

# 2023

## E-commerce ecosystem in Türkiye



iyzico



DOĞMA  
ALARES



etid

## Foreword



**Orkun Saitoğlu**

CEO, iyzico

E-commerce is reshaping the dynamics of global trade. In Türkiye, the e-commerce sector recorded a transaction volume of 1,855 billion Turkish Lira in 2023, with a goal of reaching 3,395 billion Turkish Lira in 2024<sup>1</sup>. E-commerce has significantly shifted the consumer shopping habits, which were also influenced by the pandemic. Consequently, e-commerce's share of overall trade volume increased from 18.3% in 2022 to 20.3% in 2023<sup>1</sup>.

Industries are actively working to align with the rapidly evolving digital landscape. E-commerce companies and marketplaces are prioritizing technology and digitalization in their business processes to better meet customer demands.

Building on these trends, e-commerce market volume in Türkiye grew significantly in 2023, expanding by 64% in US dollar terms<sup>1</sup>. These figures indicate a promising future for e-commerce market in Türkiye. The positive trends in the e-commerce sector are also reflected in its growing share in Türkiye's GDP. E-commerce's contribution to GDP increased from 5.1% in 2022 to 6.8% in 2023<sup>1</sup>.

In Türkiye, where the e-commerce market continues to expand rapidly, e-commerce sales surged by 132% in 2023, reaching 1,855 billion Turkish Lira<sup>1</sup>. While the number of e-commerce transactions in Türkiye grew by 45% from 2020 to 2021 and by 43% from 2021 to 2022, the annual growth rate slowed to 23% in 2023. In total, nearly 6 billion e-commerce transactions were carried out in Türkiye in 2023<sup>1</sup>. Türkiye stands out as one of the most promising markets for e-commerce growth, driven by its rapid digital transformation, strategic location near key markets, and young population.

To fully understand the potential of interactions with foreign markets, it is essential to monitor the growth of global e-commerce market. The global e-export volume, which were approximately 719 billion US dollars in 2021, is expected to experience a compound annual growth rate of 25.8% from 2022 to 2030<sup>2</sup>. This remarkable growth trajectory positions global e-commerce as a key driver of overall e-commerce activity.

Türkiye's e-commerce market is rapidly evolving, driven by a combination of favorable factors including the country's demographics, the young population's growing preference for online shopping, and increasing entrepreneurial interest in the sector. The large number of young people and their quick adoption of technology have boosted internet penetration rates from 85% in 2022 to 87% in 2023, while the proportion of e-commerce customers has grown from 46% to 50%<sup>3</sup>. Looking ahead, the ongoing adoption of emerging technologies is anticipated to accelerate growth in both transaction counts and sales volume within the e-commerce market.

iyzico is rapidly gaining ground in Türkiye's evolving payments industry. The company's "Pay with iyzico" payment method has seen significant growth, while credit cards emerging as the preferred choice for consumers. Interestingly, customers using "Pay with iyzico" tend to spend more per transaction compared to those using other payment methods. This suggests that the platform is attracting a higher-spending customer base. The platform's variety of payment options and strong security measures likely contribute to this trend, building trust and confidence among consumers.

The e-commerce industry witnessed a remarkable year of expansion and transformation in 2023. The industry's momentum, driven by digital transformation, is expected to continue.

At iyzico, we are dedicated to making financial services accessible to everyone. We actively support SMEs in their growth and digital transformation, recognizing their crucial role in driving economic growth. Our commitment is to nurture an environment that promotes their success. We hope our "E-commerce ecosystem in Türkiye" report provides valuable insights to all stakeholders in the sector. Together, we are building a stronger and more inclusive financial ecosystem for the future.

## Foreword



**Erdal Güner**

Founding Partner, Dogma Alares

Global e-commerce activity experienced significant growth during the pandemic and has continued to expand steadily even after the pandemic's effects have subsided. Both in the global market and in Türkiye, customers are increasingly preferring online shopping due to its convenience. Indicators suggest that the global e-commerce transformation progressed in 2023.

The e-commerce market in Türkiye, expected to grow by 5.7% to reach 82.4 billion USD in 2024, is strengthening its integration with the global e-commerce market, thanks to its strategic location as a crucial logistics hub<sup>1</sup>. In 2023, Türkiye's e-commerce imports made up 3.75% of the country's total e-commerce volume, while exports accounted for 2.88%<sup>1</sup>. The conveniences brought by e-commerce are also boosting the competitive capabilities of Turkish sellers in the global market. Additionally, Türkiye's relatively young and dynamic population is a significant factor in the potential growth of e-commerce.

New technologies play a crucial role in the development of e-commerce, such as artificial intelligence (AI) advancements. AI stood out in e-commerce recently, as in many other fields. Technologies that allow customers to virtually try on various clothing or accessories provide significant value to consumers. AI's ability to create virtual models and showcase products on them leads to major cost savings for sellers. The popularity and advancement of large language models in 2023 have opened up new possibilities for e-commerce vendors to deepen customer interaction, better understand their needs, and respond to demands more effectively. Developments driven by artificial intelligence technology are enhancing efficiency and adding value across the e-commerce landscape for all stakeholders. Given the global enthusiasm surrounding advancements, AI has the potential to profoundly reshape the e-commerce industry. Consequently, stakeholders must stay informed about these developments and actively work to implement them.

Another important trend for e-commerce stakeholders to address, which is among today's key topics, is sustainability. Concerns about climate change are increasingly capturing the attention of public authorities and influencing the preferences of individual consumers. E-commerce needs to adapt in response to these concerns. The European Union's "Ecodesign for Sustainable Products Regulation", aiming to achieve the objectives of EU's "2020 Circular Economy Action Plan", is a clear indication of the EU's concrete steps in this regard. The Digital Product Passport, part of this regulation, is expected to have significant impacts on e-commerce. This application aims to create a specific identity card for products, making it easier to track the environmental impacts of the production processes associated with the product<sup>4</sup>. This step by the EU helps individual consumers, who increasingly prioritize climate change, to better understand the impact of their choices on the environment.

International organizations, including the World Bank and the United Nations, are providing incentives for local governments to reduce their environmental impacts. For instance, the 2024-2028 protocol between the World Bank and Türkiye outlines a strategy that encourages Türkiye to prioritize environmental considerations in its economic activities. Since the European Union (EU) is a key trade partner for Türkiye, it is essential for Türkiye to stay updated on sustainability developments within the EU. Adapting to these legal changes can enhance Türkiye's competitiveness in global e-commerce market.

A clear example of how Türkiye is tackling 21st-century technologies and issues is the recently enacted Crypto Asset Regulation. This regulation demonstrates that regulators in Türkiye are recognizing and addressing new technologies such as blockchain. This situation paves the way for 21st-century technologies and concerns to have a deeper impact on daily life. The significant impact of such technological and regulatory developments underlines the need for e-commerce stakeholders to adapt to the dynamic world by closely monitoring these trends.

E-commerce continues to thrive globally, driven by its significant economic impact. To understand the evolving dynamics of this sector, we analyze diverse datasets to uncover insights for industry stakeholders. Our collaboration with iyzico on the third "E-commerce ecosystem in Türkiye" report aims to inspire and inform the ecosystem while providing a comprehensive perspective on Türkiye's e-commerce landscape.

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## Abbreviations

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|            |                                                    |
|------------|----------------------------------------------------|
| B2B        | Business-to-business                               |
| B2C        | Business-to-consumer                               |
| BKM        | Interbank Card Center (Bankalararası Kart Merkezi) |
| BNPL       | Buy now pay later                                  |
| C2C        | Customer-to-customer                               |
| D2C        | Direct-to-consumer                                 |
| EFT        | Electronic funds transfer                          |
| E-export   | Electronic export                                  |
| E-commerce | Electronic commerce                                |
| ETID       | Association of E-Commerce Operators                |
| GDP        | Gross domestic product                             |
| iyzico     | iyzi Ödeme ve Elektronik Para Hizmetleri A.Ş.      |
| SPK        | Capital Markets Board (Sermaye Piyasası Kurulu)    |
| TL         | Turkish Lira                                       |
| TURKSTAT   | Turkish Statistical Institute                      |
| UK         | United Kingdom                                     |
| USA        | United States of America                           |

# Methodology

The data in this report, sourced from iyzico and Dogma Alares analyses, cover transactions made through iyzico (excluding iyzico Cep POS) between 2020 and 2023. The results obtained from this data may not fully reflect the entire market. Although e-commerce activity includes B2B, B2C, and C2C sales, the majority of businesses using iyzico operate in the B2C (Business-to-consumer) sector. Therefore, iyzico's analyses primarily focus on B2C e-commerce activities.

Throughout the report, twenty sectors are referenced, including three mixed sectors marked with an asterisk (\*). The names of these sectors have been abbreviated in the text using their first words.

- Garden and hardware
- Grocery and convenience stores\*
- Education
- Equipment
- Electronics and technology
- Real estate services
- Pet products
- Services
- Book and printed publications
- Cosmetics and personal care
- Culture, arts, hobbies and games
- Furniture, kitchenware and haberdashery
- Fashion and accessories
- Payment/advertising platforms, subscriptions, social channels\*
- Marketplace\*
- Health
- Sports and outdoors
- Vehicles, spare parts, accessories
- Tourism and travel
- Food and beverage

The sectors listed in this report do not adhere to any specific standard. Comparing this report directly with those from previous years, except for the reports "2021 E-commerce Ecosystem in Türkiye" and the "2022 E-commerce Ecosystem in Türkiye" is not recommended. Mixed sectors may encompass other sectors, so their impact has been excluded from certain analyses. Consequently, the three mixed sectors indicated with an asterisk (\*) have not been included in these analyses. This exclusion is noted in the footnotes where applicable.

Beyond the 20 sectors listed above, the main data of the report includes a negligible amount of information from other sectors. Although this data is not excluded from the analysis and is categorized under 'other,' it has been omitted from certain analyses to present the results more clearly.

The report uses Euromonitor data to provide an international comparison of Türkiye's e-commerce statistics. Eight countries were selected for this comparison based on the following criteria:

- **Developed countries:** United States of America, United Kingdom, Germany
- **Countries advanced in e-commerce:** China, India
- **Developing countries with dynamics similar to Türkiye:** Brazil, South Africa, Poland

As part of the classification of sellers by size (Micro, Small, Medium, and Large), the digital sales-to-physical sales ratio for 2022, identified for each sector, was used to estimate their 2023 revenue based on sales completed through iyzico, excluding iyzico Cep POS. These digital sales-to-physical sales ratios are updated annually, taking into account market data and dynamics.

In the report, if the available data could not be evaluated within the framework of specific analyses, it was excluded from the sample. In such cases, the reduction in sample size was negligible.



## Executive summary

The e-commerce ecosystem report, prepared for the third time in collaboration with iyzico, Dogma Alares, and ETID, aims to provide a comprehensive analysis of Türkiye's e-commerce landscape, which is crucial for the country's economic activity and position in international trade. Structured into six sections, the report combines iyzico's e-commerce transaction data with extensive sector research. The findings and insights obtained are detailed in the respective sections of the report.



### E-commerce in Türkiye

With a transaction volume value of approximately 1.9 trillion TL, e-commerce activities in Türkiye accounted for about 7% of the country's GDP. Retail e-commerce accounts for 18.3% of the total retail market, demonstrating the significant impact of digital transformation on the sector. Analysis of total sales volume and transaction numbers revealed that e-commerce activity in Türkiye continued its upward trend in 2023. Key factors underscoring Türkiye's e-commerce potential include international comparisons and demographic dynamics. Additionally, a closer look at the yearly e-commerce activity revealed that campaigns and economic dynamics played a significant role in influencing this activity.



### E-commerce sectors

The fashion sector, while retaining its top spot in terms of sales volume and transaction count in 2023, experienced a decline in its overall market share compared to the previous year. Sports, food, and furniture emerged as the top growing sectors in 2023. In terms of average basket size, which is influenced by structural sector characteristics, the automotive sector again held the top position in 2023.



### E-commerce sellers

Istanbul stood out as the city with the highest concentration of e-commerce sellers by a wide margin, followed by Ankara, Izmir, and Bursa. On a larger scale, the Marmara, Central Anatolia, and Aegean regions ranked highest in seller density. Analyzing cities within their regions revealed that provinces with the highest seller density in the Mediterranean and Eastern Anatolia regions did not achieve the largest share of regional sales volume. When categorized by size, there was a noticeable increase in the number of smaller businesses this year, but their overall sales were lower.



### E-commerce customers

Customer spending habits for online purchases exhibited a seasonal pattern, with a pronounced peak in November and a subsequent decline in February. As another indicator of customer preferences, the significant growth in online payments underscores a shift in shopping behavior towards digital transactions. Weekend shopping was less frequent than weekday shopping, with peak activity occurring during lunch and evening hours. Special shopping days like Black Friday, Cyber Monday, and Single's Day saw significantly higher activity compared to average days.



### Payment methods

Alternative payment methods, including cryptocurrencies, prepaid cards, and BNPL, are gaining popularity in e-commerce, accounting for 63% of global e-commerce transactions in 2023<sup>5</sup>. While China maintains its leadership in this space, Türkiye is also witnessing increased adoption. Credit cards remain the preferred payment method for iyzico merchants, though basket sizes are larger for Pay with iyzico transactions. Installment payments remain popular, while single-payment options are declining in favor of more flexible payment plans.



### Future outlook

The e-commerce landscape is rapidly evolving, driven by advancements in artificial intelligence, sustainability, and emerging technologies. AI is enhancing customer experiences and operational efficiency, while sustainability initiatives like the Digital Product Passport and the rise of secondhand shopping are gaining traction. Innovative models such as direct-to-consumer sales, blockchain, and embedded finance are reshaping the industry, offering new opportunities for businesses and consumers alike.

# E-commerce in Türkiye

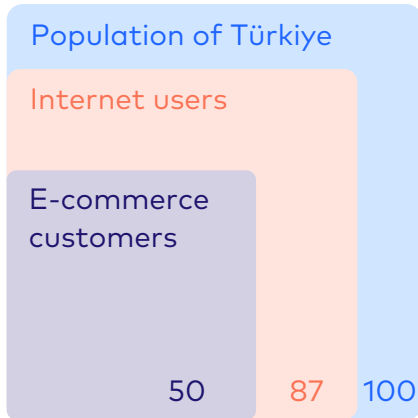


## E-commerce in Türkiye

A comprehensive analysis of Türkiye's e-commerce landscape was undertaken to assess customer demographics, market size, economic contribution, sales patterns, average basket size, and market penetration.

Graph 1: Population of Türkiye <sup>(1)</sup>, internet users, e-commerce customers

Population %, 2023



<sup>(1)</sup> Population aged between 16-74

Source: TURKSTAT

Türkiye's e-commerce landscape is expanding rapidly, with a significant portion of the population actively engaged in online shopping. According to TURKSTAT data from 2023, e-commerce customers in Türkiye constitute 50% of the population, indicating that one in every two individuals between the ages of 16 and 74 is an e-commerce customer. Internet penetration among the population stands at 87%.

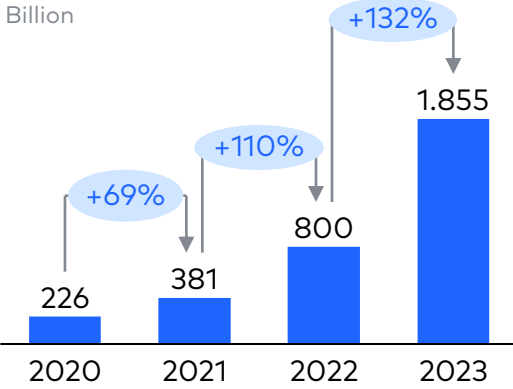
“Despite the waning effects of the pandemic, e-commerce in Türkiye keeps growing, showing a clear move towards digital transformation. Moreover, Türkiye's young and adaptable population makes its e-commerce market very attractive to investors and stakeholders.”

The increase in internet and e-commerce usage rates in Türkiye, which stood at 85% and 46% respectively in 2022, can be attributed to the country's sizable young population and their rapid adoption of technology. 2023 data reveals that approximately 23 million internet users in Türkiye have not yet engaged in e-commerce, highlighting significant opportunities for market expansion.



As internet and e-commerce penetration increased in Türkiye, there was a corresponding growth in overall e-commerce activity throughout the country.

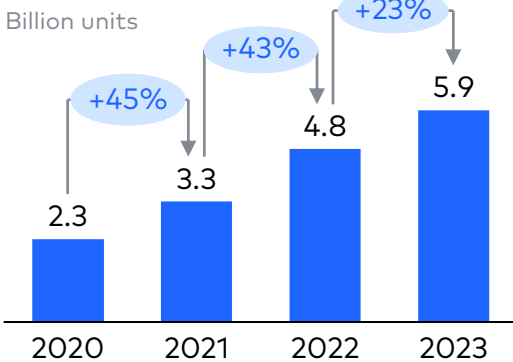
Graph 2: E-commerce sales volume in Türkiye (in Turkish Lira)



Source: Ministry of Trade

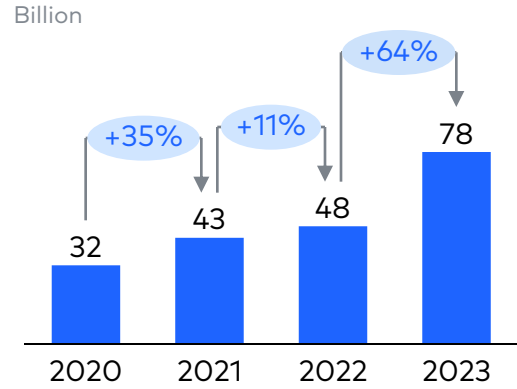
E-commerce sales volume in Türkiye has shown increasing growth since 2020. As illustrated in Graph 2, the growth rate after the pandemic was 69%, which increased to 110% the following year. In 2023, the e-commerce sector grew by 132%, reaching a sales volume of 1,855 billion TL. Moreover, the number of e-commerce transactions in Türkiye surged by 45% and 43% in 2020 and 2021, respectively. However, the growth rate decelerated to 23% in 2023, with the total number of transactions reaching nearly 6 billion.

