The Internet in Business: A Preliminary Survey of the Philippine Scenario

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ABSTRACT

Specific features of the Philippine economy (such as the popularity of handheld devices and the relatively widespread use of English) have facilitated the establishment of E-Business firms and the spreading of E-Business practices. These and other factors have propelled a number of firms to actually venture into business models wherein operations, and/or products and services, are based *solely* on the Internet (examples being portals, web-based business-to-consumer firms, etc.)

However, the Philippines' embryonic ITC infrastructure, low levels of Internet access and penetration, and widely dispersed markets have also made it difficult for pure, full-fledged E-Business enterprises to flourish without hindrance. Because of these, other businesses have chosen instead to maintain the traditional approach of doing business, while using the Internet to augment or enhance specific areas of their operations (labeled as the "clicks-and-mortar" business model).

This paper describes major features of the current Philippine scenario that facilitate and discourage using the Internet in business, presents alternative frameworks for analyzing the clicks-and-mortar model, analyzes the extent to which the 30 of the top 40 corporations utilize B2C features in their websites, and presents findings, conclusions, and recommendations.

Keywords

E-Business versus E-Commerce; B2C; dot-com; *clicks*-and-mortar versus *bricks*-and-mortar; nominal versus transactional use

1. INTRODUCTION

Electronic Commerce (E-Commerce) has been defined as "the process of buying, selling, or exchanging goods, services, and information via computer networks, including the Internet" [1], or as "any transaction completed over a computer-mediated network that involves the transfer of ownership or rights to use goods and services." This transfer of ownership usually involves a price, which may be equal to zero (as in the case of free software downloads). Examples of E-Commerce transactions would include the purchase of a book or airline ticket over the Internet, or participation in an online auction [2]. This paper restricts the definition of E-Commerce to the transfer of ownership of a firm' s *primary* products or services through the Internet, or other computer networks. Therefore, the sale of an airline ticket by an international carrier over the Internet is considered an E-Commerce transaction, but enrollment for a frequent flyer program – an auxiliary service - is not.

Electronic Business (E-Business), on the other hand, is the broader term that includes *not only* "the process of buying and selling goods, services, and information … [but also] the process of conducting electronic transactions within and between organizations" (examples of the latter being servicing customers, and collaborating with partners via computer networks) [1]. It has also been defined as "any process that a business organization conducts over a computer-mediated network." While E-Business still includes the purchase of goods and services by a consumer online, it also encompasses inter- and intra-organizational transactions such as automated stock replenishments and automated employee services [2]. Transfer of ownership of a non-primary good or service is classified as an E-Business transaction.

While authors such as Turban (1999) have found it more useful to treat both terms as equivalent [1], this paper adopts the differentiation above, and will therefore use the term "E-Business" by default. Any shift to the narrower term "E-Commerce" should be taken to be deliberate, either because context or the use of direct quotations requires such. By definition, therefore, E-Commerce transactions constitute a subset of E-Business transactions: all E-Commerce transactions are E-Business transactions, but not vice versa. (This distinction will be temporarily abandoned for simplicity towards the end of Section 4).

The field of E-Business may be divided into (a) electronic marketing (which is defined as the process of using "a network of interactions and services to exchange goods, services, information and payments") and (b) inter-organizational information systems (where two firms exchange information for the purpose of processing transactions). Electronic marketing may be further divided into consumer-oriented (B2C) and business-oriented (B2B) electronic marketing [1].

The benefits of using the Internet in doing business have been identified and discussed extensively in E-Business literature. Briefly, these benefits include lower purchasing costs, inventory reductions and improved inventory management, reduced cycle times (in building products), increased efficiency and effectiveness in customer service, reduced costs for sales and marketing, and the creation of new markets or sales opportunities [3].

Concerns involving the use of the Internet in business include unresolved legal and financial issues (such as the extent of government regulation and taxation), security and privacy, issues on the distrust of users as well as resistance on the part of the public, the new technology's possible interference with human relationships, and limited access in many areas [1].

This paper

a. provides an overview of the major features of the Philippine economy which help and hinder the move of business firms towards pure E-Business, therefore explaining why the clicks-and-mortar business model currently appears to be the most viable arrangement (given the present phase of growth of the Internet in the country);

b. presents alternative approaches towards analyzing how extensively clicks-and-mortar firms utilize the Internet (specifically, websites) in doing business, while fine-tuning the operational definition of the term "clicks-and-mortar";

c. examines (from a consumer perspective, with certain limitations) the *actual* extent to which business-to-consumer (B2C) features have already been made available in the websites of 30 of the top 40 corporations of the Philippines; and

d. formulates analyses and conclusions, and make recommendations for further study, based on the analysis of these 30 websites.

2. METHODOLOGY

Methodology. The methodology involves literature research, as well as the scanning and comparative analysis of the websites of the 30 of the 40 largest firms (mostly of the clicks-and-mortar model) in the Philippines. A *sufficiently complete* assessment of each website's main and subdirectories was carried out (that is, due professional care was taken to examine each website to the greatest extent possible, beginning with the main menu and going down to the most detailed submenus. See also [c] of limitations for more details on the depth of examination). The scanning of websites was often facilitated by utilizing site maps, with a typical examination of a website lasted 15-20 minutes, depending on its depth and breadth. Those with significant depth and breadth were subjected to an examination lasting slightly over one hour.

