Chapter 3

E-Commerce Business Models And Revenue Streams

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Abstract

This section is designed to provide detailed information about "E-Commerce Business Models and Revenue Streams." Our increasingly digital world has also shifted commercial life to the electronic environment. The banking sector's rapid adaptation to digitalization has fueled the growth of the e-commerce ecosystem. Furthermore, business models such as B2B, B2C, and C2C, as well as various hybrid approaches, are introduced, explaining the unique structure and market role of each model. The revenue streams section addresses methods such as subscription, freemium, direct sales, advertising, and affiliate marketing. The role of multi-sided platforms and marketplace dynamics in increasing user engagement and platform value is also highlighted. Consequently, it is emphasized that understanding the diverse business models and revenue strategies of businesses can help them explore different initiatives in e-commerce.

1. Introduction

The shift in e-commerce from laptops to smartphones, along with mobile internet and smartphones, has led to an increase in e-commerce volume. M-commerce, a sub-element of e-commerce, has played a transformative role in the global economy. Smartphones have brought about radical changes in the way products and services are marketed, promoted, and presented.

The increased adoption of digital channels, particularly after the COVID-19 pandemic, has led to permanent and significant shifts in consumer behavior and consumption patterns. Following this period, e-commerce is no longer an alternative to traditional retail as it once was; on

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the contrary, it has become the primary sales and communication channel for many sectors (Li et al., 2022; Warganegara & Hendijani, 2022).

This digital transformation has presented new opportunities not only for large-scale companies but also for micro, small, and medium-sized enterprises (Guo et al., 2022). These opportunities have also brought about fierce competition. This competition isn't just a race between competitors in the e-commerce environment or in the physical world; it's a competition where both the virtual and physical worlds compete and compare. At the heart of this radical change, driven by technological advancements, lie the business models adopted by e-commerce and the various revenue streams these models generate (Yacob et al., 2021).

The diverse dynamics of e-commerce and the digital connections it establishes (blockchain, cryptocurrencies, artificial intelligence, the internet of things, virtual and augmented reality, and quantum computers) will trigger not only a technological infrastructure-based transformation but also revolutionary revisions in many areas, such as marketing, customer relationship management, logistics systems, and sustainability. These fundamental business models of e-commerce can be broadly classified as Business-to-Consumer (B2C), Business-to-Business (B2B), Consumer-to-Consumer (C2C), and hybrid models.

Each of these models, also used in e-commerce, has its own unique structural dynamics in terms of market access, value creation strategies, and revenue generation methods (Sharma & Aggarwal, 2019; Zhang et al., 2019). Today's diverse e-commerce platforms include not only two-party transactions but also innovative revenue models such as multi-sided marketplaces, subscription-based service offerings, freemium strategies, and membership systems (Li, 2022). Therefore, technological integration alone will not be sufficient for this process; it must also become mandatory in comprehensive strategic planning (Li et al., 2022). However, e-commerce is not just a desk-based activity; on the contrary, it requires a broad network that transcends borders. At this point, success is not determined by a single factor. Many additional criteria, such as customer loyalty, personalization, logistics efficiency, cross-border access, and environmental sustainability, can also be determined (Jovanović et al., 2020; Jin & Chen, 2024).

In this regard, advanced technologies such as artificial intelligence, machine learning, big data, the internet of things, blockchain, augmented reality (AR) and virtual reality (VR), robotics and automation, quantum computing offer businesses significant advantages in optimizing operational processes, improving customer segmentation, and managing supply chains more effectively (Cai et al., 2018; Çopuroğlu & Şahin, 2024).

The development of e-commerce has increased the diversity of consumer needs and, over time, led to the emergence of numerous different business models and revenue streams. For example, the B2C model targets business-to-consumer sales, while the B2B model focuses on business-to-business sales. B2B involves large-volume trade between businesses (Ercan, 2025). C2C, or consumer-to-consumer business models, refers to commercial relationships in which both parties are consumers. In the C2C model, individuals often sell products or services directly to other individuals through a platform. C2C, which is generally conducted through online platforms today, includes platforms such as Sahibinden.com, GittiGidiyor, and Letgo, which primarily focus on secondhand sales. Today, C2C can take place not only on online platforms established for this purpose, but also through communities created on social networks such as Facebook, Instagram, and TikTok. For example, used car buying and selling groups established on Facebook are examples of this.

