E-Commerce in the next era of developing Bangladesh: Prospects and Challenges with the implementation of vision-2041

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Abstract:
With the inception and initiation of information technology, the whole world is witnessing a dramatic renovation in the way of accomplishing task. Introducing information communication technology and initiation of internet in day to day business activities has strikingly revolutionized the way of doing business. As a young and emerging industry, the e-commerce in Bangladesh has lots of question marks to find the solution. We see that Bangladesh is marching on the highway of development and the present government is trying to transform Bangladesh into a digitalized one through implementation of vision 2021 and vision 2041. But this digitization process will be impossible without digitizing the commercial and business activities and the government services. If the vision 2041 implemented accordingly it will create a congenial atmosphere for the growth of e-commerce. Prominent researchers and economists recognized that To be the part of 4th industrial revolution, we need to fashion a sustainable digital ecological unit .This paper is intended to state the present situations of e- commerce and looming prospects and challenges that will be accompanied with the development process in the next era of developing Bangladesh and contributions of e-commerce to the development process.
Key words: E-commerce, prospects, challenges, developing country, developed country, contribution of e- commerce, vision-2041.

E-commerce is becoming an integral part of day to day business activities of almost every organization. In a digitalized society, the relevance and prevalence of ecommerce is so conspicuous, it will not be exaggerated to say that every business is earnestly embracing the beautiful feature of e-commerce. With the implementation of vision 2021, Bangladesh has transformed remarkably into a digitalized society creating a hospitable infrastructure for e business. On the other hand Bangladesh is marching on the highway of development and it will come out of the list of LDC permanently in 2026 As Bangladesh will become a middle income country by 2031 and high income country by 2041 it will create a huge pool of consumers who will strive for more and more convenient product. High income people generally pass a life of business, care for time saving. For that reason the demand

for the platform that ensures the selling and purchasing a product without wasting time is must to reach peak in that golden period of developed Bangladesh. This transformation into a developed country will obviously be the part of infrastructural development such as ICT infrastructural development, road and railway communication infrastructural development. As we know that easy and fast communication and smooth delivery of product is one of the foremost determinants of e-business growth, this infrastructural development in Bangladesh will provide a strong ground for e- commerce to grow in the coming era of developing Bangladesh. Due to these forthcoming manifold opportunities and reasons for growth of e-commerce in the upcoming era in Bangladesh, the business policy makers and investors should reiterate the process of finding solutions to the question marks that would lead to successful and widespread market penetration of e-business ideas and concepts.

Objective of the study: We are observing that Bangladesh is in the process of transformation into digitalized and developed country. United nation committee for dialog policy has already recommended for the final formal recognition of Bangladesh as a developing country by 2026.With this achievement of prestigious status of developing country, the responsibility rests on the shoulders of intellectuals and policymakers, in general, on us to maintain the status of developing country and transform into a developed country. We know that this transformation into a developed country is possible only when it is accompanied with the development of commerce and trade and the sharp increase in the level of commercial and trade activities. Here e-commerce can play that fundamental role of pushing up the commercial and trade activities of the country and eventually contribute to the development process. According to policymakers, economists, intellectuals and researchers, Bangladesh must bring out more and more innovative and cost efficient ways to execute and operate the commercial and trade activities and e- commerce will provide that platform. My objective of the study is to find out-

1. What prospects for the growth of e-commerce in Bangladesh will be accompanied with the transformation process of its status of developing country into a developed one and
2. What are the existing challenges that we must overcome to facilitate faster growth of e-commerce here in Bangladesh
3. how can e-commerce have significant contribution to the development process

Methodology: The research is supported by secondary data only. Various e-commerce services recently began in Bangladesh. Very recently Bangladesh has made the national planning namely the vision 2041. As a result, the amount of material is scarce, and it is challenging to locate papers that simply discuss Bangladesh's e-commerce prospects, barriers and its contribution to the transformation of Bangladesh into a developed country through the implementation of vision 2041 .We gathered information for a deeper understanding from national and international research magazines, articles, many reputable censuses, websites, blogs, periodicals, and newspapers. Internet utilization has also been made as an additional information source.

Literature review of e-commerce system in Bangladesh: Electronic commerce is the sharing of business information, maintaining business relationships and conducting business transactions by means of telecommunication networks". (Vladimir Zwass, 1996).

Next era of developing Bangladesh is going to call us to come with more innovative ideas and faster and efficient process of business execution to cope with the pace of development and increasing demand for more convenient product due to increasing purchasing power .e-commerce will provide that platform of efficient process of business execution A large number of researchers cited the importance of a strong telecommunications industry infrastructure as a major driver of e-commerce growth.

The Challenges that hinder E-commerce growth in developing country: There are lots of factors that facilitate the growth of e-commerce in developing countries. Researchers around the world indicated some of the strong components that are working as strong impetus to facilitate the growth of e-commerce in developing countries.

Issue of security is a great concern in e-commerce adoption in developing countries: (H. Zaied, 2012) There are several important prerequisites that must be met to ensure expected growth of e-commerce in the developing countries. One of the noteworthy prerequisites for smooth growth of e-commerce is security. Customers will be likely to be hesitant to submit sensitive personal details online without a trustworthy and secured internet, such as credit or debit card information. In addition, businesses of all sizes and sorts all over the world are increasingly showing reliance on electronic commerce (e-commerce) technology for operating their business.

Lack of infrastructure is one of dominant barriers for the growth of e-commerce: (Wresch and Fraser, 2011) Also with improved Internet access, developing nations continue to report an extremely poor percentage of user profiles per 100 inhabitants, indicating a critical lack of telecommunication infrastructures in these regions. E-commerce progress requires strong logistical networks, which include transportation services and delivery networks. Emerging economies are struggling in this area.

Lack of competitive pressure: (Zhu, Kraemer and Xu, 2003) studied the adoption of electronic commerce by European companies and came to the conclusion that non-adopters face greater competitive pressure than adopters. Most of the e-commerce adopters take resort to e-commerce just because of avoiding competition and in pursuit of unique selling proposition.

