

Original Research Paper

# Augmented Scope-Based E-Commerce Business Model for Emerging Markets

<sup>1,2</sup>Razib Hayat Khan, <sup>3</sup>Ankan Shahriar Islam, <sup>3</sup>Md. Ahasan Hossain Sijan, <sup>1,2</sup>Mahbubul Syeed, <sup>1,2</sup>Mohammad Faisal Uddin and <sup>1,2</sup>Md. Shakhawat Hossain

<sup>1</sup>Department of Computer Science and Engineering, Independent University, Bangladesh

<sup>2</sup>RIoT Research Centre, Independent University, Bangladesh

<sup>3</sup>Department of Computer Science, American International University-Bangladesh, Dhaka, Bangladesh

## Article history

Received: 16-05-2023

Revised: 21-06-2023

Accepted: 22-08-2023

Corresponding Author:

Mahbubul Syeed

Department of Computer

Science and Engineering,

Independent University,

Bangladesh

Email: mahbubul.syeed@iub.edu.bd

**Abstract:** E-commerce is one of the world's fastest-growing software service industries. With the arrival and rise of the 4<sup>th</sup> industrial revolution and technological advancements such as Artificial Intelligence, machine learning, and subscription economies, e-commerce is primed for significant growth globally, particularly in emerging markets. Emerging markets provide several unique growth factors and catalysts such as smart device adoption, high internet penetration, growing economies, and unexplored business segments for e-commerce platforms. Bangladesh, in particular, is one of the world's fastest-growing economies, an example of development in emerging markets. While the e-commerce market in Bangladesh is still in its infancy, the unique growth factors and service adoption, such as e-banking and mobile financial services, have created the potential for exponential growth. The market also has a unique set of challenges, which presents an interesting case study on how e-commerce platforms can adapt to emerging markets. This research aims to present the unique growth characteristics and challenges to the e-commerce market in Bangladesh. Additionally, the research showcases the growing importance of subscription economies and dynamics in a service-centric business model for e-commerce platforms. Finally, the research provides a business model for e-commerce platforms in emerging markets with growth phases, business strategies, and pivots while analyzing existing e-commerce platforms from the perspective of the proposed model.

**Keywords:** E-Commerce, Software Business Models, Web Technologies, Software Services, Software Ecosystems, Consumer Relationship Management, E-Commerce Challenges, Consumer Life Cycles

## Introduction

Bangladesh is one of the world's fastest-growing economies. Due to the rapid adoption of mobile internet and the high penetration of smart devices, the country has experienced fast adoption of digital services. Even amongst emerging economies, this influx of digital device penetration has led to unique market dynamics. According to a report by IDLC (2018), the country's mobile internet market adoption sits at over 66%. The country has rapidly grown and people of all classes have some form of smart device and digital service adoption. This includes mobile E-banking, mobile payments, and e-commerce. E-commerce has substantial potential growth due to the country's unique market dynamics.

While Bangladesh shares several similarities in economic growth patterns and service adoption with its neighboring country India, the e-commerce sector in Bangladesh is still in its infancy in comparison. India has local e-commerce giants such as Flipkart and global market leader Amazon. The e-commerce sector in Bangladesh still lacks a true market leader or global presence. This is due to several factors common with most emerging markets, such as unfamiliarity with the business model and economic constraints. However, the potential for rapid adoption exists due to the country's growing economy, smart devices, internet penetration, and the rise of e-banking and mobile financial services. These unique market dynamics for emerging markets such as Bangladesh present a challenge for e-commerce platforms and a global or

traditional e-commerce business model. E-commerce platforms must also account for future market dynamics and innovations moving towards the 4<sup>th</sup> industrial revolution, such as artificial intelligence, data analysis, consumer relationship management, security and privacy, and the arrival of a subscription economy. These factors make the e-commerce market in Bangladesh a unique case study regarding the adoption and development of e-commerce for emerging markets. An e-commerce business model that adopts the strength of emerging markets presents some interesting research questions such as:

- What are key growth catalysts for the e-commerce marketplace in Bangladesh
- What economic and regulatory challenges are affecting the e-commerce market in Bangladesh
- How is the arrival of the subscription economy affecting e-commerce
- What are the business strategies and characteristics of an e-commerce business model adapted to emerging markets
- What is the evaluation of existing e-commerce platforms in Bangladesh from the perspective of this model

The core objective behind the research is to identify, understand, and propose an appropriate business model for e-commerce platforms in emerging markets like Bangladesh. Another core aspect of the research is to contextualize the core growth catalysts and the challenges of emerging e-commerce markets. The research tries to understand these aspects and elaborate on their significance. The research additionally explores the growing importance of the subscription economy and how e-commerce must adapt to a subscription-centric future. Finally, the research uses these insights to create and propose its augmented scope business model for e-commerce platforms in emerging markets and uses the model as a reference to analyze existing e-commerce platforms using the e-commerce market in Bangladesh as a reference point.

## Literature Review

Several studies have been done regarding e-commerce platforms, including aspects such as marketplace dynamics, adoption, growth dynamics, and prediction models in more mature markets, as well as some emerging markets. Tian *et al.* (2018); Akhlaq and Ahmed (2015); Boateng *et al.* (2009); Sergi *et al.* (2019) observe different types of business models for e-commerce platforms and increase the perception of consumer preference regarding online sales channels. The research covers several business models, including marketplace, inventory, hybrid models, and merchant preferences regarding e-commerce sales models. However, these studies do not fully explore hybrid models or suggest

strategic improvements. Various papers have tried to contextualize and observe e-commerce businesses in growing economies. Gibreel *et al.* (2018); Bourlier and Gomez (2016); Algharabat and Rana (2020) analyze emerging e-commerce platforms using discovery analysis and engagement metrics for social and e-commerce platforms. These papers observe e-commerce platforms in China, Central Asia, and South America. However, they lack an in-depth analysis of a growing and emerging market like Bangladesh. Some studies have been conducted on the e-commerce marketplace in Bangladesh and dynamics in The Daily Start (2021); IDLC (2018); Liu *et al.*, (2017) discuss aspects of the Bangladeshi e-commerce market, such as market growth, business models, payment platforms, localizations, and pricing dynamics. These papers use the Indian and Chinese markets and their historical growth as a point of reference for comparing growth dynamics and strategic evaluation. They do not accurately represent the Bangladeshi market dynamics due to their divergence in scale compared to platforms in India and fail to explore business strategy improvements. Islam *et al.* (2022) contextualize Bangladeshi e-commerce from a global perspective and provide a thorough analysis of market and regulation challenges and analysis of local business strategies. However, it does not provide a detailed business model or outline for e-commerce platforms in Bangladesh. Victor *et al.* (2018) analyze the Chinese and Indian e-commerce market from the pricing viewpoint and how pricing dynamics affect e-commerce growth and consumer value perception. Several papers have been done regarding the future of e-commerce platforms and the importance of factors such as artificial intelligence, machine learning, and the growing role of behavioral analysis. Khrais (2020) looks at how consumer data analysis and the implantation of adaptable AI models in e-commerce platforms can help increase customers' usability and sales. However, the papers do not explore these technologies' importance, viability, and effect on emerging markets. Qin *et al.* (2020) look at the growing importance of logistics and behavioral analysis for e-commerce platforms and how logistical analysis can be used for business strategies and increase usability, while (Maziriri and Chuchu, 2017) look at how purchase decisions can be affected by consumer psychology and risk perception. Regarding risk evaluation for e-commerce platforms, (Das and Tripathy, 2016; Jusoh and Ling, 2012) look at consumer perception and trust regarding e-commerce business models along with the validity of concerns and historical data regarding e-commerce risk factors. However, these papers don't consider any emerging markets. Several studies have been done on the growing

