

# Corporate E-Commerce Practices Of Manufacturing Industries In CALABARZON Philippines

**Dr. Shirley Eje Maranan**

Batangas State University – Pablo Borbon Main I  
College of Accountancy, Business, Economics, and International Hospitality Management  
College of Industrial Technology  
Batangas City, Batanags, 4200 Philippines  
*shirleyejemaranan@gmail.com*

**Abstract:** The business phenomenon of e-commerce leads to many opportunities and interest for manufacturing industries considering its potential to increase profits. In today's increased market competition, companies are required to have the capabilities to manage innovation as a management technique and strategy. Management innovation is a concept embracing planning, organizing, leading and controlling of endogenous capabilities within companies and translating them into competitive advantages and proceeds. In this sense, this study covered the characteristics of corporate e-commerce of manufacturing industries; assessments of managers, ICT employees, and customers/clients for management, technology infrastructures, and marketing; significant differences of corporate e-commerce practices as it relates to the characteristics of manufacturing industries; and identified problems encountered. From the analysis, the researcher proposed an input to management innovation. The descriptive method of research is used in the study and the survey questionnaire as the main data gathering instrument. The study revealed that multi-national manufacturing industries which utilized corporate e-commerce were electronics, computer, food, and metal-working and fabrication industries, and automotive businesses. The respondents agreed that practices of corporate e-commerce were much observed but there are significant differences in the assessments of the three groups of respondents. Corporate e-commerce practices relate significantly to the form of business, length of existence and business capital. The respondents also experienced less serious problems in corporate e-commerce. The proposed input to management innovation designed to broaden the applications of corporate e-commerce has business dimension, linkages, and public and service domain with electronic-culture as the primary strategy that binds the components.

**Keywords:** business dimension, corporate e-commerce, electronic-culture, linkages, public service.

## 1. Introduction

The tremendous development in information and communication technology (ICT) challenges all segments of society to carry out changes and reforms for relevance and practicality. Markets, which before are not reachable because of costs and distance, are now open through cyberspace and e-commerce. Learning, likewise, has extended beyond the four walls of the classroom and now takes place at the home and even in internet cafes. Government can now provide better, more efficient, and more transparent service to their citizens by integrating multi-agency process by means of ICT. Thus, the rapid advancement in ICT and the equally rapid spread of the internet emerged a new system which to revolutionized international trade and business – Electronic Commerce (E-Commerce). E-commerce includes many other activities, such as business trading with other businesses and internal processes that companies use to support the buying, selling, hiring, planning, and other activities. Moreover, this is a combination of marketing strategies, internet technologies, plans and implementation. More importantly, e-commerce provides buyers with a wide range of choices than the traditional way brought about by the access made to different products and services available to them for every hour and every day. Another benefit of e-commerce worthy of mention is that it enables people to telecommute, reducing number of commuters that cause traffic and pollution. Distribution of products and services available in remote areas is made possible with the help of e-commerce [1]. Manufacturing industries contribute greatly to the country's economic development, hence, the need to explore ways to enhance their operations. With technological advancements, the firms are challenged to innovate for greater profits while delivering quality products and service to the people [2]. Modern manufacturing has integration of a product's

components and intermediate processes required for the production. Every manager must be knowledgeable specifically in the functions of management such as planning, organizing, directing, and controlling. From this point of view, top level managers set very general, long-term goals that require more than one year to achieve. Management provides specific ideas for implementing the strategic plan [3]. Moreover, a manager must also plan, organize, and control [4]. Controlling as another function of management is directly related to planning [5]. Effective control systems use mechanisms to monitor activities and take corrective action, if necessary. Today, one of the important aspects of the control process is through management by objectives (MBO) [6]. This method specifically brings into line the objectives of the organization with quantitative performance measures. The great influence that firms can gain by being the first to do business a new way on the Web has caught the attention of top executives in many industries. A successful management of e-commerce initiative must include activities that recognize the initiatives' specific objectives and link those objectives to business strategies [7]. Technology infrastructure must have critical measurements and standards that enable the private sector to build the e-commerce and ensure that it can grow and change with future technical and economic advances according to [8]. In the intensely competitive information technology and e-commerce world, industry relies on the neutral, technical expertise of ICT professionals to help formulate industry-wide standards that will benefit all players and the whole economy. On the other hand, technology infrastructure leadership involves the early adoption of an emerging technology to achieve a preemptive position in e-commerce [9]. Many of the businesses followed a certain strategy or viewed technology leadership as an

