A Review of E-commerce as Part From the Excellence Movement Theory in Hospital Management System
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Abstract - The e-commerce market in Indonesia has experienced substantial growth over the years, particularly during the COVID-19 pandemic. With advancements in Information and Communication Technology (ICT), numerous companies, including hospitals, have altered their operational methods and customer interactions. This paper aims to investigate the application of e-commerce as a constituent of the Excellence Movement Theory within Hospital Management Systems. The review methodology involves conducting a literature search on relevant material pertaining to the core issue at hand. The findings illustrate how implementing an e-commerce platform within hospitals can enhance administrative processes' efficiency, improve patient care quality, and generate additional revenue from sales of healthcare products and services. Additionally, several challenges associated with utilizing an e-commerce platform in hospital management systems are addressed in this discussion. By incorporating e-commerce into hospital management practices through this review process, it can become an essential element of Indonesia's excellence movement strategy for managing hospitals effectively.

Keywords: Hospital management, E-commerce, Excellence movement, management system

Introduction
E-commerce is a trade transaction through electronic media connected to the internet. According to Mufarizzaturrizkiyah et al. (2020), e-commerce is a process carried out by consumers in buying and selling various products electronically from one company to another company using a computer as an intermediary for business transactions. E-commerce, or electronic commerce, has become an integral part of many industry sectors, including healthcare. In the hospital context, e-commerce can be used to increase operational efficiency, improve the quality of patient care, and create additional revenue. The growth of the e-commerce market in Indonesia continues to increase every year, especially during the COVID-19 pandemic. Many consumers who have never shopped online before now have to rely on digital shopping platforms to meet their needs.

The growth of e-commerce is inseparable from the development of infrastructure and digital penetration in Indonesia. With advances in Technology, Information, Communication (ICT), many companies including hospitals, are changing the way they operate and interact with their customers. For example, hospitals can use e-commerce platforms to sell health products, such as medicines, medical devices and other health services. Not only can this create additional revenue for hospitals, but it can also improve patient access to healthcare products and services. Apart from that, e-commerce can also be used to increase hospital operational efficiency. For example, in administrative processes such as doctor's appointments, payments, and medical record management. This can reduce staff workload, reduce errors, and increase patient satisfaction. One example of the application of e-commerce that went viral during the COVID-19 pandemic was the application of telemedicine where hospitals can still serve patients who have limited access to hospitals by providing consultation services with doctors online.

However, although e-commerce has a lot of potential, its implementation in healthcare also poses a number of challenges. Key challenges identified include inadequate infrastructure,
low quality internet connections, high access costs, unreliable logistics networks, lack of technology awareness, IT skills, IT competency, management support and qualified e-commerce personnel, lack of government infrastructure adequate, lack of trust in the quality of products sold online, and lack of trust in carrying out online transactions (Hendriks, 2024). However, with the right implementation strategy and support from hospital management, e-commerce can be a very effective tool in achieving excellence in hospital management. Thus, e-commerce is not just about selling products or services online, but also about using technology to increase efficiency, improve quality, and create value for patients and hospitals.

Methodology
This is a literature review paper that overview of theories and concepts related to e-commerce in hospital management system. The method of writing a review of this article is based on the search of the relevant literature to the main problem of the review. Literature comes from textbooks or journals obtained online, then selected according to relevance to the theme and title, and feasibility. The literature search was conducted using Google Database till the most recent references in 2024. The subject of e-commerce in hospital management systems falls within the category of reference eligibility.

Literature Findings

Contemporary Management
Contemporary management is a dynamic and adaptable approach to managing organizations in the face of rapid global change. It draws from various scientific disciplines, incorporating diverse theories and best practices to achieve organizational goals with maximum efficiency (Certo, 2019). Several main approaches and theories guide contemporary management, including systems theory which recognizes organizations as interconnected open systems that are influenced by their environment; contingency theory which acknowledges that there is no one-size-fits-all approach to managing an organization - rather, the most effective strategy depends on the situation and conditions at hand; stakeholder theory which highlights the importance of considering all parties interested in an organization's success such as employees, customers, suppliers and society; leadership theory which examines how leaders can inspire and direct others towards achieving common objectives (Freeman 1984; Lawrence & Lorsch, 1967; Northouse 2019).

