



A Study on Change in Automobile Distribution Structure : Focusing on Domestic Distribution

Zhixuan, QUAN

Professor, Department of alternative medicine, Kwangju women's university, Korea
E-mail: 3700qzx@gmail.com

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Abstract

Purpose – O2O (online to off-line) is a new economic concept being emerged in the 4th industrial age. Automobile distribution is also undergoing a change to the O2O system. In overseas, vehicles are already being sold through various online platforms. The purpose of this study is to analyze the domestic and foreign automobile distribution structure and intends to suggest the desirable direction of automobile sales in the 4th industrial age.

Research design, data and methodology – Through the investigation of previous studies and the actual cases, the advantages and disadvantages and trends of different types of automobile distribution structures.

Result – It can be seen that domestic and foreign automobile brands have quite diverse distribution structures such as direct managed system, agency system, dealer system, direct sales system, online system and online/offline parallel system. Each type has its own characteristics.

Conclusion – The distribution structure of automobiles is very diverse, and in particular, it is rapidly changing to an online sales system thanks to the development of information and communication technology and Internet technology and the popularization of smartphones. Through the online system, consumers can quickly and conveniently obtain vehicle information. Although the online sales system has many advantages, it requires continuous management.

Keywords: 4th industrial era, O2O system, automobile, distribution structure

JEL Classification Code: L11, L16

1. Introduction

With the development of information and communication technology and the Internet in the 4th industrial age, the existing offline distribution market has changed significantly to the online market. Due to the popularization of smartphones and the simplification of online payment systems, O2O systems have been actively used among consumers and they have become accustomed to searching for and comparing the items they want to purchase online.

However, in the distribution process of automobiles, there are automobile dealers in between manufacturers and consumers. Such system stems from the traditional franchise system in the early 20th century, during the Second Industrial Revolution, when Ford Motor Company recruited dealers and authorized them to sell the automobiles so the company can focus on production and easily collect sales proceeds. In the process, dealers take a certain amount from the sales. Currently, the world is facing the ear of 4th industrial revolution while the sales method of automobiles has been maintained more than 100 years. This is because there has been a strong perception that the automobiles are a high involvement product with many options that buyers can choose among which led them to the conclusion where they cannot purchase one without visiting an offline store to have explanation on it.

Tesla in the United States has implemented a direct sales method for the first time in the industry, breaking away from the traditional automobile sales method. To minimize the cost in building large franchise stores, the company prepared only the vehicle needed for exhibition and test runs only in essential areas, and the distribution process has all been conducted online. As the dealers are left out of the distribution process, Tesla's models are perceived more cost-effective than those of other companies with similar performance. The success of Tesla's direct sales method is because consumers no longer feel a psychological barrier to buying a vehicle online, as more than 60% of Americans stated that they are interested in purchasing a vehicle online.

Some of foreign automobile companies in Korea also have a history of selling vehicles through online channels such as e-commerce, and they are expanding online sales. Also, some of domestic automakers are also selling online. Renault Samsung Motors is the only domestic car brand that has established an online subscription channel in line with the trend of non-face-to-face consumption becoming daily.

Currently, the domestic automobile distribution structure has diverse forms. The number of customers visiting offline stores has plummeted due to the spread of the coronavirus infection (COVID-19). Accordingly, some automakers are focusing on untact marketing by starting sales through online sales channels. It can be said that COVID-19 has accelerated the era of online automobile distribution.

The biggest influence of O2O is the destruction of the realm between consumers and producers. The boundaries of the value chain are being destroyed as online technology is added to the existing distribution value chain from where automobiles are produced and delivered to consumers through dealers.

Research on the automobile distribution system has mainly focused on comparative studies on the direct management system and the dealer system. Research on O2O service is also mainly related to the food service industry, such as food delivery. However, although automobile sales are also moving to online sales, systematic comparative studies on this are very lacking. This study analyzes the domestic and foreign automobile distribution structure and intends to suggest the desirable direction of automobile sales in the 4th industrial age.

2. Literature Review

2.1 Concept and Types of O2O

The O2O is an abbreviation of 'Online to Offline' and refers to a method of promoting purchases by connecting consumers within the online with the products and services sold in offline stores (Techcrunch, 2010). It can be said that the beginning of the O2O was the connection between offline world with the online world because of repetitive evolution of IT, which created a networked world with the hyper-connection revolution. In a narrow sense, it refers to the application of online technology to the traditional retail business, but in a broad sense, it can be expanded to encompass all innovations that have occurred through the convergence of online and offline, that is, smart homes and smart factories. The point of the O2O service is the support of offline activities to be carried out online. Although there are differences depending on the subject which defines it, in general, O2O is an on/offline service in the business aspect that provides convenient services to consumers by organically connecting online and offline (Table 1).

