E-Government: A Stakeholder Relational Perspective

by

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List of Publications

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Abstract

E-governments are becoming an integral part of our lives and the study of this phenomenon has revealed valuable insights from a stakeholder relational perspective. Based on an in-depth case study, this paper addresses the strategic management of stakeholders within the e-government landscape. In particular, the research looks at how the process of stakeholder identification, segmentation and management can be strategized by public institutions to craft cooperative partnerships that are supportive of their e-transformation initiatives. The study concludes that the extent of stakeholders' involvement in e-government campaigns may be conceived as the interplay of the cognitive dimensions of acceptance versus commitment. From this notion, a two-dimensional framework can thus be devised to distinctively segregate the diversity of stakeholders participating in a typical e-government process into the four main categories of Engineers, Dissidents, Seasoners and Skeptics, each with its own corresponding relational strategy.

Keywords: e-Government, strategic stakeholder management, stakeholder relational perspective, acceptance, commitment

Chapter 1 - Introduction to the Study

The predominance of Information Technology (IT) and the speed by which it has been adopted in commercial enterprises has been phenomenal. In particular, the expansion of e-business and the proliferation of virtual alliances bear witness to the evolving role of Information Systems (IS) to buffer the effects of market dynamism (Riggins and Rhee, 1998). However, such phenomena are not exclusive to business corporations as public agencies are also quickening their pace in IT adoptions (Stratford and Stratford, 2000).

Tapping on the vast experiences of the private sector, the arena of public administration has emulated similar business-like transformations with the redesign of prosaic bureaucratic structures (Moon and Bretschneider, 2002) to accommodate an emerging generation of IT-enabled public services or "*electronic government* (*e-government*)" (Stratford and Stratford, 2000; Devadoss *et* al, 2002). More importantly, this renewed form of modernized public management emphasizes increased interactivity and greater sensitivity to the expectations of the government's diverse stakeholders (Ho, 2002; Wimmer and Traunmuller, 2000).

Nevertheless, such visions of customer-centric governments are usually overshadowed by the immediate need for radical reforms to fundamental yet crucial administrative processes (Aichholzer and Schmutzer, 2000). These revolutionary changes are best characterised by the increasing tendency to incorporate citizens as part of the managerial equation (Lowndes *et* al, 2001; Webler and Tuler, 2000) and in turn refocused

attention to the extraction of customer value as a prerequisite for effective strategic planning purposes in e-governments (Burn and Robbins, 2001). This perspective is further reinforced and extended through the work of Prahalad and Ramaswamy (2000), who foresaw the future of organizations as intimately dependent on their capabilities in "harnessing competence in an enhanced network" of stakeholders where customers serve as some of the most substantial contributors.

Hence, taking into consideration the mounting and urgent emphasis on the effective management of stakeholders as an indispensable ingredient of successful e-government recipes (Scholl, 2001), this study proposes to explore the notion of stakeholders within the context of an e-governmental initiative.

1.1 Motivation and Problem Definition

The concept of stakeholders is not an unfamiliar topic within the academic circle of public administration, especially under the guise of citizen participation. Indeed, it is well established that the solicitation and fusion of public opinions plays a mediating role in creating a responsive government (see Arnstein, 1969; Cumming, 2001; Webler and Tuler, 2000). In turn, this perspective has guided e-government practitioners to experiment with improved techniques of utilizing IT to reengineer business processes in order to achieve efficacies in service delivery and craft communicative relationships with their targeted audiences (Elgarah and Courtney, 2002).

However, despite the impending benefits of merging IT with public management ideologies, the prevalence of e-government and its representation of a market-driven mode of governance (Halligan and Turner, 1995) have posed a different challenge to public organizations. With the accelerated rate of IT diffusion in governmental agencies

(Norris and Kraemer, 1996) and the hasty move towards privatization as a competitive alternative (Veenswijk and Hakvoort, 2002), it becomes exceedingly difficult for the civil administration to come to terms with its own social identity (Haque, 1996). In fact, emerging studies have illustrated that contemporary public domain reforms have enlisted private sector values and in the process, erode the communal obligations typical of governmental agencies (Haque, 1998).

Consequently, at this infancy stage of e-government evolution, the public service faces a dilemma between maintaining equilibrium between business process improvements and being responsive towards diverse and often unpredictable fluctuations in customer expectations (Ledingham, 2001). To address this predicament, Haque (2001) advised that the premise of modern public management should not depart from the alignment of governmental e-transformation with a strategic focus on building dialogic relations, which cater to the needs and preferences of differing stakeholders (Dozier *et* al, 1995; Rainey *et* al, 1995; Taylor and Kent, 1999).

Such perceptions are almost synonymous to Kruckeberg and Starck's (1998) belief that the proper management of stakeholder relations is integral to a convergence of aims between organizations and those of their partners. In elaboration, they hypothesized that this acknowledgement of mutual interests can then serve as a self-perpetuating regulator in promoting a sense of corporate ownership amongst the stakeholders as well as strengthening the relationship between them.

The investigation of a systematic stakeholder relationship management process at this preliminary phase of e-government maturity can therefore be perceived as a timely contribution towards the appreciation and strategization of stakeholder relations in e-

governmental development. Specifically, this study endeavours to address the following research question:

> "*What are the different typologies of stakeholders in e-government as well as their implications for relationship management?*"

1.2 The Electronic Filing (e-filing) System

To appreciate the means by which stakeholder relations can be strategized as a corollary of organizational reengineering efforts, this study will examine how one public agency; the Inland Revenue Authority of Singapore (IRAS) has made inroads in its business process rejuvenation through the fusion of IT modernization with an incremental development strategy for stakeholder relationship management. By utilizing IT as a catalyst for organizational e-transformation as well as an enabler of dialogic communications, the IRAS has effectively engineered an organizational turnaround from one that is unproductive, inflexible to one that is efficient and customer-centric. The electronic filing (e-filing) system developed by the IRAS stands testimony to this achievement.

E-filing is one of the pioneering e-governmental initiatives to be introduced by the Singapore government for revitalizing aging public services. It marks a substantial step towards the migration of conventional practices onto the virtual environment. Given the unique context associated with such a complete overhaul of existing operational procedures and the diversity of stakeholders involved, this study will prove impeccably to be the first step in uncovering the evolutionary impacts on stakeholder relations to be considered during e-transformations of public organizations. Specifically, this study will adopt a stakeholder-relational perspective in exploring the influences of e-governmental

transformations on relationships between the public organization and its various stakeholders.

1.3 Methodology

From the above description of the research objective, it is obvious that the study of stakeholder relationship management within e-governments exists within a broader social context necessitating rich descriptions of the social environment, which can only be achieved by adopting qualitative research methods (Strauss and Corbin, 1990). Moreover, such a research approach allows the exploration of unforeseen relationships and provides better insights into the interdependencies among factors captured in the study (Benbasat *et* al, 1987).

1.4 Objectives of the Study

Based on the research question, this study can be categorically divided into 5 principal objectives:

1. To review the existing literature on Stakeholder Theory and e-Government.
2. To assess the current pool of knowledge in stakeholder relationship management within the context of e-government and evaluate the potential of pursuing research in this area.
3. To adopt case studies as the qualitative research methodology for data collection on the e-filing system.
4. To analyze and report findings from the study pertaining to the understanding and management of stakeholder relations for e-governmental initiatives.

5. To draw implications from the research for subsequent theoretical ventures along this direction.

1.5 Thesis Structure

This report comprises a total of 6 chapters, inclusive of the introduction. In Chapter 2, a review of the available literature on the Stakeholder Theory and e-Government is presented. It seeks to give a conceptual overview of the current status of research in each of the 2 areas and describes the theoretical potential of converging knowledge from these domains to formulate a better understanding of stakeholder relationship management in developing e-governmental initiatives.

Chapter 3 addresses the rationale and considerations behind the choice of the research methodology used in this study. It explains the reason for choosing case studies, the techniques in which this research is conducted as well as the mannerism by which the collected data is being analyzed.

Chapter 4 follows with a detailed breakdown of the events and decisions leading to the conceptualization, development and implementation of the e-filing system. In addition, it provides a further justification for the selection of this particular subject of study.

Chapter 5 focuses on the analysis and discussion of core findings from the case that contribute to the appreciation and management of stakeholder relations within e-governmental projects.

Finally, the last section, Chapter 6, reports the limitations of this study and concludes by suggesting implications for future research in this direction.

Chapter 2 - Literature Review

The impact of IT on public administration cannot be understated as governments worldwide rapidly embrace emerging technologies to restructure archaic bureaucratic operations (Moon, 2002) by redeploying their services through these new communication media (Milford, 2000). These developments are not merely cosmetic changes, but rather a paradigmatic shift in basic governmental functioning (Wimmer *et* al, 2001) as services are redesigned to steer away from conventional book-keeping functions of public agencies (Norris, 1999; Seavey, 1996) to pave the way towards a more tightly-knitted e-based society. Increasingly, this trend of fusing IT into public administrative ideologies has been commonly referred to as the dawn of the e-government era.

The remainder of this chapter will be devoted to reviewing existing studies on this recent phenomenon and to gauging the current status of academic interests in this area. Possible implications for research into e-governments will also be identified as a corollary of this literature survey. Towards the end, the stakeholder relational perspective adopted for this research will be introduced as the alternative stance from which e-governmental initiatives can be developed to reimburse strategic value from IT investments in public services.

2.1 Definitions of e-Government

In spite of the relative infant stage of e-government developments, a number of definitions have already been offered in contemporary literature. Milford (2000), for example, considered e-government to be the means by which IT is utilized to simplify and to automate transactions between public organizations and its external constituent entities such as citizens, businesses, or even foreign governmental agencies. This has popularized the notion that e-government is no different from that of pursuing "electronic commerce" within the context of public services (Stratford and Stratford, 2000).

Departing slightly from the above technical focus of e-government, Tapscott (1996) proposed a different appreciation of the role of IT in revamping the civil service. He envisioned an "inter-networked government" where public organizations thrives on the collaborative potential of networking technologies in sculpting virtual alliances to create strategic value. Coincidentally, this definition is parallel with the views of Nadler and Tushman (1997), who argued that technology is one of the means and not the ends for e-government.

Amidst these debates over the technicalities of e-government, there are other scholars who adopted a more social outlook on its purpose. Embracing a citizens' perspective, Lawson (1998) put forward the idea that e-government is the provision of public services in a "one-stop, non-stop" manner where "power is transferred to the people". This is reinforced through the work of Turban *et* al (2002) where it is again emphasized that the core responsibility of e-governments is to ensure convenient access to public information and services for the entire community. In summarizing these social

standpoints, Wimmer and Traunmuller (2000) believed that e-governments exist as the guiding vision towards modernized public administration and democracy.

To reconcile the differing positions taken by the technological and social emphasis on the e-governmental phenomenon, Aichholzer and Schmutzer (2000) conceive the function of e-governments as "covering the changes of governance in a twofold manner: (1) the transformation of the business of governance, i.e. improving service quality delivery, reducing costs and renewing administrative processes and; (2) the transformation of governance itself, i.e. re-examining the functioning of democratic practices and processes" (p. 379).

2.2 Perspectives of e-Government

The preceding definitions of e-government stems from attempts to understand the subject matter from multiple perspectives. In particular, a review of the article by Lenk and Traunmuller (2000) has unveiled **e-Business**, **Citizen**, **Knowledge**, **Process** and **Cooperation** as the five main perspectives in deriving a "complete" appreciation of this phenomenon.

2.2.1 e-Business Perspective

Even before the arrival of the Internet, governments have already been actively pursuing IT to improve productivity and enhance intra-organizational communications (see Brown, 1999; Fletcher *et* al, 1992; Kraemer and King, 1977; Kraemer *et* al, 1993; King, 1982; Norris and Kraemer, 1996). However, it did not escape the notice of scholars that the motivation for e-governments in this era is driven primarily by managerial demands for

internal efficiencies (Bellamy and Taylor, 1998) and may thus limits the strategic value, which can be generated from these investments in IT applications (Ho, 2002).

Conversely, the aggressive influx of the Internet together with the consequent business innovations is often cited as the principal driving force behind the increasing sophistication of environmental conditions, which in turn realigns the development of public services to changing consumer expectations (Csetenyi, 2000; Wimmer *et* al, 2001). Adopting an external focus, these refinements in modern e-governmental services usually entail satisfying customer-centric requirements such as the assurance of time and location independent conveniences (Gore, 1993) as well as an integrated window of access to related public services (Lenk and Traunmuller, 2000).

Taking into account the almost mirror-like cause and effect between e-business and e-government, it is not surprising that Poon (2002) has contended for the presence of "structural" similarities among these two types of Internet-based activities. In fact, he theorized that commercial e-business expertise forms an extensive knowledge pool for e-government practitioners to tap upon in order to avoid "wasted efforts and missed targets" (p. 585). In short, the *e-business perspective* of e-government considers issues associated with the direct deployment of information and communication technologies to increase citizens' access to information as well as the enhancement of operational functionalities within public administration (Robb, 2000; Schubert and Hausler, 2001).

2.2.2 Citizen Perspective

The relationship between governments and citizens counts among one of the most extensively discussed topics in e-government literature (see Heeks, 2001; Stiglitz *et* al, 2002). In general, this relationship can be perceived from two distinct dimensions

(Pablo and Pan, 2002): (1) the participation of citizens as members of a democratic process (Cumming, 2001; Elgarah and Courtney, 2002; Webler and Tuler, 2000) or, (2) the correlation of citizens as consumers of public goods and services (Fernandes *et* al, 2001; Newcombe, 2000).

Citizen participation is clearly vital in the establishment of a government that is responsive to the needs, desires and expectations of the community (ESDH, 1999). Construing the concept of citizens' involvement as an open play of bidirectional communications, studies along this direction have revolved around the methods and techniques by which consistent dialogic interactions can be realized between public organizations and citizens (see Csetenyi, 2000; Elgarah and Courtney, 2002; Heeks, 2001). Such two-way symmetrical communications are often hypothesized as essential elements to instill higher levels of empowerment among e-citizens (von Hoffman, 1999) and pave the way towards the eventual realization of an e-democracy (Backus, 2001). Nonetheless, alternate thinkers have criticized the rising trend of voluminous and notorious non-constructive exchanges between governments and citizens for eroding the quality of public inputs by causing "a decline in the deliberative value of communication" (Bimber, 1999).

In contrast, there is another team of e-governmental scholars who perceive citizens simply as the end users of a spectrum of electronic goods and services, i.e. the extent of citizens' acceptance in virtually delivered public services ultimately determines the effectiveness of e-government initiatives (Sprecher, 2000). As such, Cavanagh and Livingston (1997) have announced the absolute necessity of referencing citizens as clients in formulating strategies and policies for public agencies.

Not surprisingly, in fine-tuning the process of e-transactions for the convenience of citizen-clients, many of the investigations conducted in this area have analyzed citizens' opinion of the technical merits and tribulations in using digital government services (see Lan and Falcone, 1997; Heeks, 2001; Wescott, 2002). Others however, have chosen to explore the more intangible aspects associated with citizens' adoption of e-governmental applications such as the psychological barriers associated with Internet trust (Gefen *et* al, 2002; Momentum, 2000), the pressure of culturally acceptable behavior within this new virtual community (Boyle, 2000) or the knowledge gap that exists as a consequence of the embedded digital divide within the citizenry (Elgarah and Courtney, 2002).

