



2021 e-commerce ecosystem in Turkey

Foreword



Orkun Saitoğlu

COO, iyzico and PayU Turkey

Apart from its devastating impact on our lives, pandemic changed the scope of e-commerce. Since 2020, when global closures were experienced and physical shopping was replaced by online stores, the sector has recorded a breaking high growth. So much so that decades' worth of expected growth was achieved within a few years.

2021 was a year of hope for all of us. While we were returning to our long-awaited social times upon vaccination efforts, albeit under certain restrictions; the world of e-commerce kept its momentum. The convenient aspects of digitalisation and the emphasis on perfect customer experience made online shopping a permanent choice for customers. 2021 e-commerce statistics, which even surpassed the outstanding achievements of the sector in 2020, showed us that e-commerce is here to stay.

Based on Ministry of Trade data, the number of e-commerce transactions reached to 3,4 billion by 46% yearly growth, whereas the e-commerce sales volume rose to 381,5 billion TRY with a yearly growth of 69%, by the end of 2021. Given the fact that internet penetration in Turkey is higher than other developing markets, we could consider e-commerce as a high-potential sector in Turkey. As of March 2020 i.e., the beginning of the pandemic, monthly e-commerce sales increased more than 100% on a year-on-year basis. Overall, the e-commerce sales volume recorded a 122% growth from 2019 to 2020, thanks to the high e-commerce activity at the end of the year.

As e-commerce thrives, payment methods shine out as one major factor to shape the future of e-commerce. As iyzico, we have been developing products since our first day to support the growth of our firm, as well as the whole market. Notably micro- and small-scale merchants, we stood by our members by our solutions that boost their competitiveness during the pandemic. Furthermore, we enabled our member merchants to provide a 37% faster payment experience through Pay with iyzico.

It is not reasonable to evaluate a sector independently from the outer developments. We live in an era of digital convergence where many different sectors such as retail, e-commerce and payment methods are intertwined and supporting each other. In this period of golden opportunities, we hope to present a guide for all institutions and entrepreneurs that enter the world of e-commerce by means of our "2021 e-commerce ecosystem in Turkey" report.

Foreword



Erdal Güner

Founder Partner, Dogma Alares

The market in Turkey is characterised by the strong repercussions of global digital transformation, fast adaptation towards technological developments and an ever-increasing potential. Thanks to remarkable mobile and internet penetration rates in Turkey, the existence of e-commerce folds the value of the retail sector and gives it a new impulse. Our e-commerce sector strengthens its presence in terms of sales value as well as number of transactions, especially since its most recent acceleration in the aftermath of the pandemic.

Today, e-commerce penetration in Turkey continues to increase as it is embraced by the masses through product categories such as food and beverage, education and computer games. This translates to a rising number of e-commerce transactions, and e-commerce becoming an ordinary way of shopping. Currently, fashion industry leads the e-commerce in Turkey in terms of both sales volume and transaction count. The immediate followers of the fashion category emerge as relatively high-basket-value industries such as electronics and furniture. In the light of these information, we foresee that e-commerce will sustain its growth while it becomes a part of our lives, moreover it will continue to rise and evolve.

Being an integral element in our daily routines, mobile devices and social media will pursue their reign in our world of e-commerce even stronger in the future. This phenomenon would necessitate the transition of e-commerce towards employing business models that emphasise the communication between merchants and consumers.

Considering the payment step of online shopping experience, we observe the significant prevalence of prepaid cards and digital wallets, and we further expect this trend to stay. In addition, we predict that consumers in Turkey will opt for alternative financing options as they get more financially informed and seek for faster solutions.

E-commerce is becoming a more reachable and preferable channel even for micro-scale enterprises, by virtue of the rapid growth of the logistics sector and the enabler services related to the use of marketplaces. Although we believe that marketplaces will preserve their strong position, we also find it very likely for many micro-scale

businesses to be accommodated in the e-commerce ecosystem, provided that they establish a brand identity.

Rendering e-commerce a larger piece of global trade, advancements in logistics support the development of the cross-border e-commerce concept. Such developments expand the reach of producers and merchants towards new markets and foster the competitive environment. Hence, the imminent actions of stakeholders gain even more significance.

E-commerce not only transforms traditional shopping methods, but also undergoes a continuous transformation in itself. One of the most striking topics regarding this trend turns out to be decentralised e-commerce, which is usually alluded in relation to blockchain technology. By means of decentralisation, e-commerce ecosystem would establish a higher level of fairness among its players: It attains its highest potential towards democratisation through horizontal decision-making mechanism. On the other hand, decentralised e-commerce raises discussions about many sensitive topics, e.g. non-traceable transactions, data security, grey economy and e-commerce law. Even though blockchain has still not fully integrated into daily e-commerce, it should be treated as a major determinant for the future of e-commerce.

As e-commerce is getting more popular as a shopping method, its growth makes favourable contributions to various business models such as marketplaces, micro-scale enterprises and social media applications. That is why it is now more essential than ever before to understand and predict the e-commerce sector in Turkey, which made us partner iyzico to prepare this very report. We, as Dogma Alares, hope that our report guides stakeholders through their decision-making process and it constitutes a resource that improves Turkey's place in global e-commerce.

Contents



Foreword..... 1

Figures and tables..... 5

Abbreviations..... 6

Executive summary..... 7

Methodology..... 8

E-commerce in Turkey..... 9

Product categories..... 17

E-commerce merchants..... 25

E-commerce customers..... 32

Payment methods..... 38

Future outlook..... 44

Contributors..... 59

References..... 60



Figures and tables

| | |
|---|----|
| Figure 1: E-commerce sales volume in Turkey..... | 10 |
| Figure 2: Number of e-commerce transactions in Turkey..... | 11 |
| Figure 3: Turkey population, internet users, e-commerce customers..... | 11 |
| Figure 4: Average basket value in years..... | 12 |
| Figure 5: Average number of items per basket..... | 12 |
| Figure 6: E-commerce sales volume by month..... | 13 |
| Figure 7: Average basket value by month..... | 14 |
| Figure 8: Year-on-year sales volume growth per month..... | 15 |
| Figure 9: Top 5 categories with respect to sales volume growth..... | 20 |
| Figure 10: Average basket value per category..... | 21 |
| Figure 11: E-commerce channel preferences for selected categories..... | 22 |
| Figure 12: Number of e-commerce merchants per medium of sale..... | 26 |
| Figure 13: Distribution of e-commerce merchants by city..... | 27 |
| Figure 14: Distribution of e-commerce merchants and sales volume by enterprise size..... | 28 |
| Figure 15: Sectoral distribution of e-commerce merchants..... | 30 |
| Figure 16: Distribution of online card payments by month..... | 33 |
| Figure 17: Distribution of e-commerce transactions by day of week..... | 34 |
| Figure 18: Channel-based distribution of e-commerce transactions..... | 37 |
| Figure 19: Sales volume- and transaction-based shares of e-commerce payment methods..... | 39 |
| Figure 20: Ratio of cash-in-advance payments to instalments..... | 40 |
| Figure 21: Number of instalments per basket value range..... | 41 |
| Figure 22: Pay with iyzico market share trend by month..... | 43 |
| Figure 23: Global cumulative capital raised by aggregators..... | 51 |

Figures and tables

| | |
|---|----|
| Table 1: Top product categories with respect to year-on-year transaction growth during pandemic..... | 16 |
| Table 2: Top 5 categories by e-commerce market share..... | 18 |
| Table 3: Payment-method based top selling merchants' products and services..... | 23 |
| Table 4: Top calendar days by online shopping activity..... | 35 |
| Table 5: Transaction-based trends of payment methods on special shopping days | 36 |
| Table 6: E-commerce statistics for prepaid cards..... | 40 |
| Table 7: E-commerce statistics for Pay with iyzico..... | 42 |
| Table 8: Differentiation of live commerce compared to traditional e-commerce..... | 47 |
| Table 9: Operation areas of leader e-commerce companies in Turkey..... | 48 |
| Table 10: Value proposition of D2C e-commerce..... | 50 |
| Table 11: Features of mobile/digital wallets..... | 55 |
| Table 12: Value proposition of BNPL..... | 57 |

Abbreviations

| | |
|-------------------|---|
| AR | Augmented reality |
| BKM | Bankalararası Kart Merkezi (Interbank Card Center) |
| BNPL | Buy Now Pay Later |
| B2B | Business-to-business |
| B2C | Business-to-consumer |
| dApps | Distributed apps |
| DIY | Do it yourself |
| D2C | Direct-to-consumer |
| EBITDA | Earnings before interest, taxes, depreciation and amortisation |
| ETID | Elektronik Ticaret İşletmecileri Derneği (Turkish E-commerce Association) |
| EU | European Union |
| GDP | Gross domestic product |
| NFT | Non-fungible token |
| POS | Point of sale |
| S-commerce | Social commerce |
| TUIK | Türkiye İstatistik Kurumu (Turkish Statistical Institute) |
| US | United States |
| VR | Virtual reality |
| 3PL | Third-party logistics |
| 4PL | Fourth-party logistics |



Executive summary

E-commerce has become a key sector by means of its advantages at all layers of the value chain. Global e-commerce sales reached 4,9 trillion USD through 16,8% year-on-year growth, and they represented 19,6% of global retail¹. COVID-19 pandemic stood as one major factor behind the fast growth of e-commerce. As consumers spent more time at home, they inclined towards online shopping. In this period, electronics, fashion and furniture shopping gained significance².

E-commerce in Turkey has also demonstrated an upward trend parallel to the global developments. Retail e-commerce sales of Turkey constituted 4,5% of country GDP³ and 17,6% of total retail sector⁴ in 2021. Turkish e-commerce owes its strength to its 77,7% internet penetration rate and its 90,8% mobile penetration rate⁵. As iyzi Payment and Electronic Money Services Inc. (iyzico thereafter) and Dogma Alares, we prepared 2021 E-commerce Ecosystem in Turkey report so as to shed light on the present and the future of Turkish e-commerce through detailed analyses.

Our analyses based on iyzico data are structured in six chapters in this report:

- **E-commerce in Turkey:** E-commerce in Turkey grows to a large extent by virtue of smaller baskets and more frequent online shopping. The industry exhibits further potential due to the existence of internet users who have not experienced online shopping before. Shopping activity peaks in autumn thanks to the effect of back-to-school period and special shopping days (i.e. Black Friday and Cyber Monday).
- **Product categories:** By the end of 2021, the largest e-commerce sales volume has been created by fashion, electronics and furniture products. Compared to the previous year, the most growing categories are listed as tourism, art and culture, hobby and games and fashion. Consumer preferences regarding mobile and web channels differ by product category, yet mobile devices dominate overall shopping.
- **E-commerce merchants:** While e-commerce merchants have a presence throughout the country, they are observed to concentrate around large cities. In 2021, micro- and small-scale enterprises constituted the majority of e-commerce merchants, on the other hand large-scale marketplaces stood out as the medium of e-commerce transactions. Approximately 50% of the sellers operate within fashion, furniture and food sectors.

Executive summary

- **E-commerce customers:** In 2021, e-commerce consumers in Turkey did most of their shopping on Mondays. These consumers most actively shopped online during special shopping days such as Black Friday, new year season and the week before Mother's Day. Compared to last year, the use of prepaid cards and digital wallets has grown much higher than that of credit and debit cards.
- **Payment methods:** Prepaid cards and digital wallets have doubled their share in the total of e-commerce transactions since 2020. By virtue of smaller baskets, cash-in-advance payment prevailed in comparison to instalments since 2019.
- **Future outlook:** Country-specific consumer expectations adapt the evolution of the ecosystem, the developments in logistics and the global e-commerce trends in Turkey's e-commerce sector.

We hope that our work provides meaningful insights for the e-commerce sector as well as for the public.

Methodology

The analyses, for which the source is indicated as iyzico and Dogma Alares, are based on iyzico's virtual POS and Pay with iyzico transactions data between 2017-2021. For this reason iyzico-based analyses may not fully represent the market.

Individual records may be excluded from the sample whenever they cannot be used for the respective analysis. This action caused negligible shrinkage in all types of datasets.

Throughout the report, there will be references to 17 categories for products and 20 categories for merchants. These categories do not comply with any standard, thus they may not be appropriate to compare with other reports.

The samples are restricted to the active merchants' sales for the respective reference period in the analyses that are depicted in Figure 4, Figure 9 and Table 1. This restriction aims to control for the effect that is caused by the entry of large-scale merchants within the respective reference period. The total revenue numbers for merchants in Figure 4 have been forecasted by means of adjusting the merchants' online sales through iyzico with respect to the retail share of e-commerce for the respective merchant category.

E-commerce in Turkey



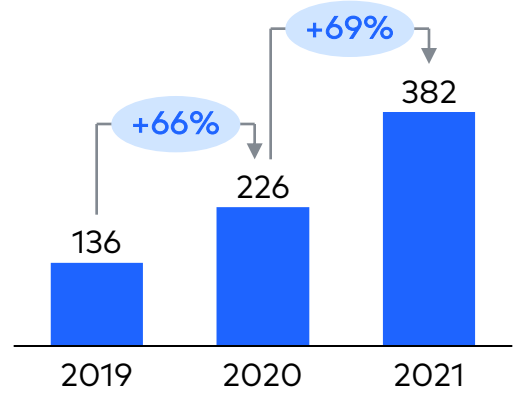
E-commerce in Turkey

Having emerged as a natural extension of digitalisation, e-commerce is expanding its area of impact. By virtue of its recent growth rates and its contribution to the retail sector, it remained a popular topic in Turkey as in the world. By its most generic definition, e-commerce covers business-to-business (B2B) and business-to-consumer (B2C) online sales, however we will be referring only to B2C/retail e-commerce transactions throughout this report.