integral part of the organization. The marketing practices of corporate e-commerce take the huge internet market. Business caters to a much larger market niche on the internet than is generally possible in a community. Moreover, the marketing environment of e-commerce surrounds and imparts upon the organization. This is further attributed with the key perspectives on the marketing environment such as macro and micro environment [10]. In analyzing the marketing environment, the industry can use the firm's strengths or micro environment as a basis for developing a competitive advantage [11]. The absence of certain strengths may be viewed as a weakness. On the other hand, the external or micro environmental analysis may expose certain new opportunities for profit and growth. Finally, changes in the external environment also may present threats to the firm. As technologies emerge, successful businesses are fast to recognize emerging opportunities and expand their commercial competences. For many businesses, new technologies that digitally exchange text and monetary information are effective tools to serve traditional business goals of streamlining services, developing new markets, and creating innovative business opportunities. Appropriately named, electronic commerce (E-Commerce) is the synthesis of traditional business practices with computer, information and communication technologies [12]. The millennial year witnessed the rapid development of e-commerce around the world. E-commerce became a powerhouse for economic globalization. At present, e-commerce application is a vital factor determining enterprises' international competitiveness. The success of Amazon and eBay in the U.S.A and China's Alibaba shows that e-commerce is leading the development of the global service industry and affecting the development model of commerce in the future [13]. In the Philippines, most of the industries using e-commerce have a comparative advantage to compete and thrive in this global new economy. With the ingenuity of Filipinos e-commerce has reached the target revenues. From e-commerce, the bulk of these transactions involve retailers and corporations of industrial parks. The rise of industrial parks and business establishments in the regional sectors spells out an environment conducive to e-commerce transactions and Region IV-A is one potential region for e-commerce. Five adjacent yet diverse provinces constituted what is called CALABARZON (Cavite, Laguna, Batangas, Rizal, Quezon) grouped together to integrate social, economic and e-commerce development. Through the industries in CALABARZON, developments in information technology and continuous expansion of the internet are reshaping organizations, changing the nature of work, and increasing the value of people capable of performing as knowledge workers [14]. Organizations today continue to emphasize total quality management in a context of technology utilization, empowerment and teamwork, and concern for work-life balance. To bring total quality management and global economy, the need therefore for management processes take over [15]. The ultimate bottom-line in every manager's job is to succeed in helping an organization achieve high performance. It is his job to successfully mobilize technology like e-commerce and talents by creating work environments within which others work hard and perform the best of his abilities. Based from the abovementioned facts, the author decided to study the e-commerce in manufacturing industries. Thus, the profile and corporate e-commerce practices of manufacturing industries

in terms of management, technology infrastructure and marketing were evaluated serving as input to management innovation. The problems experienced by the respondents were also analyzed as basis for output of the study. Finally, an input to management innovation was designed to further strengthen the application of corporate e-commerce to both the public and private entities.

## 2. Objectives of the Study

The primary purpose of the study is to assess the corporate e-commerce practices of manufacturing industries in CALABARZON. Specifically, it attempts:

1. To identify the characteristics of manufacturing industries as to nature of business, form of business, number of years in operation, size of business, and business capital.
3. To assess corporate e-commerce practices of manufacturing industries in terms of management, technology infrastructures, and marketing.
4. To compare the assessments by the three groups of respondents.
5. To analyze the relationship of corporate e-commerce practices to the characteristics of manufacturing industries.
6. To determine the problems encountered by the respondents.
7. To propose an input to management innovations in order to broaden the application of corporate e-commerce.

## 3. Methodology

The study used the descriptive method in assessing the corporate e-commerce practices of manufacturing industries. The list of registered manufacturing industries was taken from the Business Permit and Licensing Offices in CALABARZON. A total of 219 manufacturing industries were using e-commerce was drawn using Slovin's formula at five percent margin of error. For this study, probability method using simple random sampling and fish bowl technique was used for the sample population. Proportional sampling was also used in the study to give equal opportunities for the respondents. The research study has three groups of respondents namely the manager, ICT employees, and the customer and clients of the manufacturing industries.

