

# Evaluation Report On Green Transformation Of China's E-commerce Express Packaging 2023



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# Executive Summary

## Introduction

Since its emergence in the late 1990s, e-commerce has rapidly evolved, providing Chinese consumers with diverse product options and a highly convenient shopping experience. For 11 consecutive years, China has been the largest online retail market globally, with online retail sales of physical goods accounting for nearly one-third of total consumer goods retail sales. This sector has fostered the growth of some of the world's leading Chinese e-commerce platforms and fueled the rapid expansion of the courier industry.

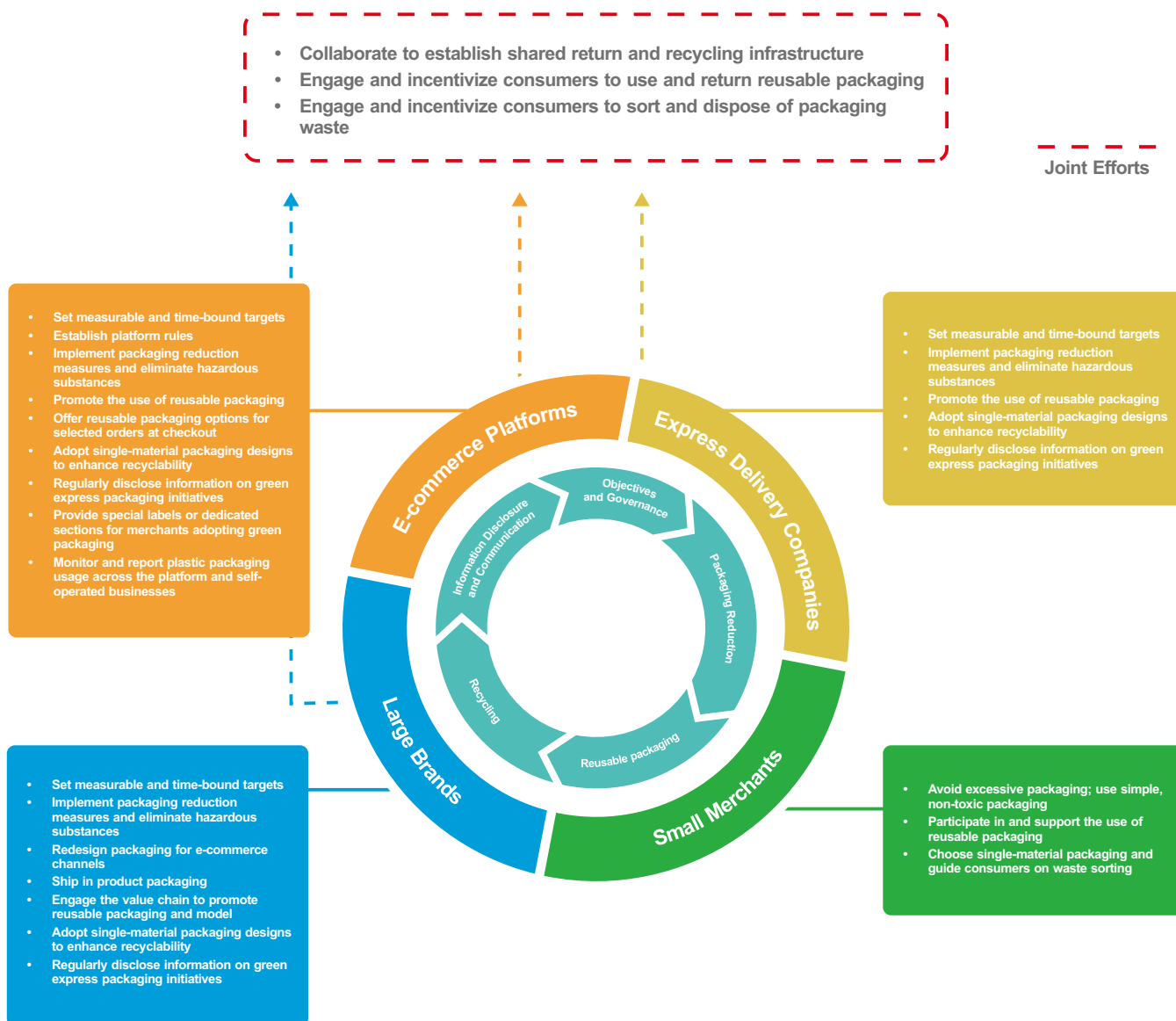
However, the surge in online sales has resulted in a dramatic increase in express delivery volumes and, consequently, packaging waste. This issue has drawn regulatory attention and generated interest in capital markets. At the end of 2023, the National Development and Reform Commission built on its 2020 directive, Opinions on Accelerating the Green Transformation of Express Packaging, by introducing the Action Plan for Advancing the Green Transformation of Express Packaging. This plan outlines reinforced requirements for the greening of e-commerce express packaging and highlights the pivotal role of e-commerce platforms in driving this transformation.

Globally, sustainable investment institutions and regulators are prioritizing issues such as plastic pollution, waste management, and the circular economy, incorporating these into risk management and disclosure requirements. In 2024, the Ministry of Finance released the Corporate Sustainable Disclosure Standards – General Guidelines (Draft for Comments), marking a shift toward mandatory sustainable disclosure, gradually expanding from listed to non-listed companies in China. For e-commerce and express delivery businesses, packaging management has become a key ESG issue, requiring proactive management measures and transparent reporting.

