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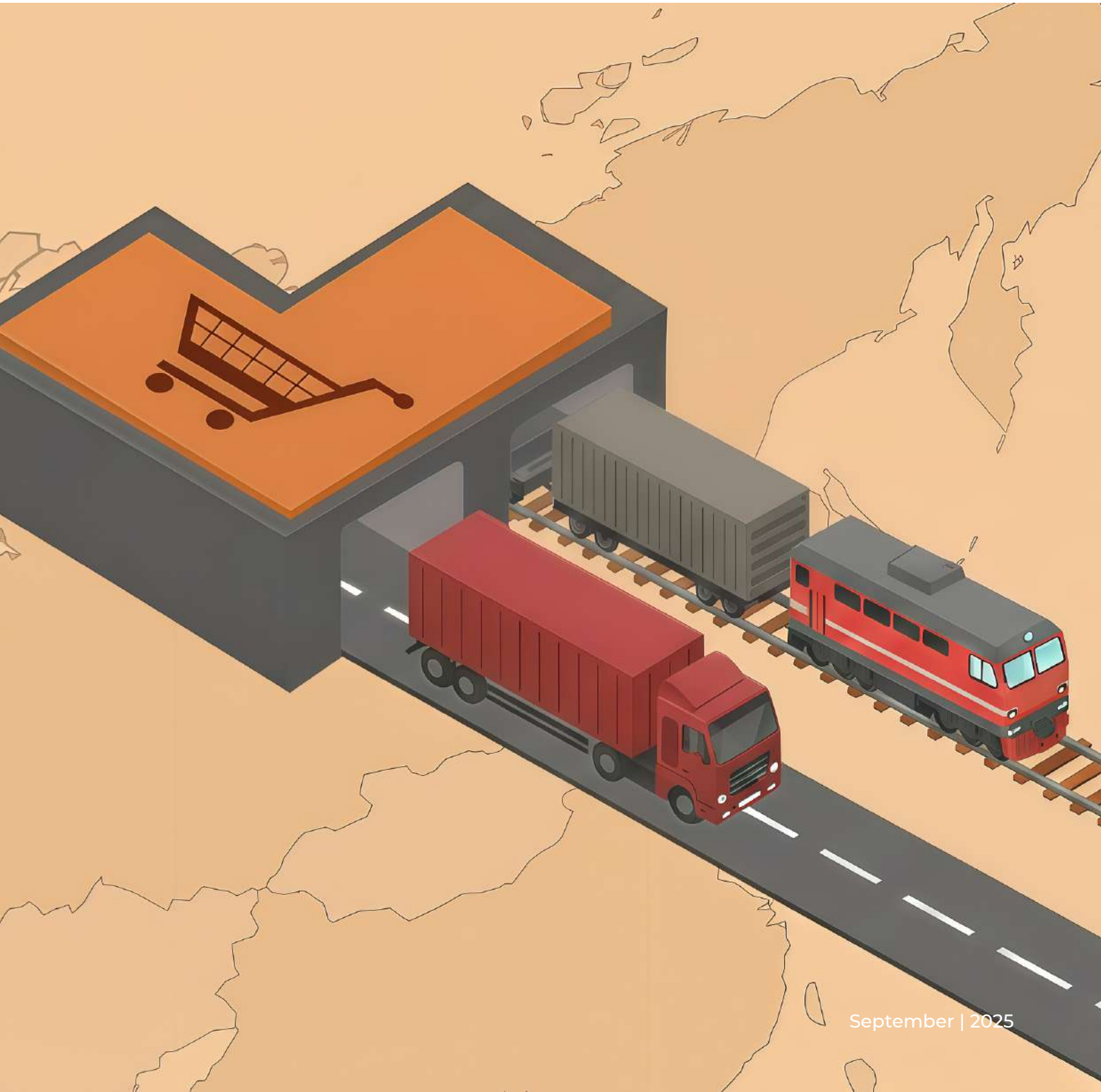
Report

E-COMMERCE IN RUSSIA AND CHINA: CROSS-BORDER ASPECTS AND LOGISTICS



September | 2025

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KEY FINDINGS

1. China remains the global e-commerce market leader, accounting for 52.1% of global online sales (approximately $2.5 trillion) in 2024, more than double the US.

2. Logistics is a key factor in China's e-commerce competitiveness. Transportation accounts for approximately 60% of industry costs, and the e-commerce logistics market in China will reach $211.9 billion in 2025.

3. Russia's online imports from China are showing a revival: a 22.8% increase in turnover and a 24.4% increase in the number of orders is expected in 2025. Moreover, approximately 98% of all cross-border parcels originate in China, underscoring the importance of the Chinese market and logistics routes.

4. The rapid growth of e-commerce in Russia has largely been made possible due to universal marketplaces. In recent years, total gross merchandise volume (GMV) has grown 20-fold, and the share of marketplaces in the e-commerce structure has increased from 23% to 64%. However, since 2024, growth has begun to slow: the annual GMV growth rate has fallen to 54%.

5. Russia's cross-border e-commerce market is recovering, but remains sensitive to international conditions and regulatory policies. In 2025, it only represented 3% of the total online retail market (compared to 30% in 2018–2019). The main barriers are the lowering of the duty-free import threshold, payment issues, and currency control by Chinese banks.

6. Consumer electronics and clothing/footwear dominate cross-border trade, accounting for the main logistics flows. These goods are most often delivered by air, but as volumes increase, a shift to cheaper options, including multimodal and rail, is possible.

7. Bonded warehouses and pilot zones in China have proven effective in reducing logistics costs and speeding up goods processing. In Russia, the development of such zones remains limited.

8. Cross-border logistics in Russia is developing using three main models: *AliExpress* builds delivery through the Cainiao network and partners with Russian operators, *Ozon Global* uses partner hubs and FBP/realFBS schemes, and *CDEK.Shopping* acts as an intermediary, consolidating orders and managing the entire procurement and delivery cycle with the help of partner services.

9. Rail transportation is becoming a promising alternative for e-commerce, especially given the high cost of road and air shipping. The most promising niche for integrating rail routes is emerging within the *CDEK.Shopping* model, particularly in the "Wholesale from China" segment.

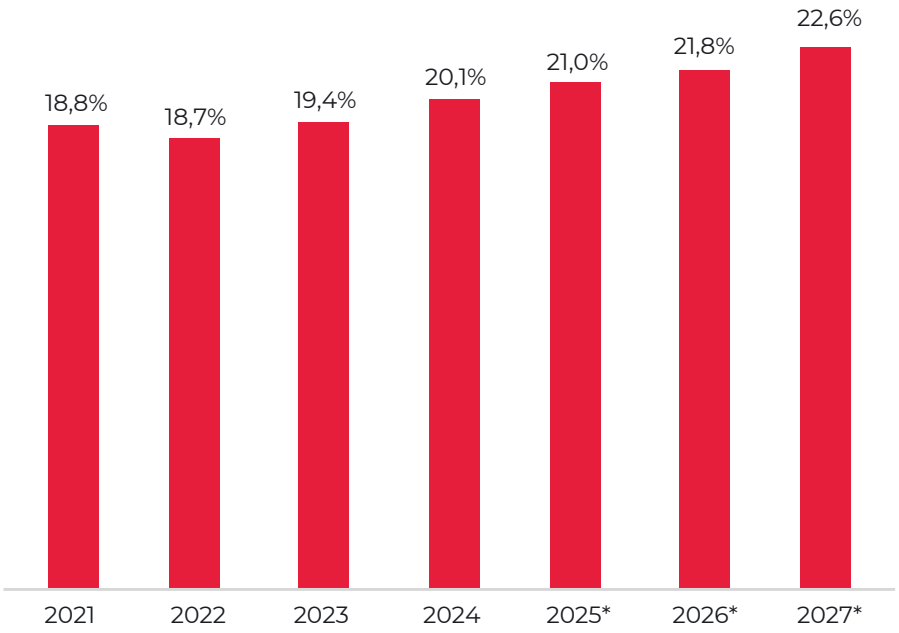
GROWING USE OF E-COMMERCE IN RETAIL

E-commerce, which emerged against the backdrop of global digitalization and the widespread adoption of information and communications technology, is a catalyst for transformational processes in the modern economy. It has a significant impact on all aspects of economic activity, including the structure and dynamics of retail.

More than a third of the world's population uses online resources to make purchases. By 2025, the number of online shoppers worldwide will reach 2.77 billion. This represents an annual growth rate of 2.2%, and is expected to reach 2.86 billion users by 2026.

The share of online purchases in retail has been growing at an average annual rate of 0.32 percentage points since 2021; in 2025, this figure will reach 21%, and in 2027, it is expected to increase to 22.6%.