In spite of such optimism on increased citizen engagements, Aichholzer and Schmutzer (2000) have cautioned against shifting the bulk of the transactional burden to the citizens through the use of IT. The removal of physical intermediaries may at times hinder the communications between governments and citizens by enforcing the public to form their own interpretations of policy rules and regulations. Under such constraints, the probability of errors may amplify and at the end, it may be more favorable for e-governments to supplement electronically driven operations with a tint of system humanization.

In a sense, the *citizen perspective* of e-governments is concerned with the causal factors that affect the degree of participation and acceptance amongst citizens towards any e-governmental initiative. Specifically, this stance takes into account both the technical incentives as well as the psychological barriers inherent in the delivery mechanisms for e-governmental services.

2.2.3 Knowledge Perspective

In an information-intensive economy, theorists have postulated that organizational competitiveness is a function of the supporting knowledge base, which is embedded within various entities of a firm, including its culture, routines, policies, systems and employees (Grant, 1996; Spender, 1996). Within the context of governmental agencies, such knowledge resources will translate to public administrators' familiarity and proficiency with regards to policies, past actions, regulations as well as administrative procedures (Lenk & Traunmuller, 2000).

Nevertheless, as public organizations embrace e-governments as the next phase of evolution, researchers such as Wimmer and Traunmuller (2000) have observed that there is a fundamental change in knowledge distribution across digital activities, which extend beyond internal structures. As opposed to traditional governments where knowledge is dominated by public authorities, the interconnectivity of e-governments has allowed the diffusion of knowledge across networked partners (Allen *et* al, 2001; McHenry, 2002). A critical challenge to knowledge management within e-governments is therefore the adequacy in mapping domain knowledge to virtual workspaces as well as the availability of IT tools to transfer quasi "knowledge on demand" to the citizen or business partner (Wimmer and Traunmuller; 2000). The significance of knowledge sharing in the public sector is reinforced by Zhang *et* al (2002) in their inquiry into the benefits of knowledge networking within e-governments as well as the demonstration of the strategic potential of knowledge management systems in law enforcement (Chen *et* al, 2002).

Hence, the *knowledge perspective* of e-government examines the issues and preventive measures associated with a possible loss of knowledge through virtual

migration of public services. In addition, it explores the reconfiguration of knowledge within e-governments where knowledge is no longer treated as an exclusive commodity of public administrators but instead, it serves as a form of shared capital between members of the e-governmental network.

2.2.4 Process Perspective

The *process perspective* of e-government has its roots in the philosophy of Business Process Reengineering (BPR), which is defined to be the fundamental rethinking and redesign of business processes to achieve dramatic improvements in efficiency (Hammer, 1990). Essentially, such process transformations are very much reliant upon information sharing as the backbone for their implementations (Hammer and Champy, 1993).

As a rendition of the *e-business perspective*, the *process perspective* also examines the methods by which IT can be utilized to improve service delivery. However, the two views differ in their approach towards the role of IT in e-governments. The *process perspective* visualizes e-government as the revamp of administrative processes with IT playing an enabler role in catalyzing and facilitating the reengineering efforts (Lenk and Traunmuller, 2000) whereas the *e-business perspective* hails IT as the main contributor towards efficiencies in e-service delivery (Cap and Maibaum, 2001; Gant and Gant, 2002; Klischewski and Wetzel, 2001; Regio, 2002). In fact, Csetenyi (2000) have advised that continuous process improvements are a must within public organizations in order to "continually adapt their process and internal structures to changes and challenges in their global environment" (p. 296).

However, in reforming public organizations, it has been illustrated from existing literature that specific business models developed commercially are only applicable in

varying degrees to the public domain (Thai and Grimm, 2000; Wassenaar, 2000), which in turn spurred extensive academic exercises on either refining frameworks in appreciating contextual restrictions (see Boyle, 2000; Gurbaxani *et* al, 1990; Momentum, 2000) or defining best practices (see Huang *et* al, 2002; Pardo and Scholl, 2002; Rupp, 2002; Whitson and Davis, 2001) for governmental agencies in adapting to e-government.

Assuming a more comprehensive view, Lenk and Traunmuller (2000) have highlighted the obstacle to e-government as merely a test of the organizational capability to fundamentally redesign the interactions with their citizens and reorganize the administrative processes. Specially, the *process perspective* looks at the reinvention of governmental processes and their impact on the citizens.

2.2.5 Cooperation Perspective

Finally, the *cooperation or tele-cooperation perspective* deals with the computer-mediated interactions between various public organizations and trading partners in a governmental transaction (Devadoss *et* al, 2002). In developing e-governmental initiatives, most independent agencies have to collaborate with the public organization through unprecedented, IT-aided modifications to current business processes. As such, the *cooperation perspective* provides a holistic appreciation of such developments by converging on the issues surrounding the support of computer-mediated cooperation in a comprehensive manner (Lenk and Traunmuller, 2000; Traunmuller and Csuhaj, 1998).

In other words, the union of services from multiple agencies into a single, integrated interface can be said to be the result of seamless collaboration among firms, people and processes (Devadoss *et* al, 2002; Lowry *et* al, 2002). Moreover, as mentioned by Traunmuller and Lenk (1996), the *cooperation perspective* is of special importance to

activities related to complicated decision-making, negotiation and policy formulation, especially if the actors are situated at different locations. The development of a single information infrastructure for the entire civil service has thus been the impetus for some of the contemporary studies along this direction (Galindo, 2000; Hornfeldt *et* al, 1998). Theoretically, this unified IT architecture will serve as a common platform for the deployment of complex services involving different public agencies (Mecella and Batini, 2001).

A comparison among the above perspectives of e-governments can be drawn to identify their implications for e-governmental developments as well as the opportunities for future research in e-government (see Table 2.1).

Perspectives of e-Government	**Implications for e-Government Development**	**Opportunities for Future Research in the Use of IS for e-Government**
e-Business	- E-Government initiatives should increase citizens' access to information and enhance the functionalities of public organizations.	- To examine the structural similarities and differences between e-business and e-government to determine if the experiences of commercialized e-business projects are portable to the context of e-governments.
Citizen	- The development of e-government initiatives should focus on overcoming the underlying elements that affect the degree of participation and acceptance amongst citizens, be it technical difficulties or psychological barriers.	- To uncover the technical and psychological factors behind citizens' adoption of e-government; - To determine if these obstacles can be conquered through effective systems design and; - To understand the implications of e-government from the viewpoint of citizens.
Knowledge	- The development of e-government initiatives should incorporate preventive measures to safeguard against possible loss of knowledge from virtual	- To explore the types of knowledge inherent in e-government initiatives; - To discover methods for creating, sharing, retaining and integrating

	migrations. - At the same time, e-government initiatives should include procedures for integrating knowledge from an enhanced network of partners.	knowledge within e-government and; - To identify the potential benefits of an integrative knowledge network in an e-government setting.
Process	- E-Government initiatives should be shaped by IT-enabled business process reengineering efforts. Particularly, the development process should look at the reinvention of governmental processes, the rethinking of the underlying governance structure as well as their impacts on the citizens.	- To continue research efforts in searching for an integrative IT-business framework that serves as guiding principles in the process redesign efforts of e-governments.
Tele-cooperation	- The development of a single information infrastructure for all governmental agencies serves as a common platform for cooperation in delivering integrated e-governmental services.	- To investigate the technical issues in system connectivity between multiple public agencies and; - To reveal the organizational barriers or resistance towards system integrations in order to work out avenues for collaboration.

Table 2.1: A Comparison of the Five Perspectives of e-Government

2.3 A Critique of Existing e-Governmental Perspectives

Irrefutably, each of the preceding definitions and perspectives provides a valid and important basis of reference by presenting an intuitive facet of e-government that aids in its development. However, due to their parochial emphasis on the transactional nature of e-governmental processes, these explanations are limited in their scope to address the level of dynamism to be expected from any e-governmental social setting (Tan *et* al, 2002). In particular, with the new genre of public administrative reforms resembling the typical market-driven mode of governance where policies are aligned along the commercial principles of competitiveness, efficiency and productivity (Halligan and

Turner, 1995; Haque, 1996), wide-spread controversies have transpired over the implications of such businesslike transformation on the "publicness" of public organizations (Haque, 2001).

The publicness of the public sector has been a standard concern among political scholars, especially with regards to its fulfilment and representation of complex public interests (Coursey and Bozeman, 1990). Citing obstacles such as the accumulation of excessive power and the inaccessibility of information on the pretext of official secrecy, Bozeman (2000), Garnham (1990) and Haque (1994) have criticized traditional public agencies for their indifference as well as lack of accountability towards public stakeholders. It is thus not surprising that many theorists have eagerly searched for alternatives to augment the publicness of the civil service (Thomas, 1999; Ventriss, 1989).

With the recent move towards a market-oriented governance model advocated by the above five perspectives, the quest appears to be over as there is a preconceived notion that public interests are best served by improving service quality and customer satisfaction through overcoming inefficiencies in operational activities (Clements, 1994; Kelegama, 1995). Nevertheless, such ideas have been brought under scrutiny for its narrow and over-simplistic assumptions on the parallelism of the fundamental objectives and processes between public-private organizations (Dillman, 1998).

Among public administration literature, it is well established that public and private organizations are not homogeneous in nature (see Bozeman, 1988; Bozeman and Bretschneider, 1986; Bretschneider, 1990; Bretschneider and Wittmer, 1993; Coursey and Bozeman, 1990; Gold, 1982; Rainey, 1983). In fact, Rainey *et* al (1976) has summarized these critical differences between public-private establishments around three

categories, namely environmental factors, organization-environment transactions as well as internal structure and processes. Some of these characteristics unique to governmental agencies include the absence of market incentives; the need for higher levels of accountability; the existence of multiple, conflicting goals; the restrictions put in place by a greater set of rules and regulations as well as the presence of a political context with a broader range of constituent stakeholder groups (Robertson and Seneviratne, 1995).

Taking into consideration these disparities between public-private organizations, Frederickson (1997) and Haque (1996, 1998) have pointed out that even though the reengineering efforts of public agencies may have diminished public-private distinctions and introduce business management culture to obsolete bureaucracies in need of revitalization, but simultaneously, these efforts have marginalized public service responsibilities in place of standard business norms. Gregory (1999), for instance, has hypothesized that an over-emphasis on business performance may encourage public organizations to devote more attention to predetermined productivity targets and compromise their capacity for public responsiveness.

Due to this mismatch between the business missions of public versus private organizations, Margetts and Willcocks (1994) have extrapolated that the political environment in which public agencies operate exacerbate the risk involved in implementing IT initiatives as well. In effect, many of the popularized IT management frameworks for commercial enterprises have been proven to be counterproductive to IT development in the public sector (Hoff, 1992) due to the negligence of inherent public-private distinctions (Cats-Baril and Thompson, 1995).

Evidently, the above literature survey suggests that the development of e-government pivots on effective triangulation between the reengineering of administrative processes, the fusion of IT into public services as well as the organizational responsiveness towards dynamic social expectations. To address this knotty predicament, Haque (2001) has advised that the premise of modern public management not to depart from the alignment of governmental transformations with a strategic focus on establishing dialogic relations, which reflect the timely requirements and preferences of differing stakeholders (Dozier *et* al, 1995; Ledingham, 2001; Rainey *et* al, 1995; Taylor and Kent, 1999). Synonymously, Kruckeberg and Starck (1998) believe that stakeholder relations, if properly managed, are integral to the convergence of aims between organizations and their transactional partners. This sharing of a unified vision in turn, serves as a self-perpetuating regulator in promoting a sense of ownership in the organization among stakeholders and the forging of strategic alliances between them.

Incidentally, this perspective is also resonated in the article by Tan and Pan (2003) where it is documented that the development of e-government initiatives does indeed trigger a chain reaction in the evolution of government-stakeholder relationships and it is through the recognition and management of these emerging relational patterns, which enhances the e-government experience.

Hence, this study proposes to approach the topic of e-government from the perspective of stakeholder relations. Essentially, the impetus for such a suggestion hinges on the proposition that the effective management of organization-stakeholder relations is crucial to the extraction of strategic value in developing and structuring e-governmental initiatives.

2.4 What is the Stakeholder Relational Perspective of e-Government?

The strategic management of stakeholders is gaining momentum in the public sector (Pardo and Scholl, 2002; Pardo *et* al, 2000; Scholl, 2001; Tennert and Schroeder, 1999). As defined by Carroll (1989), a stake is "an interest or a share in an undertaking" (p. 56), therefore a stakeholder is "any individual or group who can affect or is affected by the actions, decisions, policies, practices, or goals of the organization" (Freeman, 1984, p. 25; Greenley and Foxall, 1998; Scott and Lane, 2000). This definition is further broadened by Donaldson and Preston (1995) to include individuals who are identified through the actual or potential harms and benefits that they experience or anticipate as a result of firm's actions or inactions.

Logically, it can be deduced from these definitions that stakeholders are specific to an organization (Berman *et* al, 1999). For example, within the context of e-governments, the potential stakeholders for any public agency may include politicians, civil servants, commercial corporations, citizens and perhaps even foreign governmental organizations (Traunmuller and Wimmer, 2000). The first step in strategic stakeholder management is thus the listing of all entities that have a stake in the establishment. Freeman (1984) has referred to this list as the stakeholder map of an organization.

Nonetheless, the identification of stakeholders requires an interpretation of the definition for which many have been offered. Scott and Lane (2000), for instance, perceive stakeholders to be those who anticipated benefits from transacting with the organization. On the other hand, Coakes and Elliman (1999) have pegged stakeholders to constituent groups with vested interest in an initiative together with the ability to affect its development. Finally, stakeholders have been normally referenced as the internal and

external parties, who claim ownership over a corporation and its operational activities (Clarkson, 1995).

Once these stakeholders have been isolated, Pfeffer and Salancik (1978) have recommended managers to "rank or assign weights to them in order to indicate their impact on the organization or the extent to which the organization believes it should moderate its consequences on them" (p. 52), i.e. stakeholders should be segmented in accordance to their impacts on the organization.

In preliminary classification schemes, stakeholders can be generally divided into primary or secondary stakeholders. The group of primary stakeholders refers to those, who play a vital role towards the survival of the firm, i.e. without the continuing participation of these stakeholders; the company may suffer serious consequences or even cease to function (Clarkson, 1995; Schneiderman and Rose, 1996). In view of their strategic significance, the terms "critical stakeholders" or "strategic stakeholders" are often synonymously employed to depict these primary stakeholders as well (Demb and Neubauer, 1992; Monks and Minow, 1995; Turnbull, 1997). Conversely, the group of secondary stakeholders are typically those "who influence or affect, or are influenced or affected by, the corporation, but they are not engaged in transactions with the corporation and are not essential for its survival" (Clarkson, 1995, p.107; Schneiderman and Rose, 1996).