Graph 3: Number of e-commerce transactions in Türkiye



Source: Ministry of Trade

Graph 4: E-commerce sales volume in Türkiye (in US dollars)



Source: Ministry of Trade

Türkiye's e-commerce market also displayed impressive growth when evaluated in US dollars. Notably, the market grew by 64% in US dollar terms between 2022 and 2023, painting a promising picture for stakeholders regarding the future.



“E-commerce has a significant impact on economic growth. Considering Türkiye's dynamic customer profile, we can take this growth potential a step further with innovative payment systems infrastructure.”

”

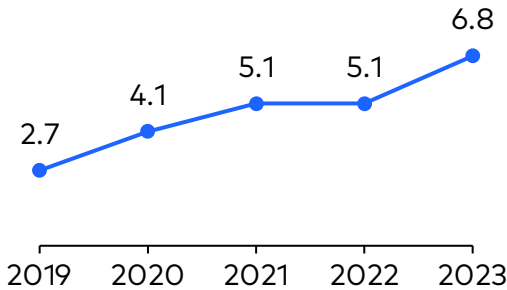
— Orkun Saitoğlu

## E-commerce in Türkiye

The positive developments observed in the e-commerce market are reflected in the increase in its share of Türkiye's Gross Domestic Product (GDP).

Graph 5: Share of e-commerce in Türkiye's GDP over the years

%, 2019-2023



Source: Ministry of Trade, Dogma Alares analysis

While Türkiye's e-commerce sector is experiencing growth as a proportion of national GDP, a comparison to other countries reveals significant untapped potential for further expansion.



*E-commerce diminishes geographical barriers to trade, allowing products to compete in the global market. E-commerce serves competition policies in protecting consumers.*



— Erdal Güner

China dominates the global e-commerce landscape, contributing over 33% to global e-commerce retail sales and generating a significant portion of its GDP through e-commerce<sup>6</sup>. This contrasts with Germany, where e-commerce represents a smaller share of the economy despite its high per capita income. A closer look at Graph 6 shows that, apart from China and Germany, countries with lower per capita GDP tend to have a smaller e-commerce share in their GDP. This trend supports the idea that as societies become wealthier, their engagement with e-commerce typically increases

Graph 6: Share of e-commerce in GDP of selected countries

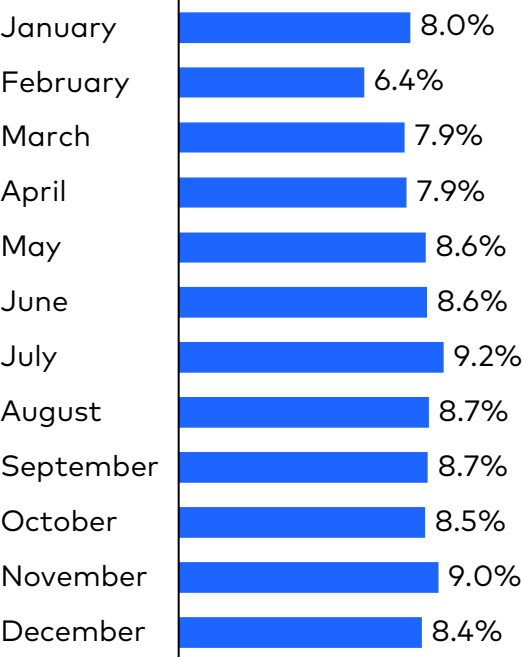
|              | E-commerce/GDP, 2022 | E-commerce/GDP, 2023 | GDP per capita, 2023, US dollar |
|--------------|----------------------|----------------------|---------------------------------|
| China        | 14.9%                | 16.2%                | 12,514                          |
| US           | 10.3%                | 10.7%                | 81,632                          |
| UK           | 9.7%                 | 10.1%                | 49,099                          |
| Poland       | 9.2%                 | 9.7%                 | 21,996                          |
| Brazil       | 7.2%                 | 7.8%                 | 10,642                          |
| Türkiye      | 5.1%                 | 6.8%                 | 12,849                          |
| India        | 5.2%                 | 6.1%                 | 2,500                           |
| Germany      | 5.0%                 | 5.0%                 | 52,727                          |
| South Africa | 2.7%                 | 3.3%                 | 6,138                           |

Source: Euromonitor, Statista, Ministry of Trade, Dogma Alares analysis

A further analysis of the change in the share of e-commerce in GDP from 2022 to 2023 shows Türkiye is leading the list with a 1.7-point increase. This highlights Türkiye's significant potential for e-commerce penetration, offering a promising outlook for stakeholders in the sector.

Graph 7: Distribution of transaction counts by month

%, 2023



Source: iyzico, Dogma Alares analysis

Analysis of monthly e-commerce transaction counts in Türkiye reveals July as the peak month with a 9.2% share. November follows closely with a 9.0% share, driven by various promotional campaigns like Teachers' Day, Singles' Day, and Black Friday. February, marked by the 6th February earthquake, holds the lowest position with a 6.4% share.

Excluding November and February, the overall transaction count trend throughout the year exhibits a rise towards the summer months and a decline towards winter. This pattern can be attributed to the strong influence of the tourism industry on the Turkish economy, with increased tourism expenditures during the summer months. E-commerce, due to its inherent convenience, is widely utilized within the tourism sector, and therefore, a surge in tourism activities is likely to be reflected in e-commerce transaction counts.

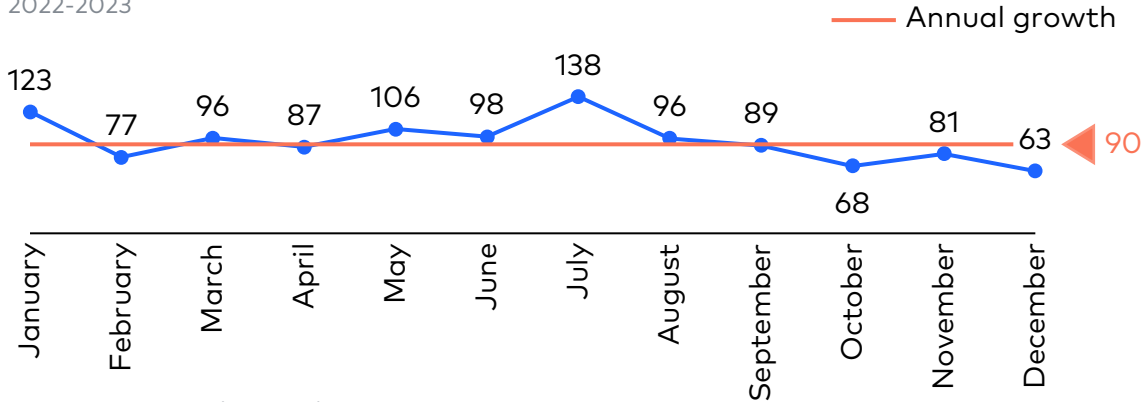
Graph 7 illustrates monthly e-commerce transaction counts in Türkiye. While an even distribution would result in an 8.3% share for each month, actual data shows fluctuations. The first quarter typically falls below this average. Summer months generally see higher transaction counts, likely influenced by increased tourism activity. December stands out as a peak month due to holiday shopping.



Graph 8 illustrates year-over-year e-commerce sales volume growth from 2022 to 2023.

## E-commerce in Türkiye

Graph 8: Sales volume growth compared to the same month of the previous year  
%, 2022-2023



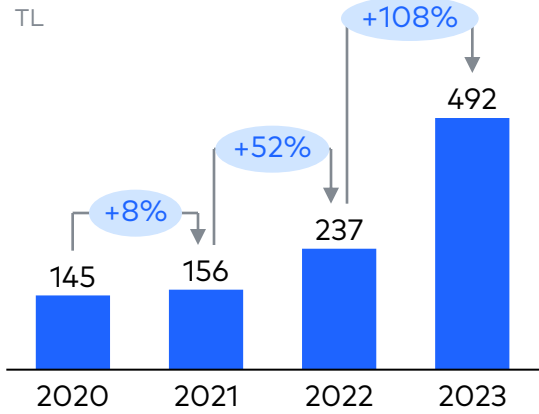
Source: iyziico, Dogma Alares analysis

Graph 8 reveals distinct seasonal patterns in sales volume. E-commerce sales volume fluctuated significantly throughout the year, with July taking the lead as the peak month, experiencing a remarkable 138% year-over-year sales growth. January also demonstrated substantial growth at 123%, while December and October recorded slower growth rates of 63% and 68%, respectively. The remaining months showed relatively stable growth rates in the range of 80% to 100% compared to the same month of the previous year.

As seen in Graphs 2 and 3, e-commerce sales volume grew faster than transaction counts, leading to an increasing trend in average basket size. This observation is further supported by an analysis of iyziico data presented in Graph 9.

The analysis revealed a 108% increase in average basket value in 2023 compared to the previous year. Mirroring the growth of e-commerce sales volume, the average basket value has exhibited accelerating growth since 2020, reaching 492 TL by 2023, an increase of 255 TL.

Graph 9: Average basket size by year<sup>(1)</sup>



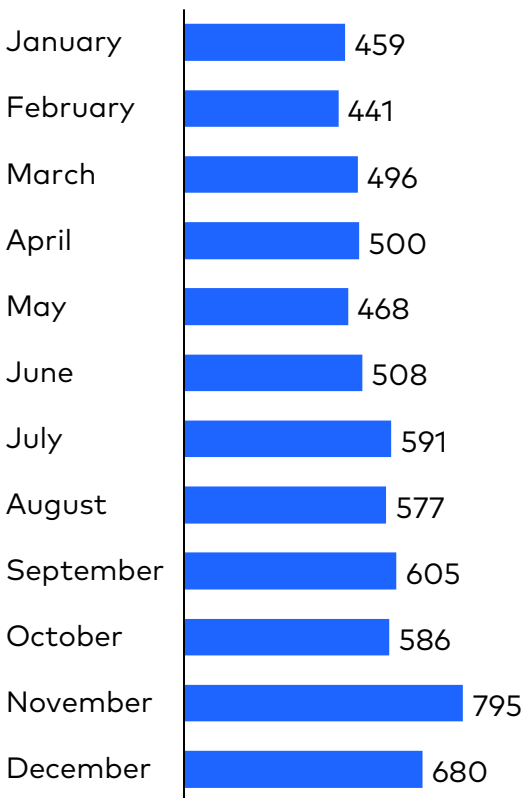
(1) Average sales for e-commerce sellers active during the entire 2020-2023 period

Source: iyziico, Dogma Alares analysis

In addition to this accelerated growth, the month-to-month variations in average basket size further highlighted the diversification of e-commerce dynamics and the evolving nature of customer behavior.

Graph 10: Average basket size by month

TL, 2023



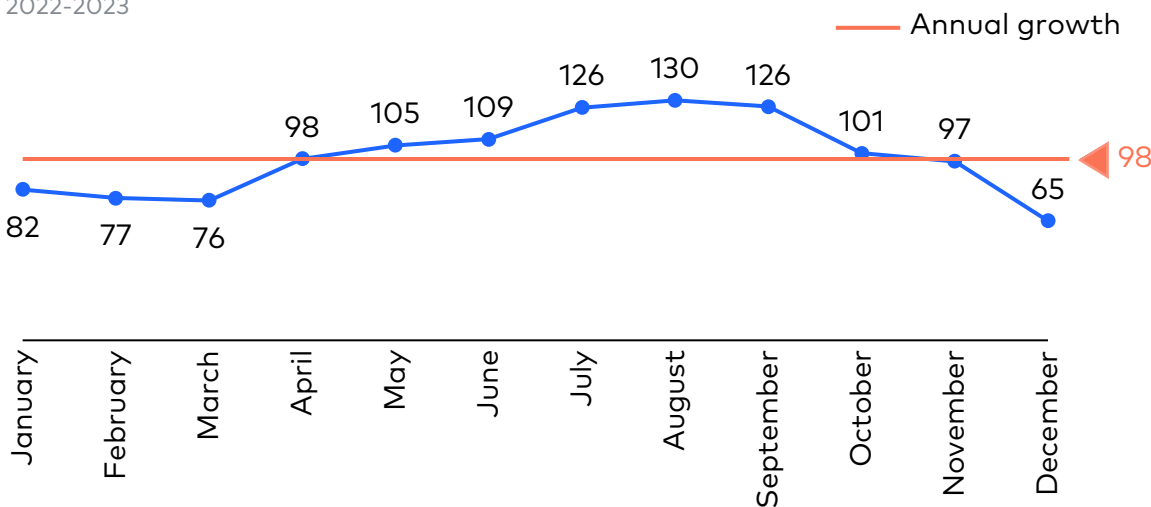
Source: izzico, Dogma Alares analysis

November, with its promotional campaigns and an average basket value of 795 TL, emerged as the top month in terms of average basket value. December, which topped this metric in the previous year, took second place in 2023. Notably, while May and June occupied the last positions in 2022, they were replaced by January and February in 2023.

Graph 11 further highlights this seasonal pattern by examining the month-to-month change in basket size compared to the corresponding month in the previous year. It reveals that the average basket value in the summer months of 2023 experienced a more significant increase compared to the winter months. The increase in the summer months peaked in August, while the decline in the winter months reached to a lowest point in December. According to the comparison in Graph 11, Notably, November, with its promotional campaigns, and December, with its new year preparations, lost their dominance shown in Graph 10. The overall annual change rate in basket size was 98%.

Graph 11: Basket size growth rate compared to the same month of the previous year

%, 2022-2023



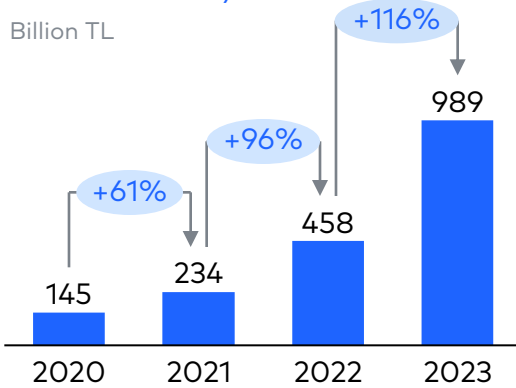
Source: izzico, Dogma Alares analysis

## E-commerce in Türkiye

### Retail e-commerce

Graph 12: Retail e-commerce sales volume in Türkiye

Billion TL



Source: Ministry of Trade

An analysis of retail e-commerce growth in Türkiye shows that the volume of retail e-commerce sales has continued its rapid rise since 2020, reaching 989 billion TL in 2023 with an 116% annual growth. This surge in retail underscores its critical role in supporting the broader e-commerce expansion across the country. Furthermore, the growth rate of retail e-commerce has surpassed that of the overall retail sector, which recorded a 68% increase according to Euromonitor data.



*The digitization of retail trade and the advancement of logistics infrastructure benefit individual consumers by enhancing quality and price competitiveness in products.*

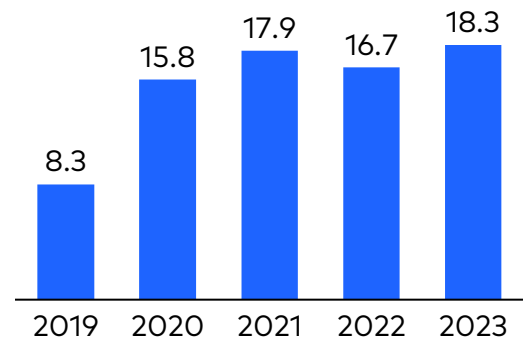


— Emre Ekmekçi



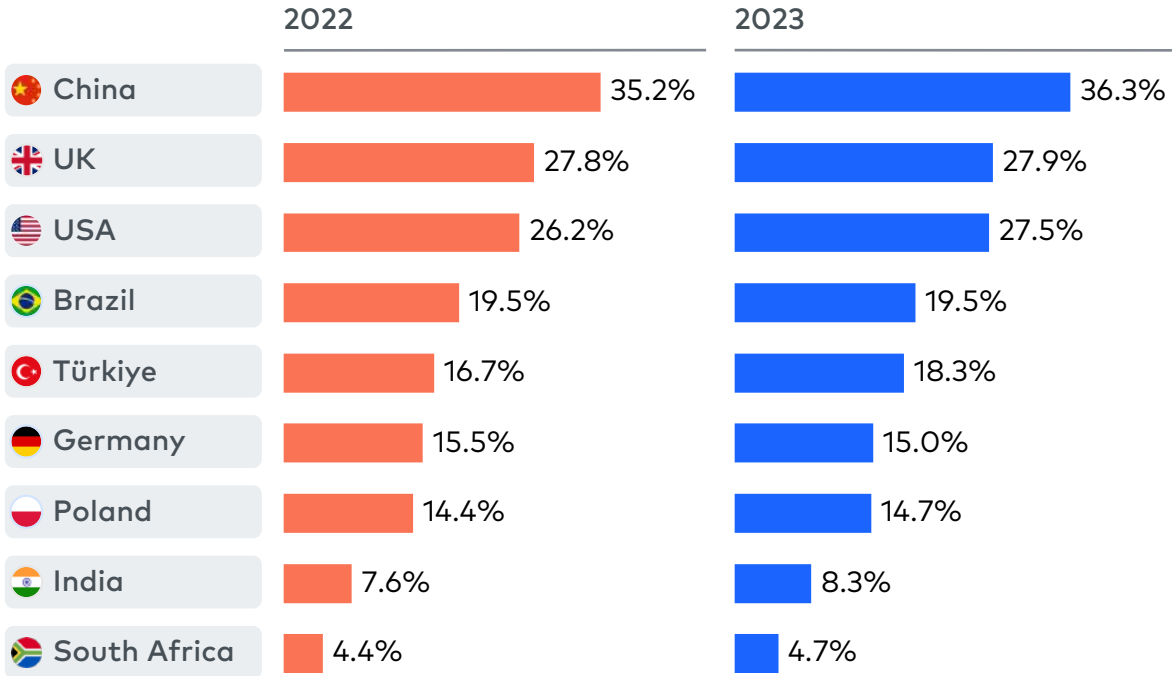
Graph 13: Share of retail e-commerce in total retail in Türkiye

%, 2019-2023



Source: Ministry of Trade, Dogma Alares analysis

While the upward trend in the share of retail e-commerce to total retail experienced a setback in 2022, the significant growth of retail e-commerce observed in 2023 serves as an indication of the continued transformation underway. Although the dramatic surge during the pandemic can be attributed to the abrupt shift in demand, the subsequent slower but relatively stable growth trend can be linked to changes on the supply side. Factors such as shifts in business strategies and the establishment of the necessary logistics infrastructure can be considered as underlying drivers of the retail sector's gradual but steady shift towards e-commerce.

