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Technology versus Skill as a Competitive Advantage in Retail

— A Case Study of Eyewear Retailers —

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Abstract

This study explores the inherent competitive advantages of small and medium-sized retailers. Considering the eyewear industry in Japan as a case study, this study conducted two short case studies of a large-scale eyewear chain store and an independent eyewear store, after confirming the current state of the eyewear retail market. After analyzing both case studies, it became clear that while large-scale eyewear chain stores are expanding their business by making use of "retail technology," independent eyewear stores are developing their business with "retail skills" as a competitive advantage, which can be said to be the craftsmanship of eyewear merchants. Retail skills, such as the craftsmanship of merchants, are theoretically suggestive of a new perspective on the existence of small and medium-sized retailers and retail competition theory.

Keywords: retail SMEs; retail technology; retail skills; competitive advantage;

Japanese retail SME theory

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Introduction

In Japan, small- and medium-sized retailers (hereafter, retail SMEs) have been experiencing decline since the 1980s. The rate of decrease is particularly high for small-scale shops with one or two employees, which face a challenging environment (Figure 1). Large-scale retailers that have implemented technological innovations and nationwide chains have been identified as contributing factors to the decline in retail SMEs. In this situation, the government has implemented various policies such as regulating the location and establishment of large-scale retailers to provide growth opportunities for retail SMEs.

However, because of these policies, there has been increasing suburbanization of large-scale retailers, leading to the hollowing out of city centers. Many retail SMEs in shopping districts in urban areas face difficult situations. To address this issue, the government abolished the Large-Scale Retail Store Law and implemented

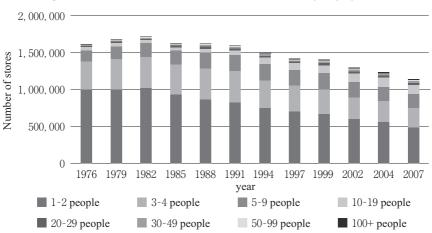


Figure 1. Trend in the number of retail establishments by employee size

Source: Created by the date of the Census of Commerce from the Ministry of Economy, Trade and Industry (each annual edition from 1976 to 2007).

a policy called the "Three Laws for Town Development" to revitalize city centers. This policy emphasized not only the economic rationality of retail SMEs but also their social significance. Research has actively examined regional commerce related to town development (Ishihara and Kato, 2009). However, the decline in retail SMEs and shopping districts has continued without significant abatement in the current situation.

Currently, there are small-scale retail stores that, albeit in small numbers, continue to thrive and maintain a strong competitive edge. They stand in defiance of large-scale retailers and assert their presence by showcasing their unique competitive advantage. However, existing research has not fully explored this phenomenon, which presents an unresolved challenge. This study aimed to address this gap and examine its effectiveness and applicability by developing a new concept. Through this approach, this study seeks to provide a theoretical and practical reassessment of retail SMEs, exploring their existing base for survival and potential for development.

Literature review

In Japan, numerous studies have been conducted from various perspectives to explain the reasons for the existence of retail SMEs. Previous studies can be divided into two perspectives, economic efficiency and social effectiveness. In the following sections, we review the previous research on retail SMEs in Japan and position our research in relation to these studies.

Economic efficiency perspective

The retail structure in Japan has long been criticized for its characteristics of "small-scale, excessive, and low in productivity" (Furo, 1960; Tamura, 1986). One contributing factor is the presence of retail SMEs. In Japan, retail SMEs did

not decline despite inefficiency, but actually increased until the 1980s.

Therefore, research has been conducted to understand why retail SMEs, which have lower competitive advantages than large-scale retailers, continue to survive. Several factors have been identified, such as the existence of market slack as a gap that cannot be covered by large-scale retailers (Tamura, 1986), the family employment system as a self-employment system within merchant families (Ishii, 1996), and adaptation to Japanese consumers' need for frequent and small purchases (Maruyama, 1992; Nariu, 1994).

These factors can be seen as the perception of retail SMEs as entities significantly influenced by the external environment. These studies view retail SMEs as entities that develop or decline in accordance with time and environmental changes from the perspective of economic effectiveness, indicating a negative assessment of their own capabilities and potential.

