I think there was one or two matches several years ago when we got those matches and the states said well can we get

the identifier on who they match on because we want to know who went in to apply for a loan so that we can talk to that person. FMS wouldn't give it to us because of the privacy issues. So it was not very beneficial at all. If we can't identify who they are, then we certainly can't take much action. So the only reason I mentioned DebtCheck is because it was one of those programs that seemed like the bite is really bigger than the bark or the bark was bigger than the bite I should say. So, I mean that's those are just a few.

……

I think they are doing a system redesign from the ground up – of TOP and I think that would help. There are some payments that we would like to go after that they could trigger on their end. One in particular, those early buyouts for Federal retirees -- we don't participate as an agency. OCSE does not participate in the Federal Salary through the administrative offset program and that's what we were talking about earlier. One of -- the big reasons why we don not participate is because states are already doing that through the withholding process directly without having to go through the administrative offset. So the states could have Federal employees that are non-custodial parents that they are able to do direct withholding for and not have to go through Treasury because if you have to go through Treasury, it is going to take longer to get the money. They would have to pay administrative offset fee every time there is a payment that's taken. You have that SPA fee, you have the Salary Payment Agency Fee and it's just a little bit more convoluted. If they go through the direct process, no fee, it takes a week or it takes five days or whatever it takes. It doesn't have to go through another agency; it doesn't require another letter to go out – those kinds of things.

Curriculum Vitae

Olu Faokunla

EDUCATION:

PhD, Public Policy and Administration, Walden University, Minneapolis, MN (anticipated graduation, 2012)
MS, Computer Systems Management, UMUC, Adelphi, MD
MS, International Relations, Obafemi Awolowo University, Ile-Ife, Nigeria
BS, Political Science, University of Ibadan, Ibadan, Nigeria

WORK EXPERIENCE:

U.S. Dept. of Treasury, Financial Management Service (3/2004 - Present)
Hyattsville, MD
Project Manager, (5/2007 – Present)

Duties:

- Manages, plans, coordinates, and executes Information Technology (IT) projects and studies
- Leads and manages competing project assignments for systems development from design to support
- Ensures that systems development adheres to organizational policies, procedures, and standards for quality and complies with IT security requirements
- Coordinates the activities of subordinate organizations for the implementation of project goals and objectives

IT Specialist, Database Management (11/2004 – 5/2005)

Duties:

- Provided database management, administration, and support for critical agency applications on distributed (Windows and UNIX) and Mainframe platforms
- Provided customers with technical expertise and knowledge for the implementation of systems' enhancement and proactive approach to resolving database issues and problems that occurred
- Performed various operational database management and administration tasks such as database creation, re-organization, backup and recovery, and performance and tuning in the development, pre-production, production, and disaster recovery environments
- Performed, upgraded, configured, and enhanced database management systems (DBMS), application and system databases

IT Specialist, Windows LAN Administration (3/2004 - 11/2004)

Duties:

- Administered user, file, and print resources over FMS Windows Network
- Provided access control over file and print resources
- Mentored and trained colleagues
- Provided Level 2 Support to Assistant Commissioner Area LAN Administrators
- Worked with vendors for the resolution of complex hardware and software issues on the Windows servers

M-Cubed Information Systems, Inc (4/2001 - 3/2004)
Silver Spring, MD, U.S.
LAN Administrator (Windows LAN Administration/Desktop Support)

Duties:

- Administered user, file, and print resources over client's Windows Network
- Provided access control over file and print resources and complied with FMS security policies, procedures and standards
- Mentored and trained colleagues

General Electric Global Exchange Services (GXS) (5/1999 - 2/2001)
Gaithersburg, MD, U.S.
Client Support Analyst

SITEL Corporation (8/1998 - 5/1999)
Herndon, VA, U.S.
Associate Support Engineer

Voice of Nigeria (VON), Lagos, Nigeria (03/1993 – 10/1995)
Senior News Correspondent/Personal Assistant to the Director- General

VIVA Magazine, Lagos, Nigeria (12/1992 – 03/1993)
Staff Writer

The MAIL, Lagos, Nigeria (12/1990 – 03/1993)
Reporter

Nigerian Institute of International Affairs (NIIA), Lagos, Nigeria (10/1988 – 10/1989)
Research Assistant

PROFESSIONAL CERTIFICATIONS:

Project Management Professional (PMP), Project Management Institute

Project Management Certified Professional, Learning Tree International
IBM Certified Database Administrator, Professional Certification Program for IBM
IBM Certified Database Associate, Professional Certification Program for IBM
Microsoft Certified Professional (MCP), Microsoft Certification Programs
A+ Certified Service Technician, CompTIA A+ Certification

REFERENCES: Available upon request.

Outstanding Performance Award - 2004, 2005, 2006, 2007, 2008, 2009, 2010 & 2011

Competent Toastmaster (CTM)

Disclaimer

This dissertation work was conducted solely as the academic work of the researcher to fulfill the requirement of a Ph.D degree at the Walden University. The study was initiated and conducted by the the researcher alone. It is not a product of the sponsorship of any other person or organization, be it the current or previous employer of the researcher, or any federal, state, or local government agency in the United States or another country.