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Customer relationship management (CRM) in e-government: a relational perspective

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Abstract

The case of the National IT Literacy Program (NITLP) as part of Singapore's e-government initiative serves to illustrate the evolution of strategic customer relationship management (CRM) practices. The role of CRM has remained relatively consistent even though its practices have evolved in response to both environmental and technological changes. This study introduces the concepts of relational incentive, relational value and relational tool that position indirect communications as an important contender to direct communications for organizational relationship building. This study adopts a relational perspective with which to formulate a managerial strategy for CRM that is independent of direct organizational involvement.

Keywords: Customer relationship management; Relational incentive; Relational value and relational tool; E-government

1. Introduction

The notion of forging intimate connections with consumers to understand the needs, preferences and potential of distinct market segments has been a crucial driving force behind organizations' mounting emphasis on customer relationship management (CRM) [26]. In particular, corporations are growing wiser to the archaic marketing philosophy of reaching out to every customer in an identical manner [26], and look upon CRM as the means to identify profitable patrons, convert prospective clients and establish lasting strategic partnerships with beneficial business partners [20,66,83]. A more recent study by Reinartz and Kumar [60] even dispels the common myth that a loyal customer is equivalent to a lucrative one, and calls for a better approach in assessing the business worthiness of each consumer.

Not surprisingly, the aforementioned phenomena have spurred an extensive amount of studies conducted on CRM initiatives (see [16,61,81]) and with the apparent dominion of information technology (IT) in the future, the growth of CRM in electronic

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commerce (EC) is also rapidly gaining momentum [64]. Nevertheless, despite the overwhelming number of articles presented on the advancement of CRM across various service industries (see [1,3,45]), few, if any, have explored the management of customer relations within governmental agencies.

The public sector is one of the most primitive and predominant service domains in any community, with a wide array of governmental services catering to all aspects of society and economy [32]. Considering the dynamism in coping with such diverse stakeholders, Gregory [28] cites public responsiveness as an important distinction of effectiveness and efficiency within civil administration. This view is supplemented Thomas [75], who proposes a mutual *trusting* alliance as the core binding element between public organizations and their customers in achieving a convergence of interests.

Though, e-government [72] has complicated matters by inducing a sense of urgency in stepping up to rising public expectations of improved interactivity and enhanced sensitivity [33,77]. In this light, CRM becomes strategically significant in promoting e-government acceptance by providing a forum for public agencies and their customers to fine-tune e-services to meet each other's precise requirements [11]. Moreover, the premise of public administration is undergoing transformation with the redesign of old-fashioned bureaucratic governmental structures [48] to accommodate an emerging generation of modernized public services [15]. In particular, the vision of transforming a government to become more customer-oriented is continuously being called for in theoretical literature [73].

This study addresses the issue of CRM in e-government development by examining the case of the National IT Literacy Program (NITLP) in Singapore. The NITLP is one of the pivotal e-government initiatives introduced by the Singapore government to create an e-inclusive society that is competitive in a global knowledge-based economy. Specifically, the program is designed as a springboard to propel the nation into the forefront of e-commerce adoption activities [12]. Considering the unique context associated with such an extensive project, the NITLP serves as an excellent anchor point from which to explore and evaluate the practice of CRM in e-government. This article seeks to contribute towards (1) a review of the role of CRM in e-governments and (2) the application of CRM in fostering strategic customer relations in public administration.

2. Customer relationship management in e-government

There is a general belief that the origins of CRM can be traced back to the old days when vendors enjoyed an interpersonal relationship with their customers [68]. Back then, consumers were served on an "exclusive" basis, with merchants making use of the personalized knowledge of their patrons to generate highly effective customer relationships in forecasting supply and demand patterns [26]. With the expansion of market economies, the in-depth understanding between merchants and their customers has been replaced by increased consumerism and mass marketing tactics [54]. This trend of assuming customer uniformity persisted until recently, when relational marketing emerged as a preferred technique of building dialogic relationships with individual clients [44,56]. Regrettably, this one-to-one marketing technique suffers from criticisms of labor intensiveness, which compromises its feasibility to be exhaustively replicated across an extensive customer population.