Lack of skills for implementation: (Tahiri, 2022) discovered that a wide range of institutional and environmental elements have impact on the uptake of E-Commerce. Regarding the implementation of E-Commerce, their model comprises two key constructs: perceived organizational E-Readiness and perceived external E-Readiness. Management's impression and assessment of the extent to which they feel their company has the knowledge, skills, competencies finances, dedication, and governance to implement E-Commerce is known as institutional E-Readiness.

Lack of perceived benefits of e-commerce: Dearth of knowledge and comprehension of the benefits of e-commerce is noticeable in many developing countries. The majority of SMEs in developing nations does not engage in e-commerce or utilize the Internet since they do not see the benefits of e-commerce for their companies. Many people believe that e-commerce is only appropriate for large businesses and that it is an extra expense with negligible payback on investments.

Lack of popularity of online purchasing: Though various reports are claiming that online purchasing is being popular, still there are enormous percentages who are not accustomed to online purchasing. Still a majority portion of population has a long way to go to accept online purchasing as a part of their culture. In developing countries, people still have a notion that purchasing online is a part of luxurious life. The countries that came out of the list of LDC recently, just crossed the minimum margin of eligibility regarding per capita income. These people just have started to live a life of luxury. As their income will rise to standard level to live a life of luxury, they will show a propensity to accept the online purchasing as a popular practice in their daily life.

Lack of adequate telecommunication infrastructure: (Agarwal, 2022) Actually there are lots of reasons that work as component to make internet connection untrustworthy. One of the reasons is shoddy cellular connections and another one is unstable energy flows. Most of the developing nations don't have the network infrastructure necessary for ecommerce, especially among individual consumers and small business owners.

High access cost: (agwu and murray, 2022) Most consumers in poor nations cannot utilize the Internet because of the high price. The expense of using the infrastructure has an impact on how quickly e-commerce develops. Usually most of the   emerging nations should prioritize creating the essential structures and a competitive economy, favorable conditions and legal structure for inexpensive Web connectivity.

Lack of enthusiasm of government: (Basu, Bhowmick and kabir, 2019) In developing nations, the government can play a crucial role in facilitating the development of essential elements of e-commerce sites, such as safe online transaction options, trustworthy and conveniently available IT infrastructure, encouragement of entrepreneurship and persistent e-commerce policy. But in most of the cases we notice that government in developing countries changes frequently and those policies also change accordingly. Researchers agree that it is inevitable to maintain political stability for smooth development of e-commerce.
According to Alyoubi (2015), the government may have a big role in e-commerce acceptance and expansion since state policy, particularly law, has a big impact. A favorable legislative and legal climate is seen as a major incentive for cultivating a welcoming, e-commerce-friendly safe environment, as it will help to overcome various hurdles to ecommerce growth.

Absence of legal framework: (Nurudden, yusof and abdullah, 2017) stated that in most of the developing countries it is very common scenario that e -commerce is beset by a variety of challenges. The scope of institutional and legal environment is the most alarming of all.

While conducting online transactions, we must face some legal issues that may emerge from the very nature of e-commerce. That is why a skillful e-marketer must know how to deal with these legal issues. Unfortunately in most of the developing countries, a comprehensive legal and regulatory framework is yet to establish. Most the researchers cited the absence of legal framework as a major barrier for smooth growth of e-commerce in developing countries.

In some developing countries we may find the existence of some regulatory framework but they are highly insufficient and flawed. On the other hand some rules are in existence without modifications for decades.
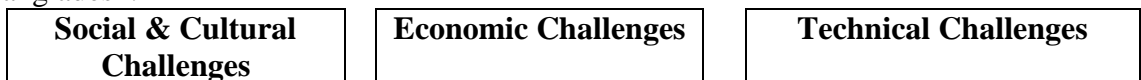
Still language is considered as a major barrier for e- commerce: (Julian Dimery, Global Director of Business Development, 2022) International communication is thus increasingly crucial for the success of multinational merchants. While businesses who thrive in multilingual e-commerce are well-positioned to lead the sector in the future, those who choose not to offer in-language interactions or who do so insufficiently, may run the danger of restricting or even losing all of their international sales.
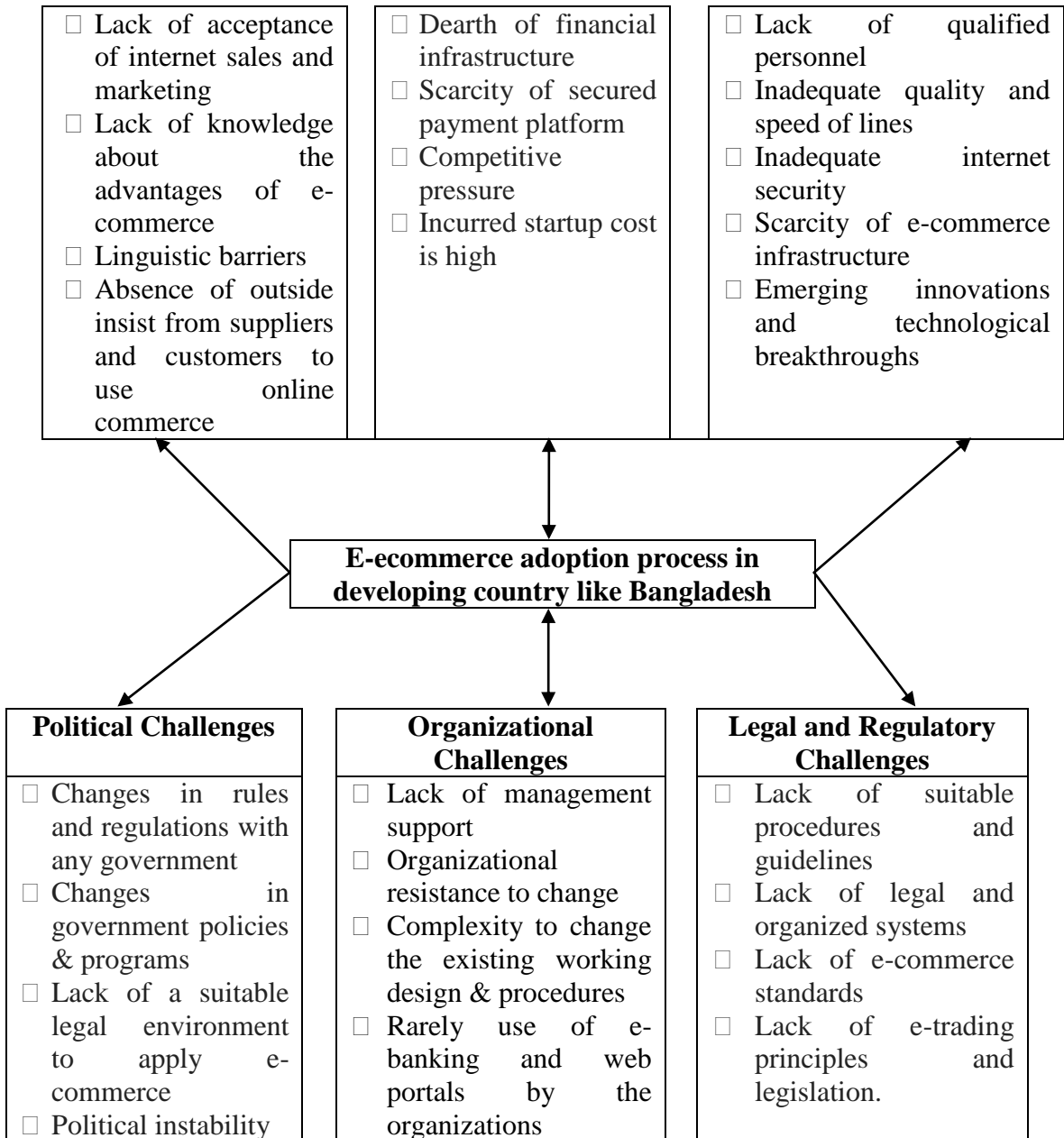
(Williams, 2022) The question of whether tongues have specific characters and in which individuals are literate adds another level of intricacy. Even though their native language is a very tiny one, people might speak it quite well yet not be able to read or write it.