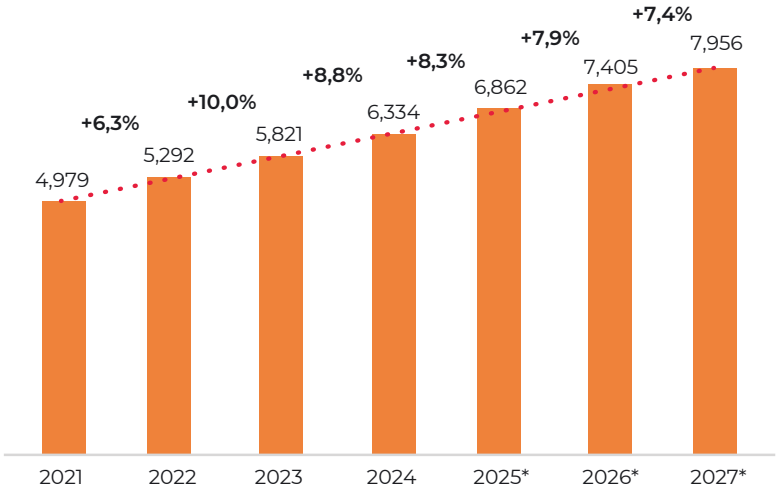
SHARE OF ONLINE PURCHASES IN GLOBAL RETAIL, %



Source: Statista
** forecast value*

At the same time, sales through e-commerce channels are growing. In 2025, the e-commerce market is expected to exceed $6.68 trillion. Sales will continue to grow at a CAGR of 7.8% from 2025 to 2027, reaching $8 trillion by 2027. This growth will be more than double that of physical stores. This indicates that e-commerce is becoming an increasingly profitable choice for companies worldwide.

GLOBAL E-COMMERCE SALES, $ TRILLION



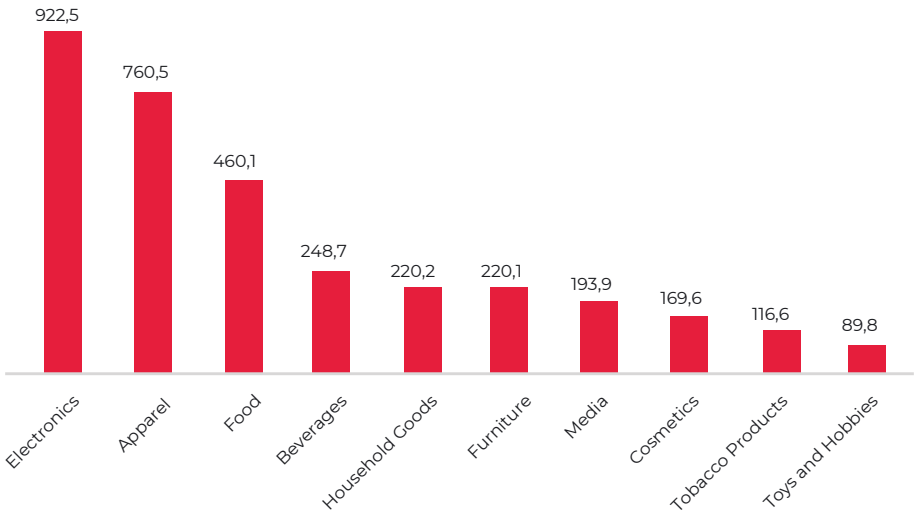
Source: Statista
** forecast value*

The widespread engagement of the population in digital commerce not only demonstrates growing trust in online services but also points to fundamental changes in consumer behavior, supply chains, and company business models.

More than two-thirds (68.1%) of online shoppers use marketplaces. According to the "2025 Global Shopper Survey," 20.5% of consumers worldwide say they usually start their search for new products on marketplaces; this figure is higher in China (36.3%), India (30.1%), and the UAE (24.9%).

According to Shopify, online retail continues to grow rapidly, with shoppers' interest focused on a few key product categories. Electronics, clothing, and food and beverages remain the most popular. The health, wellness, and home convenience niches are growing particularly rapidly, reflecting consumers' desire for comfort and self-care.

TOP-SELLING E-COMMERCE PRODUCT CATEGORIES IN 2024, $ BILLION



Source: Shopify

Consumer electronics is the leading category in global online sales. Due to its high average order value ($85-$110), it offers higher margins for sellers on platforms, despite having fewer stores than other product categories.

Apparel remains one of the most popular product categories, accounting for over 10% of all e-commerce sales, and 21% of stores sell fashion products. Meanwhile, home goods, beauty, and fitness each account for 8-9% of stores, while food and beverages account for 5% of platforms.

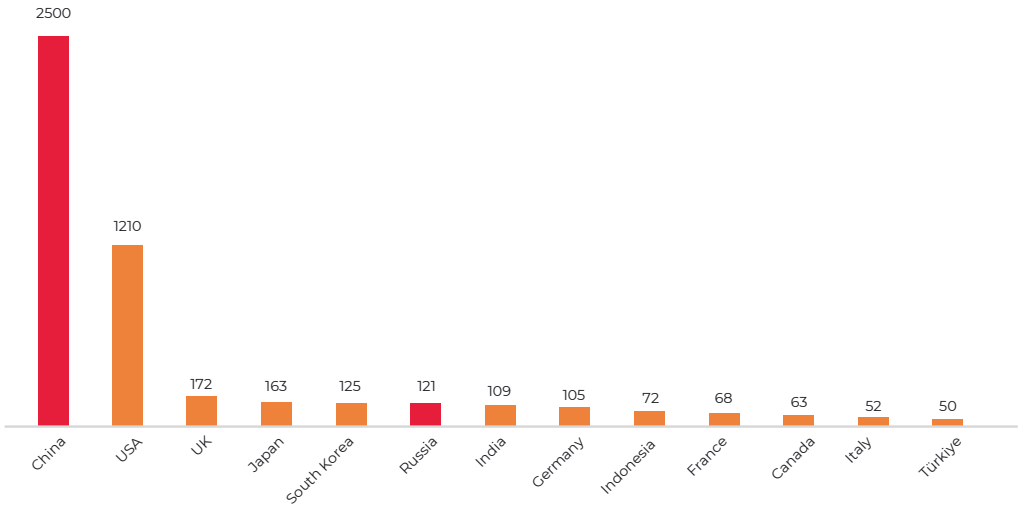
According to Future Market Insights, the global e-commerce logistics market is valued at approximately $650.2 billion in 2025, and could reach $3.22 trillion by 2035, representing a compound annual growth rate of 18.9%. This rapid growth is driven by the rapid expansion of online retail, the development of mobile commerce, and the increasing demand for expedited delivery options—from next-day to within-hours delivery. Approximately half of all e-commerce logistics costs today are spent on the so-called "last mile," the delivery from an intermediate warehouse or sorting point to the end customer. This is the area that requires the greatest investment and the implementation of new technologies.

Asia remains the key market driver, accounting for over 40% of global e-commerce logistics services. China leads the way, with widespread digital penetration, high internet coverage, and a well-established network of warehouses and transport hubs enabling the processing of millions of orders daily. China has recorded a record number of online shoppers, exceeding 904.6 million.

CHINA'S LEADING ROLE IN THE GLOBAL E-COMMERCE MARKET

China dominates the e-commerce market, accounting for 52.1% of global e-commerce sales. According to research by Data Insight, China is expected to reach $2.5 trillion in sales by 2024, more than twice that of the United States. Mordor Intelligence estimates the size of the Chinese e-commerce market to be approximately $1.53 trillion, with a compound annual growth rate (CAGR) of 10.42%. By 2030, the market is projected to be worth over $2.52 trillion. The discrepancy in estimates is due to differences in methodology: some sources include cross-border trade and digital services as well as all marketplace sales in their calculations, while others focus primarily on the domestic B2C segment.

LEADING COUNTRIES IN RETAIL E-COMMERCE BY SALES VOLUME IN 2024 ($ BILLION)



Source: Data Insight

E-commerce is growing particularly rapidly in small and medium-sized cities in China, where spending grew 5.8% in 2024—faster than in megacities. Rural areas are making a significant contribution, with over 300 million new internet users and 2.49 trillion yuan (approximately $350 billion) in online sales.

China's cross-border e-commerce volume in 2024 is estimated at 2.65 trillion yuan (approximately $ 370 billion). According to the General Administration of Customs, online exports exceeded 2 trillion yuan ($ 278.59 billion) for the first time.

In 2024, China's cross-border e-commerce structure shifted toward developed markets. The United States became the largest export destination for Chinese online retailers, accounting for 36.2% of total cross-border e-commerce exports. It was followed by the United Kingdom (11.7%) and Germany (5.7%). Consumer goods continue to play a key role in cross-border e-commerce, accounting for 97.5% of all Chinese exports in this segment.