Retail e-commerce made up 4,9% of the global GDP by the end of 2020⁶. Under the effect of the pandemic, global e-commerce sales grew by 25,7% from 2019 to 2020; the next year, the sales growth realised as 16,8% due to base effect⁷. We observe that e-commerce is attaining its global strength also in Turkey as it comprised 4,5% of country GDP the same year⁸. Following the global trends, Figure 1 shows that e-commerce sales in Turkey totalled to 226 billion TRY in 2020 through 66% growth from 2019. Meanwhile, retail sector as a whole grew by 17% in the

Figure 1: E-commerce sales volume in Turkey

Billion TRY



⁽¹⁾ B2B and B2C sales are included

Source: Ministry of Trade

same period, according to the retail sales index of TUIK. In 2021, the increase in the e-commerce sales accelerated further thanks to the habit of online shopping, resulting in a sales volume of 382 billion TRY via 69% year-on-year growth.

“

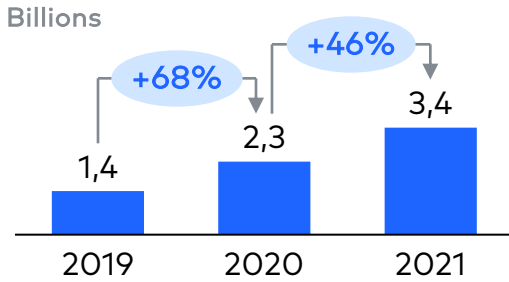
Emre Ekmekçi:

Large retailers started to consider e-commerce as a main business rather than a side business.

”

2021 e-commerce ecosystem in Turkey

Figure 2: Number of e-commerce transactions in Turkey



⁽¹⁾ B2B and B2C sales are included

Source: Ministry of Trade

Trends observed for the e-commerce sales volume translates similarly to the number of transactions. As seen in Figure 2, the number of online orders reached to 2,3 billion in 2020, being 68% higher than the previous year. The number of e-commerce transactions surged to 3,4 billion for the year of 2021, which is 46% higher compared to 2020 statistics.

The enablers of e-commerce in Turkey correspond to 44% of the country population. This customer base is a little more than half (54%) of the internet users in the country as depicted in Figure 3. Despite its superior internet and mobile penetration rates compared to other developing markets, Turkey falls behind the global average and its peers with respect to the ratio of e-commerce customers to the internet users. In Latin American countries that have a similar rate of internet penetration to Turkey, such as

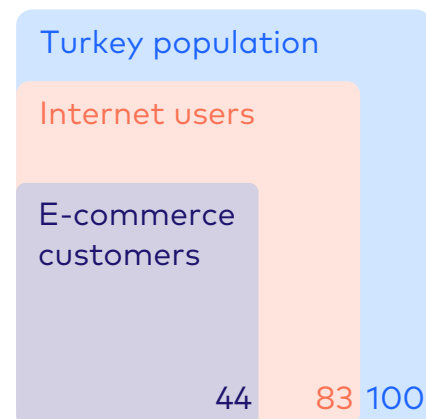
Erdal Güner:

Consumers in Turkey, who swiftly adapt to digital tools, guarantee the future of the e-commerce.

Argentina, Brazil, Colombia and Chile, this ratio is found to be between 60-75%⁹. The EU average of the same statistic is calculated as 73%, which is in the middle of the eastern and western Europe averages of 41% and 86%, respectively¹⁰. Based on these numbers, we deduce that e-commerce in Turkey display a substantial growth potential given the untapped portion of internet users.

Figure 3: Turkey population⁽¹⁾, internet users, e-commerce customers

% population, 2021

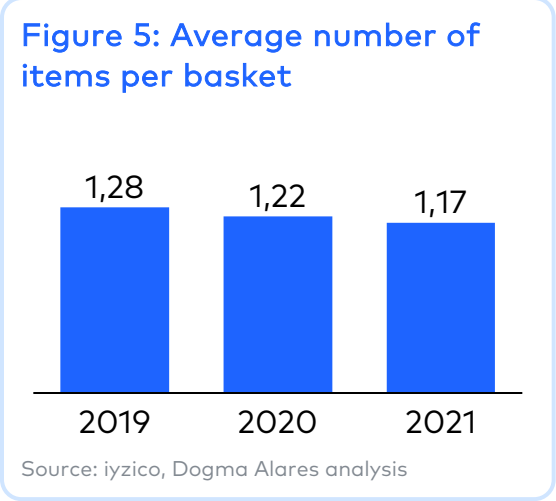
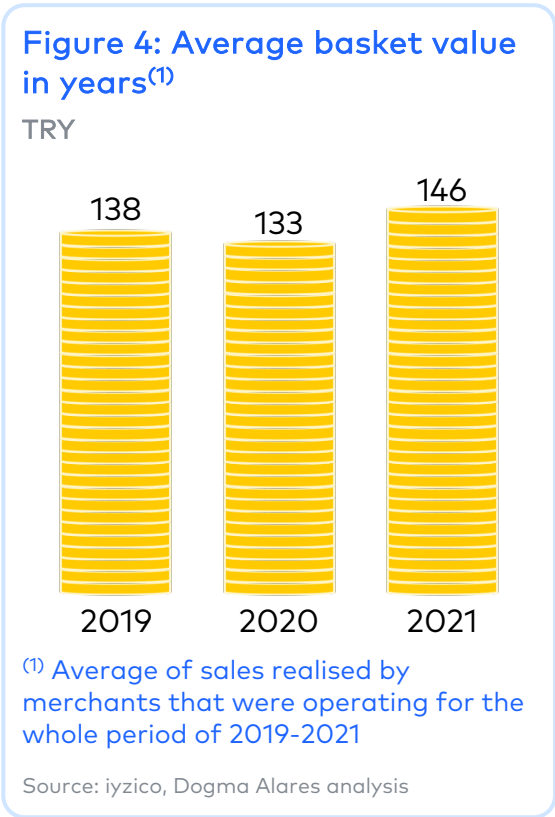


⁽¹⁾ Population aged between 16-74

Source: TUIK

E-commerce in Turkey

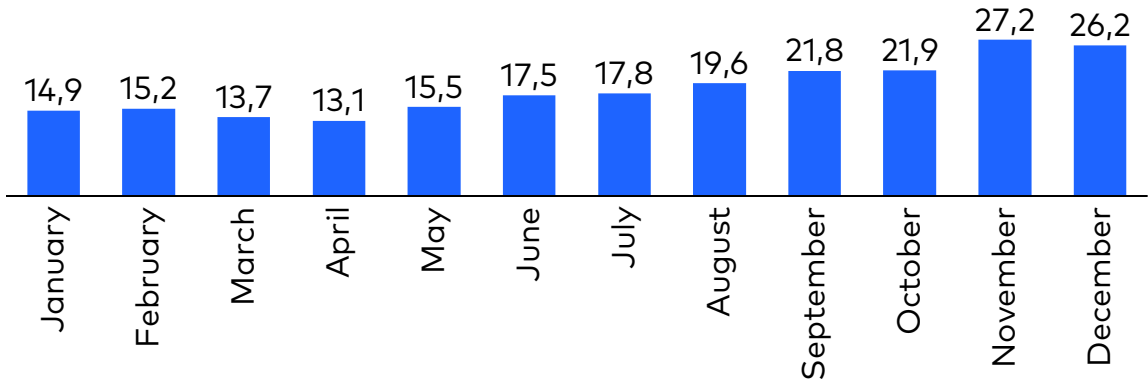
We observe that the trend in consumer spending per transaction remained relatively constant with respect to the increase in the frequency of shopping. As Figure 4 indicates, the average basket value rose only by 8 TRY, from 138 TRY to 146 TRY from 2019 to 2021. The declining basket vales in the context of e-marketplace orders, which obtained substantial market share, had an impact on the overall decline in basket values from 2019 to 2020. Next year's slightly increasing average basket value reflects the increasing price trend for several categories including electronics, fashion, art & culture.



Upon a close inspection on baskets, the number of items is found to decline on average. Figure 5 tells us that an average basket contained 1,28 products in 2019, while this number went down to 1,17 in 2021. Considering the trends for e-commerce orders as well as average basket values, it is possible to infer that the consumers tend to shop more frequently at lower basket values. A major dynamic behind this observation has been the recent investments towards building last-mile delivery capacity, which enables merchants to cut their delivery costs and shorten their delivery time.

Figure 6: E-commerce sales volume by month

Billion TRY, 2020



Source: Ministry of Trade

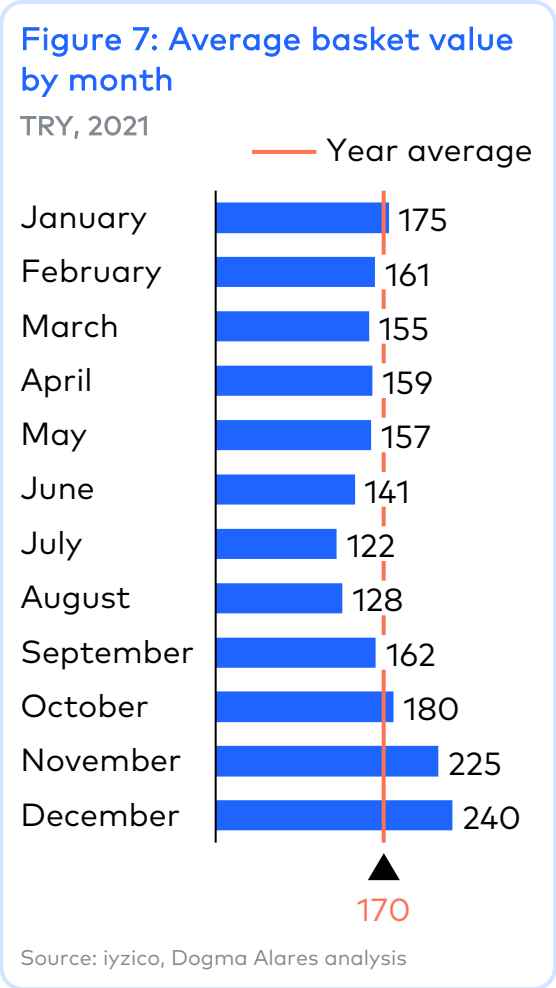
Looking at e-commerce sales month by month, the maximum sales volume is created with the beginning of the autumn. In 2020, i.e. the year of pandemic, the largest numbers in terms of e-commerce sales are observed in November and December, as Figure 6 depicts. This period coincides with a number of intense shopping times, such as back-to-school period, special shopping days (such as Black Friday and Cyber Monday), and New Year's Eve.

“

Orkun Saitoğlu:

Consumers deliberately prepare themselves for Black Friday and Cyber Monday, and they tend to spend heavily in these campaign periods.

”



When we examine the change of the average basket value by month, November and December gave rise to the highest values once again. Figure 7 displays that, in 2021, lowest average basket value belonged to the month of July with 122 TRY, meanwhile in December this number almost doubled to 240 TRY. This upward inclination towards the end of the year partially stemmed from the existence of aforementioned special shopping days and seasonal needs.

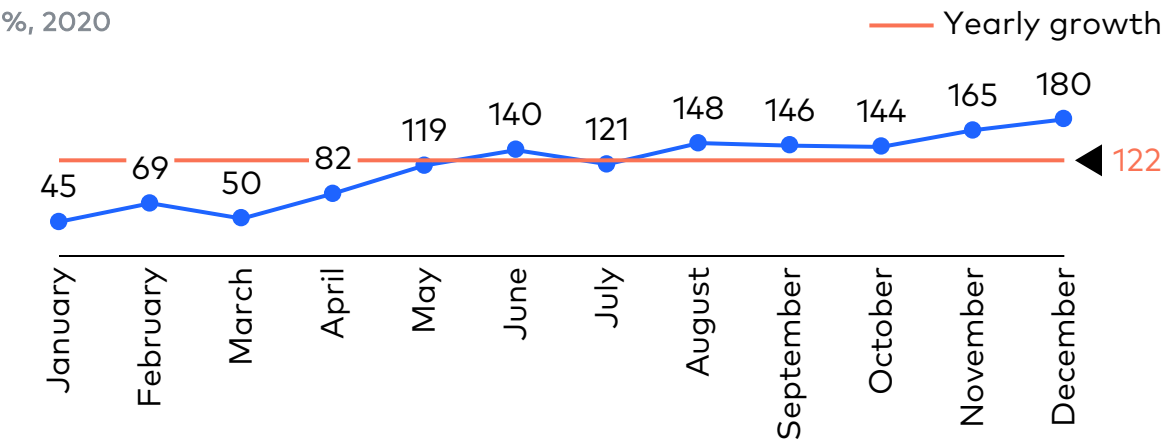


The effect of pandemic

Globally as well as in Turkey, the boom in e-commerce cannot be thought independent from the effect of Covid-19 pandemic. Before the pandemic, the 2020 growth rate for global e-commerce sales was estimated as 9%; whereas the actual growth realised at 28%¹¹. Likewise in the US, China and Europe, the e-commerce share of retail increased between 5 and 15 percent during the second quarter of 2020¹².

In the case of Turkey, online sales volume expanded rapidly from March 2020 onwards. As Figure 8 shows, monthly e-sales started to exhibit a growth more than 100% on a year-on-year basis, starting from May 2020. The growth in online shopping reached its peak in December 2020, at a rate that is four times the growth in

Figure 8: Year-on-year sales volume growth per month



Source: iyzico, Dogma Alares analysis

January. High sales volumes observed by the end of the year resulted a 122% yearly growth from 2019 to 2020.

“






Orkun Saitoğlu:
COVID-19 pandemic turned out to be a breaking point for online shopping globally, while creating considerable demand.

”



E-commerce in Turkey

Table 1: Top product categories with respect to year-on-year transaction growth during pandemic⁽¹⁾

| | 2018-2019 change | 2019-2020 change |
|---|---------------------|---------------------|
| 1  Furniture, houseware & smallware | 0,9x | 2,8x |
| 2  Equipment | 1,8x | 3,7x |
| 3  Vehicles, spare parts & accessories | 1,1x | 1,6x |
| 4  Art & culture, hobby, games | 0,9x | 1,2x |
| 5  Education | 1,4x | 1,9x |

⁽¹⁾ Sample is limited to the sales of the merchants that were operating for the whole period of 2018-2020

Source: izyico, Dogma Alares analysis

izyico data indicates that fashion, electronics, and furniture had been the best-selling product categories in the time of pandemic. Furthermore, furniture category experienced the highest acceleration in terms of yearly

growth rate, as Table 1 lists. 2019-2020 growth in furniture sales almost tripled the rate in 2018-2019 period. Equipment category follows the furniture in this analysis, by virtue of its doubled yearly growth rate from one year to the next.