Contemporary management confronts a multitude of challenges, such as globalization which amplifies global competition and market intricacy, technological change that demands swift adaptation to new technology amidst rapid advancements, diversity that necessitates the creation of an inclusive work environment in response to a more diverse workforce, and sustainability which requires striking a balance between economic objectives and social and environmental responsibility (Certo, 2019). The primary functions of contemporary management encompass goal-setting for the organization and devising strategies to achieve these goals; organizing work responsibilities into an effective and efficient organizational structure; motivating and directing individuals towards common objectives; monitoring organizational performance while taking corrective measures to ensure goal attainment; recruiting, selecting, training, developing, and retaining competent personnel; selecting optimal actions to attain organizational goals; effectively communicating information and ideas with others; negotiating agreements with other parties that benefit the organization's interests; identifying problems faced by organizations while resolving them along with creating novel products, services or processes that enhance organizational competitiveness (Jones et al., 2020).

One prevalent management theory is known as the excellence movement. This theory was introduced by Thomas J Peters alongside Robert H. Waterman Jr. This approach suggests
that certain "excellent" companies possessing long-standing success have developed systemic practices setting them apart from their counterparts. The excellence movement in management strives for attaining the highest standards in managerial practice through continuous improvement of quality alongside efficiency & effectiveness across all operational & strategic aspects within an organization. Moreover it leverages contemporary methods & techniques like benchmarking science management & operations management aimed at achieving competitive advantage whilst maximizing value for stakeholders (Wahjono 2022).

E-Commerce

The inception of electronic commerce dates back to the early 1970s, with the emergence of Electronic Fund Transfer (EFT), which was initially limited to prominent corporations. Originally, e-commerce centered around commercial transactions and involved sending purchase orders electronically. However, it has since evolved into a more refined activity known as "web-based commerce" that encompasses purchasing goods and services through the world wide web. Following the widespread adoption of the internet in 1994, numerous journalists predicted that e-commerce would burgeon into a new economic sector; subsequently, many businesses across Europe and America developed their own trading websites during 1998-2000 (Dasopang, N. 2023).

The journey of e-commerce in Indonesia began in 1999, which was the beginning of the birth of e-commerce in Indonesia. The background to the emergence of e-commerce in Indonesia was based on the increasingly rapid development of communication and information technology, especially in the telecommunications sector, namely the Internet. Indonesian people are starting to switch from conventional buying and selling models to online buying and selling as a result of the development of technology which makes it easier for people to carry out all their activities, including economic activities. According to Mufarizzaturrizkiyah et al (2020), that e-commerce is a process carried out by consumers in buying and selling various products electronically from company to other company using a computer as an intermediary for business transactions. Meanwhile, according to David Baum as quoted (Mufarizzaturrizkiyah et al, 2020) states that e-commerce is a dynamic set of technologies, applications and business processes that connect companies, consumers and certain communities through electronic transactions and trade in goods, services and information carried out online, electronic. Based on the description above, it can be concluded that e-commerce refers to the internet network for carrying out online shopping and transactions through digital money transfers.

In the contents of Law no. 11 of 2008 in Article 1 paragraph 2 of the ITE Law, it can be explained that what is meant by electronic transactions are legal acts carried out using computers, computer networks, funds or other electronic media. In accordance with this definition, buying and selling activities carried out via computer or cellphone can be categorized as an electronic transaction. In order to anticipate technological developments and their use, especially commercial transactions, in 2008 Law no. 11 of 2008 concerning Information and Electronic Transactions. So with the establishment of this Law, electronic transactions (e-commerce) have a legal basis and legal legality (Mufarizzaturrizkiyah et al, 2020).

Types of E-commerce

General classifications of e-commerce are usually based on the nature of the transaction. According to Romindo et al. (2019), there are 5 classifications of e-commerce, namely:

1. Business to business E-commerce (B2B E-commerce) Business to business E-commerce (B2B E-commerce), a type of e-commerce carried out between companies and companies. Most
traditional traders use this type more often. In this type of transaction used are EDI (Electronic Data Interchange) and email. One example of a B2B company is Alibaba, which is an e-commerce service that connects various small and medium businesses.

2. Business to consumer (B2C E-commerce) Business to consumer (B2C E-commerce), is trade between companies and consumers, involving consumers in gathering information, purchasing physical goods (such as books, or consumer products) or information goods (goods of electronic materials or digital content, such as software, e-books) and for information goods, receiving the products via electronic networks. B2C is the second largest form of e-commerce. Sales are made at retail from the company directly to end consumers. Examples of companies like this include Amazon.com, Tokopedia.