## 4. Results and Discussions

### 4.1 Characteristics of Manufacturing Industries

**Nature of Business.** There were 57.08 percent have electronics and semiconductor business, 20.09 percent are engaged in automotive business, and 11.42 percent have food and metal working and fabrication business. It appears that most of the respondents using e-commerce are engaged in business transactions like computer, electrical, electronics, networking, transportation and others.

**Form of Business.** The 65 percent are involved in corporation, 20.09 percent are engaged in partnership, 13.24 percent are involved in sole proprietorship and three respondents or 1.37 percent are engaged in other form of business.

**Number of Years in Operation.** It is evident that 49.32 percent are using e-commerce for 16 years or more, 23.29 percent used it for 11 – 15 years and 19.63 percent indicated that the manufacturing company in which they are working were using it for six to ten (6 – 10) years and 7.76 percent used it for five (5) years and below.

**Size of Business.** Out of total number of respondents, 82.19 percent are working in large and multinational firms/industries, 10.50 percent are connected in medium enterprise and or 7.31 percent are working in small enterprise.

**Business Capital.** There are 68.49 percent who indicated that the business capital of the manufacturing industry or firm where they are employed is Php 20,000,000 and more, 16.44 percent revealed that the business capital is Php 10,000,000 to Php 19,000,000, 9.13 percent indicated a business capital of Php 1,000,000 to Php 9,999,999 and 5.94 percent with Php 1,000,000 and less business capital.

#### 4. 2 Assessment of Corporate E-Commerce Practices

**Management.** Management has been much observed by the managers, employees and customers/clients with a weighted means of 3.33, 3.08, and 3.16, respectively. Based on the assessment, the manufacturing industry constantly adjusting its e-commerce strategies as a partner for investment. Seemingly, there is a continuous evaluation of the use of e-commerce to adapt to new technology for the convenience of the customers/clients.

**Technology Infrastructure.** In terms of technology infrastructure, the three groups of respondents indicated that technology infrastructure were much observed in corporate e-commerce with a composite mean of 3.18 to 3.33. This data affirms that the success indicators of e-commerce with regards to technology infrastructure are the ability of providing reliability and security. The organization should provide a 360-degree view of the customer relationships, which ensures that all employees, suppliers and partners have a complete view and the same view as that of the client [16].

**Marketing.** For marketing, as revealed by the managers, ICT employees, and customers/clients, marketing practices are much observed in corporate e-commerce of manufacturing industries with a composite means of 3.20, 2.97, and 3.02, respectively. Consequently, the managers, ICT employees and customers/clients much observed that the industry's expert on management information system (MIS) arranged and received the progress of e-commerce. Apparently, the respondents noted that the management reacted positively to comments and feedbacks of customers. It also appears that the managers, employees, and customers/clients had noticed that assessment, monitoring and surveying were done to determine the marketing mix such as products, price, place and promotions.

#### 4.3 Comparison of Assessments by the Respondents in terms of the Corporate E-Commerce Practices

It can be gleaned from table 1 that in terms of management, technology infrastructure, and marketing the three groups of respondents had different assessments with a computed F-value ranging from 3.2328 to 7.8433, which is greater than

the critical F-value of 3.0375 at .05 level of significance with  $df_A = 2$  and  $df_w = 216$ .

**Table 1: Comparison of Assessments of the Respondents in terms of the Corporate E-Commerce Practices**

Corporate E-Commerce Practices	F <sub>c</sub>	Decision H <sub>0</sub>	Interpretation
Management	3.8390	Reject	Significant
Technology Infrastructure	3.2328	Reject	Significant
Marketing	7.8433	Reject	Significant

This suggest rejection of the null hypothesis and showed significant differences in the assessments of managers, ICT employees and customers/clients regarding those marketing practices. The difference in their assessments could be attributed to the specific work of the managers and ICT employees assigned in the industry or company and the customers/clients failed to see their actual work. Table 2, 3, and 4 shows the significant difference regarding corporate e-commerce for management, technology infrastructure, and marketing.