Limitations. In the section dealing with an examination of websites of the largest Philippine corporations, this study was conducted subject to the following limitations:

a. The study is limited to measuring the extent of incorporation of business-to-consumer (B2C) features in *websites*;

b. A total of 30 websites were examined for the purpose of comparative analysis, with these 30 websites coming from among the Top 40 Philippine Corporations [11];

c. The examination of the websites took the form of consumer-level scanning. The level of thoroughness exercised was that of a vigilant customer, not that of a web expert. No validation was made by getting assistance from a third-party web expert, contacting the site webmaster, or re-examining the website at a later date for updates;

d. The examination of the websites excluded actual attempts to transact: no products were purchased; no services were availed of; no promotional schemes were taken advantage of;

e. For multinationals, the local homepage was examined by default. In the absence of a dedicated local home page, the global home page was examined;

f. In cases of firms which spun off new units dedicated to e-business (joint ventures or subsidiaries), the mother unit's website was examined, and the spin-offs were treated as different entities; and

g. The extent of examination of certain websites was limited on occasion by technical inefficiencies (such as links which refused to function after three attempts, these attempts having been made across different days).

3. THE GLOBAL SCENARIO AND THE DOT-COM SHAKEOUT

E-Business (or, in a more general sense, the use of the Internet in Business) can be traced as far back as the beginnings of the Internet in 1969. Its popularity peaked during the late 1990s, when projections about its potential were at their most optimistic.[1] During this time, the prospects of E-Business appeared exceptionally promising in the United States[2].

These optimistic indicators precipitated massive investments by venture capitalists, paving the way for the "dot-com revolution." Stock markets soared, the perception that the Internet would change lives was prevalent, and investment levels were unprecedented due to investors' desire to be affiliated with "anything which ended with a dot-com (regardless of business model or potential)" [13]. On November 12, 1998, the price of a share of stock of an E-Commerce firm, AcTel, skyrocketed from $2 to $31 in one day, while the next day, the price of a share of stock of the Internet community Theglobe.com shot up a full 606% on its first day of trading [1].

In spite of the perceived potential, the reality was that many EC companies were not making a profit. Companies such as Amazon.com were operating at a loss, giving priority to expanding operations and generating sales growth, and projecting profits by 2002 [1] For many online B2C retailers, sales were actually low, expenses were high, fulfillment and inventories remained "problematic"; and automated systems were not actually integrated [13].

Multiple books and articles document the how such firms failed to maintain customers (due to failure to fulfill customer needs and orders) and investors (due to failure to generate profit). Over the eighteen-month period from January 2000 to July 2001, at least 550 Internet ventures shut down, 330 of which folded during the first half of 2001 [14].

The causes of the so-called dot-com shakeout have been debated extensively, but oft-repeated reasons include unsustainable growth rates, inadequate or inexperienced management, lack of workable business models and plans [15], and the phenomenon of risk-taking investors looking for fast money [16].

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[1] The *Computer Industry Almanac*, for instance, projected that there would be 259 million Internet users by the end of 1999, reaching 765 million by the end of 2005 [12]. Forrester Research Institute forecasted that the value of B2C business would jump from $518 million in 1996 to $ 6.6 billion in 2000 [1].

[2] A pre-1999 compilation of Internet indicators [17] reported that 17 million households would shop online in 1999; 10 million homes in the US would be networked by 2003; 64 million US adults were regular internet users; and 56% of US companies would be selling their products online by 2000, up from 24% of 1998. The same report also referred to a survey of 30,000 consumers in 30 countries that showed that the US had not also the fastest number of Internet users, but also the largest proportion of e-commerce consumers.

While the dot-com boom and the stock market bubble of 1999 and early 2000 have come and gone, the Internet has fundamentally and permanently changed the way business is done[3]. Forrester Research still predicts that worldwide net commerce (B2B and B2C) will hit $ 6.8 trillion in 2004, initially being dominated by North America but with this dominance eventually being blunted by countries from the Asia-Pacific and Western Europe [18]. Analysts say that Asia can still expect B2C to swell over the next five years.[4] In spite of these optimistic projections, many B2Cs in Asia continue to go bankrupt [19].