In 2024, American goods led online exports to China by volume, accounting for 15.8% of all e-commerce imports. Japanese and German suppliers also held significant positions, accounting for 10.5% and 9.8%, respectively.

Chinese platforms are also actively expanding in Latin America: Temu, one of the largest Chinese platforms, already has 39 million active users in Brazil alone and is investing $150 million in local infrastructure. Strengthening trade barriers in the United States are spurring a shift toward Europe and the Middle East.

Cross-border logistics is a rapidly growing segment, driven by China's growing influence on global trade and the development of cross-border e-commerce platforms. Over the past five years, China's cross-border e-commerce volume has increased more than tenfold.

This segment is receiving government support through pilot zones and the opening of overseas warehouses in strategic regions such as the United States and Europe. The Belt and Road Initiative is strengthening logistics ties with Southeast and Central Asia, boosting the export potential of Chinese e-commerce.

Key e-commerce companies in China

The most prominent players in the Chinese market are *JD.com, Alibaba (Taobao/Tmall), and Pinduoduo (PDD Holdings),* including the international project Temu. The market remains moderately concentrated, with the top three players accounting for 62% of sales (as of 2024).

JD.com, China's largest retailer by revenue, earned approximately $158.8 billion in 2024, with a net profit of approximately $6.1 billion and a CAGR of 15%. Online retail revenue in 2024 was $127.1 billion. In the first quarter of 2025, revenue increased 15.8% to CNY301.1 billion (~$41.8 billion), and adjusted local currency profit increased 49% year-on-year, driven by recovering consumer demand, improved supply chains, and improved user experience.

Alibaba Group Holding remains a pillar of global e-commerce, demonstrating steady growth in key financial metrics. Revenue for 2024 reached ~$136.5 billion, with net profit of ~$17.84 billion and a CAGR of 4%. In the first quarter of 2025, revenue increased 6.5% to 236.5 billion yuan (~$32.4 billion). *Alibaba* is investing 380 billion yuan (approximately $52 billion) in AI infrastructure, selling non-core assets and focusing on cloud technologies and logistics. Over the past decade, *Alibaba Group's* Tmall Global platform has built a powerful cross-border commerce ecosystem, currently serving over 100 million users. This platform has played a key role in the development of cross-border e-commerce in China and provides access to the Chinese market for European brands.

Pinduoduo (PDD Holdings) reported revenue of approximately $53.9 billion in 2024, with net profit of $15.4 billion; its CAGR was 43%. In the first quarter of 2025, revenue was 95.7 billion yuan (approximately $13.3 billion). Their international project, *Temu*, is actively expanding its presence, although growth rates in the first quarter of 2025 slowed due to foreign policy and tariff restrictions—revenue fell 47% compared to expectations, to 14.7 billion yuan (~$2 billion).

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E-Commerce Logistics in China

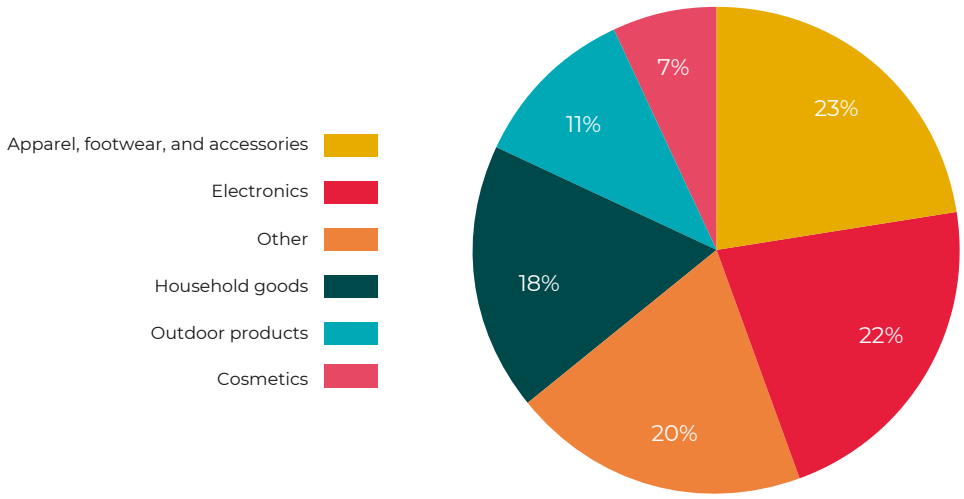
China's logistics infrastructure is key to the scale of its e-commerce. The domestic logistics segment is estimated at ~$211.9 billion in 2025, with a projected growth rate of ~$365.6 billion by 2030, with a CAGR of 11.5%. The domestic segment refers to logistics operations carried out within the country—from warehousing and order picking to last-mile delivery to the end consumer. China's cross-border logistics, connecting the domestic market with global buyers, has been valued at approximately $58.6 billion in 2025, projected to reach $86.7 billion by 2030, with a CAGR of 8.3%.

The e-commerce logistics market in China can be assessed by product type: electronics, apparel and footwear, home appliances, furniture, and beauty and personal care products. Consumer electronics remains the leader in term sof delivery volumes. Growth in this segment is supported by high demand for smartphones, accessories, smart gadgets, and home appliances, especially in the lead-up to major online sales.

Apparel and footwear is the fastest-growing segment, driven by the development of marketplaces, growing interest in Chinese brands, and simplified returns processes. As of 2024, the fashion industry is expected to become one of the key drivers of cross-border e-commerce logistics development. According to the National Bureau of Statistics of China, in October 2024 alone, retail sales of clothing, footwear, headwear, and knitwear reached RMB 135 billion (approximately $18.4 billion). According to the General Administration of Customs of China, textile, apparel, and accessory exports totaled $169.8 billion (up 1.12%) in the first seven months of 2024.

Despite domestic and external challenges—from fluctuating demand to foreign policy restrictions—the Chinese fashion industry has demonstrate resilience and growth potential. The China National Textile and Apparel Council (CNTAC) predicts that annual retail apparel sales could exceed $415 billion in 2025, exceeding the projected US figure of $347 billion.

CHINA'S CROSS-BORDER B2C E-COMMERCE EXPORTS BY PRODUCT CATEGORY IN 2023 (%)



Source: Mordor Intelligence based on data from chinabaogao.com

Over 60% of China's e-commerce logistics market revenue comes from transportation services (40% from warehousing, fulfillment, and labeling), made possible by a 169,000-km highway network connecting production and consumption zones. Rail corridors within the Belt and Road Initiative facilitate the delivery of export parcels to Europe.

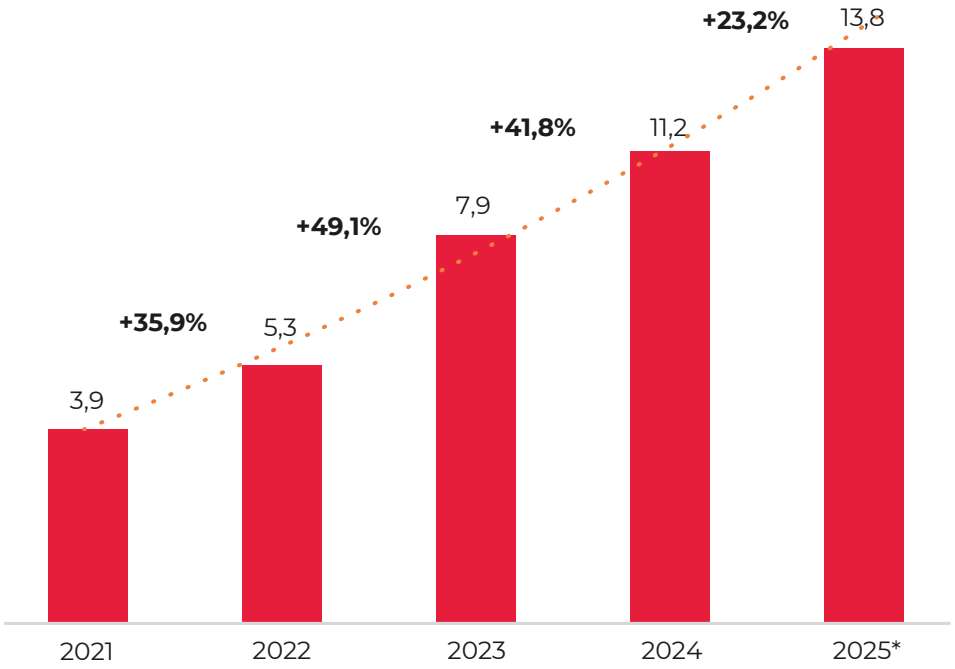
China's e-commerce logistics market is moderately concentrated: the five largest operators (SF Express, JD Logistics, Cainiao Network (Alibaba), ZTO Express, and YTO Express) account for the majority of revenue, with room for niche players. At the same time, as VMR research notes, the market is competitive, with major companies such as *Cainiao, JD Logistics, and SF Express* vying for dominance.