importance of CRM and behavioral analysis, as well as the rise of subscription economies and a service-centric business marketplace. Boateng *et al.* (2009); Liu *et al.* (2017); Sundström and Radon (2016) cover the growing importance of consumer perception and analysis and how increasing consumer loyalty can boost sales and long-term revenue. They also discuss how increasing consumer satisfaction and value can be used to extend e-commerce services and adapt towards a service-centric business model based on consumer relationships over traditional sales. However, these studies do not take emerging market dynamics into account.

## Analysis of Growth Catalysts for E-Commerce Platforms in Bangladesh

Certain factors and market dynamics have accelerated Bangladesh's e-commerce market expansion through the last decade. Proper examination is critical to identifying valuable insights regarding the growth of e-commerce platforms in Bangladesh. Figure 1 highlights some of the key growth catalysts for e-commerce in Bangladesh:

### Growing Internet Penetration

The growth of 3G and 4G internet connectivity has played a pivotal role in driving significant economic growth throughout the past decade. According to a report published by IDLC (2018), the adoption of mobile internet services in the country has exceeded 66%. Notably, since 2012, there has been a steady year-on-year increase of 19.4% in the adoption of 3G networks, resulting in an estimated user base of approximately 87.4 million people by 2018. Furthermore, 2018 marked the initiation of the country's rollout of 4G networks across multiple service providers.

It is important to clarify that these figures represent the overall penetration of mobile internet services, rather than the number of active users. Among the approximate 24% of individuals who have access to the internet, only around 8.7% are reported as active monthly users. Nonetheless, this still signifies a substantial portion of the

population with access to high-speed internet, enabling them to avail themselves of diverse over-the-top services and engage in e-commerce activities.

### High Smartphone Penetration

The proliferation of smart devices has emerged as a major catalyst propelling the expansion of internet usage and services within Bangladesh. As reported by IDLC (2018), the nation currently exhibits a sizeable populous of approximately 170 million mobile connections, of which 90 million pertain to distinct subscribers, resulting in a penetration rate of 54 percent as of the end of December 2018. The advent of smartphone adoption has given access to mobile services and facilitated the integration of high-speed internet connectivity. Furthermore, it has been instrumental in cultivating a more informed populace regarding the usage and adoption of these services, while simultaneously serving as a gateway to their immersive potential, encompassing realms such as mobile payments and e-commerce.

### Growing Middle Class and Youth Population

Bangladesh represents a promising emerging economy characterized by a growing middle class. The country's economic landscape has undergone significant transformations, encompassing shifts in consumer behavior and patterns of consumption. Notably, there has been a considerable surge in the lower and middle classes, who exhibit increasingly consumer-centric tendencies. This growth in economic stature, coupled with augmented disposable incomes and the expanded availability of luxury goods and services, has precipitated a noteworthy upswing in consumption levels among the populace. Furthermore, this trend extends to encompass services and e-commerce, wherein the proliferation of mobile services and internet connectivity has brought about a shift in consumption and associated behaviors. As a result, e-commerce companies have experienced heightened business activity as they provide convenient, round-the-clock access to a diverse array of goods and services.

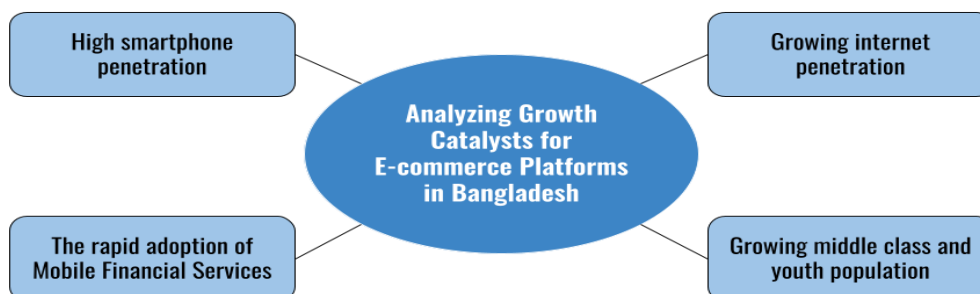


Fig. 1: Illustration of growth catalysts for the Bangladeshi e-commerce market

### Embracing and Adopting MFS Platforms

One of the most significant technological advancements in Bangladesh has been the rapid adoption of mobile transactions through MFS platforms. MFS platforms, also known as Mobile Financial Services platforms, refer to digital systems that enable individuals to perform financial transactions and manage their money using mobile devices such as smartphones. MFS has attained a pervasive presence, facilitating payments across governmental platforms and commercial mediums. Noteworthy examples in Bangladesh include bKash, Nagad, and Rocket, with bKash currently dominating the market while Nagad and Rocket experience substantial growth (Khan *et al.*, 2023). MFS platforms have also been accepted as the primary payment method across multiple government institutions and businesses. The rapid internet penetration and smart device adoption have also led to e-commerce platforms accepting MFS platforms as a major and often primary payment method. This has led to a massive increase in e-commerce usage across Bangladesh due to the accessibility and convenience of MFS payments (Khan *et al.*, 2023).

### Challenges Faced by E-Commerce Platforms in Emerging Markets like Bangladesh

E-commerce platforms in Bangladesh face several critical growth issues and challenges compared with other emerging markets. Understanding these challenges is crucial to formulating any solution or concept regarding sustainable business practices for e-commerce platforms and services in the country. Figure 2 shows an associative Illustration of the growth and regulation challenges faced by e-commerce platforms in Bangladesh.

### Migrating Brick and Brick-and-Mortar Merchants to an Online Sales Model

Migrating brick-and-mortar merchants to an online sales model is a critical endeavor for the development of a thriving marketplace-based e-commerce platform. The success of such a platform relies heavily on the presence of a diverse array of competing merchants. However, in emerging markets like Bangladesh, many small or medium-scale merchants lack familiarity with e-commerce or online sales models. Consequently, e-commerce platforms in these markets struggle to attract a wide variety of merchants and suffer from a lack of product diversity (Boyer *et al.*, 2005). Moreover, the inexperience of these merchants hampers the adoption of e-commerce platforms and slows down market growth.

### Lack of Investment and Starting Capital

A prominent issue faced by e-commerce platforms in emerging markets, including Bangladesh, is the insufficient investment and capital available to support their operations. Unlike established markets with tech giants and well-funded domestic brands, emerging markets lack the resources required to create, promote, manage, and operate e-commerce platforms at scale. This becomes particularly problematic for business models like e-commerce, where the initial phase demands substantial resources but generates minimal revenue. Companies in markets like Bangladesh encounter challenges in securing funding due to the scarcity of local investors and general unfamiliarity with the e-commerce business model. Furthermore, these companies face difficulties in going public and attracting investments through stocks due to their early-stage financial state and limited revenue generation, making them unappealing to most investors.