E-commerce involves more and more into the economy and consumers' lives in Turkey, as it exhibits a strong growth trend along with high upward potential. In the next chapter, we will take a closer look to the product categories that led these trends and attracted considerable demand, and we will also examine category-specific shopping preferences.



Product categories



Product categories






Certain product categories dominate the e-commerce market in different times; as needs, convenience expectations, and the zeitgeist change. Out of seventeen product categories varying from fashion to furniture, five categories make up 75% of all transactions and 55% of the volume in Turkey's e-commerce market, according to iyzico data.

In 2021, fashion & accessories obtained the largest volume-wise share, by a wide margin, in the total online spending of Turkey. This category has been leading the market since 2019, despite having lost 4,2% share in the last two years. Referring to Table 2, electronics and technology products

Orkun Saitoğlu:
Fashion and accessories category retains its leadership in e-commerce spendings by landslide.

Table 2: Top 5 categories by e-commerce market share

2021

| Rank ⁽¹⁾ | Category | Market share (%) | Transaction share (%) |
|---------------------|---|------------------|-----------------------|
| 1 |  Fashion and accessories | 43,7 | 40,9 |
| 2 |  Electronics and technology | 11,2 | 2,8 |
| 3 |  Furniture, houseware & smallware | 8,2 | 4,8 |
| 4 |  Vehicles, spare parts & accessories | 5,9 | 0,2 |
| 5 |  Tourism and travel | 4,8 | 6,9 |

⁽¹⁾ Within 17 categories

Source: iyzico, Dogma Alares analysis

followed fashion apparel in the 2021 rankings for created sales volume. This category doubled its market share from 2019 to 2021 by virtue of increasing basket values, meanwhile it ranked second to last by created transaction count. Coming to the third-ranking category, furniture products accounted for 7,5% of total e-commerce sales in 2021, while they constituted 9,4% of 2020's market. Occupying the fourth place, vehicles and related products experienced a market share increase from 0,8% to 5,9% between 2019-2021. Lastly, tourism and travel being the fifth top category with 4,8% market share in 2021, climbed from its tenth ranking in 2020 with a pandemic-induced 2,6% market share.

Product categories



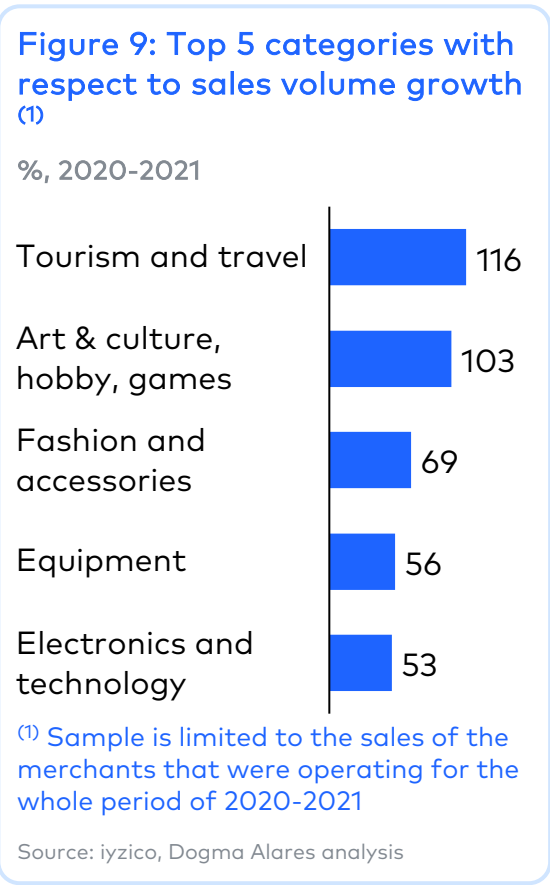
“

Erdal Güner:

Apart from particular sectors that we speak of today, e-commerce will evolve all value chains from production to sales as it gets more widespread.

”

Product categories



As alluded above, tourism and travel spendings exhibited the fastest sales growth from 2020 to 2021, which can also be seen in Figure 9. Based on sellers that were active in the full period of 2020-2021, the sales volume related to tourism increased by 116% year-on-year, compensating the 15% volume loss from 2019 to 2020. Culture & art, hobby and games came after tourism as its sales grew by 103% between 2020-2021 period. Fashion and accessories ranked the third with 69% by the end of 2021, notwithstanding the fact that it ranked sixth with 87% sales growth the previous period. Following the fashion category, equipment ranked fourth in terms of 2020-2021 sales growth with 56%, recovering from 22% sales volume loss in 2019-2020 period. Finally, electronics and technology products held the fifth rank as their sales showed an increase of 53%, being faster than its 44% growth in the previous period.





“

Emre Ekmekçi:
Supermarket, fresh food and food sectors are undergoing a complete transformation.

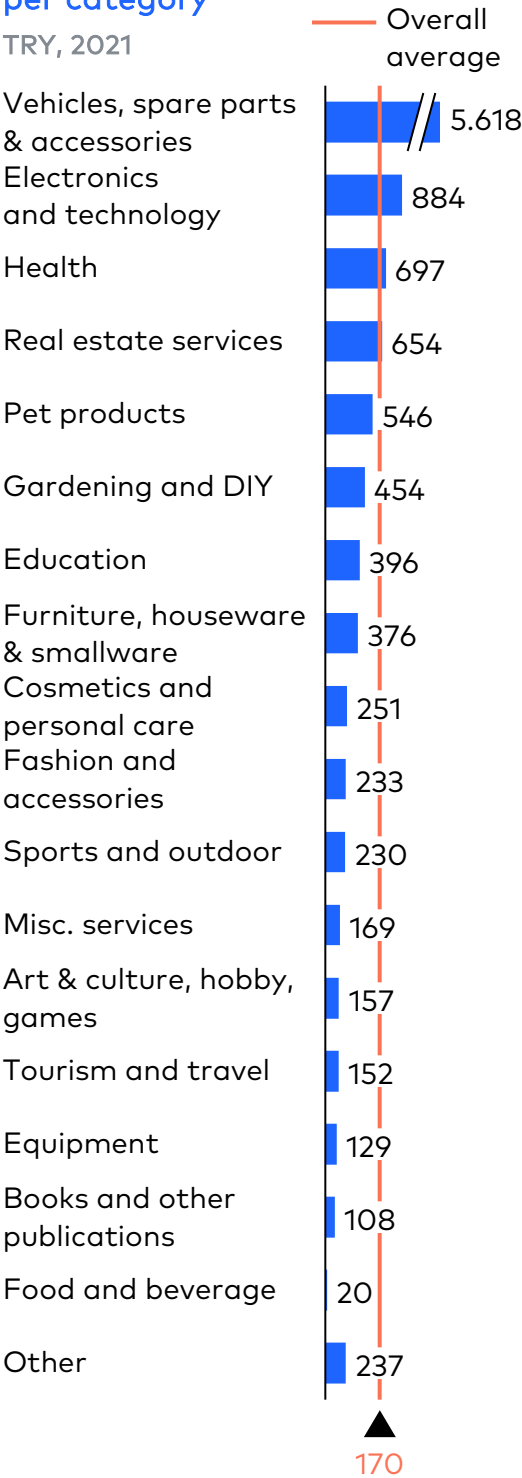
”

On average, e-commerce customers spent 170 TRY per order in 2021. Breaking down by category, vehicles and related parts became the category with the highest basket value. With respect to the seventeen product categories listed in Figure 10, electronics & technology and health-related spending were placed as second and the third, respectively, by average basket value. Both in 2020 and 2021; the largest increases in average basket value were observed for vehicles, electronics, and pet products. At the other extreme, the lowest average basket value belonged to food and beverage category, which is followed by books and equipment sales.

Product categories

Figure 10: Average basket value per category

TRY, 2021

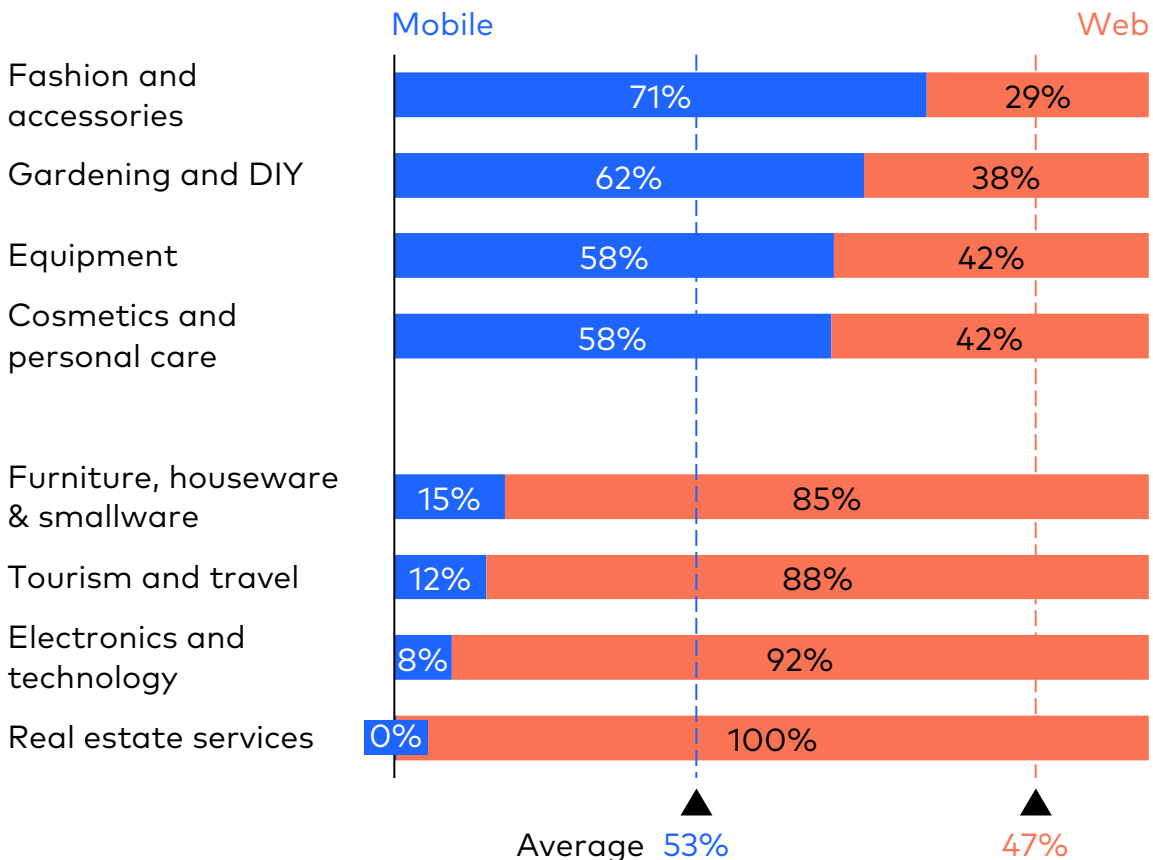


Source: izzico, Dogma Alares analysis

Product categories

Figure 11: E-commerce channel preferences for selected categories

2021



Source: iyzico, Dogma Alares analysis









iyzico data shows that, customer preference shifts from computers to mobile devices as a means of online shopping. Mobile channel was used for only 25% of the transactions in the year of 2017, yet this number reached to 53% when 2021 transactions are considered. However, the channel distributions deviate from the average statistics when product categories are isolated, as shown in Figure 11. We read that, mobile transactions correspond to 71%, 62% and 58% of

the category totals for the categories of fashion, gardening, and both equipment and cosmetics, respectively. On the other hand, it is more common to use web browsers for e-shopping in categories such as real estate services, tourism, electronics, and furniture etc. Note that web-dominated categories, like vehicles, sports equipment, miscellaneous services etc.) are characterised with the requirement of intensive market research.

Considering payment stage in online shopping, credit card is the most popular method among the customers in Turkey. 56% of e-commerce transactions were realised through credit card payments for the year of 2021. Meanwhile, transaction-wise share of credit card payments consistently declined over the last five years, which was calculated as 82% for 2017 transactions. The lost share is transferred to debit cards as well as prepaid cards, both of which are

getting more frequently used for e-shopping. By looking at the top-selling merchants in terms of different payment methods, we obtain the results that are visualised through Table 3. Approximately 45% of the amount paid by credit cards were directed towards computer, mobile phone, fashion, and houseware merchants. The dominant merchant profile for debit cards is similar to that of credit cards, with the addition of real estate service providers that

Table 3: Payment-method based top selling merchants' products and services
2021

| Credit card | Debit card | Prepaid card | Pay with izyico |
|---|---|---|--|
|  Computers and mobile phones |  Fashion and accessories |  Fashion and accessories |  Courier and transportation services |
|  Fashion and accessories |  Houseware and everyday items |  Hobby, games and toys |  Fashion and accessories |
|  Houseware and everyday items |  Real estate services |  Books and other publications |  Computer games |

Source: izyico, Dogma Alares analysis

Product categories



Orkun Saitoğlu:

Couriers & transportation service providers as well as computer game stores are among the top sellers via iyzico digital wallet solution.



created high sales volumes. Focusing on prepaid cards; stores for hobbies, toys and books generate the biggest sales amounts, after the fashion merchants that also appear among the top-sellers of all other payment methods. In 2021, these three categories constituted 50% of the amount paid by prepaid cards. Last but not the least, if we examine the spending from the digital wallet application of iyzico, i.e. Pay with iyzico, fashion sellers once more dominate all other categories regarding sales volume. Meanwhile, couriers as well as video game sellers stand out within the shopping activity that is completed via Pay with iyzico. We will provide more detailed analyses regarding the use of various payment methods in the "Payment methods" chapter of the report.

Above discussion reveals that the overall view for e-commerce market does not necessarily apply to product category-specific online shopping activity, as demonstrated by the differences in average basket value, channel preferences and use of payment methods. So as to present a deeper view into the supply factor within Turkey's e-commerce sector, we will be focusing on the merchant side of the ecosystem in the next chapter.