Considering these restrictions, the concept of CRM is advocated as the next evolution of customer management by extending and enhancing conventional relationship marketing methods. Intuitively, CRM appears to be a simple and straightforward idea, but a quick review of existing literature will yield a number of different interpretations [80]. For some, CRM is the integration of marketing, sales and service functions through IT-enabled business process automation such that the value of each customer interaction can be maximized [67]. To others, it is merely an extrapolation of relationship marketing by accrediting the commercial firm's profits into the equation such that more resources can be devoted to profit-generating clients [26]. Taking a comprehensive view amidst these differing opinions, Pan and Lee [51] recommend that CRM should be perceived as a business approach involving the seamless fusion of people, process and technology in a manner which optimizes and strategizes the business's customer contact points. In this regard, there are numerous speculations on the role of CRM in business processes as well as its inherent value in structuring organizational competitiveness.

One prevalent argument suggests that CRM exists as a decision-making mechanism for managers to tailor strategies based on individual customer profiles in order to capitalize on the business potential of every consumer [21,70]. Others proposed CRM as the means to extract accurate and sensitive customer information to assist in fine-tuning customer segmentation strategies [17,22,57] or achieving product innovations with greater market relevance [65,79].

Though, as the weightage of IT in business operations continues to grow, CRM has taken on a whole new perspective in merging the benefits of technology with existing consumer practices to develop an integrated and systematic approach to organization–customer communications [39]. Through the movement towards a structured mode of assimilating client information from intraorganizational contact points as well as interorganizational business partners [25,70], the supply chain of the firm can be better coordinated [34,52,71]. Particularly, with the reduced cost of bidirectional interactions brought about by these e-business mechanisms [82], tightly coupled supply chain management is no longer confined to huge organizations; companies of varying sizes can now accomplish almost instantaneous responses to market fluctuations [24,53,55].

Incidentally, the premise of public administration is confronted with similar challenges posed by the aforementioned IT-inspired business transformations [73]. With public agencies envisioning privatization as a modernization alternative [19,76], this emerging generation of public service reformations resembles the typical market-driven mode of governance where policies are aligned along the commercial principles of competitiveness, efficiency and productivity [29,30]. Moreover, the aggressive diffusion of IT into civic operations [46,47,49,72] has inevitably led to a paradigmatic shift in basic governmental processes [33,78] which underlines the imperative demand for increased interactivity and greater sensitivity to the needs of their diverse citizenries [33,77].

In contrast to traditional secretarial functions [69], Lawson [41] defines this genre of e-government as the provision of public service in a "one-stop, non-stop" manner where "power is transferred to the people." This opinion is shared by Aichholzer and Schmutzer [2], who ventured further to describe e-government as the transformation of the business of governance and the foundation of governance itself.

Such businesslike transformation of public services, however, has led to widespread controversies over its accompanying impact on customer relations [32]. As Haque [30] noted, while restructuring may introduce business management culture to obsolete bureaucracies in need of revitalization, it may also prompt the public agencies to marginalize their service responsibilities in favor of standard industrial norms. Gregory [28], for instance, hypothesizes that an overemphasis on business results may encourage public organizations to emphasize predetermined productivity targets and detract from their social obligations [23,31]. Haque [32] thus advises that modern public management should not deviate from the alignment of service reformation with a strategic focus on establishing and maintaining dialogic customer relations, which cater to the diverse and unpredictable expectations of different public members [58].

Yet, despite the irrefutable relevance of customer relations in influencing the adoption of e-government systems, there has not been a corresponding rise in the study of CRM practices within the context of public e-services. A probable explanation may reside in the inherent nature of public administration. Notably, the absence of market incentives, the need for higher levels of accountability, the existence of multiple conflicting goals as well as the restrictive boundaries put in place by a greater set of legislation [62] have constrained the viability of pursuing CRM within the public domain. The general impression of governmental agencies as rigid establishments with deplorable service attitudes and inefficient business operations (see [6,47]) has lowered the perceived quality of CRM lessons to be gleaned from these sterile settings.

