

# Opportunities for E-Commerce and Internet Marketing in Yemen in modern Day Obstacles & Difficulties

**Dhaif Allah Naji Moahammed Al sadi<sup>1</sup>, Dr. D.M Khandare<sup>2</sup>**

<sup>1</sup>Research Scholar, School of Commerce & Management Swami Ramanand Teerth Marathwada University, Nanded, Maharashtra India.

<sup>2</sup>Sr. Prof & Director, School of Commerce & Management Swami Ramanand Teerth Marathwada University, Nanded, Maharashtra India.

## Abstract

Currently, information and communication technologies (ICT) are rapidly advancing. The application of innovative technology in both B2B and B2C Marketing is universally recognized as highly advantageous for enterprises. For instance, the actions of purchasing and selling can be carried out using the Internet and information technology, which is referred to as e-Commerce. In light of these circumstances, online marketing has emerged. The e-Marketplace is a virtual platform where transactions take place. The advent of e-platforms facilitates firms in expanding their consumer base and conducting business transactions with greater effectiveness and efficiency. Although there are challenges and barriers to embracing and executing e-commerce, small and medium-sized enterprises (SMEs) can still reap the advantages of e-commerce. Yemen is currently in the process of establishing the fundamental components of an e-commerce infrastructure, which include networking, electronic payments, and IT-related services. This includes the development of information technology education and training. Yemen has recently experienced an increase in the number of mobile subscriptions and the rate of Internet access penetration. The growing utilization and widespread adoption of mobile phones in Yemen has facilitated the extensive implementation of e-commerce. Yemen offers a favourable environment for implementing ICT and e-commerce due to its high penetration rate and ongoing infrastructural development. Yemeni e-commerce faces challenges related to the absence of expertise and proficiency in areas like as ICT and e-commerce, the limited availability of ICTs in rural regions, and the scarcity of information technology workers and infrastructure. The document proposes that the successful adoption and execution of e-commerce should be carried out under well-designed national plans and guidelines for ICT and e-commerce growth.

**Keywords:** E-commerce, E-business, developing nations, technology developing, emerging markets, digital economy, Yemen, Digital marketing, E-government

## 1. INTERDCTION

In contemporary society, corporations place greater emphasis on the utilization of information systems in their business interactions. In recent decades, corporate operations have been revolutionized by the emergence of new approaches, namely e-commerce and internet marketing. According to Samanta &

Kyriazopoulos (2008), the Internet is crucial for the functioning of business-to-business (B2B) operations as it greatly enhances communication between customers and suppliers. Upon careful examination of various e-commerce models, it becomes evident that e-commerce is a crucial platform for relatively small enterprises. These tiny enterprises are encountering significant difficulties in identifying their target clients. Websites like Alibaba.com provide opportunities to efficiently buy and distribute things online. The Internet is becoming increasingly unavoidable. Technology profoundly influences every facet of existence, encompassing culture, economy, politics, and lifestyle. Each day, the Internet is utilized in a novel way. This article examines the utilization of the Internet in Yemen. It exemplifies the enduring potential of e-commerce in the future market. According to Al-wazir and Zheng (2014), Yemen's performance in utilizing the Internet is poor and there is a need to enhance knowledge in this area. Yemeni individuals will have increased opportunities on the Internet in the foreseeable future. Information technology and communication are crucial drivers for the long-term development of the economy (Pârgaru & Rotaru, 2012). Considering the current state of international trade, Terzi (2011) asserts that low-income nations can greatly profit from the rise of e-commerce. One notable advantage is that it can assist these countries in enhancing their income. Undoubtedly, many countries in the Middle East are plagued by poverty, and e-commerce has the potential to bring about diverse economic prosperity in these nations. This article will specifically address the primary obstacles and prospects that e-commerce presents to the Yemeni population. Prior research indicated that small and medium firms (SMEs) could gain advantages by incorporating the Internet into their operations, allowing for more effective and efficient marketing activities. The Internet may assist business-to-business (B2B) marketers by facilitating online quotations, expanding advertising reach to more areas, and enabling direct communication through email. Engage in communication with the customers. Internet advertising and communication incur significantly reduced costs compared to traditional communication methods. To enhance credibility, B2B marketers can enhance their reputation by developing polished websites, providing multilingual product support, and conducting market research in overseas markets (McCue, et al., 2007). Not only do B2B marketers view the Internet as a platform for connecting with their business customers and cultivating business relationships, but the mass consumer market can also be effectively reached through the Internet. As a result, B2C marketers have capitalized on advancements in Information Technology to offer their products. Amazon.com and eBay are the frontrunners in this field. Currently, nearly all firms have their own websites, which provide consumers with up-to-date information and enable them to engage in various commercial operations such as buying, purchasing, making payments, and tracking their orders. The prevalence of internet marketing is on the rise, even in developing nations.