E-commerce merchants



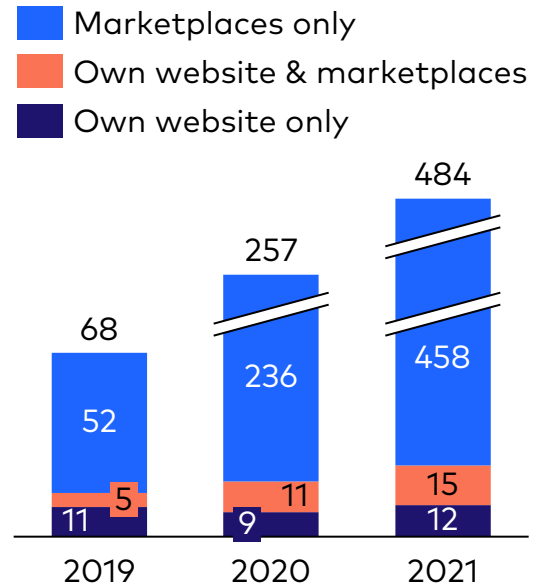
E-commerce merchants

An understanding for the positioning and strategy of e-commerce merchants complement our analysis regarding the structure of the ecosystem and the trends influencing the sector. Such an examination reveals the locations, sectors, and sales media around which the merchants concentrate.

The number of merchants consistently increases since 2019, and new merchants are introduced to the ecosystem mostly through marketplaces. By the end of 2021, there exist 484 thousand registered e-commerce sellers in Turkey; this value equalled to 68 thousand in 2019 and it sharply went up to 257 thousand by the end of 2020, i.e. the beginning of the pandemic. From Figure 12 we could calculate that marketplace sellers accounted for 84% of all sellers in 2019, whereas this ratio rose to 95% in 2021. Merchants who sell via both marketplaces and their own websites grew from 5 to 14 thousand from 2019 to 2021; yet their share declined over the same period. Meanwhile, the ecosystem accommodated fewer merchants who sold exclusively on their own website; as their number fell from 11 to 9 thousand from 2019 to 2020, and it bounced back to the level of 12 thousand by a 28% jump. The evolution of sellers' sales media preference clearly indicates that e-marketplaces have become the dominant platform for e-commerce ecosystem of Turkey.

Figure 12: Number of e-commerce merchants per medium of sale

Thousands



Source: Ministry of Trade

Emre Ekmekçi:

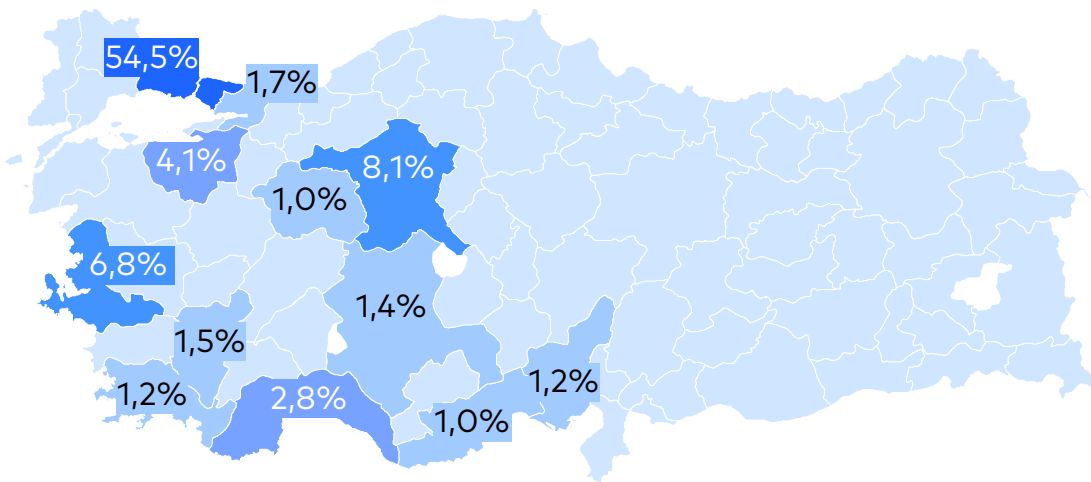
With the pandemic, businesses developed an interest towards e-commerce just as consumers did. Number of enterprises in e-commerce increased by more than 5 times.

Figure 13: Distribution of e-commerce merchants by city⁽¹⁾

2021

Share of merchants

| Share of merchants | >10% | 5 - 10% | 2,5 - 5% | 1 - 2,5% | <1% |
|--------------------|------|---------|----------|----------|-----|
|--------------------|------|---------|----------|----------|-----|



⁽¹⁾ Based on izzico activity encompassing 81 cities

Source: izzico, Dogma Alares analysis

Upon finding out about merchants' sales medium preference, we look at their location distribution and it displays a similar pattern to the overall distribution of Turkey's population. Istanbul has housed most of e-commerce sales since 2017, and the follower cities have become Ankara and Izmir in a parallel order to their population density. Fourth- and fifth-ranking cities, i.e. Bursa and Antalya, also follow the country population distribution. The mentioned top five cities host more than 75% of e-commerce merchants in Turkey since 2017. While the percentages depicted in Figure 13 have remained relatively constant since 2019, e-commerce sellers'

concentration declined in Ankara and Izmir against Istanbul between 2017 and 2019. Coming to 2021, 85% of e-commerce merchants are found in twelve cities that host more than %1 of total merchants. This share rises to 90% when the sellers in Kayseri, Balikesir, Gaziantep, Samsun and Sakarya are added. Although their merchant concentration falls behind 1%, the following five cities experienced a fast growth in the number of located merchants: Hatay, Tekirdag, Sakarya, Sanliurfa and Sinop. All in all, the supply side of Turkey's e-commerce sector has expanded all over the country, yet it has settled more heavily within one quarter of the country.

E-commerce merchants

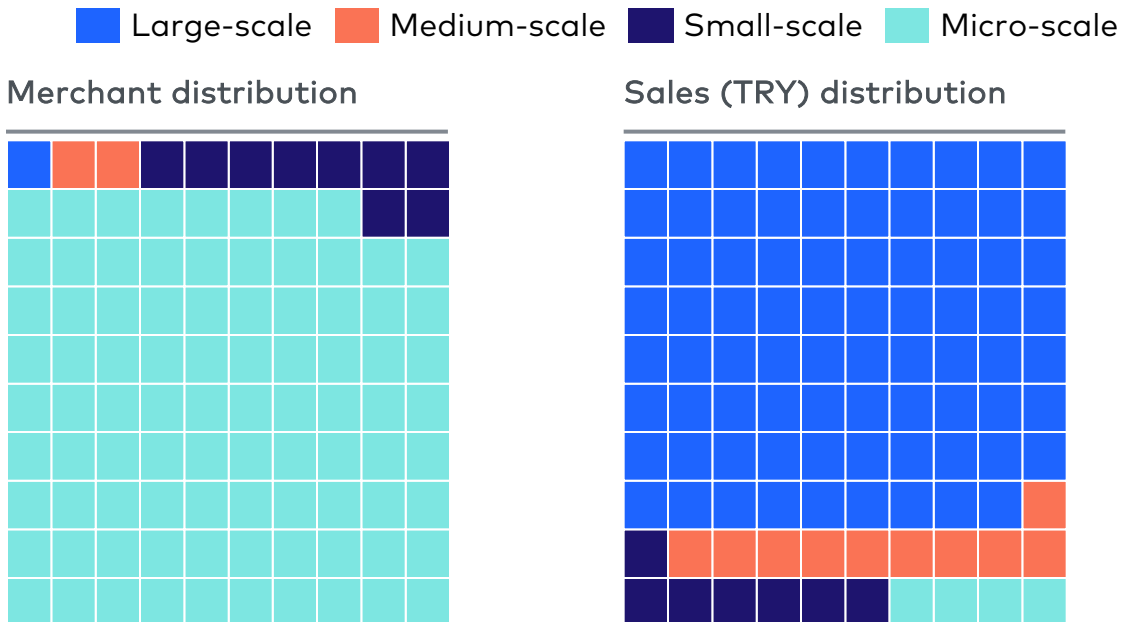
Erdal Güner:

E-commerce businesses are forming a network as wide as traditional retailers.

When we classify the e-commerce merchants of Turkey with respect to their enterprise size for the year of 2021, we deduce that micro-scaled merchants constitute the biggest group despite the small sales size they create. Figure 14 explains the other extreme, where large-scale enterprises make up only 1% of the sellers and take 79% market share. As a subsegment of large-scale enterprises, the merchants whose revenue exceed 500 million TRY improved their market share by 20 points to the level of 66%

Figure 14: Distribution of e-commerce merchants and sales volume by enterprise size⁽¹⁾

% merchants, % TRY, 2021



⁽¹⁾ Enterprises are classified as:
Micro-scale if their yearly revenue is less than 3 million TRY,
Small-scale if their yearly revenue is between 3-25 million TRY,
Medium-scale if their yearly revenue is between 25-125 million TRY,
Large-scale if their yearly revenue is more than 125 million TRY

Source: iyzico, Dogma Alares analysis



E-commerce merchants

from 2020 to 2021. The upward market share trend for "mega-scale" merchants reversed at all other enterprise sizes: The market shares of medium-, small- and micro-scale merchants went down from their 2020 levels of 11%, 8% and 6% to 10%, 7% and 4%, respectively, by the end of 2021. Similarly, for large-scale merchants within the revenue range of 125-500 million TRY experience a market share reduction from 27% to 13% in the last two years. These analyses describe a democratic and easily accessible e-commerce ecosystem for Turkey especially for micro-scale enterprises, while they also emphasise e-marketplaces as the ultimate medium for completing e-commerce transactions.

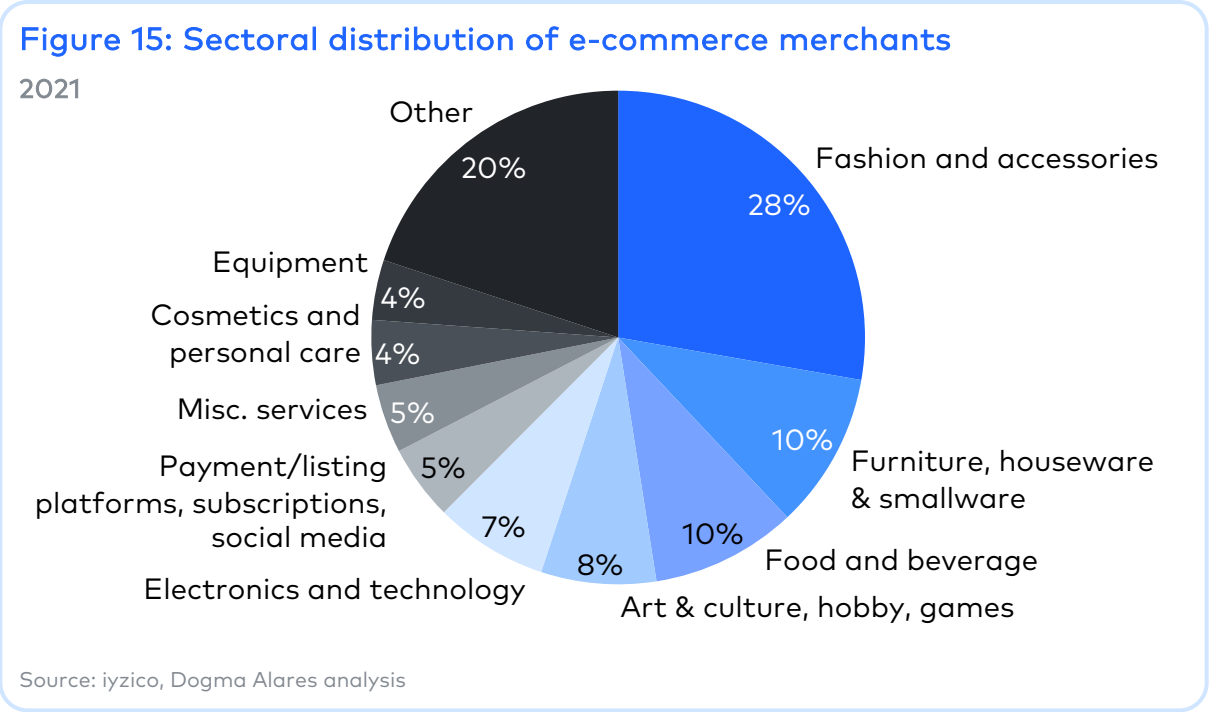
“

Orkun Saitoğlu:

Through our secure payment infrastructure, we create a democratic ecosystem around shopping.

”

E-commerce merchants



Examining the sectoral distribution of e-commerce merchants, approximately half of them operate in three categories out of twenty. Hosting the largest merchant base since 2017, the sector of fashion and accessories experienced a consistent increase in the number of e-commerce merchants over the years. Consequently, 28% of e-commerce merchants belonged to the fashion category by the end of 2021, as Figure 15 displays. Furniture, houseware & smallware sector was placed second in row, again with a continuous increase of e-commerce merchant base until 2021, similarly to the fashion industry. Along with the 10% share it takes from e-commerce merchants, food and beverage sector ranked the third: It jumped from sixth rank to third from 2019 to 2020, as its



merchant share went up from 6,7% to 8,8% in the referred period. 2021's fourth largest merchant base was associated with culture & arts, hobby and games category, which in fact lost 2% merchant share and dropped one rank compared to 2019. Likewise, the fifth-ranking category of electronics and technology lost 3% share and dropped from second place since 2019. For the year of 2021, fastest growing number of merchants were observed in the most crowded three sectors, as well as four additional categories: cosmetics and personal care, education, pet products and tourism & travel. Taking high market share sectors from previous analyses into account, there are fewer e-commerce merchants operating in vehicles or

tourism category, in proportion to fashion, furniture and electronics categories. Accordingly, sectoral merchant distribution is not directly correlated with the respective sectors' market share. It somehow reflects customer demand, however it tends to preserve its existing structure.