With an affiliation towards the market-driven governance model, Clements [13] and Kelegama [36] thus suggest that the fulfillment of public interests can be best achieved by improving customer satisfaction through overcoming the inefficiencies of civic procedures. Dillman [18], however, has scrutinized such ideas for its oversimplistic assumptions on the parallelism of the fundamental objectives and praxis between public and private organizations. Indeed, it is well established within public administration literature that public and private institutions are not homogenous in character (see [8,9,14]) with critical differences rooted in environmental factors, organization–customer transactions as well as internal structure and processes [59]. Specifically, the presence of a political context with a broader range of constituent stakeholders exacerbates the risk involved in implementing IT initiatives within the public sector [43].

In view of the above reasons, this paper argues for the significance of a CRM study in e-governments. Despite the undeniable resemblance between public agencies and private enterprises [30], there are two core distinctions, which strengthen our position on a CRM study in governmental e-services. Firstly, as compared to the business sector, the dynamism associated with a wide-ranging diversity of customers is unique to the context of the public sector [42] and therefore it enriches the insights to be gained from such a study. Moreover, within the civil service, citizens are compulsory members of these public agencies regardless of their business value. The individual interests of every customer must be accommodated separately and equally [28]. Therefore, rather than filtering favorable clients from the batch, public institutions should consider the use of CRM to strategize the value of each and every customer relation while retaining the merits of service modernization. As such, these circumstances form a fascinating phenomenon for understanding the strategic management of consumer relations.

The study of a systematic and strategic relationship management process in the context of an e-government initiative can be perceived as the missing link between public organizations and their target audience thus initializing the drive towards a holistic approach to understanding CRM practices. The application of CRM in an e-governmental context thus warrants further research to establish guiding principles on how customer relations can be effectively strategized in the public sector. Specifically, the research supplements existing knowledge about the roles and implications of CRM in public e-services and elicits the differences in CRM practices between public and private institutions.

3. Methodology

For this paper, the participative action research (AR) methodology has been adopted for data collection. AR provides a secure basis for an exploratory study of semi-iterative implementation processes to develop a higher level of internal consistency in the findings [38,63]. AR is especially useful to this investigation as the governmental organization involved is the Infocomm Development Authority of Singapore (IDA)—a national agency catering to the entire citizen base of a country. In this sense, AR allows the investigators to observe with consistency the complexities and issues of developing the NITLP within the immense organizational context of the IDA [7].

The unit of our analysis is the NITLP project team, where the developmental activities related to the formulation of the NITLP are centered. At the same time, we take into consideration the broader organizational environment. Adhering to Blackler's [5] approach in a similar study, the researchers focus on documenting the motivations, considerations and interactions associated with the developmental activities. Also, as recommended by Greenwood [27], the third author played a facilitating role to the project team throughout the study process, supplying expert opinions to the team while gathering evidence. This created a sense of total immersion within the context of the study and provided excellent access to information and close rapport with the project community.

Though the third author (action researcher) did most of the data collection, he was not biased by the possibility of having foreknowledge of the stakeholder relationships. At the time of the data collection, he did not have any prior knowledge on the subject (stakeholder relationship management), and therefore, his data collection was not guided by any theoretical framework. Data were consolidated through interviews, brainstorming sessions, informal conversations, socialization, discussions and meetings. Field notes of daily observations were also taken, and together, the information allows the researchers to form a picture of the public agency using a joint construction of descriptive accounts of the situation. This serves to provide a deep understanding of the social and organizational context required for this investigation.

4. Living the e-lifestyle: the Singapore journey

The blueprint for Singapore's transformation to a knowledge-based infocomm technology hub was initiated in 1992, with the government's vision of an "*intelligent island*" [12]. The initiative aims to encourage the utilization of computers in the daily routines of individual Singaporeans and expand the existing Internet coverage to each and every household on the island [40]. To operationalize this vision, the IDA was established to drive the development and adoption of Infocomm Technologies (ICT) towards an e-inclusive society.