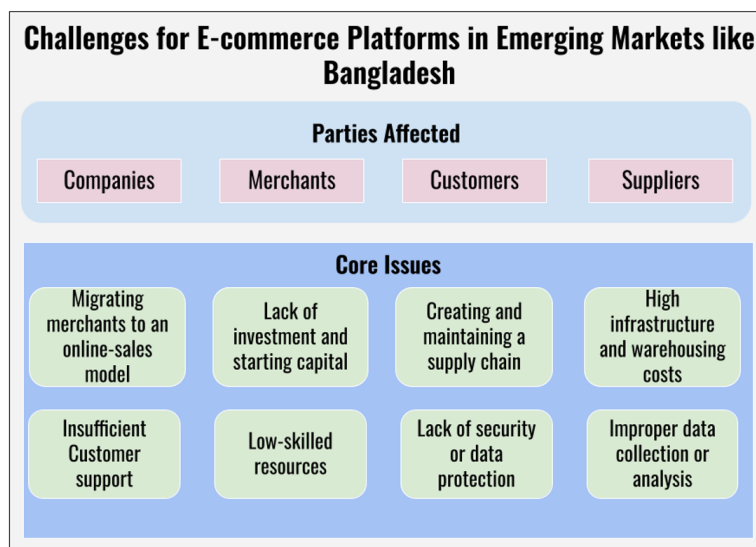


Fig. 2: E-commerce growth and regulation challenges of the Bangladeshi e-commerce market

### *Creating and Maintaining a Supply Chain*

The establishment and maintenance of a robust supply chain are crucial for the success of any e-commerce platform. By constructing a reliable network of suppliers and implementing effective supply chain management, e-commerce platforms can make well-informed business decisions and optimize costs. However, in emerging markets with smaller economies, companies struggle to ensure timely shipments, often falling behind more established brands in established markets. Moreover, smaller platforms in emerging markets encounter challenges in negotiating favorable terms with suppliers, leading to higher costs and delays in shipments. These issues are further exacerbated during periods of shortages, where both prices and delays escalate exponentially (Voccia *et al.*, 2019).

### *High Infrastructure and Warehousing Costs*

E-commerce businesses of considerable scale rely on physical infrastructure, including warehouses, for product storage and distribution. Well-planned location-based strategies and investments in infrastructure enable efficient delivery and storage systems, enhancing the quality of service provided. Nevertheless, e-commerce platforms encounter difficulties in establishing physical infrastructure due to the high costs involved, time constraints, and taxation complexities. Companies in emerging markets face particular challenges in implementing adequate infrastructure due to these limitations, which can result in various issues as the e-commerce platform expands, such as inventory shortages and failed delivery deadlines.

### *Insufficient Customer Support*

Another significant challenge faced by e-commerce platforms in emerging markets is the lack of sufficient customer support systems. Many e-commerce platforms in these markets do not possess a well-developed customer service infrastructure or service centers. The absence of adequate customer support adversely affects the shopping and service experience on these platforms, impeding their ability to establish consumer trust. Customers who encounter inadequate support or unsatisfactory experiences are less likely to make repeat purchases or utilize additional services, thereby harming the platform's reputation and long-term viability.

### *Low-Skilled Resources*

Emerging markets often struggle with a scarcity of trained and skilled human resources and employees. Talent migration and talent drain pose significant challenges to these markets, impacting various sectors including technology-driven industries such as e-commerce platforms. Companies operating e-commerce platforms in emerging markets face difficulties in acquiring skilled and

experienced professionals in areas such as development and data analysis. This dearth of talent hinders the growth potential of these platforms compared to their counterparts in more developed markets.

### *Lack of Security or Data Protection*

E-commerce platforms in emerging markets confront growing concerns regarding security and data protection, particularly concerning consumer data and credentials. Such issues commonly arise from inadequate security infrastructure, lack of data encryption, security malpractices, or vulnerabilities stemming from legacy systems. E-commerce platforms in these markets often suffer from subpar data security and storage measures for both consumer and enterprise data. This exposes customers to risks such as security breaches, insider fraud, and large-scale data hacks, resulting in the compromise of personal information such as phone numbers, credit card details, and other sensitive data. Consequently, the affected companies become liable and experience damage to their reputation, while data breaches can expose trade secrets and lead to resource losses (Fatema and Syeed, 2019; Guinness *et al.*, 2015).

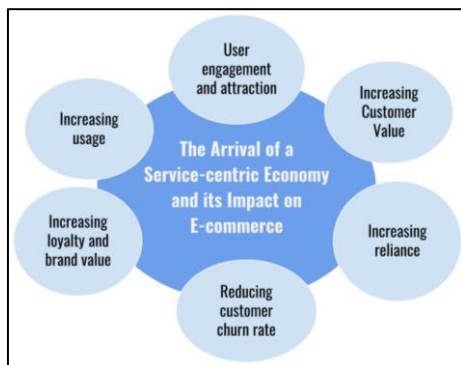
### *Lack of Data Collection or Analysis*

With the world moving forward into the 4<sup>th</sup> Industrial Revolution, data collection and analysis have become crucial components of service-centric businesses, including e-commerce platforms. The ability to utilize data and analytics effectively is essential for their success. However, e-commerce platforms in emerging markets encounter challenges in implementing these concepts due to limitations in data collection scale and infrastructure. Furthermore, the scarcity of trained resources and the expenses associated with analytics and cloud services compound the difficulties faced by these platforms in leveraging data-driven insights effectively.

## **The Arrival of a Service-Centric Economy and Its Impact on E-Commerce**

As subscription-centric business models have grown in popularity, there has also been a significant shift in customer interaction and sentiment regarding online services, including e-commerce platforms. As consumer preferences and behaviors continue to evolve, e-commerce platforms must also adapt their business models, operations, and software to better cater to changing customer needs. In regard to subscription-centric business models, the operations of an e-commerce platform have to make some drastic changes to shift from a sales-centric business model where the focus lies on aspects such as basket size, product margins, or volume sales to aspects such as service subscriptions, customer retention, after-sales service, and customers segmentation.





**Fig. 3:** Illustration of core factors in the subscription economy

Shifting to a subscription-based business requires e-commerce platforms to commit to implementing disciplines of the subscription economy. Implementing these aspects must be done at the organizational, operations, software, and service level to achieve true vertical integration and create a platform that is built with the subscription economy in mind. Figure 3 highlights some of the core factors e-commerce platforms must consider when transitioning their business to a subscription economy-optimized model.

#### *User Engagement and Attraction*

The primary objective for e-commerce platforms is to establish synchronization with their user base and harmonize each interaction point throughout the user's service experience. In order to prosper within this environment, e-commerce companies must adopt a vertical customer experience towards their consumer base, achieving synchronization of their business and operational strategies. If companies are able to successfully archive this streamlined approach, they can easily adapt their e-commerce platforms to be optimal for subscription business models.