In the cross-border e-commerce logistics market, the largest players include *Sinotrans, COSCO Shipping, Kerry Logistics*, as well as the aforementioned *JD Logistics and SF Express*.

THE RUSSIAN E-COMMERCE MARKET IS GROWING RAPIDLY

In 2024, the Russian e-commerce segment exceeded $100 billion in sales for the first time, reaching a record $121 billion (11.2 trillion RUB) and putting Russia in sixth place among the leading countries in e-commerce retail. The share of online purchases in retail in Russia is 20.3%. According to this indicator, Russia is ahead of Turkey (16.6%), the United States (16.3%), and Japan (14.7%), but behind China (36.8%), Indonesia (29.7%), South Korea (29.0%), and the United Kingdom (26.1%).

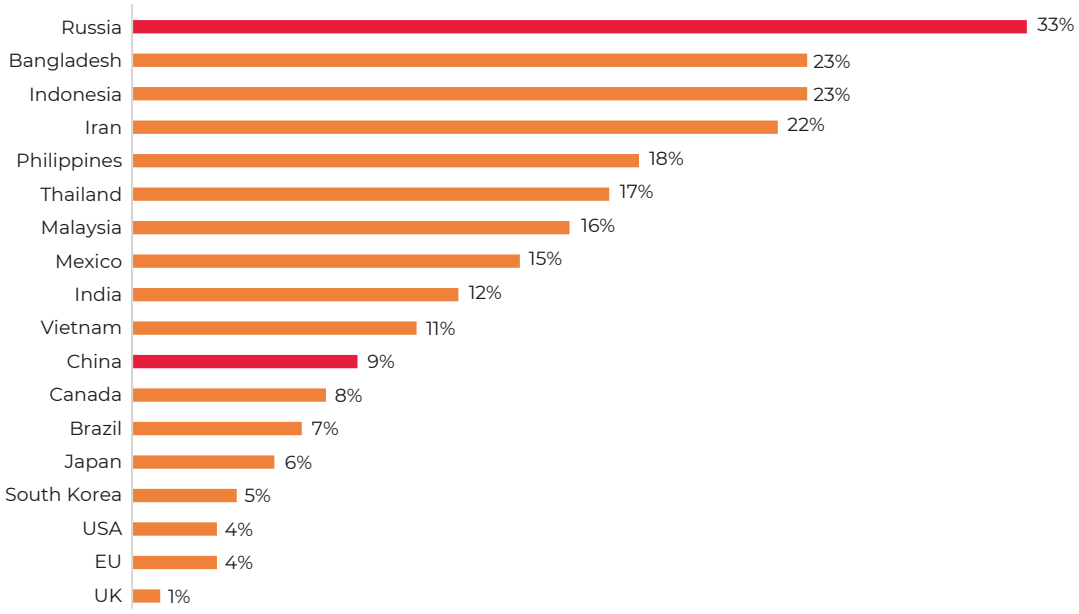
RUSSIAN E-COMMERCE SALES VOLUME DYNAMICS IN 2021–2024, TRILLION RUBLES



Source: Data Insight
** forecast value*

The domestic e-commerce market was considered the fastest growing in 2023–2024, with a compound annual growth rate of 33%. According to Statista forecasts, the Russian e-commerce market will grow from 2025 to 2029 at a compound annual growth rate of 11%, potentially leading to sales volumes reaching $200 billion over five years (an almost twofold increase).

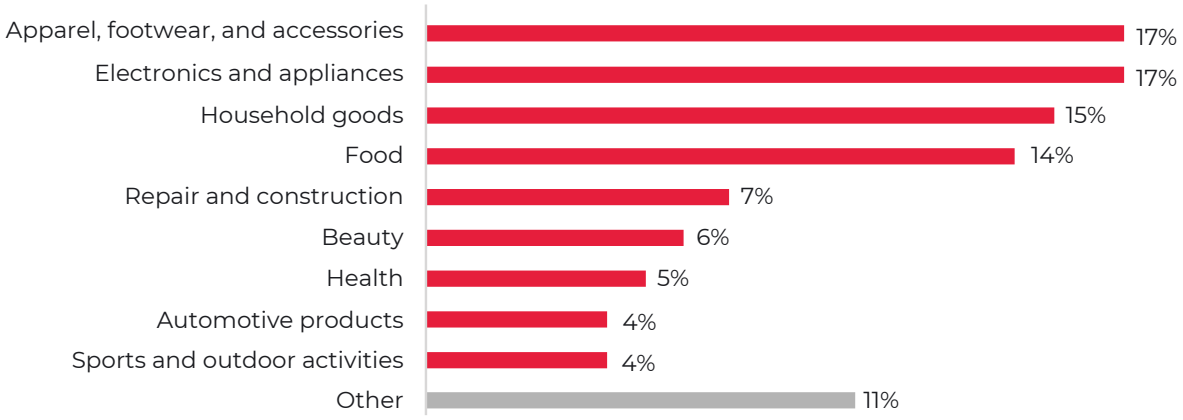
THE AVERAGE GROWTH RATE OF E-COMMERCE IN 2023–2024, ADJUSTED FOR INFLATION, %



Source: Data Insight

As the e-commerce segment develops, the range of products sold expands. Statista identifies 14 product categories sold through e-commerce channels. The most popular global delivery options include groceries, household goods (tools and building materials), electronics and appliances (laptops, smartphones, cameras, smart home devices), furniture, and home decor. Textiles, footwear, electronics, and household goods account for half of the Russian e-commerce market.

SHARE OF PRODUCT CATEGORIES IN THE RUSSIAN E-COMMERCE MARKET IN 2024, %



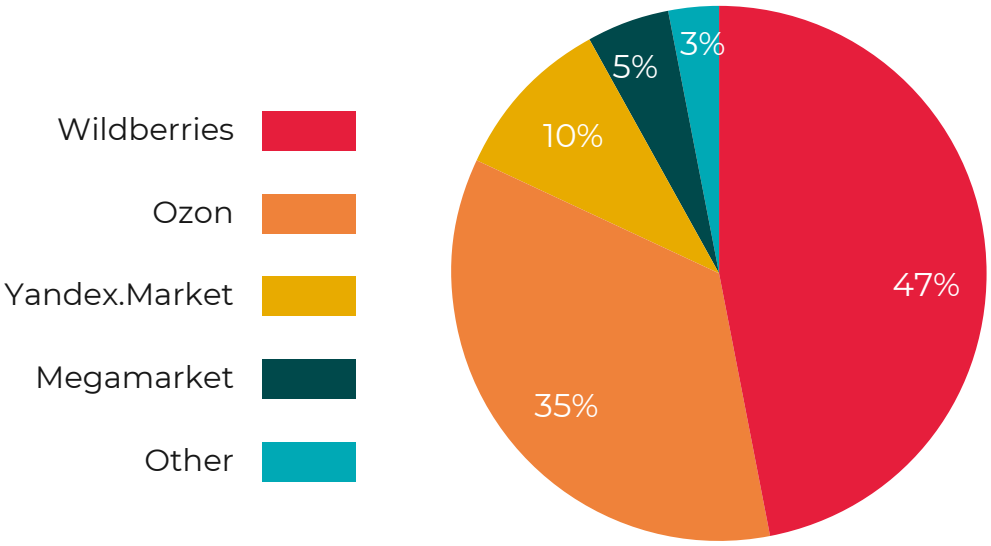
Source: Data Insight

Key Companies in the Russian E-Commerce Market

One of the key drivers of the rapid growth of the Russian e-commerce market has been the strengthening of the position of universal marketplaces. Total gross merchandise volume (GMV) increased 20-fold from 2019 to 2024, and the marketplaces' share of the e-commerce market grew more than 2.5-fold, from 23% to 64%. For several years, the annual GMV growth of the largest players exceeded 100%, but since 2024, the growth rate has begun to slow: by the end of the 2023–2024 period, the annual growth rate was approximately 54%.

Wildberries and Ozon are the leaders in the Russian e-commerce market in terms of annual sales volume. Their combined share of the online market is 82.5%, with gross sales volume for 2024 estimated at 4 trillion rubles and 2.8 trillion rubles, respectively. They are followed by *Yandex.Market,* the annual GMV of which reached 720 billion rubles, and *MegaMarket,* with 155.7 billion rubles.