Since 1998, computer ownership and the number of households connected to the Internet have risen considerably. In 2001, out of the 1.1 million households in Singapore, six in 10 (63.9%) owned personal computers and 56% had access to the Internet. In addition, the broadband infrastructure has attained a geographical reach covering 99% of the island, with household penetration level currently standing at 17.7% [74].

On the other hand, a survey of households in 2002 showed that despite a high level of awareness amongst Singaporeans of the availability of online services, their actual usage has remained relatively low [74]. Further, a separate report on the country's infocomm literacy level indicated that only 47% of Singaporeans were equipped with the necessary technical skills to perform online transactions for e-learning, e-shopping, e-banking and e-entertainment [74]. This situation is part of a larger predicament confronting the IDA in its attempts to diffuse the e-lifestyle concept into the community where every citizen will make a conscious and proactive effort to participation in e-transactions.

Based on the statistical findings, the NITLP was launched in June 2001 with the objective of training 315,000 Singaporeans to become adept users of infocomm appliances and services [74]. The strategies employed by the NITLP are multifaceted. Fundamentally, the NITLP is designed to equip IT-illiterate citizens with basic computing and Internet skills as well as to promote the integration of IT into the daily lives of Singaporeans. By investing S$25 million to target late adopters (i.e., homemakers, workers and senior citizens) and improving their skill levels in IT, the Singapore government hopes to stimulate the rate of Internet diffusion into Singaporean families. Also, to be more accommodative to the learning needs of the late adopters, the NITLP courseware is delivered as a 7-h, three-module course in the four major languages of the country, and covers essential infocomm skills such as basic computer operations, emailing, web-surfing and downloading, etc. In addition, the course is conducted at authorized training centers (ATCs) which are conveniently located at different parts of the island. To date, the NITLP has attracted more than 80,000 Singaporeans who have completed the course.

These graduates naturally became the perfect ambassadors for the NITLP, and they were strategically recruited by the IDA to spread the good word to their acquaintances. As reflected in a survey conducted by the IDA in 2002 on a cross-section of 254 course attendants, more than 88% of the NITLP participants are satisfied with the course content and instruction, with a remarkable 85% of these same respondents stating that they will definitely be recommending the NITLP courseware to their friends and families. This spate of goodwill among the graduates is instrumental to the growing awareness and continuing fresh support for the NITLP among the target audience.

More importantly, the NITLP is structured as a foundation module to a host of advanced IT curriculums with the ultimate objective of achieving total e-business competency and adoption by all graduates. Through the strategic management of customer relations, the IDA has attained significant progress in overcoming IT resistance innate within the late adopters. In fact, the IDA has succeeded in forging trusting and lasting alliances with the course participants that can be further exploited for the purpose of promoting e-services and subsequent upgrading programs. The achievements of the IDA in strategizing CRM practices through the NITLP is also demonstrated in the preceding survey where more than 86% of the respondents expressed their desire to undertake a higher level IT training course, thereby willingly establishing a long-term relationship with the public agency.

Considering the broad relational issues associated with a nation-wide campaign and its corresponding success, the development and promotion of the NITLP provide the unusual opportunity to explore the strategic role and application of CRM from a multitude of perspectives, including those of the public agency, the trainees and the agency's partnering ATCs.

5. Customer relationship management (CRM) in e-government: extracting the relational value

The case of the NITLP and the IDA demonstrates how an governmental institution has unleashed the potential of CRM to craft responsive and robust relationships that serve as a common denominator between the agency and its customers. As such, the program offers valuable insights into the elements of effective customer management in the context of e-government services. Particularly, the investigators observed that the achievements of the NITLP can be attributed to the injection of novel approaches to traditional CRM techniques. These managerial innovations will form the basis of learning for this article.