**Table 2: Scheffé Test for Significant Difference Regarding Corporate E-Commerce for Management**

Respondents	F <sub>c</sub>	Decision H <sub>0</sub>	Interpretation
Managers and ICT Employees	6.0485	Reject	Significant
Managers and Customers/ Clients	5.5085	Reject	Significant
ICT Employees and Customers/ Clients	5.2485	Reject	Significant

$$df_A = 2 \quad df_w = 216 \quad \alpha = .05 \quad S_t = 2.465$$

It can be gleaned from tables 2, 3, and 4 that the computed Scheffé value of ranging from 5.2485 to 20.3497 which is greater than the critical Scheffé value of 2.465 at .05 level of significance with  $df_A = 2$  and  $df_w = 216$  indicates the rejection of the null hypothesis. Therefore, managers ICT employees, and customers/clients showed a significant difference on their assessments on the corporate e-commerce in terms management, technology infrastructure, and marketing.

**Table 3: Scheffé Test for Significant Difference Regarding Corporate E-Commerce for Technology Infrastructure**

Respondents	F <sub>c</sub>	Decision H <sub>0</sub>	Interpretation
Managers and ICT Employees	15.0025	Reject	Significant
Managers and Customers /Clients	8.5070	Reject	Significant
ICT Employees and Customers/Clients	6.4955	Reject	Significant

$$df_A = 2 \quad df_w = 216 \quad \alpha = .05 \quad S_t = 2.465$$

This difference was noted when the customers/clients rated that they least observed the item that the CEO has an active support to the management of e-commerce. This also indicated that the difference in their assessment that policy makers evaluate the progress of e-commerce and create a solution in case there were problems and feedback



mechanism that is initiated for the legal and government sectors to do appropriate actions and control measures [17].

**Table 4: Scheffé Test for Significant Difference Regarding Corporate E-Commerce for Marketing**

Respondents	F <sub>c</sub>	Decision H <sub>0</sub>	Interpretation
Managers and ICT Employees	20.3497	Reject	Significant
Managers and Customers/ Clients	12.3297	Reject	Significant
ICT Employees and Customers/ Clients	8.0817	Reject	Significant

df<sub>A</sub> = 2      df<sub>w</sub> = 216      α = .05      S<sub>t</sub> = 2.465

Moreover, the differences could be attributed to the fact that the employees and clients failed to see most of the work of the managers. The said scenario could be attributed to the managers' observation that this was very much observed that the top management studies the value chain needed to minimize costs and maximize efficiency. This revealed that e-commerce has good effort on marketing and financial aspects of selected business establishments [18]. However, a significant difference was obtained between the traditional process and e-commerce as to marketing.

#### 4.4 Relationship of the Characteristics of Manufacturing Industries to Corporate E-Commerce Practices

The relationship of the characteristics of corporate e-commerce to management, technology infrastructure and marketing were likewise determined in the study using regression analysis. Based from the table 5, it can be noted that form of business, number of years of operation and business capital rejected the null hypothesis and showed significant relationship on the management practices of corporate e-commerce. The obtained computed beta coefficient values are 0.1000 to 0.1900.

**Table 5: Relationship of the Characteristics of Manufacturing Industries to Management**

Variables	Beta Coefficient	P-value	Decision H <sub>0</sub>	Interpretation
Nature of Business	-0.0003	0.300	Failed to Reject	Not Significant
Form of Business	0.1000	0.050	Reject	Significant
Number of Years in Operation	-0.1000	0.001	Reject	Significant
Size of Business	-0.0400	0.490	Failed to Reject	Not Significant
Business Capital	0.1900	0.002	Reject	Significant

Pearson (δ) = 0.4800  
 R square = 0.2300  
 F value = 13.0600

It appears that the form of business which could be a corporation, partnership or sole proprietorship could greatly affect management practices. This revealed that partnership as a form of business is important to e-commerce. Every company managing its e-commerce partnership centrally was able to avoid conflicts, build expertise and leverage the full market power of their core business [19]. From table 6, it can be gleaned that the form of business, number of years of

operations, and business capital obtained a computed beta coefficient value of 0.1000 to 0.1900. This rejected the null hypothesis and implies that it has a significant relationship on technology infrastructure.

