

# O2O Commerce and Consumer Behavior

Subjects: Business

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Online-to-offline (O2O) commerce is a popular business model which links offline business activities with online channels. Consumer behavior in O2O commerce is more complex than in other traditional business models as both online and offline channels are involved.

Keywords: O2O commerce ; online-to-offline ; consumer behavior

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## 1. Introduction

In the past few decades, the spread of the Internet and the emergence of electronic commerce (e-commerce) or online shopping have changed the way consumers think and live in an unprecedented trend <sup>[1]</sup>. With the exponential growth of mobile devices (mainly smartphones) in the last decade, mobile commerce (m-commerce) has emerged, once again changing consumer behavior patterns and dramatically changing the landscape of traditional e-commerce <sup>[2]</sup>. It means that consumers can make purchases using their smartphones anytime, anywhere. Technology advancements have given rise to new business models and consumer-friendly services, such as mobile payments and online bookings <sup>[3]</sup>. Online-to-offline commerce (O2O commerce), which has recently been very popular, is one of those new business models. In O2O commerce, consumers typically make the purchase online and then consume the products or services offline <sup>[4][5]</sup>. To illustrate, consumers search, book, or pay online using a mobile app. They subsequently use location services to find and walk into the target brick-and-mortar store to consume. Alternatively, they receive products or services at home or at the workplace using instant delivery or door-to-door services.

O2O commerce combines online and offline channels, which means bringing online consumers into “real-world” stores <sup>[6]</sup> or using the online channel to drive offline sales <sup>[7]</sup>. For those brick-and-mortar businesses that have been impacted by e-commerce and feel left out, O2O commerce brings them new opportunities <sup>[8]</sup>. The enormous potential profit drives many local businesses or merchants into the O2O market <sup>[9]</sup>. Meanwhile, O2O commerce also brings great convenience to consumers. One of the most visible examples is the O2O food delivery services <sup>[10]</sup>, which have been widely discussed, especially during the COVID-19 pandemic <sup>[11][12]</sup>. In addition, the “stay-at-home order” policy in the pandemic has prompted some traditional brick-and-mortar retailers to offer home delivery services through O2O platforms <sup>[13]</sup>.

O2O commerce is growing and expanding rapidly along with the development of mobile Internet and information technology <sup>[14]</sup>. In addition, since the outbreak of the COVID-19 pandemic, more and more offline businesses are using O2O platforms to find their customers <sup>[13][15]</sup>. Although O2O commerce has been very popular and has shown to be a successful business model <sup>[8]</sup>, its sustainability is unknown. The rapid expansion of O2O commerce has raised concerns that this business model may not be sustainable <sup>[16]</sup>. It is necessary to identify current trends in O2O commerce to inform the development of sustainable strategies and the implementation of sustainable management.

Due to the intense competition in the market, most O2O players tend to focus on increasing sales rather than on developing a sustainable relationship with consumers to maintain their business <sup>[17]</sup>. In the past few years, many O2O-related start-ups have failed, and one possible reason is that they did not closely observe consumer behavior <sup>[18]</sup>. In order to increase their survival chances, O2O businesses must retain existing customers and attract new ones by understanding consumer behavior to ensure the sustainability of their business. Digitization has extended to all stages of consumers' purchases <sup>[3]</sup>, making consumer behavior more complex than ever, especially in O2O commerce, as it simultaneously involves online and offline channels. It is worth acknowledging that because O2O commerce is a new and emerging business model, limited studies have attempted to understand these complex consumer behaviors.

## 2. What Is O2O Commerce?

Similar to other terms of e-commerce such as consumer-to-consumer (C2C) and business-to-consumer (B2C), online-to-offline (O2O) is a type of e-commerce business model. Rampell <sup>[6]</sup> first proposed the concept of O2O in 2010 and

illustrated that the key to O2O is to find consumers online and bring them into offline channels. Tsai et al. [2] argued that O2O commerce provides a seamless purchasing experience between online and offline commerce by any connected device, while Xiao et al. [19] stated that O2O commerce brings offline business activities to online channels which are used to promote offline businesses. Some researchers have distinguished between online-to-offline and offline-to-online commerce [20][21][22]. Although the specific wordings differ, according to Ryu et al. [23], O2O commerce is an integration rather than a competition between online and offline channels, creating new values. In the past, O2O commerce attracted consumers with banner advertisements and digital coupons [7]. Nowadays, O2O commerce plays an essential role in different scenarios of consumers' lives [12] and covers many types of local businesses, such as catering, ticketing, car-hailing, etc. [23].

Alternatively, O2O commerce can be viewed as an extension or upgrade of traditional e-commerce [19][24][25]. There are several differences between O2O commerce and traditional e-commerce. First, O2O commerce is location-based [2] and focuses on local retail and life service industries [19][26], such as restaurants, hotels, and entertainment. Second, the transactions in O2O commerce typically involve both online and offline channels [27][28]. Third, the features of O2O commerce make it difficult for consumers to return goods as easily as in traditional e-commerce [9][19]. Last, O2O commerce involves more participants, including consumers, offline stores, online platforms, and third-party service providers [29]. O2O commerce extends the scope of traditional e-commerce activities [30].