5.1. Lesson #01: relational incentive enhances the process of building and maintaining customer relationships

The benefits to be derived from effective CRM in the commercial sector are countless, ranging from the solicitation of valuable customer preferences which can be incorporated into personalized products and services [64], to the resolution of tensions between the customers and the goods and service providers [50], or even to the revolution of the process of e-commerce [24]. Nonetheless, underneath these potential advantages is a basic precondition that customer relationships have already been established, with the function of management existing merely to govern and improve these ties. However, it should not be overlooked that the creation of consumer relations is as important as their management. The remainder of this section will discuss how the IDA has capitalized on the influence of ***relational incentive*** to forge and maintain strategic relationships with its customers.

In the context of this study, the problem of an existing digital divide within the nation has prompted the creation of the IDA as the chief public agency that is tasked with the responsibility of building an e-inclusive community. To fulfill its role, the IDA has redefined the social phenomenon of a digital divide into a more concrete business vision that focuses on two primary objectives: to increase the level of IT literacy amongst citizens by providing a comprehensive training framework and to convert the mindset and attitude of citizens from one of IT resistance to that of IT acceptance. The NITLP was developed to achieve this twin business objective. Similar to the approach for strategic CRM, the development of the NITLP began with an identification of potential customers [66,83]. Interestingly, this seemingly mundane activity for any project development proves to be a strategic turning point for the IDA in managing its customer relations. By adopting a modified technique, the IDA's management triggered a sequence of innovative relational strategies that has enabled the organization to attract a steady rate of NITLP adoption.

The identification of customers for the NITLP followed a two-pronged approach. As mentioned in the case description earlier, the IDA initially employed the use of surveys and third party research findings to pinpoint the program's primary recipients, i.e., the IT-illiterate citizens who are the target audience and immediate beneficiaries of the initiative. Under conventional CRM practices, the isolation of these clients is sufficient grounds for the public agency to formulate policies and communication strategies to directly entice them to come on board the program [20]. However, the investigation reveals that the IDA does not perceive itself to be in the most appropriate position to directly establish relationships with all of its customers. This is especially true considering that the extensive group of IT-illiterate citizens possess diverse needs and varying communication behavior, which pose as inherent human barriers to the IDA in putting together a business plan that can effectively convey the benefits of IT adoption.

As such, the IDA proposed an indirect tactic to the strategic conversion of customers by considering a secondary layer of stakeholder relations. These indirect stakeholders, aptly termed for their lack of vested interest in the fundamental service being offered, can exert a greater influence on primary customers by virtue of their preestablished connections. This scope of interdependent influence between primary customers and secondary stakeholders may be a result of preconstructed relationships such as friendship, employer–employee connections or even animosities. At the same time, it may also exist in the form of naturally defined interdependencies as seen in the examples of family members. As pointed out by one of the IDA respondents, "*We are a government agency. As such, we definitely need collaboration. We are not as effective in reaching our target audience. On the other hand, the training schools [ATCs], based on their contacts and business acumen, can reach out to our target audience in the fastest and most efficient manner.*"

Moreover, the secondary stakeholders identified by the IDA are perceived to be the crucial driving forces behind the NITLP. These stakeholders comprise family members, ethnic and community self-help groups, employers and trade unions, who, in their respective existing relationships with the IT-illiterate citizens, can supply the relational incentive that accelerates IT adoption. The ***relational incentive***, as proposed in this paper, is the encouragement of a specific action by making use of the mediating factors of a relationship. This definition takes a broader view of the common understanding of the term *incentive* by considering the underlying relationship between the incentive provider and the recipient. As such, this study proposes that incentive rewards may not always be extrinsic as in the example of employee salaries or financial subsidies. They may also take intrinsic forms such as a desire for relationship building as in the event of requests between friends or a need for relationship maintenance as in the case of a child's social obligation to his parents. At times, relational incentives may also occur in the form of contention between opposing parties.