Further to the above technique of stakeholder categorization, other characteristics have been proposed as normative factors to separate stakeholders. Amidst these debates on stakeholder differntiations, a noteworthy framework developed by Mitchell *et* al (1997) for demarcating stakeholders is founded on the notion that the extent of stakeholders'

influence on an organization is subjected to the interplay of the three attributes of power, legitimacy and urgency (Agle *et* al, 1999; Scott and Lane 2000). Depending on the combination of attributes possessed by a particular stakeholder, appropriate managerial actions may be necessary. The crux of this argument is summarized in Table 2.2 below:

Attribute	Definition	Managerial Concerns
Power	- Stakeholders have power when managers perceive them to have the ability to impose their will on the organization.	- Because of their potential to acquire legitimacy or urgency or both, management should remain cognizant of such stakeholders and adjust priorities accordingly.
Legitimacy	- Stakeholder legitimacy is a perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.	- There is typically no pressure on managers to engage in an active relationship with such stakeholders. However, by virtue of their legitimacy, the actions taken by these stakeholders will impact the performance of an organization if they were to gain a second attribute.
Urgency	- Stakeholders have urgency when their claims for organizational attention are both time-sensitive and critical to them, and any delays in paying attention to them are unacceptable.	- In general, urgent stakeholders are irksome but not dangerous, bothersome but not warranting more than passing management attention, if any at all. Nevertheless, in the event that these stakeholders are able to attain power or legitimacy in their claims, then they will count amongst some of the topmost priorities in stakeholder management.

Table 2.2: A Comparison among Power, Legitimacy and Urgency of Stakeholders

From the table, the message is clear: the assessment of stakeholders' saliency is instrumental to the formulation of relational strategies to co-opt principal stakeholders

into the organizational vision (Jawahar and McLaughlin, 2001; Mitchell *et* al, 1997). This imperative nature of saliency in stakeholder management is reinforced through the work of Frooman (1999), who devised what is known as the "Typology of Relationships between Stakeholders and Firm". Based on the Resource Dependency Theory (Yuchtman and Seashore, 1967), Frooman's (1999) typology is represented as a 2x2 matrix where each axis reflects the extent of resource dependency or level of power symmetry between the firm and its stakeholders. The gist of this model is presented in Figure 2.1 below:

<table>
<tr><td colspan="2" rowspan="2"></td><td colspan="2">Is the Stakeholder Dependent on the Firm?</td></tr>
<tr><td>No</td><td>Yes</td></tr>
<tr><td rowspan="4">Is the Firm Dependent on the Stakeholder?</td><td rowspan="2">No</td><td>Low Interdependence
- Neither the firm nor the stakeholder depends on each other.</td><td>Firm Power
- The stakeholder is dependent on the firm, but the firm is not dependent on the stakeholder.</td></tr>
<tr><td colspan="2">Management Strategy
Since the firm is not dependent on the stakeholder for resources, it is likely to adopt an indifferent attitude towards stakeholders' concerns, i.e. the firm will be almost oblivious to their needs and expectations</td></tr>
<tr><td rowspan="2">Yes</td><td>Stakeholder Power
- The firm is dependent on the stakeholder, but the stakeholder is not dependent on the firm.</td><td>High Interdependence
- Both the firm and the stakeholder depend on each other.</td></tr>
<tr><td>Management Strategy
Since stakeholders control resources pivotal to the survival of the firm, the firm has an immediate mandate to attend their needs and whenever possible, manoeuvre them to become amiable partners, i.e. shift stakeholders into high interdependent relations.</td><td>Management Strategy
Since both the firm and the stakeholder are reliant on each other for resources, the firm will attempt to negotiate with stakeholders to arrive at mutually acceptable solutions.</td></tr>
</table>

Figure 2.1: A Summary of Frooman's (1999) "Typology of Relationships between Stakeholders and Firm"

In essence, the manifestation of the stakeholder theory in commercial enterprises can be summarized into three basic principles:

1. As long as the stakeholders do not acquire the capability to exert sufficient influence to obstruct organizational operations, there is no necessity to allocate resources to attend to their requirements (Frooman *et* al, 1999; Mitchell *et* al, 1997).
2. At the same time, firms should always been mindful of their most salient partners and devise business strategies that align with the interests of these crucial stakeholders (Blair, 1995; Boatright, 2002, Donaldson and Preston 1995; Porter, 1992).
3. Finally, if the balance of power is tilted towards stakeholders, organizations should concoct means by which to manoeuvre these stakeholders into a mutually dependent relationship so as to level the playing field for both parties (Frooman, 1999; Lawler and Yoon, 1995).

Undeniably, these guidelines in stakeholder management are well-tuned to the context of commercialization where businesses operate to optimize their responses to deserving stakeholders (Boatright, 2002; Donaldson and Preston, 1995; Schneiderman and Rose, 1996) within a relatively smaller resource scarcity perimeter (Greenley and Foxall, 1998; Scott and Lane, 2000). However, bearing in mind the distinctions between public-private organizations (Rainey *et* al, 1976), it is the proposition of this thesis that the underlying philosophy of stakeholder management in the private sector is not entirely transferable to the public sphere.

Reflecting on the discussions in the previous section, public administration exists predominantly to provide a channel of representation for public interests and the motivation for its continual existence is derived solely from the capacity to fulfil communal expectations (Coursey and Bozeman, 1990). Consequently, tracing the developmental cycle of e-government would reveal patterns of evolution that goes beyond mere adaptation of technologies to encompass revolutionary changes in organizational decision-making, power-sharing and coordination (Allen *et* al, 2001), which emphasizes empowerment of partnering stakeholders, especially the citizens (Deloitte, 2001; von Hoffman, 1999; Traunmuller and Wimmer, 2000).

Clearly, such a phenomenon runs contrary to the universal business wisdom of shifting the axle of power from stakeholders to firms (Frooman, 1999; Lawler and Yoon, 1995). Hypothetically, from the perspective of the civil service, most, if not all of the stakeholders are compulsory participants of the governing process and thus, there is an obvious lack of market incentive to listen to their fundamental claims (Robertson and Seneviratne, 1995), much less empowering them to legitimize their demands with substantial power justification. As such, the development of e-government and its representation of a contradictory stand on stakeholder management serve as windows of opportunities from which to re-evaluate the concept of stakeholders in IT modernization of public administration.

Specifically, the stakeholder relational perspective proposed for this study endeavours to explore the following research questions with regards to the management of stakeholders in e-government initiatives:

1. Who are the stakeholders of an e-government initiative and how are they identified?
2. Since the function of e-government is synonymous to that of a sponge in soliciting stakeholders' opinions, is there a need for stakeholder segmentation? If so, how are stakeholders differentiated and for what purpose?
3. As a follow-up to the previous question, what is the relational strategy employed by public administration in developing e-governmental initiatives? Is it a one-solution-fits-all or are there multiple tactics corresponding to different stakeholder categories?

Chapter 3 - Research Methodology

This study has adopted an in-depth case research approach. According to Yin (1994), case study research is "an empirical inquiry that: investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (p. 23). It is most appropriate in scenarios where the research question is exploratory in nature and focuses on the examination of current events that occur beyond the control of the investigator (Yin, 1994). Moreover, case study offers a chance to engage in theory-building in an area where there is relatively little prior knowledge (Benbasat *et* al, 1987; Eisenhardt, 1991; Parkhe, 1993).

As explained in the previous section, the majority of existing articles on the strategic management of stakeholders are not compatible in the premise of public agencies, rendering their corresponding application in e-governments ineffective. In other words, the theoretical and empirical understanding towards stakeholder management within the context of e-government exists at an adolescence phase of investigation. Hence, the choice of case study exemplifies both the preliminary stage and exploratory basis of the research topic.

The next section of this chapter will introduce the research paradigm adopted for this thesis. Subsequently, a detailed breakdown of the different phases in planning and implementing the study will be discussed. Towards the end, some additional

considerations in the methodology will also be presented. In sum, this chapter covers the fundamental principles governing the operationalization of the research in framing the researcher's interpretations of the phenomenon and the data collected.

3.1 Philosophical Perspectives of Case Studies

Researchers and methodologists have articulated both *positivist* and *interpretivist* approaches to the design and execution of case studies, (see Lee, 1989; Leonard-Barton, 1990; Numigami, 1998; Paré and Elam, 1997; Walsham, 1995; Yin, 1994) with no mention of inherent superiority in adopting either technique. In fact, as observed by Lee (1991), the feasibility of any theoretical angle is essentially a function of the underlying research objectives. A description and comparison of the two research perspectives are thus constructive in the clarification of the direction taken in structuring this study.

Nevertheless, since elaborate expositions of positivism and interpretivism have already surfaced in IS literature (see Galliers, 1991; Lee, 1991; Mumford *et* al, 1985; Nissen *et* al, 1991; Orlikowski and Baroudi, 1991), it is pointless to deliberate further on the pros and cons of embracing each of the research paradigms. Rather, the remainder of this section will focus on how these two ideologies can be manifested within the framework of this study as well as the rationale for selecting the interpretivistic method of analysis.

3.1.1 Positivist Perspective of Strategic Stakeholder Management

The positivist approach to theory construction is synonymous to the natural-science model of social-science research where proposed theories must "conform to the rules of formal logic (of which the rules of mathematics are a subset) and the rules of

experimental and quasi-experimental design" (Ngwenyama and Lee, 1997, p. 149). In elaboration, Ngwenyama and Lee (1997) remarked that the design of positivist studies should be governed by the manner with which the propositions are related to the empirical reality they intend to explain. To put it simply, positivism refers to the existence of an objective reality within which causal relationship can be established between the subject of interest (dependent variable) and the necessary conditions leading to its manifestation (independent variables) (Mohr, 1982; Walsham, 1993). Furthermore, in unison with the ideology of an absolute truth, positivist research must comply with a number of criteria for rigor (Lee, 1989; Miles and Huberman, 1994; Yin, 1994), namely construct, internal and external validity as well as reliability.

Naturally, from a positivist stance, the research prospects of Stakeholder Theory may assume the form of an attempt to establish a correlation among the saliency of stakeholders and the resource attributes they possessed. Drawing on proposition specification guidelines suggested by a number of methodologists (see Markus and Robey, 1988; Orlikowski, 1993; Sabherwal and Robey, 1995; Shaw and Jarvenpaa, 1997; Walsham, 1992) and applying them to the stakeholder theory model from Mitchell *et* al (1997), some hypothetical propositions for future positivist research can be envisioned:

Proposition 1: A stakeholder is salient to an organization only if the stakeholder possesses at least one of the three attributes of power, legitimacy and urgency.

Proposition 2: The degree of saliency of a stakeholder to an organization is proportional to the number of attributes possessed by the stakeholder.

Proposition 3: The degree of saliency of a stakeholder to an organization is proportional to the amount of resources devoted by the organization in meeting his/her expectations.

Nevertheless, Ngwenyama and Lee (1997) have advised against the strict application of the positivist methodology in social science research because it constrains the topic of inquiry. In fact, Lee (1991) believes that "the social scientist must not only collect facts and data describing purely objective, publicly observable aspects of human behaviour… but also the subjective meaning this behaviour has for the human subjects themselves" (p. 347). Since the interests of any particular stakeholder group cannot be considered in isolation from those of others and organizations have to respond to the interaction of multiple influences from the entire stakeholder set (Greenley and Foxall 1998, Rowley 1997), this study subscribes to the conviction that a more in-depth appreciation of interdependencies is required.

3.1.2 Interpretivist Perspective of Strategic Stakeholder Management

Conversely, interpretivism adopts the position that our knowledge of reality is a social construction by human actors (Walsham, 1993). Typically, this research paradigm accepts that reality is only partially observable and comprises relations beyond noticeable facts (Comte, 1971). In other words, from the interpretivist point of view, the collection of objective data is impossible since the investigator interacts with the human subjects involved in the enquiry and in the process, alters the perceptions of both parties (Walsham, 1995). Effectively, interpretive studies supply evidence of a nondeterministic perspective, which demonstrates the "intent to increase understanding of the phenomena within a specific cultural and contextual setting, and an examination of the phenomena

and the setting from the perspectives of participants" (Orlikowski and Baroudi, 1991; Walsham, 1995, p. 384).

In contrast to the positivist interpretation of stakeholder management where strategies are anchored from the organizational perspective and thus preconceived to be unidirectional, the interpretivist point of view steers away from this assumption of stakeholders as submissive recipients of managerial measures. Inspired by Markus's (1994) defense of individuals as intelligent beings existing in a shared social context, this study postulates that stakeholders are not merely passive receptacles of corporate actions and participate actively in shaping organization-stakeholder relations. Consequently, given the research objectives, a holistic comprehension of the social environment is deemed to be a necessary requirement.

Furthermore, taking into account the unique circumstances of this study where everybody, including the investigator, is a target audience of the e-governmental initiative, the adoption of an interpretivistic perspective of the data collected can be perceived to be a logical decision. In another sense, the experience and contextual understanding of the researcher is understood to provide additional background information that is invaluable to the interpretation of the evidence uncovered (Lacity and Janson, 1994).

3.2 Research Design and Execution

The entire study is conducted over a period of twelve months with procedures ranging from research design to data collection and case analysis. Distinctively, this spectrum of research activities can be divided into three phases: (1) Conceptualization and Planning, (2) Data Collection, (3) Thematic Analysis.

3.2.1 Conceptualization and Planning

In any formal and rigorous study, a thorough literature review of the subject matter together with relevant or related disciplines is definitely the topmost priority on the agenda. The literature survey is crucial in enabling the researcher to confront his/her own perception of the topic (Klein and Myer, 1999) and garner theoretical support for pursuing a specific area of research. In addition, it forms the foundation upon which readers may appreciate the reason for the study (Krueger, 1998) and acquire the theoretical lens for interpreting the research findings. Most importantly, throughout the study, the theoretical base of the researcher is constantly refreshed with contemporary articles in order to refine the enquiry to remain relevant by reflecting probable environmental changes.

After an initial round of academic justification, the immediate task at hand is the selection of a site for conducting the investigation. Since the thesis revolves around the management of stakeholders in e-governmental initiatives, a couple of potential locations with e-governmental services catering to a broad citizenry were short-listed, including the Inland Revenue Authority of Singapore (IRAS), the Central Provident Fund (CPF) Board as well as the Infocomm Development Authority of Singapore (IDA). The divestment of contact efforts into multiple sites of access is an important step because not many organizations are receptive of external researchers (Darke *et* al, 1998), i.e. attempts to establish organizational connections simultaneously will reduce the time lag associated with performing the same process consecutively.

3.2.2 Data Collection

The core responsibility of a researcher is to solicit the richest form of data possible (Lofland and Lofland, 1995). However, this ideal is very much dependent on the type of accessibility available to the investigator through negotiations. Fortunately, for this study, the researcher has the opportunity to approach the Chief Information Officer (CIO) of IRAS, who was keen to showcase the Electronic Filing (e-Filing) system as an epitome of e-governmental excellence. Based on stipulated conditions, the researcher was able to negotiate for research duration of 6 – 8 months for data collection.

