RESEARCH ARTICLE OPEN ACCESS

Comparative study between E-commerce and E-government

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ABSTRACT
E-commerce and E-government have increasingly become a necessary component of decision strategy and a powerful catalyst for economic development within the global economy. Some time ago, we presented early insights from a comparative study of the two phenomena. This research paper shows that despite major similarities the two phenomena follow quite separate and distinct trajectories. E-commerce and E-government applications have made major role in their respective sectors, private and public. This paper reports on more robust findings from an ongoing empirical investigation and deepens our understanding of similarities and differences between E-commerce and E-government.
Keyword: E-commerce, E-government, B2B, ECIS, EGIS

1. Introduction

E-commerce and E-government have increasingly become a necessary component of decision strategy and a robust catalyst for economic development within the global economy. In step with our earlier study, E-commerce and E-government have plays different dimensions, priorities, and governing principles. While private-sector mainly target E-commerce applications at process simplification, service quality enhancements additionally as cost and labor savings, their public-sector counterparts see E-government applications as instruments for establishing an information technology (IT) architecture. Our pilot study further found that illuminating similarities and differences exist in (1) information management regarding the management of content, which was perceived as a serious challenge. Some differences were detected in areas like electronic record keeping, where the general public sector emphasized the legal liability issue as a main concern and driver, whereas the private. Differences were found within the extent and class of process redesign between the sectors. In (2) process management, although the transaction volumes in E-commerce were found larger than in E-government.

In the context of (3) stakeholder relations, the balancing of stakeholders' interests and managing their expectations was found similar in both E-commerce and E-government. Stakeholders in e Commerce preferred network approaches, while governments had preference for alliances to incorporate every important stakeholder. In addition, in e- Government we also noticed a commitment to ethics in commission to citizens, that we found no equivalent in e- Commerce. Finally, the (4) digital divide with relevance equal access, literacy, reach, language, content, and infrastructure was a serious concern in E-government practice. Interestingly, all preliminary findings hold in light of a much-expanded base of knowledge points.

2. Recent Literature Comparing E-Commerce and E-Government

We found that literary study on E-commerce and E-government is incredibly small. So, we had to seem at separate streams of literature to anticipate and isolate potential similarities and differences between E-commerce and E-government. On a more general plane, public-to-private differences are identified in three areas: The private sector has been also praised for its higher agility, greater resourcefulness, less burdensome bureaucracy, and stronger motivation to proactively innovate in comparison with public sector organizations. These differences also surfaced in an exceedingly study, which compared the strategic priorities of Chief Information Officers (CIOs) in both public and personal sectors. It had been found that public-sector CIOs focused on (a) the implementation of an IT architecture, (b) cultural change, (d) hiring/retaining skilled professionals, (e) and streamlining business processes, while private-sector CIOs emphasized (a) simplifying business processes, (b) improving services, (c) effective relationships with senior executives, (d) preventing intrusions, and (e) the implementation of IT architecture. Process changes via streamlining and repair improvement were more highly ranked by private-sector CIOs. Second, we introduce and discuss the study design followed by the presentation and discussion of our findings.(1) Environmental drivers and constraints, (2) organizational mandates and scope, and (3) internal processes, complexities, and incentives. Model relies on laws, statutes, and regulations providing citizens and firms with access to government information and services, and also delineating intergovernmental relationships, strategies, and interoperation of electronic government information. Also, in E-commerce several sub-models could also be found , which explain certain differences

particularly in process management.(4) vertical and horizontal systems integration, (5) increased responsiveness and repair quality. Finally, as our own pilot study uncovered [6], similarities between E-commerce and E-government were found regarding (1) process improvements, (2) backend (process) integration, (3) cost savings, (4) information sharing. Differences between the sectors were found to prevail regarding (1) the drivers and motivations for E-commerce and E-government, (2) stakeholder expectations, and (3) resource availability.

3. Research Question and Methodology

The two central study questions of this research remained a similar as within the pilot:(1) What are similarities between private-sector E-commerce and public-sector E-government, a the way does it matter?
(2) What is different in private-sector commerce and public-sector E-government, the way does it matter? within the absence of related comparative research antecedents and a rather thin theoretical foundation relative tc study problem at hand, we decided to cont with our resulting in a mesh of socio, techn and organizational complexities, which challe the reduction of the study problem to s variables. Study situation, particularly, since interaction between participants results in data and high data quality.

