E-Procurement as a New Trend in Hospitality Industry: A Descriptive Study in Egyptian Hotels

Nancy Awadallah* and Sherif Gamal Saad

1Department of Computer and Information Systems, Sadat Academy for Management Sciences, Egypt
2Faculty of Tourism and Hotel Studies, Mansoura University, Egypt

Abstract

Purpose: This research investigates the reception for electronic procurement (e-procurement) concept by those hotels in Egypt, examines how hoteliers perceive the challenges and benefits of e-procurement in the hotel industry. Also this research focuses on identify the challenges and opportunities associated with the implementation of e-procurement.

Design/methodology/approach: A self-administered questionnaire with purchasing managers was designed as the research instrument for collecting primary data. This questionnaire included items pertaining to illustrate purchasing managers’ perceptions of applying e-procurement in hotels, challenges and benefits of using e-procurement, cost involved in implementing e-procurement, the kind of materials/products procure online, and purchasing managers prediction of return on investment when using e-procurement. Fifteen forms were distributed in fifteen investigated hotels; among them 15 forms valid for analysis (100%) but between fifteen hotels are ten hotels conducted e-procurement process.

Findings: The findings revealed that e-procurement impacts to supply chain management (SCM); time taking for employees to adopt e-procurement system too long; ten of investigated hotels use e-procurement between one to above four years; there are many benefits and advantages of conducting e-procurement in hotels (i.e. reducing costs, time, and staff). Furniture’s, Fixtures and Equipment and food for the restaurant are the highest percentage of the kind of materials/products implemented by using e-procurement; and return of investment when using e-procurement are short-term within one to two years.

Originality/value: Egyptian hoteliers illustrated that the benefits of e-procurement implementation are quality of goods and services which will due to enhancing customer satisfaction, saving time and cost for Hotels.

Keywords: E-procurement; E-commerce; Supply chain management; Enterprise resource planning; Hospitality industry

Introduction

In lodging business, the technological applications are imaginative and spearheading when contrasted with different enterprises [1].

E-Procurement is a decent case of the imaginative utilization of innovation in the hotel business. It is buying products and services over the web. Its further objective is to move the whole procurement process online, bringing operators together with their chosen wholesalers and empowering a streamlined and mechanized flow of the buying cycle [2].

Today, a real objective of a hotel’s SCM may be on proficiently applying information technology (IT) to its procurement systems. E-procurement is ordained will assume a progressively critical part in the best approach cordiality business may be led later on. It advances would not just a paramount administration tool, as well as an essential analytics part from SCM to those lodging industry.

E-procurement may be an immediate outgrowth of the internet’s capabilities, empowering organizations on allotment. Data from large portions sources, including their customers, financial organizations and suppliers. It simplifies the techniques of the request procedure what’s more lessens base also transaction fetches.

The main aim of the hotels purchasing management system is the efficient application of information technology to its purchasing process. The transformation from the manual purchasing process to the electronic purchasing process via internet, brings about significant improvement in productivity, cost saving and efficient operational activities [3].

Theoretical Literature Review

This section aims review related theories and literatures in the area with the objective of adding knowledge for researcher who interest in e-procurement process in hotel industry. It comprised the definition of various concepts dealing with E-Procurement, its implementation, risks, benefits and SCM included in hospitality sector.

E-Procurement concept and importance

The term procurement defined as the purchasing, leasing or legal means of acquisition of the goods and services required to achieve needs at right time, from right supplies or service provider, at right quantities and at right price.

The term of E-procurement is characterized from numerous points of view by researchers. According to Croom and Brandon-Jones characterize E-procurement as: the usage of facilitated correspondence systems for the lead of the most part of the buying procedure; a strategy that may merge stages from the hidden need recognizing confirmation by customer, through pursuit [4], exchange, sourcing, demanding,

*Corresponding author: Nancy Awadallah, Department of Computer and Information Systems, Sadat Academy for Management Sciences, Egypt, Tel: +20 202-237-87628; E-mail: rarecore2002@yahoo.com

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receiving and post-buy review. Morris considers that e-procurement is movement of procedures from the meaning of the purchasing corporate strategy to the real execution of an online system purchasing [5].