During the course of the study, the researchers came across an illustration of how the relational incentives actually play a dominating role in pushing for the adoption of the NITLP by one of its participants. Right from the beginning, the IDA has aggressively advertised the NITLP as a basic course on location-independent communication technologies, which appeal specifically to families that are separated geographically. As confessed by an older NITLP participant during one of the interviews, "*The only reason I take up the [NITLP] course is because I wanted to pick up emailing skills to communicate with my son who is studying overseas.*" From this example, it is intuitive that there is an untapped potential in making use of relational incentives to induce behavioral changes or even overcome personal resistance. Hence, by not discounting the presence of secondary stakeholders who may provide better relational incentive to primary customers, the IDA believes that a more effective CRM strategy can be devised to promote the NITLP.

In essence, instead of making rash attempts to forge relationships with customers directly, the case of the NITLP illustrates that relational incentive can be creatively applied to counteract the limitations of the IDA in establishing initial customer contacts. Organizations, either public or private, can thus take a leaf out of the strategy adopted by IDA and take into account the presence of secondary stakeholders, who, by virtue of their associations with primary customers, may exert a far greater motivating force due to the influence of relational incentives.

5.2. Lesson #02: relational value optimizes customer relationship segmentation

According to Reinartz and Kumar [60], the segmentation of customers is a crucial phase in categorizing consumer behavior, and sets the foundation for business strategies to be developed to effectively anticipate, react to and maximize the results from each customer segment. Specifically, these exercises can classify individual clients according to different categories of purchasing behavior and formulate strategies accordingly [10].

The case of the NITLP, on the other hand, presents a perspective of segmentation that deviates slightly from the traditional methods of differentiating consumers. Despite a similar emphasis on the necessity of customer segmentation as a means of efficient resource allocation, the paradigm adopted by the IDA has shifted from one of customer segmentation to that of relationship differentiation.

As implied from the findings in the preceding section on the identification of customers, the stakeholders of an organizational initiative may no longer be confined to only customers with direct investment in the firm. In fact, agencies like the IDA are taking the initiative to devise strategic business plans that include secondary stakeholders who are indirectly related to the governmental organization's mission. The development from the case of the NITLP allows the inference that modification is needed in the way assessment is done on relationship building between any organization and the various categories of primary customers or secondary stakeholders identified as a consequence of its business objective.

To its credit, the IDA has taken a first step in devising a unique method of segmenting the various categories of stakeholders who have been identified as important players of the NITLP. As opposed to the typical mode of segmenting customers in accordance to the extent of their business value, the differentiation method employed by the IDA warrants merit for its capability to recognize the potential of any relationship beyond an organization-centric perspective of evaluation. It is at this point of the case discussion that the researchers would like to introduce the term ***relational value*** as a possible defining element of customer relationship segmentation. For example, one of the IDA informants mentioned that external partners such as the self-help groups play important mediating roles between the IDA and the IT-illiterate citizens, "*They [self-help groups] actually help us to handhold the community. They know better how the community functions. For us, we try to facilitate the process by providing what they need in getting their job done.*"

Relational value, which will be illustrated in subsequent findings, refers to any strategic characteristic exhibited by a specific relationship that defines the business context of the situation. To elaborate, this ***relational value*** perspective differs from conventional customer relations thinking in two ways:

(1) The viewpoint relating to the relational value in this case does not perceive the public organization, as a permanent participant in every relationship building process, but instead takes into account all relationships among stakeholders including that with the organization, i.e., it extends beyond organization–customer relations to examine the relationship between primary customers and secondary stakeholders as well.

(2) By departing from the view of isolated organization–customer relations, the relational value examines the worth inherent in existing and newly constructed relationships in contrast to the emphasis on the benefits that can be extracted from building new relationships with any particular customer.