Lack of organizational preparedness is also a notable barrier for e-commerce: (Almousa, 2013) stated that Many organizations still lag a far behind on their way to adopting e-commerce as they still believe higher levels of interpersonal engagement are required for our sales and marketing. They are ignoring the importance of e-commerce on this premise that there lots of issues that the technology cannot appropriately deal but the human interactions can.

It is challenging to change the way things are done now. They think that the huge amount of investment is needed for training and ICT based education .still there is significant shortage of qualified personnel to manage or sustain e-commerce. They show a tendency not to understand the benefits and business potentials of e-commerce's application. Still a remarkable percentage of top management lacks the required skill to understand the application of e-Commerce. That is why they show a propensity not to support and implement e-commerce in their organization.

Figure 1.1: Challenges affecting e-commerce adoption process in developing country like Bangladesh.

Social & Cultural Challenges	**Economic Challenges**	**Technical Challenges**

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- Lack of acceptance of internet sales and marketing
- Lack of knowledge about the advantages of e-commerce
- Linguistic barriers
- Absence of outside insist from suppliers and customers to use online commerce

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- Dearth of financial infrastructure
- Scarcity of secured payment platform
- Competitive pressure
- Incurred startup cost is high

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- Lack of qualified personnel
- Inadequate quality and speed of lines
- Inadequate internet security
- Scarcity of e-commerce infrastructure
- Emerging innovations and technological breakthroughs

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E-ecommerce adoption process in developing country like Bangladesh

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Political Challenges

- Changes in rules and regulations with any government
- Changes in government policies & programs
- Lack of a suitable legal environment to apply e-commerce
- Political instability

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Organizational Challenges

- Lack of management support
- Organizational resistance to change
- Complexity to change the existing working design & procedures
- Rarely use of e-banking and web portals by the organizations

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Legal and Regulatory Challenges

- Lack of suitable procedures and guidelines
- Lack of legal and organized systems
- Lack of e-commerce standards
- Lack of e-trading principles and legislation.

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Source: International Journal of Information Engineering and Electronic Business, 4(3), pp.9-18.

1.6 Factors that are contributing to e-commerce growth and will shape the future of e-commerce in the next era of developing country like Bangladesh

The following are the factors that are indicating Bangladesh has high potential for e-commerce in near future.

Increasing number of mobile phone subscribers and internet users in Bangladesh: According to (Rashid, 2019), Bangladesh's telecommunications business has two main service offers. Voice phone services and mobile internet are the two primary service offerings. However, the income of enterprises in this market is dominated by phone call services, as just one out of every five Bangladeshis subscribes to mobile internet services. Nonetheless, the daily Star (4 November 2021) reports that "from 2016, there has been a 10.4 percent yearly increase in the number of unique mobile internet customers." The number of unique internet customers is predicted to expand at a rate of 9.6% per year, *reaching* 11.8 crore by 2030. Currently, internet customers account for 28.8% of the overall population, bringing the total number of internet users in Bangladesh to 4.76 crore. The number of unique users is growing at a 3% CAGR, whereas mobile internet customers are growing at a 10% CAGR, indicating that the latter has tremendous development potential. The increased accessibility to low-cost smart phones, as well as the expanding number of young people, is driving the business forward. The expansion of internet-dependent services, including as e-commerce, e-agriculture, and e-education, has contributed to the growth of industry.

Tele-density & Internet Penetration at the end of June, 2021

Tele-density (voice internet subscription)	103.69%
Internet penetration(total)	70.53
Fixed broadband	5.86%
Mobile internet subscriber	110.90
ISP+PSTN Subscriber (million)	10.05
Total internet subscriber(million)	120.95

Source: old.btrc.gov.bd

Bangladesh government's effort to ensure equal access to telecommunication infrastructure for both urban and rural citizen is praise worthy: Experts and specialists have acknowledged the importance of equal amenities and access to affordable and secure internet for both urban and rural citizens for the growth of e-commerce. In Bangladesh, still significant number of population live in rural areas .These rural people are highly deprived of quality internet connection due to lack of affordable connection and requisite skills to secure the advantage. That is why a platform that ensures affordable, accessible and secure internet connection is highly needed to facilitate the growth of e-commerce. Fortunately Bangladesh govt is relentlessly working to ensure internet connection in areas that are not currently covered under broadband connectivity.On March 28, 2018, the Prime Minister's Office's Access to Information (a2i) Program hosted an international workshop at Karabi Hall at the Prime Minister's Office in Dhaka on the 2nd coalition forum for affordable internet for all in Bangladesh. Bangladesh has joined the Alliance for Affordable Internet (A4AI), the world's largest technology industry group devoted to lowering internet connection costs. One of the key aims of the world's widest technology industry coalition,

"Alliance for Inexpensive Internet (A4AI)," has been to provide rapid, convenient, and affordable internet services at people' doorsteps.

