

Importance of Same Day Delivery of Fast-Moving Consumer Goods for E-Commerce Companies

Onur Delikurt

Department of Industrial Engineering
Bahcesehir University
Istanbul, Türkiye

Adnan Corum

Department of Industrial Engineering
Bahcesehir University
Istanbul, Türkiye

Abstract

Customer habits have changed with the rapid growth of e-commerce globally. It has become inevitable for companies to produce solutions according to the preferences of customers in fast moving consumer goods (FMCG) where competition is high. In this study, which looks at the FMCG sector from a broad perspective, how customer habits have changed over the years, the growth charts of e-commerce, their sales shares, their importance for FMCG products and the effects of same-day delivery on customer decisions are explained. How these global issues have changed for Türkiye is also compared with global data. The development of the e-commerce sector in Türkiye in recent years is presented. This study emphasizes the importance of e-commerce companies selling FMCG to switch to the same day delivery method.

Key words: Fast-moving consumer goods, e-commerce, same-day delivery, consumer behavior.

1. Introduction

The fast-moving consumer goods (FMCG) industry has a proven track record of producing consistent growth across mass brands. However, as customer behavior changes and the channel ecosystem shifts, the structure that launched the industry to success seems to be under challenge. Companies under this competition must satisfy their customer's need to survive in this environment.

The FMCG industry is always evolving and becoming extremely fast-paced to respond to the quickly changing needs of the younger generation. Companies are evolving and efficiently producing new solutions to expand or maintain market shares in the competitive FMCG sector. E-commerce is becoming one of the most significant channels for these products group. Compared to the traditional channels and the total trade, e-commerce is growing much more. In addition, the sales share of e-commerce for the FMCG sector is also growing.

In Türkiye, the growth rate of e-commerce is also higher compared to the global sector because of the younger generation population. That's why both FMCG companies and e-commerce companies which sell FMCG products should be up to date to provide the needed solutions for the customer needs. For the e-commerce sector, customer satisfaction is also critical. Every year, the number of online buyers grows, and customer behavior shifts tremendously.

Customers are making more demands when it comes to having their products delivered, with a pleasing service that is both free and fast. Order delivery time has become an important aspect of the online purchasing experience and a decisive factor for many customers. Customers might abandon their orders due to long delivery periods. One of the most crucial is same-day or next-day delivery, which has inspired plenty of new business models.

Circumstances in e-commerce logistics, which has seen a fast expansion in recent years, have also changed. For consumers, same-day delivery is a major plus. The demand for e-commerce logistics grew because of this condition.

While corporations with well-developed information technology infrastructure gained a kickstart, new business models developed to satisfy the increasing demands, and the number of players in the market expanded. E-commerce logistics has emerged as a new growth sector for Türkiye's top companies. Many organizations have raised their investments in this industry in recent years. Leading e-commerce companies in Türkiye are expanding their shipping operations as well.

One of the possible models to expand and improve the shipping operations with satisfactory delivery time is to establish some warehouses/docks to strategic locations. According to the data gathered from Trade Ministry of Türkiye, 55% of the total e-commerce sales comes from 5 big cities of Türkiye. For an already operating e-commerce company, establishing docks with highly preferred products in locations having high demand might become a profitable solution to be strong in the competition.

2. FMCG Sector

The FMCG market is a strongly competitive and fast-paced industry. FMCG sector is multi-billion-dollar and one of the world's fastest-growing sectors. Nearly every single person in the developed and developing countries buys and uses FMCG items daily basis. The FMCG industry's suppliers include some of the world's most well-known brands (Thain & Bradley 2014). With the rapid development of the industry, the market's brands are continuously shifting their market share.

Manufacturing, distribution, and retail are significant facilities provided by the FMCG industry. FMCG products are items that are commonly purchased by customers and are delivered quickly from the manufacturer to the customers. This is where the sector's name comes from: the quick flow. This sector's goods are typically high-volume but low-cost.