Min and Galles characterized e-procurement process as business to business (B2B) purchasing practices that use e-commerce to recognize wellsprings of supply, to buy merchandise and enterprises, to exchange installment, and to cooperate with suppliers [6]. It involves electronic fax, non internet/web based approaches, voice communications and general email which are viewed as partial conventional e-procurement arrangements. The Maugmentation incorporates knowledge sharing, business, commercial transactions and information exchange between organizations [7]. Specifically, e-procurement is the utilization of information technologies to encourage (B2B) purchase exchanges for materials and services.

According to Dobler and Burt e-procurement is an innovation arrangement that encourages corporate purchasing using the Internet [8]. It has the ability to change the purchasing procedure since it overruns the majority of the means distinguished. It is characterized to incorporate e-design of the purchasing procedure, finishing with the supply manager’s efforts to assess and rate supplier performance [9].

Types of e-procurement

Kalakota classified e-procurement into 3 types namely, transaction management to deal with the demand to payment process, brokerage such as using electronic exchanges and e-auctions, and electronic integration which may include shared information systems in the supply chain (SC) [10].

Six forms have been classified of e-procurement are presented by de Boer which are e-Maintenance Repair Operate (MRO), e-ordering, e-sourcing, web-based enterprise resource planning (ERP), e-informing, e-reverse auctioning/e-auctioning and e-tendering [11].

Matunga et al. discussed the study of e-procurement types such as: Baily (2008) who classified e-procurement into seven classes [12] which are:

- Web-based ERP: manages making and affirming purchasing orders, placing purchase requests and accepting products and ventures by utilizing web-based technology.
- E-MRO: concerns in creating and accepting buying ordering, placing buying requests and accepting non-product related MRO supplies.
- E-sourcing: includes distinguishing new suppliers for a particular class of buying necessities utilizing IT.
- E-tendering: involves sending suppliers demands for information and prices and getting suppliers responses by using IT.
- E-reverse auctioning: utilizes IT to purchase goods and products from various known or obscure providers.
- E-informing: includes assembling and distributing buying information for external and internal parties by using IT.
- E-market sites can get to favored providers’ items and services, add to shopping wicker container, make request, searches for underwriting, receipt buy requests and process electronic solicitations with compromise to providers’ SCs and purchasers’ financial systems.

E-commerce role in e-procurement process

E-procurement is considered a sub-set of e-commerce that meets the definitional prerequisites each of the four points of view. It characterized as an organizational information system that is expected to encourage (B2B) communication and support information-transaction exchange through a web access. Callist pointed that e-procurement is the computerization of numerous procurement processes via electronic systems, particularly the internet and public key infrastructure (PKI) [13].

Zou and Seo examined the accompanying advantages of e-commerce innovations [14]. That are applied for supply chain:

- Shorter exchange expenses;
- Decrease staffing demands;
- Shorter cycles of procurement;
- Decreased stock levels;
- Increase transparency level;
- Provision of requested information,
- Promoting more incessant and extreme utilize;
- Connection to operations over organizational boundaries;
- Increased and compelling control and coordination;
- Enhanced decision-making quality;
- Improved communication and collaboration between SC organizations.

Vaidya and Campbell stated that e-procurement is an effective instrument for procurement change in the general sector. Numerous legislatures need to accomplish diminishing expenses and their financial deficiencies [15]. Improving open procurement through e-procurement could be one approach to accomplish these destinations.

Rai et al. mentioned that a standout amongst the most vital difficulties for organizations is manner by which to best help the new innovations to acquire expected organizational efficiencies [16].

Information and Communication Technology (ICT), incorporates any specialized gadget or application, PC and system equipment and programming, PDAs, satellite system, radio, TV, and additionally video conferencing and distance learning [17].