MARKETPLACE SHARE OF THE RUSSIAN E-COMMERCE MARKET IN 2024, %



Source: compiled by the authors based on the companies' annual reports

Wildberries is a marketplace which focuses on maintaining a wide selection and competitive prices. Its core audience is made up of shoppers aged 25 to 45 with average incomes. The most popular categories remain Clothing and Footwear, Home Goods, and Children's Goods. Most purchases are made for between 700 to 1,500 rubles. The platform is actively expanding its presence outside of Russia, operating in Belarus, Kazakhstan, Armenia, Kyrgyzstan, Uzbekistan, and Tajikistan, and is also considering entering the markets of China, the Persian Gulf, and other CIS countries.

Ozon's leading categories include Electronics, Home & Garden, Clothing, Footwear, and Accessories, and Children's Goods. The marketplace operates not only in Russia, but also in Armenia, Belarus, Kazakhstan, Georgia, Azerbaijan, Uzbekistan, Kyrgyzstan, and Turkey. Furthermore, as part of the *Ozon Global* program, it is developing import trade with China and Turkey.

Yandex.Market, part of the broader Yandex digital ecosystem, rounds out the top three largest players. Its key feature is integration with other brand services, ensuring a seamless user experience and fostering a stable customer base as part of an omnichannel strategy. More than half of the audience is men aged 25 to 35. The average purchase price on the platform ranges from 4,500 to 5,500 rubles, and purchases tend to be more rational—users take longer to make purchasing decisions, as Yandex.Market is used for purchasing more expensive products (phones, headphones, and home appliances). Yandex.Market is the leader among Russian marketplaces in gadget sales volume.

E-Commerce Logistics in Russia

Russian e-commerce relies primarily on its own logistics infrastructure, which is actively developed by key marketplaces such as *Wildberries and Ozon*.

Warehouses are the central hub of e-commerce logistics, where the entire fulfillment process is carried out: receiving, storing goods, picking orders, and shipping them to the user. For online retailers, the warehouse becomes the point where a virtual order is converted into a physical product ready for delivery.

Demand for such warehouses in Russia has grown sharply. By the end of Q1 2025, the total amount of warehouse space used by online retailers in Russia reached 8.4 million square meters (+33%). Online retail already consumes up to 85% of all warehouse space, while vacancy rates have dropped to a minimum of less than 1%.

Wildberries has a developed infrastructure with 83,000 pickup points and postal services/parcel lockers across all its markets. More than half of these are owned by partner entrepreneurs who have opened their own locations under a brand name.

Furthermore, the logistics infrastructure includes 130 facilities, totaling over 2.5 million square meters, with plans to develop another 18 logistics centers.

Ozon invests billions of rubles in the construction of new logistics centers annually: in 2024, over 48 billion rubles were spent on opening logistics centers in 11 cities. A new sorting center in Kazakhstan was opened in 2025, with an investment of 3 billion rubles.

For delivery to customers, sellers can use the companies' warehouses, which, in turn, will handle all necessary logistics operations. Alternatively, they can deliver in-house or through marketplace partners. For example, *Ozon* partners with Delovye Linii Group and PEC for such purposes. Partners' logistics operations are similar to those of marketplaces, with warehouse space also playing a central role. Delovye Linii Group provides 3PL services in 18 warehouse complexes located in 13 regions of the Russian Federation, with a total area of approximately 85,000 square meters. PEC provides comprehensive 3PL services in 12 Class A and B+ warehouses with a total area of 170,000 square meters in 7 regions of Russia, Belarus, and Kazakhstan.

CROSS-BORDER E-COMMERCE TRENDS

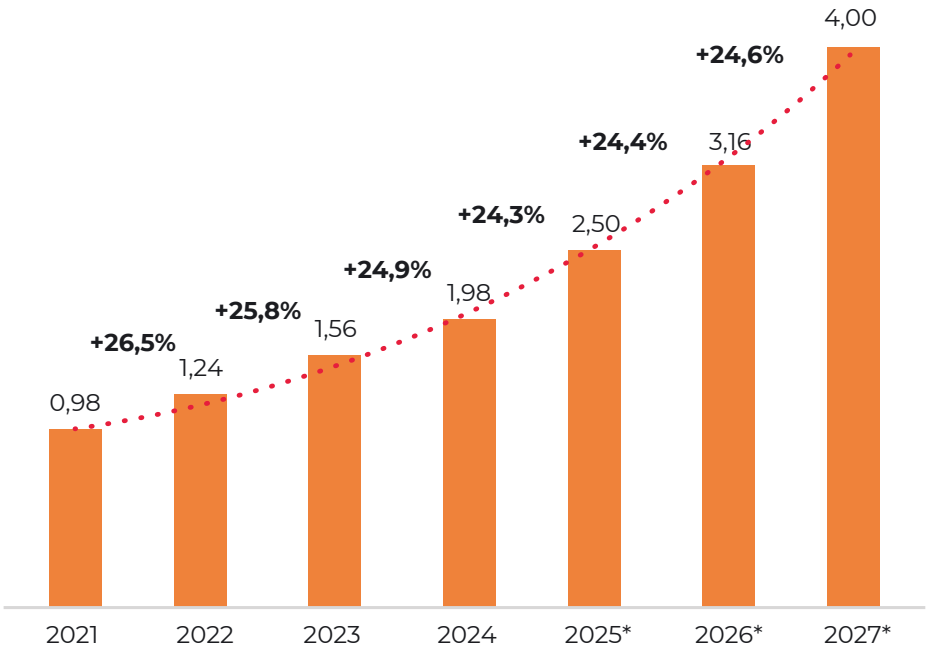
Cross-border e-commerce is a form of international trade in which an order is placed through an online platform and the goods are delivered directly to the end consumer in another country. It involves two key stages: first, the cargo is transported from the foreign supplier to the marketplace or logistics operator's warehouse, where the goods undergo customs formalities and initial processing; then, delivery occurs through the domestic logistics chain, from the warehouse to the end consumer.

Unlike the classic import model, where goods are purchased abroad for subsequent resale in the domestic market (e.g., through distributors or wholesalers), cross-border e-commerce involves targeted delivery in a B2C (business-to-consumer) format.

Cross-border e-commerce accounts for approximately 31.2% of all global online sales. In 2024, the global cross-border e-commerce market was estimated at $1.98 trillion. By 2027, this figure is expected to reach $4 trillion (a twofold increase).

By 2027, approximately 50% of internet users making online purchases will turn to foreign marketplaces. This trend is primarily being driven by the high availability of international delivery, the development of logistics infrastructures, and the convenience of ordering goods remotely. According to DHL, the Chinese market is the most popular among cross-border e-commerce customers, with 57% of customers worldwide, followed by the US (41%) and the UK (23%).

GLOBAL CROSS-BORDER E-COMMERCE SALES, $ TRILLION



Source: Statista
** forecast value*

The Role of B2B Platforms in Shaping China's Cross-Border E-Commerce Logistics

The key factors behind China's leadership in cross-border e-commerce are not limited to the size of its domestic market and its developed logistics infrastructure. They also include the presence of global B2B platforms, which account for a significant portion of export trade flows. Platforms like *Alibaba.com, Global Sources, Made-in-China, DHgate, and YiwuGo* serve as the starting point for millions of international transactions, creating the foundation for subsequent logistics processes.

Through these services, foreign marketplaces, retailers, and distributors process orders, selecting suppliers based on specific parameters, including volumes, production times, delivery options, and customs clearance requirements. Many platforms include integrated logistics solutions, including cargo consolidation, express air or rail delivery, and invoice and customs declaration preparation.

It's worth noting that the choice of delivery routes and types is influenced by the specific platform and product categories. Large shipments of machinery or industrial equipment purchased through *Alibaba or Made-in-China* are more often shipped by sea or container rail. Small orders of electronics, clothing, and accessories, typical for *DHgate and YiwuGo,* are usually delivered by air or multimodal routes.

Modern practices also rely on the digitalization of supplier selection: AI services and specialized CRM solutions integrated into some platforms help international companies assess factory reliability, forecast delivery times and costs, and select logistics routes while taking into account potential customs risks.

B2B platforms have become an important part of the Chinese e-commerce ecosystem, effectively connecting manufacturers and global marketplaces with transport operators, warehouses, and bonded warehouses. This transforms logistics into a seamless chain, beginning at the supplier selection stage, and explains why China is so able to so effectively scale its e-commerce export flows to dozens of countries.