Numerous communities have been created on Facebook, where a large number of consumer-to-consumer buying and selling takes place. One of the most important reasons for this is the increase in time spent on social media. This increase has given rise to new models such as social commerce. Thanks to these types of social commerce models, product promotion and sales on social media have become popular (Işık & Tarcan, 2022; Xu et al., 2024).

At this point, businesses have increasingly sought to collaborate with influencers, particularly on popular social media platforms. These social media influencers, who establish strong bonds with their followers, try to persuade them to purchase products by clicking on links provided on the platform or through tagged products. Ma (2024) stated that the quality of the content produced in such groups and the strength of the interactions can determine the strength and sustainability of C2C. Today, spending more time online means individuals are more exposed to branded product advertisements.

This exposure has led to an increase in online shopping. With the rise in online shopping, businesses have created their own mobile apps, making their accessibility even easier. Companies have also elevated the customer experience they offer through their mobile apps. Many people today have various social media apps installed on their phones, as well as numerous e-commerce and shopping apps. In Turkey, examples include Trendyol, Sahibinden.com, Letgo, and Yemeksepeti. These technologies offer businesses new ways to make money and new revenue streams, such as location-based offers, targeted ads, and mobile applications (Keskin, 2024).

Based on technological advancements, technology entrepreneurs are generating new ideas based on these infrastructures. These new ideas are giving rise to new and diverse revenue models. Examples include "subscription models" like Netflix, Spotify, and Adobe Creative Cloud, or "freemium models" like Spotify and LinkedIn. Advertising revenue models, such as Google, Facebook, and YouTube, that generate revenue from advertisers by using user data, are also examples.

There are also examples such as the "Marketplace Model," which brings buyers and sellers together and charges a commission or transaction fee for each transaction, such as Airbnb, Trendyol, and Hepsiburada, or the "Licensing Model," which involves a business granting another company the right to use its intellectual property (software, patents, trademarks, etc.) in exchange for a fee, similar to how Microsoft licenses its Windows operating system to computer manufacturers.

This section of the book will first define B2B, B2C, C2C, and hybrid models. The second section will discuss Subscription, Freemium, and Membership models. The second section will also address the dynamics that Freemium models must incorporate to reach a wide audience and the value-benefit concepts they must offer. The relationship between these membership models and the communities they serve, as well as the ways they create loyalty-based value, is also discussed. Finally, the challenges of such models are evaluated.

2. B2B, B2C, C2C, and Hybrid Models

With digitalization, commercial activities have also entered the virtual world. Business models in this virtual world can be summarized under four main headings. The first of these is Business-to-Business (B2B), the second is Business-to-Consumer (B2C), the third is Consumer-to-Consumer (C2C), and finally, the fourth is hybrid business models. Each model has its own operating dynamics. Therefore, each model has different revenue and profit models. These models, which have different ways of doing business, have their own distinct advantages and weaknesses (Mayayise, 2024). A visual representation of these models is provided below for a better understanding.

Figure 1. B2B, B2C, C2B, and C2C business models

Note. Adapted from Kotaman (2023).

The B2B business model refers to business-to-business sales. In this model, businesses trade among themselves. They can sell raw materials, semi-finished goods, or finished goods to each other. In other words, both parties are industrial consumers. Because both parties are companies, large-scale purchases and sales are possible (Hsu et al. 2013). In short, a larger volume of trade takes place compared to other business models. Wang et al. (2017) stated that the B2B model encompasses all strategic, tactical, and operational activities. Another well-known and widespread model is the B2C model. In this model, sales occur from business to consumer. It is the most common business model in both daily business life and e-commerce. It encompasses the activities undertaken by businesses to deliver their products and services to the end consumer. Another and more widely used business model is the C2C model. In this model, consumers buy and sell among themselves. Secondhand product markets, which generally operate both physically and online, are examples of these. The key differences between these business models are shown in Table 1.