The study was conducted over a period of approximately six months where a total of fifteen semi-structured qualitative interviews (Cassell and Symon, 1994; Merton *et* al, 1990) were conducted with the CIO, the e-Filing system design team, the e-Filing system implementation team and the e-Filing administrative group to obtain data concerning the intra-organizational considerations behind the implementation of the e-Filing project. For the semi-structured interviews, they were open-ended in nature and assumed a conversational manner. Nevertheless, the questions were prepared in advance to restrict the scope of each dialogue session in order to prevent topics of a broader, undefined nature from emerging. Precautions were also exercised with the wording of the questions so that the interviewer appeared to be genuinely naïve about the subject matter and thus, allowing the respondents to provide an objective opinion (Yin, 1994). On estimate, each of the interviews lasted two hours, giving a grand total of approximately 30 interview hours.

The job positions of the interviewees chosen for this study as well as the reasons for their selection are summarized in Table 3.1 below:

Position	No.	Purpose for Interview
e-Filing System Administrators		
Chief Information Officer (CIO)	1	- To provide a strategic overview of the e-Filing system and its implications for the organization.
Assistant Director (IT Service Branch)	1	- To uncover the organizational considerations in designing, developing, implementing and maintaining the e-Filing system.
System Officer	4	
IT Specialist (System Maintenance)	2	
Sub-Total:	**8**	
Contact Points of Taxpayer Communications		
Manager (Corporate Communications)	1	- To examine the communication policies and strategies adopted by IRAS in improving the effectiveness of interactive channels to solicit taxpayers' opinions.
Corporate Communication Officer	1	
Sub-Total:	**2**	
e-Filing System Users		
Senior Tax Officer	1	- To explore the pros and cons of migrating tax filing services onto the virtual environment from the users' perspective.
Senior Assistant Tax Officer	1	
Officer (Taxpayer Services Division)	1	
Sub-Total:	**3**	
Corporate Administrators		
Assistant Director (Finance)	1	- To understand the corporate changes brought about by the e-Filing system.
Assistant Director (Human Resource)	1	
Sub-Total:	**2**	
Total	**15**	

Table 3.1: A Summary of Interviewees Selected for the Study

To reduce the distraction from having to scribble down the entire conversation, each interview was digitally recorded using a microphone attached to a laptop and was subsequently converted to MP3 format for easy and secure storage (Spradley, 1979). This

enabled the researcher to focus on the interviewing process and adjust questions in accordance to its progress. This in turn contributed to a richer data set. Furthermore, given the fragmented schedules of these practitioners, such a procedure yielded substantial time savings and allowed the researcher to "squeeze" more questions within the allocated duration.

Throughout the interviewing experience, notes were only taken if interesting themes happened to emerge from the interaction. At times, the interviewees were also prompted for supporting evidence (e.g. news archives, meeting minutes etc) of their statements, whenever possible (Benbasat *et* al, 1987). Right after every interview, the digital recording was transcribed immediately to ensure that data distortions were minimized.

Over and above the interviews that served as the primary data source, secondary documents in the form of meeting minutes, newspaper clippings and archived reports were obtained with permission from the IRAS' management. Field notes were also taken during observational visits to the organization. In particular, the researcher was especially attentive to the business routines supporting the e-Filing system as well as its operational performance. This accumulated mass of secondary evidence proved to be complementary to this investigation as it augmented the background understanding of the tax agency and provided an anchoring reference point from which to appreciate the materials from interview sessions.

In addition, the data obtained from the aforementioned intra-organizational research activities was further triangulated with perspectives from external customers or taxpayers (Orlikowski, 1993; Patton, 1990). Since the aim of this study is to evaluate the

role of stakeholders in structuring the e-Filing system, it was essential to establish the stakeholders' perspective of the system. In general, the population of taxpayers can be separated into three main factions: (1) the group of taxpayers who chooses to submit paper returns; (2) the group of taxpayers who opts for electronic submissions and does so independently (Independent e-Filers) as well as; (3) the group of taxpayers who is unfamiliar with the e-Filing system but decides to go ahead by visiting conveniently-located help centers where student volunteers are available for assistance (Dependent e-Filers).

Keeping within the scope of this study, four interviews were conducted with members from the group of independent e-filers. The primary emphasis of these interviews rested on: (1) the motivation behind adopting the e-Filing system; (2) opinions of system feature as well as; (3) suggestions of possible improvements, which should be incorporated into subsequent versions. At the same time, the researcher journeyed down to one of the help centers during the tax cycle where seven interviews were negotiated with a fraction of the dependent e-filers to gain their perspective of the e-Filing system. In particular, the investigator was eager to understand the rationale of these taxpayers in taking the extra effort to travel to the help centers despite the availability of a parallel running paper filing procedure. More importantly, such interviews also served as valuable insights into the e-Filing system as perceived from the viewpoint of these e-filing laggards.

From the triangulation of different methods in data collection, the researcher was able to build a qualitative in-depth compilation of data points within the study environment (Jick, 1979; Lacity and Janson, 1994) that focused specifically on

developmental issues pertaining to the e-filing service provided by IRAS, with lesser emphasis on its technicalities (Eisenhardt, 1991). This phase of research was concluded when repetitive themes started to emerge during interviews thus, suggesting the possibility of information saturation (Glaser and Strauss, 1967).

3.2.3 Thematic Analysis

For this study, thematic analysis (Boyatzis, 1998) was adopted for encoding the qualitative information to create an explicit "code" consisting of themes, indicators and qualifications. Such a theme is handy for categorizing evidence, which aids in the researcher's interpretation of the phenomenon. Fundamentally, thematic analysis is a data-driven approach where the codes are generated inductively from raw data (Boyatzis, 1998), i.e. codes are constructed to explain the data instead of forcing a fit between data and predetermined codes (Orlikowski, 1993).

To perform thematic analysis, the initial step was to reduce the unprocessed data and identify patterns of interest among the different interviewees. Since the unit of analysis for this study was a project, a rough outline was created for each interview transcript to highlight the main issues raised by the interviewee and serve as an elementary summary of the raw information. Following that, a comparison among the various transcripts will reveal recurring patterns in the conversations. For example, one of the attributes that emerged from this study was the attitude of employees and taxpayers towards the e-Filing system. From the interactions, most of the interviewees, in one way or another, have expressed personal opinions pertaining to the functionality and features of the e-Filing system; the CIO may perceive it to be an ingenious innovation, the employees may deem it to be a necessary application whereas the stakeholders may just

regard it simply as an alternative procedure. As a rule, any data points that corresponded to the specific pattern was isolated and classified under it.

Subsequently, the next step to thematic analysis is to combine and catalogue related patterns into sub-themes. As defined by Taylor and Bogdan (1984), themes are units derived from patterns such as "conversation topics, vocabulary, recurring activities, meanings, feelings, or folk sayings and proverbs" (p. 131). Basically, they are identified by "bringing together components or fragments of ideas or experiences, which often are meaningless when viewed alone" (Leininger, 1985, p. 60). Elaborating on the above example, it can be interpreted that attitude was merely one of the factors contributing to the theme of the "Role of e-Filing System" in affecting the tax filing process. There were other patterns that collectively, can be collated under different themes: the pros and cons of the system, the extent of its adoption, as well as its impact on stakeholder relations.

In all, the researcher has developed a total of 12 sub-themes that were conceived to substantiate the research objective. Known as Open Coding, this exercise served as a preliminary categorization of identified patterns (Orlikowski, 1993). However, the sub-themes proposed during this phase of analysis were still very much disjointed or fractured and must be reassembled into meaningful concepts (Orlikowski, 1993) through establishing relationships among different sub-themes. Termed as Axial Coding, this strategy, interweaved with the theoretical understanding of the investigator through the exploitation of the literature review process, provided a foundation for conceptual interpretation. Table 3.2 below illustrates the process of open and axial coding.

Themes from Axial Coding	Sub-Themes from Open Coding	Interpretation of Sub-Themes
Internal and External Value Creation	Role of e-Filing System	- The role of e-Filing system in affecting the tax filing process.
	Business Process Improvements	- The reengineering of business processes to cater to renewed organizational functions.
	Collaborative and Knowledge Sharing Environment	- The creation of knowledge sharing networks within the framework of the e-Filing system.
	Conflicting Interests	- The presence of conflicting interests among different stakeholders.
Communication Strategies	Conflicts	- The existence of physical conflicts among various stakeholders.
	Stakeholder Resistance	- The extent of resistance by stakeholders of the e-Filing system.
	Communication Channels	- The type of communication channels available to stakeholders.
	Communication Policies and Procedures	- The documentation of policies and procedures with regards to stakeholder communications.
Role of Stakeholders	Feedback Strategy	- Whether IRAS is adopting a proactive, reactive or oblivious stance towards feedback.
	Organizational Attitude towards Stakeholders	- The perception of stakeholders from the standpoint of IRAS. Are all stakeholders regarded with equality or are there preferential treatments?
	Partnerships	- The establishment of partnerships between IRAS and its stakeholders.
	Stakeholders' Perception of their Organizational Function	- What is stakeholders' perception of their role in IRAS?

Table 3.2: An Overview of the Process of Open and Axial Coding

From the table, the themes that emerge were pieced together to form a holistic or comprehensive picture of the subject matter. At this point in time, it should be clarified

that the "coherence of ideas rests with the analyst who has rigorously studied how different ideas or components fit together in a meaningful way when linked together" (Leininger, 1985, p. 60). This viewpoint is also reiterated by Constas (1992) who stated that the "interpretative approach should be considered as a distinct point of origination" (p. 258).

Also, in the process of gathering themes and categorizing data, it is vital to obtain informants' feedback on the identified themes. The significance of such a review cannot be overlooked because it is an indispensable means to verify the essential facts and evidence presented for the case (Schatzman and Strauss, 1973). As explained by Yin (1994), even though disagreements may arise over the interpretations and conclusions, there should not be any disputes over the facts. In the event that conflicts occur over the case data, then there is a necessity to search for further evidence. Moreover, the review may serve to extract more information from the respondents as some of them may recollect events that have been forgotten during previous interviews.

In conjunction with this objective, several conference and journal papers (Chan *et* al, 2003; Tan and Pan, 2003; Tan *et* al, 2002, 2003) were written at different stages to gradually frame and fine-tune the interpretations through construing intermediate pictures of the contextual environment, which were authenticated by the organization. Furthermore, these papers served the secondary purpose of soliciting experts' views on the appropriate research direction during conference presentations.

In the final stage of analysis, selective coding was employed to integrate and refine concepts in order to ascertain the central theme of the research (Strauss and Corbin, 1998). By pulling the themes together, the researcher was able to develop an explanatory

idea that connected the themes and described the "story" (Strauss and Corbin, 1998). Essentially, the development of a central concept also ensures consistency across identified themes (Dickens and Watkins, 1999; Yin, 1994). Based on the themes inducted from axial coding, the investigator has extracted the core notion that "*The Strategic Management of Stakeholder is a Crucial Driver of e-Government Development*".

Chapter 4 - Case Description

This chapter will provide a detailed description of the evolution of the Electronic Filing (e-filing) system developed by the Inland Revenue Authority of Singapore (IRAS) to inject IT into its governance system and integrate stakeholders from all echelons of the community.

4.1 Inland Revenue Authority of Singapore (IRAS): A Pioneer in E-Government Initiative

IRAS was set up as a statuary board in 1992 to replace the Inland Revenue Department in administering income, property taxes and the new value-added tax, the Goods and Services Tax (GST). Additional responsibilities of this new establishment included addressing the high staff turnover level, which was almost three times that of other public service, as well as changing public attitudes towards the agency, which was rated in a 1997 government report as the lowest in terms of public satisfaction within the entire public sector. As explained by one of the managers,

> "*Rapid developments in technology and growth towards a more knowledge-intensive economy not only alter the ways businesses are done, it also requires the tax system and administration to change.*"

Since then, the tax administration has progressed into an integrated, computerized system, which has yielded improved results. Firstly, with a significant portion of the administrative burden being shifted from the tax officials to the implemented e-filing

system, the staff size can remain relatively constant with minimal turnover regardless of fluctuating tax environments. Secondly, tax arrears have been cut down with improved auditing and consistent property valuations. Finally, public satisfaction with the tax service has increased tremendously. As informed by one of the respondents,

> "*Our vision is to be the leading tax administration in the world. While taxpayers have no choice about paying taxes, we believe in making that experience as pleasant as possible.*"

Before the creation of IRAS, the tax administration adopted the classic hierarchical bureaucracy of paper filing system, which was both time consuming and highly inefficient. It was only with the introduction of new direct taxpayer services (Internet filing) in 1998 that the entire tax filing system was revolutionized. Such a transition from paper-based to paperless tax filing system was envisioned by IRAS to be a necessary phase of organizational rejuvenation. As elaborated by one of the e-filing system officers,

> "*From the organisation's point of view, we were concerned with the escalating amount of paper returns [tax documents], their storage, and subsequent disposal. We had to think of a better way to manage the huge amount of paper tax returns that was coming in, so that's why we go for something paperless. Moreover, with paper documents, the amount of time required to process the tax return is longer.*"

Under the new electronic filing system, even though tax officers still dealt with approximately 400,000 calls annually, but about 43% of the total tax inquiries were already being handled automatically. To maintain service quality among the employees,

the organization has also pledged "to providing excellent service and to continually improve in the way" meet customers' needs and expectations (IRAS, 2000, p. 51). Not surprisingly, these customer-centric efforts were reciprocated in a recent 2001 survey where 94.1% of individual taxpayers, 89.6% of corporate taxpayers and 94.6% of goods and services taxpayers expressed their satisfaction with IRAS' services, which were found to be convenient, as well as competently and courteously provided.

4.2 The e-Filing System

With the arrival of the Internet, IRAS perceived that the services provided by the phone filing system can be extended to the World Wide Web (W^3). Since its launch on 16th February 1998 by the Commissioner of Inland Revenue, taxpayers have been able to file their income tax returns either through the Internet or by telephone. Termed as e-filing, this new S$1.90 million electronic filing installment can even be accessed by Singaporeans whose employment requires them to be stationed overseas. The e-filing campaign began in 1998 and has been reprised yearly during the tax return periods.