An integral part of this ecosystem is the rapid development of the dropshipping model, which allows for international trade without the need to store goods in the buyer's warehouses. Due to these services, entrepreneurs from different countries can connect to Chinese production facilities without incurring warehousing and inventory management costs. The logistics chain is built with maximum flexibility: goods are consolidated in the supplier's or aggregator's warehouses, undergo the necessary processing (labeling and packaging), and then shipped via air freight or multimodal routes.

Bonded warehouses as a tool for developing cross-border e-commerce

With the rapid growth of cross-border e-commerce, bonded warehouses[1] are becoming increasingly important. These zones simplify the delivery of goods from foreign online stores to Russia, including bypassing certain restrictions. Goods stored in bonded warehouses can clear customs faster, especially if the logistics chain is already established. This is critical for marketplaces and sellers who have products physically located which are available for purchase by Russian consumers.

In many developed countries, bonded warehouses are used for processing, repackaging, and labeling consolidated batches of goods—all under customs supervision but without customs clearance. Until customs clearance is granted, the goods are stored and can be returned if unsold.

In Russia, the bonded warehouse concept is only just beginning to be implemented. A pilot project, with Russian Post serving as the main operator, began on April 1, 2023. The pilot project involves a single 2,000 square meter warehouse in Kazan, located in the Russian Post logistics hub. Goods are stored in the warehouse under a preferential regime: import duties, VAT, and excise taxes are assessed not during the border crossing, but only upon actual sale to the end consumer. This experimental model is beneficial for everyone: sellers are able to purchase large quantities without blocking funds and sell them gradually; the state guarantees tax revenue as sales proceed; and consumers benefit from lower prices and faster delivery (delivery times are reduced from several weeks to 2-3 days).

The number of existing bonded warehouses in Russia is limited, and extensive plans to expand such zones to other regions or border logistics hubs remain under discussion. By comparison, China has more than 20 large-scale bonded warehouses, including free trade zones in Shanghai, where light processing, labeling, and export-re-export are permitted. The Chinese approach demonstrates that such zones serve as an effective tool, not only for storage but also for technologically advanced, high added value logistics.

Thus, the lack of a developed bonded warehouse network limits the potential for cross-border e-commerce: delivery times and costs increase, and the returns chain becomes more complex. In this regard, Ozon has already announced plans to establish the first bonded warehouse in the Moscow region by 2026–2027, with an investment of 6–8 billion rubles.

Rail Freight for E-Commerce

With the growth of cross-border e-commerce and the expanding geography of online orders, rail transport is increasingly being viewed as a potential channel for delivering e-commerce goods over medium and long distances, between China, the EAEU countries, and Europe.

1 A bonded warehouse is a site or warehouse where sellers can place goods from abroad and pay taxes only on those that they sell.

The recent launch of a new Guangzhou-Italy route as part of the China-Europe Railway Express represents an important addition to China's cross-border e-commerce infrastructure: the train delivers typical consumer goods (clothing, small appliances, kitchenware) in 13 days, more than twice as fast as sea freight and approximately five times cheaper than air freight.

Unlike slow sea freight and expensive but fast air freight, rail transport occupies an intermediate niche, offering a balance between delivery time and cost. The average transit time between Chinese logistics hubs (e.g., Chongqing, Urumqi, Yiwu) and distribution centers in Russia ranges from 10 to 20 days, depending on the route and final destination. Transportation costs are also an advantage of rail. At the beginning of 2025, the average cost of air freight was approximately $3.20 per kilogram. By comparison, in March of the same year, shipping a 40-foot container by rail cost $3,300–$3,700, while shipping the same volume by road cost $7,000–$8,000. Thus, rail freight can be 3–5 times cheaper than air freight, and with well-established logistics and efficient loading, savings can improve by 30–40%.

For cross-border trade, this is especially important in high-price segments, where customers are willing to wait a little longer for lower shipping costs. The greatest interest is coming from marketplaces and manufacturers that work with high-value-added goods with a long shelf life: consumer electronics (smartphones, tablets), clothing and footwear, household goods, toys, and children's products. Railroads offer more sustainable logistics: less dependence on weather conditions, high cargo security, and a relatively predictable delivery schedule.

In 2023, Russian Railways launched a service for the rail transportation of e-commerce goods and postal products from the Chinese border city of Hongchun to Vladivostok. Ozon and “RZD Logistics” (Russian Railways Logistics) implemented a pilot project to launch container routes between China, Russia, and Belarus, where they implemented an end-to-end cargo tracking system and partially automated document flow. This marked an important step toward integrating digital platforms with physical infrastructure. *Wildberries* is already actively using multimodal solutions, including rail routes, in inter-warehouse logistics and regional distribution. Russian Post is accumulating similar experience, having partnered with logistics operators to test rail parcel delivery from China, including transit through Kazakhstan and Mongolia.

However, the advantages in cost and volume are accompanied by potential limitations that hinder the widespread use of rail transport in cross-border e-commerce.

1. Rail transport cannot compete with air transport in terms of speed. Even along key China-Russia routes, delivery takes 14-18 days. For example, in the branded clothing and fast-moving consumer goods (FMCG) segment, where fast delivery is essential, such timeframes are irrelevant.
2. Unlike road transport, which can deliver cargo door-to-door, rail requires additional transshipment at terminals and subsequent distribution by road. This increases costs, complicates the logistics chain, and increases the risk of cargo damage.

3. The capacity of some border crossings, particularly in the Far East and the Trans-Baikal Territory, as well as on transit routes through Kazakhstan and Mongolia, is limited. These problems are exacerbated during periods of high seasonal demand, as rail infrastructure is not always ready for high-frequency e-commerce shipments.

1. Not all goods are suitable for rail transport: fragile, temperature-sensitive, perishable, or high-value goods require more careful and rapid solutions.

Despite these challenges, major e-commerce players, as noted above, have already begun integrating rail solutions into their supply chains. Although rail transport cannot yet compete with air travel in terms of speed, it offers significant advantages in terms of cost and sustainability. Given digitalization and the expansion of multimodal routes, its role in e-commerce will only grow. In the future, rail transport may become a strong part of e-commerce supply chains, especially for large marketplaces and cross-border suppliers.

RUSSIA'S CROSS-BORDER E-COMMERCE MARKET

In 2024, the turnover of the Russian cross-border e-commerce market involving individuals grew by 5.1% compared to 2023, reaching 329 billion rubles. The volume of cross-border online orders placed by Russian consumers also demonstrated moderate growth: by the end of 2024, their number increased by 3.7% to reach 168 million. However, the overall growth rate of cross-border trade during this period remained subdued, largely due to difficulties encountered in the payment process for goods purchased from Chinese suppliers. Specifically, in the second half of 2024, Chinese banks tightened requirements for Russian counterparties, significantly complicating mutual settlements.

Market analysis shows that almost all cross-border online orders in Russia (approximately 98%) are generated by deliveries from China. In April 2025, parcel imports from Chinese online stores increased 80% compared to the previous year. Therefore, the stability and predictability of payment and logistics mechanisms in Russian-Chinese trade relations are critical for the continued growth of this segment.

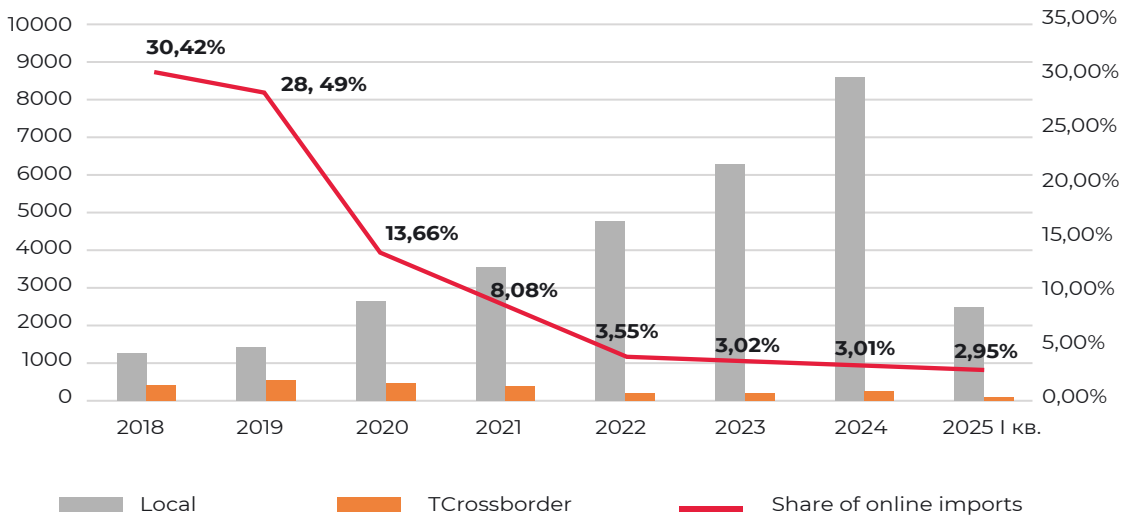
According to forecasts from analytical agencies Data Insight and GBS, the volume of cross-border e-commerce in Russia could reach 404 billion rubles by the end of 2025, a 22.8% increase compared to 2024. Moreover, the expected number of orders will be approximately 209 million units, representing a 24.4% year-on-year increase.