Food and beverages, beauty and personal care products, toiletries, over-the-counter medications, and home care products are all popular product categories in the FMCG industry. The products of these categories move rapidly off the shelves and into the hands of consumers. As a result, replenishment is crucial for both producers and retailers to avoid losing revenue opportunities and optimize return on investment (Bilgen & Günther 2009).

To investigate the sector deeply, the challenges must be considered as well. Latest technological innovations, omnichannel consumers, changing user preferences, the impact of internet review websites and ratings, and ability of customers to search for the best offers are all barriers that companies in the FMCG sector face. In addition, in the FMCG industry, new products and industries develop daily basis, and customers also change. They are no longer adopting low-cost brands and are now pressuring FMCG companies to keep delivering innovative new goods at a quicker speed (Bashir et al. 2020; Ashford & Hall 2011). Therefore, FMCG companies who want to remain ahead of their rivals must gain a deeper understanding of current business dynamics, as well as a better understanding of their consumers, buying behavior, and personalized consumer demands (Lehner et al. 2016).

FMCG are generally low-cost products which typically consumed on a small scale and can be found in a variety of locations. Because of the emergence of experience retailing and willingness of consumers to expand their physical value proposition with a purchasing experience, the FMCG market has grown steadily over the last decade. According to the Global FMCG Market Opportunities and Forecast report published by Allied Market Research; The global FMCG market is projected to reach \$ 15361.8 Billion by 2025, registering a compound annual growth rate (CAGR) of 5.4% from 2018 to 2025.

Product form, distribution channel, and location are all used to distinguish the global FMCG market. Based on the product type, food & refreshments, beauty & personal care products, healthcare (OTC medications, vitamins & dietary supplements, oral care, feminine care, and others), and home care are the main categories of FMCG industry (Oraman et al. 2011). Major distribution channels for FMCG industry as discounters, hypermarkets/supermarkets, general stores, etc.

The food & beverage category dominated the FMCG market, and it is expected to continue to dominate the global market in the coming years (Ghoshal 2016; Kumar & Kumar 2017). Today's consumers are more informed about and tolerant to foods & beverages from other cultures. Food and beverage operators have been forced to preserve the consistency of their products to provide the same experience to the consumers. The trend of healthy food seems to have had a significant impact on the food and beverage market's development (Vojtovic et al. 2016).

The distribution channel segment of supermarkets and hypermarkets dominated the FMCG market. The growth in population and competition for another service for all shopping needs are driving this segment's development. Furthermore, the increased experience offered by these business models making them more appealing to the customers.

Regarding the region, North America is projected to continue to dominate and expand at a steady rate in the FMCG market. However, due to change in customer behavior brought on by globalization and a rise technological development Asia-Pacific is projected to expand at the fastest rate of 8% (Wagner 2018).

The growth of the educated population, as well as increased internet and social media access, have expanded the market of processed and packaged foods, providing the basis for the region's FMCG market to expand. Besides that, potential growth drivers for the FMCG industry are expected to come from product advances and the launch of new products with competitive pricing. To gain a significant share of the FMCG market, the top companies concentrate on offering personalized solutions to their consumers as one of their main strategies (Ahluwalia 2017). Brand launch and acquisition strategies have also aided key players in gaining a substantial share of the global FMCG market (Thain and Bradley 2014).

Numerous different trends, such as the increasing popularity of online sales, research and development for new brands and goods, and the penetration of FMCG infrastructure into underdeveloped and developing countries, are expected to create significant opportunities for FMCG companies in the future (Vibhuti et al. 2014).

Consumers have been increasingly concerned about their health and personal hygiene in recent years, leading to a preference for a healthful lifestyle. Customers evaluate their daily requirements depending on their hygienic consistency, and their buying habits are shaped by their behavior (Kim & Chung 2011). The FMCG companies must consider this change as an opportunity to increase their market share and penetration.