Graph 14: Share of retail e-commerce in total retail in selected countries <sup>(1)</sup>

<sup>(1)</sup> Latest historical data updated by Euromonitor was used

Source: Ministry of Trade, Euromonitor, Dogma Alares analysis

When examining the share of retail e-commerce in total retail, China, which is widely recognized for e-commerce activity, ranked significantly ahead among the sample countries. Türkiye, where approximately 18 TL out of every 100 TL of retail purchases were made online, was positioned in the middle among the sample countries

Graph 6 suggests that Türkiye's e-commerce share of economic activity has not yet reached saturation and continues to hold significant potential. This analysis is corroborated by Graph 14, where examining the point-based growth of countries between 2022 and 2023 reveals a supporting trend for this thesis.

**Between 2022 and 2023, Türkiye increased its share of e-commerce within retail activity by 1.6 percentage points and Türkiye is placed at the top among the sample countries in terms of the change in this ratio.**

*“E-commerce has simplified global trade, opening new opportunities for Turkish exporters. By streamlining complex export processes, e-commerce can significantly boost Türkiye's export potential.”*

— Emre Ekmekçi

## E-commerce in Türkiye

### The contribution of iyzico to the Turkish e-commerce ecosystem

The financial technology company iyzico offers innovative payment solutions and security in shopping experience. iyzico provides quick and easy integration in less than 24 hours for SMEs, enabling corporate and individual sellers to engage in online commerce globally via websites or social media platforms. iyzico's technology facilitates payments in local and foreign currencies, both upfront and in installments, while ensuring a secure shopping experience on e-commerce websites with 24/7 live support.

**Founded in 2013, iyzico serves over 120,000 merchant members across more than 20 sectors. With 6 million digital wallet users and an annual sales volume exceeding 130 billion, iyzico continues its operations as one of Türkiye's leading financial technology companies.**

### Secure and diversified payment options

iyzico meets the needs of both e-commerce businesses and consumers by offering secure and diverse payment solutions. With its PCI-DSS certified infrastructure, iyzico ensures top-level security with every transaction. Supporting a wide range of payment options including credit cards, debit cards, bank transfers, and local payment methods, iyzico enables users to shop using their preferred payment method.

### Quick and easy integration for businesses

iyzico enhances operational efficiency and saves time for e-commerce businesses with its easy and quick integration options. APIs and SDKs tailored for developers enable rapid integration of iyzico's payment systems into e-commerce websites. This capability allows businesses to launch operations in a shorter timeframe.



*At iyzico, we contribute to the secure and rapid growth of e-commerce with our innovative payment solutions. We remain committed to supporting all stakeholders with easy integration, 24/7 support, and top-level security.*



— Orkun Saitoğlu



### ➔ *Innovative and customer-centric products*

iyzico also sets itself apart in the e-commerce ecosystem with innovative products and services. iyzico's Protected Shopping service ensures costumers can shop securely while providing payment guarantees to sellers. This product enhances user satisfaction by creating a secure shopping experience for both buyers and sellers alike.

### ➔ *Expansion in local and global markets*

iyzico not only supports e-commerce businesses in the Turkish market but also provides growth assistance in global markets. By offering solutions that enable local businesses to compete globally, iyzico makes significant contributions to the globalization of the Turkish e-commerce ecosystem.

### ➔ *Economic and social impact*

The 2023 data highlights the economic and social contributions of iyzico to the e-commerce ecosystem. iyzico injects vitality into the economy by providing payment infrastructure to thousands of businesses, supporting digitalization among entrepreneurs and SMEs, and contributing to employment and income growth.



*iyzico adds value to the e-commerce ecosystem with innovative products and services. We contribute to local businesses in Türkiye by providing solutions that help them compete internationally.*



— Orkun Saitoğlu



# E-commerce sectors



## E-commerce Sectors

The thriving e-commerce market offers consumers a vast array of products across diverse sectors. Analyzing the sales figures of these sectors helps paint a clearer picture of e-commerce activities. Preserving the 17 sectors utilized in the previous two years, this analysis delves into the sector-specific landscape of the e-commerce market, taking into account the innovations introduced in 2023.

Table 1: The five sectors with the highest market share in e-commerce<sup>(1)</sup>

2023

|   | Sector                      |                                                                                     | Market share | Transaction share |
|---|-----------------------------|-------------------------------------------------------------------------------------|--------------|-------------------|
| 1 | Fashion and accessories     |    | 24.7%        | 13.5%             |
| 2 | Electronics and technology  |    | 15.0%        | 4.0%              |
| 3 | Cosmetics and personal care |    | 6.6%         | 9.9%              |
| 4 | Tourism and travel          |    | 6.4%         | 6.7%              |
| 5 | Services                    |  | 5.9%         | 16.1%             |

<sup>(1)</sup> Among 17 sectors

Source: izzico, Dogma Alares analysis

In 2023, the top 5 sectors in terms of market share in e-commerce accounted for 58.6% of total sales volume and 50.2% of total transactions. While the top 3 sectors retained their positions from 2022 to 2023, the tourism sector, which was ranked 5th in 2022, surpassed the service sector to rank 4th in 2023. Between 2022 and 2023, the combined market share of these 5 sectors decreased by 5 percentage points, and their total transaction share decreased by 15 percentage points.

Despite maintaining its position as the top e-commerce sector in Türkiye, the fashion industry experienced a decline in both market share and transaction counts. Both metrics dropped by 7 points compared to the previous year.

The electronic sector, in second place, increased its market share by 2 percentage points and its transaction share by 0.6 percentage points. In the cosmetics sector, while the market share remained relatively stable, there was a significant decrease of nearly 12 percentage points in transaction share. A similar situation occurred in the tourism sector, where despite a 0.5 percentage point increase in market share, there was a decline of nearly 2 percentage points in transaction share. The service sector saw a 0.2 percentage point decrease in market share but increased its transaction share by 4.6 percentage points, placing it second in transaction share after the food sector, which holds a 28.0% transaction share.

## E-commerce sectors

“E-commerce is expanding across different industries thanks to improved logistics and growing customer comfort with online shopping.”

— Erdal Güner

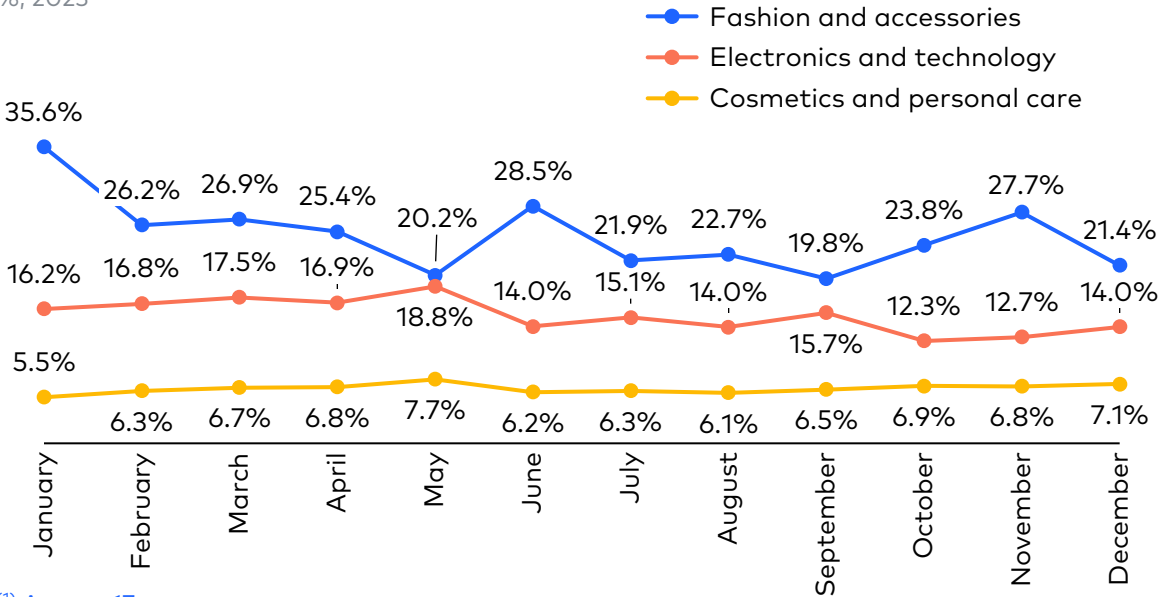


Analysis of the annual change in market share for the top three sectors in 2023 reveals that the fashion sector attained its highest market share in January. The sector also saw market share increases in June and November, likely due to increased demand for clothing during seasonal transitions. Meanwhile, both the electronics and cosmetics sectors reached their highest market share in May.

Among the top 3 sectors, fashion stands out as the most volatile in terms of monthly market share changes, while cosmetics is the most stable sector.

Graph 15: Monthly change in market share of top 3 sectors by sales volume<sup>(1)</sup>

%, 2023



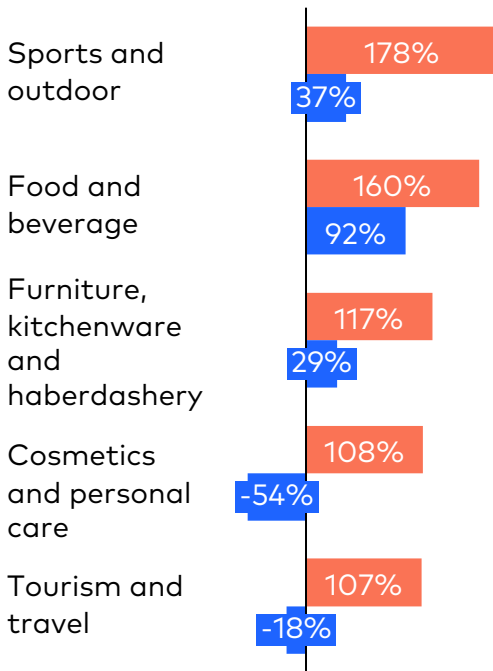
<sup>(1)</sup> Among 17 sectors

Source: iyzico, Dogma Alares analysis

Graph 16: The five sectors that grew the most between 2022-2023<sup>(1)(2)</sup>

%, 2022-2023

Change in the sales volume  
Change in the transaction count



(1) Among 17 sectors

(2) Average sales for e-commerce sellers active during the entire 2020-2023 period

Source: izzico, Dogma Alares analysis

An examination of the sectors with the most significant sales volume growth compared to the previous year revealed substantial changes in the top five rankings. The cosmetics sector, which had skyrocketed to the top spot in 2022 with nearly six times growth, dropped to fourth place in 2023 despite doubling in size. The service, equipment, and electronics sectors, previously holding the second, third, and fifth positions respectively in 2022, failed to maintain their rankings in 2023. In their place, the sports, food, and furniture sectors surged into the top three positions.

“

*Evolving consumer preferences are driving demand for specific products and services. Businesses must adapt to these changes to stay competitive.*

”

— Orkun Saitoğlu

Tourism, on the other hand, fell from fourth to fifth place in 2023. While the sales volume change rates for the top 5 sectors ranged between 250% and 480% in 2022, it is noteworthy that these rates ranged between 107% and 178% in 2023. In 2022, there was market share growth of over 2 times in 12 sectors, while this number decreased to 7 in 2023.

Examining the change in transaction counts showed that the food sector topped the list with a 92% annual growth rate. The sports and service sectors followed the food sector in second and third place, respectively. Graph 16 highlights an interesting trend where, despite gains in sales volume, the cosmetics and tourism sectors experienced declines in transaction counts. Notably, the equipment sector distinguished itself in 2023 by being the only sector to register decreases in both sales volume and transaction counts, at 16% and 40% respectively.



## E-commerce sectors

In the analysis of average basket sizes, the automotive sector maintained its top position from 2022. Meanwhile, the health and electronics sectors, which ranked 2nd and 3rd in 2022, respectively, yielded their places to the furniture and garden sectors. The food sector remained in the last position, as it was in 2022."

As we moved on to 2023, the average basket size increased for all sectors. The overall average rose from 290 TL to 564 TL, nearly doubling. The number of sectors that remained below the overall average, as in 2022, stayed constant at 7 in 2023.

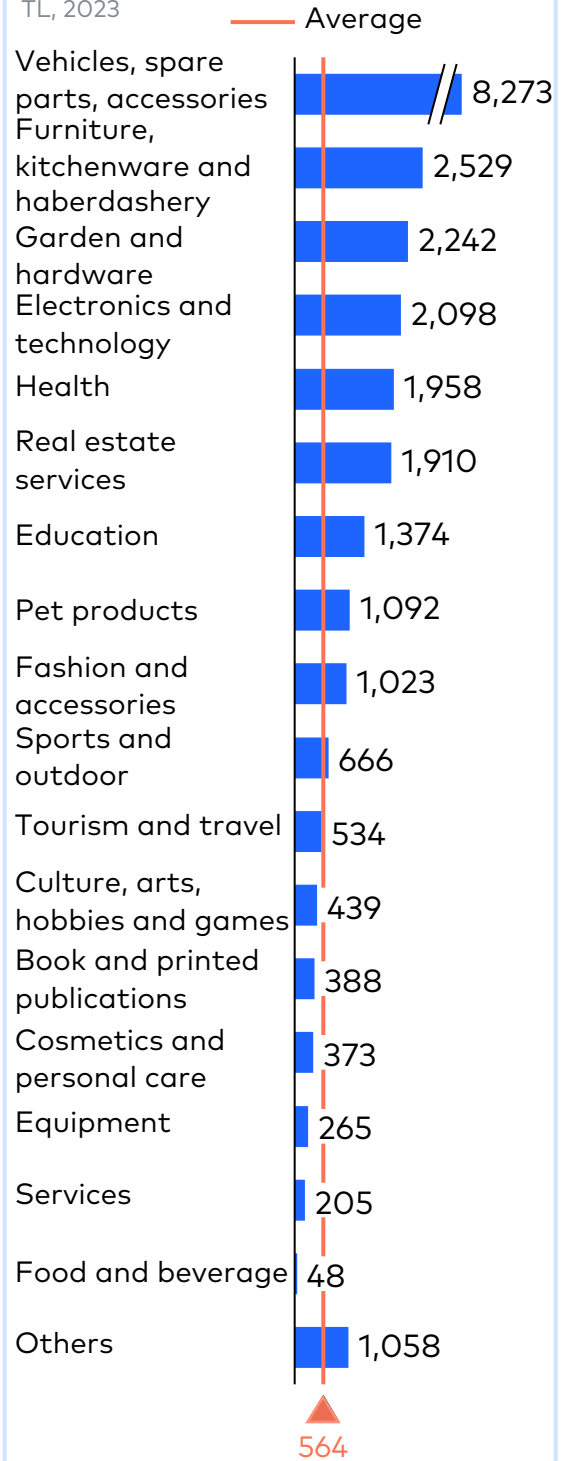


“Online sales in fashion industry has been slowing due to the tactile experience offered by physical stores. Nevertheless, emerging technologies that replicate in-store try-on experiences could revitalize the industry's online presence.”

— Erdal Güner

Graph 17: Average basket size by sector<sup>(1)</sup>

TL, 2023



<sup>(1)</sup> Among 17 sectors

Source: iyzico, Dogma Alares analysis

**In 2023, according to iyzico data, credit cards were the payment method with the highest sales volume across all sectors. When examining the number of transactions, debit cards were the most used payment method in the equipment, tourism, and food sectors. However, in all other sectors, credit cards also maintained their lead in terms of the number of transactions.**

In the automotive sector, the volume of transactions made with credit cards accounted for 95.8% of all transactions in the sector, making it the sector where credit cards were used the most intensively. Debit cards, on the other hand, were predominantly used in the book sector, with a volume share of 25.8%.