**Table 6: Relationship of the Characteristics of Manufacturing Industries to Technology Infrastructure**

Variables	Beta Coefficient	P-value	Decision H <sub>0</sub>	Interpretation
Nature of Business	-0.0230	0.300	Failed to Reject	Not Significant
Form of Business	0.1000	0.050	Reject	Significant
Number of Years in Operation	-0.1000	0.001	Reject	Significant
Size of Business	-0.0400	0.490	Failed to Reject	Not Significant
Business Capital	0.1900	0.0002	Reject	Significant

Pearson (δ) = 0.4800  
 R square = 0.2300  
 F value = 13.0600

It can be deduced from this data that the impact of e-commerce especially technology infrastructure has affected the form of business whether it is sole proprietorship, partnership or corporation. This data also revealed that e-commerce has greatly affected all business establishments which help them improve their business processes.

**Table 7: Relationship of the Characteristics of Manufacturing Industries to Marketing**

Variables	Beta Coefficient	P-value	Decision H <sub>0</sub>	Interpretation
Nature of Business	-0.0200	0.490	Failed to Reject	Not Significant
Form of Business	0.1000	0.020	Reject	Significant
Number of Years in Operation	-0.0900	0.009	Reject	Significant
Size of Business	-0.0400	0.480	Failed to Reject	Not Significant
Business Capital	0.2300	0.0001	Reject	Significant

Pearson (δ) = 0.4800  
 R square = 0.2300  
 F value = 13.0600

On table 7 form of business, number of years of operation, and business capital has relationship on corporate e-commerce in terms of marketing resulting to the computed beta coefficient value of 0.0900 to 0.2300. Marketing were affected based on how the business was being run and managed. This data revealed that e-commerce has affected the business. It helped business organization to work effectively and efficiently through speed of communication and business operations [20]. Likewise, it appears that a business with more capital could easily get abreast with the different marketing strategies of e-commerce. Although e-commerce adds expenses to the manufacturing industries, it also increases visibility of financial transparency.

#### 4.5 Identified Problems Encountered by Manufacturing Industries in Corporate E-Commerce

Table 8 presents the identified problems experienced by managers. Accordingly, failure to follow a plan and track was considered by the manager the most problems experienced to be much serious problem obtaining a weighted mean of 2.62. Consequently, the manager-respondents are honest in revealing that there were plans that did not materialize due to some problems in monitoring and evaluating the implemented plans does not follow. The composite means of 2.47 indicates that the managers experienced less serious problems in using corporate e-commerce.

**Table 8: Identified Problems Experienced by Managers**

Problems	Mean	Verbal Interpretation
1. Ignoring customers' reasons for buying.	2.29	Less Serious
2. Inadequately analyzing the competitive situation of the market.	2.38	Less Serious
3. Predict unsuccessfully environmental reactions especially external factors.	2.50	Much Serious
4. Ignoring over-estimation of resource competence.	2.50	Much Serious
5. Failure to coordinate and obtain every staff member commitment.	2.56	Much Serious
6. Estimating time and capital requirements unsuccessfully.	2.44	Less Serious
7. Following a plan erroneously and tracking the progress against a plan inadequately.	2.62	Much Serious
8. Taking into account the resources needed for successful e-commerce incorrectly.	2.53	Much Serious
9. Offering a new product for sale by online transaction unsatisfactorily.	2.38	Less Serious
10. Ignoring international coordination of e-commerce development.	2.47	Less Serious
Composite Mean	2.47	Less Serious

On the other hand, table 9 presents the identified problems encountered by ICT employees. Failure to hire competent ICT professionals and ignoring relevant policies of information technology are experienced much serious problems by the ICT employees and the rest of the problems as less serious as to the use of corporate e-commerce [21].

**Table 9: Identified Problems Experienced by ICT Employees**

Problems	Mean	Verbal Interpretation
1. Failure to develop e-commerce based from privately run organizations	2.32	Less Serious
2. Failure to hire competent ICT professionals	2.53	Much Serious
3. Ignoring relevant policies of information tech.	2.68	Much Serious
4. Over-estimation of available technology resource allocation.	2.47	Less Serious
5. Failure of the programmer to prioritize firewall	2.35	Less Serious
6. Failure to change information through system documentation	2.44	Less Serious
7. Unavailable digital signature.	2.21	Less Serious
8. Failure to adopt digital certificate as a security measure in e-commerce.	2.41	Less Serious
9. An irrelevant anti-spam law is provided.	2.29	Less Serious
10. Failure to use licensed application software.	2.29	Less Serious
Composite Mean	2.40	Less Serious

The composite means of 2.40 reveals that the ICT employees experienced less serious problems in using e-commerce. This is an indication that there are times when ICT employees encountered problems because of failure to consider the competitive situation [22]. Lastly, customers/clients experienced much serious problems in using e-commerce because of unstructured product identifications and obtained a weighted mean of 2.63 which ranks first among the ten items as reflected in table 10. To sum up, the composite means of 2.41 indicates that the customers/clients experienced less serious problems in using e-commerce. Accordingly, the degree of seriousness of the problems encountered was due to e-commerce access to web commerce, mainly for poor households.