3. Business to Government (B2G E-commerce) Business to government E-commerce is trade between companies and the public or government sector, such as the use of the internet in procurement, licensing procedures and other activities involving the government. B2G E-commerce has two conditions: first, the public sector is assumed to be the main control holder in running e-commerce, second, it is assumed that the public sector really needs a more effective procurement system. Currently, the size of the B2G e-commerce market as a component of total e-commerce is still not significant, because the government's e-commerce system is still in the process of development. An example of B2G is the IBM Center for the Business of Government connecting public management research with practice.

4. Consumer to Consumer (C2C) Consumer to consumer is trade between individuals (private sector) and consumers, it can also be defined as a transaction where consumers sell products directly to other consumers. C2C transactions involve reverse auctions, where consumers are the driving force in the transaction process. Transactions carried out in C2C activities are carried out by third parties who provide applications or online platforms as transaction media, therefore sellers and buyers can directly sell and buy goods on the applications or platforms provided by these third parties. There are three types of C2C, including: - Disaffiliate auctions on certain portals, such as eBay, which allow real-time bidding on products/services sold on the website. - Peer to peer systems, such as the Napster model (a protocol for sharing files between users using chat forums such as IRC), file exchanges and foreign currency exchange. - Classifying ads on portal sites such as Excite Classifieds and eWanted (an interactive online buying and selling place where buyers and sellers negotiate through the "Buyer Leads & Want Ads" feature).

5. Mobile Commerce (m-commerce) M-commerce (mobile commerce) is the purchase and sale of goods and services via wireless technology, namely, handheld devices such as Personal Digital Assistants (PDA). Japan is one of the global leaders in mcommerce. Industries that can be influenced by m-commerce include: a. Financial Services, including mobile banking b. Telecommunications, where service changes, bill payments and account reviews can be done in the same tool, a mobile phone. c. Service/retail, consumers are given the ability to place and pay for orders On-the-fly. d. Information Services, including entertainment, financial news, sports and traffic updates sent to mobile phones.

**E-Commerce Components**

E-Commerce has several standard components that business transactions carried out offline have and do not have, namely (Mubarok, M.M. (2022):

a. Products: Many types of products can be sold via the internet, such as computers, books, music, clothes, toys, etc.
b. Place to sell products: place to sell is the internet, which means you must have a domain and hosting.
c. How to receive orders: email, telephone, SMS, etc.
d. Payment methods: cash, check, bank draft, credit card, internet payment (eg PayPal).
e. Delivery method: delivery can be done via package, salesman, or downloaded if the product being sold allows for this (for example software or e-books).
f. Customer service: email, online form, FAQ, telephone, chat, etc.

Condition of E-Commerce in Indonesia

In 2017, a surge in E-commerce was reported with 1,500 startups already established in Indonesia. The country boasts around 93.4 million internet users and approximately 80 million smartphone users (Kemeninfo, 2017). Covid-19 has altered the pattern of E-commerce in Indonesia, prompting more business owners to seek digital marketing opportunities. Notably, data reveals that from ages 16 to 64 years old, an estimated 80% of global internet users search for products/goods via the web while visiting online retail sites is at a staggering rate of up to 90%. A significant proportion (74%) buy goods through e-commerce platforms. In contrast, Indonesian online retail visits exceed expectations by surpassing the aforementioned rates - above average with transactions reaching as high as 88%. Mobile phone usage dominates transactional activities within the country accounting for up to eighty percent (80%). With Halodoc's monthly active user base hitting twenty million and its extensive reach across all regions including remote areas such as Aceh, Nusa Tenggara, Maluku, and Papua (Halodoc, 2021), it is evident that they are leading the charge towards digitalization in Indonesia.

Categorized by sector, e-commerce purchases made by Indonesian consumers witnessed a substantial growth in 2019 when compared to the previous year. The toys, DIY and hobby segment saw the highest surge with a growth rate of 67% in 2019 as opposed to 2018. Following this was the food and personal care category which experienced an increase of 60% during the same period. Credit cards were found to be the most commonly used payment method for e-commerce transactions, followed by bank transfers and e-wallets, while cash was least frequently employed (Pahmi, 2022).