### **E-government**

In Yemen refers to the system or group of individuals that have the authority to make and enforce laws and regulations within a particular country or region. The Yemeni e-government has the potential to achieve significant and evident advancements within a short timeframe. According to Bhat (2014), e-government is crucial in combating corruption and enhancing policy development. The Yemeni administrations are encountering many obstacles in establishing e-government. Yemen, being one of the countries with the lowest rank, is crucial in uncovering the variables that the United Nations considers important (Al-Aghbari et al., 2015). According to Al-wazir & Zheng (2014), leadership and management provide significant obstacles, and the expenditures associated with infrastructure cannot be

overlooked. The Yemeni internet service is the primary aspect that requires significant enhancement (A. Ali & Zhao, 2012). The e-commerce rules and regulations that closely pertain to Yemen include "Act No. 40 of the 2006 Electronic Payment System for Finance and Banking." The statute acknowledges the court's acceptance of electronic payments, as well as its recognition of financial and banking activities. In this scenario, electronic signatures and transactions can obtain validity from this source. The government possesses the capacity to forecast the trajectory of telecommunications and information technology advancements. When considering Tele Yemen and Yemen, the government can be seen as the exclusive provider of Internet services, effectively holding a monopoly. While Tele Yemen have various ownership interests in the government, the government of Yemen maintains complete sovereignty over the country. Internet users express dissatisfaction with the inadequate service and limited availability of Internet connection. In addition, the government made the choice to implement email communication in the early 21st century. Given this circumstance, it is unfortunate that the project is unable to accurately comprehend the conceptions of e-commerce. Frankly speaking, this project is plagued by various issues. The office responsible for its management possesses technical project management capabilities. The system suffers from availability issues, which hampers its usability. The system functions as an electronic wallet, serving as an electronic funds transfer (EFT) mechanism. Users are interested in purchasing emails and subsequently adding them to their collection. Various cards. Not all emails can be categorized under relevant recipients, leading to client dissatisfaction with email communication. There is no one centralized database in the electricity companies, and these companies can be linked to an electronic database.

### **E-commerce in Yemen and globally**

In order to expedite the adoption of e-commerce services in Yemen, it is necessary to implement efforts that aim to comprehend the mind set of Yemenis, overcome cultural and traditional obstacles, and alleviate the existing mistrust between the government and its population. Increasingly, worldwide electronic transactions are being conducted across global networks, with the first one occurring in 2005. Despite the widespread adoption of ATM culture, the transaction growth rate in 2011 was low. Local banks were unable to offer online business accounts before authoring this article. The local financial transactions infrastructure is experiencing various network issues. Furthermore, these flaws might give rise to security vulnerabilities and economic challenges. In 2014, the World Bank introduced a sophisticated electronic transfer system that integrated credit bureaus, real-time total settlement (RTGS), and current core banking systems into electronic interbank transactions. This initiative aimed to enhance the efficiency and effectiveness of local payment systems. The funding aims to implement enhanced information technology in the financial system. Oman has successfully implemented its payment system (S. Ali & Al-Jabri, 2011). The Yemeni Central Bank stands to gain significant benefits from this. Online banking is closely associated with a personal bank that offers a relatively restricted range of services. Banks persistently exert great effort to attain dependable service. Banks are widely recognized as providers of electronic bill payment services. Internet fraud is a risk that banks must assume.