**Table 10: Identified Problems Experienced by Customers/Clients**

Problems	Mean	Verbal Interpretation
1. Failure to use generic manufacturer information for product description.	2.54	Much Serious
2. Lack of unstructured product identifications.	2.63	Much Serious
3. Ignoring of the proper design of homepage.	2.48	Less Serious
4. Failure to develop a user-friendly search engine (URL).	2.54	Much Serious
5. Failure to optimize file names and locations.	2.32	Less Serious
6. Use of uncommon HTML pages and session ID's.	2.31	Less Serious
7. Failure to provide access to webpage for customers.	2.35	Less Serious
8. Failure to program internal links.	2.42	Less Serious
9. Inadequacy of link to specific product pages for site visitors.	2.25	Less Serious
10. Failure to avail the customers of security-privacy.	2.29	Less Serious
Composite Mean	2.41	Less Serious

However, the low penetration rate of internet access in some sectors greatly reduces the potential for e-commerce. Moreover, the social aspect of shopping also affects the use of e-commerce in today's business environment.

#### 4.6 Proposed Input to Management Innovation

Management innovation is the main vehicle to materializing the organization's competitive strategies. The high demand for innovation increased the organizational demand for new ideas. This mean that management innovation has to be pushed down to the frontline where knowledge of the customer is abundant and where the numbers of ideas generated are greater. Moreover, top management must accept appropriate innovation strategies to lead the surge of the innovative activity. This scenario prompted the researcher to Proposed Input to Management Innovation were electronic culture will be at the core of every organization supported with the policy on how to inhibits and supports innovation. The following were important dimensions of the proposed input:

- I. **Business Dimensions.** Successful small and medium sized enterprises (SMEs) are recognized as important components in the industrial development; hence, their consequent economic and social benefits are considered. It is very evident that most organizations implement IT projects going on simultaneously as part of management innovation. With the occurrence of imbalances, the author came up with the strategic alliance, business

outsourcing, strategic marketing mix, affiliate marketing, viral marketing, and software management components and strategies of business dimensions that will help the industries/firms gain full understanding of management innovation in terms of corporate e-commerce application.

- II. Linkages. The educational institutions should teach the students about internet. In schools where conditions permit, especially in colleges and universities that are running courses on internet and e-commerce, such as economics, trade and computer, the stress should be put on cultivating high-quality graduates with interdisciplinary knowledge. The strategies that can be used as an input to management innovation such as e-internship, e-training and seminars, and curriculum enhancement or revisions.
- III. Public and Service Domain. Although governments do not typically sell products or services to customers, they perform many functions for their stakeholders. Many of these functions may be enhanced using the provisions in the E-commerce Law or R.A. 8792 as point of reference. This law states an act providing for recognition and use of electronic commercial and non-commercial transactions whether private or publicly owned entities. In the service industries, as web matures, it will be increasingly difficult to identify unserved market segments and to attain dominance. In terms of public and service components e-government must be considered

## 5. Conclusions

Based from the findings, the following conclusions are drawn:

1. Multi-national manufacturing industries/firms which utilized corporate e-commerce mostly are engaged in electronics, computer, food, and metal-working and fabrication industries, and automotive business.
2. The managers, ICT employees and customers/clients of manufacturing industries agreed that practices of corporate-commerce are much observed.
3. There are significant differences in the assessments of the three groups of respondents regarding corporate e-commerce practices.
4. Corporate e-commerce practices relate significantly to the form of business, length of existence and business capital.
5. The managers, ICT employees and customers/clients experienced less serious problems in using corporate e-commerce.
6. The proposed input to management innovation is designed to broaden the applications of corporate e-commerce in both public and private entities.