Social effectiveness perspective

Contrarily, there has been a growing movement in research to re-evaluate retail SMEs not only from an economic perspective, but also from a social effectiveness perspective. Many retail SMEs in Japan are located in the central cities and form commercial clusters. These clusters not only serve as commercial hubs but also play a role in urban functionality by incorporating housing, schools, medical facilities, and public services. In other words, retail SMEs have long served as venues for social communication among city center residents.

Based on this perspective, numerous studies have been conducted to re-evaluate the social impact of retail SMEs and provide a more positive assessment of their meaning. For instance, Ishihara (2006) explored a novel portrayal of merchants beyond the scope of traditional commercial theory by examining the concept of a "town merchant" who actively supports and contributes to the city as an integral community member.

In a related study, Watanabe (2010) asserted the existence of various types of town merchants and highlighted the potential impact of their differing attitudes towards community development activities, influenced by their entrepreneurial consciousness, on the commercial agglomerations they are affiliated with.

However, this social significance relies on the premise that individual store performance is good and that a large population of residents living in the vicinity also desire social communication. In Japan, owing to long-term economic stagnation, an aging population, and declining birth rates, overall consumption has stagnated, leading to an increase in the number of retail SMEs facing difficult business conditions. Generally, it takes considerable time for retail SMEs to reflect the results of community development activities. Therefore, the more difficult conducting business becomes, the more passive retail SMEs tend to engage in activities related to social effectiveness.

In addition, local cities are suburbanizing. Population is declining in city centers, where many retail SMEs are located. The number of residents who do not actively communicate is increasing because of progressing individualism. For example, society itself is changing, such as not being deeply involved with others or not knowing who one's neighbors are. Against this background, many situations exist in which social effectiveness, considered a new evaluation axis, does not work well. In other words, it is becoming difficult to fully explain the significance of existence at the individual store level even when using social effectiveness.

Present study perspective

Previous studies have attempted to explain the foundation of retail SMEs from the perspectives of both economic efficiency and social effectiveness. However, as time and the environment evolve, it becomes more difficult to provide adequate explanations. To address this challenge, this study focuses on the core aspect of competition between retail SMEs and large-scale retailers. This study explores novel factors that can serve as the underlying basis for the existence of retail SMEs.

Based on these issues, researchers have explored the strengths of retail SMEs and their competition with large retail corporations. Yokoyama (2010), for example, deliberates on the significance of "creative competition" as an alternative to "homogenizing competition," characterized by price wars, emphasizing the importance of differentiation and coexistence. In this study, the concept of creative competition is aligned with a competitive perspective.

Nonetheless, more clarity remains regarding the specific abilities required for merchants to manage retail SMEs and engage in creative competition. In response to this concern, Matsuda (2017) conducted participant observations of greengrocers operating within retail SMEs to examine small business merchants' skills in product handling techniques. However, the study conducted by Matsuda (2017) has certain limitations as it focuses exclusively on the green industry within retail SMEs, and it is difficult to say that the concept of product handling techniques is inherently unique to retail SMEs' merchants.

Considering the implications and limitations of prior research, this study focuses on a micro-level analysis of merchants operating retail SMEs businesses. The objective is to develop a comprehensive conceptual framework that effectively captures the distinct competitive advantage of retail SMEs in the context of creative competition.

Case studies

Eyewear retail trends in Japan

In recent years, there have been dramatic shifts in the structure of the production and distribution systems within the eyewear industry in Japan. In particular, we focus on the shifts occurring in the retail sector. Figure 2 presents the trajectory of the number of eyewear retail stores since 2007, revealing a

substantial decline of approximately 30% over the past ten years, resulting in the closure of 4, 871 stores. However, a closer analysis of Figure 3, excluding the data for 2020 that were likely affected by the COVID-19 pandemic, indicates a slight upward trend in both the number of eyewear consumers and sales revenue. Furthermore, Figure 4 shows a consistent decline in the average unit price of eyewear sets since 2007.

The observed trend can be explained by the emergence of innovative retail formats that leverage disruptive pricing and fast-standardized services as their key competitive advantages. Consequently, these formats have proliferated, resulting in decreased customer unit prices. Furthermore, the decline in the number of independent, small-scale eyewear stores can be attributed to their inability to maintain a competitive edge in the face of price competition.