The explanation for the seemingly contradictory phenomenon (of B2Cs going bankrupt juxtaposed with optimistic statistics) is explained by Web Guru Asia's chief Jeffrey Zweig, who analyzes that most of the projected revenues will be coming "[not] from dot-com pureplays [but from] brick-and-mortar companies that have already added/ will add B2C-related Internet capabilities to their existing offline sales and marketing channels." These established companies, as compared to pureplay dot-coms, have the advantage of established brand awareness, a loyal customer base, and the ability to integrate the online experience with existing offline outlets. Pureplay dot-coms, while not dead, will thrive only if supported by sound business models, skilled management, and creative strategies. [19]

4. THE PHILIPPINE E-BUSINESS SETTING

B2C E-Business in the Philippines is still in its infancy stage (a situation better described as "the Internet being used in business", rather than E-Business per se). Relative to the recent shakeout in E-Business, there was no Internet bubble that burst in the Philippines, sparing it from backlashes of bankruptcy and layoffs. Furthermore, the Philippines can now benefit from hindsight and from the lessons learned by the United States. The country is in the infancy stage due as evidenced by a number of conditions, among them:

Consumer behavior/ characteristics of the population. Online shopping remains unpopular with the Filipino population. One survey by a Hong Kong-based firm shows that less that one in ten respondents shopped through the Internet [21], while the Merrill-Lynch report estimates online shoppers to be less than 1% of the population [4]. The overall value of online transactions is a meager $2-3 million dollars out of worldwide value of $150 billion. Contributing and/ or related factors include a low level of credit card penetration, lack of faith in online transactions, and low disposable incomes [21]. As an added complication, the population is spread out across fragmented, dispersed markets [4].

Despite current spending patterns, the Filipino population does seem to have B2C potential, given its high literacy rate [21], its people's affinity for Western tastes, and the popularity of English as a language [4]. Furthermore, increases in credit card ownership (a usual requirement for e-shopping) and in the percentage of online shoppers are both forecasted [21].

Prevailing business strategy. The Philippine Internet Directory lists 5,220 business and commerce firms with either a website and/ or an email address [5]. It is estimated that less than 1% of all businesses are online, with the online presence of many being limited to the posting of the company mission [21]. Overall spending of business for Internet advertising remains negligible [4]. It must be noted, however, that a number of successful e-business ventures have already emerged, both B2C (PinoyAuctions, Yehey.com) and B2B (BayanTrade).

Connectivity and Infrastructure. Less than 3% of the population is connected to the Internet. The Merrill-Lynch report dated March 2000 study pegged number of users at 500,000 [4]; the Economist Intelligence Unit was slightly more optimistic at 700,000 as of March 2001. (This figure is multiplied by a factor if each account is assumed to have multiple users). This low level of access can be attributed to multiple factors: (a) the fact that personal computers were estimated to be a mere 2 million [4], which explains why most Internet users can only access the web through community-based computers (most used cyber cafés, schools, or workplaces) [21]; (b) the low telephone penetration rate of 4% [4]; or (c) the high cost of ISP services. Sison (2001) identifies the factor of connectivity as the greatest barrier to be dealt with, and states that there are other more deep-seated issues which bring about this condition, among them low levels of disposable income, the country's archipelagic geography, and the structure of the support industries (the telecommunications industry is duopolistic, leading to less incentive for improved services; the ISP sector is oligopolistic, with profit levels at non-enticing levels) [22].

One feature worth noting about the degree of connectivity in the Philippines is the remarkable popularity of mobile phones. Mobile phone penetration doubled from 1999 to 2000, from a rate of 3.8 to 6.5%. Penetration is expected to reach 10% by the end of 2001 [21], due to the relative affordability of units and services. The practice of mobile phone "texting" is very popular in the Philippines [4], and should be seriously considered as a channel for E-Business.

Legal framework. The E-Commerce Act was passed in June 2000, establishing a framework for E-Business policy in the country. The act mandates that government offices switch to computerization and electronic documents, aims to increase efficiency and reduce red tape, and imposes sanctions for computer hacking. Apart from this, additional support legislation (such as tax incentives for Internet investments) has been put into place. It must be noted, however, that major gaps still exist in the E-Commerce legal framework. The act does not cover areas such as taxation or jurisdiction of disputes; there are no specific rulings that deal with issues like privacy and protection of the consumer; finally, significant problems remain in the area of protection of Intellectual Property Rights [21].

The conclusion that the country is in the infancy stage is further supported by the McConnell study, which ranks a country's e-readiness according to five factors (with the Philippines rated as "in need of substantial improvement" in four out of five areas, and "in need of improvement" in the fifth, human capital) [6].

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[3]Thomas Malone writes that the "dot-com bubble was more like a wave on the surface of an underlying sea change that is still working its way through the economy. Nowadays, virtually all companies still use the Internet in some way." [20]. Andy Grove, Chairman of Intel, is quoted as saying that one perspective is that "all we gave up was the bubble." [23] Paul Saffo, analyst at the Institute for the Future, California, says: "People haven't stopped using the Internet. The fact is that it is changing the world, and it has changed the world." [24]

[4] B2C in India is expected to rise from present levels from $10.6 m (present levels) to $400 m in 2005; and B2C in Singapore is expected to double next year to $ 1.51 billion [19].