The whole e-filing process is paperless. Even receipts need not be sent in but kept for verification. When returns are filed electronically, they are directly entered into the IRAS integrated information system. In estimation, if IRAS is able to get approximately 20% to 30% of taxpayers to submit their returns through the e-filing system, the IT investment could be recovered within a period of five years. From previously being available to only salaried employees (which adds up to about 1.4 million), e-filing has expanded to include employers and those with business incomes as well. Those in the high-income category who earns more than S$150,000 a year, are the only exception and they must submit their IR8A (employer's remuneration) returns by post for statistical

purposes and even then, they are permitted to e-file too. The benefits of the e-filing system to the taxpayers are best summarized in the following statements by one of the informants,

> "*We want to make it more convenient for taxpayers to submit their returns, so that they do not feel that it's a chore to submit their returns every year. We want to make it as easy as possible. Hence, the better way is to enable you to file your returns, be it from home or the office.*"

On the other hand, it should be noted that the benefits of the e-filing system are not exclusive to the taxpayers. From IRAS' perspective, the implementation of the e-filing system has generated substantial improvements in operational efficiency as evidenced by the decrease in the 'cost per dollar of tax revenue' from 1.00 cent in 1996 to 0.95 cent in 2000 (IRAS, 2000). Considering the annual tax revenue of $16.17 billion in 2000, a 0.05 cent per dollar reduction can be extrapolated to mean millions in organizational savings. Furthermore, apart from cost savings, the e-filing system is designed under the fundamental assumption that the dissemination of timely information can simplify and enhance the filing process such that taxpayers can easily comply with their tax obligations. As aptly phrased by one of the top management executives,

> "*In IRAS, we believe that through excellent taxpayer service, we can bring about higher levels of compliance.*"

Since its introduction in 1998, the top management has reported an approximate 100% growth in the number of e-filers annually (see Figure 4.1). As such, IRAS' success on the e-government front provides a golden opportunity to study the evolution and strategization of stakeholder relations as well as their implications on modern public

administration so as to derive lessons for the guidance of future strategic management of stakeholders in developing e-governmental initiatives.

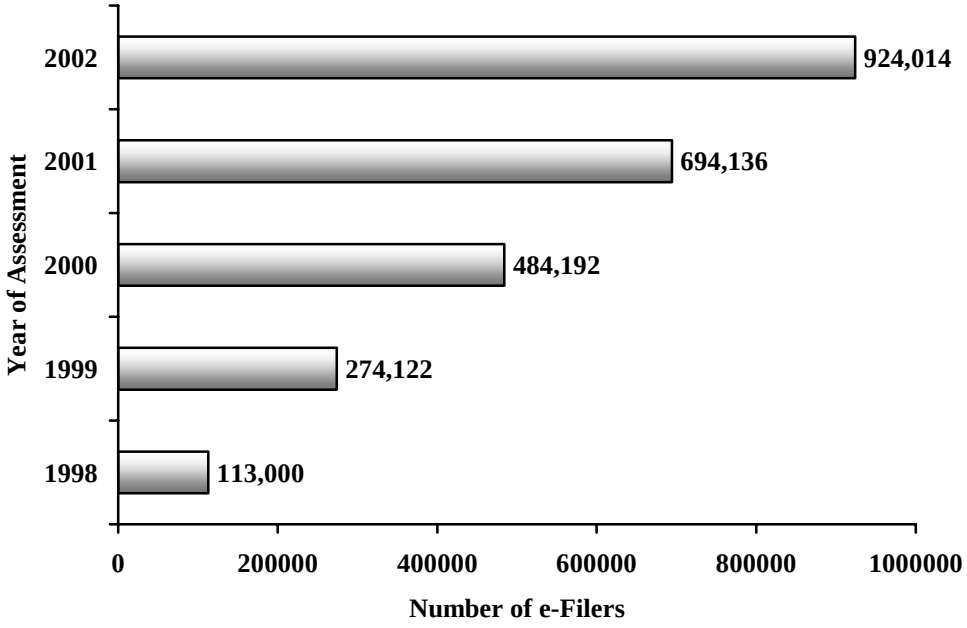

Figure 4.1: Annual Number of E-Filers

4.3 Evolution of the e-Filing System

The e-filing system is a systematic and incremental evolution from the development of IRAS' Information Systems (IS) architecture. Since its creation in 1992, IRAS has been on a constant mission to redefine its tax administration practices. In the past, the tax system was marred by sluggish manual tax processing systems and the piling up of paper tax documents. During that time, IRAS experienced a shortage of staff to process the tax returns, which often resulted in an inefficient and lengthy tax cycles. An estimated number of 300 tax returns were left uncollected every year, which snowballed with each passing cycle. As highlighted by the CIO,

> "*We had difficulty clearing all the returns… to do all the work, we estimated that we require 2,000 people, but we have only 1,600. So there is no way we can finish the job. Many taxpayers will have to wait and even then, it took us one and a half years to clear the lot, so a lot of people got angry. Also, every time at the end of each year, we always have about 300 returns we cannot collect. And of course it keeps snowballing.*"

Compounding onto the problem, other bureaucratic procedures proved to be equally detrimental to customer relations as taxpayers became enraged by the long delays in attempts to locate their personal tax folders for other tax related administration. Some of these problems were revealed by one of the interviewees,

> "*The problem with [paper] files is the need to search for them; you do not know exactly who holds the documents. Besides, customers can just come unannounced. So whenever they are here, you will need to retrieve the files, because in the past, not everything is available online. That is why sometimes when we go hunting for the files, we look everywhere and yet, we cannot locate them. It becomes very embarrassing and taxpayers get very agitated. 'Why you lose my file?' that is their reaction. Then we have to explain that we didn't lose your file, it is with someone else. And they still can't visualize, 'Why if it is with someone else, you can't find it?*"

Such miscommunications further eroded the confidence of customers in the paper-based tax filing system and compromised the effectiveness of the taxation system. Hence, IRAS' top management perceived that changes were inevitable and started motion

for a series of IT initiatives, including the e-filing system, designed to revitalize the aging business processes.

4.3.1 Phase I: Digitizing Taxpayers' Information

The first significant change to the conventional tax filing process brought about by the reengineering effort was the implementation of the digital imaging system in 1992, with the sole purpose of cutting down the increasing number of paper files as well as the demand on storage space to archive the overwhelming number of tax documents. This system made use of precision scanners to scan in physical returns and converted them into digitized images, which were then stored in a centralized database that was accessible to all tax officers.

Even though it was practically impossible to capture the hand writings on the physical returns as accurate computerized information and additional personnel were still required do the job of data entry, it should be emphasized that a centralized database represented a significant and strategic move, from both the organization and taxpayers' point of view, away from relatively inefficient and conventional procedures. For IRAS, a database of digitized taxpayers' information translated into potential cost savings for the organization through an increase in productivity levels. In the past, multiple tax officers would have to take turns in going through a single case file. As a result, the manual tax processing system was both time-consuming and unproductive. All these inefficiencies were reduced with a central database by authorizing multiple concurrent accesses to the same taxpayer information. Comparing the former paper filing procedures with the current imaging techniques, one of the tax officers remarked,

> "*When you scan it [tax information] in, it will eliminate the process of filing in the paper returns and the problem of only one person who is able to view it at any one time. In the olden days, we used to have a filing base. We will dedicate a few stories [Revenue Building] for just files alone. Not only that, we have a yearly pap exercise to rid away the old files. We will microfilm and pap all the old documents. All these are very labor intensive exercises. It also restricts the availability of information to other officers, so we decided to scan it in for electronic filing and easy referencing purposes.*"

Moreover, the database benefited the taxpayers in the form of a one-stop service center to customer inquiries. Any taxpayer service officer was thus sufficiently equipped with the relevant information to address the taxpayers' enquiries by simply calling up the taxpayer's digital folder on their terminal display screens in a matter of seconds. As indicated by one of the taxpayer service officer,

> "*Whenever a taxpayer approaches us, the first thing we would like to do is to retrieve his record before we will know how to assist him. Now that we have the system, with just a click of the IC [Identity Card] number, we get a record of what their last conversation was and who they have spoken to; everything is there. But back then, we wouldn't know who was the last person to handle the case until the taxpayer's file is back in its slot. If it is not, we will need to find out who is holding the file but then it is quite tedious since no one would know unless the taxpayer himself has taken down the name of the officer he contacted.*"

4.3.2 Phase II: Automating Organizational Business Processes

The digitization and centralization of taxpayers' data within the organization provided further possibilities in moving ahead with a system that could efficiently process most of the tax returns without physical intervention. According to IRAS' statistical approximation, 80% of tax returns are considered to be "normal" and do not require additional verification by tax officers. As a result, it was ill-considered to waste manpower resources on going through every individual case physically. This idea of a more efficient human resource allocation gave birth to the Inland Revenue Integrated System (IRIS) in 1995. As the CIO pointed out,

> "*We visualize a very efficient tax [processing] system and that's when we started examining at our existing business processes. At the end of the day, we came to a conclusion that a lot of these tax returns are processed by a number of people [tax officers] and these people [tax officers] only requires a short duration of time to complete it. We feel that there is no need for these tax professionals to perform such kind of mandatory work when all it takes is only 20 minutes. Hence, we find that a lot of these tax returns do not demand attention from these people [tax officers] and we believe that the process can be automated. We came up with this basic concept that alters our fundamental assumptions. We presume that when the people [taxpayers] comes, these people [taxpayers] are very honest and we can accept the tax returns as they are, so we propose to get the system to process it according to the 80/20 rule. We would get the machine to do 80% and leave 20% to be handled by tax officers where*

required by examination and without any loss in accuracy as in the way we do it in the manual system. It is our objective to transfer all these jams and bottlenecks in the rear [back-end tax processing] into the system."

As the name suggests, IRIS is an integrated system developed in-house to incorporate all the tax processes into a single information infrastructure. Very similar to Enterprise Systems (ES) (Davenport, 2000), IRIS is a modular system that comprises application components catering to specific tax functions. As described by the manager of IRIS design team,

"*It [IRIS] comes with different, different modules or you call it components, the pipeline to process the tax returns, the enforcement module, the case management module and then they have the payment module, data module and another very specific module to handle the property accounts and then the workflow module is by itself, printing module is by itself, scanning, data control etc. Basically, it is the integration of all these modules that makes up IRIS.*"

Considering the typical complexity associated with the development of enterprise-wide systems, the design and implementation of IRIS was segregated into phases. In addition, the IRIS development team housed user-representatives from every tax division in order to create a cross-functional perspective of the system and understand its possible impacts on various aspects of the taxation system. As reminisced by one of the system engineers,

"*We have a team of user representatives. I think there are about 600 over people in the development team, if I'm not wrong. Because my front-end*

team is already 200 plus. We have a team of user representatives who are fulltime on the project… Before it [development of IRIS] begins, each user branch would have already identified their main users or experts. They are very experienced users, so they will represent their functional group and any decision with regards to the system development will be made by these people."

However, in spite of the broad representation, most of the users found it difficult to come to terms with the drastic change in business paradigm where the responsibility of authenticating the tax return has been shifted to the taxpayers. As recalled by the CIO,

"*The principle concept is that we must accept the new tax filing model [80/20 rule] and so there must be a change in mindset. Of course, with the change in mindset, there are a lot of obstacles when you have to throw the old thinking out. A number of tax officers will argue that: "No, this [manual tax return verification process] is the right way. We must still check and things like that.*"

A change management team was thus set up to ease the restructuring process and was given the additional responsibility of designing customized courses and providing continuous training to all system users. IRAS' commitment in overcoming user resistance through familiarization and constant upgrading is best exemplified by the following comment by one of the respondents,

"*Some are common applications such as the workflow imaging system, which everybody will use it. However, there are some applications, which will only be pertaining to user modules, depending on their functions. Not*

everybody will use it. Therefore, they [change management team] will have to tailor make training sessions for these other users... Moreover, it's not just one-time training; it's re-training, re-training and re-training."

Through effective management of the change process, IRIS was successfully implemented and fused into the core functions of the organization. Also, to embed the renewed business ideology of tax administration into IRIS, a set of in-built pre-defined evaluation criteria was ingrained within the system to process 80% of those "normal" or routine tax returns. The remaining returns were then routed to the appropriate tax officer with the essential skill domain and even then, this routing operation has been fully automated. The Workflow Management System (WMS) is the subsystem in IRIS that is primarily responsible for channeling the unique tax cases to the appropriate tax officer and it deploys a huge number of rules to match the case to the fitting tax officer. In addition, it is equipped with tracking abilities to monitor the status of a case right from the instance it is assigned to the time of its closure. As revealed by the manager of IRIS design team,

"*It's [Workflow Management System] a very sophisticated workflow system. We even incorporated the skill level of our staff such that based on these criteria, the system will know who to route that particular case to. We don't go by numbers, or randomization or anything like that. It's actually according to skill level, experience and compatibility of the work. That's why when the profile of taxpayers comes in; we match them, because with this profile, we can tell whether it is a complicated or simple case. We will then match the case against the skill level of our staff [tax*

officers]… In addition, the workflow system will track the case from the moment it is assigned to the officer till it's completed."

Nevertheless, it must be highlighted that there is no underlying change to the tax processing measures as the design of IRIS and the development of the virtual tax valuation process are modeled after the physical tax administrative practices.

4.3.3 Phase III: Developing the Phone-Filing System

The implementation of IRIS has successfully integrated the backend tax processes into a singular IS architecture. The next logical step towards efficiency, as perceived by IRAS, would be the automation of the data input function. As mentioned above, even with the imaging system, physical data entry was still unavoidable, which was why IRAS introduced the phone filing system in 1995. The phone filing system was designed to provide an alternative avenue from physical forms for taxpayers to input data directly into IRIS and comprised a series of simple phone instructions to guide taxpayers in the tax filing process.

However, the phone filing system never did catch on due to three technical limitations. Firstly, due to security considerations, phone filing was only made available to a restricted group of taxpayers, those who have a single source of employment income. Moreover, despite the simplicity of the phone instructions, most taxpayers were uncomfortable in using a non-graphical tax filing system. Finally, the linear nature of the phone filing system made it inconvenient and tedious for taxpayers to retrace the steps if they made a mistake in filing their tax returns. As recollected by one of the managers,

"*We tried to use the phone to perform e-filing. Unfortunately, when we use the phone, for those people who are not the visual type; they cannot see*

the instructions and resisted the system. Also, when we start the phone filing system, we were concerned about the security and everything. As such, we were very restrictive on the requirements."

Taking into account the technical constraints of the phone filing system, IRAS' top management is consistently watching out for better a communication medium to migrate the taxation system virtually.

4.3.4 Phase IV: Designing the e-Filing System

Around the same period, the increasing popularity of the Internet caught the attention of IRAS' management. A decision was made to capitalize on this opportunity by duplicating and enhancing the phone filing experience onto the W^3. Consequently, the Internet e-filing system was launched in 1998 for salaried employees and its service base was further enlarged in subsequent years to include all individual taxpayers. The Internet filing system adopted a customer-centric approach to its design.