Prepaid cards emerged as the preferred payment method for purchases in the culture and arts sector, capturing a 5.1% share of the market. This highlights the unique payment preferences of costumers within specific e-commerce categories in Türkiye.

When examining the distribution of payment methods within sectors in terms of the number of transactions, it was observed that credit card transactions were concentrated in the furniture sector at a rate of 82.4%. Debit card transactions, on the other hand, made up the majority of transactions in the food sector with a transaction share of 59.6%. The culture and arts sector ranked first in terms of the share of prepaid card transactions, with a rate of 15.1%.

Insights regarding payment methods were thoroughly examined in the payment methods section of the report.

# E-commerce sellers



## E-commerce sellers

To gain a comprehensive understanding of Türkiye's e-commerce supply side, a multifaceted analysis of e-commerce sellers was conducted. The study includes geographical distribution by city and region, sectoral analysis, and a revenue-based categorization of sellers.

Graph 18: Distribution of e-commerce sellers by city<sup>(1)</sup>

2023

| Rank | City     | Seller ratio |
|------|----------|--------------|
| 1    | Istanbul | 52.9%        |
| 2    | Ankara   | 8.2%         |
| 3    | Izmir    | 6.6%         |
| 4    | Bursa    | 4.2%         |
| 5    | Antalya  | 2.8%         |
| 6    | Kocaeli  | 1.8%         |
| 7    | Denizli  | 1.5%         |
| 8    | Konya    | 1.4%         |
| 9    | Adana    | 1.3%         |
| 10   | Mugla    | 1.3%         |

(1) Based on iyzico's activity in 81 cities in Türkiye

Source: iyzico, Dogma Alares analysis

Data from Graphic 18 reveals Istanbul's preeminence in the e-commerce seller landscape, with over half of all businesses located there. Istanbul's preeminence in e-commerce extends to both sales volume and transaction count. Notably, it captures 90% of the national e-commerce sales volume and 77% of all transactions, solidifying its position as the leader by a significant margin.

Istanbul's dominance is followed by Ankara and Izmir, which hold second and third place with seller shares of 8.2% and 6.6%, respectively. Over 70% of Turkish e-commerce sellers are concentrated in the top four cities. Notably, the ranking of the top ten cities by seller count remained remarkably stable between 2022 and 2023, with minimal fluctuation in their respective shares.

“

*The concentration of e-commerce sellers in the cities of western Türkiye highlights the importance of logistical infrastructure for e-commerce.*

”

— Erdal Güner

Analysis by geographical region reveals that the Marmara Region ranked first with 62.8% of the sellers, while the Eastern Anatolia Region ranked last with a seller ratio of 1.2%. Marmara was followed by Central Anatolia with 12.6% and the Aegean with 11.4%.



## E-commerce sellers

The Marmara region maintained its leadership in the analysis by sales volume with a rate of 93.0%. Notably, the Aegean region surpassed Central Anatolia in the sales volume rankings, rising to second place with a 3.1% rate. Central Anatolia followed closely behind with a 2.4% share.

The top three regions from the sales volume analysis maintain their ranking in transaction count. Marmara captures the largest share with 80.8%, followed by the Aegean region at 12.8% and Central Anatolia at 5.0%. The growing difference between the sales volume and transaction shares of Central Anatolia and the Aegean regions is reflected in their average basket values. The average basket value in Central Anatolia is approximately twice that observed in the Aegean region.

**A combined analysis of all metrics reveals a significant concentration of e-commerce activity in the Marmara region, followed by the Aegean and Central Anatolia regions.**

An analysis of prominent cities within regions revealed no significant changes in seller distribution between 2022 and 2023. The leading cities in each region maintained their positions. In the Marmara region, Istanbul had 84.3% seller share in 2023, while in the Eastern Anatolia region, Malatya held a 20.7% seller share.

Table 2: Cities with the highest number of sellers by geographic regions<sup>(1)</sup>

%, 2023

|                       | City      | Seller share | Sales volume share |
|-----------------------|-----------|--------------|--------------------|
| Marmara               | Istanbul  | 84.3%        | 96.9%              |
| Central Anatolia      | Ankara    | 65.0%        | 75.0%              |
| Aegean                | Izmir     | 57.5%        | 63.5%              |
| Mediterranean         | Antalya   | 43.8%        | 40.5%              |
| Southeastern Anatolia | Gaziantep | 43.0%        | 30.1%              |
| Black Sea             | Samsun    | 25.3%        | 31.6%              |
| Eastern Anatolia      | Malatya   | 20.7%        | 4.1%               |

<sup>(1)</sup> Based on iyzico's activity in 81 cities in Türkiye

Source: iyzico, Dogma Alares analysis

**Table 2 reveals a declining concentration of sellers as we move down the ranking of geographical regions.**

In all regions excluding the Mediterranean and Eastern Anatolia, the city with the highest number of sellers also has the highest sales volume. In the Mediterranean region, Antalya boasted the highest number of sellers, while Adana captured the leading sales volume share (41.6%). Eastern Anatolia presented a similar anomaly. Despite holding the top regional seller share, Malatya was surpassed by Iğdır in sales volume, which captured a notable 33.2% rate in sales volume.

The decline in seller share observed across regions in Table 2 is mirrored in the sales volume data. This trend highlighted a decrease in the concentration of e-commerce activity towards a single city as one moves down Table 2 within the respective geographic regions.

Malatya, the leading province in Eastern Anatolia, witnessed a decline in its regional dominance between 2022 and 2023. This is evidenced by a 6-point decrease in seller share and a 5-point drop in transaction share. In contrast, Samsun saw a 2-point increase in regional seller share and a significant 6-point increase in regional sales volume share. Other cities did not show significant changes in their regional shares, maintaining overall stability between 2022 and 2023.

**Table 3: Top-performing sectors in the ten cities with the highest e-commerce seller amount<sup>(1)</sup>**

2023

| Rank | City     | Sector with the highest sales volume    | Sector's volume share in the city |
|------|----------|-----------------------------------------|-----------------------------------|
| 1    | Istanbul | Fashion and accessories                 | 24.9%                             |
| 2    | Ankara   | Fashion and accessories                 | 24.9%                             |
| 3    | Izmir    | Furniture, kitchenware and haberdashery | 37.2%                             |
| 4    | Bursa    | Services                                | 46.0%                             |
| 5    | Antalya  | Tourism and travel                      | 18.9%                             |
| 6    | Kocaeli  | Cosmetics and personal care             | 27.1%                             |
| 7    | Denizli  | Fashion and accessories                 | 41.6%                             |
| 8    | Konya    | Fashion and accessories                 | 49.8%                             |
| 9    | Adana    | Fashion and accessories                 | 38.1%                             |
| 10   | Mugla    | Fashion and accessories                 | 26.1%                             |

(1) Based on iyzico's activity in 81 cities in Türkiye

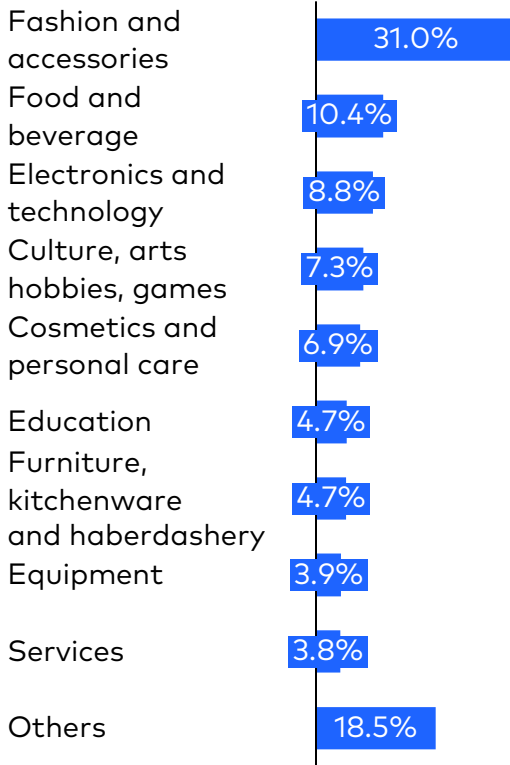
Source: iyzico, Dogma Alares analysis

## E-commerce sellers

An examination of sectoral activities within the top 10 cities by seller share reveals the fashion sector as a leader, dominating the e-commerce landscape in six of these key markets. Furniture, services, tourism, and cosmetics sectors are prominent in each of the remaining cities. Istanbul, Antalya, Kocaeli, and Muğla stand out for their diversified e-commerce landscapes. These cities exhibit a balanced e-commerce landscape, with no single sector exceeding 30% share. Additionally, the gap between the leading and second-ranking sectors remains narrow, at less than 3 percentage points. In contrast, other cities show clear sectoral dominance, with the second sector trailing the leader by at least 13 percentage points.

Graph 19: Sector distribution of e-commerce sellers

%, 2023



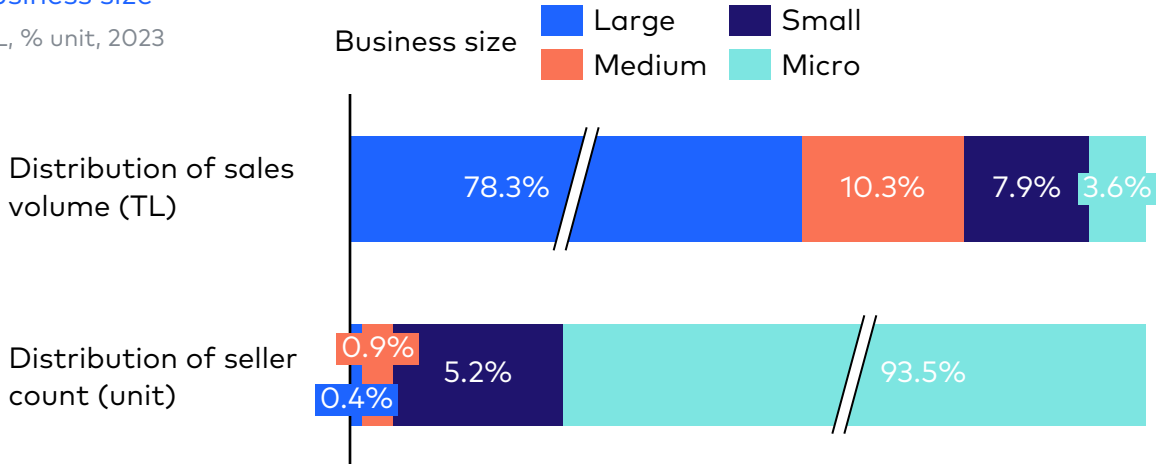
Source: izzico, Dogma Alares analysis



To explore the sectors in which e-commerce sellers operate, an analysis based on seller count was conducted. Among the top 10 sectors with the highest share of sellers, it was observed that the sectors remained the same between 2022 and 2023, but their rankings changed. The fashion sector increased its share by 3.0 percentage points, maintaining its first place with a share of 31.0% in 2022. The electronics sector, which was in second place in 2022, dropped 2.9 points in seller share in 2023, allowing the food sector to take its place. The service sector maintained its 10th place with a decrease of 0.2 percentage points. The sectors that saw an increase in the list were fashion, food, and education, while the remaining sectors showed a decrease in terms of seller shares.

Graph 20: Distribution of e-commerce sellers' sales volumes and numbers by business size<sup>(1)</sup>

TL, % unit, 2023



- <sup>(1)</sup> Micro-scale business: Those with annual revenue below 10 million TL  
 Small-scale business: Those with annual revenue between 10-100 million TL  
 Medium-scale business: Those with annual revenue between 100-500 million TL  
 Large-scale business: Those with annual revenue exceeding 500 million TL

Source: iyzico, Dogma Alares analysis

An examination of Graph 20, which depicts seller distribution by annual revenue, reveals remarkable continuity between 2022 and 2023.

“Large e-commerce players often dominate the market due to economies of scale. This dynamic highlights the challenges faced by smaller sellers. However, marketplaces can level the playing field by offering services and tools that help these smaller businesses compete.”

— Erdal Güner

A clear trend emerges as business scale decreases: the seller share increases, while the sales volume share exhibits a decline. Despite representing a staggering 93.5% of all e-commerce sellers in 2023, the micro-business segment contributed only 3.6% to the total sales volume. On the other hand, large-scale businesses, comprising only 0.4% of the sellers, accounted for 78.3% of the total sales volume.



## E-commerce sellers

Table 4: Sales volume changes in e-commerce sellers by business size<sup>(1)</sup>

%, 2022-2023

| Business size | Change |
|---------------|--------|
| Large         | 101.4% |
| Medium        | 51.3%  |
| Small         | 65.7%  |
| Micro         | 39.8%  |

(1) Average sales for e-commerce sellers active during the entire 2020-2023 period

Source: izico, Dogma Alares analysis

An analysis of sales volume changes by business size reveals a positive trend across all categories in 2023. Notably, large-scale businesses continued to exhibit exceptional growth, exceeding 100% once again.

While all business segments experienced sales volume growth in 2023, a deceleration in growth momentum was observed among seller categories excluding micro-businesses. In contrast to the slowdown observed in other segments, micro-businesses displayed a surge in sales volume growth, 15.6% in 2022 to a 39.8% in 2023. The previously observed correlation between business size and sales volume growth in 2022 underwent a significant shift in 2023.



Small businesses defied the trend by exceeding the sales volume growth rate of medium-sized businesses.

“E-commerce has provided a platform for small businesses to expand their reach and increase sales. By offering diverse payment options, e-commerce platforms have empowered these businesses to thrive in the digital marketplace.”

— Orkun Saitoğlu



## E-commerce sellers

Interestingly, large businesses were the only segment to exhibit continuity in sectoral ranking distribution between 2022 and 2023.

The tourism sector made a remarkable debut in 2023, securing the second-place position within the medium-sized business category. This marks a significant ascent, as the sector was entirely absent from the top rankings in 2022.

In 2023, the fashion sector maintained its leadership in terms of sales volume in medium and large businesses, but dropped to third place in micro and small businesses. The electronics sector, which was in second place in each segment in 2022, rose to first place in small businesses while falling to third place in medium-sized businesses. A noteworthy development in 2023 was the service sector's emergence as the leader in sales volume within the micro-business segment.

“In Türkiye, where the majority of businesses are small-scale sole proprietorships, marketplaces play a vital role in leveling the playing field. By providing access to a wider customer base and essential tools, marketplaces support these businesses to compete more effectively in the e-commerce landscape.”

— Emre Ekmekçi

Table 5: Top 3 sectors by sales volume in each business size category<sup>(1)</sup>

2023

|   | Micro                                                                                                          | Small                                                                                                          | Medium                                                                                                          | Large                                                                                                             |
|---|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 1 | Services                    | Electronics and technology  | Fashion and accessories     | Fashion and accessories      |
| 2 | Electronics and technology  | Services                    | Tourism and travel          | Electronics and technology   |
| 3 | Fashion and accessories     | Fashion and accessories     | Electronics and technology  | Cosmetics and personal care  |

(1) Among 17 sectors

Source: iyzico, Dogma Alares analysis

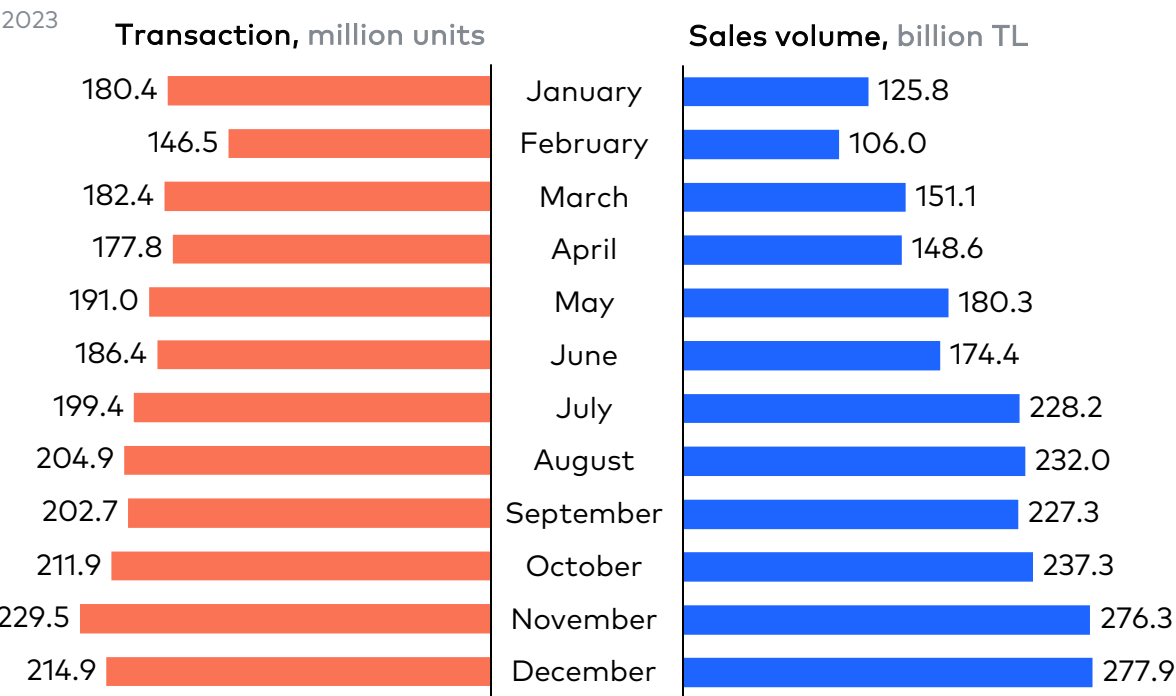
# E-commerce customers



## E-commerce customers

The evolving e-commerce landscape is significantly influenced by customer behavior. To accurately assess the current market and predict future trends, a comprehensive understanding of customer demographics, preferences, and online activities is essential.