### **E-commerce, internet marketing, and e-marketplace.**

The advent of the World Wide Web (WWW) has revolutionized the commercial landscape, giving rise to innovative platforms and systems like e-commerce. E-commerce refers to the process of conducting business transactions and research using digital technologies and online platforms. Gilmore et al. (2007)

assert that it aligns with both e-commerce and e-marketing. E-commerce refers to the buying and selling of goods and services over the Internet. It is distinguished by its lack of geographical limitations and the presence of unpredictability (Hu, Wu, & Wang, 2009). Electronic marketing refers to the process of using electronic methods or media, such as the B2B electronic market, to establish and maintain customer relationships. Its purpose is to meet the needs of buyers and sellers by leveraging electronic platforms. This definition is based on the work of Ngai (2003), as cited in Chong (2011). Gilmore et al. (2007) highlighted that e-marketing is a rational progression that allows businesses to generate, distribute, and provide value to customers.

More precisely, e-commerce is commonly categorized into two primary segments, namely, business-to-business (B2B) and business-to-consumer (B2C). B2B e-commerce, being an electronic platform, prioritizes the items and services it offers. Smaller enterprises typically depend on the electronics market, whereas larger corporations operate on their own platforms, such as their own website. Hence, the digital marketplace holds significant significance for many enterprises to engage in online commerce. Laudon and Laudon (2000) highlighted the strong correlation between the B2B electronic market and online payments. Rohim, et al. (2004) provides a definition of the electronic market as an information system (IS) where individuals can engage in transactions by collaborating with suitable trade partners. Gullidge (2002) posits that electronic markets, exchanges, and centres are frequently perceived as having distinct connotations. The electronic market is an online platform where buyers and sellers engage in business transactions. The exchange encompasses a range of privately or publicly issued services, including spot purchases, auctions, catalog hosting, and both purchasing and non-purchasing activities. Hub, in the context of e-commerce transactions, specifically denotes the process of exchanging Document between supporting business.

### **E-commerce in emerging economies**

Developing countries are characterized by a scarcity of large-scale enterprises and a low level of investment in infrastructure, resulting in inadequate information and communication services. Given the significant presence of SMEs in developing nations, it is imperative to assess the feasibility of implementing e-business and E-commerce, as well as identify any potential obstacles and constraints. SMEs can benefit from cost reduction in information search and transaction by implementing e-Trade. The poll indicates that certain information is highly significant for small and medium-sized enterprises (SMEs). Precisely, the information can be obtained through the utilization of the Internet. According to Wikibooks (2012), the Internet is crucial in facilitating the automated packaging and of content.

There are four ways can be useful of Internet and e-commerce for the entrepreneurs which are operated in the developing countries:

1. It facilitates the market entry of small and medium-sized enterprises (SMEs) on a global scale.
2. Facilitate the advancement of tourism in poor nations.
3. Enhance the global agricultural market.
4. It provides enterprises in economically disadvantaged countries with access to B2B and B2G supply chains

Although e-commerce offers advantages, small and medium-sized enterprises (SMEs) may encounter challenges, as evidenced by recent studies done in certain developing nations. Internal hurdles in small and medium-sized enterprises (SMEs) are characterized by a lack of ICT awareness and knowledge,

insufficient ICT competencies and cultural managers, and limited financial resources (Wikibooks, 2012). The primary impediments to the growth of information technology and e-commerce usage can be summarized as follows (Wikibooks, 2012): There is a lack of clarity in people's comprehension of e-commerce. Many SMEs worldwide refrain from participating in e-commerce despite being aware of the benefits it might bring to their business. Traditionally, there is a belief that only large-scale enterprises can utilize e-commerce. Additionally, they believe that implementing e-commerce would result in additional expenses for their investment and that achieving a quick return is not a simple task. Mere proficiency in ICT is insufficient. People play a crucial part in the development of e-commerce. Nevertheless, it is undeniable that there is a lack of technological literacy in developing countries worldwide. In this scenario, there is a shortage of trained people in small and medium-sized enterprises (SMEs), which is a significant obstacle to implementing information technology in these businesses. In general, small and medium-sized enterprises (SMEs) have limited design capabilities. Therefore, it is a challenging question whether SMEs can effectively enter the global marketplace by fully utilizing the internet. Although the Internet is a valuable tool for accessing global design knowledge, small and medium-sized enterprises (SMEs) do not believe they can effectively manage their costs unless they provide innovative products. Nevertheless, they can exploit returns due to their status as inexpensive providers.