We also stratified the sample using Antho framework, which distinguishes betv professionals, supervisors with operati control, managers, and strategic planners and chose the managerial level for the pilot, since that level gave the impression to us high enough for capturing strategic aspects and motives furthermore as low enough to spot specifics of implementation and outcomes.
Within the private-sector focus group we ended up with a complete of 20 individuals from leading E-commerce-engaged organizations representing various industries, while we had 19 individuals from the general public sector representing the chief branch of varied levels of presidency. A complete of six focus groups was conducted with five to 6 participants each, that is, three groups for every sector. Likewise, we introduced the concepts of G2C, G2B, G2G, and government-to-employee (G2E) furthermore as IEE (see also figure 1) within the invitation letters to prospective participants from the general. Northwest, which has been found highly developed in both E-commerce (for example, Amazon.com, Boeing, Microsoft, etc.) and E-government .In the letter of invitation to prospective participants from the private sector, we verbally and graphically (see figure 1) introduced the concepts of business-to-consumer (B2C), business-to business (B2B), business-to-government (B2G),business to- employee (B2E), and internal effectiveness and efficiency (IEE).

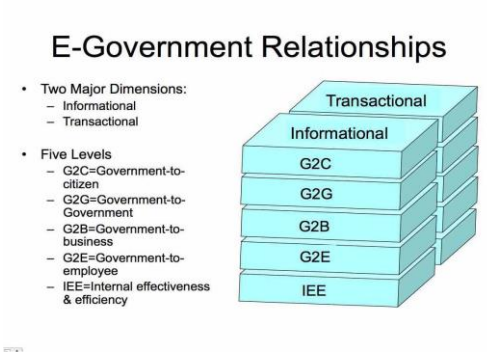
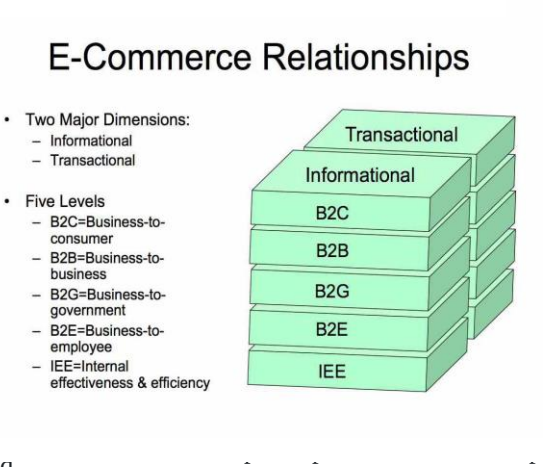


Figure 1 Relationships in e-Government and e-Commerce



sector participants, successive day with the general public sector participants. The moderator first introduced the main target group format to the participants; he then re-introduced the E-commerce and E-government concepts as already outlined within the invitation letters. He explained to participants that the primary session would be dedicated to the "informational" aspects of the five concepts followed by a second session on the "transactional' aspects. Before each session, participants were asked to organize and write down discussion points for every concept as far as those applied to their projects and skill. The moderator then launched the main target give-and-take with a gap question and facilitated the discussion, while three observers took notes and administered the recording.

Data Analysis

During this research paper we mainly used Strauss and Corbin coding methodology.

First, the four researchers independently read the transcripts identifying units of information. Our feeling from the gathering exercise was confirmed during this phase that we had in reality managed to gather rich and high-quality data all told four sessions. Within the second pass, the 2 researchers read the transcripts again and consolidated the units of information. In an open coding process, each unit of information was then assigned to a preliminary category or subcategory whose dimensions and properties were developed from the information.

New categories and subcategories were introduced, just in case existing categories didn't apply. In an exceedingly subsequent pass, an axial coding process was applied, during which the converged categories/clusters and subcategories (emphasized in small capitals below) were analyzed regarding their inherent structure sand processes resulting in paradigms, whose internal relationships were identified wherever possible. Within the final pass, a selective coding process was performed, during which the resulting concepts and theories were associated with one another. In this section, we present our findings for five of a complete of 11 main categories or clusters of themes, which we were able to identify from the information. We highlight the most important elements and themes in each category/cluster by using Small Capitals. These five clusters, however, we found central to the understanding of similarities and dissimilarities in E-commerce and E-government. The four clusters comprise (a) Process management, (2) Information management, (3) Citizen/customer focus, (4) Stakeholder relation.

4.1 Process Management

Process Streamlining and Process Integration while initial applications would mostly only mimic existing processes electronically ("manumission"), new workflows are created and processes are redesigned ("business process design") in additional recent projects, which help exploit the new technological capabilities in step with the practitioner experts in both E-commerce and E-government. In both sectors it absolutely was said improved internal and external service quality, process speed-ups, and consistent performance of transaction processing were among major driving forces for process redesign Also, the will to attain or improve vertical and horizontal process Integration and alignment at the side of fostering the interoperation between information systems of collaborating institutional partners were among the main drivers for introducing E-commerce information systems (ECIS) and EGIS. In government, service speed the experts said was still hampered because systems and processes weren't aligned to a tolerable degree. Also, not all transactions can be performed completely electronically because of media breaks or legal requirements.