3. Consumer Behavior Change for FMCG Sector

To be responsive to the rapidly changing requirements of the new generation, the FMCG business is continuously developing and becoming highly fast-paced. In the competitive FMCG world, companies are currently transforming and effectively creating new solutions to grow or to keep market shares (Wanninayake and Randiwela 2008).

The increased accessibility of information online has recently affected trends. Customers are becoming more health-conscious and eco-friendly, which induced them to e-commerce sites. Companies are now trying to transform digitally to understand the customer behavior and their new journeys (Kouvelis et al. 2006). This would allow them to capture and forecast future opportunities like producing the upcoming popular products rather than waiting for products to become popular.

In FMCG business, the millennial generation is rapidly turning to be the decision-makers. With the exponential rise of digital transformation and accessible knowledge majority of this generation's customers are making purchases online. The ability to research and gather information online from home or office and getting the product delivered would force FMCG companies to adopt more innovative marketing and branding tactics (Lorange and Rembiszewski 2016).

The FMCG market has become much more dynamic, but as a result, it has become more difficult for businesses that have struggled to adapt and maintain with technological innovation. Companies need also consider their current condition and be up to date in their approach to adapting themselves regularly. The most basic and common way to do it is to invest on digitization and e-commerce actions considering the power of online shopping. It was

accepted that physical/offline shopping was once the most common method of shopping. However, online shopping is rapidly becoming the preferred method of shopping for consumers around the world. Due to the extreme rise of e-commerce, shopping preferences of consumers has shifted dramatically in recent years. The shopping revolution driven by e-commerce lets consumers no longer be required to go shopping. E-commerce has revolutionized the way consumers shop by bringing the shopping experience to their hands through computers and mobile devices.

4. Importance of Online Shopping for FMCG Sector

Consumers all over the world are increasingly buying items online because it provides conveniences that physical stores cannot, such as delivering orders straight to their door, a large range, and low prices (Hansen 2005). The most significant effect of e-commerce on customer shopping preferences is the ability to shop from any place, at any time. They no longer must shop during store hours or spend time in line. Ability to shop online has been available for a certain time in a day but it is more popular now with smart phones.

The ability to save money is one of the most critical factors in increasing online sales (Lee & Littrell 2005). Most of the customers state that if products are cheaper online than in a physical/offline store, they are more likely to buy them. In addition to that, they also prefer to shop online because of the discount promotions and free shipping options (Guo et al. 2020).

Although price is significant in customer buying decisions, competing primarily on price is not a solid option for FMCG companies. Luckily, they may compete in other aspects that are equally critical in the online journey. Recent studies indicate that together with the lower prices, online materials like product images, rich content, customer services, and availability of product information are also important (Lee & Lin 2005).

FMCG shoppers love the ease of shopping online. However, they also enjoy being interaction with the products physically. Consumers have no choice but trust product descriptions, features, and specifics when making online purchases. That is why they expect product detail pages to include detailed and accurate information as well as high-quality images to make purchasing decisions (Di et al. 2014). Those are the crucial trending actions to be taken for a better online shopping experience for the customers.

Apart from the rising trend of online shopping, the emergence of mobile shopping has blurred online and offline shopping. Instead of using two different channels, there is likely to be an opportunity to be used together to improve the shopping experience. If the FMCG companies and brands are not likely to use this opportunity, there is a possibility to lose market share. To avoid this possibility, companies must provide more options for their customers like having e-commerce channels, listing their products on marketplaces, creating their own mobile applications, and selling through social commerce. By doing so, companies have given their customers the shopping flexibility to select the place, time, and way of shopping. So, customers can buy anything online at any time in a day, get it delivered in preferred time, and may return it to a physical store if they do not like it.