Graph 21: Distribution of online card payments in Türkiye by month<sup>(1)</sup>



<sup>(1)</sup> Domestic transactions made with domestic and foreign cards

Source: BKM, Dogma Alares analysis

Graph 21 indicates that average monthly sales volume exceeded the overall average during the autumn months. Sales volume and transaction counts peaked in November and reached their lowest points in February. These fluctuations align with the promotional activities characteristic of November and the impact of the devastating earthquake centered in Kahramanmaraş in February. Online card payments exhibited an upward trajectory in both volume and transaction count throughout the year, culminating in peak levels towards year-end.

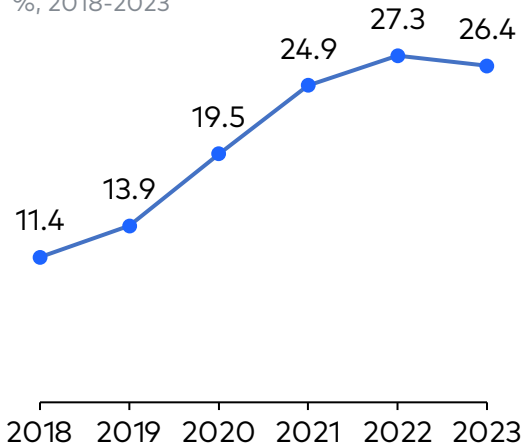
Online card payments have witnessed substantial growth. In 2018, they accounted for 1 out of every 10 card payments, whereas by 2023, they constituted 1 out of every 4 card payments. The proportion of online card payments has increased 2.3 times over the past 5 years, with the largest annual increase of 40% occurring in 2020.

On an annual basis, the share of online card payments in total card payments reached 26.4% in 2023, showing a slight decrease. However, as seen in Graph 23, the number of online payments per card continued to increase in 2023.

## E-commerce customers

Graph 22: Share of online card payments in total card payments in Türkiye<sup>(1)</sup>

%, 2018-2023

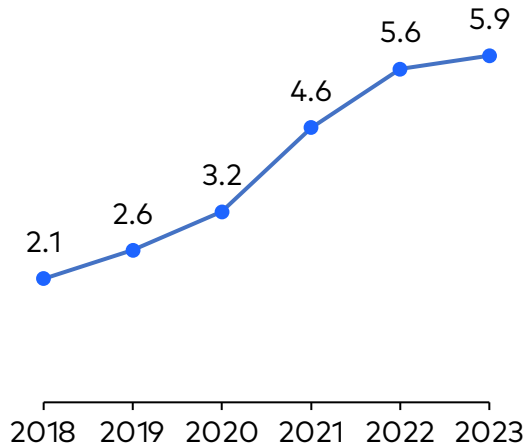


<sup>(1)</sup> Amount of domestic transactions made with domestic and foreign cards are considered

Kaynak: BKM, Dogma Alares analizi

Graph 23: Number of online card payments per card in Türkiye<sup>(1)</sup>

%, 2018-2023



<sup>(1)</sup> Amount of domestic transactions made with domestic and foreign cards are considered

Source: BKM, Dogma Alares analysis

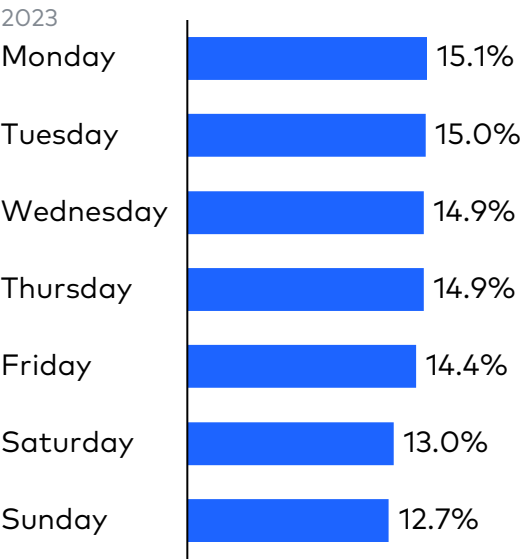
Graph 23 reveals a consistent upward trajectory in the number of online transactions per card over the past five years, with a nearly threefold increase to a level of 5.9. The increasing frequency of online transactions per card signifies a growing consumer preference for online shopping. The momentum of increase was higher during the pandemic years of 2020 and 2021, but it slowed down after 2021.

Following an analysis of stakeholder attitudes toward online payments in Türkiye, the behavioral patterns of e-commerce participants across specific time periods was examined.

E-commerce transactions demonstrate a consistent distribution throughout the week, with a notable decline towards the weekend.

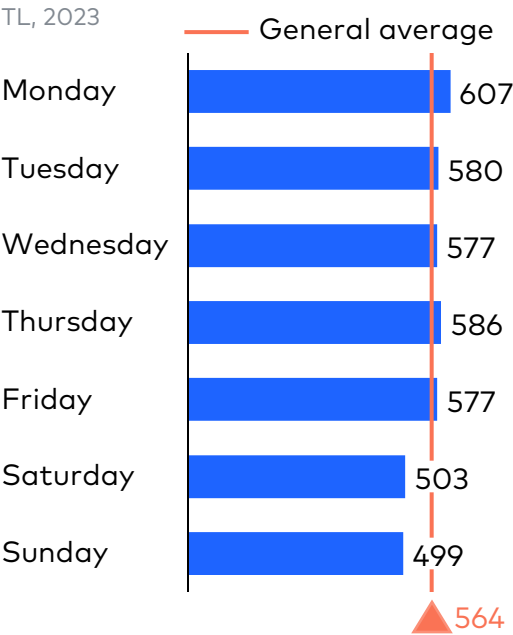


Graph 24: Distribution of transaction counts by day of the week



Source: izzico, Dogma Alares analysis

Graph 25: Average basket size by day of the week



Source: izzico, Dogma Alares analysis

E-commerce customer activity declined by approximately 1-1.5% below the average on Saturdays and Sundays. The observed decline in e-commerce activity on weekends may be attributed to increased social engagement during these periods.

In addition to transaction counts, the observed decline in average basket size over the weekend further supports the hypothesis that Turkish households exhibit reduced e-commerce activity during these days.

Monday emerged as the most active day for e-commerce, registering the highest transaction amount and an average basket size of 607 TL. Similar to transaction patterns, average basket size remained relatively consistent throughout the week. However, Saturday and Sunday registered lower values at 503 TL and 499 TL, respectively, compared to the weekly average of 564 TL.

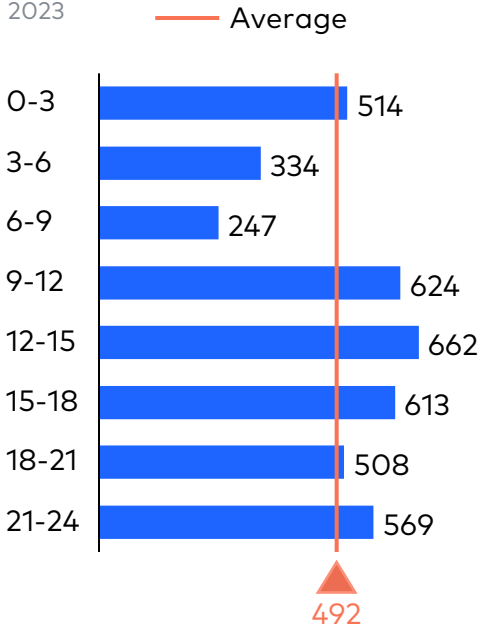
When narrowing down to hourly distribution and examining the distribution of basket sizes, the highest average basket size, 662 TL, was observed between 12:00 and 15:00 hours.



## E-commerce customers

Graph 26: Distribution of average basket size by hours

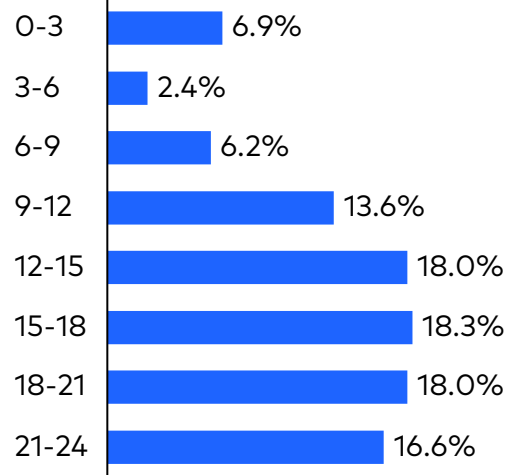
TL, 2023



Source: izzico, Dogma Alares analysis

Graph 27: Distribution of transaction amounts by hours

2023



Source: izzico, Dogma Alares analysis

A notable increase in average basket size was observed between 09:00 and 12:00, registering a value of 624 TL. This represents a substantial 150% increase compared to the preceding three-hour period. Conversely, average basket sizes during the early morning hours (03:00-09:00) fell below the overall average.

An analysis of hourly transaction amount indicates that the midday period (12:00-15:00) represents the peak shopping activity.

In both 2022 and 2023, transaction counts exhibited a consistent distribution throughout the midday and evening periods. Conversely, activity levels during the overnight and early morning hours were considerably lower.

Transaction intensity reached its peak between 15:00 and 18:00, subsequently declining to the lowest level between 03:00 and 06:00 before gradually increasing. Notably, over 70% of transactions were concentrated within the 12-hour period between 12:00 and 00:00.

“Businesses that tailor their sales strategies to evolving customer habits are more likely to increase their market share. Particularly, marketing capabilities that can adapt to specific times and demographics will yield long-term benefits.”

— Emre Ekmekçi

Having analyzed customer preferences on a weekly and daily basis, the following analysis examines e-commerce activity during special periods.

The prominent shopping events of 2023 largely mirrored those of the previous year. Consistent with 2022 trends, Black Friday emerged as the peak period for online shopping activity. Compared to the previous year, special periods other than Black Friday and Back to School exhibited declines in sales volume, transaction count, and average basket value relative to overall annual averages. The "Back to School" period demonstrated performance metrics closely aligned with annual averages in terms of transaction count, sales volume, and average basket value, distinguishing it from other promotional periods. The subsequent analysis focuses on the nominal value of average basket size during these special periods.



Table 6: Shopping data on selected special days

2023

| Period            | Dates          | Difference from the average <sup>(1)</sup> |                   |                  |
|-------------------|----------------|--------------------------------------------|-------------------|------------------|
|                   |                | Sales volume (TL)                          | Transaction count | Basket size (TL) |
| Back to School    | 1-11 September | 1.12x                                      | 1.03x             | 1.08x            |
| Singles' Day      | 11 November    | 1.47x                                      | 0.98x             | 1.51x            |
| Black Friday      | 20-24 November | 2.41x                                      | 1.41x             | 1.71x            |
| Cyber Monday      | 27-29 November | 1.46x                                      | 1.08x             | 1.35x            |
| Before New Year's | 19-31 December | 1.31x                                      | 1.01x             | 1.30x            |

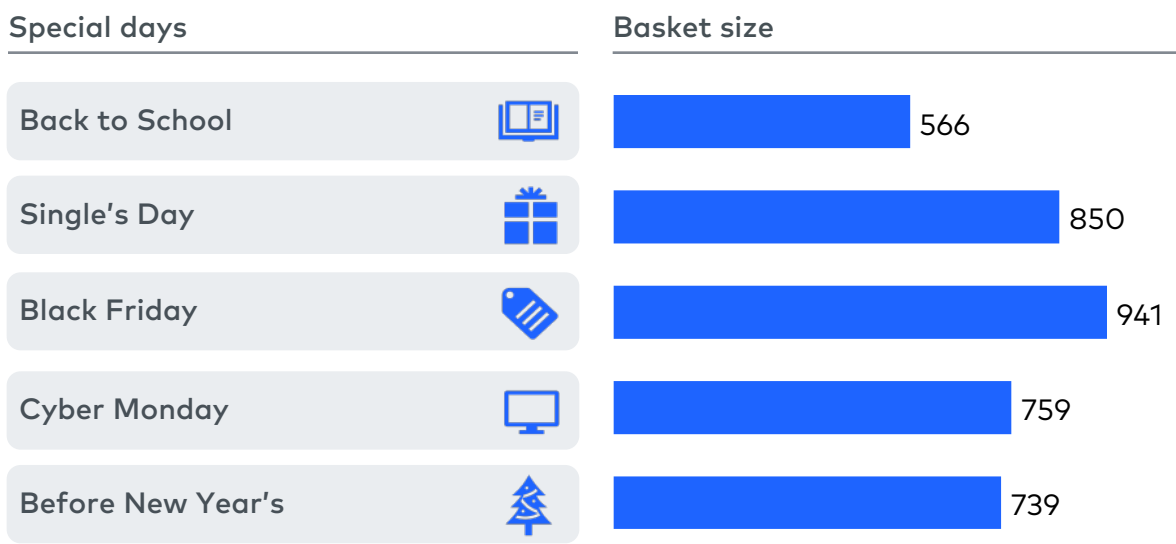
(1) Comparison is made based on the daily average of the relevant value throughout 2023

Source: izzico, Dogma Alares analysis

E-commerce customers

Graph 28: Average basket size on selected special days

TL, 2023



Source: İyzico, Dogma Alares analysis

The "Black Friday" week exhibited the highest average basket value at 941 TL, followed by "Single's Day" at 850 TL. The "Back to School" week registered the lowest average basket value among the special periods at 566 TL, attributed to the relatively lower cost of associated stationery products. The Cyber Monday and New Year periods, occurring in close proximity, recorded average basket sizes of 759 TL and 739 TL, respectively.

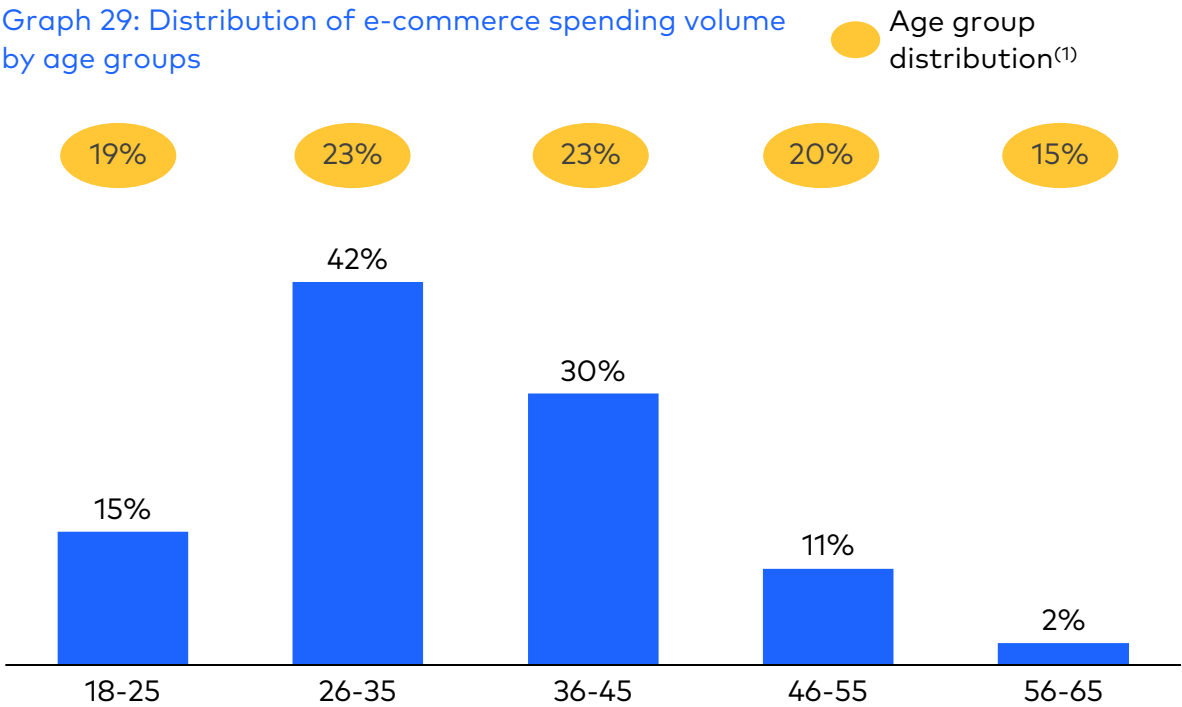
To gain a deeper understanding of e-commerce consumer behavior, customers were segmented by age group for analysis.

“E-commerce platforms can effectively influence consumer choices through strategic campaigns and promotions. This level of impact surpasses traditional retail methods, highlighting the importance of well-crafted sales strategies in the digital marketplace.”

Erdal Güner



Graph 29: Distribution of e-commerce spending volume by age groups



(1) Population aged between 18-65 in Türkiye has been included

Source: Ticaret Bakanlığı, Dogma Alares analysis

The demographic analysis indicates that the 26-35 age bracket accounts for 42% of Türkiye's total e-commerce spending among consumers aged 18-65. E-shopping habits decreased with increasing age, dropping to 2% in the 56-65 age group.