Proposition #01: ECIS and EGIS are more practical when processes are streamlined and new workflows introduced.

Proposition #02: Organizations in both the general public and personal sector increasingly engage in redesigning existing processes and build new workflows to create better use of the potential of ECIS. Both ECIS and EGIS provide for top volumes of electronically processed transactions in a very cost-effective, speedy, and reliable fashion. Transactions involving citizens were still fragmented in step with the practitioners. However, compared with government within the private sector, transaction volumes gave the impression to be much higher. Overall, within the data from our sample, electronic transaction processing was found much more sophisticated and much more geared towards directing swift action or reaction within the private sector than in government allowing high organizational ability in E-commerce. In E-commerce, transactions were monitored in real time for problem detection, inventory adjustments, and capacity planning.

Proposition #03: Transaction processing is more sophisticated and proliferated in E-commerce than in e- Government.

Proposition #04: Innovative transaction processing methods are more likely found in E-commerce than in E-government.

Proposition #05: Historical data from transaction processing are more frequently analyzed and used for strategy development in E-commerce than in E-government.

Creating a supportive culture for collaboration strongly depends on conductive personal relationships between the choice makers of the collaborating entities it absolutely was said. The practitioners declared essential to its success the event of a proper governance structure for the collaboration.

Proposition #06: G2G collaboration is more practical between organizations of comparable size and similar governance structure than between organizations of dissimilar size and dissimilar governance structure. Experts of both sectors emphasized the increased opportunity for and engagement in institutional. Finally, formal agreements regarding the governance of collaborative efforts were found essential to the effectiveness and sustainability of a continued collaborative relationship between G2G partners.

Proposition #7: G2B/B2G collaboration reduces cost, overhead, and transaction completion time for each side.

In government-to-business (G2B) and business-to government (B2G) collaboration the ALIGNMENT OFF or that reason, in many G2B/B2G collaborative projects, the private sector partner took on the burden of developing, maintaining, and troubleshooting a collaborative G2B EGIS. Like in G2G collaboration, so in G2G/B2G collaboration, formal agreements governing the collaborative effort were found essential to their effectiveness and sustainability

4.2 Information Management

Proposition #8: Lower information quality affects E-commerce more negatively than E-government

Information Quality as a Key Factor

In E-commerce, most information appears to originate from or relate to in-house transactional data sources. Those data were found to be more refined and more ready for mining than in government.

Proposition #9: The higher the information quality the more effective is information management in both E-commerce and E-government.

Proposition #10: Maintaining acceptable levels of information quality is more challenging in E-government than in E-commerce due to the higher volume of information in government.

Information Sharing

In government, which appears as more information rich than the private sector, insufficient IQ, non-reliable EGIS, incompatibilities, and lack of information integration it was said frequently still hampered the sharing of information. High accessibility, sufficient performance, and high IQ were identified as major facilitators of information sharing in both sectors. Many government agencies put much effort into better information integration for the purpose of sharing.

Content Management

Even more than in commerce, website content management was found a major challenge in government. Quite a few participants pointed out those government agencies were lacking a sound strategy for the management of content. Government agencies obviously try to strike a balance between citizens' need for information and the extent of government services to provide that information electronically. Proposition #11: Content management is more challenging in government than in the private sector due to volume of information and complexity of linked content.

4.3 Stakeholders Relations

Additional thematic analysis did not yield additional major concepts than previously reached in pilot. This demonstrates that the cluster is reaching a maturity stage in terms of developing a theory. Three areas needing attention appeared in E-government: i) Governance; ii) Collaboration and iii) Diversity of stakeholders as opposed to E-commerce, which mainly emphasized diversity of stakeholders only.

Governance in E-government Relations

The governance description reflected an ongoing concern in the E-government side regarding management and control of governance structure. This appeared particularly important due to a clear border between elected officials and nominated professional staff [20].The importance of governance was also reflected through emphasizing power struggles among different stakeholders to achieve their particular interests and the fear of stakeholders from losing control. Proposition #12: Stakeholders governance structure influences ECIS and EGIS design and deliverables.

Diversity of Stakeholders

This ties up nicely to the next narrative, diversity of stakeholders. To achieve a stable and balanced governance structure one needs to balance relationships among different types of stakeholders, elected and nominated officials, political and professional staff, and federal and local stakeholders. This objective becomes even harder when the boundaries of the system are rigidly fixed for a long period, most of the professional staff retains, the needs are vast and the interests are quite different from each other, pulling into different directions. For example, participants reported the fear to partner with "a too big city", and to create dependency on their resources and governance structure. Diversity appeared as a critical issue also for the e-Commerce sector due to shaky, temporary and unstable partnership structures.