The novel format that has recently emerged in the eyewear industry is the specialty store retailer of the private label apparel (SPA) eyewear chain store.

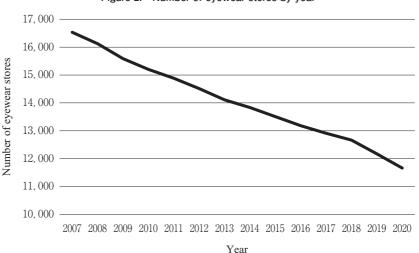


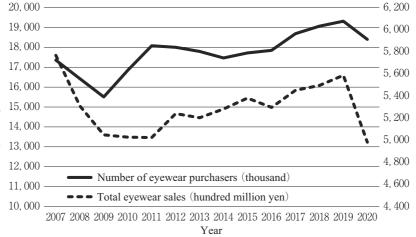
Figure 2. Number of eyewear stores by year

Source: Created by modifying Chart 1-2-12 of Gankyo publishing (2020).

Number of eyewear purchasers (thousand)

Total eyewear sales (hundred million yen

Figure 3. Trends in the Japanese eyewear market by year



Source: Created by modifying Chart 1-2-1 of Gankyo publishing (2020).

29,000 -27,000 Average unit price of eyewear 25,000 -23,000 21,000 -19,000 -17,000 -15,000 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 Year

Figure 4. Average unit price of eyewear (yen) by year

Source: Created by modifying Chart 1-2-1 of Gankyo publishing (2020).

Examples of companies operating in this format include JINS, Zoff, and OWNDAYS. These eyewear retailers adopt the SPA model commonly used in the apparel industry in which they develop and manufacture their own brands. These enterprises experienced significant business expansion by embracing a fast-fashion approach to eyewear.

Case study comparison

As previously mentioned, the Japanese eyewear retail industry comprises innovative large-scale retailers and retail SMEs facing intense competition. Therefore, as case studies of large-scale retailers and small-scale eyewear stores in the Japanese eyewear industry, this study examines the cases of OWNDAYS Co., Ltd. and Doitsu Meister Gankyouin to explore how they conduct their businesses. We collected data through interviews with the head of OWNDAYS' Taiwan subsidiary and the owner of Doitsu Meister-Gankyouin.

OWNDAYS Co., Ltd.

OWNDAYS Co., Ltd. is an SPA-type eyewear retail chain store established in 2002 by Big Contact Lens Co., Ltd. that no longer exists. The first store opened in Tokyo in August of the same year. Although the company has faced a management crisis for a while, it has undergone a series of management reforms since 2008. As of July 2022, it has 225 stores nationwide. The company is also actively expanding overseas. Since launching its first overseas store in Singapore in 2013, there are currently 275 stores in 12 countries.

Like other SPA-type eyewear chain stores that have appeared in Japan since the 2000s, OWNDAYS possesses a competitive advantage through three innovative sales methods, with a low price and mass-sales mission as the basis of its business model. The first sales method that provides a competitive advantage is the overwhelming assortment offered. OWNDAYS Co., Ltd. has more than 1,500

original frames developed in-house. There are 18 categories of private brands that align with the target customer and product concepts.

The second strategy involves competitive pricing. Before the emergence of SPA-type eyewear chain stores, lenses and frames were priced individually. The total price of the frame and lens was typically greater than JPY 40,000. OWNDAYS Co., Ltd. however, follows a one price system, which combines the prices of the lens and the frame. The cheapest pair of glasses costs JPY 6,600. However, this price is extremely disruptive.

The third innovative practice is the speed of the entire process from eyesight measurements to the delivery of eyeglasses. In addition to ensuring customers' peace of mind through accurate eyesight measurement, the company has a policy of delivering eyeglasses to customers as soon as 20 minutes after eyesight measurement. By contrast, for a typical small independent eyewear store, it is common to deliver finished eyeglasses one week after the initial measurement.

As an SPA-type eyeglass chain store, OWNDAYS Co., Ltd. follows a business model where the company sells original brands developed in-house at low prices and in large quantities. The key to this business model is increasing the turnover rate of product sales. Visual acuity measuring machines and lens processing machines enable this business model. The use of a highly accurate optometry machine ensures that eyesight is measured accurately. Thus, the work performed by the staff members at a store can be simplified as much as possible. OWNDAYS Co., Ltd. improved the efficiency of its storefronts by drastically reducing the number of jobs employees had to complete and by establishing both a new sales method and a high turnover rate for eyeglass sales.