With the boosting effect of Covid-19, total e-commerce sales have reached \$4.29 trillion in 2020 globally. It was \$3.46 trillion in 2019 and 2.93 trillion in 2018 (Young 2021; Sabanoglu 2021). The total share of e-commerce is also increasing year by year. At the end of 2020, total e-commerce share increased to 18% and expected to reach around 25% at the end of 2024 (Sabanoglu 2021). Total e-commerce sales were growing around 10 times faster than total retail in the previous years. However, Covid-19 impacted the figures and in 2020 e-commerce grew 20 times faster than total retail (Perez 2020). FMCG figures are also like global retail sales. In the Kantar's FMCG Worldpanel report, online contribution of total FMCG will be around 10% in 2025 which is around 5% in 2018.

5. FMCG Sector in Türkiye

Due to the Covid-19, Türkiye's shopping habits in 2020 have changed. The Ipsos Household Consumption Panel's annual data showed real consumer shopping habits and behavioral improvements in 2020, as well as new concepts that emerged. The most significant shift in consumer behavior is that shoppers are shopping less often. Considering FMCG sector, household consumption grew in turnover in 2020, but fell behind the previous two years. Household FMCG spending grew by 16.3% in terms of turnover, but spending growth remained below the last 2 years. Change in fixed price is around 3.8%. FMCG household spending were growing 20.6% in 2018

compared to 2017 and 25.6% in 2019 compared to 2018. With the impact of Covid-19, households went shopping less frequently in 2020, with an 11% decrease in shopping frequency. On the other hand, the decrease in spending at the beginning of shopping increased by 14.7% in 2020

Investigating the monthly trends; the change in shopping behavior throughout the year started during the Covid-19 period. Especially in March, the fact that households started to make bigger baskets and go shopping less frequently was effective in the change. Considering the trend, while the “open products” share in total expenditure is decreasing, the products that are unique to the markets continue to grow. Open markets, which lost their share during the Covid-19 period, had a significant effect on the shrinkage of open products.

Looking at household spending dynamics; there was an increasing trend of discount stores in the channel preferences of households. This year, the discount stores grew above the average of previous years. Households spent 33% of their spending in discount stores. Going to nearby places for shopping this year enabled independent supermarkets to increase their share, while open markets became the only shopping places to lose their share.

In the Ipsos Türkiye Barometer New Year Special Report, channel percentages are like 7% open bazaars, 6% groceries, 32% discounters, 23% independent SPMs, 8% local chains and 11% national chains. In 2020 online shopping grew significantly for also FMCG sector.

6. Growth of E-Commerce in Türkiye

The e-commerce sector in Türkiye has been very active for the last 20 years (Demirdöğmez et al. 2018; Özekenci 2017). To better understand the development in this period, it may be necessary to examine companies chronologically. Turkish economy is not growing double digits and constantly. However, growth of e-commerce is growing double digits for years. Between 2015-2019 e-commerce sector grew 13% in USD. In 2019 the sector grew 18% in dollars according to the report that Deloitte and TUBISAD (Turkish IT Industrialists Association) published in April 2020,

According to the TUBISAD's E-commerce report, e-commerce share in total retail was 5.3% in 2018 and 6.2% in 2019 which were significantly low compared to developed countries and global records. The share was around 16% worldwide in 2019. Former Trade Minister of Türkiye announced that the e-commerce share in total trade was 9.8% in 2019 and increased to 15.7% in 2020.

According to the data published by Trade Minister of Türkiye in 2020, majority of e-commerce platform usage comes from the age between 25 and 34 with 31%. Gender distribution is 57% male and 43% female. Distribution of e-commerce businesses/stores by provinces dominated by Istanbul with 43% followed by Ankara with 9%. E-commerce sales share is parallel to the number of businesses/stores and again dominated by Istanbul with 35% followed by Ankara with 11%. In 2020, compared to 2019 sector grew 68% in quantity based. 91% of the total sales comes from domestic orders. E-export is also increased and reached 1.4 billion dollars and has 1.3% share in total export.