The average profile of Turkey's e-commerce merchants can be described as follows: They are mostly located in metropolitan areas, concentrated around particular sectors, micro-scale enterprises that hold a small market share; and most of their sales take place in online marketplaces. On the other hand, large-scale sellers are responsible for an overwhelming majority of the e-commerce activity. It is also worth mentioning that the year of 2020 largely determined today's picture regarding the supply side of Turkey's e-commerce. In the next chapter, we will delve deeper into the demand side, with an aim to reveal the preferences that shaped the sector.

“

Emre Ekmekçi:

There is an increasing number of entrepreneurs who sell from online channels only.

”



E-commerce customers



E-commerce customers

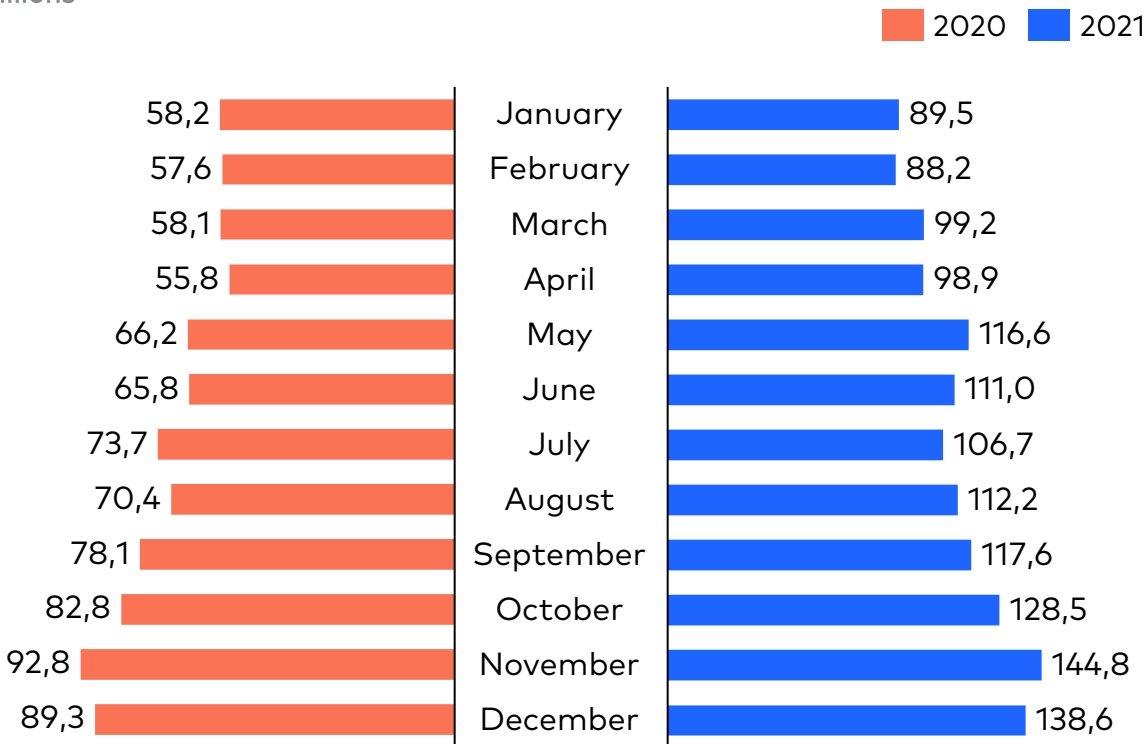
Customers' needs, expectations and behaviours fundamentally influence the commercial transactions. This relationship manifests itself stronger in the digital-native e-commerce than in traditional commerce. Hence, acquiring information regarding the e-commerce customer becomes very relevant for discovering the present and the future of the sector.

From a macro view on e-commerce transactions of 2021, the activity intensifies in the months of October, November and December, in parallel

to the sales volume trends. It would be misleading to evaluate the end-of-year transactional growth, which is visualised by Figure 16, independent from the overall sector growth. For the period between 2020 and 2021, there are meaningful month-on-month increases in the number of transactions in May and December, when normalised for the yearly overall growth. Specifically for 2021, we could capture a meaningful monthly transactional growth also in March and October besides the mentioned two months.

Figure 16: Distribution of online card payments⁽¹⁾ by month

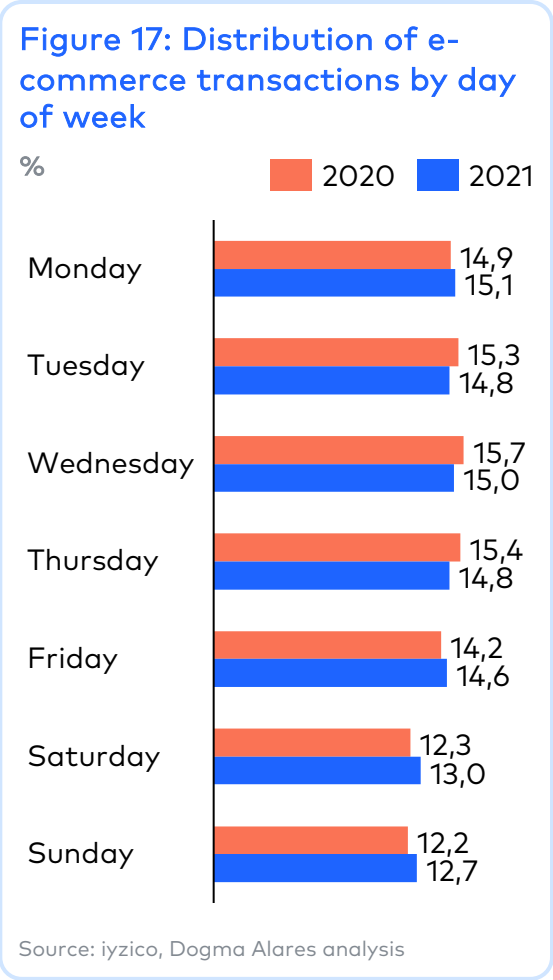
Millions



⁽¹⁾ Domestic transactions through domestic and international cards

Source: BKM

E-commerce customers



Dividing total e-commerce transactions into days, we observe that Monday was the most preferred day for online shopping for the year of 2021. In the preceding year, Wednesday was the day on which the highest average number of e-commerce transactions was realised. Figure 17 illustrates that the e-shopping activity intensifies within the weekdays, which is an observation that coincides with global trends.

Emre Ekmekçi:
Variety of delivery options directly influence the frequency of e-commerce use.



Table 4: Top calendar days by online shopping activity⁽¹⁾

2021

| Rank | Description | Dates | Difference from average ⁽²⁾ | |
|------|-----------------------|--|--|--------------|
| | | | Sales volume | Transactions |
| 1 | Black Friday week | 22 nd - 26 th November | 3,0x | 1,8x |
| 2 | New Year's Eve season | 15 th , 16 th , 17 th , 20 th December | 2,3x | 1,2x |
| 3 | Cyber Monday period | 29 th - 30 th November | 2,1x | 1,2x |
| 4 | Singles' Day | 11 th November | 2,0x | 1,5x |
| 5 | Mothers' Day week | 5 th - 8 th May | 1,5x | 1,4x |

⁽¹⁾ Top 10 periods with respect to sales volume or transaction are taken into consideration

⁽²⁾ The full-year daily averages constitute the basis of comparison

Source: iyzico, Dogma Alares analysis

Supporting the full-year picture, Monday, November 22nd was the calendar day on which the highest number of e-commerce transactions was recorded in 2021. This date marks the first day of the Black Friday week, when Black Friday campaigns start. Yet, the highest e-commerce sales volume was achieved 4 days later on the Black Friday, 26th of November. On Black Friday, e-commerce sales volume more than tripled and number of transactions almost doubled with respect to an average day in 2021.

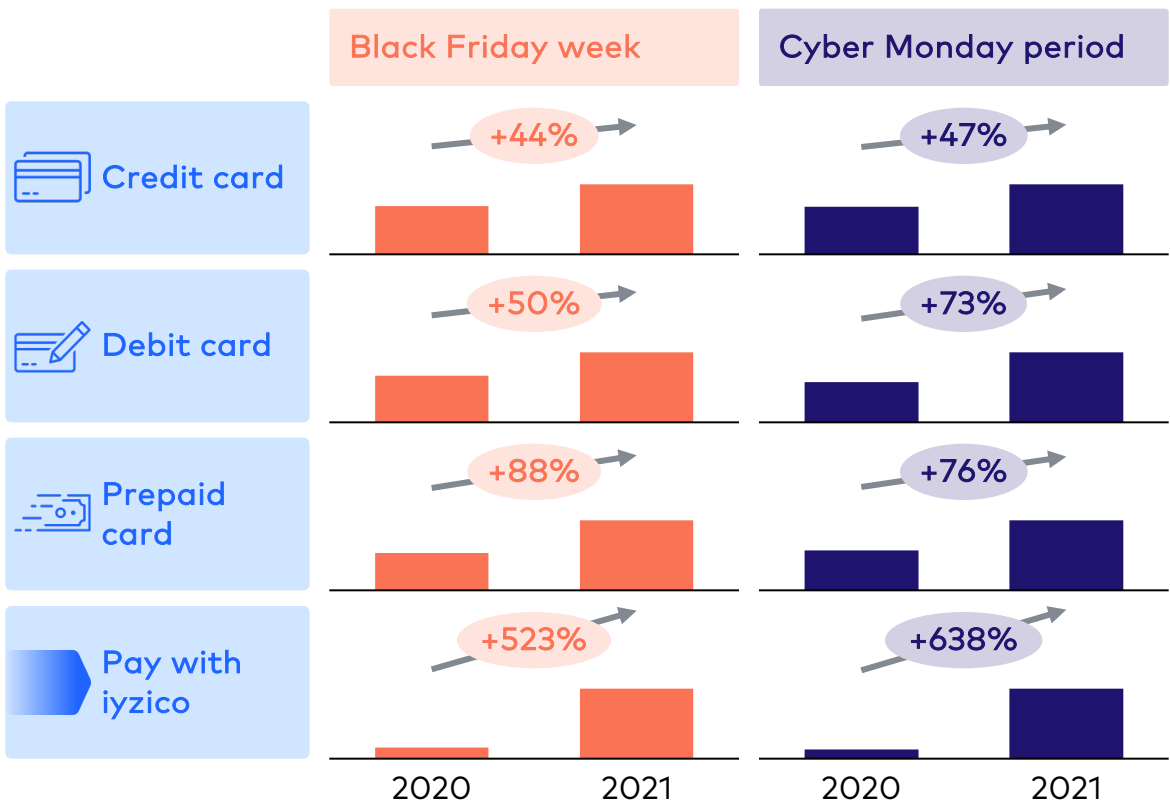
Table 4 shows the results of a similar analysis, i.e. volume- and transaction-wise comparison with an average day, as well as for the other most intense e-shopping periods. Unlike the global campaigns of Black Friday and Cyber Monday, Turkey's shopping campaigns last more than one day. One more Turkey-specific finding was that Mother's Day week is among the top periods in terms of e-commerce activity, which explains the meaningful increase in number of e-commerce transactions for the month of May.

E-commerce customers



Another striking observation refers to the visible shift towards alternative payment methods during the discount periods. In Black Friday week, number of transactions hiked per each payment method. However, the growth rates for alternative payment methods, such as Pay with izzico or prepaid cards, surpassed the transactional growth for card payments. A similar distinction between payment methods happened also in Cyber Monday period, where

Table 5: Transaction-based trends⁽¹⁾ of payment methods on special shopping days



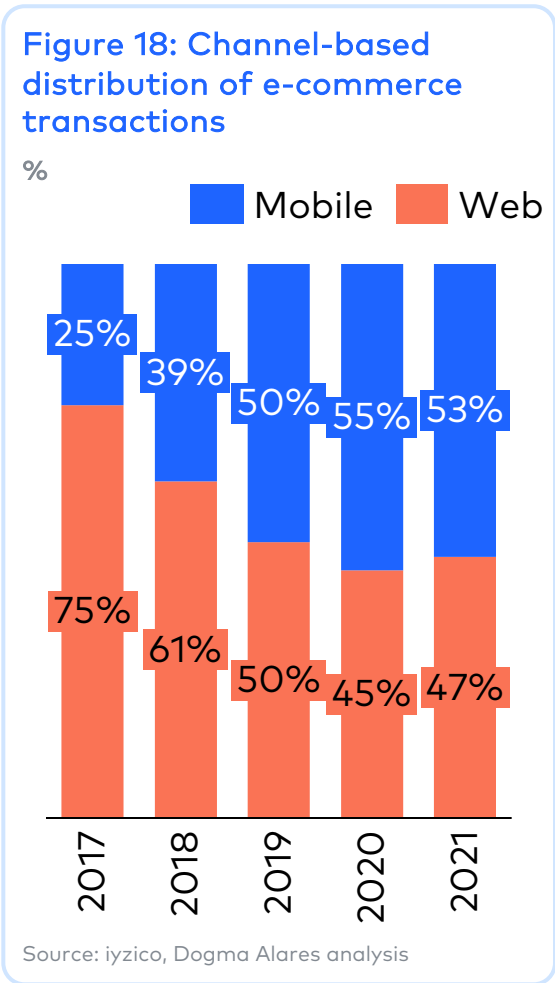
⁽¹⁾ Transaction counts within the discount periods of respective years form the basis of comparison

Source: izzico, Dogma Alares analysis

Pay with iyzico stood out with a 638% year-on-year growth in number of transactions.

Switching to the preferences regarding shopping channel, mobile devices are getting the dominant facilitator for e-shopping whereas computers are losing popularity. As Figure 18 indicates, the use of mobile devices for e-commerce purposes climbed up from 25% to 53%, from 2017 to 2021. However, in terms of sales volume, computers still bring most of the revenue to the sector: The

Erdal Güner:
Acquisition of a loyal customer base must be a priority item on the strategic agenda of e-commerce businesses.



e-commerce sales volume created by mobile device transactions correspond to 34% of the total in 2021. Note that this ratio was only 15% in 2017. We could deduce that, mobile devices are more frequently used for executing e-commerce transactions, yet computers intermediate the large online spendings in general.

In sum, e-commerce customers in Turkey tend to shop on weekdays – Mondays in particular, take advantage of discount periods, show interest in alternative payment methods, use mobile devices and computers for small- and large-volume orders, respectively. In the next chapter, we will provide more details on different payment methods that are briefly discussed in the previous chapters.