The Padma Bridge will add another strong positive dimension to the communication infrastructure in Bangladesh facilitating online transactions through fast and easy communication opportunities: (Zishan, 2022) The Padma Bridge will largely improve the economic growth of Bangladesh including the growth of e-commerce. The country's GDP will rise by 1.3% to 2% per annum, according to analysts. After the railway component is accomplished, the bridge project will increase GDP by an additional 1%. Leading economist with the World Bank Zahid Hossain estimates that th Padma Bridge will shorten traveling distances for around 27% of Bangladesh's population by 100 km, improving trade and agriculture and raising the country's GDP. Some observers claim that the bridge will improve commerce, tourism, industry, and employment opportunities in the southwest of the country while also assisting in the reduction of poverty. Due to easy communication opportunities and improved communication infrastructure , delivery time and delivery cost will significantly be reduced .Thus Padma bridge has high potential for facilitating the growth of online trade and commerce with reduced delivery time and delivery cost . The vicinity is also anticipated to benefit from the Padma Bridge. Better connections will result from it. A farmer with perishable goods and commodities from the southern part of the country can easily seek the market in northern region and other parts of the country without worrying about the shipping distance and cost.

According to "(perspective plan of Bangladesh, 2021-2041) we see that after successful implementation of vision 2041 we will have platform of balanced urbanization which is a prerequisite for smooth growth of e-commerce in Bangladesh. As a consequence of balanced urbanization both rural and urban people will have equal access to internet connectivity, Tele communication and transportation infrastructure and all the amenities of urban life. This opportunity will boost our trade and commercial activities significantly irrespective of urban and rural areas. This increased volume of   commerce and trade activities will justify the need for online transactions.

Concept of digital Bangladesh is serving as another milestone for e-commerce in Bangladesh: G2G is one of the important types of e-commerce. Almost every government around the world is realizing the magnificent impact of digitalization of government services on improving the efficacy and efficiency of government services and upgrading the standard of living of its citizens. Auspiciously Bangladesh government launched the concept of digital Bangladesh in 2009 realizing that wonderful impact of e-commerce.

According to UNCTAD, a commendable digital foundation has been laid down by Bangladesh and it is relentlessly working to make its citizen skilled and equipped enough for the digital future. According to an assessment report of UNCTAD, There has been colossal growth in the information and communication technology sector in Bangladesh and a sharp increase in the it's young, dynamic and IT savvy population is observed. This growth is playing the role to make things better.

"Bangladesh is fertile ground for e-commerce to take root and benefit companies and consumers alike," said UNCTAD's director of technology and logistics, Shamika N. Sirimanne, while launching the assessment report in Dhaka on 25 July.

Bangladeshi government is relentlessly working and putting its best effort to implement the vision of its digital strategy and to build a robust, safe and business-friendly e-commerce ecosystem. The report is projected to inform Bangladeshi government's ongoing efforts to its reader and audience.

(Rahman, 10 March 2015) stated that the slogan "Digital Bangladesh" has special significance for national development because it acts as a magical word, paving the way for new ways of thinking and instilling a sense of revolution in the minds of its citizens. Digital Bangladesh with Vision 2021 is a major impetus for the country's use of digital technology. Work on achieving a digital Bangladesh is now underway. Thankfully, the current government's ambition to create a digital ecosystem is unwavering enough to battle against all hurdles, challenges, bottlenecks, and limits. It is heartening to report that some commendable digitalization projects have been finished, with a large number of others in the works. It is clear that the country is currently reaping the benefits of digitalization in a variety of domains. With over 12 crore mobile customers and 4.3 crore Internet subscribers, the government is on the verge of achieving its ultimate goal of bringing more and more services to the doorsteps of every person through enhanced digitization wherever plausible. Tendering, pilgrimage registration, gathering of official paperwork, online filing of tax returns, and release of examination results, and registration for admission to academic institutions are only a few instances of Bangladesh's online services. Because of internet banking systems, we are seeing a rapid increase in financial activity. A victim can readily file a complaint with the appropriate authorities. Bill payments for utility services may be made online, as can quick contact with those working abroad and e-passports. Telemedicine services are now available in Bangladesh, allowing patients to seek medical assistance online in the event of an emergency. Doctors use videoconferencing for some of the most difficult patients. We recognize the value of union information service centers as a critical component of Bangladesh's digital transformation. It is a pleasure that we inform you that Bangladesh has established approximately 5,000 Union Information Service Centers, primarily in rural regions. Bangladesh has already turned its eight thousand village post offices and approximately five hundred upozila post offices into e-centers and recently Bangladesh has introduced the mobile money order and postal cash cards and these are considered significant achievements in the recent past. Some revolutionary additions for the faster digitization process of Bangladesh are Union Information Centers, District Information Cells, and National Information Cell. There are many more developments in the line. A large number of e- services to rural clients are being provided by Deputy Commissioner Offices in districts and UNO offices in upazilas. Middlemen are eliminated because of direct digital services and it is saving both time and money. Our cities and towns would have turned into difficult places to live in without such online services.

Recent steps taken by Bangladesh authority are serving as trace for a secured platform for e-commerce development: To establish transparency, responsiveness and accountability in the government service system a country needs standard ICT policy.

(Tasmin Turag, 2021)To create a secured and trustworthy atmosphere for e-commerce, it is necessary to clearly state and define the shipping and delivery policies for online transactions. This step will make it possible for customers to be aware of the shipping's time, cost of delivery and other terms. Refund is certainly a crucial component of gaining the confidence of clients, which is why a clear refunding procedure is equally necessary. In addition to the release of accurate information regarding products to clients with accurate descriptions, it is also necessary to include conditions and terms that safeguard the personal interests of both parties, a homogeneous refund strategy, a money transfer log, individual data safeguards , preserving party confidentiality, and an efficient conflict resolution process.