Excluding the potentially economically dependent 18-25 age group, the data indicates a consistent growth in e-commerce demand among new generations in Türkiye, presenting substantial opportunities for e-commerce stakeholders. Despite the inherent convenience of e-commerce, its underutilization among older demographics may be attributed to limited technological penetration within this consumer segment.



*Promotions offered during special occasions effectively capture customer attention and drive demand for e-commerce. Offering a variety of payment options during these times is essential to meeting customer needs and improving the overall shopping experience.*



Orkun Saitoğlu

# Payment methods



## Payment methods

Payment methods constitute a critical component of e-commerce strategy development. By examining payment trends and preferences, stakeholders can gain valuable insights to inform decision-making across the ecosystem.

Alternative payment methods, including cryptocurrencies, prepaid cards, and BNPL, accounted for 63% of global e-commerce transactions in 2023. China solidified its position as a global leader in alternative payment methods, with adoption rates reaching 89%, a two-point increase from the preceding year.

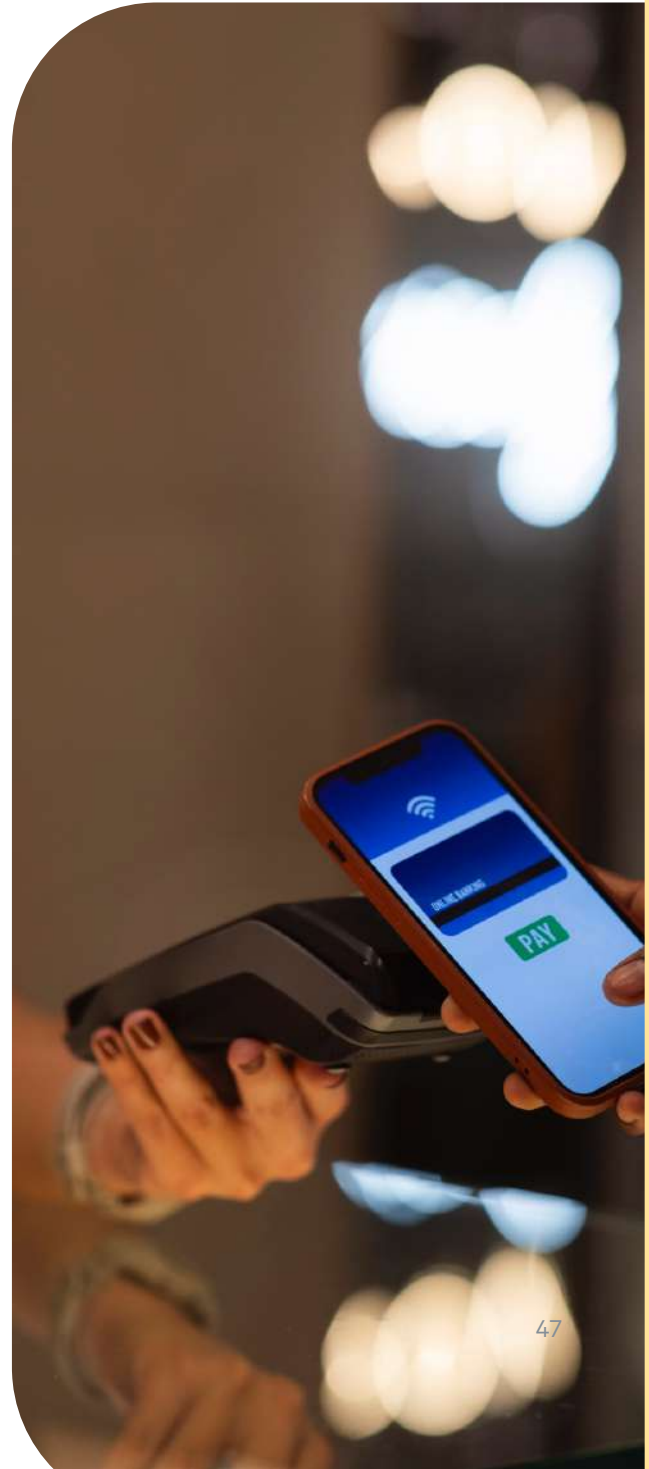
Türkiye's alternative payment adoption rate remains below the global average but increased by 4 points year-over-year. Türkiye's growth in alternative payment adoption contrasts with the global decline of 3 points, indicating increasing market potential.

Türkiye, with a traditional payment usage rate nearly double the global average, is rapidly advancing its digital finance and payment infrastructure. These developments are anticipated to significantly transform Türkiye's digital payment ecosystem, enhancing the overall e-commerce experience through improved security, efficiency, and user-friendliness.

These developments are positioned to enhance Türkiye's competitive standing within both domestic and global marketplaces.

“The synergy between e-commerce growth and payment system innovation is accelerating the industry's expansion, both globally and in Türkiye.”

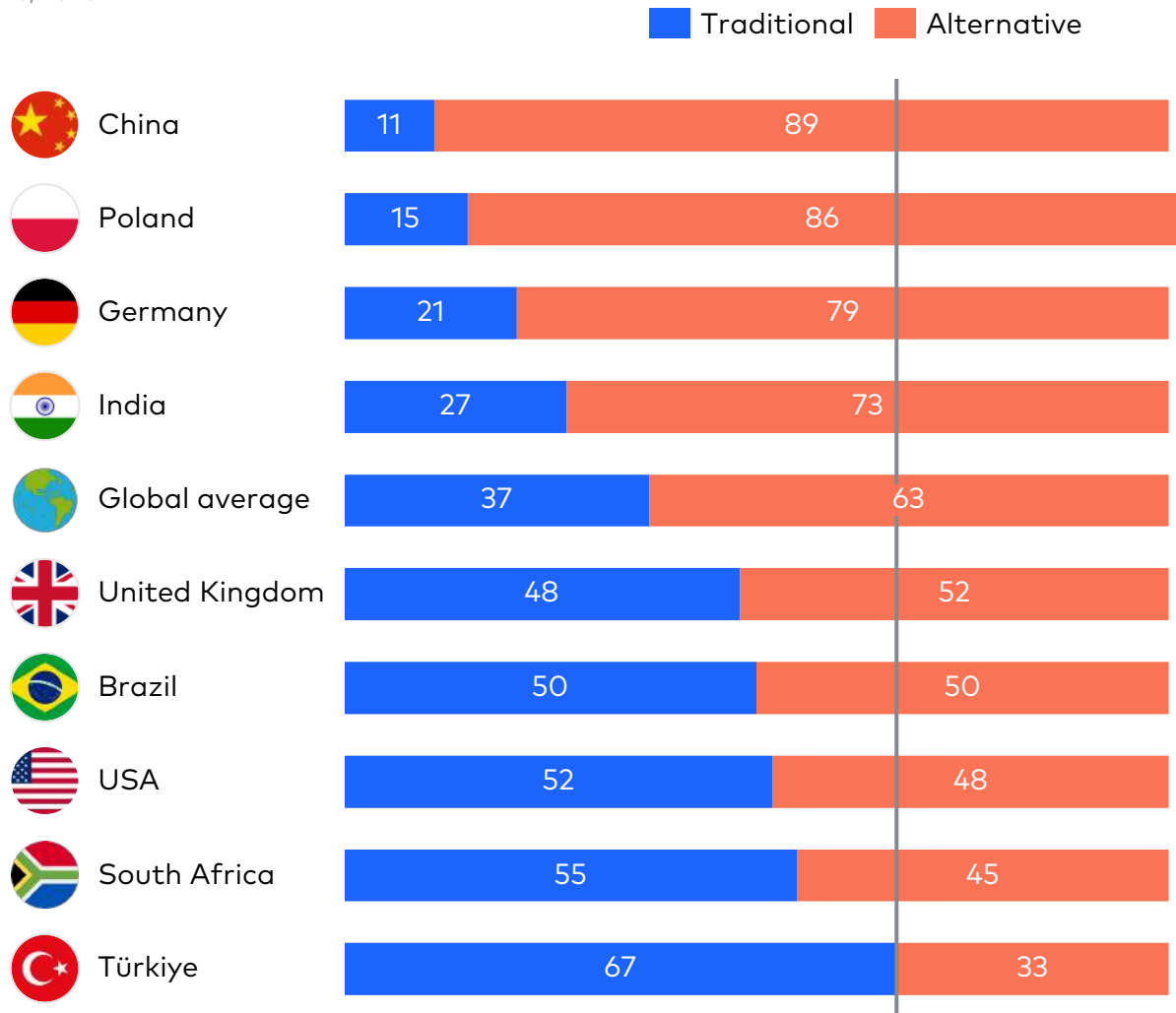
— Orkun Saitoğlu



## Payment methods

Graph 30: Preference rates for traditional<sup>(1)</sup> and alternative<sup>(2)</sup> payment methods in e-commerce across selected countries

%, 2023



(1) Credit cards, debit cards, and cash on delivery

(2) Cryptocurrencies, prepaid cards, BNPL, A2A payments, digital wallet payments, PrePay, and PostPay

Source: Worldpay, Dogma Alares analysis

An analysis of e-commerce transactions through izyico, as depicted in Graph 31, reveals that credit cards constitute the dominant payment method, accounting for 50% of transactions and 65% of sales revenue. Compared to the previous year, credit card payments saw a 12-point increase in sales volume,

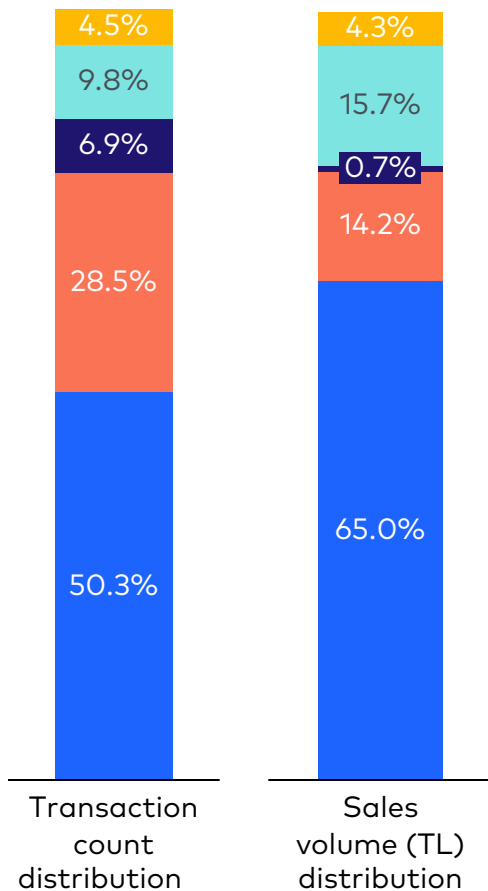
gaining this share from declines in bank transfers, EFT, and other methods. Debit cards, the second most popular payment method after credit cards, experienced a slight decline of approximately 1 percentage point in both transaction count and sales volume.

Prepaid card transactions increased in frequency, although their overall contribution to sales remained stable. Bank transfers, EFTs, and other payment methods saw a sales volume decline, but transaction counts increased, indicating smaller transaction values.

**Graph 31: Distribution of payment methods used in e-commerce in terms of transaction count and sales volume<sup>(1)</sup>**

2023

■ Credit card    ■ Pay with iyzico  
■ Debit card    ■ Other<sup>(2)</sup>  
■ Prepaid card

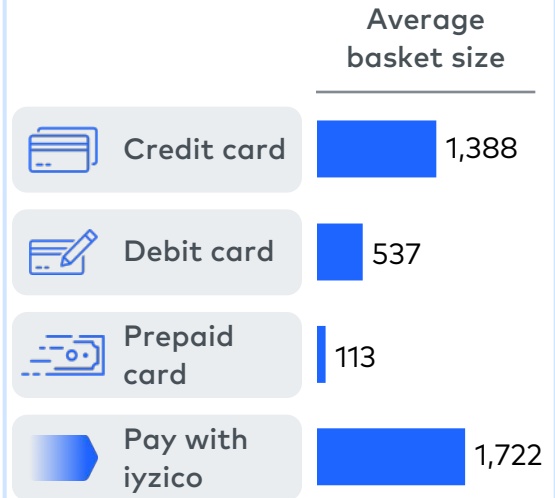


- (1) Among e-commerce sellers using the Pay with iyzico method  
 (2) Wire transfer, EFT and other alternative payment methods

Source: iyzico, Dogma Alares analysis

**Graph 32: Average basket size by payment method**

TL, 2023



Source: iyzico, Dogma Alares analysis

“When comparing the share of alternative payment methods across countries, it becomes clear that Türkiye has significant potential. iyzico, with its advanced infrastructure and innovative solutions, is actively supporting the rising trend of alternative payments in Türkiye.”

— Orkun Saitoğlu

The "Pay with iyzico" method exhibited a stable transaction count share while increasing its sales volume share by 0.6 points. Consequently, 1 in every 10 transactions and 15 TL of every 100 TL in sales were made using the "Pay with iyzico" option. The "Pay with iyzico" method demonstrates a higher average transaction value compared to other payment methods, as its sales volume share is 50% greater than its transaction count share.

## Payment methods

The "Pay with izyico" method exhibited a substantial 110% year-over-year increase in average basket size, significantly outperforming other payment methods. This indicates a preference for "Pay with izyico" for high-value e-commerce transactions. The primary driver of this increase is izyico's protected shopping method, which has gained significant traction among costumers making substantial purchases.

Prepaid card purchases demonstrated a 40% increase in average basket size, which lags behind the general 108% annual basket size growth. Meanwhile, the most common payment method, credit cards, experienced a 2.5-fold increase in average basket size.

Across all business sizes in Türkiye's e-commerce landscape, credit cards remain the primary payment method, followed closely by debit cards.



“ The growing adoption of modern payment methods, facilitated by advancements in financial technologies, stands as a key driver of e-commerce growth in Türkiye. ”

— Erdal Güner

Table 7: Preference rates for payment methods by business size<sup>(1)</sup>

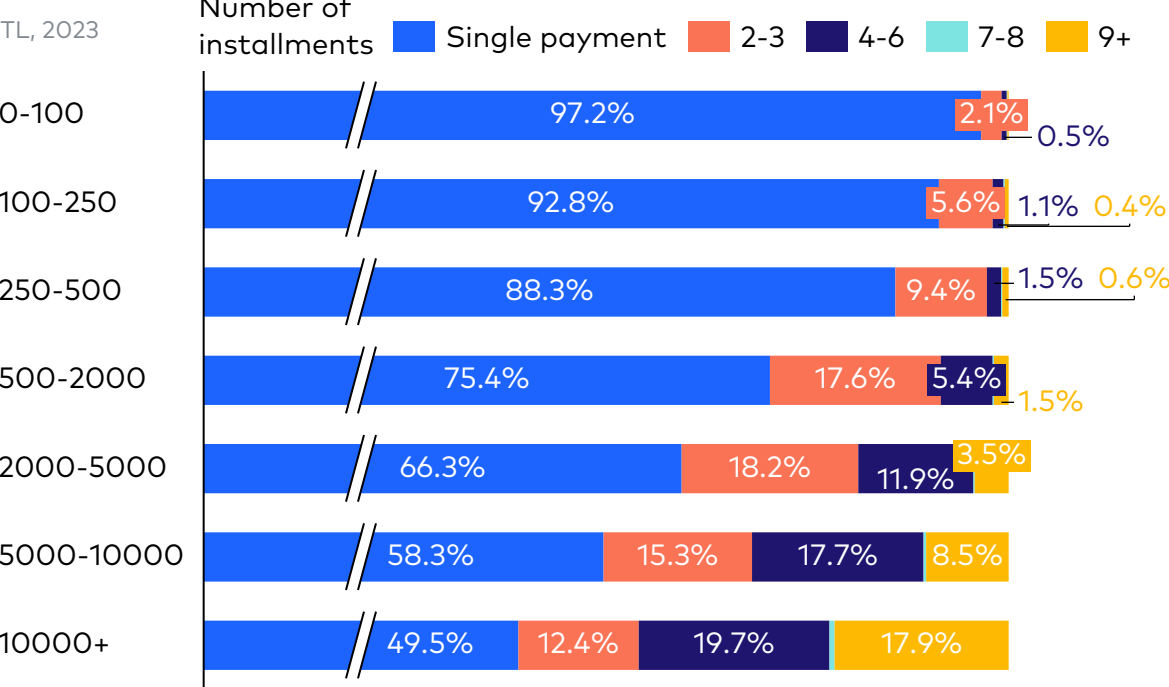
2023

|                                                                                                     | Large | Medium | Small | Micro |
|-----------------------------------------------------------------------------------------------------|-------|--------|-------|-------|
|  Credit card     | 65.1% | 57.1%  | 44.5% | 36.6% |
|  Debit card      | 34.5% | 29.8%  | 27.0% | 24.9% |
|  Prepaid card    | 0.0%  | 4.6%   | 14.2% | 13.9% |
|  Pay with izyico | 0.4%  | 8.6%   | 14.3% | 24.6% |

(1) Among e-commerce sellers using the Pay with izyico method

Source: izyico, Dogma Alares analysis

Graph 33: Distribution of total transactions by basket size and number of installments



Source: iyzico, Dogma Alares analysis

However, the prevalence of credit and debit card usage tends to decrease as business size diminishes. In contrast, payment methods such as Pay with iyzico and prepaid cards are chosen more frequently. Despite being the least preferred online payment method overall, prepaid card usage has demonstrated growth among medium, small, and micro-enterprise sellers in 2023 compared to the previous year.