In the O2O system, consumers can easily obtain information about products and services, and purchase online products through offline discounts. Companies can conveniently promote their products and services, and it is possible to continuously manage customers by gathering consumer information in databases.

Table 1: Types of O2O Service

Concepts of O2O	Example of Different Types of O2O Services
Online to Online	Order products online, after payment, consumers receive the products by delivery.
Online to Offline	Order products online, receive the products at offline stores.
	Promote consumers to visit offline stores by providing discount coupons through social media. Induce purchase by sending product information and discount coupons of preferred brand stores to shoppers online.
Offline to Online	Guide to online store web sites through smartphone applications.

2.2 Characteristics of O2O Service

O2O is a business model that harmonizes real and virtual worlds based on the combination of online and offline. According to previous studies, the characteristics of O2O services are typically mobility, convenience, suitability, immediacy, economy, interactivity, ease of use and playfulness.

The O2O service is a service based on smartphone applications. And one of the characteristics of the mobile is the mobility. Through which, consumers can easily access O2O services whenever they want by using mobile devices while moving locations to locations.

One of the biggest advantages of e-commerce through the internet is that shopping has become much more convenient, which is the most important characteristic of online shopping malls (Choi, 2016). Convenience refers to the degree to which one believes that a particular system can be easily used. The development of smartphones and applications technologies have enabled O2O service users to efficiently achieve their goals on the internet. The value of O2O service can be increased as more consumers feel more comfortable with the purchase processes.

Compatibility refers to the degree on how much a technology is suitable to user value. According to ‘Task-Technology Fit theory’, when information technology is applied to work with high compatibility, it has a positive effect on work performance and efficiency (Goodhue & Thomson, 1995). Most of internet users state that they have feeling of high compatibility between the time and effort spent in using O2O service and their lifestyle.

The O2O service provides simple transaction processes since users can place an order and finish payment by smartphones at the same time. In addition, it provides immediacy as users can enjoy real-time service anytime, anywhere regardless of the consumers’ locations.

Economics is an important factor influencing consumers' purchasing decisions. O2O service users can check online vendors selling at low prices easily and quickly through price comparison web sites, saving time and money compared to offline. Consumers tend to reduce costs by using O2O services with fewer intermediate steps, such as dealers, because high-priced consumer goods such as automobiles can be greatly cost-effective even with a small discount rate.

Parasuraman et al. (1988) defined interaction as 'the attitude to provide prompt and immediate service to customers'. Oh Yong-seok (2016) defined interactivity as 'the degree to which message exchange activities between communication participants can be smoothly allowed'. The O2O service that communicates on the platform is a combination of online and offline and has the nature of interconnection, thus the interactivity is a representative characteristic of O2O business. In the O2O service systems, customers select the content among the provided ones by themselves and acquire various information. In addition, they can directly interact with the person in charge through social media during the purchase process. Through the medium of the Internet, two-way communication between businesses and consumers is possible, allowing them to quickly exchange information and services they want.

Davis (1989) defined ease of use as the degree to which a user believes that a technical system can be used relatively easily and without much effort. Gefen, Karahanna and Straub (2003) defined it as the degree to which users think they will use the system easily and comfortably. For O2O service users who are using it with the mobiles and internet, the ease of use is an important characteristic of the O2O business.

Playfulness is a dimension related to the pleasure of shopping that online customers can additionally enjoy at an online shopping mall (Mun & Lee, 2009). Since the 1990s, playfulness has been studied as an important component of customer value. Pleasure can reduce the burden on facing a new system and give confidence in the ability to use information systems successfully (Sun, Mun, & Lee, 2012). When consumers use O2O services, they feel a joyful value as well as a practical experience.

3. Distribution Structures and its Changes of Domestic and Foreign Automobile Brands

3.1 Distribution Structure of Domestic Automobile Brands

Domestic automobile industry has mainly used the direct sales system based on offline stores and a mixture of direct sales system and agency system parallelly. In other words, the manufacturer has the dominance in the distribution network of its own brand cars.

The direct sales system is a form in which an automaker sells its products directly to customers at the same price across the country without intervention of intermediary distributors, but with a sales network under the control of the sales department within the company (Lee, 2008). A direct system, which is a vertical distribution channel, makes it easy to control distribution networks and internalize sales margins. In addition, the company's advertising and promotion effects are good, which helps to improve the image. However, management costs are high for directly managed stores. In addition, the resistance of employees such as the labor union may cause a contraction in corporate management. Within the direct sales system, salespeople force the customer to buy the car that the manufacturer wants to sell regardless of customers' preferences.