Table 1. Key differences and characteristics of B2B, B2C, and C2C business models

Features	B2B (Business-to-Business)	B2C (Business-to-Consumer)	C2C (Consumer-to-Consumer)
Definition	A business selling products/services to other businesses.	A business selling products/services directly to individual consumers.	Individual consumers selling products/services to other consumers.
Target Audience	Companies, corporations, professionals	End-users, individual customers	Other individual consumers
Decision-Making Process	Long and complex; involves multiple decision-makers.	Quick and emotional; based on personal preferences.	Fast and personal; may involve negotiation or trust.
Transaction Volume	Typically high-volume, bulk purchases.	Typically single, low-volume purchases.	Typically single, low-volume transactions.
Marketing Focus	Rational benefits, expertise, long-term relationships.	Emotional connection, brand loyalty, personal experience.	Convenience, trust, and low cost provided by the platform.
Platform Examples	Alibaba, Amazon Business, Salesforce	Trendyol, Hepsiburada, Amazon, Starbucks	Sahibinden, Letgo, Etsy, eBay, Airbnb

An example of the C2C model is classified sites like sahibinden.com, which sell second-hand products. Online marketplaces like eBay and Etsy are also examples of this business model. As with all business models, infrastructures such as ordering, payment, and security are important in this business model (Alharbi et al., 2022). This is because these systems, which include many actors such as sellers, buyers, and logistics companies, directly impact the efficiency of transactions. Direct sales channels are often preferred in B2C business models. Amazon is a prime example of this. Amazon ships its products directly to the end consumer. Spotify and Netflix, which offer subscription-based services, are also examples of B2C business models. The key to the B2C model is to take swift action against changing consumer behaviors and maintain a competitive advantage. This is because comparing prices with a single click in the online world makes competition much more difficult. While consumers typically research prices at a few stores daily in the physical world, they can compare prices even on a global scale online. In fact, this disadvantage can be a significant advantage over physical shopping if it offers lower prices.

In recent years, the growth of the logistics sector and the reduction of shipping times have further increased the volume of e-commerce. These positive developments have brought these types of business models, or alternative business models that can be adapted to these platforms, to online and mobile platforms. In addition to these business models, hybrid business models are also encountered. Hybrid models generally incorporate certain characteristics of B2B, B2C, and C2C business models. Livestream-based e-commerce applications such as TikTok Shopping and Amazon Live are examples of hybrid models (Xu et al., 2024). Today, Amazon exhibits a hybrid approach by combining different business models. These companies seek to reduce costs and increase profitability by optimizing their use of these models. For example, "hepsiburada.com" initially shipped products to its own warehouse and shipped them to consumers in a B2C manner. Later, it enabled businesses that opened stores on the platform to ship their products directly to consumers.

This eliminated storage costs and, through its marketplace model, began to receive a percentage commission on sales from businesses that opened stores on the platform. The Hepsiburada.com example demonstrates that such entrepreneurs can transition between models and integrate different features of different models into their existing models. One of the most important factors that online platforms must pay attention to in this process is thorough consumer data analysis. Because for the model to be sustainable, users must be encouraged to use and remain on the system.

Businesses that fail to analyze consumers and address customer complaints will be slow to intervene because they lack the opportunity to understand the reasons for these losses (Hsu et al., 2013; Nur and Kusumastuti, 2020). Another point worth emphasizing is that companies operating online with these business models must constantly update themselves to adapt to changing technology. For example, if an online retailer doesn't utilize today's trending technology, such as artificial intelligence, they will fall behind their competitors. In this case, if other competitors offer more convenience and a better shopping experience to their customers, loss of profit will be inevitable (Çopuroğlu & Şahin, 2024).

3. Subscription, Freemium and Membership Approaches

One of the most important goals of businesses is profit. Therefore, businesses may choose to turn to subscription-based models to create sustainable revenue streams with the evolving digital economy. Subscription, Freemium, and Membership approaches are the most common revenue models preferred by businesses offering digital and physical products or services. Each of these models aims to generate revenue by offering a different value proposition to customers. The main goal of these models is to provide a continuous revenue stream rather than a one-time sale. If we think of the customer as the hen that lays the golden eggs, the farmer who wants to receive these eggs will try to maintain their connection with the hen. Therefore, the farmer who wants the hen to stay on their farm must keep the hen happy, that is, ensure customer satisfaction. However, to keep the hen on their farm, they must also convince the hen that their farm offers more value than other farms.