Alongside increases in average basket size, there has been a noticeable rise in purchases with higher number of installments. Furthermore, installment distributions correlate with basket value, with longer installment periods corresponding to larger purchases.

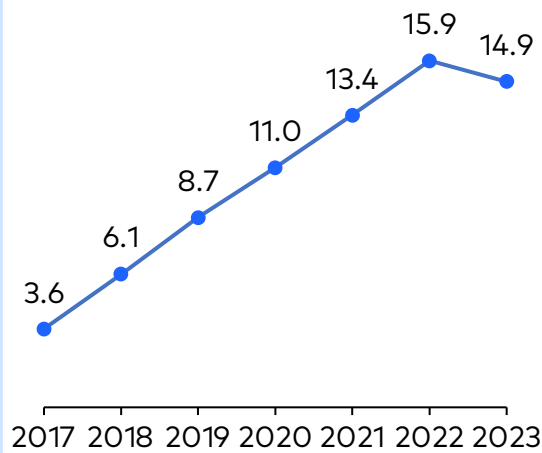
Single installment payments are prevalent for purchases below 10,000 TL, whereas installment plans of two or more are favored for purchases exceeding this threshold. The preference for more than six installments is relatively low for items priced up to 500 TL but increases significantly for purchases over 500 TL. The 2-3 installment transactions peak at 18.2% within the 2,000-5,000 TL range. This group distinguishes itself from other installment groups, which either increases or decreases as the basket size grows.

**Despite the enduring popularity of single payment options, costumer preference has shifted towards longer installment plans over the past year.**

Payment methods

Graph 34: Ratio of single payment purchases to installment purchases

2017-2023



Source: izzico, Dogma Alares analysis

Historical data from 2017 to 2022 reveals a consistent increase in the ratio of single payment purchases to installment purchases, culminating in a peak of 15.9 times in 2022. However, this ratio experienced a slight decline in 2023, decreasing to 14.9 times. Despite a slight decline in 2023, the historical trend of single payment purchases outpacing installment purchases suggests enduring customer preference for this method.

Analysis of installment purchases by seller segment indicates a positive correlation between seller size and installment purchase propensity, with smaller sellers experiencing higher rates of installment transactions. However, the absence of significant disparity in installment preferences between large and medium-sized businesses is noteworthy.

Table 8: Share of installment purchases by business size

2023

| Business size | Share of installment purchases |
|---------------|--------------------------------|
| Large         | 6%                             |
| Medium        | 6%                             |
| Small         | 10%                            |
| Micro         | 20%                            |

Source: izzico, Dogma Alares analysis

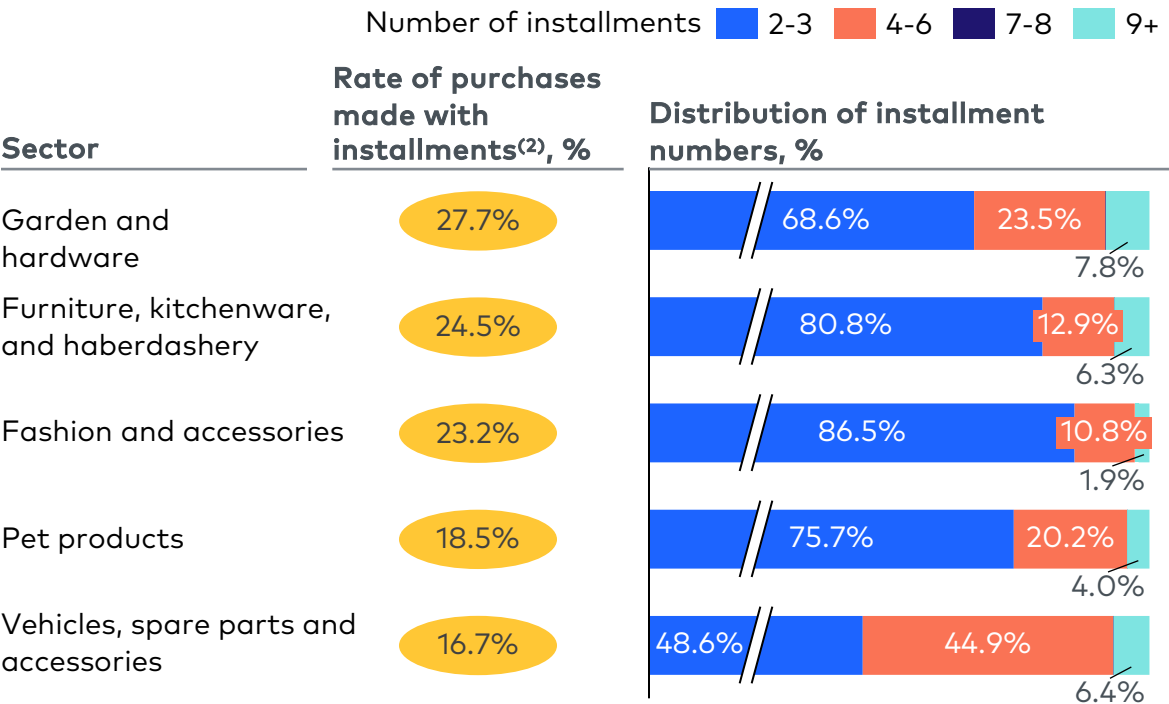
“Companies that offer alternative financial services have a crucial role in helping individual users. By implementing the right strategic actions, these firms can create new opportunities for both themselves and e-commerce sellers in the alternative payment sector.”

— Erdal Güner



Graph 35: Installment preferences in selected sectors<sup>(1)</sup>

%, 2023



(1) Among 17 sectors

(2) Calculated as the ratio of installment purchases to total purchases

Source: iyzico, Dogma Alares analysis

Graph 35 illustrates that the gardening sector exhibited the highest preference for installment payments, with 27.7% of purchases utilizing this option. Furniture and fashion sectors followed. The 2 to 3 installment payment option was overwhelmingly preferred, constituting 75.3% of installment purchases, while the 7 to 8 installment option was least favored, representing only 0.1% of transactions. In 2023, there was a shift in customer preferences toward shorter installment periods compared to the preceding year.



# Future outlook



## Future outlook

In 2023, the global e-commerce sector was influenced by five major trends: generative artificial intelligence, blockchain technology, direct-to-consumer models, embedded finance, and sustainability. An in-depth examination of these areas was conducted to comprehend the present status and future trajectory of global e-commerce.



### Generative AI

- The AI revolution in content production is transforming e-commerce, resulting in significant time and cost savings.
- Enhancing customer experience through natural language processing and sentiment analysis is becoming a pivotal factor.



### Blockchain technology

- Blockchain technology is increasingly gaining popularity.
- Advancements in the Digital Turkish Lira and Türkiye's cryptocurrency adoption process is continuing
- Proliferation of Web3 and decentralized internet services is influencing e-commerce activity.



### Direct-to-consumer model (D2C)

- Barriers between sellers and customers are being eliminated
- Value of the customer data is increasing
- Subscription models and personalized experiences are boosting customer loyalty
- Accessibility of financial services is enhancing convenience in e-commerce



### Embedded Finance

- Embedded finance approach is expanding into banking, loans and insurance
- Innovations in e-commerce are being driven by personalized financial products



### Sustainability

- Environmental concerns among e-commerce customers is leading to a rising demand for sustainable products
- Eco-design regulations for sustainable products are becoming increasingly effective, particularly across the EU

## Future outlook

### Generative AI

In 2023, the impact of AI-powered technologies on e-commerce became increasingly apparent. The sector experienced notable advancements owing to the innovations in generative AI. These effects are anticipated to continue expanding in the future.

For instance, virtual try-on technology driven by generative AI profoundly enriches the online shopping experience and has the potential to transform the e-commerce. By enabling customers to virtually try on products such as clothes, glasses, and accessories, it bridges the divide between physical and digital shopping. Virtual try-on technology increases consumer confidence, boosting conversion rates and sales. Leading retailers like Walmart<sup>7</sup> and renowned eyewear brands such as Ray-Ban and Warby Parker have started incorporating virtual try-on functionalities into their online platforms, allowing users to preview products before buying them<sup>8</sup>.

Another benefit of AI is its ability to streamline content creation, effectively optimizing time utilization.

“Companies aiming for quick success with generative AI will see positive outcomes by taking proactive steps. However, realizing the full potential of generative AI will require organizational changes.”

— Erdal Güner

Language models like ChatGPT and Jasper AI can generate a wide array of content, ranging from product descriptions to social media posts<sup>9</sup>.

On the other hand, text-based product search in e-commerce is becoming progressively effective and user-friendly with AI-powered natural language processing (NLP) technology. NLP employs AI algorithms to comprehend user queries, assess context, and offer precise product recommendations. Delivering accurate results for queries expressed in daily language simplifies the shopping experience, particularly for customers seeking products with intricate names or specific features.



2023 E-commerce ecosystem in Türkiye

NLP technology's ability to understand intentions and deliver accurate results not only increases customer satisfaction and conversion rates but also reduces cart abandonment rates. A study by the Baymard Institute found that 22% of e-commerce customers abandoned their purchases due to complex payment and cart processes. This research of Baymard Institute indicated that by addressing issues in the cart process alone, major e-commerce sites could achieve a 35% customer conversion rate<sup>10</sup>. E-commerce sites can leverage NLP technologies to improve efficiency in areas related to user experience.

An effective way to improve customer experience and increase revenue is through sentiment analysis and pattern recognition driven by generative AI. Sentiment analysis identifies the emotional tone within text, while pattern recognition technology detects common complaints or praises. Integrating these technologies allows e-commerce vendors to better understand customer behaviors and adjust their marketing strategies.

Hyper-personalization emerged as a method to deeply customize the consumer experience by offering a unique shopping journey for each individual. Site appearance, product listings, visual and written descriptions and notification language are among the elements that constitute such personalized shopping experience. By providing personalized content and promotions based on customer preferences and past behaviors, e-commerce platforms can increase customer loyalty and boost sales.



In 2023, LLM (Large Language Model) chatbots are widely used in various sectors, including e-commerce, to improve customer experience. These chatbots personalize interactions, enhance the shopping experience and boost both sales and conversion rates. Another advantage of LLM chatbots is to reduce operational and marketing costs by automating customer service tasks and optimizing marketing campaigns.

Additionally, chatbots manage repetitive customer service tasks such as answering frequently asked questions. This allows customer service staff to concentrate on more complex and valuable responsibilities. A study by the Academy of Entrepreneurship Journal found that chatbots can reduce customer support service costs by 20%<sup>11</sup>.

Furthermore, chatbots enable e-commerce platforms to provide real-time customer service globally by offering instant multilingual support. CSA Research, which surveyed 8,709 consumers across 29 countries, found that 76% of online shoppers prefer to use their native language in online shopping, while 40% avoid shopping in another language<sup>12</sup>.

Future outlook

Blockchain technology

Blockchain technology has gained significant popularity in recent years, attracting considerable attention particularly from governments and various organizations. In 2023, the global blockchain market was valued at 12.3 trillion USD and is projected to grow at a compound annual growth rate of over 57% until 2030<sup>13</sup>. Nearly 90% of firms in China, the US, and the UK have adopted blockchain technology to some extent<sup>14</sup>. The demand for a platform that fosters trust and collaboration among various parties is a major driver of blockchain adoption<sup>15</sup>.

In Türkiye, the regulation of crypto assets has resolved several uncertainties. The new legal framework designates the Capital Markets Board (SPK) as the authority overseeing crypto asset activities.

The draft law mandates that crypto platforms will be subject to an operating license from the SPK. Although crypto investors will not be taxed, platforms providing crypto services must pay 1% of their revenues to the SPK and 1% to TÜBİTAK. The SPK will establish listing standards for crypto assets, and platforms failing to meet these standards or operating without a license will incur various penalties<sup>16</sup>.

The global blockchain market, valued at 12.3 trillion USD in 2023, is projected to grow at an annual rate exceeding 57% until 2030.

Table 9: Crypto asset regulation

| Topic                                                                                                                  | Detail                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  Regulatory authorities             | <ul style="list-style-type: none"><li>• SPK will oversee crypto asset activities and establish the related guidelines</li></ul>                                                                |
|  Licensing and regulatory processes | <ul style="list-style-type: none"><li>• Platforms will obtain licenses from SPK</li><li>• Independent auditors designated by SPK will oversee the platforms</li></ul>                          |
|  Platform licensing and penalties   | <ul style="list-style-type: none"><li>• Unlicensed crypto asset service providers will face imprisonment for 3 to 5 years and judicial fine ranging from 5,000 to 10,000 days</li></ul>        |
|  Taxation                           | <ul style="list-style-type: none"><li>• No taxes will be imposed on investors</li><li>• Platforms will pay 1% of their revenues, excluding interest income, to SPK and 1% to TÜBİTAK</li></ul> |

Source: Official Gazette of the Republic of Türkiye

Meanwhile, significant progress has been made in Türkiye's "Digital Turkish Lira" project. At the end of 2023, the Central Bank of the Republic of Türkiye (TCMB) released the "Digital Turkish Lira Phase One Evaluation Report."<sup>17</sup> The TCMB is anticipated to proceed to Phase 2 in the coming years<sup>18</sup>. Türkiye's advancements in crypto activities are highlighted by its 12<sup>th</sup> place ranking out of 154 countries in the 2023 Global Crypto Adoption Index, emphasizing its position as one of the leading countries in the global crypto landscape<sup>19</sup>.

In addition to crypto assets, the progress of blockchain technology has introduced new opportunities. Web3, a concept arising from blockchain, refers to decentralized internet services governed by user-owned tokens<sup>20</sup>. Recently, various developments based on Web3 principles have been implemented in the retail sector.

Nike's Web3 platform, Dot Swoosh, enables users to design and sell their own virtual shoes<sup>21</sup>. By establishing a virtual marketplace through Dot Swoosh, Nike has created a platform where users can buy and sell virtual products and access exclusive items or events. Thereby Nike turns customers into co-creators (co-creative commerce). In an era, where value creation through personalization is pivotal, Dot Swoosh exemplifies the retail sector's efforts to engage customers in the creative process. Nike's Dot Swoosh platform demonstrates a significant vision enabled by decentralized Web3 technologies.

Highlighting the potential of this vision, the Metaverse market is projected to reach 783 trillion USD by 2024<sup>21</sup>. An example of the digital nesting approach in the retail sector is West Elm Home Design.

West Elm Home Design, through its application on Roblox, allows users to furnish their virtual homes with digital replicas of physical furniture<sup>21</sup>. These global applications illustrate how such technologies can transform and enrich e-commerce activities, particularly in the retail sector.

“

*Blockchain has the potential to significantly transform financial services and capital markets. Benefits such as tokenization, 24/7 data access, rapid transaction settlement, and automation can lower operational costs and expand access to investment opportunities for a broader audience. This impact is particularly notable in asset classes that traditionally require manual processing.*

”

— Erdal Güner



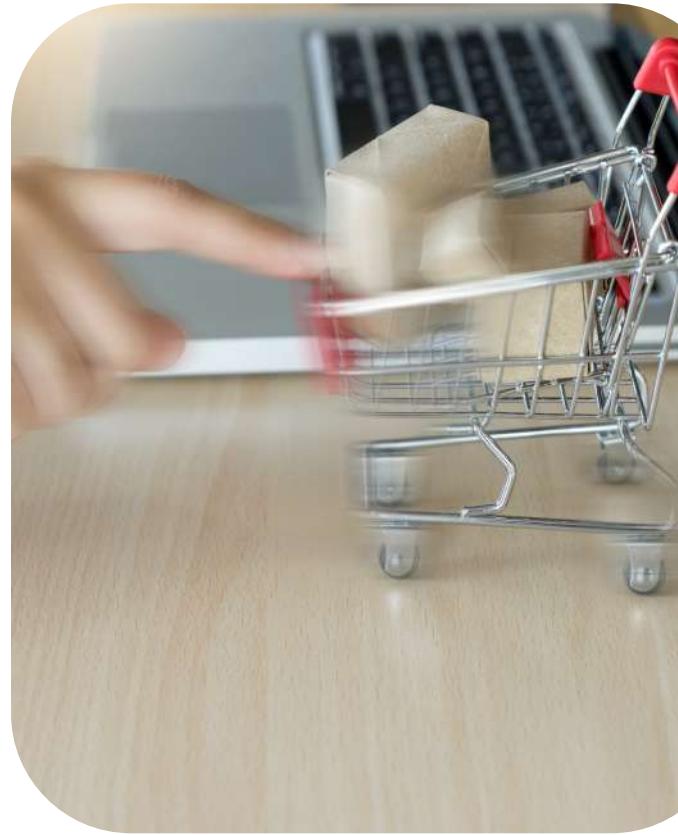
## Future outlook

### Direct-to-consumer model (D2C)

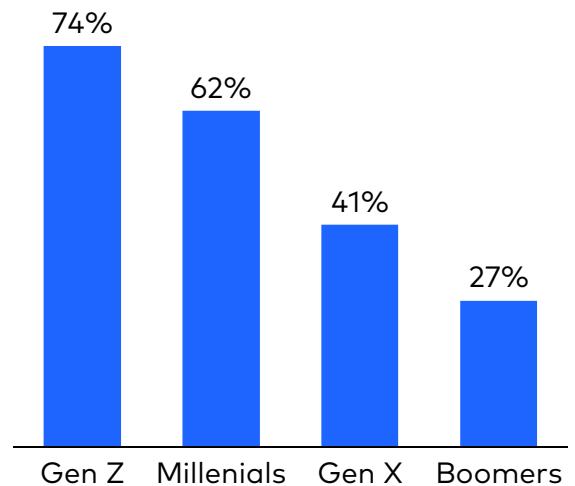
In e-commerce, the direct-to-consumer (D2C) business model is attractive to manufacturers owing to its potential benefits. By removing intermediaries, the D2C model can strengthen the relationship between sellers and customers, offering several significant advantages.