To begin with, comprehending the value perception of consumers is fundamental. By understanding how consumers perceive the value of products and services, e-commerce platforms can discern the extent to which a product's actual value aligns with the consumer's perspective. An e-commerce platform's ability to adequately comprehend and predict value directly influences its capacity to respond to market trends. Thus, platforms can leverage user data and insights from their customer demographic, which is imperative for e-commerce platforms to establish value comprehension for their platform.

Equally essential is the creation of compelling value propositions. This entails a comprehensive analysis of user purchasing habits and trends in order to craft enticing sales campaigns or offers. E-commerce platforms must consider how the perception of value is conveyed to users through every interaction point. By generating a favorable impression of the value inherent in an offer or service, e-commerce

platforms can effectively attract and engage existing and potential customers.

Moreover, establishing proper value engagement plays a pivotal role in maintaining a strong value proposition throughout the consumer lifecycle. As previously mentioned, the consumer lifecycle pertains to the duration for which a customer remains loyal to a platform and continues as an active subscriber. For subscription-based platforms, augmenting customer retention is of utmost importance. To ensure consumer loyalty and reduce the subscription churn rate, platforms must consistently provide compelling value propositions to existing customers, thereby fostering their continued subscription and increasing their lifetime revenue for the platform. By comprehending value perception, creating persuasive value propositions, and fostering proper value engagement, e-commerce platforms can effectively attract and retain customers, ultimately maximizing their revenue and success in the market.

#### *Increasing Customer Value*

The pursuit of augmenting customer value is a fundamental objective for e-commerce platforms. To achieve this, platforms must first ascertain the baseline value proposition for potential new users. Within the subscription economy, customer acquisition cost is a pivotal metric that includes determining the theoretical cost incurred by the e-commerce platform to acquire a new subscriber. Furthermore, it is imperative to establish the duration for which a user must remain a customer in order to recoup the original acquisition value invested in that customer. Once the platform reaches a break-even point within its operational cycle, it must consistently offer compelling value propositions to consumers. Extending the duration of a user's subscription is quantified as consumer lifetime value, which holds great importance for the profitability of subscription-based services. To increase the customer lifetime value, platforms must concentrate on specific facets of their sales and service operations. These core factors play a critical role in delivering and capitalizing on consumer satisfaction.

#### *Increasing Service Usage and Engagement*

The significance of increasing service usage time and feature engagement within e-commerce platforms operating under the subscription-based model cannot be overstated. Extended periods of active engagement with the service are instrumental in driving customer interaction with the platform. This, in turn, leads to a tangible impact on sales and subscription numbers, contributing to the platform's overall success. As customers spend more time utilizing the service, the internal value proposition of the platform becomes more apparent and compelling. Consequently, customers are more inclined to view the service as a necessity rather than a discretionary indulgence, resulting in a higher probability of subscription retention.

As customers spend more time with the service, they become more familiar with its intricacies and unique capabilities. This heightened familiarity further solidifies the value proposition of the service in the customers' minds, leading them to recognize its indispensability in fulfilling their specific needs and preferences. The transition from perceiving the service as a discretionary luxury to an essential necessity reflects a significant shift in customer perception, increasing the likelihood of long-term subscription retention.

The implications of increasing service usage and engagement extend beyond immediate revenue gains. By focusing on enhancing user experience and fostering a sense of necessity, e-commerce platforms can cultivate a loyal customer base that actively advocates for the service and exhibits reduced churn rates.

#### *Increasing Close Service Coupling and Reliance*

Close integration between multiple services and features is a key part of building subscription-based business models. Subscription-based platforms typically do this by centralizing around a core service first and then building complementary services and features around the core features. This can be effective as this leverages the core services audience and slowly filters them to these new services or compliments. A great example is Amazon Prime service, which originally started out as a same-day shipping service, later adding services such as Kindle Unlimited, Amazon Prime Video, Amazon Prime Music, Audible, and others to create a diverse selection of services, all completing each other with vertical integration of features and payments, ensuring a unified customer experience.

#### *Increasing Loyalty and Brand Value*

Cultivating customer loyalty and fortifying brand equity represent fundamental imperatives for subscription-based e-commerce platforms. These platforms must consistently uphold the quality of their products and services to retain their customer base. Furthermore, they must adapt to prevailing market trends and competitive forces in order to ensure ongoing competitiveness. Offering comprehensive customer support and post-purchase services assumes significant importance in fostering enduring customer loyalty. Moreover, platforms must strive to establish a consistent public image and brand identity, which is paramount in attracting a desirable customer base.

#### *Reducing Customer CHURN Rate*

Customer turnover or churn refers to the loss of customers or subscribers in a given period over subscribers gained. The churn rate is a critical metric in

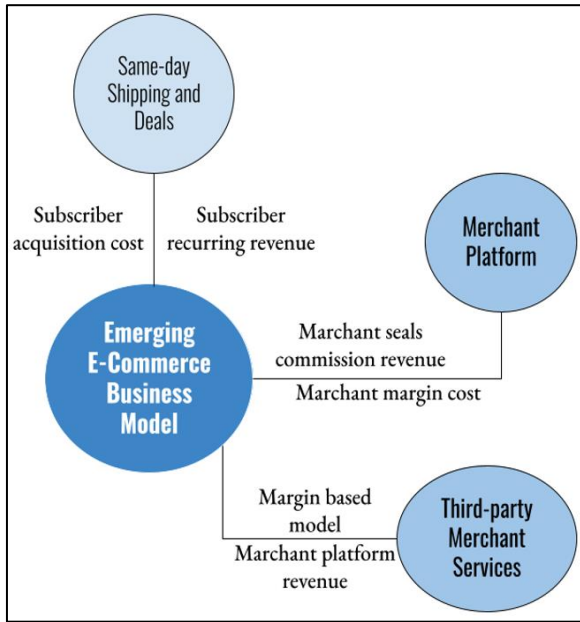
evaluating a subscription-based business model, particularly e-commerce. The goal for any subscription business is reducing customer churn and increasing customer growth. However, customer churn can still be useful for e-commerce platforms as valuable insights regarding customer sentiments toward their services. Companies who are able to properly identify reasons behind customer churn can make agile business decisions and optimize their business to dynamic and unpredictable business environments (Syeed *et al.*, 2021).

### **Augmented Scope Model for E-Commerce Platforms in Emerging Markets**

The proposed e-commerce business model for emerging markets is based on the subscription and service-focused economy, with some features and market dynamics common in emerging markets, addressing weaknesses and limitations of e-commerce platforms highlighted in Table 1. This e-commerce business model has several service and growth branches that are added incrementally over the e-commerce platform's lifespan, ultimately forming an ecosystem of services. This incremental model gradually adds these sub-portions of services, which can help by providing several pivots and new growth opportunities through leveraging an existing or growing customer base (Syeed *et al.*, 2021). As each phase augments the previous one, we have decided to refer to it as the augmented scope e-commerce business model.