Despite this positive growth trend, the share of cross-border trade in the Russian e-commerce market remains extremely low. According to the Online Retailers Association (AKIT), as of May 2025, it constituted only 3% of the total e-commerce market in the country.

In 2018–2019, the share of cross-border trade reached 30%. This significant decline was driven by two key factors: global logistics disruptions in 2020–2021 and sanctions restrictions introduced after 2022, which together led to a more than 90% decline in the cross-border segment.

By May 2025, the situation with cross-border payments had partially stabilized, providing grounds for more favorable forecasts for the development of foreign e-commerce this year. At the same time, in addition to external economic factors, changes in the regulatory framework also contributed to the decline in the share of cross-border trade. For example, starting in April 2024, the duty-free threshold for personal goods imported into Russia was lowered from €1,000 to €200, making international orders less attractive to private consumers and curbing the volume of foreign purchases.

RUSSIAN E-COMMERCE MARKET, BILLION RUBLES



Source: AKIT

Cross-border e-commerce logistics in Russia

Cross-border logistics in e-commerce are characterized by increased sensitivity to changes in the international environment. Unlike domestic deliveries, cross-border shipping involves not only overcoming large geographical distances but also constant interaction with customs authorities, various legal regimes, labeling, certification, and currency control requirements. Issues of timeliness, transparency, and supply chain stability are particularly critical.

Air logistics is a key tool for cross-border trade: approximately 87% of all cross-border e-commerce parcels are delivered by air. This choice is driven by the need to ensure fast delivery, especially in the face of increasing competition between marketplaces and consumer expectations for immediate delivery. In turn, land transport offers a reliable alternative.

1. AliExpress Case Study: E-Commerce Delivery to Russia

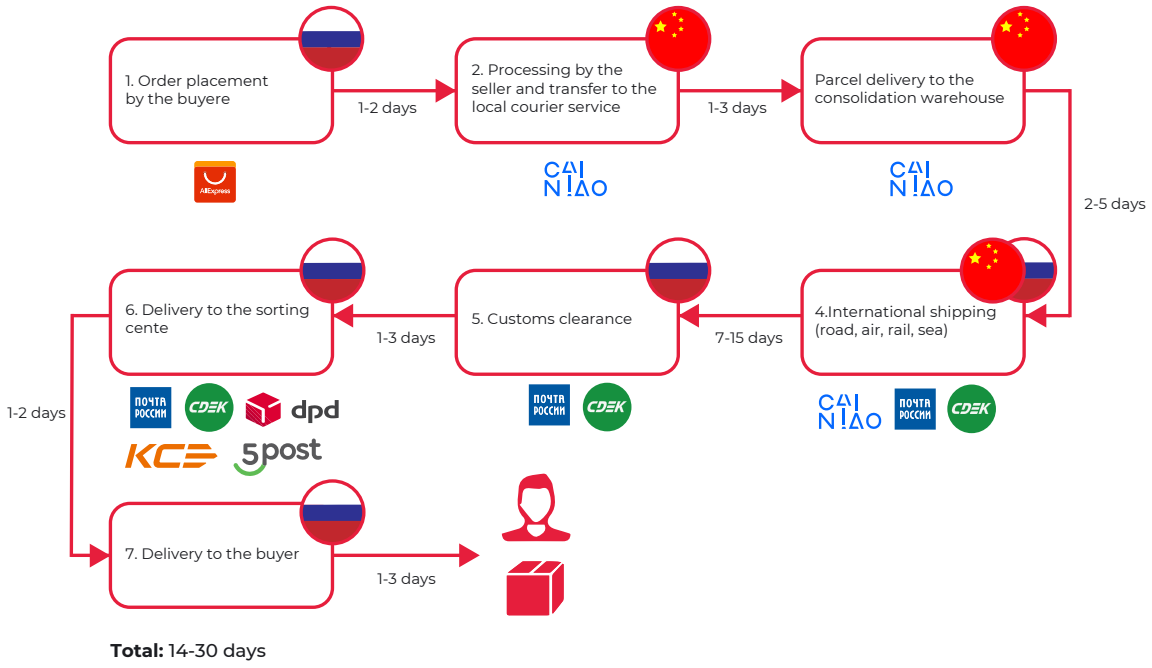
AliExpress partners with Cainiao, a logistics operator within the *Alibaba Group,* for delivery. After an order is placed in China, goods are sent to one of Cainiao's logistics hubs, where they undergo initial sorting, packaging, and batching. The shipments are then shipped to Russia primarily by air—most commonly to Moscow, Yekaterinburg, Novosibirsk, or Kazan. International shipping is provided by *Cainiao,* as well as partners such as Russian Post, *CDEK*, and *Boxberry. Cainiao* plays a key role, handling over 90% of *AliExpress* shipments worldwide.

In Russia, delivery is handled by partner services: *Cainiao* works closely with Russian Post, as well as private delivery services (such as DPD, 5POST, and CSE), which ensure delivery to the buyer's door or pickup points. All customs procedures are automated: parcels are processed through a simplified electronic declaration procedure if their value does not exceed 200 euros. Otherwise, the buyer is required

to pay customs duties. Due to its centralized import model and unified logistics chain, *AliExpress* is able to maintain delivery times of 10-14 days to major Russian cities.

AliExpress Russia has opened its own fulfillment centers: a 55,000-square-meter warehouse complex in Chekhov, warehouses in Kazan, Rostov-on-Don, and Yekaterinburg, as well as partner warehouses with up to 140,000 square meters of space in Domodedovo and Podolsk to serve local sellers

SUPPLY CHAIN FOR E-COMMERCE PRODUCTS PURCHASED ON THE ALIEXPRESS PLATFORM



Source: compiled by the authors based on AliExpress data

2. Ozon Global's Case Study: E-Commerce Delivery to Russia

Ozon Global's logistics are built on a multi-tier model with a clear role for external partners and its own infrastructure. After opening an office in Shenzhen in 2022, *Ozon* is actively expanding into the Chinese market: the headquarters has become the link between sellers and Russian consumers.

One of the key elements is its import partner hubs, located in various regions of China. The initial hubs operated in the border cities of Hunchun, Suifenhe, Harbin, Heihe, and Khorgos, facilitating deliveries to Russia via rail and road routes. In 2024–2025, six more facilities were added: in Dongning, Alashankou, Hangzhou, Dongguan, Yiwu, and Shanghai. Moreover, the Dongning and Alashankou hubs are

located in bonded warehouses, which entitles sellers to VAT refunds and expedites shipment delivery.

OZON PARTNER WAREHOUSES IN CHINA

Source: Ozon

There are two key delivery models in cross-border e-commerce: FBP and realFBS. Logistics change depending on the seller's model.

FBP (Fulfillment by Partner) is a sales model that allows sellers to place their goods in Ozon partner warehouses (the warehouse geography is noted above). FBP can be considered a "hybrid" between FBO and FBS, but for cross-border deliveries. The seller regularly ships their goods to the consolidation warehouses of Ozon's foreign partners (for example, in China). These warehouses act as an “intermediary” between the seller and the buyer in Russia.

Once goods arrive at a partner's warehouse, they are accepted, stored, and accounted for in the system. The seller is required to regularly replenish inventory in order to maintain uninterrupted sales. When a Russian buyer places an order, the Ozon system automatically reserves the required item in the warehouse. The Ozon partner then performs the full fulfillment cycle: assembling the order, checking its

quality, packaging and labeling it in accordance with established requirements, and then preparing it for shipment. The logistics operator connected to this system transports the order to Russia, handles customs clearance, and updates the delivery status in the Ozon system. At the final stage, the so-called "last mile," the goods are delivered to Ozon's fulfillment network—pickup points, parcel terminals, or via courier service. If a return is necessary, the buyer returns the goods to an Ozon location in Russia, after which they are centrally shipped back to the partner's warehouse in China, or are subject to recycling or resale in Russia, depending on the agreed-upon terms.