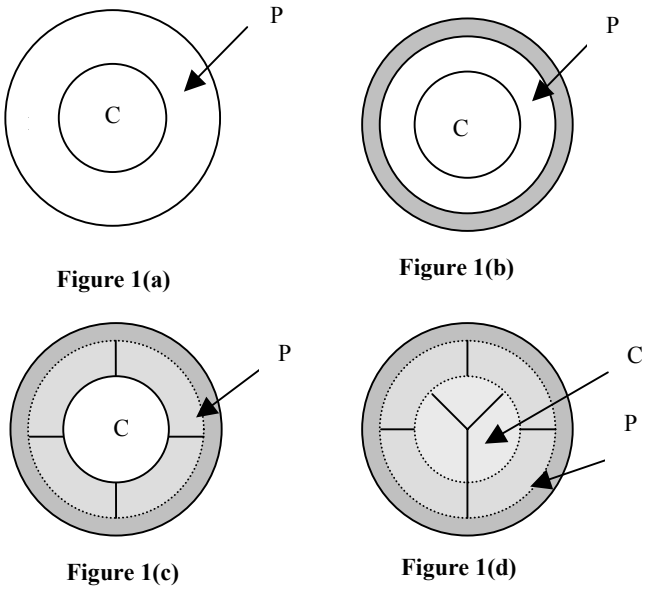

Figure 1(a) **Figure 1(b)**

Figure 1(c) **Figure 1(d)**

Figure 1. Alternative Scenarios of Internet Usage

Because the infancy stage is characterized by challenges, multiple reports conclude that it is not pure Internet plays, but rather existing bricks-and-mortar firms with sound fundamentals that are in the best position to maximize Internet opportunities [4]. These so-called traditional firms, characterized by solid performance and having been founded on sound business models, are described as firms that have partially embraced the new technology without completely abandoning their conventional ways of doing business (unlike pureplay dot-coms which, for now, are perceived to be more "transient."). These conglomerates are adopting the clicks-and-mortar approach [4], and will be the subject of discussion in the next section.

5. THE "DEGREE OF E"

In this portion of the study, a "clicks-and-mortar" business will first be loosely described as an entity conducting only some of its business transactions via the Internet. In a spectrum with traditional *bricks*-and-mortar firms on one end, and pure E-Commerce firms on the other, a clicks-and-mortar firm is one which falls anywhere in the middle of the spectrum, endpoints excluded. Three different models help illustrate how firms with varying degrees of digitization may operate within this middle range.

The first model, developed by Choi et.al. in 1997 [1], uses three axes to denote major aspects of a business, which may be digital or physical: the product, the agent, and the process, all of which are plotted on a three-dimensional graph. Choi's model is applicable to e-Commerce firms; a pure E-Commerce firm is one where all three dimensions are digital (such as the sale and delivery of an electronic book through a website), while a traditional firm is one where all three are physical (normal over-the-counter purchase of a novel from a conventional bookstore). The rest are a mix of physical and digital combinations; these non-pure combinations are deemed to be varying examples of a clicks-and-mortar business (for example, purchasing the hard copy of a novel, using the online shopping process of Amazon.com, and getting it delivered by a physical agent such as FedEx) [1].

The second model, developed by PriceWaterhouse Coopers in 1999, discusses how the process of transforming an enterprise into an E-Business firm is characterized by four major stages. Stage One involves the setting up of a website to tap E-Business opportunities; Stage Two involves expanding the websites' capabilities to include linking with suppliers; Stage Three involves the formation of close collaborative relationships (called online "alliances") with resulting coordination and integration; and Stage Four involves industrial convergence. A firm need not proceed through each stage in a sequential manner [7].

The third model bears some similarity to the second, in the sense that it deals with how "deeply" a website is used to conduct E-Business: it classifies websites into generations, depending on functionalities. Generation One websites are those that simply function as online brochures. Generation Two websites expand to cover other corporate issues such as investor relations and mission statements. Generation Three websites begin to reflect B2B or B2C features. Generation Four websites are tightly integrated into the operations of the company. [8]

The major limitation in Choi's model is that, while it is useful for analyzing E-Commerce firms which have digitized some or all aspects related to transferring ownership of its *primary* product or service, it does not provide a framework for analysis for firms that use the Internet for E-Business, yet non-E-Commerce processes (such as customer service or job applicant transactions). On the other hand, the next two models, while helpful in dissecting Internet usage into "layers", are not explicit about when a firm starts becoming a true E-Business or E-Commerce firm.

This study combines Choi's three-dimensional approach with the two latter models' "layering" approach. Individual and collective examination of the models show that at least two sets of broad criteria, therefore, that can be used to estimate the "degree of e-ness" of a business: (1) the digital-physical combinations of its primary operational dimensions: product, process, and agents, and (2) the extent (or "depth") to which its websites can be used for transacting. These sets of criteria may actually be two slightly different perspectives of essentially the same standard: the types of transactions, and the extent to which these transactions can be carried out through websites.

At this point of the study it is useful to adopt the definition that if a website is used for information dissemination (that is, it is a Generation One and Two website), with information flowing in one direction from the site to the user, the use of the Internet is said to be *nominal* or *non-transactional* (perhaps even "cosmetic"). If the website is used to transfer the ownership of, or the rights to use, goods and services, and/ or for the bi-directional transmission of information, the use of the Internet is said to be transactional (whether or not payment is involved in the transfer or transmission). Therefore, posting of non-interactive brochures online is nominal use of the Internet, while features like sending

Table 1. Taxonomy of Firms Based on Depth of Internet Usage

Feature	Nominal use of the Internet	Transactional use of the Internet		
		For some or all peripheral transactions	For some aspects of core transactions (product, agent, process)	For all remaining peripheral and core transactions
Bricks-and-mortar Firms	X	X	X	X
		X	X	X
Clicks-and-mortar E-Business Firms			X	X
Clicks-and-mortar E-Commerce Firms				X
Pure E-Commerce Firms				

messages to customer service, submitting an application form, or making actual purchases are transactional use of the Internet.