Payment methods



Payment methods

As the closing step of e-commerce transactions, payment stage is an important determinant regarding consumers' buying behaviour. Consumers tend to use an appropriate payment method considering the amount of spending, their level of indebtedness, as well as the respective method's convenience in terms of managing finances.

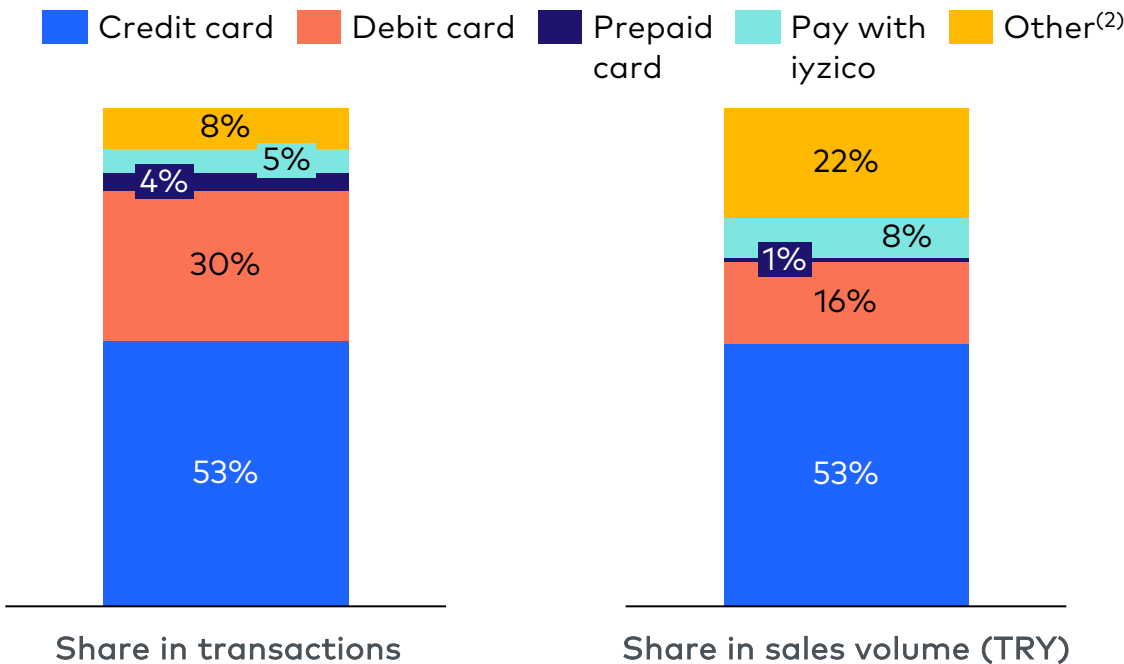
According to iyzico transaction data, credit card dominates all other payment methods in the realm of online shopping in Turkey since 2017.

Figure 19 shows that this fact is still valid in 2021, in terms of both sales volume and transaction count. Yet, credit card lost a considerable transaction share against debit cards from 2017 to this date.

Although they represent a relatively small portion of e-commerce transactions and market size, prepaid cards captured a noticeable momentum as a payment method for online shopping in 2020. As cited in Table 6, the share of all prepaid card payment transactions in e-commerce

Figure 19: Sales volume- and transaction-based shares of e-commerce payment methods⁽¹⁾

2021







⁽¹⁾ Sample is limited to the sales of merchants that offer Pay with iyzico

⁽²⁾ Bank transfer and other alternative payment methods

Source: iyzico, Dogma Alares analysis

Payment methods

Table 6: E-commerce statistics for prepaid cards

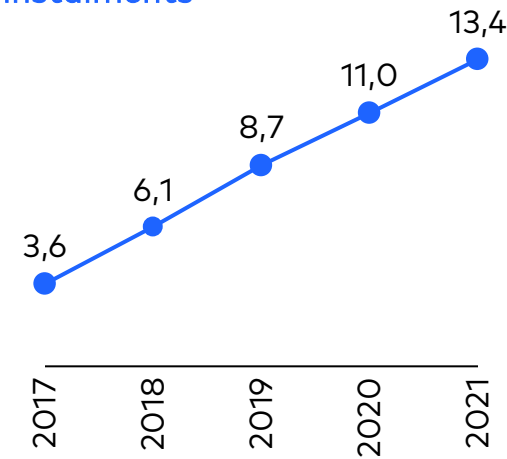
| | |
|---|--------|
|  Transaction count growth in 2020-2021 | 227% |
|  Transaction share growth in 2020-2021 | 1,8x |
|  Average basket value in 2021 | 50 TRY |
|  Most frequently used day in 2021 | Friday |

Source: izico, Dogma Alares analysis

grew by 227% over 2020, which almost doubled their transaction share.

Cash-in-advance payments are getting more and more common for online shopping in recent years. The ratio of cash-in-advance payments to instalments within e-commerce transactions was calculated as 3,6 in the year of 2017, while this value jumped to 13,4 by the end of 2021. Figure 20 clearly presents this behaviour, that is in part a result of the growth in the share of low basket value orders. A supporting visualisation is provided by Figure 21: As the basket value rises, not only the ratio of instalment payments but also the number of instalments increase. One side information about instalment payments is that, often times the number of instalments is a multiple of 3.

Figure 20: Ratio of cash-in-advance payments to instalments

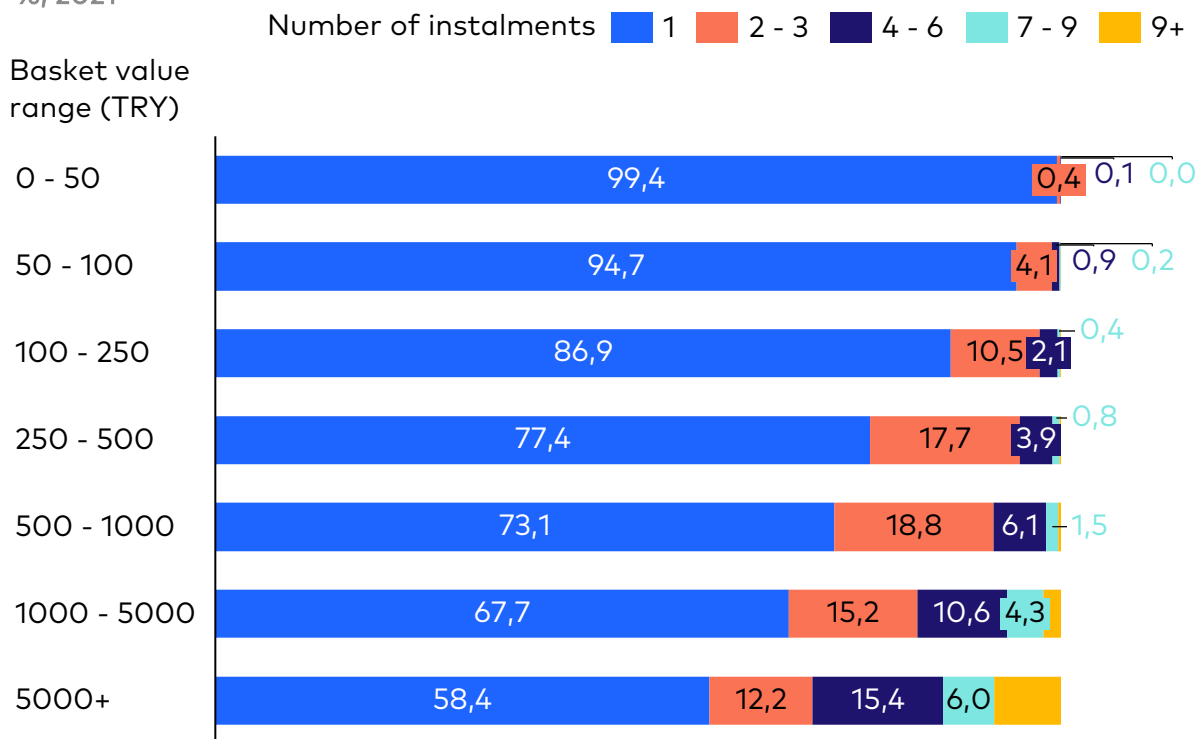


Source: izico, Dogma Alares analysis



Figure 21: Number of instalments per basket value range

%, 2021



Source: iyzico, Dogma Alares analysis

Erdal Güner:

The statistics regarding the use of digital banking applications signal the shift towards digital methods among the customers who prefer physical payment methods.






Payment methods

Pay with iyzico

At the global scale, credit and debit cards have been replaced by digital wallets in the scope of e-commerce payments. In 2020, 44,5% of all e-commerce transactions were executed via digital wallets in the world. The use of iyzico's digital wallet application, Pay with iyzico, reflects the rising global trend in Turkey's e-commerce ecosystem via its proposition of a smooth, fast and secure payment experience.

By virtue of its digital infrastructure, Pay with iyzico enables the users to choose from multiple payment methods: They can pay with their existing cards, use bank transfer, or directly pay from their prepaid balance in iyzico. It also allows the users to combine partial payments from different accounts for completing the payment amount. Furthermore, unbanked users can benefit from Pay with iyzico's "Pay with iyzico balance" feature for executing their payments. As noted in Table 7, mentioned advantages made Pay with iyzico transactions grow by 388% from 2020 to 2021: By the end of 2021, the reach of Pay with iyzico has widened to 30.000 merchants and 1,5 million active users.

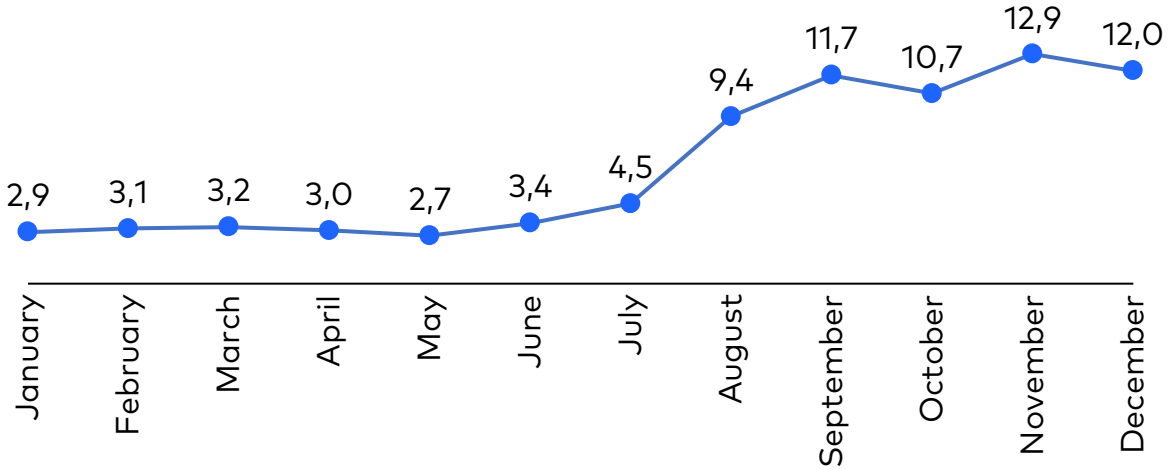
Table 7: E-commerce statistics for Pay with iyzico

| | | |
|---|---------------------------------------|---------|
|  | Member merchants by the end of 2021 | 30k |
|  | User base by the end of 2021 | 1,5M |
|  | Reduction in payment duration | 37% |
|  | Transaction count growth in 2020-2021 | 388% |
|  | Average basket value in 2021 | 300 TRY |

Source: iyzico, Dogma Alares analysis

Figure 22: Pay with iyzico market share trend by month⁽¹⁾

%, 2021



⁽¹⁾ Sample is limited to the sales of merchants that offer Pay with iyzico

Source: iyzico, Dogma Alares analysis

As illustrated by Figure 22, Pay with iyzico's share in all e-commerce payments jumped from the level of 3% to 13% on a monthly basis. Moreover, Pay with iyzico usage peaked in back-to-school period as well as during the special shopping campaigns.

The trends regarding alternative payment methods, such as prepaid cards and digital wallets, are expected to strengthen their reflection on Turkey's e-commerce ecosystem in the foreseeable future. We will list many other influential trends on the sector, along with analyses regarding their impact potential.



Future outlook



Future outlook

The Turkish e-commerce ecosystem flourishes under the effect of the trends mentioned in this report and the digital transformation in the world. We believe the following topics, which already influence or expected to influence the global e-commerce, will also be important determinants of the evolution of e-commerce in Turkey:

- **S-commerce:** Defined as the online shopping directed or completed from social media platforms, s-commerce took off from China and is currently spreading all over the world.
- **Last-mile delivery infrastructure:** Last mile delivery, i.e. the last step of the delivery where the end customer is reached, is turning into a substantial competitive advantage in e-commerce. This fact becomes more relevant as marketplaces start to involve into services that require immediate delivery, such as food and grocery shopping.
- **Liberalisation of international trade:** Sellers are able to expand easily into foreign markets by means of the value-added logistics services that are offered by e-marketplaces and logistics companies.
- **Direct-to-customer (D2C) e-commerce:** Facilitating a direct commercial relationship between the producer and the consumer, D2C e-commerce stands out in terms of creating brand value and obtaining customer loyalty.
- **Aggregators:** Aggregators acquire small and highly demanded brands from e-marketplaces, with an intention to boost their sales by turning them into all-stars. This new business model draws attention due to its ability to raise capital.
- **Developments in the digital marketing:** Apart from their intermediary function in the scope of e-commerce transactions, marketplaces are becoming a medium of advertisement for the promotion of the accommodated products.
- **Blockchain and new technologies:** Blockchain-based concepts not only redesign the relationships within the e-commerce ecosystem as in the cases of Web3 and NFT, they also bring the existence of parallel e-commerce ecosystems into question with the Metaverse concept.
- **Widening variety of payment methods:** Being the dominant payment method in global e-commerce, mobile/digital wallets are getting more and more embraced by the e-shoppers. BNPL (Buy Now Pay Later) is another payment method on the rise, as it offers an intuitive and user-friendly instalment scheme.
- **B2B e-commerce:** B2B e-commerce, the rising star of global e-commerce, is still a nascent domain in Turkey that can enable the merchants to gain first-mover advantage.