Businesses that succeed in these subscription-based models generally establish long-term relationships with customers, ensuring both revenue continuity and customer loyalty. For example, platforms like Netflix and Spotify can increase customer loyalty and reduce churn through subscription models based on recurring payments (Vara-Miguel et al., 2021; Chen and Thorson, 2024). The success of these models depends, first, on motivating the user and providing value. Then, it depends on the customer experience provided through personalized product and service offerings throughout their stay on the system (Chen & Thorson, 2024; Lindström et al., 2024).

The Freemium Model: Reaching a Large Audience and Transforming Value

Freemium is a combination of the words "free" and "premium." This business model allows users to access the basic features of a product or service free of charge. However, a fee is charged for accessing more advanced features and services.

This is because additional content or options, like ad-free, are classified as premium features. The goal here is to convert members who use the platform for free into paying subscribers. This business model is a particularly successful strategy in industries such as software and digital games (Hussain, 2024). While research shows that the freemium business model is effective in attracting large user bases, converting free users into paying customers is quite difficult. Therefore, success is only possible with carefully designed offers and strategies (Wei, 2020). This is because, in highly competitive industries, paid services are expected to offer a significant difference over free services, making them worth purchasing (Rietveld, 2018; Tavman, 2022).

The Membership Approach: Community and Loyalty-Based Value Creation

The membership approach, which operates similarly to the subscription model, aims to foster a sense of community by offering customers exclusive services. The primary goal of the membership approach is not to purchase a product or service, but rather to focus on the user's desire to be a special part of a community or group. Indeed, users agree to make this payment because they feel special as part of a group. They may make regular payments due to a sense of belonging to the group, the sense of specialness, privilege, luck, and happiness they feel by being a member, or the satisfaction they derive from interacting with group members or the benefits they receive. It can yield successful results in sectors such as gyms, gaming platforms, and subscription boxes, where brands seek to establish an emotional connection with their customers. Successful examples of this model, which is particularly prevalent in software and digital services, include Spotify, Dropbox, LinkedIn, and various mobile games. In such membership structures, where customers want to feel part of an experience or a community, customer interaction and loyalty can be increased by making users feel special (Tavman, 2022).

Challenges and Evaluation

The biggest challenge with freemium and subscription models is converting free users into paying customers. Most users prefer to settle for free features, so they won't convert unless they're offered significant value that would make them abandon the free version. While these types of revenue models offer significant opportunities for businesses, they also present some inherent challenges. Relying solely on subscription or freemium strategies is inappropriate, as a subscription model requires constantly offering new content and products to retain customers. Businesses adopting these models must have well-planned strategies and well-trained customer service to adapt to market dynamics (Chen & Thorson, 2024).

Therefore, businesses relying solely on these models may face risks such as high customer acquisition costs, increased competitive pressure, and the need for constant innovation (Fernandes et al., 2024). This, in turn, translates to high operational and innovation costs. If necessary innovations aren't implemented in a timely manner, customers are likely to become frustrated and cancel their subscriptions. Additionally, failure to properly understand user motivations will lead to a gap between the service provided and expectations. These resulting service gaps will lead to dissatisfaction and, eventually, membership cancellations. Negative user experiences can lead to customer churn. Therefore, value propositions that users are willing to pay for must be presented. The key factors shaping the success of these models are easy access, personalization, and value delivery. To overcome these challenges and achieve success, subscription-based models must thoroughly analyze consumer behavior.

4. Multi-Sided Platforms and Marketplace Dynamics

Multi-sided platforms are business models that bring two or more user groups together in the same digital environment, enabling interaction between them. These business models facilitate interaction between these groups and generate economic value. For example, this economic structure, generated by business models like Airbnb, is called the sharing economy or collaborative consumption. By connecting homeowners with those in need of a rental room or home, Airbnb offers savings to both parties. The success of these platforms in these models is based on the mutual benefits they provide. Similarly, applications like Uber, Lyft, and BlaBlaCar bring two parties together on a mobile app, providing savings to both parties. With digitalization, the structure of multi-sided platforms has spread across many sectors, including transportation, accommodation, service and labor, and property and office sharing. The various benefits that multi-sided platforms provide, such as savings and time savings, enable users to gather in a single environment. Building this environment digitally, particularly through mobile applications, reduces transaction costs for both the entrepreneur and the user (Hänninen et al., 2018; McIntyre et al., 2021).