The three models yield a more concrete picture of the various forms that "clicks-and-mortar" firms may take; nevertheless, using them still raises further questions. Does a *bricks*-and-mortar firm therefore *not* use the Internet (or other computer-aided networks for that matter) at all? Does the simple creation of a website by a *bricks*-and-mortar firm automatically transform it into a *clicks*-and-mortar firm, even if use of the website is nominal? If not, is it therefore the presence of transactional features (which allow the bi-directional flow of goods, services, and information) that becomes is the minimum requirement for a clicks-and-mortar firm? How complex do these transactional features have to be (i.e., would the presence of a single feature, a simple "click here to contact us", which is transactional, justifiably reclassify a firm from bricks to clicks)? If not, what then becomes the dividing line between bricks-and-mortar, and clicks-and-mortar?

A fourth model (Figure 1) is presented diagrammatically, illustrating alternative scenarios showing the various ways a firm may use the Internet (through websites) in its business operations. Areas shaded in gray would indicate that the Internet, specifically through the use of a website, has penetrated (been used for) specific aspects of the business.

Figure 1(a) shows two concentric circles, a core "C" (referring to all transactions *directly* related to the transfer of ownership of the firms' *primary* good or service or, using Choi's model, aspects of operations involving the product, the delivery agent, and the process of transferring ownership) and a periphery "P" (referring to other secondary transactions, like customer service and human resources. ("Core" and "primary" will now refer to the same pool of transactions, as will "peripheral" and secondary.") This study does not attempt to exhaustively define primary and secondary, but a useful model to help distinguish between primary and secondary transactions would be Porter's values chain [9]. For now, also note this periphery is not dissected more carefully). The figure, devoid of any gray areas, implies that this hypothetical firm does not use the Internet at all (nominally or transactionally) and is therefore representative of a pure bricks-and-mortar firm with zero E-Business capability.

Figure 1(b) shows a firm which utilizes a Generation One or Two website. The website, therefore, contains only information which is non-interactive and travels uni-directionally from the site to the user. As a result, the gray area remains at the circumference of the circle as a wall of outward- flowing information, implying that the Internet is used nominally but not transactionally (excluding even for secondary-type transactions). The Internet has remained as a "wraparound" to operations; that is, it is simply an information shell that has not penetrated, and has therefore not affected, peripheral (secondary) operations.

Figure 1(c), which shows the use of the web penetrating the peripheral circle, pertains to a firm that uses websites nominally, as well as for secondary transactions (assume customer service and human resource as examples). A dotted line outside the peripheral circle denotes that this section has been penetrated by the Internet (signified further by the shading of the periphery in gray). Therefore it can be said to be using the Internet for E-Business (yet non-E-Commerce), purposes. Also, the second circle may be now be further dissected into smaller segments, with only specific segments shaded in gray, showing that some, but not all, secondary transactions can be done through the websites. Both the PriceWaterhouse Coopers model [7] and Rosen's model [8] employ a layering approach, and have been found to be helpful when assessing firms who use the Internet in varying degrees for peripheral transactions.

Figure 1(d), which shows the use of the web penetrating all the way into the core E-Commerce transactions (transactions involving the sale of the company's primary good or service), therefore reflects a pure E-Commerce firm. Note, however, that in line with Choi's model, the core may also be dissected further into three sections (product, agent, process), and a firm such as Amazon.com would only have its "process" segment shaded. Therefore, if core operations are only partly supported by the Internet, the firm cannot be classified as a pure E-Business firm.

Table 2. Clustering of Firms by (a) Industry and (b) Depth of Internet Usage

	BANKING	ELEC-TRONICS	FOOD/ CONSUMER GOODS	PETROL	UTILITIES	HOLDING	OTHERS	TOTAL
Bricks-and-mortar Firms (zero use, or nominal use of the Internet)	1	0	1	0	1	0	3	6
Clicks-and-mortar E-Business Firms (use of the Internet is limited to some or all peripheral transactions)	1	2	4	3	2	2	1	15
Clicks-and-mortar E-Commerce Firms (use of the Internet is limited to peripheral, as well as some core transactions)	3	4	1	0	0	0	1	9
Pure E-Commerce Firms	0	0	0	0	0	0	0	0
TOTAL	5	6	6	3	3	2	5	30

Based on this analysis, varying implementations of the clicks-and-mortar approach can be presented using a simple taxonomy shown in Table 1. It basically classifies firms into four broad categories:

a. Bricks-and-mortar firms, which include (a) firms which do not use the Internet at all; *or* (b) firms which use the Internet nominally;

b. Clicks-and-mortar E-Business firms, which utilize the Internet for nominal purposes *as well as* for peripheral transactions. However, they do *not* use it for any primary transaction (this limitation relaxes the distinction made in section 1, which describes E-Commerce as a subset of E-Business, but it is done only to simplify the taxonomy).

c. Clicks-and-mortar E-Commerce firms, which utilize the Internet for nominal purposes, some or all peripheral transactions, and some aspects of core/primary transactions (without *all* three of Choi's dimensions being carried out through the Internet); and

d. Pure E-Commerce firms, which utilize the Internet for all core/ primary, as well as peripheral transactions.