Moreover, it is commonly observed that branded fashion enterprises have acquired a distinct advantage in terms of design. Small and medium-sized enterprises (SMEs) are uncertain about whether the presence of the network will enhance their global brand awareness. Costs related to financial activities. Small enterprises face significant upfront costs when implementing new technologies. One of the main obstacles to the growth of e-commerce is the high cost associated with internet connection. Due to financial constraints, small and medium-sized enterprises (SMEs) view the additional expenses of information and communication technology (ICT) spending as a substantial investment. Many small and medium-sized enterprises (SMEs) perceive the cost of Internet marketing to be exorbitant. There is a distinction between simply having a website and having a website with varying levels of traffic. One explanation for this assertion is that mass can be determined by various individuals. The second reason for this is due to the anonymity of SMEs, which is encountering several obstacles. Given the abundance of companies online, establishing brand recognition has become increasingly crucial in order to remain competitive. Furthermore, the website lacks sufficient user friendliness and fails to be updated promptly. The search engine prioritizes the website query and aims to widely distribute website information. Increasingly, numerous OECD countries are demonstrating that e-marketing methods are not a superior substitute for traditional media formats. An effective strategy could involve taking responsibility for developing identification or branding through the use of hyperlinks or regular updates. Physical structures and systems that are necessary for the operation of a society or organization. Network infrastructures in developing nations include distinct characteristics. As an illustration, a scarcity of telecommunications infrastructure. Security. When establishing e-commerce, ensuring payment security and transaction privacy on the internet is crucial. Although certain policies can facilitate the implementation of e-commerce, there are still impediments hindering the utilization of the Internet for online transactions. The absence of trust symbolizes these challenges. Furthermore, it remains rather unpopular among individuals residing in the

**Obstacles encountered in the implementation of e-Commerce in Businesses**

The development of the contemporary environment is primarily driven by the introduction of smartphones and various forms of social media. These opportunities have offered valuable prospects for organizations to implement Internet marketing, including online marketing. Additionally, other companies provide goods and services through online retail platforms. Although commercial activity in Yemen have been rapidly increasing, there are still constraints and challenges present in the country's current circumstances. Essentially, the issue highlights the readiness of governments to embrace e-commerce. Various indicators can be utilized to evaluate countries' inclination towards adopting e-commerce. However, this can be modified by other factors, including network infrastructure and the cost of Internet connection. According to Goldstein and O'Connor (2000), the implementation of e-commerce should take into account both legal regulations and technical specifications. Now is an opportune moment for individuals to identify crucial components for embracing and executing e-commerce in Yemen. The specific details are outlined below. Primarily, Yemen's development has been hindered by the inadequate implementation of banking systems, including bank currency transfers and bank payments. In the realm of e-commerce, a reliable financial infrastructure is crucial. While certain payment alternatives have been offered and are already accessible, online payments have not yet been definitively established. Yemenis are reportedly unfamiliar with the utilization of credit and debit cards, online banking, and payment via kiosks. It is commonly recognized that the majority of firms are very small and family-owned, which poses challenges in effectively using modern technologies in their operational processes. One important aspect to consider is the necessity to be vigilant regarding the creation of innovative business systems. The younger generation, who possess a strong educational background and are very proficient in computer usage, tend to favor internet marketing. In this scenario, IT service providers can quickly gain recognition due to their ability to develop websites and essential e-commerce infrastructure. Furthermore, inadequate Internet capacity and communication infrastructure are identified as the primary obstacles that can restrict the deployment and marketing of e-commerce on the Internet. Despite Yemen possessing a telecommunications network system, it is insufficient to adequately sustain commercial usage. The mean data transfer rate is significantly slow, necessitating the installation of transfer channels. Lastly, it is essential to examine the legal framework that is necessary to safeguard the information of both corporations and individuals. Ensuring privacy and safeguarding information are crucial for the effective execution of e-Commerce. Yemen lacks sufficient legislation and regulations pertaining to the Internet and businesses operating online. Yemen does not have a reliable system for identifying internet users. For instance, people are purchasing SIM cards without any requirement for registration.