**Phase 1:** In this phase, the e-commerce platform will operate as a typical marketplace model by providing a place for vendors to sell or showcase their products. The pricing strategy for the merchant platform can be tiered based on business size and capacity. One differentiating factor is that besides the standard sales commission, the platform will utilize the merchant platform as a service. The merchant platform revenue adds another revenue stream independent of sales and provides the e-commerce platform with additional revenue sources at the start.

In terms of sales, the e-commerce business model can also integrate offers and subsidies optimized for emerging markets. For example, it can offer discounts through gift cards or a separate subscription. With some regular offers behind subscriptions, customers would feel an incentive to get a subscription to access these offers. Over time, unsubsidized offers can be locked behind subscriptions to help manage costs while also leaving the flexibility to offer discounts and gain revenue from parallel sales and the subscription or card revenue. Using gift cards for currency is an alternative to subscriptions in the early phase for emerging markets, as the subscription economy is still in early progression. Figure 4 shows the start of the business model.



**Fig. 4:** Phase 1 of the augmented scope model for e-commerce platforms in emerging markets

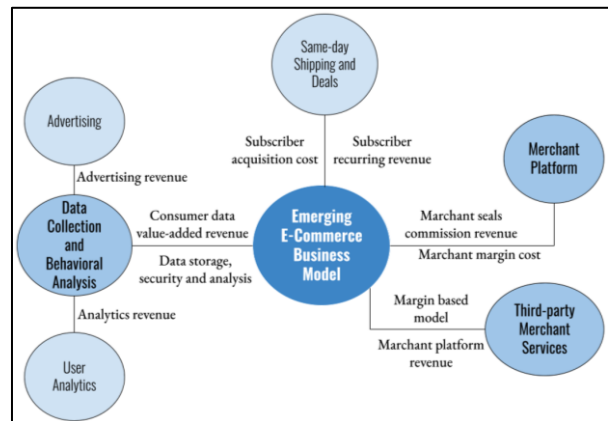
**Phase 2:** In this phase, e-commerce has developed merchant, sales, and delivery chains. The platform can use the matured delivery chain to offer premium shipping services to certain locations. For example, if there is a delivery station in a city, the platform can experiment with same-day shipping. This can be done in a traditional same-day shipping toggle with an additional charge or can be given as an additional service with a monthly charge as a subscription or even kept in parallel with each other. Having both options in parallel gives customers more choice and acts as a value proposition for the subscription. This presents another opportunity for the e-commerce platform to gain monthly recurring revenue. Moreover, this subscription can be later augmented with other services as well.

**Phase 3:** The e-commerce platform has matured and has a stable merchant and sales model in a traditional phase. Now it can utilize its digital assets such as user data and advertising. The e-commerce platform can use advertising as a resource. For example, paid promotions or sponsored content can be a source of additional revenue. Having an option for merchants to feature products or services with paid promotions can be an additional premium feature of their merchant subscription. Easy integration with this service adds another branch to the ecosystem of services.

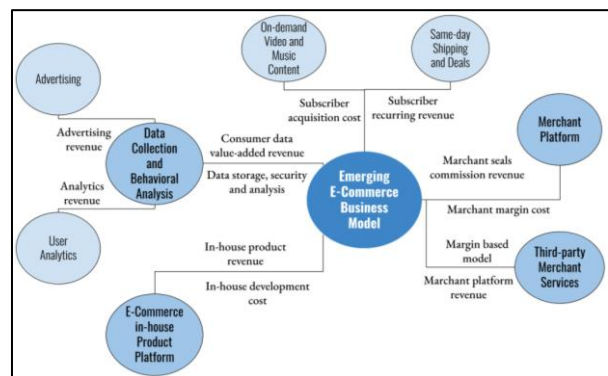
The platform can also utilize its growing consumer data as an additional asset. Consumer data analysis can optimize services better and give customers more timely suggestions. However, this data is an asset as various advertising platforms, analyst firms, and other parties are

willing to purchase analytics data for market research. While questions of consent and lawful data collection are involved, this can be another additional revenue stream for the e-commerce platform. Figure 5 shows the state of the model after phases 2 and 3.

**Phase 4:** The e-commerce platform has some maturity with sales, delivery, and merchant ecosystem. Now the platform can diversify into other services and in-house development or products. In-house development can extend to creating first-party products, services, or content. Producing first-party goods or services can be lengthy and cost-sensitive. However, this can be augmented with licensed manufacturing, where the platform lends its name to a product and the manufacturer handles the production (Fatema *et al.*, 2020). Regarding content, the platform can partner with existing subscriptions to offer bundle services. In this stage, the revenue from bundles might be minuscule, but introducing services is the platform's primary goal in this phase. Figure 6 shows what the model looks like after the completion of phase 4.

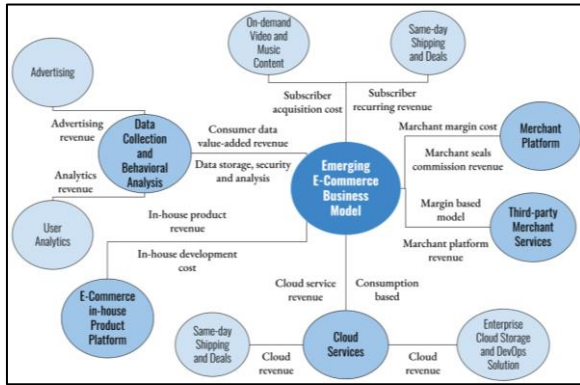


**Fig. 5:** Phases 2 and 3 of the augmented scope models for e-commerce platforms in emerging markets

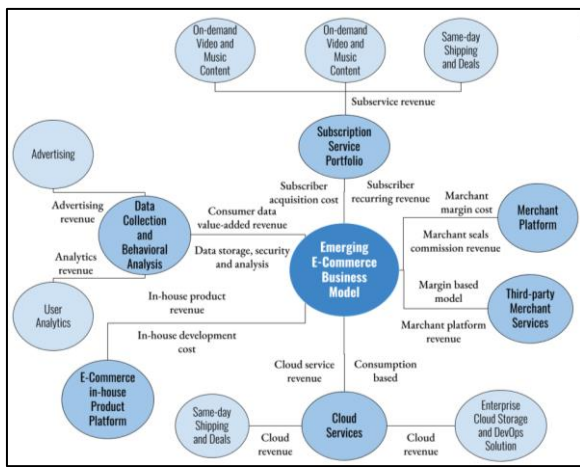


**Fig. 6:** Phase 4 of the augmented scope model for e-commerce platforms in emerging markets





**Fig. 7:** Phase 5 of the augmented scope model for e-commerce platforms in emerging markets



**Fig. 8:** Completed version of the augmented scope model for e-commerce platforms in emerging markets

**Phase 5:** In this phase, the e-commerce platform can diversify into services and create additional subscription options for its suite of services. The platform can leverage its cloud storage resources and use them as a resource to provide cloud storage services from its implementation to customers or merchants. This service can be integrated into the customer and merchant platform subscriptions as an additional tier, adding more value to the subscription. Cloud services could be given to merchants for enterprise use cases. This lets the e-commerce platform adapt to both consumers and businesses, growing their potential business market and giving it more flexibility. Figure 7 shows the state of the overall model considering the phase

**Phase 6:** The e-commerce platform will extend its services as a bundle in this phase. With the growing popularity of software service bundles, providing a bundle for all services can help the platform deliver a convenient one-subscription solution for its customer base. It can act as an entryway to its ecosystem and, with common payment and user accounts, it provides users with a streamlined business. This lets the e-commerce platform

increase consumer lifetime revenue from its existing consumer base while lowering its dependency on sales.