This study therefore considers the presence of transactional features to be the minimum requirement to classify a firm as "clicks-and-mortar."

6. PHILIPPINE BUSINESSES: FINDINGS AND CONCLUSIONS

Given the current Philippine scenario which has allowed large, established conglomerates with sound fundamentals to take the lead in taking advantage of the Internet through the use of the clicks-and-mortar model, further questions which may be asked are: What are the specific ways that the largest firms in the Philippines use the Internet (specifically, websites) for B2C business today? To what extent do they use the Internet nominally (i.e., simply as a place to store Generation One-and-Two types of websites), and to what extent is it used for core, versus peripheral (secondary) transactions?

The study covered an examination of 30 of the top 40 corporations of the Philippines [11], distributed as follows:

a. Local versus international (note that firms are classified into "local" and international" based on the location of the parent company):
   - International: 11, of which six did not have a separate Philippine website, so the global website was examined
   - Local: 19

b. Industry classification:
   - Food/ consumer goods: 6
   - Electronics: 6
   - Banks: 5
   - Petroleum: 3
   - Utilities: 3
   - Holding: 2
   - Others: 5

Findings. The 30 websites were clustered into industries, and then subsequently grouped using the taxonomy in Table 1. This grouping is summarized in Table 2. Subject to the limitations discussed in Section 2, the findings are as follows:

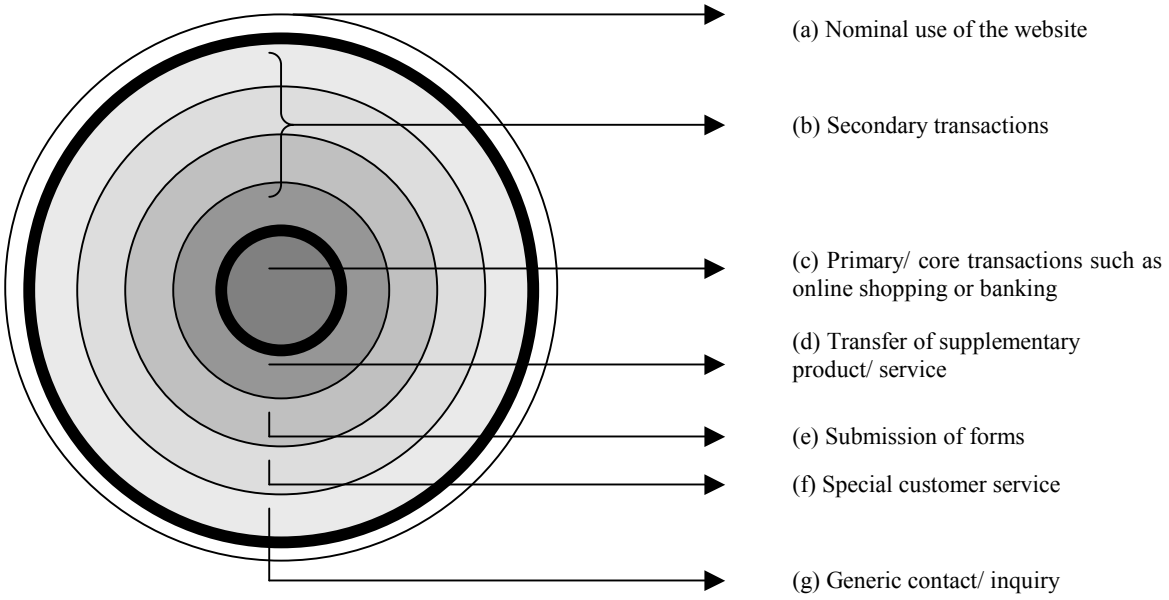

Figure 2. Depth of Usage of Internet, With Distinctions Among Peripheral Transactions

a. The most common aspects involving nominal use of websites included the following (ranked from most frequent to least frequent, with a total of 30 firms surveyed):
   - Corporate mission, vision, plans, organizational structure, and other information geared towards providing a comprehensive company overview: 30
   - Major products, services, or programs offered: 28
   - News (current and archived), announcements, press releases, updates, accomplishments and awards: 19
   - Financial and/ or investor information: 17
   - Other offices/ outlets/ locations/ networks/ directories/ distribution centers/ links to sites of other locations: 17
   - Related studies/ reports/ economic reviews and outlooks/ market indices/ new research and technical reports on related fields: 10

b. Of the 30 firms, six firms used websites only nominally. All six of these were local firms; that is, no international firm restricted themselves to only nominal use of the Internet.

c. Of the 30 firms, 24 used websites both nominally and transactionally.