The direct-to-consumer (D2C) model enables manufacturers to bypass traditional intermediaries such as distributors, wholesalers, and retailers. This approach allows manufacturers to offer more competitive prices while increasing profit margins. In today's data-driven world, the D2C model provides manufacturers with valuable insights into consumer preferences through direct interactions. Consumer data resulting from D2C model helps companies to refine marketing strategies, exert greater control over their brand image and understand demand more deeply, driving innovation and growth. Ultimately, customers benefit from a personalized shopping experience, customizable product catalogs, and improved products based on their feedback. Given these advantages, the D2C trend is expected to continue growing in 2023 and beyond.

Comparing different consumer generations reveals that younger customers are more likely to shop from D2C brands. This trend is a key factor encouraging companies to adopt the D2C model as a strategic investment in their future. Furthermore, across all customer segments, the proportion of those who regularly shop through D2C channels has steadily increased over the years<sup>22</sup>.



Graph 36: Shopping rates from D2C brands by generation



Source: Capgemini

In 2023, notable D2C trends include a rise in B2B companies adopting the D2C model, increased integration of subscription services, advancements in customer experience processes, and a growing use of headless software principles<sup>23</sup>.

Among these D2C trends, the rise of subscription models is particularly notable. Studies in the US indicate that one in three customers has at least one retail subscription, with growing interest in D2C subscriptions<sup>24</sup>. The increase in D2C subscriptions is driven by the perception that subscriptions provide exclusive access to higher-quality products. In this regard, companies seeking to meet evolving demand should consider introducing D2C subscription systems.

Another advantage of the D2C subscription model is its flexibility in the ordering process. Subscriptions help customers avoid the risk of products being out of stock at retailers. Therefore, customers benefit from being able to access products whenever needed.

**“** Fueled by the e-commerce boom, the D2C model has emerged as a strategic imperative for brands seeking to establish direct relationships with consumers. However, scaling a D2C business successfully requires steadfast leadership, a keen focus on customer needs, and advanced digital services. **”**

— Emre Ekmekçi

Additionally, regular demand assessment benefits sellers by improving supply chain planning. The D2C subscription model offers greater control over shopping activities, creating value for both customers and sellers.

Table 10: D2C trends in 2023

-  More B2B companies adopting the D2C model
-  Expanding role of subscription models
-  Advancements in customer experience
-  Rise in headless software adoption

Source: Vaimo



## Future outlook

Graph 37: Factors driving customers to shop from D2C brands



Source: Censuswide, Wunderman Thompson Commerce

Analyzing the benefits of the D2C model from Graph 37 reveals that the primary motivation for customers choosing D2C sellers is their competitive pricing<sup>25</sup>. Economic fluctuations following the pandemic have increased consumers' sensitivity to prices, prompting brands to adopt more flexible pricing strategies. The D2C model's agility in pricing offers sellers a crucial opportunity to better align with consumer preferences.

Other key factors motivating customers include free, fast, and easy delivery, as well as straightforward return policies. In this context, D2C brands that establish a robust logistics foundation and offer competitive pricing, are well-equipped to effectively meet customer needs.

D2C brands that effectively utilize customer data can attract a diverse range of customers by offering loyalty programs, exclusive and personalized products, detailed product information, and extensive product catalogs. A sector-specific demand analysis shows that consumers are more inclined to buy directly from manufacturers in the apparel, accessories, and electronics sectors<sup>26</sup>. In contrast, D2C purchasing behaviors are generally less adopted in the food and furniture sectors.

While the D2C model offers numerous benefits, it also presents inherent risks. Transitioning from existing customer bases of intermediaries to building a new customer base can be challenging. Besides, companies must overcome potential difficulties in developing the necessary infrastructure and supply chains.

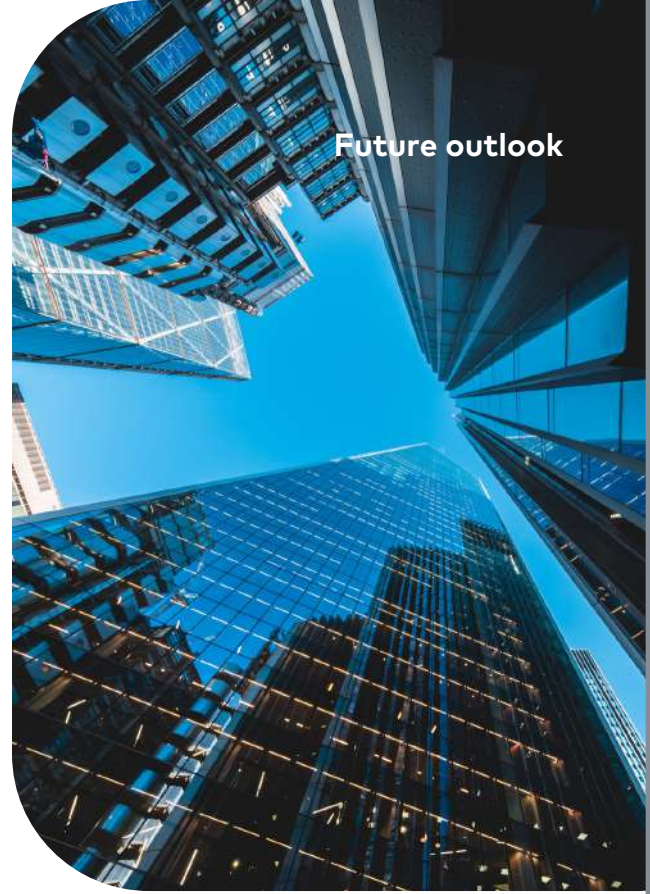
Competing with established D2C brands often requires substantial investments in advertising and logistics, which represent significant costs<sup>27</sup>. In Europe, companies transitioning to a D2C model commonly face obstacles related to logistics, storage, and the setup of D2C sales platforms. According to various European firms, key challenges include adapting efficient warehouse management systems for online orders, establishing consumer-facing channels such as websites and marketplaces, and managing carriers for delivery options.

## Embedded finance

Embedded finance, which integrates financial services into non-financial products such as e-commerce sites, social media, or messaging apps, has become a significant trend<sup>28</sup>. It is projected to reach a transaction value of 228 trillion USD by 2028, reflecting its considerable value<sup>29</sup>. The primary benefit for users is increased convenience and accessibility. Embedded finance allows consumers to choose from a wide range of financial services and facilitates access for individuals with limited banking options.

From a business perspective, embedded finance simplifies access to user data and boosts customer engagement. This provides valuable insights into value creation, helping businesses identify opportunities to improve customer experience and develop services. Additionally, it reduces the costs of establishing financial infrastructure. Consequently, embedded finance adds significant value for both consumers and sellers, enriching the e-commerce experience.

In the implementation of embedded finance, areas such as banking, loans, payments, and insurance are prominent. Banking services integrated into e-commerce applications enhance usability in e-commerce. Many online retailers offer credit and installment options to their customers directly within their own application. Digital wallets and quick payment methods are examples of embedded payment solutions, enabling customers to make payments seamlessly without leaving the service provider's platform.



Travel booking platforms integrate insurance options into the purchasing process. These examples demonstrate how embedded finance can enhance e-commerce.

In 2023, key topics in embedded finance include the rise of "super apps," efficiency gains from open banking, smart contracts, the personalization of financial products, and improved access to financial services<sup>30</sup>. "Super apps" are mobile applications that consolidate various services and functions beyond their original purpose to provide greater convenience to users.

## Future outlook

Super apps can incorporate functions such as e-commerce, payments, food delivery, and social media. These apps, which attract a large customer base due to their convenience, have also drawn interest from traditional financial institutions. The financial services embedded within these apps exemplify the current use of embedded finance. A prominent example is China's WeChat, which showcases embedded finance through its WeChat Pay function. The super app market, led by the Asia-Pacific region, was valued at 76 trillion USD in 2023 and is projected to reach 426 trillion USD by 2030<sup>31</sup>.

Open banking involves securely sharing banking data with third parties via application programming interfaces (APIs). This necessitates technological adoption and business model changes for traditional banks. Expected outcomes of such changes include reduced costs, enhanced technological innovations, and improved customer service.

Owing to open banking, customers benefit from more accurate insights about their own financial situation. For example, an open banking app can offer personalized analyses for customers considering a home purchase, delivering more reliable information than generic mortgage guides<sup>32</sup>. On the other hand, lenders gain a clearer view of customer finances, facilitating more profitable lending decisions.

Open banking applications streamline accounting tasks for small businesses and facilitate earlier fraud detection. Increased financial inclusion and efficiency arising from open banking will likely stimulate e-commerce growth as its infrastructure develops.

Consequently, open banking is a pivotal catalyst for e-commerce transformation, simplification and expansion.

Smart contracts, a decentralized finance application, enable peer-to-peer transactions without intermediaries. While less understood than other blockchain applications, smart contracts are a key focus of executive interest according to a 2023 Casperlabs survey<sup>33</sup>.



Growing executive interest in smart contracts indicates their increasing prominence. Given the rise of peer-to-peer e-commerce, smart contracts are poised to become instrumental in this sector.

Financial product customization is a growing trend. Leveraging big data, advanced analytics, and machine learning, institutions tailor their financial products to individual needs<sup>30</sup>.

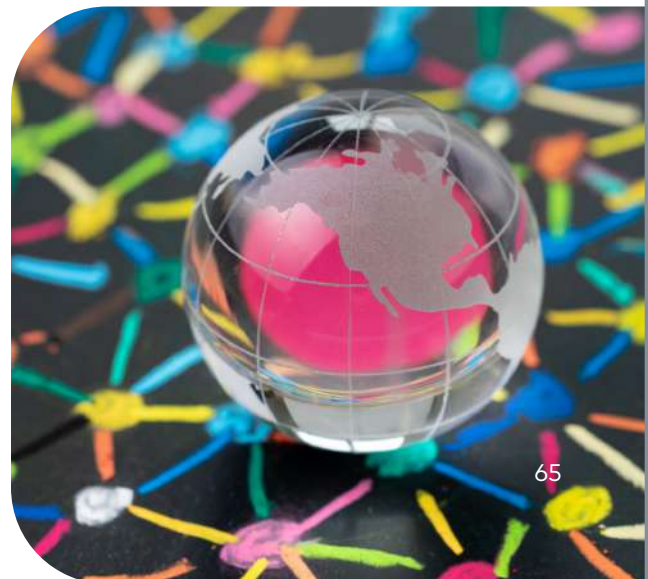
Customers who receive personalized financial offers through multiple channels were observed to be three times more likely to accept these offers compared to others<sup>34</sup>. The effectiveness of personalized financial offerings incentivizes institutions to customize, but data privacy concerns pose significant challenges. Balancing personalization with data protection is crucial for institutions.

“*In recent years, prominent brands and technology platforms have established strategic partnerships with financial institutions to develop and integrate financial products into their offerings. Embedded finance presents an attractive opportunity for banks to expand their distribution networks and reduce operational costs, while also offering consumers more integrated and user-friendly financial services. However, it also carries significant risks for banks, such as the potential loss of direct customer relationships and the cannibalization of core products.*”

— Emre Ekmekçi

Organizations utilizing user data for operational optimization now face stricter data regulations due to heightened privacy concerns. According to Google, despite abundant data in financial services, privacy concerns are shaping approaches in data collection methodologies. For instance, the gradual removal of third-party cookies is forcing digital marketing leaders to make new strategic decisions<sup>35</sup>.

The increasing trend towards personalization is anticipated to facilitate broader access to financial services, thereby positively impacting the e-commerce sector. Financial inclusion aims to provide underserved populations, such as rural and low-income households, with accessible and relevant financial services. Governments and institutions are actively promoting financial inclusion to drive economic growth and development in 2023. Global financial inclusion efforts have yielded positive results, with the 2023 global financial access index reaching 47.3, a substantial 5.6-point increase<sup>36</sup>. Financial inclusion is expanding more rapidly in developing and less developed regions compared to advanced economies, positively impacting e-commerce growth. Expanded financial access empowers households to participate more actively in e-commerce.



## Future outlook

### Sustainability

A growing number of e-commerce consumers are exhibiting heightened environmental awareness, placing increasing emphasis on the sustainability of products throughout their lifecycle, from sourcing to packaging and delivery. Various field studies reveal that 85% of consumers have shifted their preferences towards sustainability in the past 5 years, and 74% are willing to pay more for sustainable products. A UK survey revealed that packaging sustainability significantly influences 69% of consumers' purchasing decisions. A significant proportion of investors, specifically 85%, incorporate Environmental, Social, and Governance (ESG) criteria into their investment decision-making processes. Investor attitudes exert a substantial influence on corporate behavior, with companies increasingly inclined to disclose their environmental impact in response to investor expectations.

Two significant developments in the e-commerce sector during 2023 underscored the growing emphasis on environmental impact: the implementation of the Digital Product Passport and the increasing prevalence of second-hand shopping as a means of product lifecycle extension.

**The Ecological Design legislation for sustainable products is expected to mandate Digital Product Passports for products sold in the EU by 2030.**



To mandate the Digital Product Passport, the European Union introduced the Ecodesign for Sustainable Products Regulation as part of its 2020 Circular Economy Action Plan. This regulatory package aims to improve circularity, energy efficiency, and other sustainability criteria for products in the EU market. The Digital Product Passport, introduced in 2023, is a digital identity containing detailed information on a product's sustainability, circularity, and regulatory compliance. The digital passport facilitates access to a product's environmental impact information for all stakeholders. The Digital Product Passport offers comprehensive product information including identification, origin, materials, carbon footprint, energy consumption, environmental impact, ownership history, and repair details.

Enhanced supply chain transparency, enabled by the Digital Product Passport, empowers stakeholders to make informed decisions that reduce carbon footprints. With the implementation of the Ecological Design regulation for Sustainable Products starting in 2024, it is anticipated that almost all products sold in the EU will be required to have a Digital Product Passport by 2030<sup>37</sup>.

The Digital Product Passport is anticipated to have a major impact on the e-commerce sector. Given the increasing emphasis on sustainability by consumers, e-commerce businesses must prioritize regulatory compliance to maintain market competitiveness and consumer trust. The inclusion of e-commerce products within the Digital Product Passport framework enhances consumer trust and accelerates sustainable manufacturing and shopping practices. On the other hand, investors are increasingly exerting pressure on companies to prioritize environmental impact in their operational strategies.

Examples of environmental pressures exerted on firms by both customers and investors can be seen in the data presented in Table 11.

E-commerce businesses that align their strategies with evolving consumer and investor preferences for sustainability are gaining a significant competitive advantage. For example, a household products manufacturer plans to incorporate Digital Product Passports into 1 million beds produced in 2024<sup>38</sup>. This initiative aims to increase sales, reduce waste, and positively impact the environment.

Table 11: Environmental preferences of customers and investors



Globally, 85% of consumers say they have changed their preferences towards sustainability in the last 5 years



74% of consumers say they would pay more for sustainable products



69% of UK consumers say it is a priority that the materials used in the packaging of the products they buy are recyclable



85% of investors indicate that they consider environmental, social and governance factors when choosing their investments



Companies show a tendency to disclose their environmental impacts twice as much when targeted by investors



A global investor group with over \$10 trillion in assets, including more than 100 investors from 23 markets worldwide, is urging over 1,000 companies with the highest environmental impact to disclose their environmental data

Source: Snowkap, Circular Online, Gartner, CDP, Forbes

## Future outlook

The Digital Product Passport is anticipated to catalyze the development of novel, sustainability-focused business models and market opportunities within the e-commerce landscape. For example, C2C platforms that promote the sale of second-hand and refurbished goods are expected to become more trustworthy thanks to the increased transparency of the Digital Product Passport<sup>39</sup>.

Another example of environmental concerns effecting the consumer behavior is the pre-loved shopping trend. The trend emphasizes the perceived value of previously owned items and has rapidly gained traction among Gen Z and Millennial demographics through social media platforms. In 2023, 45% of customers from these generations opted for second-hand products<sup>40</sup>. The surge in pre-loved shopping has significantly contributed to the expansion of the global secondhand clothing market, projected to grow from 177 billion USD in 2022 to 351 billion USD by 2027. This projection indicates nearly a 98% growth in just five years. Increasing impact of social commerce and growing awareness of sustainability, indicates a shift in online shopping preferences towards these trends.

The rise of "preloved" shopping is pivotal for advancing environmental sustainability and fostering a circular economy. The fashion industry is undergoing a transformative shift towards circular business models to mitigate its environmental impact. For example, H&M's "Close the Loop" initiative allows customers to bring unwanted clothes back to stores and drop them off for recycling. Through this project, 155,000 tons of textiles were collected in 2023<sup>41</sup>.



“Sustainability has emerged as a strategic imperative for organizations. To achieve measurable outcomes, executives must proactively and strategically embed sustainability into corporate strategy. Effective leadership is crucial in integrating sustainability considerations across all organizational functions.”

— Erdal Güner

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