Figure 8 shows what the completed version of the augmented scope e-commerce business model for emerging markets looks like.

### *Advantages of Augmented Scope Business Model for E-Commerce*

- **Sustainability through recurring subscription revenue:** In the context of an augmented scope model for emerging e-commerce, sustainability is achieved through a recurring subscription revenue approach. The augmented scope model leverages the benefits of monthly subscribers and service users, which generates a steady stream of monthly recurring revenue. This consistent influx of revenue is a key advantage for e-commerce platforms, addressing the challenges associated with limited capital and unpredictable sales patterns

The recurring subscription revenue not only provides financial stability but also serves as a valuable indicator of the platform’s overall growth in terms of services and subscriptions. By relying on this model, e-commerce platforms can reduce their reliance on traditional sales channels, gradually shifting towards more digital revenue streams. This transition allows them to make progress towards a sustainable business model that is less susceptible to sales irregularities and capital limitations, ensuring a more reliable and resilient future for the platform:

- **Increased customer retention and value proposition:** In the context of an augmented scope model for e-commerce, subscription-based business models play a crucial role in establishing brand value and fostering long-term customer loyalty. Beyond their initial purpose, these models also serve as effective marketing tools, enhancing the company’s reputation. Companies that adopt subscription models often report higher customer satisfaction rates and increased customer engagement, both of which contribute to shaping the brand image of the platform. Moreover, the data collected from the subscription base enables companies to make informed business decisions and implement new features. This model not only generates significant value for the company but also ensures a steady stream of revenue

Furthermore, the augmented scope model for e-commerce offers companies the flexibility to adapt and evolve their services. If a subscription service becomes unprofitable or stagnates, companies can pivot by selling the subsidiary to a competitor. This strategic maneuver allows companies to capitalize on the existing user base while transitioning to a more promising venture, maintaining business continuity.

In addition to these advantages, companies can leverage their existing user base to migrate users from an older, stagnant platform to a newer service by offering a better value proposition. The user base itself holds great value for an e-commerce platform, contributing to its overall value proposition. By cultivating a positive brand image and prioritizing customer satisfaction, the platform becomes more attractive to potential new users and gains their trust. Users are more likely to willingly share personal information and consent to data tracking with companies they trust, creating an additional business value stream for e-commerce brands:

- **Increasing Lifetime Customer Value:** In the context of an augmented scope model for e-commerce, an important aspect is understanding the concept of Lifetime Customer Value (LCV). LCV refers to the total value that a customer is expected to spend on the platform or its products over the course of their relationship with the platform. It goes beyond just considering the monthly payment amount made by the customer

Throughout a customer's journey with a service, they provide valuable data and feedback, which can be used by e-commerce platforms to make informed adjustments. By properly analyzing the Lifetime Customer Value, e-commerce platforms can gain insights into customer behavior, preferences, and patterns. This enables them to make practical marketing strategies, optimize product placements, and create new services and features that align with their customers' needs and desires.

By focusing on LCV, e-commerce platforms can foster long-term relationships with their customers and capitalize on their potential for contributing to the platform's growth. Understanding why existing customers remain loyal and engage with the platform's services allows the platform to attract new customers by effectively communicating its value proposition and delivering a personalized experience that resonates with its target audience. In this way, the augmented scope model emphasizes the importance of leveraging Lifetime Customer Value to drive sustained growth and enhance the overall customer experience in the e-commerce ecosystem:

- **Creating an ecosystem of services and monetizing the existing user base:** In the context of an augmented scope model for e-commerce, a key strategic advantage lies in the creation of an ecosystem of services and effective monetization of the existing user base. By expanding beyond the core subscription offering, e-commerce platforms can unlock additional growth opportunities

One significant benefit of this approach is the ability to introduce complementary add-in services and bundled offerings that enhance convenience and user experience. Leveraging the existing services and customer base, e-commerce platforms can seamlessly integrate these complementary services, providing users with a cohesive and convenient ecosystem. By offering such additional services, the platform increases the likelihood of adoption among existing subscribers, leading to the growth of these new services while extracting more revenue from each customer (Fatema *et al.*, 2020).

Building an ecosystem of services also contributes to the brand presence and facilitates exponential growth for the e-commerce platform. When customers heavily invest in a range of services within the ecosystem, they become less likely to migrate to competitors due to the lack of integration and the inconvenience of switching. This promotes customer retention and loyalty.

By establishing and investing in an ecosystem, e-commerce platforms can simultaneously increase customer retention and boost monthly recurring revenue per customer. Successful implementation of such an ecosystem can ultimately lead to long-term profitability for the platform, as it fosters a sustainable and interdependent relationship with its user base:

- **Having multiple business pivots:** The augmented scope model offers e-commerce platforms the significant advantage of having multiple business pivots, ensuring resilience in the face of potential failures in specific strategies or branches. By incorporating a range of services alongside traditional sales, businesses gain enhanced flexibility and adaptability. This allows them to capitalize on evolving market dynamics and customer preferences. For instance, by leveraging consumer statistics and analytics, companies can identify the services that generate the highest lifetime customer value. With this valuable insight, they can gradually optimize their overall strategy, strategically shifting customers towards these high-value services. By doing so, they not only maximize their revenue potential but also strengthen customer loyalty and satisfaction

Furthermore, given the dynamic nature of the e-commerce landscape, businesses must adopt a vigilant and proactive stance in identifying shifts or obsolescence within specific business ventures. Rather than passively losing customers from declining sectors, companies that embrace the augmented scope model possess the capability to redirect a substantial portion of their customer base toward emerging or alternative options. This empowers them to

cannibalize their own customer base, deftly transitioning customers towards more profitable services while effectively safeguarding their overall business. This agile approach assumes a critical role in preventing companies from succumbing to obsolescence or experiencing a loss of market share when confronted with shifting market paradigms or a waning interest in certain services. By perpetually evaluating and adapting their offerings in alignment with market trends, customer demands, and emerging opportunities, businesses can ensure their sustained relevance and competitiveness within the dynamic e-commerce landscape.

Overall, the augmented scope model bestows upon e-commerce platforms the capacity to pivot, optimize,

and cannibalize their business strategies, thereby securing their continued success amidst market uncertainties and the ever-evolving preferences of customers.

## Evaluation of E-Commerce Companies in Bangladesh Under the Augmented Scope Model

To fully highlight the standing and state of current e-commerce platforms in the Bangladesh market Table 1. Compares some of the most prominent e-commerce brands in Bangladesh using their market standing and key limitations.