Those approach for all the more propelled ICT, the Internet, offers those possibility will move past the restricted electronic data interchange procedures ill mechanize the information streams crosswise over the supply chain, Subsequently setting on an commitment to an additional multilateral data return and the encouraging for market-based exchanges On the whole transaction stages. Overall, e-business results as a rule need aid trying should upgrade SC viability. Also, effectiveness through the mechanization about business procedures [18].

Supply chain management (SCM)

The management of procurement alludes to the coordination of all activities pertaining to buying products and services important to finish the function of an endeavor. Purchasing life cycle for a product or service involves 7 stages of purchasing activities that fuse information gathering, supplier contact, foundation survey, arrangement, fulfillment, usage, upkeep and transfer and energizing [19]. The utilization of e-procurement gives the basis for SC integration
by giving efficient, transparent and timely business information to the appropriate parties [20].

Svensson and Baath discussed that e-procurement system with supply chains achieve efficient integration and provide better tracking of transaction records for easier data acquisition [21]. All products and services bids can be tracked more easily, allowing organizations and businesses to use such knowledge to obtain better pricing. Podlogar stated that e-procurement promotes shorter product-development cycles as a result of faster exchanges of information and delivery of goods and services [22].

Nurmilaakso demonstrates SCM in the hotel industry as a dual of information streaming, materials, services and financial dealing between suppliers and final customers. This internal and external transaction involves the hotel suppliers, the hotel and the hotel customers [23].

E-commerce offers various business opportunities to increase revenue while reducing operating costs. Figure 1 shows a complete e-commerce model for SCM which combines both the front end and back end systems.

As indicated by Croom [24], E-business improvement in the SCM follows five phases of advancement:

1. Firms utilize website and email messages to increment upgraded access to customer and markets.
2. The accentuation is on the customer relationship management.
3. The helping of operations process management by using e-business systems.
4. The consolidation of a move e-SCM and greater management of aggregate expenses of buying.
5. The last one, accentuation consolidated e-SCM such as global.

The implementing of e-procurement between benefits and challenges

According to Hawking and Stein benefits e-procurement administrative are costs reduction, reduction of prices, procure more effectively and efficiently, reduced process lead times, unit cost of negotiated products will be reduced, improved audit control, operational cost reduction and reduced costs of inventory, ensure proper authority of purchasing, improved management of inventory, and decision making process will be improved [25].

McCue and Roman pointed that the important reasons for dissatisfaction of e-procurement process are low implementation rates and low probability of future e-procurement initiatives rests on the cost of implementing such software "relative to risk" and their inability to "locate" a suitable system that addresses their primary needs [26].

The benefits of implementing e-procurement

Nevalainen presented the advantages of the e-procurement [27] which are the following:

- Self-service and ease-of-use on the internet are the results as all workers who shared in the purchasing process.
- Decreasing in order-processing expenses and time duration. The products and services ordered should be conveyed quicker in light of the fact that the procedure is more effective.
- A company's e-procurement system can communicate to other application systems, instead of putting away repetitive data.
- It brings focus to the capacity of procurement and the significance of cost-sparing.
- It endeavors to restrain independent purchasing practices.

The fundamental benefits of e-procurement are increasing the competitiveness in firms through cost reduction [28]. These benefits might appear done and decrease of buying transactions costs, a decrease of the amount of provider alternately indeed a decrease in the cost paid, and the amount of suppliers on help buy transactions [29]. However, in place with procure benefits, the business procedures associated to procurement should be enhanced before it is supported with an e-procurement result [30].

Concerns and challenges of e-procurement

Inquisitively, execution of e-procurement activities has ended up being substantially more tricky and testing than anticipated [31]. Indeed inquire about has demonstrated that executing e-procurement won't naturally prompt larger amounts of productivity or contract and system consistence [32]. Trying to address some of these worries Varney noticed that a "typical procurement vocabulary" is imperative to a definitive achievement of e-procurement in accomplishing expanded basic viability through coordinating procurement frameworks crosswise over locales [33].