Doitsu Meister-Gankyouin

Doitsu Meister-Gankyouin is a small independent eyewear store in Aoyama, a luxury area in Tokyo, that was launched in 2014. The owner of Doitus Meister-

Gankyouin acquired the Meister qualification in Germany, the highest professional qualification in crafts, and a state-approved grade. In Japan, only four people are considered to have this qualification, with two of the four on staff at Doitsu Meister-Gankyouin. To obtain this qualification, a person must take courses and perform practical tasks in a wide range of fields, including eyewear, anatomy, pharmacy, psychology, and business administration. The path to achieving this qualification is challenging and long, sometimes taking up to ten years.

Doitsu Meister-Gankyouin conducts visual acuity tests using an optometry method called a "binocular vision examination," something only a Meister can perform. Because the left and right eyes have a separation between them, there is a slight difference between the images viewed by each eye individually. This gap may cause eye strain, stiff shoulders, and migraines. To eliminate this burden, binocular vision examination is an inspection method that measures not only the visual acuity balance of both eyes but also the deviation of visual function in the eye muscles and brain.

The vision test process begins with an inquiry that covers the customer's background information such as occupation, hobbies, and living environment, including total PC usage time. Subsequently, a preliminary test is conducted to check eye movements, visual acuity balance of both eyes, and the sense of distance. Any deviation from normal visual function in the eye muscles or brain is measured and corrected. The eyeglass frame and lens are selected next. Finally, the fit of the glasses is thoroughly checked, and suitable adjustments are made. An examination like this, one that investigates not only sight but also comfort, can take up to two hours. This combination of detailed eyesight evaluations and custom services, which can never be performed with machines alone, has made stores popular. Although it is located in Tokyo, it is now a thriving store with customers from all over Japan.

Discussions

Concepts of technology and skill in the manufacturing industry

In considering the unique competitive advantage of retail SMEs, the concepts of "technology" and "skills," used in discussions that historically analyze the competitive advantage of Japanese manufacturing companies, are useful. Japan's manufacturing industry has been praised for nurturing internationally competitive industries and contributing to economic growth. The use of innovative technology is one source of strength; however, skill acquired at the manufacturing site, whether on the individual production lines of large manufacturers or in town factories of small- and medium-sized manufacturers, is also essential for success.

However, technology and skills are often used interchangeably. Technology refers to the knowledge and abilities that have been theorized or formalized. Technology can be realized through mechanization, tools, and objects outside the human body. For example, information technology can be used in the manufacturing of both liquor and bread to make subtle adjustments to the production process and enable production using machines. Machines based on innovative technology significantly reduce the need for people who possess key knowledge of brewing and baking.

In contrast, skill is an inherent personal capability; it enables delicate processing that cannot be expressed in terms of data. It has been asserted that skills, which can only be acquired through experience, are significant in supporting Japanese manufacturing (Koike, Chuma, and Ohta 2001; Koseki 2005; Koseki 2009).

Concepts of retail technology and retail skills

Technology in the manufacturing industry has been adopted and used in the retail industry as "retail technology." Retail technology has been promoted as a

factor that exceeds the critical point of product-handling technology and drives format innovation (Ishihara, 2000). This holds true for OWNDAYS Co., Ltd. Some of the skills possessed by a person have been embodied in eyesight-measuring machines as a retail technology, and these innovative technologies have significantly reduced the work of merchants. Consequently, OWNDAYS has been able to implement new sales methods and enhance store efficiency. New sales methods based on this retail technology constitute a competitive advantage for OWNDAYS Co., Ltd.