Table 2: Characteristics of O2O Service

Classification	Characteristic
Mobility	Consumers can easily access the service while on the go using a mobile device and use the service at anytime and anywhere.
Convenience	User can easily use a specific system and achieve his or her desired goal efficiently.
Compatibility	Users can feel high compatibility between the time and effort spent in using O2O service and their lifestyle.
Immediacy	It is possible to place an order and pay at the same time using a mobile device, and the transaction process is simple.
Economics	Consumers can check online vendors selling at low prices easily and quickly through price comparison web sites, saving time and money compared to offline.
Interactivity	Through the website, two-way communication between companies and consumers is possible, so that each other can get the information they want.
Ease of use	It is easy to use a specific system.
Playfulness	Customers can additionally feel the pleasure of shopping at an online shopping mall.

The parallel system of direct sales and agency is a form in which a manufacturer operates a direct managed stores and operates an agency through a contract at the same time. In countries such as the United States and Europe, dealers purchase vehicles with cash from a manufacturer and sell them to consumers at a retail price determined at their discretion. However, the Korean agency does not purchase from the manufacturer, but sells it at the retail price determined by the manufacturer and receives a commission as compensation for the sales. It only covers agent functionality without taking any risk of owning vehicles (Jeong & Huh, 2011). This is because Korean agencies lack in financial power while they are satisfied with the system where they only need to deliver customers' orders to companies and receive commissions without any additional burden. With the introduction of the agency system in 1997, the per capita sales performance of directly managed salespeople began to decline. As a result, the awareness of damage among directly managed salespersons has increased, and the conflict between directly managed stores and agencies is also a task that companies need to resolve.

However, the existing domestic distribution market centered on directly managed stores is facing an opportunity for transformation due to the direct sales of online car dealers and manufacturers. In particular, starting with the sale of domestic cars through TV home shopping since 2018, it is accelerating with various distribution systems.

Hyundai CASPER, which was released in September 2021, is planned to be sold entirely online only, and the company launched a dedicated web site to make in-advance contracts and the number of contracts reached double of what the company expected at the beginning. Despite these achievements, there is also great resistance to stick to the existing distribution system. Sales unions in the domestic auto industry oppose online car sales because they believe that increasing online sales will threaten their jobs.

Hyundai Motor Company is expanding its online car market, starting with overseas markets, by starting online sales in the UK and Canada. In the UK, through online sales called 'Click to Buy', the process from selecting a vehicle, quotation, payment, and to transportation of a vehicle is possible. Canada, wherein the auto brand Genesis was recently launched, also introduced an online sales system. This will be extended worldwide. The reason Hyundai Motor Company started expanding online sales from overseas markets is because of domestic backlash.

Kia Motors introduced the 'Kia VIK' service in the domestic market to solve overall automobile-related tasks from consumers' car purchase information to operation, maintenance, and disposal of used cars with one application. The application provides users with useful information about the vehicle, various services and benefits tailored to each customer's preferences through push alarms (such as release news, quotation service and test drive scheduling).

Renault Samsung Motors conducted car purchase consultations with consumers based on KakaoTalk and established the only online subscription channel among domestic car brands. Of the 5,500 pre-orders for Renault Samsung's SUV 'XM3' released in March 2020, 21% were made online. This is a very meaningful figure that shows the potential of online car sales.

3.2 Distribution Structure of Foreign Automobile Brands

Foreign brand cars have a more diverse distribution structures: a dealer system, a direct sales system, a parallel system with direct management and dealerships, a direct sales system and an online sales system.

The dealer system is a distribution form in which automakers focus on production and technology development, while marketing and distribution are empowered to professional car dealers to increase the efficiency of sales and fund collection. The dealer system was first implemented by Ford in the US, and many automobile powerhouses such as the US and Japan mainly use the dealer system. In the dealer system, dealers pay the manufacturer cash to buy the car, so the dealer can set the selling price. The price of a car in the same class may be different depending on the dealer, and consumers have the advantage of being able to choose a dealer whoever sells at more reasonable price. From the manufacturer's point of view, distribution costs can be reduced, and there is no fear of business contraction as there is no resistance from organizations such as labor unions.

Foreign brand automakers mainly select an official importer in Korea, and the official importer sells it through an agency (dealers) in each area directly managed by the company. Or it is a structure in which a subsidiary is established to play a sales role. BMW is a dealer sales model in which an agency takes charge of sales rather than selling them directly by BMW itself in Korea. In addition, Mercedes-Benz, Audi, Volkswagen, GM, Ford, Toyota, Honda, Daimler Chrysler, Nissan, Volvo, Jaguar and Land Rover are also under the very same structure. Domestic dealers have the advantage of increasing sales efficiency because they are suitable for the domestic market since they are more aware of the domestic environments. However, this is also based on off-line sales, and the fact that there is an intermediary between the manufacturer and the consumer is still similar to the direct sales system of domestic brand automobiles. Accordingly, the price of the car purchased by the customer inevitably includes the middleman's store management cost and margin.