The essential advantage of E-procurement announced by a few analysts is decreased expenses via numerous means, involving the followings: upgraded inside capability, cut supplier expenses, lessen arrange mistake rate, limited "dissident" purchasing [4,31].

![Figure 1: E-Procurement and CRM as e-Commerce tools for the hotel SCM.](image-url)
Matunga et al. said that an organization which utilizes E-procurement has the accompanying points of interest [12]. Firstly, cost lessening in offering: Exact investigations by Gebauer et al., showed that cost and time are most critical measures for the accomplishment of procurement procedures [34,35]. This technique is additionally speedier to send an archive electronically when contrasted with the conventional strategy for sending delicate reports through post office. This due to enhanced request following and following, for it is considerably less demanding to follow the requests and make fundamental redresses on the off chance that a blunder is seen in the past request.

Secondly, source materials is lessening: In time diminishment has been demonstrated as a pertinent advantage by Knudsen cited in Eadie et al. who declared that E-procurement is a fast productive technique for finding and associating new sources [34,36]. By expansion, E-procurement prompts decrease independent purchasing, which is when staff purchases via supplier than others whom obtaining understanding has been arranged.

Thirdly, decrease organization costs as Rankin contends that e-procurement brings about diminishment in printed material and this prompts bring down organization costs [37]. Fourthly, Lessening in procurement staff: since a large portion of the procurement procedure is done automatically, the staff quantity expected to encourage the procedure decreases.

Elizabeth and Arthur illustrated the potential of E-procurement Cost Lessening [38]: Procure more viably and productively

- Streamline processes
- Enhance volume and price;
- Increment predictability;

New income streams: Modify center from cost investment funds to:
- Leverage income.

Offer a support of the business group to exchange:
- The process.
- The service and software.
- The volume rebates.

Improved review control: Guarantee legitimate expert of obtaining:
- Profiles purchasing levels.
- Approval by means of work move through next levels.
- Being legitimately connected to territory of obligation.
- Better connectivity.

E-procurement in hotel industry

According to Tanvi et al. argued essential procurement procedure in a lodging inventory SC and report useful findings, for example, the obtaining inclinations for materials that hotels were interested in procuring online [39].

Peter and Kevin introduced a thorough methodological way to deal with the examination the benefits of e-procurement. The approach empowers an estimation of both the normal and fluctuation of procurement expenses and benefits, workload, and lead times [40]. In like manner, the approach empowers enhancement of an procurement procedure.

Irene Aikins et al. discussed that hospitality industry is comprised of a general class of regions inside the administration business. This involves lodging, restaurants, event planning, amusement parks, transportation, voyage line, and extra regions inside the tourism industry. The lodging aspect in the hospitality industry appear to be the most urgent part since the majority of the other service if not all are in one way or the other provided by most standard hotels.

Research Methodology

Research sample

In this study, convenience sample was used in order to achieve the aim and objective of this study. A self-administered questionnaire with purchasing managers was designed as the research instrument for collecting primary data. This questionnaire included items pertaining to illustrate purchasing managers’ perceptions of applying e-procurement in hotels, challenges and benefits of using e-procurement, cost involved in implementing e-procurement, the kind of materials/products procure online, and purchasing managers prediction of return on investment when using e-procurement.

Fifteen forms were distributed in fifteen investigated hotels; among them 15 forms valid for analysis (100%) but between fifteen hotels are ten hotels conducted e-procurement process. The study focused on five star hotels.

The selected investigated hotels are:
- Cataract Pyramids Resort.
- Hilton Pyramids Golf Resort.
- Holiday Inn Cairo City Stars.
- Intercontinental City Stars.
- Mena House Oberoi Hotel.
- Le Meridian Pyramids Hotel.
- Movenpick Hotel Cairo-Media City.
- Ramses Hilton Hotel.
- Pyramisa Hotel.
- Softtel Cairo Maadi Towers.
- Cairo Marriott.
- Concorde El-Salam.
- Sonesta Hotel Cairo.
- Fairmont towers Nile city.
- Grand Nile towers.