**Table 1:** Classification and limitations of e-commerce platforms in Bangladesh

Company	Type	Category	Current state and limitations
Daraz	B2C	Marketplace	Daraz is a subsidiary of Alibaba, thereby possessing significant growth potential and access to abundant resources While the platform has garnered attention in Bangladesh, it has not sustained substantial growth over time The platform lacks a centralized offer system or any specific subscription dedicated to offers It does not provide a robust same-day shipping option, which may affect the promptness of product deliveries Daraz follows a traditional marketplace model, resembling a conventional online marketplace It does not offer any subscription tailored to merchants for merchant-based services Apart from traditional e-commerce, the platform does not provide a comprehensive range of service-based options The platform has not succeeded in establishing an ecosystem of services beyond the realm of e-commerce
Ajker Deal	B2C	Marketplace	Ajker Deal operates as a subsidiary of Bdjobs.com, establishing its association with a reputable organization The platform has encountered challenges in implementing an effective same-day shipping model, which may impact the timeliness of product deliveries Ajker Deal lacks a centralized offer system or any subscription specifically designed for offers, limiting its ability to provide tailored promotional benefits to its customers The absence of a robust same-day shipping option further diminishes the platform's capacity to meet urgent delivery requirements Ajker Deal adheres to a conventional marketplace model, resembling the structure of a traditional online marketplace It does not offer any merchant subscription catering to merchant-based services, thereby limiting opportunities for collaboration and specialized services for merchants Apart from traditional e-commerce, Ajker Deal does not provide a comprehensive array of service-based options, leaving customers with limited choices beyond product purchases Ajker Deal has not succeeded in establishing an ecosystem of services beyond the realm of e-commerce, potentially missing out on opportunities to provide a diverse range of offerings to its customer base
Evaly	B2C	Marketplace	Evaly is an E-commerce platform that helped popularize e-commerce in Bangladesh In 2020, Evaly reported having over 3.5 Million unique users The platform also boasted over 10,000 registered merchants The platform lacks a robust same-day shipping option The platform follows a traditional marketplace model The platform does not have any merchant subscription for merchant-based services The platform failed to utilize a proper subsidized offer policy and accumulated losses The company failed to create a warehouse and delivery infrastructure to match its order capacity The company's services failed to leverage its existing customer base The company declared bankruptcy in 2021, before resuming operations in late 2022
ChalDaal	B2C	Grocery, Food	ChalDaal is an online grocery-focused e-commerce platform in Bangladesh ChalDaal started operations in 2013 ChalDaal places a heavy emphasis on fresh produce including meat, fish, fruits, vegetables, and other cooking essentials The service is delivered all across Dhaka and some other districts in Bangladesh The platform only focuses on groceries and lacks e-commerce marketplace products
Pickaboo	B2C	Marketplace	The platform lacks any sort of services beyond e-commerce sales and services Pickaboo.com is a Bangladeshi e-commerce platform established in 2016 It sells a diverse catalog of marketplace e-commerce products The platform lacks any innovative business operations outside of traditional e-commerce sales It lacks robust logistics capabilities and delivery services
Bikroy.com	B2C, B2A	Marketplace, Advertisement	Bikroy.com is a Bangladeshi e-commerce platform established in 2012 Bikroy.com is currently owned by Swedish conglomerate Salt Side Technologies which purchased it in 2015 The company merges C2C and B2C business marketplaces The company lacks any genuinely original or in-house digital service or subscription The company lacks any complementary services besides core e-commerce The company lacks any merchant or seller-focused service that leverages their needs
Rokomary.com	B2C	Marketplace, Books	Rokomari.com is an e-commerce platform in Bangladesh primarily focused on selling books It started its operations in 2012 While focusing primarily on books, it later diversified its portfolio by selling other education and learning products Initially, it only sold books but later expanded its portfolio
Sindabad.com	B2B	Marketplace, Wholesale	The company lacks any significant market share to implement an ecosystem of services Sindabad.com is a leading B2B e-commerce platform in Bangladesh It primarily works with factories, suppliers, SMEs, and manufacturers directly The company boasts a client base of 5,000 corporate customers and 4,200 BME customers

**Table 1:** Continue

Othoba.com	B2C	Marketplace	<p>The company lacks any service-based option besides the traditional marketplace                      The company is limited to a B2B scope                      Lacks any compelling service focused on B2B business needs that complement sales</p> <p>Othoba.com was established in 2015 as an electronic commerce platform, primarily focusing on offering a restricted range of PRAN-RFL products through an online store. Over time, the platform expanded its operations and evolved into a prominent online marketplace in the country</p> <p>It now encompasses a diverse array of products sourced not only from its proprietary production line but also from various merchants nationwide</p> <p>Othoba.com has significantly contributed to reshaping the online shopping landscape in Bangladesh, providing consumers with an extensive selection of goods that spans from every day groceries to industrial commodities</p> <p>It boasts over 3.5 million visitors a month</p>
Shohoz.com	B2C	Marketplace, Travel	<p>The platform lacks proper order management and scalability</p> <p>Shohoz.com is the exclusive property of Shohoz Limited and serves as a distinguished provider of online travel services, dedicated to facilitating seamless and hassle-free long-distance travel within Bangladesh. Shohoz.com holds the distinction of being a trailblazer in the realm of online travel by offering convenient access to bus tickets and activation tickets</p> <p>Shohoz.com extends its offerings to encompass the domain of entertainment, where it provides movie tickets, event tickets, and tickets for cricket matches</p> <p>The platform focuses solely on ticket sales, catering to a specific market niche</p> <p>Shohoz Limited does not possess any proprietary products or services, as its primary focus lies on delivering exceptional ticketing services</p> <p>The company does not offer any digital services that complement or enhance its ticketing offerings</p> <p>The platform is limited to ticket sales and has a specific market scope</p>

## Conclusion

This research tries to shed light on the increasing importance and growth of e-commerce within the context of a global shift towards digitalized and service-centric business models. The ability of e-commerce platforms to adapt to emerging markets and their dynamics emerged as a crucial factor influencing their growth and the overall industry. This research utilizes qualitative analysis and a comprehensive study to identify key characteristics of emerging markets including its strengths, weaknesses, and growth opportunities. It also analyzes existing e-commerce platforms in Bangladesh and proposes an augmented scope-based e-commerce business model to address their limitations. The model highlights strategies and techniques to effectively tap into emerging markets such as Bangladesh, the research showcases how e-commerce platforms must acquire a deep understanding of local markets and develop tailored business strategies and services that align with their specific needs while leveraging technological advancements such as artificial intelligence and robust security measures. Bangladesh serves as a unique and valuable case study within the realm of emerging markets, providing valuable insights into how e-commerce business models can be successfully applied in such contexts. By comprehending the nuances of the diverse emerging markets like Bangladesh, e-commerce platforms can effectively capture the attention and market share of both local and global consumers.

## Future Work

While the research constructed the augmented scope model for e-commerce from comprehensive qualitative research and theories, it requires additional data-driven validation to reinforce its findings. A decision matrix could be integrated within the analysis to further highlight

the advantages and drawbacks of the model in a more quantifiable format. The model highlighted in the research can be further compared to existing e-commerce business models in more advanced economies to highlight key strategic differences between emerging markets and first-world mature markets.