## 6. Recommendations

From the findings and conclusions of the study, the following recommendations are offered:

1. The proposed input to management innovations be evaluated by practitioners in manufacturing industries with expertise in corporate e-commerce.
2. The evaluated input to management innovation be disseminated to stakeholders to maximize its application.
3. Interested groups be encouraged to avail of the findings of the study.

4. Similar studies on corporate e-commerce involving service industries be conducted.

## References

- [1] Schneider, Gary P. Electronic Commerce 7th Annual Edition. Singapore: Thompson Learning Asia. 2007.
- [2] Friedman, David. No Light at the End of the Tunnel. USA: Los Angeles Times. New America Foundation. 2008.
- [3] Emery, James C. Organizational Planning and Control System: Theory and Technology. New York: McMillan. 2001.
- [4] Kotler, Philip S. Marketing Management 12th Edition. USA: Pearson Prentice Hall. 2006.
- [5] Snyder, Neil H. Strategic Planning. USA: University of Virginia. 2003.
- [6] Harvey Donald. An Experiential Approach to Organizational Development. USA: McGraw Hill Book Company. 2001.
- [7] Borgmann, Albert. People, Power and the Organization. The Canadian Journal of Sociology. 2006.  
<[http://wiki.answers.com/Q/What\\_does\\_the\\_'nature\\_of\\_business'\\_mean](http://wiki.answers.com/Q/What_does_the_'nature_of_business'_mean)> (Accessed: September 19, 2008)
- [8] Ramsey, C. Managing Web Sites as Dynamic Business Applications. 2000.  
<[http://internet.com/articles/2006/wm\\_index.html](http://internet.com/articles/2006/wm_index.html)>(Accessed: April 27, 2008)
- [9] Dano, M. Internet Collaboration Gets Another Tool, Technical Insights Alert. John Wiley & Son. 2003.
- [10] Schneider G. and Bruton C. Marketing. 2003.<<http://12mange.com>> (Accessed: October 21, 2007)
- [11] Orlando, Paul. E-Commerce and the Construction Industry: The Revolution Is Here. Thelen Reid Brown Raysman & Steiner LLP
- [12] Parker, N. Electronic Commerce. 2007.<[http://3wwork.com/e-commerce/e-commerce\\_aspects.htm](http://3wwork.com/e-commerce/e-commerce_aspects.htm)> (Accessed: February 02, 2008)
- [13] Ryal L. Marketing Mix. 2005.<<http://www.marketingteacher.com>> (Accessed: November 5, 2007)
- [14] ([http://tradelinephil.dti.gov.ph/betp/region\\_4](http://tradelinephil.dti.gov.ph/betp/region_4))
- [15] ([http://www.nscb.gov.ph/RU4/facts\\_figures/facts.htm](http://www.nscb.gov.ph/RU4/facts_figures/facts.htm), 2007)
- [16] Shelton, J. Contextual Advertising in Context. 2002.<<http://www.quickmba.com/strategicmanagement.com>> (Accessed: October 21, 2007)

- [17] Stark, John. Innovation and Management Innovation. 2007. <[www.johnstark.com/in1.html](http://www.johnstark.com/in1.html)> (Accessed: May 5, 2008)
- [18] Mentzer, John T. The Impact of E-commerce on Supply Chain Relationships. (Unpublished Dissertation) Tennessee USA: University of Tennessee. 2002.
- [19] Torral, J. State of E-Finance and E-Payment in the Philippines. Digital Filipino. 2006. <<http://www.digital Filipino.com>> (Accessed: January 17, 2007)
- [20] Wilder, C. Planning the Ecommerce Business. 1999.
- [21] Varon, E. How to Take Control of Your Web Site. USA: Prentice Hall. 2002.
- [22] Walton, M. Management at Work. New York: G.P. Putnam's and Sons. 2005.

### Author Profile

**Dr. Shirley Eje Maranan** received the Bachelor of Industrial Technology major in Mechanical and Bachelor of Secondary Education from Pablo Borbon Memorial Institute of Technology and Golden Gate Colleges, respectively. She also studied her Master in Business Administration and Doctor of Business Administration both from Batangas State University.



Moreover, she has worked in multi-national corporations for production planning, management, and technology-related works. Her academic experiences both in local and international universities made her a globally competitive professional. She is now a full-time faculty member at Batangas State University and taking-up Doctor of Technology.