Pilot study

The pilot study was conducted in this research in July 2017. The aim of the pilot study was to ensure that the questionnaire form well designed and easily understood by potential respondents, to examine the reliability and validity of the research tool as well as to develop and refine measure of the questionnaire form. In this study, the research was piloted using interviews with ten purchasing managers of five star Cairo hotels. These hotels are: Ramsis Hilton Hotel, Pyramisa Hotel, Fairmont Towers Nile city, and Grand Nile Towers.

The managers’ questionnaire was piloted by a limited sample in
investigated hotels. The questionnaire form was revised and adapted according to the managers’ comments.

Statistical techniques

Statistical Package for Social Sciences (SPSS) version 19 was used to analyze and compute the data. Frequency counts, percentage distributions were calculated and analyzed. After analyzing the results, certain interpretations of the data helped to draw conclusions about the findings of this study. Those conclusions were related to the objective of the study and formulated based upon the statistical applications that were employed.

Validity and reliability

In order to increase the reliability of the method used in the current study, one measure was applied as follows: self-administered questionnaires directed to a sample of purchasing managers in order to know purchasing managers’ perceptions of applying e-procurement in hotels, benefits and challenges of using e-procurement, cost involved in implementing e-procurement, the kind of materials/products procure online, and purchasing managers prediction of return on investment when using e-procurement.

Cronbach’s coefficient alpha was used to measure the internal consistency of the scale. A minimum level of the Cronbach’s coefficient alpha is 0.7. The higher value of the Cronbach’s coefficient alpha indicates greater value. In that sense, all the values of the Cronbach’s coefficient alpha in this study were above the minimum level.

This study used a survey research design approach and questionnaires were utilized as the means to obtain data.

A questionnaire is a list of questions asked to hoteliers and designed to collect information from respondents or extract specific information, questions in this questionnaire based on Tanvi et al. and Irene et al. The data was collected within a period of one month [39,41]. The collected data was analyzed using Statistical Package for Social Sciences (SPSS version 19). Analyzing data generally includes the examining the evidence to address the objectives of study. The objective of analyzing data is to treat the evidence in order to generate good analytical conclusions and to rule out alternative interpretations.

Results and Discussion

Starting with the observation of the respondents, hoteliers act e-procurement through the phone should, purchase alternately request items from their suppliers. A portion of the reductions said need aid expense and run through sparing. Despite the fact that the web will be the medium through which e-procurement will be rehearsed worldwide, the flimsy power and the expense for securing systems, tools, recruitment of disappointments and outrage on his/her staff. Furthermore unreliability are a portion of the issues that keep hoteliers to utilize web for those e-procurement as stated by those respondents. Hoteliers responded that purchasing and settling of specialized foul equipment, interview fees for administration suppliers What’s more preparation about existing disappointments and outrage on his/her staff will a chance to be those fitches they will bring about in the transform about change with e-procurement. A portion of the profits said in corporate gaining entrance to ALSO retrieving from claiming majority of the data starting with their suppliers; it recoveries occasion when ALSO lessens cost, those procurement from claiming caliber administration and focused estimating.

The results showed that the number of rooms in each of selected hotel more than 800 forms (67%); while, the type of a lodging operation between up-scale (20%) and luxury (80%). Table 1 shows this issue.

The next table measure purchasing managers’ perceptions of applying e-procurement in hotels (i.e. E-procurement system efficient to procurement activities, challenges associated with implementation of e-procurement system in your hotel, e-procurement impacts to supply chain management). Which, 1=Strongly disagreed, 2=Disagreed, 3=Neutral, 4=Agreed, 5=Strongly agreed.