## Acknowledgment

We would like to acknowledge and give our warmest thanks to the RIoT research Center, IUB for facilitating the research.

## Funding Information

This research is funded by the RIoT Research Center, Independent University, Bangladesh, Dhaka, Bangladesh (<http://www.riot.iub.ac.bd/>).

## Author's Contributions

All authors equally contributed in this work.

## Ethics

The paper reflects the authors' own research and analysis in a truthful and complete manner. The paper properly credits the meaningful contributions of co-authors and co-researchers. The results are appropriately placed in the context of prior and existing research. All sources and related works are duly cited in the text.

## References

- Akhlaq, A., & Ahmed, E. (2015). Digital commerce in emerging economies. *International Journal of Emerging Markets*, 10(4), 634-647.  
<https://doi.org/10.1108/ijoem-01-2014-0051>

- Algharabat, R. S., & Rana, N. P. (2020). Social commerce in emerging markets and its impact on online community engagement. *Information Systems Frontiers*, 23(6), 1499-1520.  
<https://doi.org/10.1007/s10796-020-10041-4>
- Boateng, R., Molla, A., & Heeks, R. (2009). E-commerce in developing economies. In *Emerging Markets and E-commerce in Developing Economies* (pp. 1-56).  
<https://doi.org/10.4018/978-1-60566-100-1.ch001>
- Bourlier, A., & Gomez, G. (2016). Strategies for expanding into emerging markets with e-commerce.  
[https://unctad.org/system/files/non-official-document/dtl-eWeek2017c08-euromonitor\\_en.pdf](https://unctad.org/system/files/non-official-document/dtl-eWeek2017c08-euromonitor_en.pdf)
- Boyer, K. K., & Hult, G. T. (2005). Customer behavioral intentions for online purchases: An examination of fulfillment method and customer experience level. *Journal of Operations Management*, 24(2), 124-147. <https://doi.org/10.1016/j.jom.2005.04.002>
- Das, D. K. K., & Tripathy, P. (2016). Perceived importance of retail product attributes A context analysis of emerging retail formats. *International Journal of Advanced Research*, 4(8), 2022-2034.  
<https://doi.org/10.21474/ijar01/1419>
- Fatema, K., & Syeed, M. M. (2019). A Privacy Protected Platform to Aggrandize Micro-Business. *Journal of Computer Science*, 15(11).  
<https://doi.org/10.3844/jcssp.2019.1595.1606>
- Fatema, K., Syeed M. M., & Miah, S. U. (2020). Demography of Startup Software Companies: An Empirical Investigation on the Success and Failure. *International Journal of Computer Applications*, 176 (29).
- Gibreel, O., Al-Otaibi, D. A., & Altmann, J. (2018). Social commerce development in emerging markets. *Electronic Commerce Research and Applications*, 27, 152-162.  
<https://doi.org/10.1016/j.elerap.2017.12.008>
- Guinness, R. E., Kuusniemi, H., Vallet, J., Sarjakoski, T., Oksanen, J., Islam, M., Syeed, M. M., Halkosaari, H. M., Kettunen, P. & Laakso, M., R. (2015). MyGeo Trust: A Platform for Trusted Crowdsourced Geospatial Data. 28<sup>th</sup> *International Technical Meeting of the Satellite Division of The Institute of Navigation (ION GNSS)*, USA.
- IDLC. (2018). E-commerce of Bangladesh: Shaping the future of shopping.  
<https://idlc.com/mbr/article.php?id=136>
- Islam, A. S., Ahmed, S., & Khan, R. H. (2022). A review on e-commerce system in Bangladesh: An empirical study. *Proceedings of the 2<sup>nd</sup> International Conference on Computing Advancements*.  
<https://doi.org/10.1145/3542954.3542994>
- Jusoh, Z. M., & Ling, G. H. (2012). Factors influencing consumers' attitude towards e-commerce purchases through online shopping. *International Journal of Humanities and Social Science*, 2(4), 223-230.
- Khan, R. H., Haque, R. U., Syeed, M. M., & Uddin, M. F. (2023). Confirming secure interoperability in mobile financial services: Challenges of Data Federation and Cryptography based Solution, *World Conference on Smart Trends in Systems, Security and Sustainability*.
- Khrais, L. T. (2020). Role of artificial intelligence in shaping consumer demand in e-commerce. *Future Internet*, 12(12), 226. <https://doi.org/10.3390/fi12120226>
- Liu, F., Xiao, B., Lim, E. T., & Tan, C. W. (2017). The art of appeal in electronic commerce: Understanding the impact of product and website quality on online purchases. *Internet Research*, 27(4), 752-771.  
<https://doi.org/10.1108/intr-09-2016-0280>
- Maziriri, E. T., & Chuchu, T. (2017). The Conception of Consumer Perceived Risk towards Online Purchases of Apparel and an Idiosyncratic Scrutiny of Perceived Social Risk: A Review of Literature. *International Review of Management and Marketing*, 7(3), 257-365.
- Qin, X., Liu, Z., & Tian, L. (2020). The strategic analysis of Logistics Service Sharing in an e-commerce platform. *Omega*, 92, 102153.  
<https://doi.org/10.1016/j.omega.2019.102153>
- Sergi, B. S., Esposito, M., & Goyal, S. (2019). Literature Review of Emerging Trends and future directions of e-commerce in Global Business Landscape. *World Review of Entrepreneurship, Management and Sustainable Development*, 15(1/2), 226.  
<https://doi.org/10.1504/wremsd.2019.10019882>
- Sundström, M., & Radon, A. (2016). Utilizing the concept of convenience as a business opportunity in emerging markets. *Organizations and Markets in Emerging Economies*, 6(2), 7-21.  
<https://doi.org/10.15388/omee.2015.6.2.14219>
- Syeed, M. M, Khan, R. H., & Miah, J. (2021). Agile Fitness of Software Companies in Bangladesh: An Empirical Investigation. *International Journal of Advanced Computer Science and Applications (IJACSA)*, 12(2).  
<http://dx.doi.org/10.14569/IJACSA.2021.01202103>
- The Daily Start. (2021). E-Commerce of Bangladesh in the next five years: What to expect? (2021).
- Tian, L., Vakharia, A. J., Tan, Y., & Xu, Y. (2018). Marketplace, reseller, or hybrid: Strategic analysis of an emerging e-commerce model. *Production and Operations Management*, 27(8), 1595-1610.  
<https://doi.org/10.1111/poms.12885>
- Victor, V., Joy Thoppan, J., Jeyakumar Nathan, R., & Farkas Maria, F. (2018). Factors influencing consumer behavior and prospective purchase decisions in a dynamic pricing environment-an exploratory factor analysis approach. *Social Sciences*, 7(9), 153.  
<https://doi.org/10.3390/socsci7090153>
- Voccia, S. A., Campbell, A. M., & Thomas, B. W. (2019). The same-day delivery problem for online purchases. *Transportation Science*, 53(1), 167-184.  
<https://doi.org/10.1287/trsc.2016.0732>