Similar to the development of IRIS, the design team of the e-filing system comprised representatives from all the tax divisions in the organization and the majority of the discussions were centered on understanding the taxpayers' perspective of the system. In addition, at various phases of its development, taxpayers were invited to take part in focus groups or engage in active forums so as to provide a source of external feedback with regards to the functionality of the e-filing system. This included the testing of a prototype system prior to the launch. The aims of conducting these customer focus groups were clarified by one of the project managers,

"*We want to gather taxpayers' input; to put ourselves in their shoes and see whatever we do, whether it would meet the taxpayers' expectations.*

> *This is important because we treasure their feedback and we hope to incorporate the taxpayers' perspective into whatever we do. Also, through customer feedback, we can be confident that whenever we deliver new system or tax procedures; the taxpayers are receptive towards them.*"

Another feature unique to the Internet filing experience is the utilization of an Electronic-Filing Personal Identification Number (EF PIN) for authentication purposes. The EF PIN is exclusive to the e-filing process because unlike other verification PINs on the Internet, the lifespan of each EF PIN is limited to only one e-filing period. It is issued to the taxpayer prior to the tax filing period and once the taxpayer submits his/her electronic returns, the PIN is terminated, eliminating the need for remembering the PIN beyond the current tax filing cycle. Moreover, since the EF PIN becomes invalid after e-filing has been performed, it serves a double purpose of alerting taxpayers in the event of unauthorized tax filing on their behalf. In recent years, IRAS is even trying to develop a standardized PIN, which hopes to cut across other e-initiatives introduced by the government, providing the citizen with integrative access to all e-government services. The rationale for devising the EF PIN was elucidated by the CIO,

> "*When we were doing phone filing, we gave everybody a pin. However, our first encounter with such reusable pins is that every time when we send out the e-filing forms, we got a backlash of enquiries by everybody. A lot of them will claim that they cannot remember the pin and asked, "Can you please give me a registration number?" Hence, we have a lot of problems over the pin and we found difficulty doing that. However, it is an authentication requirement of the system; otherwise we wouldn't know*

who the e-filer is. We sought out many solutions to resolve the problem for this internet filing and came out with the EF pin. The EF pin is different from the normal pin that you use. For security reasons, it can only be used once. It is more efficient because it is a very simple thing; there is no need to for people to remember the number. It is printed on the e-filing notice. Use the number and nobody else can use it to enter the system."

Despite the novelty and advantages of the EF PIN, it does suffer from a distinctive drawback. In the unusual event that the taxpayer keys in the wrong information, the voiding of the PIN precludes taxpayers from correcting their mistakes and the only course of action open to them is to contact IRAS directly for rectification.

4.3.5 Phase V: Maintaining and Improving the e-Filing System

Even after the Internet filing system went online, IRAS maintained 24-hours customer service during every tax cycle to ensure the stability and reliability of the system during peak periods. Anticipating surges in connectivity during the annual tax cycle, IRAS has also cooperated with the Internet Service Providers (ISP) of the country to ensure the stability and reliability of the national IT infrastructure.

Besides system maintenance, continuous efforts are made to enhance the e-filing system as well. At the end of every tax cycle, a post-mortem is conducted to cross-examine the problems that occurred during the tax filing period. This involves addressing the large number of customer queries received during the tax filing period. The analysis from these investigative measures forms the basis of improvements to be incorporated into the e-filing system for the next financial year. An example of the improvements

made to the e-filing system due to this reflective policy was cited by one of the system engineers,

> "*That's where we started learning and improving. The lesson we learnt from the first e-filing cycle is actually this: The tendency to cater to all the requirements and all possible tax scenarios results in a complicated electronic form that not everybody requires. Some of them do but most of them don't. Hence, what we did is to actually change the design of system in such a way that we will know from your history or your previous record that you don't have a very complex tax profile. We will then try to give you a customized form, a simplified version so as to make it downloadable in about hopefully within 8 to 10 seconds.*"

Apart from analyzing external opinions at the end of every taxation period, IRAS also set up an independent Taxpayer Feedback Panel (TFP) in 1999 consisting of members from a cross-section of taxpayers whose sole purpose is to review and enhance IRAS' current services while at the same time, serves as a resource pool to generate fresh ideas and deliberate on suggestions to meet the ever-changing requirements of taxpayers. In response to a question on the composition of TFP, one manager stated,

> "*We invited taxpayers from all walks of life and we ask them to come in and be members of this panel. So far, we have about 20 members representing different industries and service lines. The chairman is elected among members themselves with one of our deputy commissioners sitting in as IRAS' representative. Also, this panel has a regular meeting schedule on a quarterly basis. If they gather any feedback, they will come*

back to us. On the other hand, if we are launching any new services, we will let them know and allow them to have a preliminary look at the new system. They are like our external but consistent source of feedback."

On top of providing customary feedback to IRAS on its taxation system, the TFP also houses a website where taxpayers are given an opportunity to voice their opinions, which in turn are conveyed to the tax agency by the panel members. This is in addition to whatever communication channels IRAS may have for the taxpayers. Such alternate measures of consolidating taxpayers' inputs will ensure that a majority of the voices are heard by the appropriate people, i.e. members of the TFP may be in a better position than those of the public organization to empathize with some of the more personalized concerns.

4.3.6 Phase VI: Extending e-Filing Services

In a further bid to make e-filing effortless for taxpayers, IRAS established links with a number of government agencies and huge business organizations so that these organizations are able transfer the relevant tax information for each of their employees directly into IRAS' central database for every tax cycle. Once the information for a particular taxpayer has been uploaded into the system, all that remains to be done for that taxpayer is to submit a series of zero returns through the e-filing system.

This auto-inclusion scheme has to-date clinched data transfer agreements with a total of 1,197 business organizations or 2% of all Singaporean companies. This small percentage of participating organizations may seem insignificant, but according to statistical approximation, these companies account for an approximate figure of 550,000

or 46% of all employees in the country. Recently, the auto-inclusion scheme has also been broadened to include tax relief and stock dividends.

More importantly, the direct transmission of tax information reduces the data capturing efforts and enables controls to be built into the system to validate the accuracy of taxpayers' financial portfolio. As enlightened by the CIO,

> "*The question of concern is when we adopt the 80/20 rule, only 20% of all the data you pumped through is checked. Where is the control, how do you know you are getting all the information in? That gives birth to the other idea of getting the information directly from the employer and automatically into the system. We started with dividends and now we have moved on to employment income. I have no worries about whether there is an understatement of income because I sourced it direct from a third party. I can accept tax information from third parties without worries because it is not in their interest to lie. Moreover, doing auto inclusion means we can reduce our tremendous efforts in data capturing.*"

From the preceding case description, it is obvious that the success of the e-filing system is attributed to the collective efforts of stakeholders both internally and externally. The top management's foresight and zealous attitude in pushing for the e-filing system, the employees' willingness to overcome and adapt to changing business processes, the taxpayers' participation and suggestions for system improvements as well as the employers' support and commitment towards the auto-inclusion scheme all play crucial roles in crafting a responsive and scalable electronic taxation system. Hence, the case of

IRAS provides a rich source of insights into how stakeholder relationships can be effectively managed in a public organization during e-governmental project development.

Chapter 5 - Case Analysis and Findings

As the pace of IT modernization quickens among civil administrations, the advent of e-government together with as depiction of a rapid sense and response public service model inevitably becomes a pervasive phenomenon. Indeed, the realization of this emerging generation of digital governments hinges on the persistent restructuring of administrative norms to encompass new patterns of power distribution at all echelons of the stakeholder community (Allen et al, 2001; Wimmer and Traunmuller, 2000). This standpoint was reinforced by Guillaume (1999) who hinted at an upcoming communicative revolution, which will capitalize on the capabilities of technological innovations to establish and redefine the relational characteristics of any e-governance system.

From the preceding case description, it is clear that the evolution of the IRAS' e-Filing system provides a rich tapestry of experiences to tap upon through the recounting of the e-government journey undertaken by a public agency using a fusion of IT-based business process rejuvenation and a holistic strategy for managing stakeholder relations. To provide a systematic and insightful overview into the dynamics of the IRAS' e-Filing system development that has contributed to its phenomenal rate of diffusion among taxpayers, the remainder of this chapter will draw upon prior theoretical foundations and endeavor to explain the strategic management of stakeholders in this e-government initiative from three distinctive but complementary angles: their identification, segmentation and management.

5.1 Stakeholder Identification

The identification of stakeholders is conceived to be the foremost vestige in effective public management of e-government initiatives (Pardo and Scholl, 2002; Scholl, 2001). Through a conscious recognition of the groups of individuals whose interests coincide in one or more ways with the organization (Brody, 1988), the public agency can pinpoint the sources of constraints or support, which may restrict or augment the corporation's capacity to accomplish its missions. More importantly, such an exercise serves as a pre-requisite for these civil administrations to base their relational tactics (Dozier *et* al, 1995) and formulate parameters for strategic planning purposes in e-governments (Burn and Robbins, 2001).

In the context of this case, the stigma typically associated with a governmental 'tax collector' coupled with an escalating problem of uncollected tax revenue and inefficient manual tax processing procedures, have prompted the inauguration of the IRAS to be installed as the new chief statutory body tasked with the responsibility of reinventing the bureaucratic tax processes and repairing the tarnished public image inherited from its predecessor. To accomplish its assignment, the IRAS embarked on an extensive e-transformation campaign devised to cut across archaic business functions and revitalize its obsolete taxation system.

Armed with a forward-looking managerial philosophy, acute sensitivity and improved receptivity towards the potential of emerging technologies, the IRAS has triumphed in sculpting a cutting-edge and responsive e-Filing system that integrates its complete range of tax processing activities into a homogeneous infostructure. Moreover, with its relentless drive towards strategic and operational reformations, the IRAS has

progressively acknowledged the value of mutually beneficial cooperative networks and in the process, methodically assimilated various stakeholder constituencies into seamless partnerships that uphold the ideals of its business reengineering objectives.

To kick start this momentum for operational transformation, the IRAS perspicuously redefined its corporate vision whereby taxpayers are no longer dismissed as mere subjects in the eyes of ritualistic bureaucracies (Moon and Bretschneider, 2002; Kotchegura, 1997; Schachter, 1994), but as respected peers in the pursuit of collaborative alliances. This prescribed dose of customer-centrism was subsequently propagated across the tax organization through mission statements and its intuitive service motto of "*I R*espond *A*nd *S*erve" (IRAS, 2000). An IRAS tax officer recalled the initial psychological barriers associated with such antonymous mental conversions from past attitudes,

> "*In the past, it was like taxpayers were people who owed us money. To be honest, we actually needed [to learn] to see taxpayers as customers… and not simply people bound by law to pay taxes.*"

Through such enterprise-wide rectification exercises, the IRAS managed to inculcate an organizational culture that attributes citizens as rightful partners in the formulation of public policies for which they are the intended beneficiaries (Cumming, 2001; Webler and Tuler, 2000). An illustration of such explicit stakeholder empowerment can be found in the preceding chapter on case description where it is noted that the IRAS has placed consumer interest in parallel priority with corporate concerns during the conceptualization of the e-Filing system. In other words, the employees of the IRAS, together with the class of public members who has participated actively in spontaneous dialogue sessions, can be dubbed to be sharing a strong sense of ***commitment*** towards the

eventual strategization of the e-Filing system to create a synchronous and bilateral communicative channel to foster permanent dialogic relationships between the tax agency and its targeted audience (Cutlip *et* al, 1994; Taylor and Kent, 1999). This observation coincides with the recommendation by Nelson and Winter (1982), who expounded the acquirement of internal commitment, as vital for revised business capabilities to be infused into the collective skill sets of employees or within special routines embodied in the firm's operations and knowledge base.

Nevertheless, despite the IRAS' intensive efforts to reach out to the general taxpaying population, a sizeable portion of this community still maintains a neutral or even negative stance on the proposal of a fully automated tax filing system. In light of this prevailing indifferent behaviour across a multiplicity of public initiatives (Lowndes *et* al, 2001), Elgarah and Courtney (2002) posited that the crux of the e-government challenge resides in the assurance of proactive and consistent stakeholder participation in its cyclical process of conceptualization, development, maintenance and strategization.

Compared with strategic management literature, this contention is in sharp contrast to the unspoken commercial principles of relational engagement whereby the power of stakeholders is deliberately minimized through countermeasures aimed at manipulating and disintegrating the corporation's dependency on these stakeholders (see Frooman *et* al, 1999; Mitchell *et* al, 1997). Consequently, it is conceivable from the above discussion that commitment is a definitive and decisive virtue of e-government initiatives as it defines the psychological attachment or desire among various factions of the stakeholder community to contribute beyond their pre-configured roles in moulding

the prospective future as well as charting the strategic direction of e-governmental development.

With intrinsic consensus and ubiquitous commitment secured among internal associates as a cornerstone of the revamped tax processing paradigm, the IRAS has paved the way towards the mass-concatenation of stakeholders' participative efforts en route to the conceptualization of the eventual synthesis of the e-filing modus operandi. Such a pledge gave the IRAS the endorsement as a forerunner in e-government programmes and virtual tax filing measures and encouraged the tax organization to bring on-board a fair representation of stakeholders during the system modeling process to compensate for the understandable shortage of exemplary governance models that could be used to benchmark against the design blueprint of its e-Filing system (Oliver, 1999). The CIO confessed to this apparent lack of testimonial examples for the IRAS to take a leaf from,

> "*For the e-Filing system, we did not have anybody to learn from; nobody. When we conceptualized the system at that time, there were no other models to look at.*"

Moreover, the inception of the e-Filing system has been premeditated as the technological imperative, which offers an integrative information-backbone that bridges front-end customer transactions with backend business processes. This is in line with the theoretical impression of an increasingly popular client-based organizational model where business processes are seamlessly integrated for the benefit of its consumers (Calista, 1986; Ho, 2002; Rainey and Rainey, 1986).

Nonetheless, in mapping the original functional routines onto the e-Filing system architecture, a primary concern was the adequate retention of knowledge assets or

proficiencies embedded within the former governance perimeter (Wimmer and Traunmuller; 2000). Consequently, the recruitment of internal 'experts' into the system development team served as a protective measure to preserve knowledge resources that have been acquired through specialization in current work processes (Pan *et* al, 2001).

To achieve the aforementioned merits of broad stakeholder inclusion, it was shown from previous case discussion that a cross-functional project committee of 'power-users' had been handpicked to create a wellspring of knowledge, which was reflective of the differing business requirements that corresponded to the spectrum of tax processing functions in the public establishment. The feedback garnered was then infused into the exoskeleton of the e-Filing system to cater to the diverse expectations across the IRAS' internal business divisions. This in turn reduced the probability of incompatibilities or even outright rejection by core staff members. Furthermore, to enhance the appeal of the e-Filing system among its targeted audience, the design schematics together with its subsequent implementation were further strengthened and refined through regular focus group gatherings where symmetrical communications between system designers and taxpayers helped to reinforce bidirectional understanding of systemic components. As explained by one of the system engineers,

> "*We need to go through the whole process and let the taxpayers see it the way we do. If we find that we have placed something there that two persons interpret differently, we will request for input. When we perform testing, we will involve the taxpayers and then observe the result. Whenever we obtain unexpected results, we ask them why they interpret it in that manner*"

Naturally, with the extensive involvement of stakeholders in defining the techno-structure of the e-Filing system, it was conceivable from the case explanation that the end

product was delivered as a holistic informational solution for the effective management of non-delineated value chain collaborations. In addition, the embedded functionalities of the e-Filing system are welcomed by its recipients as a fresh change from its conventional administrative practices. As professed by one of the e-Filers,

> "*It [e-Filing system] is a convenient system because it is quite reliable and I don't need to send any tax filing application such as the employer income form.*"

Furthermore, through ingenious inspirations such as the EF Pin, the IRAS has succeeded in capturing a loyal threshold of e-filers that expands geometrically with each passing tax cycle, which in turn constitutes significant cost savings for the tax agency as commented by one of the respondents,

> "*We have a lot of repeat users and we discovered that there are benefits to be gained for the e-Filing system. Previously, when we have to send you a tax package, we wasted a lot of effort but now once you e-file, we only need to send you a letter together with the [EF] pin number for subsequent years. There is no necessity to send forms and as a result, we become more cost efficient.*"

But interestingly, in spite of the IRAS' crusade to incorporate partners' interests into the fabric of its refurbished business processes, the e-Filing system still suffered from lingering disagreements among a minority of stakeholders. Discounting the fraction of taxpayers who has adamantly insisted on the traditional paper filing procedures due to security or privacy concerns (McNaughton, 1999); resistance was also internalized in the form of compelling pressure from domestic project players. The most noteworthy

trepidation expressed by these vanguards as highlighted earlier was the unprecedented shift away from the conservative corporate mentality of treating taxpayers as legally-binding and unwilling participants of the tax filing process.