In this case study, we argue that the relational value that must be extracted for effective CRM is the degree of interdependent influence which exists within stakeholder relations. This influence is not only prized for its potential in encouraging IT-illiterate citizens to take up IT training courses, but even more so for cultivating a change in mindset and attitude. To illustrate the application of this ***relational value*** in segmenting customers, one example highlighted in the case of the NITLP is the IDA's perception that the relationship between IT-illiterate citizens and their family members is valued or ranked more highly than any direct relational marketing efforts between the IDA and IT-illiterate citizens. In other words, even though IT-illiterate citizens are the primary targets of the NITLP and should be ranked as such, the IDA perceives that building a direct relationship with them through directly targeted promotional campaigns is far less effective in terms of the relational influence exerted by family members. As mentioned by one of the informants in the IDA, the NITLP employs the services of senior citizens to reach out to fellow old folks, "*They are basically using their own testimonial to share their experience with someone else.*" Moreover, the informant elaborated, "*A message from someone personal is definitely more impactful and powerful than [a message] from a government agency.*"

Underlying the IDA's use of relational value to segment the customer base is the foresight of the agency to comprehend its limitations as a new establishment in reaching out to potential IT-illiterate citizens. To put it differently, the management realizes that additional unnecessary resources will have to be expended in promoting awareness of the relationship between the public organization and the NITLP participants. In effect, the IDA believes it is more economically efficient and strategically effective to exploit existing relational elements between IT-illiterate citizens and other stakeholders such as their family members, coworkers, employers and self-help groups in order to induce the behavioral changes that are core to its mission.

In sum, the findings of the case point to the alternative perspective of customer relationship segmentation, which may assist other organizations in general in deriving relational values from existing stakeholder relationships that contribute to effective CRM. In particular, the above perspective suggests that exploiting existing stakeholder relationships may at times lower the costs incurred in building relations.

5.3. Lesson #03: relational tool shapes organization–customer communication during relation building

In spite of the above discussions, the primary premise of CRM still depends strongly on the ability of the firm to effectively communicate its mission to its stakeholders [51]. However, a quick survey of the existing literature yields a surprisingly high level of consensus in supporting a technical focus of communication media (see [4,35]). Generally, the attention given to a communication medium has been one that promotes dialogic relationships through technical elements such as the usefulness of information, the generation of return visits or the intuitiveness and ease of interface etc. [37]. Although these proposed elements have proved to be valid and independent of technological advances, there is an impending need to integrate the technical and strategic components of a communication medium to craft a ***relational tool*** that captures the intrinsic and extrinsic values of any stakeholder relation. The impetus for such a proposal is derived from the differing approach adopted by the IDA in identifying and segmenting its customers. Since stakeholders are not selected for their direct impact on the public agency, relationships (that are defined in terms of their relational value, and conventional communications ideology that values penetration and economic efficiency) should be incorporated with a strategic scope for relational incentives to form part of the equation. In other words, the ***relational tool*** should be the communication means by which relational incentives are maximized.

From the case description, it is obvious that the IDA has capitalized on the relational value inherent in existing stakeholder relationships. One prominent example of how the relational tool has manifested in the IDA's push for the NITLP is the subsidies provided to self-help groups to attract them to encourage their members to attend IT training sessions. It may be argued here that the subsidies act as financial incentives to ATCs, especially in the case of nonprofit bodies. This is indeed a relevant point of view, but it should be clarified that it is not the objective of this paper to dispute the basis of truth for this argument. Instead, the study hopes to present a different direction from which to examine the incentive strategy of the IDA so as to derive the relational principles behind the move.

An important observation that may be highlighted from the study is that the incentive strategy of the IDA was not developed solely on economic or business sense. Relations also played a considerable part in shaping the incentive strategy. In particular, the ability of the self-help groups to mobilize NITLP participation amongst their members may be largely attributed to the influence of the communal relations on which the self-help groups have been formed. In fact, in assessing potential partners for the NITLP initiative, the IDA appears to consider relationships as assets and monetary factor as a liability. This perspective is summarized by one of the informants, "*Some of them [the partners] are self-help groups. But there are also partners who are profit-oriented organizations where the first thing they must see is what there is for them before they would actually embark on the program. So we have to be careful in how we approach this matter… we will need a profile of these organizations, how they operate, how they behave, their way of thinking and what we think they will actually want in order to cooperate with us.*"