**Potentialities of electronic commerce in Yemen.**

In order to assess the potential uses of e-Commerce in Yemen, we will utilize the PEST framework and examine the relevant business environment at a micro-level. Firstly, the political environment refers to the alterations in the policies and laws implemented by the government. An essential and prominent aspect of government strategy is shown in its active engagement with the AEC (Asian Economic Community). The community's objective is to transform the region into a prominent international centre by effectively incorporating it into the global economy. This action necessitates robust collaboration among the nations in the vicinity. This evolution presents both opportunities and threats to enterprises. By enhancing their own capabilities and establishing connections with international businesses, local

organizations may effectively keep up with current trends. Otherwise, they will be excluded from the evolving ecosystem. In order to enhance the connectivity and relationships between organizations, it is crucial to adopt and deploy modern Information and Communication Technology (ICT) systems. It is thus feasible to deploy new business models and methodologies, such as e-Business and e-Commerce. Businesses, particularly small and medium-sized enterprises (SMEs), who are able to embrace and utilize modern technologies and execute innovative business practices, such as e-commerce, can achieve significant benefits. As part of the government's efforts to promote the growth of the private sector and small and medium-sized enterprises (SMEs), there is also a push to support the integration of new technology in businesses.

The Yemeni economy remains predominantly agrarian, with the majority of the population engaged in the primary sector. The per capita income is far below 350 USD, with a recorded amount of 250.191 USD in 2011. Nevertheless, the Yemeni economy saw accelerated growth in recent years following the assumption of power by the civilian administration in 2010. The process of increasing speed or rate the rise in economic growth has also led to an increase in consumer demand for products and services. The greater magnitude of demand for goods and services also signifies an increase in business transactions and the potential for utilizing internet-based business and commercial transactions. Furthermore, a significant factor in the economy is the growing influx of foreign direct investment (FDI), which reached a total of 56.7 Billion Yemeni Real by June 2014. The increase in foreign direct investment (FDI) will facilitate collaboration between local enterprises and global corporations, enabling the implementation of contemporary business methods, including e-commerce activities. The deployment of E-Commerce is directly influenced by the technological environment. Yemen is now in the early stages of technological development, however, there has been tremendous progress in the advancement of the Internet and telecommunication system and infrastructure. The establishment of internet connectivity occurred in 2000, however, access was severely restricted owing to several circumstances, including censorship (admin, 2015). The Internet had a significant surge in 2011 when the government modified its stance and allowed unrestricted access. Yemen Post and Telecommunication (YPT) experienced substantial expansion by reducing the price of its SIM cards for the GSM system to 2000 Yemeni Real, thereby making them accessible to all phone customers. According to the Ministry of Telecommunication's report as of March 31, 2015, the mobile penetration rate has exceeded 50 percent, with 28.1 million SIMs sold in the market.

The e-commerce readiness level is primarily determined by the extent of ICT dissemination and the establishment of an e-commerce ecosystem (ITU, 2008). The rate of infiltration and internet connectivity for PCs, laptops, and tablets has been increasing steadily over the past three decades. Contrarily, legal infrastructure is mostly utilized for the regulation of business activities, and it is imperative to acknowledge the significance of protecting consumers' rights. The difficulties to e-commerce in Yemen are closely tied to traditional business practices and primarily involve legal impediments. From the standpoint of the credit/debit card industry, the digital environment has given rise to several issues, mostly due to the shift towards online payments. Furthermore, the online banking regulations impose limitations that impede the ability of online consumers to establish confidence in the digital society. Furthermore, prior to 2008, credit bureaus were not proficient in effectively managing risks in a planned manner. Nevertheless, individuals lacked a credit history. In recent times, there has been a significant transformation with the founding of the I-Score Bureau. During the initial year, over 4.3 million individuals became registered clients, leading to the adoption of credit ratings by financial