d. Of the 24 transactional-level firms, 15 firms used websites only for peripheral transactions (however, another one was reportedly creating its online store), and the remaining nine used it for core transactions.

e. The most common forms of peripheral transactions supported by websites are (moving from most peripheral, to those closest to core operations):
   - A generic facility allowing a user to contact the firm for routine inquiries (about products, the website, or the firm itself): 24
   - Specialized customer service features (such as status checks on complaints and inquiries, customer technical support, or input for new products or patents, requests for historical data): 3
   - Submission of specialized forms by specific parties (applicants, vendors, dealers, potential investors or subscribers, even scholarship applicants: 13
   - Transfer of ownership of a supplementary service or product. This includes downloadable software, e-cards, screensavers, free news on a topic related to a product (like car-racing updates for petroleum companies), fora for consultations with relevant experts (like doctors, pharmacists, or beauty experts); promotional incentives (like downloadable coupons which can be presented at physical stores); applications for special programs (such as those offered by airlines) or additional services on a product previously acquired (like adding call-waiting features on an existing telephone line): 9

   Only one website had features across all four of these levels. The rest had one or a combination of the four.

f. Of the nine firms which used websites for core E-Commerce transactions (that is, for the sale of their primary product or service), the following are included:
   - Airline allowing online reservation and credit purchase: 1
   - Local banks that support online banking: 3
   - Multinationals (mostly electronics firms): 5. It must noted that (i) these firms allowed online shopping via their global web page (i.e., there was no dedicated Philippine homepage which supported Philippine-based online shopping), and (ii) purchase and/ or shipping was

limited only to certain countries, not including the Philippines.

Based on the findings, a refinement of the fourth model (discussed in the previous section) may be developed in analyzing firms to the extent that they use E-business features in their websites for B2C transactions. This refinement dissects the peripheral sections into concentric circles, depicting the four layers of secondary transactions, moving closer and closer to core operations (see Figure 2).

Conclusions. Based on the findings above, the first conclusion is that *B2C E-Business in the Philippines is an embryonic stage, with uneven progress made across industries.* This is supported by the following more specific conclusions:

a. Majority of large companies surveyed (24 out of 30, or 80%) are clicks-and-mortar firms; a minority are still bricks-and-mortar firms using the Internet for nominal purposes only. *None of the 30 firms can be classified as pure E-Commerce firms.*

b. Firms that restrict themselves to nominal use of the Internet are local firms; all international firms among the companies surveyed companies made use of the Internet at least for peripheral transactions.

c. Among the 24 firms that use the Internet transactionally, majority (15 out of 24, or half of the 30 firms surveyed) cannot even be classified as conducting even *partial* E-Commerce over the Internet; they are restricted to secondary transactions. These firms are classified as clicks-and-mortar E-*Business* firms. They have used the Internet only at the fringes of their operations (at least as far as B2C is concerned), as shown by the fact that they have restricted themselves mostly to (a) allowing forms to be submitted by external parties, and (b) giving access to a secondary product or service online.

d. Nine companies are classified as clicks-and-mortar E-Commerce firms; the process of obtaining their primary products and services may be done (at least partially) online. The two industries that have made the greatest headway in terms of using the Internet for core transactions are: (1) the banking sector (with three local banks support online banking) and (2) the electronics sector (with four international electronics firms support online shopping, in a restricted sense). Company-level details can be seen in Appendix B.

e. Between the two industries mentioned in (d), it is the banking sector that is perceived to have achieved deeper penetration than the electronics sector. For most firms under the electronics sector, primary transactions can only be carried out over the global website, and shopping and/ or shipping are restricted only to specific countries, excluding the Philippines. On the other hand, online banking can be carried out through local websites, without any restrictions as to the geographical location of customers.

f. While the data pool is still much too limited to make a statistically sound conclusion, it appears that at least two factors have facilitated the use of the Internet for business in baking and electronics firms. For the banking sector, it is presumably the nature of the service (mostly electronic transactions with no physical product involved) that helps firms adapt the new technology with ease. For the electronics sector, it appears to be the nature of the firm (its affinity with new technologies, perhaps its existing resource and infrastructural support) that seems to be the facilitating factor.

The second conclusion is that high profile (and useful) efforts have been made to make the environment more supportive of E-Business. *However, it is foreseen that sustainable progress can only be made if fundamental (i.e., changes in society's behavior and mindset towards online transactions) and structural (i.e., access, connectivity, income distribution and infrastructure) changes are made by various sectors.* These changes will not take place over the short, or even medium term.

A third conclusion is that, because the more fundamental changes are not expected to take place in the Philippine scenario over the short-term, *an exploration of more viable alternatives might be in order for the short and medium term.* These alternatives include:

a. Looking into a modified B2C E-Business model for the Philippines. Sison (2001) describes three possible features of this modified model [22]:

   i. Supporting community access, through Internet kiosks or cafés that allow individuals to use Internet-connected PCs for a nominal fee or, if possible, for free.

   ii. Encouraging E-Business transactions through mobile phones and SMS, which are very popular in the Philippines. This therefore advocates support for a specific SMS-based type of Mobile Commerce, or M-Commerce; and

   iii. Making ISP subscription more affordable to the public by using prepaid Internet cards.