Future outlook

S-commerce

S-commerce (social commerce) is a natural extension of the intense mobile e-commerce activity. While mobile devices currently constitute the dominant channel for e-commerce in Turkey, they also provide access to social media for 98,5% of social media users¹⁴. S-commerce includes online shopping transactions that either take place directly on social media, or start in social media platforms to be ended on e-commerce websites.

60 million users in Turkey spend an average of 3 hours on social media every day¹⁵. As a medium of e-commerce, social media usage is most popular in China. In 2021, half of internet users in China shopped on social media, while the total s-commerce activity in the country was worth 352 billion USD the same year¹⁶. Among other things that make China particular is the concept of “live commerce”, which defines the promotion and sale of products through live broadcasts on social media. Booming since the outbreak of the pandemic, live commerce found its place among the 2020 plans of 81% of the e-commerce consumers in China to be used in 2021¹⁷. The differentiation points of s-commerce, as described in Table 8, can be exploited by merchants to gain competitive advantage, yet s-commerce has not reached the same scale in Western countries like in China.



Orkun Saitoğlu:
Social media and influencer communication shape the investments towards mobile e-commerce.

Table 8: Differentiation of live commerce compared to traditional e-commerce

| Dimension | Explanation |
|-----------------------|---|
| Trust relationship | <ul style="list-style-type: none">• Brands establish trust through promoting their products during live broadcasts of the influencers who are loved and trusted by the consumers |
| Instant information | <ul style="list-style-type: none">• Consumers can immediately get answers to their questions via messaging function in livestreams |
| Intense interaction | <ul style="list-style-type: none">• Brand and merchant-related content can be communicated much more effectively to the consumers as consumers devote continuous attention throughout live broadcasts that typically take 1-2 hours |
| Special discounts | <ul style="list-style-type: none">• Live-exclusive offers can be beneficial for targeting price-sensitive consumers |
| High conversion rates | <ul style="list-style-type: none">• Live commerce can capture conversion rates between 30-50%, which raise valuations and sales potential considering that websites in Turkey obtain a conversion rate of approximately 2% |

Source: Ministry of Trade, Taobao Live (2016), Technode (2020), Dogma Alares analysis

Last-mile delivery infrastructure

As per its definition in logistics sector, the last-mile delivery refers to the stage where the shipment reaches its destination address. This step involves the distribution of small-size shipments to many addresses in the scope of e-commerce, which makes it a costly element in the delivery process. To be precise, last-mile delivery is estimated to account for 53% of the total cost of logistics¹⁸. Thus, it should be treated as a critical improvement area by the marketplaces that pursue

a multi-category growth strategy.

In 2021, e-commerce platforms having high market shares in Turkey were observed to have an intention of transforming into superapps that offer many services together. As summarised in Table 9, Turkey's leading e-commerce companies take action to acquire logistics capacity to provide transportation services, apart from extending their operations in the instant-delivery segment, i.e. food and grocery ordering.

Future outlook

Table 9: Operation areas of leader e-commerce companies in Turkey

| | |
|---|--|
|  Retail |  Wholesale |
|  Production |  Cargo and logistics |
|  Food ordering and delivery |  Supermarket ordering and delivery |
|  Payment services |  Second-hand goods trade |
|  Private integrator services* |  Marketing & advertise-ment |

*Intermediation for the relevant service

Source: Turkish Competition Authority (2021), Dogma Alares analysis

The presence of e-commerce companies that have significantly improved their cargo infrastructure would not only raise the consumer expectation regarding fast/instant delivery, but also render the logistics infrastructure into a critical factor of competition in the ecosystem. At the same time, it is of high probability for the e-commerce market to solidify its oligopolistic structure, as large companies obtain early-mover advantage in terms of logistics capabilities and increase their market shares even further.

Erdal Güner:

The structure of e-commerce market will be shaped significantly by the sizable investments towards logistics capacity enhancement.



2021 e-commerce ecosystem in Turkey

Liberalisation of international trade

E-commerce is getting more and more favourable as a shopping method both in our country and many other countries, particularly in developed markets. For e-commerce sellers who aspire to meet the demand outside their countries, logistics planning becomes a key issue to consider. According to a study of eMarketer, 27% of retailers state that delivering to the end user presents the biggest challenge in the context of cross-border e-commerce¹⁹.

Merchants who plan to expand to foreign countries may partner with third-party logistics (3PL) firms to get support for their delivery process, including the last-mile stage mentioned earlier. In summary, 3PL companies can undertake various responsibilities throughout the e-commerce sellers' supply chain management. On top of 3PL concept, fourth-party logistics (4PL) firms provide additional services ranging from order management to the supply chain operation.

In addition to 3PL and 4PL companies, marketplaces offer programs that are intended to enhance the logistics capacity of their vendors. In this respect, Fulfillment by Amazon (FBA) is one of the leading initiatives. Within the scope of FBA, Amazon performs the storage, packaging, shipment, and reverse logistics activities on behalf of the sellers, besides providing customer service. In 70 countries covered by Amazon, 57% of merchants fulfilled all of their orders via FBA, while another 34% benefited both from FBA and their own logistics arrangements²⁰.

3PL and 4PL offerings, as well as programs like FBA eliminate a major barrier for the merchants on their way to extend their reach across the globe, and thus contribute substantially to the development of cross-border e-commerce.



Future outlook




Direct-to-customer (D2C) e-commerce

Being a sub-branch of retail e-commerce, D2C e-commerce defines the online shopping transactions where the manufacturer reaches the buyer directly, without any intermediary such as distributors or retailers. In 2020, D2C e-commerce activity totalled to 112 billion USD, and it is estimated to go up to 175 billion USD by 2023²¹. While it draws particular attention from Generation Z²², D2C e-commerce shines out by virtue of providing various advantages

to the consumer as mentioned in Table 10: It not only enables the consumer to reach the manufacturer directly, but also drives product prices down.

Beyond lowering the market entry cost for vendors²³, D2C e-commerce stands one step ahead of traditional retail e-commerce in terms of long-term customer acquisition. In an ecosystem that allows for a profit improvement between 25-95% by increasing customer loyalty only by 5%²⁴, merchants may account for the existence of D2C selling during strategy development.

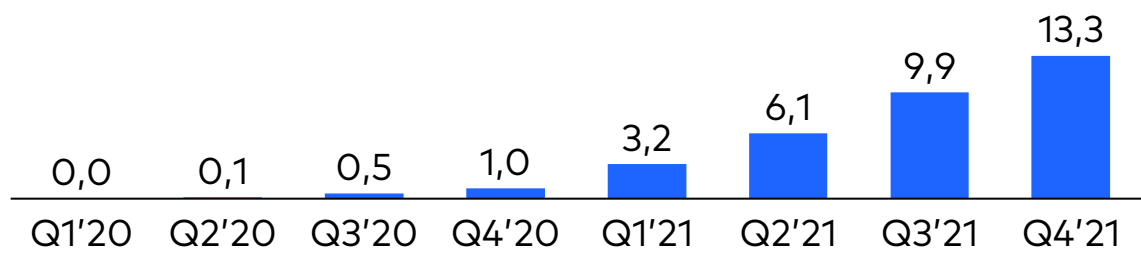
Table 10: Value proposition of D2C e-commerce

| Question | Answer |
|--|--|
|  Who is the target customer? | <ul style="list-style-type: none">• Consumers who care about personalised online shopping experience• Consumers of Z generation |
|  How does it create value for the consumer? | <ul style="list-style-type: none">• Facilitates a direct line of communication between the producer and the consumer• Enables the customer to experience the optimum shopping experience and find the most relevant product• Provides cheaper offers directly from the producer |
|  How does it create value for the merchant? | <ul style="list-style-type: none">• Gives the end-to-end control of customer experience to the merchant• Allows for data-driven decision making by virtue of granting the data ownership to the merchant• Fosters competitive prices through reducing market entry costs• Establishes customer loyalty by allowing them to directly interact with the brand |

Source: Smart Insights (2021), Vaimo (2022), Dogma Alares analysis

Figure 23: Global cumulative capital raised by aggregators

Billion USD, 2021



Source: Marketplace Pulse

Aggregators

In the future of small-scale merchants on marketplaces, aggregators may play a significant role. As depicted in Figure 23, these firms attracted a capital of 13,3 billion USD within two years from 2020 to 2021, making their mark in the world of investors. Aggregators embrace a business model where they act as investment firms that acquire small brands from

e-marketplaces, with an intention to build a brand identity around them, obtain customer loyalty for them and boosting their sales. In 2020, the adjusted EBITDA for mid- and small-scale merchants ranged between 2,5 and 3, while the presence of aggregators carried these multiples to a range of 4 and 8, and even up to 10 added the earn-outs²⁵.

To date, there are 94 active aggregators in 21 countries, primarily in the US and Germany and also in Turkey²⁶. Compared to global picture, aggregator firms have not yet won enough appreciation from investors in Turkey; however this business model is expected to get more widespread as more mid- and small-scale e-commerce merchants develop their brands, value propositions and revenues. In line with this expectation, we can presume an increasing trend for the market values of the mid- and small-scale sellers on e-marketplaces.





Erdal Güner:

It is possible for e-commerce merchants to step ahead by optimising the visibility of their products on marketplaces.

Developments in the digital marketing

This report alludes several times to the importance of marketplaces within the e-commerce ecosystem. Due to their key position, marketplaces turned into an alternative medium for digital marketing activities.

Marketplace advertisements look different than usual advertisement content, such as visuals that appear on the top or at the sides of the webpage/mobile application. The advertised, i.e. "promoted" products are listed higher than their organic rankings whenever a user searches for a product on an e-marketplace. By promoting their products, merchants can increase the visibility of their products and obtain better sales, which would create a domino effect that pushes their products even higher in the search results²⁷.

Marketplace advertising is also an option for e-commerce merchants in Turkey. This method can be used for developing brand recognition and facilitating direct access to the target consumer²⁸. Click-based advertisements constitute a low-cost and high-margin revenue stream for marketplaces, given that they typically make profit from low-margin sources such as commissions and fixed rates. Through sponsored products, the transformative effect of e-commerce radiates into the world of marketing.

Blockchain and new technologies

All sectors and even our lives are being reshaped by disruptive technologies, so it is inevitable for e-commerce to be influenced by such developments. Being one of the leading technologies, blockchain signals a reorganisation of the players and the relationships in the e-commerce ecosystem. Meanwhile, Metaverse demonstrates a potential to change the environment, the perception, and the features of the e-commerce as a whole.

According to its definition, a blockchain holds the records for any kind of transactions while assuring that the records cannot be manipulated later. Moreover, this system allows for public verification of the transactions. At the very fundamental, blockchains eliminate the need for an authority between parties of a contract, and they also have a function of decentralising data

protection. Cryptocurrencies as one major use case of blockchains, will be used as commonly as traditional payments in e-commerce, experts say²⁹. Having emerged as a variation of cryptocurrency-like assets, non-fungible tokens (NFTs) are destined for boosting the effectiveness of customer loyalty programs in e-commerce. NFTs can be described as unique assets that are defined within certain blockchain infrastructures, and they may replace the ordinary loyalty points granted by e-commerce websites. This way, e-commerce consumers will be able to earn more appealing assets that have a certain market value rather than plain points that are only valid within the realm of relevant e-commerce platforms³⁰.

Web3 as another application of blockchain technology, can be described as a blockchain-based superior version of the internet infrastructure on which e-commerce is built, i.e., of Web2.0. By its nature,



Future outlook

Web3 will not treat any person or institution in the e-commerce ecosystem as reliable³¹ and will ensure transaction security using the blockchain infrastructure, instead of entrusting it to any company or institution. Moving e-commerce to Web3 would imply that customers' current shopping experience does not change significantly. However they would then shop from distributed applications (dApps) on blockchains³², meaning that intermediaries between buyers and sellers may become unnecessary in the ecosystem.

As the combination of aforementioned blockchain-based concepts, augmented reality (AR), virtual reality (VR), and s-commerce; Metaverse currently constitutes an alternative channel for e-commerce sellers, not to mention it opens up the discussion of an alternative e-commerce ecosystem³³. Even though Metaverse does not have a precise definition, in a general sense, it describes the overall evolution of our interaction with technology³⁴. In the

near future, Metaverse is expected to host a superficial alternative universe and therefore a new digital economy.

Even today, we started to observe the early applications of Metaverse such as Amazon's AR-based Room Decorator. This app allows customers to view furniture and accessories as if they are put in some real place, before the shopping takes place on tablets or phones³⁵. Similarly, fashion brands are developing applications in which consumers can try clothes and accessories without going to the store. Along with its first applications, Metaverse blurs the distinction between e-commerce and traditional commerce, hinting new e-commerce ecosystems within alternative digital economies.











Widening variety of payment methods

In Turkey, credit cards and debit cards are the most preferred payment options in the scope of e-commerce transactions. In the first eleven months of 2021, 8,2 million payments were realised through cards, corresponding to a spending of 1,6 trillion TRY³⁶. 1,2 million of these transactions belonged to e-commerce, which created a volume of 403 billion TRY³⁷. When compared to the same

period of 2020, these numbers translate into a 73,2% volume-wise and a 59,7% transaction-wise increase for online card payments. Among different types of cards, prepaid cards are worth mentioning as their number went up by 33,1% in a year-on-year basis³⁸. Taking into account that the increase in the number of debit and credit cards remained at 7,3% and 8,3% respectively³⁹, it seems highly possible for prepaid cards to be used more often as a means to pay in terms of e-commerce.

Table 11: Features of mobile/digital wallets

| | |
|---|--|
|  Allows for access from mobile devices and computers, transfers seamlessly between different devices | |
|  Keeps loyalty cards, coupons and event tickets etc. in one single place |  Cannot keep driving licences and ID cards etc. |
|  Supports contactless payment |  Not accepted as widely as physical cards |
|  Requires password or biometric verification before processing the payment |  Necessitates the device to be under password or biometric protection |
|  Helps users track their budget | |

Source: NerdWallet (2021), Brandon Gaille (2018), Dogma Alares analysis

Orkun Saitoğlu:





Beside the emerging need for contactless shopping, BNPL credit solutions will be the new shopping friend of personal users and sellers.