However, with the development of information and communication technology and the internet, foreign automakers are rapidly expanding into O2O systems. Since 2013, GM has been operating a shop-click-drive program that allows customers to get a quote and apply for installment financing without visiting a store. With the outbreak of COVID-19, the number of users of the program increased by 40%. Other foreign automobile brands are also increasing their online sales. Mercedes-Benz has set a goal of increasing its online sales share to 25% by 2025. Volvo has started selling online in the UK and elsewhere. Ford has signed an online sales partnership with China's Alibaba. Tesla is the first automaker to sell cars online. Fiat Chrysler launched an online car sales service.

4. Result

It can be seen that domestic and foreign automobile brands have quite diverse distribution structures such as direct managed system, agency system, dealer system, direct sales system, online system and online/offline parallel system (Table 3). Each type has its own characteristics (Table 4). However, what is common is that the distribution structure of the domestic and foreign automobile markets is rapidly changing into an online market or an on/offline parallel form. This is because, with the development of information and communication technology, the Internet, and the popularization of smartphones, the online sales system enables consumers to perform the entire vehicle purchase process quickly and conveniently, from consultation to option selection and payment.

Consumers who are accustomed to digital devices do not feel inconvenient to search information and purchase online, and they prefer online sales because it reduces the costs and time. Some consumers find it inconvenient to negotiate face-to-face with dealers since it requires more time and effort. Consulting firm Frost & Sullivan predicts that by 2025, a third of cars sold in Europe will be sold online. Around 2025, when the MZ generation, who is familiar with smartphones and IT, becomes the main consumer of automobiles, global online car sales will increase significantly.

Table 1: Distribution Structures of Automobile Brands

Automobile Brand	Distribution Structure	
	Domestic Market	Overseas Market
Hyundai	Direct sales (mainly), Agency, Online	Dealer system, Online (Extending)
KIA	Direct sales, Agency, Online (Extending)	Dealer system, Online (Extending)
Renault Samsung	Direct sales, Agency, Online (Extending)	Dealer system, Online (Extending)
GM	Dealer system, On/offline Compromised, Online	Dealer system, Online (Extending)
Tesla	Direct online sales	Direct online sales
Mercedes Benz	Dealer system	Dealer system, Online (Extending)
Volvo	Dealer system	Dealer system, Online (Extending)
Timon	Dealer system, Online (Extending)	Dealer system, Online (Extending)
Jaguar	Dealer system, Online (Extending)	Dealer system, Online (Extending)

5. Conclusions and Implications

Through the study, the following conclusions and implications can be obtained. The distribution structure of automobiles is very diverse, and in particular, it is rapidly changing to an online sales system thanks to the development of information and communication technology and Internet technology and the popularization of smartphones. Through the online system, consumers can quickly and conveniently obtain vehicle information. Since automobiles are expensive goods unlike general products, the difference between online sales and offline sales is very large. Accordingly, with these online characteristics, consumers can obtain economic benefits by finding information about cars online, test driving offline, and making actual contracts online. In the past, automakers were reluctant to sell online for various reasons, including conflicts of interest. And luxury foreign car makers have also banned online sales because they fear that the image of luxury cars will disappear if sold online. However, through bold attempts by domestic and foreign automakers, it was confirmed that online car sales are not only impossible but will become a trend.

Table 2: Characteristics of Different Types of Automobile Distribution System

Type	Characteristic
Direct sales system	Strong control of the headquarters, internalization of sales margins, high sales and management costs, collective action such as unions, high inventory burden, high consumer prices, etc.
Agency system	Head quarter's price control, commission based on sales volume, high motivation, no inventory burden, high consumer price, etc.
Dealer system	Independent system, flexible pricing, high motivation, high inventory burden, different consumer prices from different dealers, etc.
Direct online sales system	Direct sales from manufacturers, no distribution stores, simple purchasing process, ease of use, economic benefits for both companies and consumers, etc.
On/offline parallel sales system	Easy to acquire information and pay the price, and it is possible to sell in large quantities in a short time by using specific channels such as TV home shopping.

However, there are problems that need to be addressed until online car sales are fully realized. Online sales can provoke backlash from existing distribution networks. As employment reduction is inevitable, the jobs of salespeople in the existing direct distribution network will be threatened, and the agency system and dealer system will suffer economic damage due to the decline in performance. In particular, the domestic direct management system may be introduced by confusion by the collective opposition of the union. Therefore, if online sales are attempted without amicable negotiations and alternatives, there is a risk that even offline distribution will be ruined.

Although the online sales system has many advantages, it requires continuous management. First, security measures are required to prevent online member data from being leaked to the outside. In addition, the latest information should always be provided to the users of the online specialized company. Considering this maintenance process during system development, continuous update is required even after development.

As a limitation of this study, it was not possible to conduct an empirical study on the satisfaction and repurchase intention of automobile purchase customers with O2O service. Therefore, follow-up investigations and studies are needed.

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