Business models always seem to change with the evolution of technology [2]. Many new types of O2O commerce are springing up, such as O2O clothing customization [31] and O2O community e-commerce [32]. There are many different scenarios in O2O commerce, but the two most apparent market segments in O2O industry practice, namely, "to-shop" and "to-home" [33][34], are rarely mentioned. The former refers to in-store consumption after paying or booking online. In contrast, the latter refers to receiving products or services at home or at the workplace through instant delivery or door-to-door services.

### 3. Consumer Behavior in O2O Commerce

Consumer behavior involves many things. It reflects the totality of consumers' decisions in terms of "the acquisition, consumption, and disposition of goods, services, activities, experiences, people, and ideas by (human) decision-making units" [35]. Consumer behavior includes the consumers' emotional, mental, and behavioral responses that precede, determine, or follow activities such as purchasing, using, and distributing goods and services [36] (p. 8). Although research has shown that consumer behavior is difficult to predict, it has always been an area of interest for scholars and marketers. Back in the 1960s and 1970s, Howard and Sheth [37] and Fishbein and Ajzen [38] proposed traditional models to explain consumer behavior. As e-commerce became popular, some researchers argued that online consumer behavior is different from offline behavior, and that new theories or models are required [39].

A review paper by Hwang and Jeong [40] discussed the factors affecting consumer behavior in e-commerce from the individual, website, and environmental dimensions and reported that many constructs had been used to study online consumer behavior. Technology acceptance and use behavior has been the subject of many classic studies in e-commerce. Haryanti and Subriadi's [41] literature review showed popular theories and models in e-commerce research, namely TRA [38], TPB [42], TAM [43][44], UTAUT [45], and UTAUT2 [46] (see **Table 1**). They also found variables outside these theories and models, with trust and perceived risk being the most widely used. In addition, the information systems success model (ISSM) developed by DeLone and McLean [47] and the expectation–confirmation model (ECM) proposed by Bhattacharjee [48] have been used to explain consumers' e-commerce adoption and use continuance behavior in many studies [49][50]. **Table 1** shows exogenous variables from these theories and models that affect consumer behavior in e-commerce.

**Table 1.** Exogenous variables of popular theories and models in e-commerce literature.

| Theories/Models                  | Exogenous Variables (Factors) |
|----------------------------------|-------------------------------|
| Theory of reasoned action (TRA)  | Attitude                      |
|                                  | Subjective norm               |
| Theory of planned behavior (TPB) | Perceived behavioral control  |
|                                  | Subjective norm               |

| Theories/Models  | Exogenous Variables (Factors) |
|--|-------------------------------|
| Technology acceptance model (TAM)  | Perceived usefulness          |
|  | Perceived Ease of Use         |
|  | Performance expectancy        |
| Unified theory of acceptance and use of technology (UTAUT)                       | Effort expectancy             |
|  | Social influence              |
|  | Facilitating conditions       |
|  | Performance expectancy        |
| The extension of the unified theory of acceptance and use of technology (UTAUT2) | Effort expectancy             |
|  | Social influence              |
|  | Facilitating conditions       |
|  | Hedonic motivation            |
|  | Price value                   |
|  | Habit                         |
| Information systems success model (ISSM)   | Information quality           |
|  | System quality                |
|  | Service quality               |
| Expectation–confirmation model (ECM)   | Perceived usefulness          |
|  | Confirmation                  |

However, when it comes to O2O commerce, the situation seems to get more complex as it includes both online and offline channels. Wang et al. [30] pointed out that free-riding and showrooming are typical consumer behaviors in the omnichannel market (i.e., the O2O market). Free-riding refers to consumers searching for information in one channel and purchasing in another [51][52]. Consumers usually compare different channels and choose the one with higher added value to buy products or services [53]. Showrooming refers to consumers selecting goods offline and buying online [54], which reflects consumers' pursuit of transaction cost minimization on the premise of ensuring product efficacy [55]. Additionally, compared with traditional e-commerce, O2O commerce involves more participants and technological innovation, making consumer behavior more complex. For instance, O2O transactions include activities such as online matchmaking, online payment, and offline consumption [29], as well as technologies such as location systems, near-field communication (NFC), and quick response (QR) codes [22].

Similar to traditional e-commerce, O2O commerce can be viewed by consumers as an innovative information technology service, hence the technology use literature is relevant for understanding consumer behavior related to O2O services [56]. Previous models or constructs have been used to explain consumer behavior in O2O commerce, being the most widely concerned with the TAM and service quality (e.g., [20][57]). However, discussions have been sporadic and limited as the factors influencing consumers' O2O behavior have been loosely theorized. For instance, the food choice motives discussed in O2O food delivery [58] may not apply in other O2O scenarios. Furthermore, more evidence is needed to demonstrate that the theories and models applied in the prior e-commerce literature can explain consumer behavior in the context of O2O.

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