In product category based, the fastest growing one is food & grocery category. The main reason for that growth is Covid-19 effect. The following product categories are household appliances, electronic category, and clothing & accessories in 2020. Some of the product categories like entertainment, airline, travel & transportation, and accommodation were negatively affected in 2020 because of the Covid-19. Considering all the sales, 61% of the share comes from credit card/debit card, 36% of the sales come from EFT and 3% of the sales comes from COD (cash-on-door) payment. Total CR% which is the conversion rate of the visit to the sales is 1.8% and the total visit/traffic distribution is like 63% mobile application, 25% website and 12% mobile web. The average order value (AOV) is \$ 11.50. AOV for product categories differentiate so much. AOV for electronic category is \$21, clothing is \$26, food & grocery is \$10. Monday is the top selling day with 20% sales share and Sunday is the least selling day with its 9% share. November is the top selling month with 12% sales share because of the biggest promotions like Black Friday and 11-11 (Single's Day) promotions. The least sales come in April with 6% sales share.

7. E-Commerce Share for FMCG Sector

Starting from 2020, FMCG industry is facing a great digital transformation because of Covid-19 effects. For almost all markets, the Covid-19 has boosted e-commerce growth. In 2020, an extra 5% of global households (67 million households) had also done their grocery shopping online at least once. In 2019, e-commerce accounted for 4.9% of grocery shopping; by 2020, this had risen to 6.5% of global grocery sales, contributing to a 45.5% increase and it is expected to reach 10% of the total FMCG sales in 2025 according to the Kantar's yearly Winning in Omnichannel report published in April 2021.

As stated in Winning in Omnichannel report by Kantar, household food consumption has 11.4% growth rate in 2020. Home care category products has 9.8% growth because of more hygiene requirement of the people due to covid-19 while beauty and personal care category has 0.1% sales decrease. As total, e-commerce share for grocery is accounted for 6.5%. Majority of the sales share comes from beverages, dairy, and food categories with 74% of the total FMCG industry. Beverages grew 8.6%, dairy grew 10.3%, and food grew 11.4% in 2020.

According to the Nielsen's Global E-Commerce Report published in November 2020, Türkiye's online FMCG growth rate was 57% before Covid-19. In the first phases of Covid-19 period, the growth rate increased to 159%. Later the growth rate stabilized at 130%. In Europe, growth rate was 9% before Covid-19. In the first phases of Covid-19 period, the growth rate was 65% and stabilized at 46%. Türkiye's online growth rate is much higher than Europe. The fastest growing online FMCG categories are wax and depilatory, hair dye, tea, instant coffee, conditioner, toothpaste, Turkish coffee, pregnant & lactating supplements, sanitary pads, and bleach, respectively. Online sales turnover growth, which was 53% before Covid-19, in the fastest-growing waxes and depilatories increased to 670% during the Covid-19 period. This figure was 351% in the stabilized period. Another product that attracts attention with its growth is hair dye, which had an online turnover growth of 160% before Covid-19. This increased to 835% during the Covid-19 period, stood out with 340%. In comparison to before Covid-19 period, the share of e-commerce for FMCG in the United States increased by 6% to 15%. In Mexico 9% increase has led to 12% share. In United Kingdom, 7% increase has led to 13% share. In China, 5% increase has led to 30%, in Korea, 4% increase has led to 26% share. There is also an accelerated increase trend in the Turkish market. According to the report, the share of e-commerce in the Turkish FMCG market increased by 2 points to 4%.

FMCG companies focus on the major change in shopping behavior of consumers due to the Covid-19. As the share of e-commerce in FMCG increases, companies are more focused on their e-commerce operations. The rapid development of e-commerce is causing to increase in the share of FMCG companies on the sector. Due to the convenience brought by online shopping, the share of e-commerce in FMCG is expected to increase even more in the coming period.

8. Importance of Same Day Delivery for FMCG Sector

Customer satisfaction is crucial for online retailers that have outstanding delivery services. Every year, the number of digital buyers increases, and customer behavior changes dramatically year by year. When it comes to having their purchases delivered, customers are becoming more demanding, with a satisfying free and fast service. Speed of order delivery has become a significant feature of the online shopping experience and deciding factor for online shoppers (Rahman et al. 2018). Slow delivery times have caused 53% of customers to abandon an order according to the Digital Commerce Survey 2017 published by Boston Retail Partners.