   It must be noted that these features will bypass the need for credit cards, PC ownership, and regular subscriptions to ISPs, therefore addressing the issue of connectivity and access.

b. It may very well be that B2C E-Business will eventually prove not to be appropriate in the Philippine setting. It is therefore expedient not to focus solely on B2C, but to also pursue efforts that harness the power of the Internet within the context of B2B arrangements, or within academe (via e-learning) or government (via e-governance).

7. RECOMMENDATIONS

Because this paper attempts to present only a preliminary set of findings based on a small group of Philippine corporations, it is recommended that validation and expansion studies be conducted as future work.

First, it is recommended that the website functionalities of the pool of companies examined be validated in at least two ways: first through a second thorough pass, again through "consumer-level" scanning, and then through confirmation of findings by contacting the technical unit(s) which actually maintains the website. It may also be useful to unearth the philosophies

underlying management's choice of functionalities in designing websites.

Second, it is recommended that the study be expanded to include the top 100 companies, which should give a better representation of each industry. Findings per industry can then be culled. A fine-tuned comparative analysis of the banking sector, which appears (based on this study) to have made greatest progress in term of allowing the Internet to penetrate its core operations, may be looked into.

Third, it is recommended that a similar study be conducted to determine the B2B and intra-organizational web features of the top 100 companies. The methodology will have to depart from the consumer-level scanning of websites that was utilized here, and may have to involve interviews with or survey forms completed by the firms' web experts.

Fourth, it is recommended that a similar study be conducted on "pure plays" type of firms, particularly those loyal to the pure E-Business model defined by Choi et. al. [1], and also on other clusters of organizations (government, educational, etc.)

Finally, it is recommended that a more thorough assessment of the Philippine Internet landscape be conducted, using a more comprehensive framework. One possibility to look into is Kotler's capabilities approach [10] to assessing the strengths and weaknesses of a nation.

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APPENDICES

Appendix A: List of Websites Examined

[1] http://www.info.com.ph/~npc/home_main.htm
[2] http://www.meralco.com.ph/
[3] http://www.sanmiguel.com.ph/
[4] http://www.petron.com/LeftNav.asp
[5] http://www.shell.com/ph-en/0,4598,,00.htm
[6] http://www.pldt.com.ph/
[7] http://www.caltex.com.ph
[8] http://www.philippineair.com
[9] http://www.nestle.com.ph
[10] http://www.ccamatil.com/s02_03_philippines.asp
[11] http://metrobank.com.ph/sitemap.htm
[12] http://www.jgsummit.com.ph/body_index.html
[13] http://nfa.gov.ph/index2.html
[14] http://www.toshiba.co.jp/index.htm
[15] http://www.mercurydrug.com/help/index.html
[16] http://www.fujitsu.com.ph/sitemap.htm
[17] http://www.landbank.com/lbpcontents.html
[18] http://www.tanduay.com/affiliates/ fortune_tobacco.htm
[19] http://www.bpi.com.ph/
[20] http://www.pasar.net.ph/side.htm
[21] http://www.pcib.com/static/sitemap/ sitemap_content.htm
[22] http://www.pg.com/common/sitemap.jhtml
[23] http://www.intel.com/contents.htm
[24] http://www.philips.semiconductors.com/sitemap
[25] http://www.metropacific.com
[26] http://www.hitachi.com/
[27] http://www.urc.com.ph/html/index_main.htm
[28] http://www.citibank.com/philippines/idemo/topx.htm
[29] http://www.acerphil.com.ph
[30] http://www.jolibee.com.ph/sitemap.htm

Appendix B: Industry Clustering Showing Individual Company Data

INDUSTRY	INT'L/ LOCAL	NOMINAL	TRANSAC-TIONAL	GENERIC FEEDBACK	SPECIAL CUSTOMER SERVICE FEATURES	FORMS	SECONDARY	PRIMARY
BANK	L	x	x	x				
BANK	L	x						
BANK	L	x	x	x		x	x	x
BANK	L	x	x	x		x		x
BANK	I	x	x	x				x
ELEC	I	x	x	x		x	x	x
ELEC	I	x	x	x		x		
ELEC	I	x	x	x	x		x	x
ELEC	I	x	x	x		x	x	x
ELEC	I	x	x	x		x		x
ELEC	I	x	x	x				
FD/ CON	L	x	x	x				
FD/ CON	I	x	x	x				
FD/ CON	L	x						
FD/ CON	I	x	x	x	x	x	x	x
FD/ CON	L	x	x	x		x		
FD/ CON	L	x	x	x		x		
HOLDING	L	x	x	x		x		
HOLDING	L	x	x	x				
OTHER	L	x	x	x			x	x
OTHER	L	x						
OTHER	L	x	x	x		x	x	
OTHER	L	x						
OTHER	L	x						
PET	L	x	x	x		x		
PET	I	x	x	x		x	x	
PET	I	x	x	x				
UTIL	L	x						
UTIL	L	x	x	x	x			
UTIL	L	x	x	x			x	