While payment by card is also frequent in the global e-commerce as in the case of Turkey, digital/mobile wallets currently lead the payment methods for online shopping. 44,5% of world e-commerce has taken place by virtue of wallet applications in 2020, which are expected to become even more popular in the coming years⁴⁰. 52% is the estimated share of mobile/digital wallets in 2024 global e-commerce payments, on the other hand card payments are expected to take 33%⁴¹. Digital wallets can keep many items of a typical physical wallet such as debit/credit cards, loyalty cards, coupons, or event tickets. Furthermore, they have a potential to address the consumer concerns in Turkey regarding physical contact, which manifests itself by the 255% and 117% year-on-year increases in the use of contactless payment by the end of 2020 and 2021, respectively⁴². Table 11 shows that wallet applications appeal to safety-, price- and budget-sensitive consumers through their features like user authentication

exclusive rewards/ discounts, and budget tracking assistance. Although most e-commerce platforms support mobile/digital wallets, in general these applications are not as widely accepted by the sellers in comparison to regular cards.

There is only one other payment method than digital/mobile wallets that is associated with a share increase regarding e-commerce payments. As it is referred to, Buy Now Pay Later (BNPL) accounted for 2,1% of e-commerce payments in 2020, and this share is expected to double (4,2%) by the end of 2024⁴³. BNPL offers a payment scheme with instalments which is typically provided by credit cards or consumer loans. In addition, BNPL allows consumers to postpone their payments to a certain extent. It is known that Gen Y and Z consumers comprise the main customer base of this method⁴⁴, yet BNPL also presents an attractive alternative for the individuals who have limited access to financial

Table 12: Value proposition of BNPL

| Question | Answer |
|---|---|
|  Who is the target customer? | <ul style="list-style-type: none"> • Consumers who have credit cards with low limit/lower limit than their spendings • Consumers who have limited access to financial resources • Young consumers who do not have a bank account |
|  How does it create value for the consumer? | <ul style="list-style-type: none"> • Enables instalments and payment deference without using credit cards or consumer loans • Applies no/little interest to the instalments of short term payments |
|  How does it create value for the merchant? | <ul style="list-style-type: none"> • Reduces credit risk via paying the merchant in advance • Carries potential to improve conversion rates, average basket values and abandonment rates |
|  How is its fee structure? | <ul style="list-style-type: none"> • Charges interest/instalment fees for long term payments • Charges extra fees for late payments |

Source: Investopedia (2021), Volusion (2021), Dogma Alares analysis

resources, or who do not trust financial institutions. Research indicates that sellers can potentially improve their conversion rates by 20-30%⁴⁵, average basket values by 30-50%⁴⁶, and reduce their abandonment rates by 35%⁴⁷; through accepting BNPL payments. As pointed out in Table 12, BNPL brings a further advantage for the merchants by transferring the risk of receivables to the payment provider. In contrast to its convenience, BNPL can rapidly increase indebtedness if the consumer does take enough responsibility to track their payments⁴⁸. Meanwhile,

BNPL providers may apply high fees in case of skipped payments.

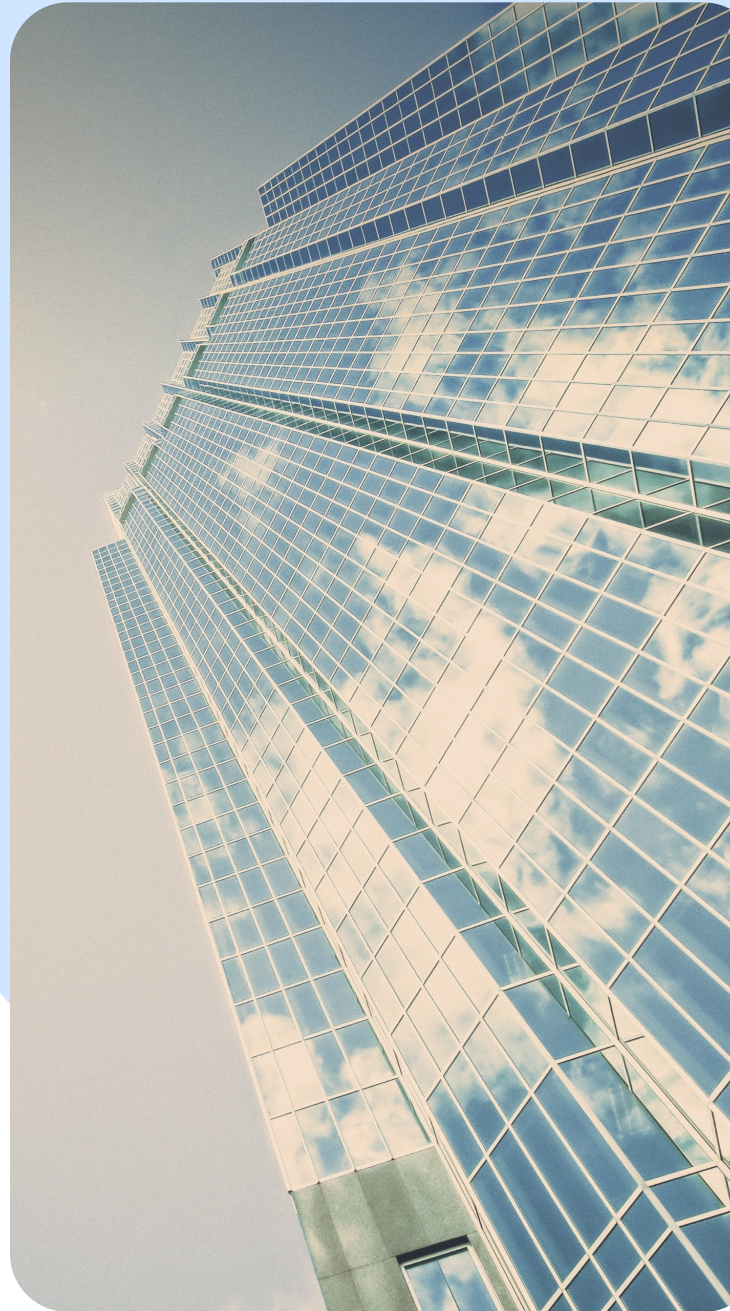
In the near future of the e-commerce in Turkey, it is possible to argue that card payments will retain their leadership considering the cross-section of global-scale analyses with European and Middle Eastern trends. Nevertheless, it will be eventually necessary for e-commerce merchants to swiftly establish infrastructures for accepting payments through consumer-friendly methods such as digital wallets or BNPL.

Future outlook

B2B e-commerce

Retail e-commerce has been elaborated from many aspects in this report, however it encompasses only one part of global e-commerce. B2B e-commerce as the remaining part created 15 trillion USD, fourfold the retail e-commerce volume, by the end of 2020. In a global scale, the market size of B2B e-commerce is estimated as 35 trillion USD for 2025 year end⁴⁹.

B2B e-commerce stands for the online shopping transactions where the end-consumer is either a corporate or a commercial entity. Compared to B2C e-commerce, B2B segment is characterised by the concentration of industry-specific, i.e., vertical marketplaces, as well as service marketplaces that match the supply and demand for various types of services. Despite the fact that the global growth of B2B e-commerce has not reflected fully onto Turkey's ecosystem, it may be the right time for prospective B2B e-commerce merchants to take action in order to gain early-mover advantage.



Contributors

iyzico

Orkun Saitoğlu

orkun@iyzico.com

Selin Mete

selin.mete@iyzico.com

Serkan Karaduman

serkan.karaduman@iyzico.com

Nadide Akgöz

nadide.akgoz@iyzico.com

Berk Çakar

berk.cakar@iyzico.com

Dogma Alares

Erdal Güner

erdal.guner@dogmaalares.com

Muratcan Güneri

muratcan.gueri@dogmaalares.com

Ozan Dündar

ozan.dundar@dogmaalares.com

Yasemen Aktaş

yasemen.aktas@dogmaalares.com

Atılberk Çelebi

atilberk.celebi@dogmaalares.com

Çisem Altan

cisem.altan@dogmaalares.com

Ali Berke Ersözlü

aliberke.ersozlu@dogmaalares.com

ETID

Emre Ekmekçi

eekmekci@etid.org.tr

References

1. **Global Ecommerce Forecast 2021** (2021):
<https://www.emarketer.com/content/global-ecommerce-forecast-2021>
2. **Digital 2022: Global Overview Report** (2022):
<https://datareportal.com/reports/digital-2022-global-overview-report>
3. **Küresel e-ticaret pazarı %14 artışla 4,9 trilyon dolara koşuyor** (2021):
<https://www.bloomberght.com/kuresel-e-ticaret-pazari-14-artisla-4-9-trilyon-dolara-kosuyor-2282063>
4. **2021 Yılı İstatistikleri (İlk 6 Ay)** (2021): <https://www.eticaret.gov.tr/istatistikler>
5. **Digital 2021: Turkey** (2021): <https://datareportal.com/reports/digital-2021-turkey>
6. **GDP (Current US\$)**: <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>;
E-commerce worldwide - statistics & facts (2022):
<https://www.statista.com/topics/871/online-shopping/>
7. See 1.
8. See 3.
9. **The Next Frontier** (2021): PayU
10. **European E-commerce Report** (2021): Amsterdam University of Applied Sciences & Ecommerce Europe
11. **Impact of COVID Pandemic on eCommerce** (2022):
<https://www.trade.gov/impact-covid-pandemic-ecommerce>
12. **E-commerce at the time of COVID-19** (2020):
<https://www.oecd.org/coronavirus/policy-responses/e-commerce-in-the-time-of-covid-19-3a2b78e8/>
13. **The Global Payments Report** (2021): Worldpay
14. See 5.
15. See 5.
16. **The Future of E-commerce Trend Report** (2022): Shopify
17. **Chinese Consumers Rally For Singles' Day But Plan To Shun Foreign Brands, Says AlixPartners' Survey** (2020): <https://www.alixpartners.com/media-center/press-releases/chinese-consumers-rally-for-singles-day-2020/>
18. **The challenges of last mile delivery logistics and the tech solutions cutting costs in the final mile** (2022): <https://www.businessinsider.com/last-mile-delivery-shipping-explained>
19. **Cross-Border E-commerce: Succeed With Cross Border Warehousing and Fulfillment**: <https://blog.getbyrd.com/en/cross-border-ecommerce-fulfillment>
20. **Fulfillment methods used by third-party sellers on Amazon in 2020** (2021):
<https://www.statista.com/statistics/1255966/amazon-third-party-seller-fulfillment-methods/>
21. **D2C e-commerce - statistics and facts** (2021):
<https://www.statista.com/topics/8838/d2c-e-commerce/>

22. **Digital Commerce Business Models: The Current Landscape** (2022):
<https://www.vaimo.com/digital-commerce-business-models-current-landscape/>
23. See 22.
24. **The Value of Keeping the Right Customers** (2014): Harvard Business Review (2014)
25. **Marketplaces Year in Review 2021** (2021):
<https://www.marketplacepulse.com/marketplaces-year-in-review-2021>
26. **Amazon Aggregators** (2021): <https://www.marketplacepulse.com/aggregators>
27. **What is Amazon Advertising?** (2020):
<https://www.bigcommerce.com/ecommerce-answers/what-is-amazon-advertising/>
28. See 27.
29. **Web3 Is Going to Rewrite Your E-Commerce Strategy** (2021):
<https://www.inc.com/joan-westenberg/web3-is-going-to-rewrite-your-ecommerce-strategy.html>
30. **How Will Web3 and NFTs Impact Ecommerce?** (2022):
<https://www.vaimo.com/web3-nft-ecommerce/>
31. **Will Web3 Change Ecommerce?** (2021):
<https://www.practicalecommerce.com/will-web3-change-ecommerce>
32. See 29.
33. **Ecommerce and the metaverse: What we can expect** (2021):
<https://whiplash.com/blog/ecommerce-and-the-metaverse/>
34. **What Is the Metaverse, Exactly?** (2021): <https://www.wired.com/story/what-is-the-metaverse/>
35. **How The Metaverse Will Reshape E-Commerce Forever** (2022):
<https://www.forbes.com/sites/theyec/2022/01/24/how-the-metaverse-will-reshape-e-commerce-forever/?sh=4f87571469d9>
36. **Yerli ve yabancı kredi kartlarının yurt içi kullanımı:** <https://bkm.com.tr/yerli-ve-yabanci-kredi-kartlarinin-yurt-ici-kullanimi/>, **Yerli ve yabancı banka kartlarının yurt içi kullanımı:** <https://bkm.com.tr/yerli-ve-yabanci-banka-kartlarinin-yurt-ici-kullanimi/>
37. **İnternette yapılan kartlı ödeme işlemleri:** <https://bkm.com.tr/internette-yapilan-kartli-odeme-islemleri/>
38. **Kart sayıları:** <https://bkm.com.tr/kart-sayilari/>
39. See 38.
40. See 13.
41. See 13.
42. **Temassız kart sayıları:** <https://bkm.com.tr/temassiz-kart-sayilari/>
43. See 13.

References

44. **How buy now, pay later became a \$100 billion industry** (2021): <https://www.cnbc.com/2021/09/21/how-buy-now-pay-later-became-a-100-billion-industry.html>
45. **Retailers bid farewell to layaway, as shoppers embrace buy now, pay later options** (2021): <https://www.cnbc.com/2021/09/25/why-retailers-are-embracing-buy-now-pay-later-financing-services.html>
46. See 45.
47. **Mastercard reinvents installments to give consumers more payment choices wherever they shop** (2021): <https://www.mastercard.com/news/press/2021/september/mastercard-reinvents-installments-to-give-consumers-more-payment-choices-wherever-they-shop/>
48. **Why "Buy Now, Pay Later" (BNPL) Is Growing in Popularity** (2021): <https://fintechmagazine.com/financial-services-finserv/why-buy-now-pay-later-bnpl-growing-popularity>
49. **In-depth: B2B eCommerce 2021** (2021): Statista