Bangladesh bank's recent step is another milestone for establishment of secured e-payment platform: (Tasmin Turag, 2021)In a fairly recent effort, the Ministry of Commerce decided that Bangladesh Bank will retain funds as a third party until items are supplied to the actual purchaser in cases where early payments are made. It follows recent concerns and complaints about unusually long delays in goods delivery on various online marketplaces with a prepayment-based business model. This is truly wonderful news, as it's the first step to make online purchasing safer in Bangladesh's mostly uncontrolled e-commerce market.

Bangladesh national ICT policy 2018: National ICT Policy 2018 is Bangladesh's national strategy for implementing Digital Bangladesh, with the vision of "expanding and diversifying the use of ICTs to establish a transparent, responsive, and accountable government; develop skilled human resources; enhance social equity; ensure cost-effective delivery of citizen-services through public-private partnerships; and support the national goal of becoming a middle-income country by 2021 and joining the ranks of the developed."

Four praiseworthy initiatives have been taken by Bangladesh government to standardize e-commerce operation in Bangladesh: It is a beacon of hope that Bangladesh government has precisely recognized the importance of standardized e-commerce policies. That is why the government's measures to standardize the expanding e-commerce industry by fostering an ecosystem that fights unsustainable business models through responsibility, accountability, transparency and traceability have been completed. A Consolidated Complaint Managing System (CCMS), an interoperable transaction platform, an Unified Logistics Tracking Platform, and required Unique Business Identification (UBID) for all e-commerce and f-commerce enterprises are all part of the government's efforts to standardize (CLTP). In an effort to standardize, the government, working through its various ministries, is planning to impose a Central Complaint Management System (CCMS), an interoperable

transaction platform, a Central Logistics Tracking Platform, and mandatory Unique Business Identification (UBID) for all e-commerce and f-commerce businesses (CLTP).

Now unique business identification number is a must for any business operating online in Bangladesh: Every business conducting online operations in Bangladesh now must obtain a unique business identification number. This identity help Bangladesh authority easily recognize the business entities from any online platform. It can easily recognize a business even from a face book page. This identification number scan be obtained from the website mygov.bd. In order to equip social media-based and website-based e-commerce enterprises with Unique Business IDs, the government has finally released an app (UBIDs) in February 6, 2022.

A consolidated complains management system is a noteworthy initiative taken by Bangladesh authority: According to the relevant body, the government would test out an app and website to handle client complaints against various e-commerce sites. The Central Complaint Management System (CCMP), a computerized system, is being developed by the Access to Information Programme (a2i). According to authorities, it will be run by the Directorate of National Consumer Rights Protection (DNCRP). The digital system to address consumer complaints would also include participation from the Ministry of Commerce, the Registrar of Joint Stock Companies and Firms, and the e-Commerce Association of Bangladesh (e-CAB).

The e-CAB and the a2i have stepped in to establish a digital system that will automatically accept and resolve the consumers' complaints against some problematic e-commerce businesses in response to a deluge of complaints. In accordance with this effort, the appropriate government authorities will automatically receive complaints that the e-commerce platforms in question are unable to resolve right away.

Customers can only file complaints against authorized e-commerce platforms. Every e-commerce site will have a connection to the platform. Clients can click it to voice their complaints.

Customers will also be able to check each company's settlement rate and be better educated before making a purchase with access to the pertinent data.

Now that it is operational, the mobile application is ready. A demo demonstration of the software was recently organized by Ekshop, an integrated rural e-commerce platform of the a2i and the ICT Division. It is certainly be a new dimension for smooth and secured e-commerce operation in Bangladesh. An online customer now has a central authority to listen their complain and get their problem solved while conducting transaction online. Now no online customer will feel isolated as they can easily communicate with the unified and central authority of Bangladesh in case of any emergencies and necessity.

Binimoy, the interoperability digital transaction platform will provide the cashless and paperless transaction opportunity in Bangladesh: Bangladesh is moving in the direction of being "smart" through technology. By assuring digital connection of broadband internet

and 5G spectrums, public services are becoming paperless. To make financial transactions "paperless" this time, the national digital transaction platform is also being built as an inter-transactional medium. Through this, all transactions, both personal and business-related, will be "cashless." This platform will be known as "Binimoy."

A centralized logistic tracking platform is going to be introduced soon: (Govt finalises four new initiatives to bring back trust in e-commerce industry, 2022) The State Minister states that the central logistical tracking platform, a coordinated effort to gather suppliers, payment gateways, and delivery partners under one platform, is still in the works. This platform was meant to be delivered by Post & Telecom Division; however they haven't been successful thus far. If the platform is not ready by the next week, the ICT Division will get it ready over the course of the following six months.

Bangladesh government's   step for ICT training and education is undoubtedly praiseworthy: "One of the most important success aspects of e-commerce are training and education," according to Alyoubi (2015). The digital gap affects developing nations mostly due to a lack of intellectual human capital. E-commerce is a futile effort due to widespread illiteracy and a lack of grasp of the English language."

(Govt. eyes sustainable digital ecosystem for Vision 2041, 2022) said that the current administration recognizes the importance of ICT education and is determined to addressing it. More than 8000 Sheikh Russel digital computer labs and more than 38000 computer-based education multimedia classrooms have been established since the Bangladesh government joined union digital centers in 2010. Bangladesh has established 8280 digital centers to make internet inexpensive, available, and accessible to all inhabitants. These citizens are served by over 16000 young entrepreneurs. "We have the infrastructure, we have the point of connection," Palak continued, "but we need the right technology, support, expertise, and business models."

As a result, it's critical to encourage local businesses to produce digital gadgets, whether they're smart phones, feature phones, laptops, or chats.

According to independent news, Mostofa Zabbar stated that bringing fiber optic cable to the village level is a difficult task for Bangladesh. However, Bangladesh has taken the brave step of bringing fiber optic cable to the village level and has successfully linked 4,571 union digital centers. By the end of the year, it plans to have fiber, optical, and high-speed Internet access in all of its union digital centers. It is very commendable that the government's next goal is to connect 100,000 educational institutions and 13,000 community health clinics at the village level, as well as land offices. A total of 200,000 connection points will be managed by a single network.