HOW FBP DELIVERY WORKS

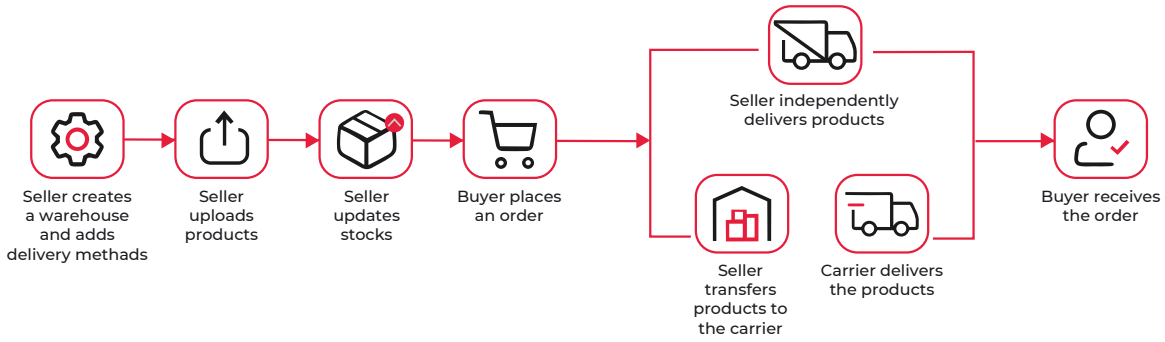
Source: Ozon

Ozon Global actively partners with Chinese third-party logistics aggregators such as *China Post, RETS, OYX, Tanais, ABT, GUOO, XY, Leader, ZTO, ATC, IML, Ural, UNI, CEL, 7D, GBS, and Xingyuan Express*, enabling sellers from various provinces to ship cargo to local partner hubs in China. Ozon's main partners in Russia are SDEK, Delovye Linii, Podorozhnik, Russian Post, L-Post, PEK, and DPD.

With the realFBS (Real Fulfillment by Seller) model[2], the seller takes full control of the fulfillment process. After the buyer places an order on *Ozon*, the system forwards the request to the seller, who independently handles all stages: from picking the order in their warehouse to packaging and labeling according to *Ozon* requirements. The seller organizes the shipment themselves—whether it's air freight, multimodal transport, or even door-to-door delivery through their logistics partners. Upon arrival in Russia, the goods undergo customs clearance, either under their own legal status or with a broker, and are then transferred to the *Ozon* network for final delivery. The marketplace only controls the order processing and status updates, but is not involved in the physical logistics—this remains entirely the seller's responsibility. The seller can choose the optimal channel—for example, using a courier network integrated with *Ozon* (see the list of partners above) to ensure delivery to the buyer or pickup point. This model allows for flexible logistics tailored to the product range, taking into account route specifics, and offering unique product categories (large, fragile, requiring special conditions) that are difficult to process in the marketplace's warehouses.

2 Unlike the FBS (Fulfillment by Seller) model, where the marketplace arranges delivery to the buyer from the seller's warehouse, with realFBS, the seller handles delivery themselves, using marketplace partners or third-party shipping companies

HOW DELIVERY WORKS UNDER THE REALFBS MODEL



Source: Ozon

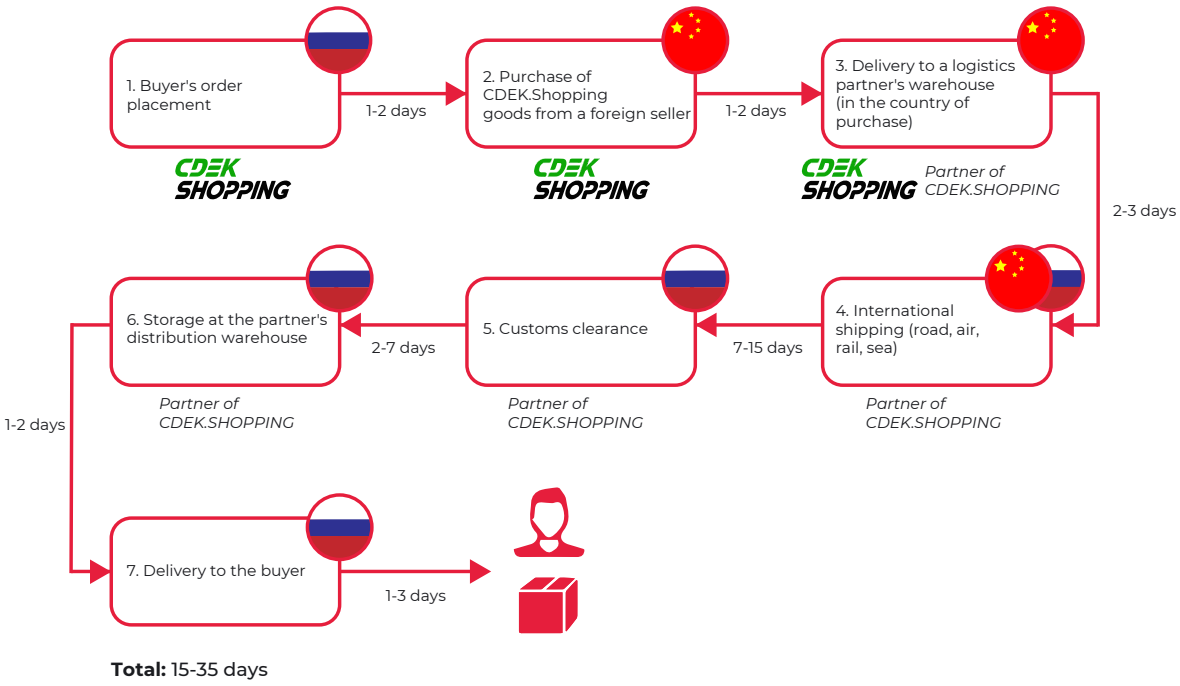
3. CDEK.Shopping's Case Study on E-Commerce Delivery to Russia

CDEK.Shopping is a service that allows you to order products from international online stores with delivery to Russia. Unlike marketplaces, where sellers list products directly and arrange delivery to the buyer, CDEK.Shopping acts as an intermediary: the buyer selects the desired product, pays for it through the platform, and the service independently purchases it from the international seller and arranges delivery. What makes this service unique is that it handles all operational, customs, and logistical issues.

Delivery typically takes two to four weeks, but delivery times may vary depending on the country of origin, shipping conditions, and customs regulations. In order to organize delivery, the service utilizes a large number of partner companies that handle purchase, transportation, storage, and delivery to the buyer. Estimated delivery times are provided when placing an order, and if delivery is delayed by more than eight weeks, the customer is offered the option to wait for the order to arrive or cancel it for a full refund. Orders are typically stored in a partner company's warehouse for up to seven days, allowing for technical and logistical considerations.

At the same time, CDEK.Shopping is attractive not only to individuals purchasing goods for personal use but also to entrepreneurs thanks to its "Wholesale from China" service. Unlike a typical retail shopping platform, this service is focused on large quantities of goods and handles the entire procurement and delivery process. The buyer selects the desired items on the platform, places an order, and pays for the order, after which CDEK.Shopping arranges for the purchase from the Chinese seller and the transportation of the goods to warehouses in Russia.

SUPPLY CHAIN OF E-COMMERCE GOODS PURCHASED ON THE CDEK.SHOPPING PLATFORM



Source: compiled by the authors based on CDEK.Shopping data

Potential for using rail transportation in cross-border e-commerce

When considering three cases—*AliExpress, Ozon Global, and CDEK.Shopping* — from the perspective of rail transportation opportunities, several features stand out.

AliExpress primarily focuses on small wholesale and retail orders with a global logistics network, where air freight predominates for faster delivery. Rail is used more often as a secondary option, but its share of individual orders is small. Rail's niche here is limited: large warehouses and integration with local courier networks are needed to ensure cost-effective delivery to the end customer.

Ozon Global works with large partners and uses a marketplace model with its own logistics in Russia. Delivery to the country is primarily achieved via air and land routes, but final delivery is carried out by local courier companies. Rail is an attractive option for delivering batches of goods to distribution centers within the country, especially for product categories where speed is not critical but transportation cost is important.

CDEK.Shopping is unique in that it operates as an intermediary service for purchasing international goods based on customer orders. This provides flexibility in choosing routes and means of transport. Since goods arrive in batches from different sellers, third-party logistics companies are involved, including rail freight for shipments from China and other CIS countries. Rail freight has a more distinct niche here: it can specialize in large shipments with predictable delivery schedules, where speed isn't critical, but reliability and the ability to consolidate shipments for cost savings are important.

Thus, the most niche segment for rail carriers is the *CDEK.Shopping* model and its “Wholesale from China” service, where large-batch delivery and the use of various transport modes allow for the effective integration of rail into the logistics chain. *AliExpress* is more focused on expedited delivery via air freight, while *Ozon Global* focuses on domestic logistics, where rail is used to a limited extent.