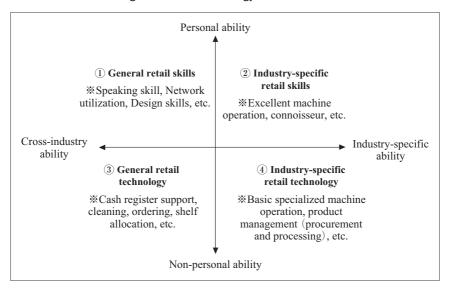
In contrast, Doitsu Meister-Gankyouin demonstrates an ability that cannot be achieved using a vision-measuring machine. Through close communication with customers, the store not only improves a customer's visual acuity, but the owner's expertise augments the customer's comfort. The unique services provided by Doitsu Meister-Gankyouin are essentially rooted in the owner' skills. In this study, we refer to the merchants' abilities that retail technology cannot replicate as "retail skills."

Retail skills is a comprehensive concept that captures the artisanal abilities possessed by merchants, distinct from those in the manufacturing industry, and clearly differentiated from retail technology, which can be addressed through mechanization and systemization. It is believed that retail skills vary depending on the industry and that merchants possess diverse abilities. Contrarily, merchants share some common retail skills that transcend the boundaries of different industries.

The retail industry's technologies and skills are organized as shown in Figure 5. This study classifies four types of skills by determining whether the merchant's unique ability is personal or non-personal and whether the ability can be transferred within or beyond the industry.

The first set of "General retail skills" are personal abilities, but they can be observed in various retail industries. These skills are utilized when communicating with customers and business partners. Merchants possessing these skills adeptly

Figure 5. Retail technology and retail skills



capture customers' feelings, thereby influencing their purchasing behavior and transactions. This category includes the ability to provide stores with unique designs that attract customers. These abilities may seem imitable at first but are instead abilities that an individual possesses by nature or has acquired independently through association with the business for generations. These abilities are difficult to acquire in the short term. Therefore, the competitive advantage offered by this category of ability is relatively high.

The second category is "Industry-specific retail skills." These are personal abilities specific to each industry. These skills are called professional abilities and are based on several years of experience. Examples of these skills include the handling of specialized equipment, specialized knowledge, specific handling methods, and the ability to find the product the customer wants or needs. These abilities include those unique to Doitsu Meister-Gankyouin, or to the greengrocer's

assortment formation ability, as described by Matsuda (2017). It takes a great deal of specialized knowledge and experience to acquire abilities in this category. A considerable amount of time, effort, and talent are needed to transfer industry-specific retail skills to another person. Therefore, the competitive advantage of this ability is relatively high.

The third category is "General retail technology." These nonpersonal abilities are shared across various industries. For example, the ability to perform general daily tasks such as cash-register handling, cleaning, ordering, and product delivery are categorized as basic retail technology. One characteristic of these abilities is that they can be used for more than one type of work, including manuals and training and may even pertain to part-time jobs. This means, abilities in this category can be acquired by anyone with a certain amount of preparation. Therefore, this ability imparts little to no competitive advantage.

The fourth category is "Industry-specific retail technology." These are non-personal abilities specific to each industry. Industry-specific retail technology can be acquired through manuals and on-the-job training. For example, basic specialized machine operations and product management fall into this category. OWNDAYS Co., Ltd. exhibits some of these abilities. Although these abilities require a certain amount of experience, anyone can acquire them through training, including manual training. The competitive advantage of this ability is low.

The aspect of both retail skills is crucial here. Retail skills are present across all industries, and their levels significantly affect the performance and growth of individual stores, ultimately leading to significant competitive advantages. However, acquiring such retail skills is difficult. Some individuals may inherently possess them, while others gain them through years of cultivated experience, making them inaccessible to all merchants. Consequently, these abilities cannot easily be imitated by large chain stores, thus showcasing strong competitive advantages.

Conclusion

Until now, studies on retail SMEs in Japan have implicitly assumed that retail SMEs make a profit by merely buying and reselling goods. As a result, research has not focused on the craftsmanship of retail SMEs. This study attempts to fill this gap in the existing literature. This study conducted an exploratory analysis of the unique advantages of retail SMEs, which are not necessarily inferior to large-scale retailers, although large-scale retailers are inherently superior in terms of technology and productivity. The study focused on the concept of "skills" meaning craftsmanship in manufacturing companies, adopting the concept, and developing a new concept of retail skills. Some theoretical and practical implications and future issues emerged from this study's exploration and analysis.