institutions and an increase in the number of authorized card applications. Research indicates that almost 40% of individuals under the age of 18 are unable to obtain a credit or debit card. However, this situation holds promise for the future as digital payment transactions are expected to gain increasing popularity. Regarding laws, Yemen has a single law, No. 15/2004, which was implemented in 2004 and specifically addresses e-commerce. Upon careful examination of the law, it becomes evident that it places significant emphasis on analyzing the legal status of various electronic documents. In addition, it offers legal services to the Information Technology Industry Development Authority (ITIDA). Its objective is to grant the authority to authenticate the structure of the electronic document. Furthermore, in 2009, ITIDA initiated the establishment of the Yemeni Certification Authority (Root CA) with a primary emphasis on assessing the efficacy of various endeavors. The primary problem lies in bolstering public confidence in e-commerce, and all efforts are made towards achieving this goal. The clients' level of trust can significantly impact the ways of payment. Online transactions and payments are significantly amplified. Statistics indicate that in Yemen, the private sector has a 60% rate of Internet usage, while families have a rate of only 15%. Yemen has a total of 5.4 million households, and around twenty percent of these families are unable to do without computer services. Since 2004, the government has implemented a range of e-government apps to promote online business transactions. This includes the issuance of a driver's license, high school grades, and other related matters. Table 2 presents the barriers to the implementation of e-commerce measures in Yemen according to the European Benchmark Test and E-Commerce Report (ECATT, 2000). It is justifiable to assert that numerous stakeholders should address distinct influencing elements in finance as an effective means of summarizing the issues experienced by Yemen's e-commerce. Furthermore, certain societal obstacles arise, notably the absence of trust deeply rooted within consumers. Consciousness plays a crucial role in determining the level of e-commerce interests obtained by both customers and enterprises. When comparing the rate of mobile adoption in Yemen with Internet usage, it becomes evident that mobile users are willing to spend a similar amount, and there is a noticeable upward trend in costs. This illustrates that affordability is not the paramount concern that should be taken into account. The costs of internet access are consistent and it enables the widespread adoption of mobile business. The presence of a suitable ecosystem is necessary for effective training work. However, it has been identified that insufficient training is a significant obstacle in a network environment (Kamel and Fikry, 2007; Dutta and Mia 2009). Introducing individuals to cutting-edge technologies can often be perplexing. A significant obstacle faced by new users of electronic payment systems is the absence of confidence. Resistance to change is a deeply ingrained cultural characteristic, making it challenging to alter established patterns. This is connected to Organizational considerations include the presence of younger generation senior managers and intermediate managers. There is a divide between the ICT and technical workers inside the ICT community. Ultimately, it is crucial to comprehend the linguistic obstacles associated with internet material. The majority of Yemenis lack comprehension of the English language, although it is regrettable that over 82% of websites are predominantly constructed in English. Online retailers are not widely embraced by Arabic speakers due to the constraints of the Arabic language. This hinders their enthusiasm for building online communities. Since 2011, Yemen has witnessed a significant surge in the use of social media. This has not only stimulated a significant influence on the growth of the e-commerce community but also has diverse effects on the development of the economy.



**Table 2 . Presents the obstacles that hinder the development of electronic commerce in Yemen.**

<b>Barriers</b>	<b>Remarks</b>
<b>Insufficient knowledge of the benefits and advantages</b>	Due to the presence of effective distributed access and security concerns, both organizations and customers exhibit a lack of enthusiasm towards online buying, resulting in significant doubts regarding the benefits of e-commerce.
<b>Product suitability for distribution</b>	Yemen's data indicates that 48% of individuals who buy online do so primarily because of the limited availability of products in the local market. Additionally, 32% find the convenience of comparing products online to be a motivating factor, while 24% are driven by the ability to compare costs. Furthermore, 21% like the ease of online payment.
<b>Expenses and efficiency</b>	The constraints imposed by narrowband access have impeded the progress of e-commerce; online buying is widely regarded as costly rather than a viable substitute for conventional shopping..
<b>Data security</b>	When compared to private value-added networks, the Internet presents significant security challenges because of its open structure. To maintain the security and dependability of data flow, specific technical solutions are required, which might be costly. It is necessary to enhance security measures and enable other payment options, such as cash on delivery, to complement credit card usage for local customers. This will foster trust and alleviate consumer apprehensions over online payment information.
<b>Consumer protection</b>	Establishing trust in a business-to-consumer (B2C) context necessitates implementing measures to safeguard consumers against fraudulent activities and providing them with adequate online consumer protection. It is necessary to increase consumer awareness and engagement in online shopping in order to address their worries regarding the acquisition of individualized data that may be used for other reasons. This can be addressed by the implementation of copyright notices or the enactment of new intellectual property regulations..