Consequently, despite the obvious commitment of the entire organizational body behind the movement for customer-driven tax routines, it was not surprising that the business convention embodied within the proposed e-Filing system to permit taxpayers to assume their civic responsibilities in submitting accurate employment income figures [80/20 rule] has proven to be a source of tension between the IRAS and this group of bourgeois tax administrators. In particular, these disapproving voices demanded that the e-Filing system came equipped with mechanisms to validate the accuracy of self-declared tax information. As recollected by the CIO,

> "*The principal concept is that we must accept the new tax filing model [80/20 rule] and so there must be a change in mindset. Of course, with the change in mindset, there are a lot of obstacles when you have to throw the old thinking out. A number of tax officers will argue that: "No, this [manual tax return verification process] is the right way. We must still check and things like that.*"

In a sense, such disparities in perceptions contribute to a seemingly contradictory scenario where certain categories of stakeholders may not be receptive towards the technical propositions of the e-government initiative even though they may identify with its strategic developmental direction. From above, it is clear that the ***acceptance*** of the functionalities accessible from the e-Filing system thus presents another deterministic aspect of its institutionalization.

Consistent with contemporary perspectives on Information Systems (IS) development, this notion of system acceptance has been broadly represented in

corresponding literature as an implicit connotation for the measurable success of IS implementation (see Davis *et* al, 1989; DeLone and McLean, 1992; Markus *et* al, 2000; Seddon, 1997). In effect, existing studies have accumulated a mixture of technical and sociological factors that influence operators' reception of any installed application. Found within this expanding list are features such as system quality (Hamilton and Chervany, 1981), information quality (Ahituv, 1980; Bailey and Pearson, 1983), amount of usage (Kim and Lee, 1986), user satisfaction (DeLone and McLean, 1992) and perceived usefulness (Davis, 1989, 1993; Seddon, 1997), which collectively encapsulate the socio-technical forces governing system utilization.

In another sense, the acceptance of any e-government initiative can therefore be perceived to be tantamount to the alignment of users' anticipations with the inherent attributes of its corresponding operational manifestation. And often, such psychological affiliations with the promised technical features of the deliverable, serve as self-perpetuating monitors to regulate stakeholders' behavior in fulfilling pre-assigned roles and duties within the e-government arrangement. Drawing a reference to the e-Filing system, its acceptance is thus equivalent to recurring usage by taxpayers and unequivocal synergy within the IRAS' internal faculty members.

Furthermore, contrary to popular belief, the case suggests that the commitment of stakeholders in the strategization of an e-government system does not guarantee an automatic acceptance of its physical dimensions. Clearly, under the IRAS' circumstances, the acceptance of the e-filing experience can be understood to be more of an attraction to its tangible elements whereas a commitment is analogous to that of a psychological affinity essential for the system's ultimate strategization. Indeed, modern literature on IS

Critical Success Factors (CSF) is lined with paradoxical evidence (Markus and Robey, 1988), which parallels the postulation of this thesis that the adoption and expansion of e-governments should not solely be based in mere technological acceptance but instead, should include a parenthesis for the intangible aspects of sociological commitment.

As depicted in the situation above, the veteran tax executives, having gone through a chaotic and unstable era under the IRAS' predecessor, can be presumed to be highly committed or in actual fact, anticipative towards the realization of an efficient, customer-centric tax filing system. However, the merger of this vision into the e-Filing system opens up disputes over its mechanistic structure. To be precise, although the IRAS' employees share a strong sense of urgency in construing a more productive mode of tax processing, they are not obliged to accept its systemic properties. Hence, commitment and acceptance can be deduced to be two separate but instinctive dimensions in the identification of stakeholders for any e-government initiative.

5.2 Stakeholder Segmentation

The segmentation of stakeholders is an activity that derives value from their preceding identification (Freeman, 1984) and proves to be an integral function in the strategic management of stakeholder relations. Given the resource constraints faced by every organization, stakeholder segmentation persists as a managerial contraption to focus limited corporate resources on formulating strategic partnerships with key players such that managers are made accountable to the rights and wishes of these core actors (Demb and Neubauer, 1992). Anchoring on similar grounds, Tricker (1994) hypothesized that effective governance thus pivots on the ability of the system to accommodate the

complete range of issues raised by a diversity of interest groups that are affiliated with the institution.

In early segmentation studies, the social behavioral concepts of attitudes and cognitions have often been used for classifying individuals (Cunningham and Crissy, 1972; Moore, 1980; Green *et* al, 1981). Then again, Pfeffer and Salancik (1978) counteracted these methods with the notion that stakeholder segmentation should be assessed with respect to the consequences on the firm as a result of their actions or inactions. This idea, in turn, has contributed to a burgeoning influx of proposed organization-centric measures for categorizing stakeholders (see Clarkson, 1995; Mitchell *et* al, 1997; Schneiderman and Rose, 1996).

Embracing an identical emphasis on the importance of segmenting stakeholders in accordance to their impacts on the e-Filing system, the investigator notices that the case classification can be derived from the interplay of the two aforementioned dimensions of acceptance and commitment. Even though both factors are representative of cognitive spectrums ranging from low to high, but for the simplicity of presentation and understanding in this thesis, they have been reduced to a dichotomy of positive or negative as tackled by Frooman (1999) under similar research circumstances.

Evidently, from the interactions of these two vectors, four main categories of stakeholders can be labeled as decisive to the adoption and strategization of the e-Filing system. The first group of stakeholders is characteristic of individuals who are both receptive and committed towards the developmental momentum of the virtual tax filing system. Irrefutably, it is clear from preceding discourses that this category of stakeholders would comprise the vast majority of corporate employees for which the IRAS has

undertaken precautions to affirm their support as well as consolidate their opinions through broad functional participations during system conceptualization. To its credit, this foresight of the IRAS to include a wide-ranging base of internal agents throughout different phases of project development has eased implicit transition barriers (Pan *et* al, 2001) during the installation of the e-Filing system. Strategically, this will facilitate the tax agency to advance synchronously with the e-Filing system, thereby reinforcing the reins on acceptance and commitment within its own administrative body.

Apart from these enthusiastic attempts at garnering domestic assistance, the initiation of the Taxpayer Feedback Panel (TFP) marks an alternative but novel approach by the IRAS to sponsor a regular and formalized forum to extract responses from the relatively nebulous composition of the tax-paying population. Specifically, the invitation of e-filers to partake in quarterly dialogue sessions has evolved into an indispensable source of exclusive consumer insights that frequently translates into consecutive improvement options for the e-Filing system:

> "*The [taxpayer feedback] panel has a regular meeting on a quarterly basis. If they should gather any feedback, they will come back to us. And on our part, if we are launching any new services, we will let them know and have a look at the new system. They are like our source of feedback; our eyes and ears among the taxpayer population. In fact, some of the system changes were actually initiated by them.*" (Manager, IRAS)

In view of the time and effort invested by this team of stakeholders to continuously familiarize and upgrade themselves with the facilities of the e-Filing system before passing judgment, they can be deemed as the true ***Engineers*** of the e-government

initiative by offering discerning and constructive critiques that advance the public institution along its premeditated mission.

Contrary to this class of avid believers, there is another segment of stakeholders, who, despite a strong commitment towards the strategization of the e-Filing system, may frown upon the directional bearings of its technical implementation. As highlighted in the above section, there was a secondary cluster of tax officials who opposed the fundamental presumption of the e-Filing system towards the evaluation of taxpayers as dependable participants of the taxation procedures. Naturally, the absence of any form of perceivable market incentives for customers has bolster the conception of taxpayers, in the eyes of these aristocratic officials, to be compulsory and reluctant members of the taxation system, with an inherent distrust entrenched within the tax agency of their capability to perform accurate employment declarations. As such, it is comprehensible that long-serving employees who were nostalgic of the stringent controls inbuilt within the manual tax filing model and found it difficult to come to terms with the business process modification embedded in the e-Filing system.

Similarly, within the ranks of the taxpayers, there are also individuals who contribute actively in focus groups and forums but disapprove of the current system mechanics. One primary concern raised by these taxpayers was the inadequacy of information transparency in the e-Filing system. Apparently, these taxpayers expressed doubts over their limited knowledge of what went on behind the e-filing system. In particular, questions were raised pertaining to the confidentiality and security of transmitted personal data to the agency with one of them suggesting that the IRAS should lay down "*explicit rules and guidelines*" governing sensitive tax information

(McNaughton, 1999). Such innate reservations over the e-Filing system protocols imply a certain degree of mistrust among these taxpayers of the potential presence of subtle control mechanisms erected through information regulation (Foucault, 1991; Tannenbaum, 1967).

Besides, the launch of the auto-inclusion scheme has compounded onto this misconception through its opaque data transmission arrangements. As described in the former chapter, the income figures are transferred directly via electronic media from the employers to the IRAS and taxpayers will not get a chance to review these numbers even with the e-Filing interface. It is thus not surprising that a standard request for prospective system enhancements is the reciprocal display of transmitted employment information to be verified by its tax paying owner. As commented by one of the taxpayers,

> "*I don't see any differences between they [the employers] filing it for you versus they sending the information for you file it yourself. However, since they have access your income information, I suppose if there is anything to note here is how accurate this information is … how much we actually make this year. If they can show the numbers when you e-file, then it would be even better*."

This group of stakeholders who are committed to the strategic objectives of the e-Filing system but dissatisfied with the existing technical configuration can be considered to be ***dissidents*** whom the public organization should make a conscious effort to engage.

Conversely, the third group of stakeholders refers to the category of individuals who unenthusiastically accepts the e-Filing system in its current state without giving due consideration to any possible avenues of improvement. This class of stakeholders is

characteristically representative of the general e-Filing population where the virtual tax filing process is an annual event that takes up less than an hour with the installation of the e-Filing system. Due to the infrequent and cyclical pattern in which these stakeholders come into contact with the e-Filing system, they are usually only committed to its operational performance within the short timeframe of the tax filing period. The CIO highlighted one prominent example of this seasonal frenzy during the tax filing cycles,

> "*The taxpayer just sends [emails] and sends during the e-Filing period. Basically, they treat it like a chat room. They keep sending and then complain of late or failure to respond. They thought that there is a person there all the time and they expect instant replies*."

In other words, the term, ***seasoners***, is thus appropriately reserved for this specific segment of stakeholders who accepts the e-Filing system solely as a mechanical tool to carry out mundane seasonal chores and has no desire to get involved beyond the mere carrying out of their tax filing duties. A feasible explanation for this dispassionate stand, as put forward by Lowndes *et* al (2001), is the mistaken mindset of social exclusion among citizens, which mislead public members to believe that they are detached from the process of decision making in civil institutions. To put it simply, these citizenries assume that they do not hold sway over the legislation of governmental policies and as a direct consequence, choose to remain passive to the governance system. Any feedback and suggestions put forward to IRAS by these seasoners are thus normally short-term criticisms targeted at systemic failures rather than long-term recommendations and even then, they commonly resemble nothing more than unwarranted frustrations taken out on the tax establishment for any hiccups in the e-Filing system.

Finally, the last category of stakeholders comprises individuals who are neither comfortable nor committed to the e-Filing system. Undeniably, the paper tax filers are limpidly representative of this stakeholder classification. Despite the IRAS' efforts to reach out to this population of paper filers through extensive promotional events and easy access to PC terminals complete with assistance offered by well-trained polytechnic students, there is still a considerable fragment of the taxpaying community who is obdurately unmoved by these intensive campaigning attempts to relate to them. This lot of total non-believers or ***skeptics*** is therefore one of the most arduous hurdles that must be overcome by the IRAS in institutionalizing the e-Filing system. They are typically immune to any predictable advances conceived by the public organization to lure them out of their protective covers.

To summarize, as analyzed in the case of the e-Filing system, the concept of stakeholder segmentation in e-government development can be deduced as the combination and interdependence between the cognitive factors of acceptance versus commitment in order to arrive at a two-dimensional theoretical framework:

		Is the operationization of the e-governmental initiative acceptable to the stakeholder?	
		Yes	**No**
Is the stakeholder committed to the strategization of the e-government initiative?	**Yes**	**Engineers** • Stakeholders who are both receptive towards the technical propositions of the e-government initiative and committed towards its strategization.	**Dissidents** • Stakeholders who are committed towards the strategization of the e-government initiative even though they may not be receptive towards its technical propositions.
	No	**Seasoners** • Stakeholders who are receptive towards the technical propositions of the e-government initiative even though they may not be committed towards its strategization.	**Skeptics** • Stakeholders who are neither receptive towards the technical propositions of the e-government initiative nor committed towards its strategization.

Figure 5.1: A Proposed Framework of Stakeholder Segmentation in e-Government Projects

5.3 Stakeholder Management

In spite of the above contemplations, the primary premise of strategic stakeholder management still slants heavily towards the capacity of the firm to effectively communicate and impart its corporate vision to its partners (Porter, 1992). A quick survey of existing e-government literature will yield a surprisingly high level of consensus in supporting a technical perspective where the genesis of e-government development rests on the effective adoption of viable information technologies (see Cap and Maibaum, 2001; Gant and Gant, 2002; Klischewski and Wetzel, 2001; Regio, 2002). As such, Chan

et al (2003) pointed out that there is insufficient research being performed on the sociological sphere of stakeholder relationship management.

Based on the proposed model of stakeholder segmentation, the researcher observed the concoction of various respective relational strategies by the IRAS in relation to the different stakeholder groups with varying levels of acceptance and commitment to achieve the vision of a holistic e-Filing system. Beginning with the group of stakeholders who is both receptive and committed to the developmental direction of the e-Filing initiative, it is perceivable from the case that this class of individuals behaves as a readily accessible and inexpensive concentration of supportive sentiments behind the e-government system. With an inherent desire to push the e-Filing system beyond its current function, the expertise of these voluntary contributors can be easily leveraged by the IRAS to coordinate a well-received application environment to sketch out plans for prospective avenues of enhancements. The establishment of periodic dialogic interactive sessions is thus a critical step in building positive communication links with this team of stakeholders to provide a procedural means by which the public agency and its partners can communicate interactively with the ultimate aim of maintaining continuous as well as productive conferences (Cutlip et al, 1994; Taylor and Kent, 1999).