It can be inferred that amidst the pandemic era, E-commerce has emerged as a vibrant force playing significant roles for consumers, entrepreneurs and government alike. As businesses seek solutions to overcome Covid-19's impact on their operations, E-commerce provides them with ample opportunities through scaling up their business activities owing to increasing investments pouring into this field; gaining insights into market trends and behavior; expanding marketing reach; adapting themselves better towards changing technological scenarios alongside maintaining safety protocols. For customers too, E-commerce offers secure transactional experiences complying well with health guidelines while being more effective in terms of time management along with price selection than conventional modes of trade. At last but not least for governments too it is expected that having such platforms will enhance national economic growth prospects besides augmenting revenue receipts from value-added taxes or VAT (Ayu, 2020).

Data for the last quarter of 2023, the e-commerce sites in the marketplace category with the most visitors in Indonesia are Shopee, Tokopedia, Lazada, Blibli and Bukalapak. Of these 5 sites, the increase in the number of visits from the previous quarter only occurred on Shopee and Blibli, while on the other 3 e-commerce sites there was a decrease in visits. Shopee's achievement increased by around 30% compared to the average visits in the second quarter of 2023. In the same period, average visits to the Blibli site rose 5% while Tokopedia fell 9%, Lazada fell 30%, and Bukalapak fell 21%. The Shopee site recorded an average of 216 million visits per month throughout the third quarter of 2023, followed by Tokopedia with around 100 million visits per month, then Lazada with 50 million visits per month, and Blibli and
Bukalapak <50 million visits per month. Meanwhile, according to the Katadata Insight Center (KIC), the majority of Indonesian people are not yet actively using e-commerce services. KIC estimates that the proportion of active e-commerce users in the country is only 33.4% of the total population. Then 17% of the population is an occasional user, that is, they use e-commerce but rarely, and the majority or 49.6% of the remaining population are non-e-commerce users. The non-user group is a combination of Indonesian residents who do not have internet access, plus residents who have internet access but don't know about it, don't install applications, and don't use e-commerce (Ahdiat, 2023).

**Discussion**

The excellence movement is a popular management theory put forward by Thomas J Peters and Robert H. Waterman, Jr. This approach proposes that certain “excellent” firms, or those with a long history of success, do things systemically that set them apart from other firms by one characteristic of maximizing worker productivity. The excellence movement in management is an effort to achieve the highest standards in management practice. It involves the continuous pursuit of improving quality, efficiency, and effectiveness in all operational and strategic aspects of an organization. Over the past few decades, the business world has faced increasing challenges as a result of globalization. In order to survive in intense business competition, businesses must be able to adapt to changes and improve their efficiency. Process integration can increase efficiency. Digital transformation can achieve effective integration (Budiyatno, 2022). The digital transformation process aims to increase business efficiency, the business processes of an organization by triggering major changes in its parts through the combination of information, computing, communication and connectivity carried out with technology (Kraus, Schiavone, et al., 2021).

E-commerce can be included in the excellence movement in management. E-commerce refers to the internet network for carrying out digital trade transactions. Hospitals can use e-commerce to improve the quality of patient care, increase operational efficiency, and increase revenue. To increase operational efficiency, hospitals can use web-based information management systems. Patient registration, storing patient data into the system, and computerized billing in pharmacies and laboratories are part of the hospital management system. The software can assign a unique identity to each patient and automatically store patient and employee details. There is a search facility to track the current status of each room. By using the patient's identity, users can find available doctors and patient information (Oqaylan, n.d). With this system, hospitals can automate various administrative processes, such as appointment booking, payment and medical record management. This can provide benefits in improving good administration and control by reducing the amount of work that must be done by employees so as to reduce error rates and control employee costs more efficiently (Premkumar and Kalpana, 2013). E-commerce offers better information flow in various forms, such as direct communication with providers and electronic data exchange. By using e-commerce, healthcare centers can become more competitive by increasing data transfer speed, reducing errors, increasing the accuracy of data received and sent, reducing storage inventory, planning logistics and inventory control, and developing a platform that allows them to compete with other companies (Alyoubi, 2015).