In comparison to 2019, almost twice as many customers claim they used same-day delivery in 2020. When same-day delivery isn't an option, customers aren't satisfied: Nearly 30% of the customers claim they are disappointed when a company doesn't propose it. According to Global Opportunity Analysis and Industry Forecast report published in May 2021, the worldwide same-day delivery market is expected to grow at a compound annual growth rate (CAGR) of 50% from 7.55 billion dollars in 2019 to 132 billion dollars by 2026.

Same-day delivery is a major selling feature for customers (Klapp 2020). According to Amazon Commerce Competitive Edge 2018 report of Business Insider Intelligence, 80% of respondents stated that same-day delivery would persuade them to prefer one retailer over the other if two retailers offered the same product at the same price. The radical change caused by Covid-19 has affected consumer habits on e-commerce. The fast or same-day

delivery created a wide range of new business models (Chen et al. 2020). Conditions also changed in e-commerce logistics, which has entered a rapid growth trend in recent years.

The rapid growth in cargo traffic with discount campaigns created the need for a significant change in the e-commerce industry in Türkiye. The experience of Covid-19 and the rapid increase in e-commerce traffic made this change essential. With Covid-19, the e-commerce sector needed to develop totally. Customers preferred to meet almost all their needs with online shopping. This situation increased the demand for e-commerce logistics. While companies with developed technology infrastructure came one step ahead, new business models emerged to meet the increasing demand, and the number of players in the sector increased rapidly (Ding & Zhao 2021).

The new growth area of Türkiye's leading companies has been e-commerce logistics. In recent years, many companies have increased their investments in this sector (Erceg & Kilic 2018). The failure of cargo companies to keep up with the speed of e-commerce, which has risen rapidly with Covid-19, has led retailers to initiate their cargo operations. Companies started to offer their customers a fast and innovative door-to-door delivery services. Customers can receive delivery service on the same day or at any time the next day in addition to the other delivery options in their online orders. Türkiye's leading e-commerce platforms are also increasing their activities in the cargo area.

Within the scope of the project organized by cargo companies in Türkiye, they agreed with many small local businesses. Consumers who shop from the e-commerce site do not have to wait at home for their cargo to arrive. Their products will be delivered to the designated small businesses at the closest points to their homes and they will be able to reach their products from those points within 3 days without paying any additional fee.

In addition to those developments, the number of entrepreneurs entering the cargo and delivery business is rapidly increasing. In this period, where fast and trouble-free delivery became more significant start-ups with a strong technology infrastructure are getting popular in the market. Entrepreneurs compete for their same-day and the next-day options. After the increase in e-commerce demand, supermarkets also entered the door-to-door business. Market chains that started this business before, started fast delivery.

Companies are also creating alternative solutions to solve the undelivered order problems when consumers are not home which is one of the most common problems in e-commerce deliveries. Recently, the most favorite delivery point has been petrol stations for e-commerce companies.

9. Conclusions

The fast-moving consumer products market has a direct impact on the performance of growing mass-market brands. But the business is hard. In this atmosphere, businesses must satisfy needs of their customers to exist. Because of the number of younger populations, Türkiye's e-commerce growth rate is also higher than the worldwide sector. As a result, both FMCG companies and e-commerce enterprises that offer FMCG products should stay current to supply the necessary solutions for customer demand. Customer satisfaction is extremely crucial in the e-commerce industry. The number of online buyers expands every year, and customer behavior changes dramatically.

To meet the rapidly changing needs of the current customer needs, the FMCG business is constantly expanding and shifting quickly. In the competitive FMCG sector, companies are evolving and efficiently generating innovative solutions to expand or preserve market share. E-commerce is increasingly becoming one of the most important channels. E-commerce is developing at a significantly faster rate than traditional channels and total trade. Furthermore, share of e-sales in the FMCG sector is increasing.