Clearly, from the case evidence, the ritual of conducting a post-mortem reflection after every tax cycle serves as a cardinal foundation of knowledge to gather input from internal staff members based on their reminiscences of topics that have cropped up during the e-Filing duration. As for the harder-to-reach external taxpayers, it is evident that the sponsorship of the TFP tenders the much-needed leveled platform for the IRAS to

socialize with its extrinsic engineers for cooperative rumination on the developmental progress and strategic direction of the e-Filing system (Wimmer and Traunmuller, 2000).

Conversely, dissidents are often deemed to be non-welcomed 'personnel' as they emit a disruptive tone to the smooth operationalization of management strategies. However, it is foolhardy to discount any form of dissatisfaction in the public sphere as it compromises the publicness of the governmental institution (Haque, 2001). Moreover, this category of stakeholders, given their full backing to the strategization of a customer-centric taxation paradigm, may manifest as an alternative knowledge resource of disagreeing opinions. In fact, at times, it may prove to be favorable for the organization to take into account conflicting comments and mull over the motivations behind these criticisms in order to appreciate the e-government initiative from multiple facets. On this note, the IRAS tries its best to be accommodative to deviations from stakeholders and readily incorporates their opposing views into consideration during project discussions for future system enhancements.

The auto-inclusion scheme mentioned in chapter 4 is one such illustration that was borne out of intense deliberations with dissenting tax officials for a revolutionary paradigm to ensure the veracity of the tax information that is submitted by the e-Filers. Such an outcome represents an exemplification of the immense benefits that can be reaped by maintaining an open and receptive culture that inadvertently led to the discovery of previously unexplored avenues for the reimbursement of strategic value from the e-government initiative. On the other hand, it is not the case that any proposals from dissents will necessarily be entertained.

For instance, while the IRAS has cautiously explored the viability of deploying the e-Filing system for the digital presentation of transmitted employment information under the auto-inclusion scheme, the danger of probable data interceptions when transferring information across public domain such as the Internet has induced the IRAS to maintain its intransigency of having a non-transfer policy, where data transfer is unidirectional from the taxpayers to the agency. As clarified by the CIO,

> "*A lot of information is already captured by the system, so what we need for e-filing is just asking you to complete the remaining portion. As such, the information of the taxpayer is never a complete picture that is meaningless to a person without all the other information*"

In such scenarios, the IRAS chose to exploit communication opportunities in the likes of seminars to corral prehension among these dissents on the corporate concerns associated with certain abstruse features of the e-Filing system that may seem polemical for this group of stakeholders, i.e. the IRAS attempts to induct these individuals to the rationale behind some of the more controversial characteristics of the e-government initiative through education and familiarization courses in hope of co-opting these members by boosting their level of acceptance to match that of their commitment.

Furthermore, the tax agency has wisely devised a comprehensive knowledge repository archiving records of past comments, opinions from taxpayers as well as any corresponding remedies undertaken by tax officials (Kankanhalli *et* al, 2001). This trail of historical experiences forms a large part of the IRAS' environmental surveillance efforts to uncover any disputes taxpayers may have had with the e-Filing system in order to arrive at ways to integrate their suggestions. Moreover, by making use of IRIS' integrated

framework, this information within the database is transliterated dynamically throughout the organizational operations, thereby allowing knowledge to be shared and assimilated within the IRAS' strategization effort (Alavi and Tiwana, 2002, Nonaka *et* al, 1998; Pfeffer and Sutton, 2000; von Krogh, 1998). One of the corporate communication officers verified,

> "*Whenever we answer phone calls from taxpayers, we have a template whereby we can keep a log on the problems raised by them. Through such records, we will know the percentage of calls registered for any particular problem. There is also a remark column whereby we are able to type in comments for similar queries so that when we refer to the template, we will be able see from the remark column if taxpayers are having a recurring problem…Basically, our template is quite well designed because it is equipped with all possible options available from the e-Filing website.*"

For the seasoners, even though they may be receptive to the e-Filing system, they demonstrate only a fleeting or seasonal commitment towards the strategization of the e-Filing system. In most cases, they are primarily concerned with ironing out immediate software problems that confronted them during the tax filing process and nothing beyond fulfilling their taxation duties. These stakeholders derive no gratification from spending time and effort working hand in hand with the public agency in the bid to contribute to this particular initiative's strategic future. As highlighted above, such apathetic disposition from them stems frequently from their antipathy towards dealings with the government and their cynicism of ever significantly influencing the direction of public administration (Lowndes *et* al, 2001). This mentality and its aftermath undoubtedly prove

to be counter-productive to such a heavily-invested initiative that is meant to form the perdurable national taxation understructure. Hence, from the stance of the IRAS, it is important to increase the level of commitment of these stakeholders.

In line with e-government and public management literature, the IRAS has ventured zealously to fashion a corporate persona that can be facilely approbated by its stakeholders as one that is congenially transparent and insatiably appreciative of salubrious comments in its ingenuous bid to aspire to greater strategic heights with the e-Filing paradigm (Aichholzer and Schmutzer, 2000). For instance, the availability of email addresses and telephone numbers of relevant tax officials on the e-Filing website effectively communicates a flat hierarchical structure atypical of traditional bureaucratic, procedural-driven governmental image (Bozeman and Kingsley, 1998) and sends a strong signal to taxpayers of the IRAS' resolution to construct dialogic relationships with them. Likewise, the IRAS is constantly on the move to explore new channels for bilateral exchanges or improve existing communication options in order to reduce the cost of communication to increase the intensity of dedication among these stakeholders.

Finally, the last group of skeptics poses one of the greatest challenges to the e-Filing system as they are most likely to shrug off any relational gimmicks directed at them to tempt them aboard. Recognizing this restraining problem, the IRAS believes that it is more realistic to secure acceptance of the system before it can harness their commitment. Particularly, the auto-inclusion scheme, apart from being a stopper of dissenting voices, is also a key relational weapon by the IRAS to persuade these stakeholders to adopt the e-Filing system. From a strategic management perspective, the auto-inclusion scheme represents the gradual maturity of a strategic value network

between IRAS and its various stakeholder entities (Tan and Pan, 2003) whereby substantial benefits can be gleaned for all parties participating in the same relational web.

On the part of the employers, participation in the auto inclusion scheme translates into greater efficiency. Rather than catering to the requests of individual employees who may approach the company separately for documentation in support of their personal tax filing needs, it is simpler for the company to transmit the tax information directly to the IRAS. For the employees, they are spared the effort and hassle of sifting through and supplying the details of their employment information for their tax returns. For the IRAS, direct access to taxpayer information at its source – that is from the employers who are paying the salaries of the taxpayers – means a reduction to the tremendous costs of data capturing and safeguarding against erroneous tax declarations. Eventually, the IRAS believes, the auto inclusion scheme can be converted into a paperless tax filing paradigm where all relevant tax information is automatically channelled into the e-filing system, without any form of physical intervention. As explained by the CIO,

> "*Doing auto inclusion means we can reduce our tremendous data capture efforts because we capture so much of the tax information. That's why when you do e-filing, it is not as tedious as if you were to file all the different forms; you only have to complete the part that is necessary… Since we started the auto inclusion scheme, we have been systematically trying to auto include as much tax information as possible. And, hopefully one day, we will reach the stage where taxpayers do not have to do anything anymore (in the filing of their tax returns). That's our ultimate goal.*"

Essentially, it can be inferred from the case that the budding of strategic value networks underlines the presence of mediating relational elements or incentives among stakeholders, which may compel their obstinate counterparts to modify their positions on the e-Filing system.

In sum, the case of the IRAS offers a preliminary glimpse into the strategic management of stakeholders for e-government initiatives and to round off the discussion for this chapter, the main findings of this thesis is tabulated in Table 5.1 below.

Types of Stakeholders	**Implications for Stakeholder Relationship Management in e-Governments**
Engineers	□ The establishment of a leveled platform to facilitate symmetrical communications and dialogic relations.
Dissents	□ The cultivation of an open and receptive culture to accommodate and consider dissenting opinions.
Seasoners	□ The promotion of a transparent and approachable organizational structure to dismiss socially exclusive behavior.
Skeptics	□ The induction of strategic value networks to provide mediating relational elements or incentives to induce psychological conversions.

Table 5.1: A Summary of Implications on Stakeholder Relationship Management

Chapter 6 - Conclusion

This study has closely scrutinized the journey of a public agency in implementing an e-government initiative in conjunction with the strategic management of an intimate relationship with its stakeholders within an IT-based transformation environment (Markus and Benjamin, 1997; Venkatraman, 1994). Specifically, the research traces the development of the IRAS e-Filling initiative from 1992 to 2003 to identify and discern the measures undertaken by the tax agency in stakeholder identification, segmentation as well as management. In this regard, the study offers an analytical account of the experiences and lessons learned in the e-transformation of the IRAS from a bureaucratic agency (in the early 1990s) to one that possesses anticipative and responsive business capabilities.

6.1 Summary of Case Analysis and Findings

From this trail of evidence, the researcher observes that the identification of stakeholders in this e-government initiative can be characterized by two cognitive dimensions: the acceptance of the technological features of the e-Filing system versus the commitment towards its strategic institutionalization.

Undeniably, users' reception serves as a crucial determinant of e-government development as it dictates the take-up rate of the initiative among stakeholders. Nevertheless, the investigation suggests that commitment is equally important in driving

the e-government movement beyond its functional limitations to embrace a strategic influence on the socio-economic environment. From the interplay of these behavioral attributes of stakeholders, the case reveals that four main categories of stakeholders can be derived together with respective strategies for relationship management.

The engineers are representative of the group of stakeholders who are both receptive towards the technical propositions of the e-government initiative and committed towards its strategization. Being inherently motivated coupled with hands-on experience; these engineers form a convenient and inimitable source of knowledge for e-government practitioners to tap on for both systemic improvements as well as strategic expansions. However, to exploit the wisdom of these potential partners, the example of the IRAS demonstrates that civil administrations should adopt a proactive stance in establishing a leveled platform with stakeholders to facilitate symmetrical communications and build dialogic relations.

Conversely, it is identifiable from the study that there is another class of stakeholders who, despite being committed towards the strategization of the e-government initiative, may not be receptive towards its technical propositions. These dissents, or so termed in this thesis, portrays a complementary role to e-government development as they offer an alternative perspective from which to conceive the physical manifestation of the initiative. Moreover, since these stakeholders share a common strategic agenda with the public institution, it is not unimaginable that some of these suggestions may prove to be constructive as illustrated in the preceding chapter. In this respect, governments should practice an open and receptive culture in accommodating dissenting opinions.

The seasoners denote the third classification of stakeholders who are receptive towards the technical propositions of the e-government initiative even though they may not be committed towards its strategization. This group of stakeholders is characteristic of the general citizen population, which deems e-government systems as easily accessible replacements for conventional public services. Furthermore, the psychological barrier of social exclusion is the other inhibiting factor towards a more participative role on the part of the seasoners. Therefore, it is understandable that these seasoners are primarily concerned with operational performance rather than strategic value extraction. It is thus vital for governmental organizations to promote a transparent and approachable structure to dismiss socially exclusive attitudes.

Finally, the skeptics, as the name suggests, refer to the cluster of stakeholders who are neither receptive towards the technical propositions of the e-government initiative nor committed towards its strategization. This group of stakeholders poses an onerous challenge to e-government development because they are most likely to shrug off any direct attempts by the public agencies to reach out to them. Findings from the research provide a novel solution in the form of strategic value networks where the mediating relational elements at work among different stakeholder entities serve as incentives to discourage deviating actions.

6.2 Theoretical and Managerial Implications

The diffusion of IT into civil administrations has given birth to the rising phenomenon of e-government. Nevertheless, contemporary literature on this emerging occurrence, though multi-faceted, has remained rhetorical in character (Devadoss *et* al, 2002). Amidst these

proposed perspectives with which to explore the e-government 'black-box', the strategic management of stakeholders stands out as one of the prominent beacons charting its evolution (Chan *et* al, 2003; Pardo *et* al, 2000; Pardo and Scholl, 2002; Scholl 2001; Tennert & Schroeder, 1999). In particular, Tan and Pan (2003) depicted a development model of government-stakeholder relationships, which captures the essence of working towards the symmetrical collaboration between public institutions and stakeholders on e-government progression.

Based on the proposed framework, this research thus makes a pertinent contribution to e-government literature by offering a preliminary glimpse into how a public agency is able to strategize the process of stakeholder identification, segmentation and management to craft cooperative partnerships that are supportive of its e-transformation initiative. Specifically, it extends existing knowledge of stakeholder management in e-government by advising the adoption of a typology of stakeholder classification that is intuitive to a governmental context. In fact, the proposed model reaffirms stakeholders' participation as the interplay of technical acceptance versus social commitment and in this sense, reinforces the theoretical notion of e-government as a socio-technical system. This understanding in turn can be informative in deciphering any IT-driven business re-inventive efforts in governmental establishments.

Apart from the conceptual overture, the findings in this study may also bear important managerial implications. Indeed, it can be gathered that e-governmental transformation is a vital step in altering the often-perceived uncompromising and uncompetitive nature of bureaucratic public organizations, but only if it is accompanied by measures to revolutionize the relationships between the public agency and its

stakeholders. Moreover, it is illustrated in the case of the e-Filing system that these managerial actions to secure stakeholders' participation should originate from their identification before following through with their segmentation and relational management. In particular, the two dimensional parameters highlighted in the proposed model may serve as guiding principles for e-government practitioners to construe a holistic strategy for stakeholder management.

6.3 Limitations

The data utilized for this research is derived from multiple sources to reconstruct a retrospective and comprehensive picture of how stakeholder management has been strategize alongside an e-transformation program at a government agency (Lacity and Janson, 1994). While this single case study has tendered empirical validation of the conception that e-government adoptions should be accompanied by the cyclical process of stakeholder management along the cognitive dimensions of acceptance and commitment, the researcher acknowledges the limitations of this investigation in providing statistical extrapolation across a multiplicity of public organizations.

Nonetheless, as clarified by Yin (1994), the generalizing properties of a case methodology differ from quantitative studies because "survey research relies on statistical generalization, whereas case studies rely on analytical generalization. In analytical generalization, the investigator is striving to generalize a particular set of results to some broader theory" (p. 36). Taken in this light, the conclusions from this case analysis could provide a vocabulary for researchers to take into reference for subsequent scholarly

explorations of e-government initiatives, so that further endeavors of such nature can be compared and benchmarked.

6.4 Future Research Directions

For future studies on the subject matter, three specific areas of research has been identified that may effectively enhance our comprehension of strategic stakeholder management in e-government projects. Firstly, as recommended by Yin (1994), studies of a similar nature should be replicated to verify the findings of this research and validate the proposed theory. In other words, it is necessary to examine the strategic management of stakeholders across other e-government projects to refine the theoretical prepositions of this thesis.

Finally, an in-depth study is required to explore the inter-relationships among the four categories of stakeholders. For instance, the composition of strategic value networks is derived from the assimilation of differing stakeholder entities and in this respect, subsequent research can attest to the possibility of interdependencies existing between the extent of relational influence embedded within strategic value networks and the relational configuration of the partnership web.

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