<p><b>Lack of critical mass</b></p>	<p>The internet market functions well through the collaboration of many consumers and suppliers. Yemen's market is limited in size, and this issue can be mitigated by diversifying market segments.</p>
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In terms of technical hurdles, certain issues have arisen as a result of the inadequate telecommunications infrastructure. It pertains to the expenses related to the amount of data that can lead to extended durations for accessing and downloading. One significant difficulty in the realm of finance is the absence of a reliable and secure electronic payment system. A major obstacle for credit or debit card users is the insufficient knowledge about how to use these cards. Online, it is customary for consumers to complete transactions using a variety of bank cards. Additionally, the proliferation of e-commerce is hindered by tax complications and barriers. Furthermore, the stances of governments can effectively mirror the demands of utilizing information networks. This establishes a strong basis for the selected approach to handling transactions and conventional techniques. For instance, levying taxes on things that are available for purchase on the Internet. In Yemen, the economy is closely linked to taxes and tariffs, as they have traditionally served as a dependable source of income. These difficulties should be strategically tackled by allocating methods and resources appropriately. Various prospects exist for establishing a robust e-commerce framework in Yemen. In regards to the possibility, the government implemented a comprehensive approach to collaborate with the National Postal Service (NPA). This strategy is considered the principal government endeavor for fostering the development of e-commerce and is an effective means of achieving initial distribution. NPA intends to establish a network that will enhance connectivity among 3,000 branches spanning 22 provinces in Yemen. Being the sole entity in the country, it not only operates at the village level but also surpasses the capabilities of the banking business. Without exaggeration, it may be claimed that the organization has branches situated in various regions, spanning almost four thousand villages and rural areas. According to Kamel (2009a), it is believed that it can be beneficial in bridging the gap between various developing countries by addressing issues like the digital divide and integrating their communities. Postal services are widely regarded as highly esteemed brands globally. The significance of this is readily apparent in Yemen as it facilitates the establishment of real transportation networks. These services can be maximized through the use of e-commerce.

The company offers worldwide visibility and delivers up-to-date information to its clients (ITU, 2008). The digital economy in Yemen is still in its nascent stage of development. Although this country is small in scale, it possesses a vibrant e-commerce infrastructure. The Internet contributed roughly \$200 million to the economy in 2011, which accounted for approximately 1.2% of the country's gross domestic product (BCG, 2012). One of the most evident benefits of the internet is its ability to stimulate the growth of the digital economy. Furthermore, the investment process holds significant potential. In the fiscal year 2011-11, the Yemen ICT industry earned around \$1.3 billion in income, which is a decrease from the \$2.7 billion earned in the 2009-2010 fiscal years. The growth rate of ICT revenue during this period was 6.5%. In fiscal year 2009-2010, the ICT sector accounted for 4.2% of Yemen's gross domestic product (GDP), whereas in fiscal year 2011-2012, it contributed 4.6%. The ICT sector in Yemen experienced a growth rate of 7% in 2010-2011, whereas it reached 13% in 2009-2010. The digital purchasing behaviour of customers in modern society is a significant indicator of the impact of the Internet on Yemen's economy. According to the prediction, the total contribution is expected to