Consumers are demanding that their products be delivered with a pleasant service that is both free and quick. For many customers, order delivery time has become a key element of the online purchase experience and a deciding element. Long delivery times may cause customers to abandon their orders. One of the most significant is same-day or next-day delivery, which has created several innovative business models. Conditions in the e-commerce logistics industry, which has undergone rapid growth in recent years, have also changed. Same-day delivery is a huge bonus for customers. As a result of this situation, the need for e-commerce logistics increased.

As companies with well technology infrastructure got a head start, new businesses developed to meet rising demand, and the number of players in the market grew. For Türkiye's leading corporations, e-commerce logistics has emerged as a new development industry. In recent years, many organizations have increased their investments in this sector. Türkiye's leading e-commerce businesses are also growing their delivery operations.

Placing various warehouses/docks in key locations is one of the available models for expanding and improving shipping operations with an acceptable delivery time. According to data acquired by the Turkish Ministry of Trade, 5 big cities account for 55 percent of overall e-commerce sales. Placing docks with highly preferred products to certain places could be a profitable alternative for an existing running e-commerce company to stay competitive.

In addition, new innovations coming globally like Amazon's physical stores opening. Even though, Amazon is the biggest company in online environment, they decided to open offline stores with the most selling products without putting any physical cashiers to their stores. Jack Ma, the founder of Ali Baba, brought a new aspect to the retail sector combining online and offline operations. Since the e-commerce companies collect enormous amount of data gathered from first part customers, he claimed that it would be the future of the sector by using these data with offline applications such as physical stores or click and collect solutions like the omni-channel applications. By using artificial intelligence, it is likely to be seen that customers would experience unmanned physical stores soon. After some successful applications globally, Türkiye would follow those applications to gain or keep market share with innovative solutions.

References

- Ashford, N. A. & Hall, R. P., Technology, globalization and sustainable development. Transforming the industrial State. New Haven & London: Yale University Press, 2011.
- Bashir, H., Jorgensen, S., Pedersen, L. J. T. P & Skard, S., Experimenting with sustainable business models in fast moving consumer goods, *Journal of Cleaner Production*, vol. 270, 2020.
- Bilgen, B & Günther, H.O., Integrated production and distribution planning in the fast-moving consumer goods industry: a block planning application. *OR Spectrum*, vol. 32, pp. 927-955, 2009.
- Chen, X., Wang, T., Thomas, B. W. & Ulmer, M. W., 2020. Same-day delivery with fairness. Arxiv Preprint.
- Demirdöğmez, M., Gültekin, N. & Taş, H. Y., Türkiye'de E-Ticaret Sektörünün Yıllara Göre Gelişimi. *Uluslararası Toplum Araştırmaları Dergisi*. vol. 8, no. 15, pp. 2218-2232, 2018.
- Di, W., Sundaresan, N., Piramuthu, R. & Bhardwaj, A., Is a picture really worth a thousand words?: on the role of images in e-commerce. 7th ACM international conference on Web search and data mining. pp. 633-642, 2014.
- Ding, Q., & Zhao, H., Study on e-commerce logistics cost control methods in the context of COVID-19 prevention and control, *Soft Computing*, vol. 25 no. 18, pp. 11955-11963, 2021.
- Erceg, A. & Kilic, Z., Interconnection of e-commerce and logistics: Examples from Croatia and Türkiye. 18th international scientific conference Business Logistics in Modern Management. pp. 265-283, 2018.
- Ghoshal, M., The phenomenal success of Patanjali in FMCG Sector – An analytical study. *Research Journal of Social Science & Management*, vol. 6, no. 4, pp. 11- 20, 2016.
- Guo, Y., Hu, X., Zou, Y., Li, S., Cheng, W., & Li, Z., Maximizing E-tailers' sales volume through the shipping-fee discount and product recommendation system, *Discrete Dynamics in Nature and Society*, 2020.
- Hansen, T., Consumer adoption of online grocery buying: a discriminant analysis. *International Journal of Retail & Distribution Management*, vol. 33, no. 2, pp. 101-121, 2005.
- Kim, H. Y. & Chung, J-E., Consumer purchase intention for organic personal care products. *Journal of Consumer Marketing*, vol. 28, no.1, pp. 40-47, 2011.
- Klapp, M. A., Erera, A. L., & Toriello, A., Request acceptance in same-day delivery, *Transportation Research Part E: Logistics and Transportation Review*, vol. 143, 2020.
- Kouvelis, P., Chambers, C. & Wang, H., Supply Chain Management Research and Production and Operations Management: Review, Trends and Opportunities. *Production and Operations Management Society*, vol. 15 no. 3, pp. 449-469, 2006.
- Kumar, M. & Kumar, Y., GST & Its probable impact on the FMCG Industry in India, *International Journal of Research in Finance and Marketing*, vol. 7, no. 4, pp. 66-76, 2017.