"Another project that we've undertaken is one that connects Bangladesh. All of our islands, river islands, and hilly distant and unreachable locations will be connected with fiber optic cable, and we will connect more than 100 unions on the islands or in mountainous areas utilizing our Bangabandhu Satellite-1," Palak stated.

The effects of Increasing level of per capita income in e-commerce in Bangladesh: (Y.K. Chau and J. Hu, 2014) Higher income causes internet users to perceive lower implicit risks in undertaking online purchases and thereby affects their demand for internet products and services. Low income discourages online transactions, and perceptions of self-efficacy ease of use and usefulness - incomes, due to the ability to withstand possible financial losses. Usually, income is reflected in the professional status or social class of the individual – different professional categories are accompanied by different incomes and by different levels of IT knowledge and experience. Thus, Different user perspectives and behaviors toward online transaction   may result from such groups.
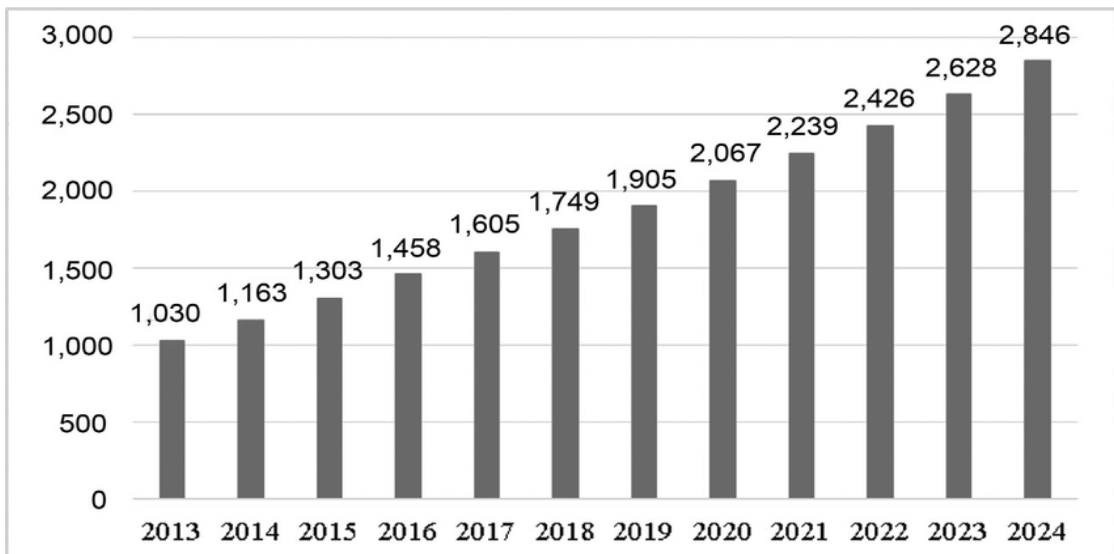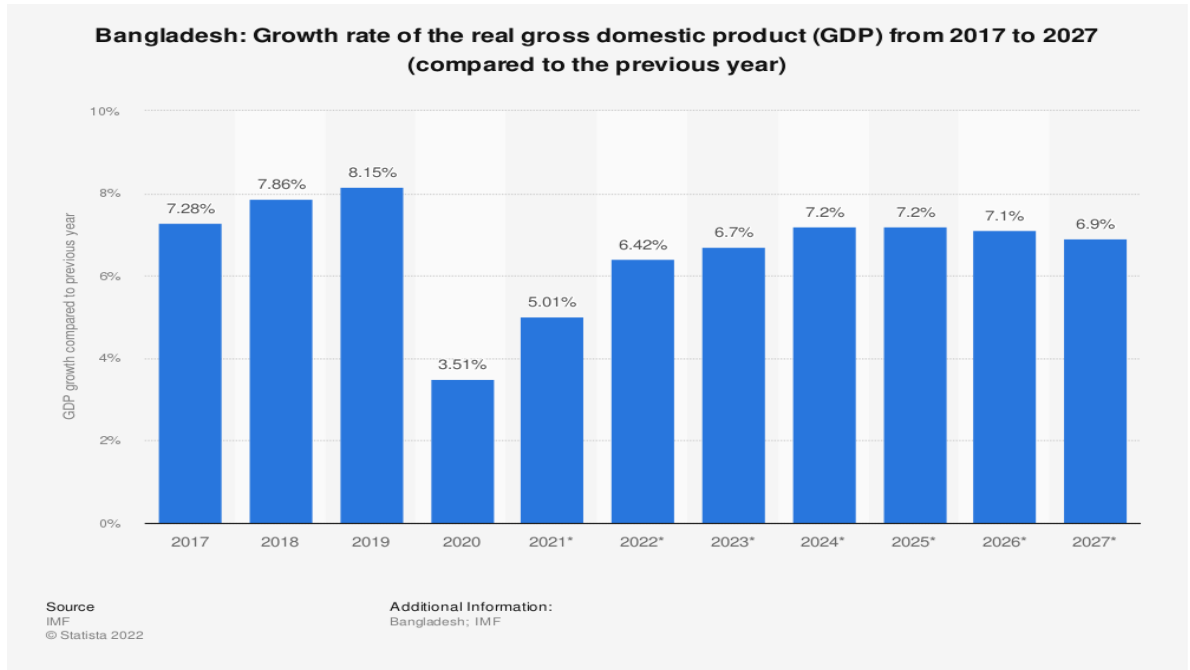

Chart: Pattern of increasing per capita income in BD
Source: Statista-2020

Another crucial goal of vision 2041 is to eradicate the severe poverty and achieve status of upper middle income country within 2030 and high income country status around 2041.it's ultimate goal is to reduce poverty level to a state of non-existence. We can conclude that by the end of the year 2030 and 2041, Bangladesh will have a large pool of consumers who will show a propensity to live a life of luxury and prefer online transaction because of its convenience.