6. Summary of the findings

Based on the findings mentioned above, it can be deduced that the role of communications in strategic customer relations should expand beyond its technical

Table 1
A summary of modern customer relationship management (CRM) practices

Strategic component	Implications on customer relationship management (CRM)
Relational incentive	Enhances the process of building and maintaining customer relations by making use of the mediating elements of established relationships between primary customers and secondary stakeholders instead of direct relational marketing efforts.
Relational value	Optimizes the process of customer relationship segmentation by recognizing and evaluating the intricate network of relationships among organizations (either public or private), primary customers and secondary stakeholders such that the optimal configuration of relationships can be derived for realizing the business mission.
Relational tool	Shapes the communication between CRM-adopting organizations and customers during relational building by maximizing the relational incentive inherent in each relation, regardless of the combination between organizations, customers or stakeholders.

capabilities to also include a strategic focus on the value of the relational incentive in affecting customer behavior and enhancing the process of relational building.

In summary, the three strategic components and their implications on modern CRM is presented in Table 1.

7. Conclusion

The strategic management of customer relations in this case study refers to an evaluation of the relational value contained within any thread in a web of relations so as to develop a relational tool that maximizes relational incentive to induce customer behavior that aids the e-governmental organization in accomplishing its goals. In other words, the focus on CRM in the context of e-government would be to improve service related measures, maximizing customer equity measured using "goodwill" of citizens and reducing costs of service.

From the above discussion, it is clear that the practice of CRM in e-government varies from conventional ideas in three aspects: (1) the ability of the public organization to recognize an intricate network of stakeholder–customer relations and the existing influence of relational incentives brought about by these relations; (2) the strategy adopted by the governmental institution to segment identified stakeholders as well as customers; and (3) the means by which the public agency communicates its mission to each of these individual segments. Essentially, the goal of CRM in e-government has remained fundamentally as the need for organization in a public setting to manage strategic relations with its customers in order to accomplish its missions. However, findings from the case do point to an emerging paradigm for the strategic management of customer relations. This shift in the relational strategies that bears important implications for other organizations within the private domain can be characterized by the refinements made to the physical manifestations of three underlying principles of CRM:

(1) The identification of potential stakeholders who may not be directly involved in the situation but can offer a better relational incentive than the organization in affecting the behavioral changes of primary customers.
(2) The segmentation of stakeholders and customers in accordance to their relational value inherent within a relationship as opposed to pure customer categorization in order to identify opportunities for the organization to capitalize on existing relational characteristics that are more relevant to the business situation.
(3) The development of a relational tool that maximizes the relational incentive required to extract the relational value within any stakeholder relationship.

In terms of implications for e-government research and practice, improving the proficiency of citizens' usage of the Internet has become one of the most crucial and challenging issues facing most governments. E-government initiatives changed the way government services are delivered and organized. In order to educate and prepare its people to be more proficient in Internet usage, most government have started to engage in nation-wide campaigns in embracing this change—the way public information and services are delivered. At the end of the day, the future success of e-government would very dependent on citizens' proficiency level of the Internet usage.

This study presents the case of the NITLP, an important illustration of the evolution of CRM practices within the context of an e-government initiative. The findings indicate that the role of CRM within such public settings has remained relatively stagnant even though its practices have evolved in conjunction with environmental changes. The concepts of relational incentive, relational value and relational tool approach the practice of CRM from a slightly different and creative angle that positions indirect communications as an important contender to direct communications for organizational customer relationship building. These three elements of CRM are necessary in successfully implementing and running of an e-government. Without cultivating the right relational value among the staff of government agencies, any incentives and relational tools would not be considered as useful to the overall success of e-government initiatives. Having said that, however, it will be presumptuous for this study to call for reforms to existing CRM practices based on the findings of a single case study. Instead, as mentioned very early in the paper, the objective of this study is to review the role and application of CRM in e-government and perhaps, in the process, offer an alternative direction for academic research and the organizational management of customer relations along the lines of communication strategies that can exploit the inherent relational values of existing relationships.

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