E-commerce can also increase patient satisfaction by improving the quality of patient care. During the COVID-19 pandemic, with limited access to health facilities, telemedicine or telemedicine emerged. Medical services provided remotely through the use of information and communication technology known as telemedicine facilitate public access to health services (Andrianto, et.al., 2022). Telemedicine is a combination of technological and medical innovation that provides communication from doctors to provide health services, such as consultations, temporary diagnosis, and temporary medical treatment planning to patients.
without being limited by place and time. Examples of telemedicine applications that are popular in Indonesia include Halodoc, GrabHealth, AldoDokter, etc. Many doctors have collaborated or joined these applications which offer consultation services to patients online. In this application, patients can also see in detail the doctor's practice location and can make digital appointments for consultations both online and offline at the hospital. Telemedicine has several advantages such as increasing patient access to health services, reducing patient costs (usually online consultation costs are cheaper than offline consultation costs and patients can save on transportation costs to the hospital), reducing patient remoteness from doctors' needs, and improving the quality of health services (Andrianto, et.al., 2022).

E-commerce can be used as a platform for selling online health products such as medicines, medical devices, as well as health services and care to patients. The impact of the COVID-19 pandemic has accelerated the growth of e-commerce in Indonesia, as it caused a significant shift towards online retail and digital transactions, thereby reducing the economic impact and pushing the retail sector towards digital transformation (Locar team, 2023). More and more business people are trying to market their wares online. Data obtained on the percentage of internet users carrying out global e-commerce activities from ages 16 to 64 years in searching for products/goods via the internet was 80% and visiting online retail sites was 90%. Where internet users buy products online as much as 74%. Meanwhile, in Indonesia itself, online retail visits are above 90%, with 88% making transactions. The transaction process in Indonesia is dominated by mobile phone users, namely 80%. In e-commerce transactions, the payment method most frequently used in 2019 was credit card, then bank transfer, e-wallet and the least frequently used method was cash (Pahmi, 2022). Hospitals have the potential to reap additional profits by trading health products online on online health e-commerce platforms.

E-commerce also has several obstacles, including problems related to patient data privacy. For example, on every digital platform, there are cookies that request to be able to collect processing of patient personal data and the patient's medical conditions and preferences. Therefore, the security of patient data needs to be guaranteed to be maintained by every business actor who offers health products or services online. Another obstacle is the hospital's unpreparedness in preparing adequate information technology infrastructure. Not all hospitals in remote areas of Indonesia are able to prepare good technology and resources to manage the e-commerce platforms offered to patients. In addition, the level of patient confidence in adopting health services has not yet fully developed. Young patients tend to use this technology to consult a doctor without waiting in line quickly and efficiently, however, older patients tend to prefer to come offline for consultations with a doctor so that a physical examination can be carried out by the doctor. Apart from that, the use of hard drugs such as antibiotics that are circulated online on digital platforms can be easily accessed by the public, so there needs to be a stricter policy regarding purchasing these drugs using a doctor's prescription.

In Indonesia, e-commerce regulations for hospitals are regulated in Law no. 36 of 2009 concerning Health states that "Health technology is all forms of tools and/or methods intended to help diagnose, prevent and treat human health problems." Regulations regarding Telemedicine emerged during the COVID-19 pandemic, namely Minister of Health Regulation no. 20 of 2019 concerning the Implementation of Telemedicine Services between Health Service Facilities, and Indonesian Medical Council Regulation no. 74 of 2020 concerning Clinical Authority and Medical Practice via Telemedicine During the COVID-19 Pandemic in Indonesia. Meanwhile, regulations for online drug sales are regulated by Food and Drug Supervisory Agency Regulation Number 8 of 2020 concerning Online Drug and Food Supervision. By utilizing e-commerce technology, hospitals can achieve a level of excellence in managing resources and providing better health services to patients.

Conclusion
E-commerce has become an important part of the excellence movement in hospital management in Indonesia. By utilizing digital technology, hospitals can increase operational efficiency in administrative processes, improve the quality of patient care, and create additional income from sales of health products, such as medicines, medical devices, and other health services. However, implementing e-commerce in hospital management also raises a number of challenges such as providing the digitalization infrastructure needed to use e-commerce platforms, processing patient personal and medical data, as well as e-commerce policy regulations that need to be considered in Indonesia. Integrating an e-commerce platform with an existing hospital information management system can be a complex and time-consuming task, but with support from the government and business actors, e-commerce can be a very effective tool in achieving excellence in hospital management. Therefore, e-commerce is not just about selling products or services online, but also about using technology to increase efficiency, improve quality, and care for patients and hospitals. Thus, e-commerce can become an integral part of the excellence movement in hospital management in Indonesia.

References