4.4 Citizen/Customer Focus

CITIZEN/CUSTOMER NEEDS define much of the way processes and deliverables of technologies are designed both in E-government and E-commerce. The pilot highlighted the robust process B2C implements to deliver a product or a service: understand CUSTOMER NEEDS through mechanisms of surveys and TRACKING behavior; gathering this information makes it possible for companies to specialise in HIGH VALUE CUSTOMERS and to focus on SEGMENTS of shoppers per personal

characteristics; creating TAILORED BRANDS and services to those particular segments of population; finally, since needs are DYNAMIC, companies need to repeat this process. The most goal of the above illustrated process is to focus on customers per their needs and lock them in with the service/product these companies suggest.

Needs serve in B2C as an instrumental good since is that they are valued because they cause something else, a bottom-line result, while for G2C needs of citizens function an intrinsic good, that's they're valued for his or her own sake. Proposition #13: In both the private and public sectors designing information systems is extremely influenced by customer needs, or citizens' needs respectively.

Proposition #14: Targeting customers via identifying individuals or groups is more sophisticated and frequent in E-commerce than targeting citizens in E-government.

Creating a robust Customer Experience the other side of the coin of unveiling the customer needs in B2C is creating these needs through shaping the CUSTOMER EXPERIENCE. While traditionally marketing were the one mainly inquisitive about the customer experience perspective, recently other departments including R&D joined in shaping and creating this experience. Some aspects could be controllable by the businesses, e.g. creating a SOCIAL ENVIRONMENT, enhancing a simple and customised online experience, and partially learning the way to work with customer EMOTIONS effectively through the technology.

4.5 Discussion and Summary

We started out to research, identify, and characterize the similarities and differences between E-commerce and E-government since we believed that the findings from such a study would benefit academic knowledge within the following we discuss and summarize our observations and insights. According to our findings both ECIS and EGIS benefit their respective organizations significantly more when the underlying workflows and processes don't seem to be only electronic re-embodiments of their paper-based antecedents but rather streamlined, simplified, or completely discarded and replaced by different workflows and processes, which take full advantage of the technology. A great incentive for streamlining and redesigning workflows and processes we found within the increased degree of collaboration within and between the sectors, which has become possible.

Interestingly, cross-sector collaboration supported ECIS/EGIS reduces cost and accelerates the method on both ends though the private-sector partner provides systems, infrastructure, and maintenance. Along with transactional collaboration and integration we found increasing collaboration within and across sectors also within the area of knowledge sharing. Information quality played a critical role during this context. A regeneration between perceived IQ, information sharing, and also the strength of the link gave the impression to exist. In E-commerce, organizations were inquisitive about providing a social environment, which was conducive to a positive experience as a customer. These findings suggest that ECIS/EGIS-related phenomena have important characteristics in common, which transcend the mere technical resemblance of systems and methods. Process redesign practices can be a worthwhile subject of further study. We found in both sectors that similar governance structures of organizations influenced how collaborative remarkably, in both sectors the perceived needs of citizens (and customers, respectively) strongly influenced the designs of respective systems.

On the opposite hand, informatics and management, including the archiving of electronic records we found rather more developed within the public sector than with private firms. Yet, private sector firms were found to form much more elaborate use of historical data and data in processing so as to optimize desired organizational outcomes than government agencies. Lower information quality was also found to steer to more immediate and economically more negative effects in E-commerce than in E-government. Still, governments struggled over commercial organizations to keep up acceptable levels of knowledge quality resulting in far greater challenges, as an example, in content management. Interestingly, leadership in government gave the impression to be more supportive of (in particular, collaborative) e projects than their commercial counterparts. It also those collaborative structures within the public sector were markedly stronger than those within the private sector. Although many EGIS initiatives seemingly greatly cared about citizens' involvement and participation, we found that personal firms had a footing in creating a customer experience."

Transaction processing was found more sophisticated and of far higher volume in commerce than in government. Present finding, we noticed that citizens were much more influential within the design of EGIS than customers were within the design of ECIS. Overall, what we found different between E-commerce and E-government suggests that the 2 phenomena follow different trajectories despite many similarities and technical commonalities.

One obvious explanation lies within the sector-specific differences, which produce different drivers also during this area. It'll be interesting to research to what extent Enterprise Resource Planning (ERP) systems, which are increasingly introduced in government, may help align the trajectories between E-commerce and E-government to a better degree than we found during this study.

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