Bangladesh: Growth rate of the real gross domestic product (GDP) from 2017 to 2027 (compared to the previous year)

Year	GDP growth
2017	7.28%
2018	7.86%
2019	8.15%
2020	3.51%
2021*	5.01%
2022*	6.42%
2023*	6.7%
2024*	7.2%
2025*	7.2%
2026*	7.1%
2027*	6.9%

Source
IMF
© Statista 2022

Additional Information:
Bangladesh; IMF

It is a very common notion that high income people generally pass a busy life. For that reason they are unable to purchase their necessary products and service offline. For saving time, they cannot but adopt online transactions as solution. As our income is increasing, there is a strong possibility that we will adopt e-commerce as part of convenient practice and luxurious life.

Successful execution of e-commerce depends on marketer's understanding of market timing, market strategy, changing trend and various factors.

Customer's readiness level for e-commerce in Bangladesh: (Mahmood, 2018) E-commerce is anticipated to remold and fundamentally alter the current framework of trading activities and business in Bangladesh. Because it shifts from among the least developed to one of the most potential arising economies alongside BRICs. This will have a positive social influence and upgrade Bangladesh's economy to significant degree. The rising population of online subscribers and technical improvements, such as digital transactions, 4G access, and similar services, has already spurred new small and medium businesses to embrace e-commerce centered marketing strategies. In this emerging economy, this is leading to the emergence of an altogether new industry sector.

(Mahmood, 2018) A small fraction of the entire population participates in e-commerce. However, with the resources and technical innovation serving as the primary force behind societal transformation, Bangladesh's e-commerce has enormous prospects. The internet market is still in its very early stages, and there are stark differences between what customers want and what facilities, rules, and general platforms and methods are offered. Customers enjoy the benefits of being able to select from a wide range of options from their

home computer, smart phone, or from wherever they like at whatever time. Customers, however, need answer explaining about the company they are trading with, quality, volume, company reputation, and dependability metrics. Entrepreneurs need to be aware of consumer needs and always need to come out with new items.

(Syed Mostahidal Hoq, Managing Director, Daraz Bangladesh) Bangladesh so far experienced a highly encouraging result in terms of its growing e-business and the mass's participation in it. Consumers have correctly recognized the effectiveness of electronic transfers and internet purchasing, which simply widens the scope of our game. And we have a lot of enthusiasm for one such future. Analysts anticipate that the e-commerce sector will reach maturity within the next five years. The overall environment must also develop to the point where it can sustain the sector as a whole. Moreover, because of the Covid-19 epidemic, the country has realized the value of e-commerce and is using it to the fullest extent feasible. As a result, it is reported that Bangladesh's e-commerce industry is now 5 years ahead its current state. In other words, if the pandemic hadn't struck, it might take the e-commerce industry 10 years to attain this place.

E-commerce can significantly facilitate the development process of Bangladesh by facilitating the implementation process of vision 2041. The following are the reasons: Though it is necessary to have an e-commerce friendly echo-system to make sure the smooth growth of e-commerce, e-commerce also can accelerate the development process of Bangladesh. There are some unique aspects of e-commerce that will definitely contribute to the transformation of Bangladesh into a developed country.

E-commerce can be an effective solution to traffic jam in Bangladesh: One of the most expected aspects of a developed country is that it tries to find an effective solution for traffic jam. Traffic jam is very common scenario in most of the developing countries. Extreme traffic jam is one of the bitterest truths of urban life in Bangladesh. Traffic jam is killing productivity by wasting billion loads of working hours. One of the promising aspects of e-commerce is that people will not find it necessary to go outside for purchasing goods as they can easily order the products from online sellers. This aspect of e-commerce is preventing hundreds of customers to come outside their home to buy goods. Thus e-commerce can be a very effective and efficient solution to traffic jam in Bangladesh. Economies of scale in transportation can be easily achieved via e-commerce transactions.

(Hafez, 2022) The world's most densely inhabited nation is Bangladesh. In practically every city in Bangladesh, traffic jams are a typical occurrence. In Dhaka city, there is a daily loss of 3.8 million work hours due to traffic, according to a World Bank report. Therefore, finding an original solution to this issue is now crucial. Bangladesh entered the world of e-commerce in 2009, but it quickly became well-known for its distinctive advantages. E-commerce is the term used to describe the purchasing and selling of goods and services using computer networks like the Internet. E-commerce has the potential to reduce traffic in Bangladesh since it can divert customers from brick and mortar establishments to online retailers.

The aspect of eco-friendliness of e-commerce makes it highly suitable in this era of climate change crisis of Bangladesh: (The Economic and Environmental Benefits of Ecommerce, 2021) Beyond the ways in which e-commerce can boost an economic growth, it can also lessen its carbon footprint. Global research by Generation IM found that e-commerce is 17% more carbon-efficient than conventional retail outlets. The business's carbon-efficient operations cover areas like product transportation, construction, warehousing, product packaging, and manufacturing. Online businesses have greater flexibility when it comes to putting policies in place that can lower their carbon footprints because they depend less on having physical store locations.

Unemployment problem can be solved through e-commerce in Bangladesh: Internet-based B2B e-commerce aids in the development of new business prospects for producer firms in our nation, so assisting in the alleviation of the unemployment issue. E-commerce makes it simple to do any type of business. As a result, many people express interest in starting the firm.

Many unemployed persons find new ways to support themselves through work. Utilizing e-Commerce's wonderful effects in this country can help to enhance our economy by reducing the problem of unemployment.

E-commerce will reduce the entry barriers and provides cost efficient platform for small and medium sized enterprises in Bangladesh: For a developing country like Bangladesh small and medium enterprises can play vital role to boost the economic growth. Just because of online platform, many small and medium organizations are getting the opportunity to enter the market with minimum cost. Entry barriers and exit barriers are very low because of online platform.

E-learning will highly boost the education sector that is one of the primary focuses of vision 2041: (Desk, 2022) After the session on the perspectives of the students, Abdul Hannan Chowdhury, dean and professor of North South University's School of Business and Economics (SBE), gave a speech about the future of education in Bangladesh. He contends that in order to realize the goal of 2041, the education sector, which heavily relies on online learning, must be upgraded. Since the majority of people in Bangladesh live in poverty, they are unable to keep up with the times by purchasing technology advancements at such a rapid speed. He believes that in order to achieve the vision of 2041 and advance the online education system, we must first work to end poverty.