- Lee, G-G. & Lin, H-F., Customer perceptions of e-service quality in online shopping. *International Journal of Retail & Distribution Management*, vol. 33, no.2, pp. 161-176, 2005.
- Lee, Seung-Eun & Littrel, M.A., Global e-tailing: US consumers' intention to shop for cultural products on the internet, *International Journal of Retail & Distribution Management*, vol. 33, no.2, pp. 133-147, 2005.
- Lehner, M., Mont, O., & Heiskanen, E., Nudging—A promising tool for sustainable consumption behaviour?, *Journal of Cleaner Production*, vol. 134, pp. 166-177, 2016.
- Lorange, P., & Rembiszewski, J., From great to gone: why FMCG companies are losing the race for customers, Routledge, 2016.
- Oraman, Y. Azabagaoglu, M. O. & Inan, I. H., The firms' survival and competition through global expansion: A case study from food industry in FMCG Sector. *Procedia Social and Behavioral Sciences*, vol. 24, pp. 188-197, 2011.
- Özekenci, E. K., The Determinants of E-Commerce in Türkiye and European Countries: A Panel Data Analysis, Master Thesis, Mersin: Çağ University Department of Business Administration, 2017.
- Perez, S., August 24, 2020. Covid-19 pandemic accelerated shift to e-commerce by 5 years, new report says. <https://techcrunch.com/2020/08/24/covid-19-pandemic-accelerated-shift-to-e-commerce-by-5-years-new-report-says/>, [accessed May 30, 2021].
- Sabanoglu, T., Mar. 26, 2021. Global retail e-commerce sales 2014-2024. <https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/>, [accessed May 30, 2021].
- Thain, G. & Bradley, J., FMCG: The power of fast-moving consumer goods. Sarasota: First Edition Design Publishing, Inc, 2014.
- Vibhuti, Kumar Tyagi A. & Pandey, V., A case study on consumer buying behavior towards selected FMCG products, *International Journal of Scientific Research and Management*, vol. 2, no.8, pp. 1168-1182, 2014.
- Vojtovic, S., Navickas, V. & Gruzauskas, V., Sustainable business development process: The case of the food and beverage industry, *Zeszyty Naukowe Politechniki Poznanskiej*, vol. 68, pp. 226-239, 2016.
- Wagner, C. F., Personal care and self-adhesive / Sealant. Beiersdorf AG Company Report. Nova School of Business & Economics, 2018.
- Wanninayake, W. M. C. B., & Randiwela, P., Consumer attractiveness towards green products of FMCG sector: an empirical study. In Proceedings of the Oxford Business and Economics Conference, Oxford: UK, June 2018.
- Young, J., Global online sales reach nearly \$ 4.29 trillion in 2020, April 2021. <https://www.digitalcommerce360.com/article/global-e-commerce-sales/>, [accessed May 30, 2021].