quadruple by 2017, reaching 1.6% of the global GDP (BCG, 2012). However, it is crucial to note that Yemen's businesses have not yet fully understood the significant economic opportunities and capabilities offered by the Internet. Certain industries can reap advantages from the digital economy, including the tourist sector. The internet market for tourism and travel services is estimated to be worth \$1.8 billion. Yemen's travel industry, for instance, utilizes 5% of this market share (BCG, 2012). According to estimates from BCG (2012), e-commerce adds \$229 million to Yemen's GDP, or only 0.1% of the total. This data has resulted in significant disparities when comparing it with other countries that have gradually recognized the significance of fostering the Internet economy. According to BCG (2012), online advertising made for 4% of Yemen's total advertising consumption in 2011. The Internet has presented a significant threat to the advertising industry by creating a B2B economic activity paradigm. It is the predominant platform in the country, drawing over 15 million individuals in Yemen and garnering attention in the Middle East. Ahmed (2007b) said that the number of population exceeded 400 million. In this scenario, the digital economy can be significantly impacted by both social services and inclusiveness. The Yemeni government places significant emphasis on enhancing the efficiency of food subsidies in order to regulate purchases and ensure equitable distribution of food (BCG, 2012). Information and communication technologies can mitigate poverty, address issues in the healthcare sector, fairly distribute resources, and encourage participation in decision-making. When evaluating the impact of the Internet as an ICT tool, it is important to include not just the number of people using it, but also its contributions to the advancement of the social economy. In this context, it is crucial to focus on the Internet and its effects on Yemen. The Internet has always been regarded as a commercial platform that facilitates the growth of trade volume, boosts investment, and facilitates business transactions. Furthermore, as a means of promoting and advertising, it has created an exceptional chance (EIU, 2001). Due to the growth of the young population in Yemen, a significant number of individuals opt to establish their own enterprises, mostly to cater to the pressing demands of the community by offering various goods and services. This tendency is believed to have several positive consequences. For instance, it caters to various need, generates work opportunities, mitigates youth unemployment, and enhances the economic circumstances of numerous individuals. Furthermore, Bell (1998) emphasizes that Yemen can enhance its efficiency and profitability by acquiring a comprehensive understanding of the existing e-commerce ecosystem. The number of websites in Yemen is projected to exceed 8,000. It is worth noting that only a maximum of 10% of them are specifically allocated to e-commerce. Furthermore, only a limited number of e-commerce platforms and online shopping websites utilize online payment systems, with the majority still depending on cash on delivery (COD). Meanwhile, Kamel and Abdel Ghaffar (2004) assert the significance of alternative payment methods. More precisely, they refer to debit cards and mobile payments.

## Conclusion

To conclude, it is evident from the aforementioned information that the presence of e-commerce provides customers with increased opportunities for employment. Considering the aforementioned information, it is imperative for the e-commerce infrastructure to be dependable. More precisely, it encompasses the internet speed, payment methods, and payment security. It is crucial and essential to implement awareness initiatives in order to address and potentially resolve the challenges related to e-commerce. As previously said, e-commerce company represents approximately 5% of the overall buy volume, presenting a favourable opportunity for enterprises. In addition, the article offers a

comprehensive analysis of Yemen's e-commerce ecosystem and the obstacles it confronts. The online buying population has experienced a significant growth. An increasing number of individuals are assuming responsibility for online purchases and payments by leveraging their social networks and third-party businesses. The rationale the reason why people can learn a great deal via the internet is mostly due to its provision of technological access, authenticity of items, communication capabilities, and even amusement projects. Yemenis excel in online purchasing and are capable of efficiently completing regulated tasks in a timely manner. Furthermore, notwithstanding the fact that certain individuals refrain from making online purchases, they nevertheless encounter several infrastructure obstacles. One of the most evident concerns is the dependable payment mechanism. These global payment system providers not only offer convenient payment services, but also prioritize fraud prevention and improving purchasers' understanding of Internet-related hazards. Furthermore, it is evident that the transportation and logistics services in Yemen do not fully integrate with the advent of the Internet. Transportation costs provide a significant hurdle for individuals who are interested in shopping online. Certain individuals continue to opt for delivering their service through third-party businesses. International airlines appear to have received shipments from the Yemeni market. The postal service in Yemen appears to be missing out on potential commercial prospects. Finally, the legal system of Yemen must provide explicit guidelines for corporate transactions. Furthermore, it should offer robust safeguards against cyber-crime. The Yemeni governors must possess the capacity to enhance the infrastructures pertaining to power and transportation. Crucially, only by doing this can companies enhance their effectiveness in the field of e-commerce?

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