If Bangladesh is to capitalize on its demographic dividend, e-learning is crucial: (Zaman and Sarker, 2022) As vision 2041 has highly focused on developing skilled manpower it will create more skilled man power in Bangladesh. But it is the bitter truth that Bangladesh itself cannot create employment opportunities for this huge pool of skilled manpower. The solution is self-employment either though e-commerce or freelancing that is also another form of e-commerce. The more the e-commerce opportunities the more demographic dividend will be.

Findings and Recommendations:

1. E-commerce industry in Bangladesh is sure to boom in the next era of developing Bangladesh if the developing process of Bangladesh and other things remain constant. The orientation and philosophy of Bangladesh authority has proven to be e-commerce friendly through the initiation, conception and the implementation of vision 2021 and commencement of vision 2041. It has been found that Bangladesh authority has sincere interest in the digitalization of Bangladesh. Thanks to Vision 2021 that has already given an essence of digital connotations in every single sector in Bangladesh. According to JOHN SOFORIC "half effort does not produce half result, it produces no result. Work, continuous work and hard work is the only way to accomplish results that last." It is true for e-commerce industry in Bangladesh also. Though Bangladesh authority has adopted bundles of initiative in an effort to create an e-commerce friendly eco-system and digital intensive Bangladesh as a whole, still e-commerce industry in Bangladesh is considered to be in infant stage. Still Bangladesh has long way to go with the implementation process. The following are the some of the findings.

2. There are several issues that are still functioning as impediment to e-commerce growth in Bangladesh.

3. From implementation perspective, Bangladesh still has not been able to create a secured platform both for e-commerce entities and e-consumers also. It is found that though Bangladesh has proactively initiating plan for digitization, it is acting reactive in case of security issues. There are several incidents that Bangladesh took initiatives only when the incidents specifically the security issues happened. But it is highly praiseworthy that recently Bangladesh bank has taken some meaningful and effective security measures .Bangladesh national ICT policy 2018, recent four measure namely having unique business identification number (UBIDS), a centralized complain management system (CCMP) BY DNCRP, an interoperability digital transaction platform (binimoy), a central logistic tracking platform will certainly contribute to the formation of a robust security platform for e-commerce in Bangladesh.

4. As Bangladesh is going to be a developed country with the implementation of vision-2041, it will surely happen through the development of road and communication infrastructure. Bangladesh government is also focusing on improving the information and communication infrastructure. The unification of Bangladesh with the Alliance for Affordable Internet (A4AI) will surely provide guideline in this regard. Padma bridge, Padma rail link, Padma multipurpose bridge, Dhaka metro rail , Dhaka,karnaphuli underwater tunnel ,Chattogram-cox's bazar, railway link, Dhaka-Chattogram Express Railway are some of the initiatives that have been taken recently by Bangladesh authority for smooth road and transportation infrastructure . It is recommended that Bangladesh should focus on

production of ICT intensive infrastructure so that it can ensure affordable Internet both for urban and rural citizen.

5. By the end of December 2021, there were 123.82 million active Internet subscribers worldwide. In Bangladesh there are 52.58 million internet users in January 2022. Within 2031 the number of internet subscribers will be double with around 10 percent annual increase. In Bangladesh, the B2C e-commerce industry is anticipated to increase by 17.61% annually to reach US$6,596.6 million in 2022. In 2022, the e-Commerce market is expected to generate US$8.03 billion in revenue. By 2025, market volume is predicted to reach US$14.68 billion, with revenue forecast to expand at a 22.27% annual rate (CAGR 2022-2025). So it is suggestive that e-commerce industry in Bangladesh will flourish if other things remain constant.

6. It has been found that one of the notable goals of vision 2041 is to create knowledge based economy by 2041. That is why Bangladesh authority is primarily focusing on creating skilled manpower. However report says that around 84.9 % of the youth of Bangladesh lack required ICT skill. If Bangladesh can properly train the working force it will surely be able to reduce the digital divide. Eventually the removal of lack of shortage of skilled human resource for e-commerce will be possible.

7. With the implementation of vision 2041 the per capita income of the citizens of Bangladesh will be so high that they will likely to live a life of luxury and more likely to spend on convenience purchasing to save time for recreation.

8. Consumers in Bangladesh started to realize the effectiveness of e-commerce and accept the e-commerce as part of luxurious norm of culture. Covid -19 pandemic significantly contributed to the readiness level of consumers of Bangladesh for the acceptance of e-commerce as norrm and culture.

9. Another crucial goal of vision -2041 is to create a sustainable development .This is only possible when it will be able to create a platform that fashions an environment friendly eco-system for development E-commerce can play a role in this issue. E-commerce has proven to be environment friendly as it requires less traffic due to economies of scale for transportation.

10. For a developing country like Bangladesh, the role and importance of small and medium size enterprises cannot be denied. However finding market for SME products is a major challenge for a developing country. E-commerce can significantly contribute to this issue as it makes it only a matter of opening a face book page or a YouTube channel. Thus it can reduce the entry barriers for SMEs and the problem of unemployment.

11. E-learning is also a part of e-commerce. It can significantly contribute to the formation of knowledge based economy as part of implementation process of vision 2041. It can appreciably contribute to create more demographic dividend in Bangladesh by providing the opportunities for freelancing. As freelancing can be

considered as e-commerce it can highly reduce the unemployment problem in Bangladesh and contribute to the realization of vision 2041.

Conclusion: E-commerce in Bangladesh has high potentiality to grow though e-commerce industry is still in infant stage in Bangladesh. It is a ray of light that Bangladesh authority has taken bundle of ambitious initiatives   to transform it into a developed country. But this planning cannot be realized until the development of a business and commerce friendly platform specifically e-commerce friendly eco-system in the country is made. Still Bangladesh has long way to go as per developing IT skilled human resource, establishing secured payment platform, standard e-commerce policy, regulation and timely implementation of those policies in case of urgency. If these issues are properly managed with appropriate course of actions there is no doubt that e-commerce industry in Bangladesh will surely flourish in full bloom and highly contribute to the realization of 4th industrial revolution and implementation of vision 2041.

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