Theoretical implications

The following two points can be considered as the theoretical implications. First, this study introduced a new perspective on the debate on why retail SMEs are able to survive. Retail SMEs are often considered outdated, inefficient, and produce low retail service levels. In contrast, there are high expectations for modern and innovative large-scale retailers, and it is often understood that they enhance consumer convenience. Consequently, large-scale retailers' market share in developed countries far exceeds that of retail SMEs. Even in Japan, although selection has progressed considerably, retail SMEs have not been eradicated and many coexist with large-scale retailers while competing on an equal footing. Furthermore, the number of large-scale retailers is growing in emerging countries, and yet, retail SMEs in those countries are still present. Is it a meaningless existence for retail SMEs? Should they be eliminated, and why can retail SMEs exist in the first place? To answer these questions, economic efficiency and social effectiveness have been considered the basis for retail SMEs. However, this study

showed that retail skills as a personal attribute of retailers are a new factor constituting the basis for their existence. By reassessing retail SMEs using this concept, we can re-examine their significance.

Second, it is necessary to review retail competition theory. Large-scale retailers, now at the heart of the retail market, have leveraged economies of scale to achieve innovation and the resulting mechanization of work. They have grown by using "retail technology" and pursuing efficiency. However, many retail SMEs, which are small and unrelated to innovation, have struggled in the competition against large-scale retailers and have been eliminated. However, the retail skills presented in this study are independent of economies of scale and innovation, and are retailers' unique capabilities. Clarifying the existence and importance of these capabilities will dramatically increase retail SMEs' growth potential. A new source of competitive advantage for retail SMEs will force changes in the competitive relationship between large-scale retailers and retail SMEs. New developments in the retail competition theory are expected to this end.

Practical implications

The following two points can be considered as practical implications. The first is enabling the revival of retail SMEs. The position of retail SMEs in developed countries is extremely weak. To put it somewhat hyperbolically, retail SMEs as a business model are no longer prospering. However, although the share of retail SMEs in developing countries remains high, empirically, it is highly likely that they will eventually follow the same path as their counterparts in developed countries. However, retail SMEs have growth opportunities, particularly in terms of honing their retail skills. Retail skills refer to the ability of an individual retailer. This study shows that retail SMEs around the world that are struggling can seize great potential by restructuring their strategies using retail skills as a competitive advantage.

Second, large-scale retailers have the opportunity to gain a discriminatory competitive advantage. As mentioned previously, large-scale retailers have gained an overwhelming market share by pursuing efficiency using retail technology. However, they face significant challenges, such as homogenization. Further differentiation must be observed among growing large-scale retailers. Consumers perceive these companies as mostly the same. The key to overcoming this situation is retail skills. Although retail skills are the personal abilities of retail SMEs, the concept also seems applicable to large-scale retailers. If retail skills can be embedded within an organization, large-scale retailers should be able to differentiate themselves. Incorporating retail skills within the organization requires careful consideration. However, large-scale retailers need to focus on retail skills to regain the essence of retail "merchants" they might have had at the time of establishment and achieve differentiation.

Limitations and future research directions

While this study aimed to derive the concept of highly abstract retail skills from a case study of the eyewear industry with the goal of generalizing the competitive advantage of retail SMEs, it did not conduct an in-depth analysis of the specific abilities possessed by eyewear retailers as part of their retail skills. Moreover, focusing solely on eyewear retail SMEs impose limitations on the generalization of retail skills as a competitive advantage for all retail merchants. Considering these limitations, the following three research tasks can be identified as future research directions to advance this study.

First, it is necessary to conduct further investigations, including an in-depth exploration of the eyewear industry and accumulating case studies across other industries, to generalize the discussions on retail skills. It is essential to analyze various industries comparatively and comprehensively, identifying the specific abilities that constitute "industry-specific retail skills" of retail skills within each

industry and determining the common "general retail skills" that transcend different sectors.

Second, research on the transferability of retail skills within an organization is needed. Retail skills are the attributes of individual merchants. How does retail skills spread and propagate within the organization, and is this possible? Future studies should address this issue.

Third, the scope of the retail skill concept needs to be broadened. Future research must examine whether retail skills exist as individual attributes within the organization of large-scale retailers, not just retail SMEs, and, if so, how they differ from retail skills in small- and medium-sized retailers. This is expected to lead to further progress in retail research.

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