Regarding purchasing managers’ perceptions of applying E-procurement in hotels, the findings showed that “E-procurement impacts to supply chain management” had 84% as a rate of the maximum possible score. These findings agreed with Cagliano et al. who stated that the use of e-procurement provides the basis for supply chain integration by providing efficient, timely and transparent business information to the appropriate parties [20]. Least attribute was time taking for employees to adopt E-procurement system too long; it had only 44% of the maximum possible score. Other managers’ answers came in between (Table 2).

From the tabulated data, ten of investigated hotels use e-procurement between one to above four years. These findings agreed with Lederer et al. who recommended that an organization can use E-procurement to make vital preferred standpoint through enhanced customer relationships coming from the result of better information access, adaptability and greater business efficiency [42]. On the other hand, other hotels (33%) not utilize e-procurement (Table 3).

More than half (67%) mentioned that there are many benefits and advantages of conducting e-procurement in hotels (i.e. reducing costs, time, and staff). These findings agreed with Eddie et al. who expressed that an organization which utilizes e-procurement has the accompanying advantages: In the first, price lessening in tendering; Secondly, there is time decreasing in source materials; Thirdly, lower organization costs; Fourthly, decrease in procurement staff [34]. While, 33% of purchasing managers expressed that there are many drawbacks and difficulties of e-procurement (Table 4). These findings agreed with Brandon and Carey who contended that executing e-procurement won’t naturally prompt larger amounts of proficiency or contract and system compliance [32]. Moreover, given the relative short history In addition, given the relative short history of e-procurement activities in the public sector, reliable performance and result estimations still can’t seem to be created.

Regarding the cost involved in implementing e-procurement, the answers showed that technical equipments were highest percentage (40%); while, recruiting new staff was lowest percentage (10%) (Table 5).

Concerning the kind of materials/products implemented by using e-procurement, 4/10 of the selected hotels stated that FFE

<table>
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<th>Variables</th>
<th>Frequency (n=15)</th>
<th>Percentage (%)</th>
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<tbody>
<tr>
<td>Number of rooms of your lodging property</td>
<td></td>
<td></td>
</tr>
<tr>
<td>300-500</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>500-800</td>
<td>3</td>
<td>20</td>
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<tr>
<td>More than 800</td>
<td>10</td>
<td>67</td>
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<tr>
<td>The type of a lodging operation</td>
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<tr>
<td>Up-scale</td>
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<td>20</td>
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<td>Luxury</td>
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<td>80</td>
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<tr>
<td>Mid-scale</td>
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<tr>
<td>Budget (Economical)</td>
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Table 1: General Information about hotels (number of rooms, type).
Conclusions and Recommendations

This paper draws the consideration of researchers and managers on the huge capability of E-procurement to getting organizations benefits.

The utilization of conventional procurement systems is perceived for their absence of provoke data and their extreme many-sided quality, all of these factors leading to waste of time and money. E-procurement is promising to solve these problems by streamlining processes, giving opportune data and enhancing coordination and cooperation, all these prompting cost reserve funds and economies of time.

Based on the findings of this study, the next recommendations have been made to urge hoteliers to consolidate or adjust e-procurement in their operations.

• The hotels ought to utilize e-quotations and e-tendering and e-sourcing, it ought to similarly attempt the usage of e-MRO, web-based (ERP) and e-reverse auctioning.
• The hotels ought to likewise endeavor to address the troubles the difficulties confronted by the department to be specific insufficient financing, organization’s powerless to deal with management, shortage of staff training on the best way to utilize system, E-procurement adoption at a moderate pace, deficient reacting to inquiries by the framework supplier, providers not being prepared to utilize this system and ominous installment when utilizing the system both to the hotel and the supplier.
• The hotels ought to likewise urge suppliers to pass on provisions, services and works immediately, screen solidly extended expenses of products.
• The hotels should guarantee that services, goods that are substandard are not gotten.

It can be concluded that e-procurement has a future for the hotels in Egypt. Hoteliers have a comprehension of the potential profits from applying e-procurement in the hotel industry.

References