These platforms largely serve as intermediaries. They establish the infrastructure, set the rules, and bring the parties together. On these platforms, when one party arrives, the other must be present. If one party is absent, the system will not function. Therefore, the most important structural challenge to overcome, described as the "chicken and egg" problem, is to attract both parties to the platform simultaneously. When one party is present, the other party must be present. If there are not enough first parties in the application, the second party will abandon the platform. If there are not enough second parties, the first party will lose interest (Yiğit, 2022). Online platforms such as Amazon and eBay are successful examples of this structure.

Membership programs like Amazon's Prime also serve to increase user loyalty to the platform (Hänninen et al., 2018; Navidi et al., 2020). Marketplaces like these, which bring buyers and sellers together, also have their own unique dynamics. The primary dynamics affecting the success and sustainability of these platforms are network effects, cross-network effects, transaction costs, monopoly tendencies, trust, and ratings. Another dynamic is pricing mechanisms and a wide variety of products (McIntyre et al., 2021).

To achieve success, such platforms must strike the right balance. To achieve this, they must employ complex pricing and incentive strategies. Because the goal is to ensure both parties remain on the platform, a sufficient number of buyers and sellers must coexist. When there are insufficient buyers and sellers on the platform, the company will seek to subsidize one of the parties. In other words, it will either lower the price for one party or offer free use. On the other hand, as the platform grows, per-unit costs will decrease, and economies of scale will be leveraged. However, until this level is reached, the platform should be kept active through various marketing efforts (Yiğit, 2022). Another point is that platform owners should no longer focus solely on profit. Because one of the most significant problems today is ethical issues. Many companies are facing enormous compensation payments in such cases. Personal data breaches and unauthorized sharing are particularly prominent among these cases. Therefore, platform owners are expected to create an ecosystem that prioritizes ethical responsibilities.

5. Conclusion

Today, the evolution of e-commerce cannot be explained solely by technological advancements. Changing global market dynamics, followed by evolving consumer behavior and expectations, have led to the transformation of digitalized business processes. Businesses seeking to adapt to this change are launching their ventures on digital platforms with B2B, B2C, C2C, and hybrid business models that appeal to different customer segments. While the aspects and directions of these models differ, their business practices become completely distinct. In fact, they offer solutions to diverse needs. In this respect, each model has different formats in many areas, from the supply chain to the customer experience. For a digital business to survive and grow, it must not rely on a single source of revenue.

To survive, these models need to develop business models that provide diverse revenue streams. This is because online platforms are fundamentally a service industry. Therefore, their revenue models are also based on the services they provide. For example, these businesses seek to generate advertising or subscription revenue in exchange for the free services they offer. Platforms like online shopping sites, on the other hand, generate commissions and transaction fees. Freemium models, on the other hand, charge fees primarily for advanced features.

Subscription, freemium, and membership revenue models offer businesses the opportunity to create sustainable and predictable revenue streams. In terms of revenue diversification, alternative methods such as advertising, transaction fees, and affiliate marketing are available. This diversity helps businesses become financially stronger by preventing them from being tied to a single market or revenue model. Digital platforms are not simply sales channels; they are a much more complex and interactive ecosystem. Because many factors influence the success of this ecosystem. Business models are the surface shell of this business. Within this shell are numerous issues, including marketing and promotion, product and service quality, user experience and interface, trust, and customer service. Behind the scenes lies a robust digital infrastructure that fosters interaction between users, personalizes the experience, and focuses on data-driven decision-making.

Furthermore, the concept of customer lifetime value is crucial to the success of these platforms. In this respect, users must be both satisfied with the service they receive and trust the platform. This trust will increase loyalty and spending. Therefore, achieving success requires striking the right balance between business models and revenue strategies. In this regard, businesses must not only adapt to current trends (e.g., artificial intelligence) but also adopt innovative approaches to transform them. Ultimately, the primary drivers of competition in the future will not be product and price, but how effectively you leverage data and deliver a high-quality customer experience. Therefore, the quality of the customer journey, starting from the first contact, and the customer's satisfaction with this journey will be the primary drivers of the future of e-commerce.

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