The confluence of regulatory mandates and growing investor expectations highlights the urgent need for companies to accelerate green packaging efforts. Achieving this transformation demands leadership from e-commerce platforms and coordinated efforts across the value chain, given the intricate network of stakeholders involved.

This report outlines a framework for green transformation and actionable pathways for four types of enterprises in the e-commerce value chain. The framework integrates policy requirements, industry practices, corporate initiatives, and internationally recognized ESG evaluation and disclosure standards.

In the e-commerce ecosystem, companies' roles in advancing green packaging solutions differ based on their positions and capabilities within the supply chain. These roles are interconnected, requiring collaborative efforts to drive systemic and meaningful change. Among the four key enterprise types in this transformation—e-commerce platforms, express delivery companies, large brands, and small merchants—platforms and delivery companies are particularly influential in shaping the industry's progress.

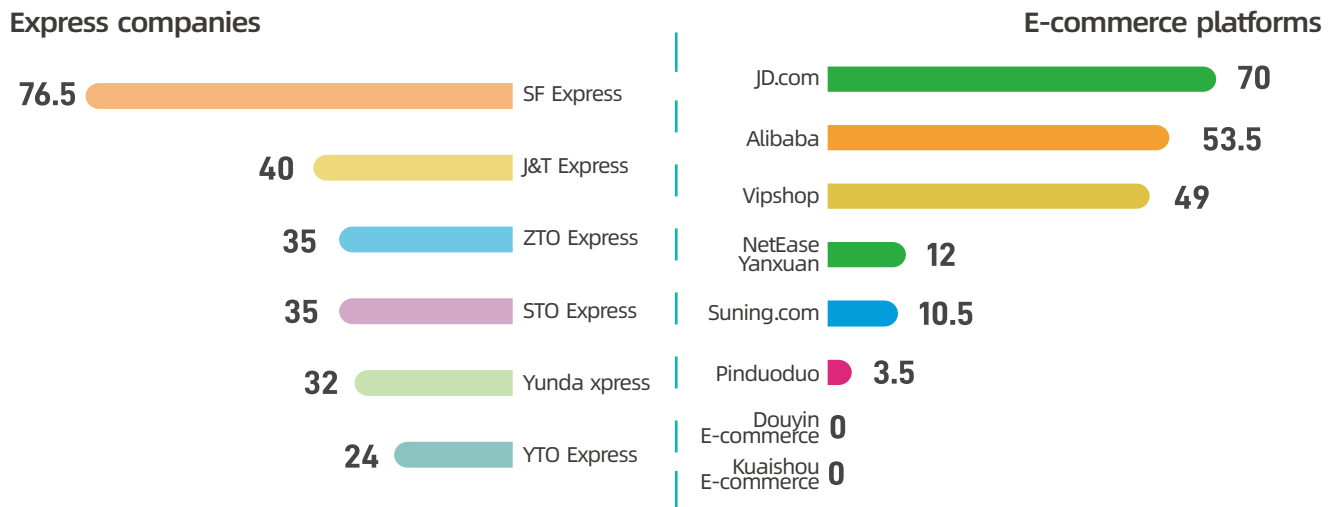


Among the four key types of enterprises involved in the green transformation of e-commerce express packaging, e-commerce platforms and express delivery companies are the most prominent, playing a central role in driving change. This report centers on these two categories of enterprises, developing an evaluation framework and actionable pathways for the green transformation of packaging, along with an indicator system to assess their performance and impact systematically.

The evaluation system is structured around five primary action dimensions, with each dimension broken down into secondary indicators, which are weighted accordingly. Recognizing the distinct responsibilities and strengths of e-commerce platforms as key industry drivers, and in line with their highlighted leadership role in the Action Plan for Advancing the Green Transformation of Express Packaging, additional indicators have been incorporated to reflect their specific obligations and capabilities within the evaluation framework.

To provide a comprehensive evaluation, the report analyzes 14 leading companies across both sectors, selected based on their market influence, competitiveness, market capitalization, and industry share.

## Overview of Company Rankings



## Key Findings

Under the guidance of the State Post Bureau, China's express delivery companies have adopted consistent strategies for the green transformation of packaging. Key initiatives include strengthening internal governance, reducing packaging, promoting reuse and recycling, and enhancing information disclosure. Leading companies excel in research and innovation, while lower-ranked firms have also implemented green measures and actively reported on their efforts, reflecting strong industry-wide synergy.

Among the six express delivery companies evaluated in this report, SF Express leads with 76.5 points (out of 100), reflecting strong performance across multiple dimensions. Companies ranked in the middle include J&T Express, ZTO Express, and STO Express, with scores ranging from 35 to 40. At the lower end, Yunda Express and YTO Express scored 32 and 24, respectively.

In contrast to express delivery companies, e-commerce platforms show notable disparities in their actions, outcomes, and information disclosure related to the green transformation of packaging, with significant polarization between companies. Some established platforms have made progress over the years in green packaging transformation and provide more comprehensive disclosures. However, emerging platforms such as Pinduoduo, Douyin E-commerce, and Kuaishou E-commerce have yet to incorporate packaging issues into their core ESG strategies, resulting in limited actions and disclosures, placing them at the lower end of the rankings.

Among the eight e-commerce platforms evaluated, JD.com, Alibaba, and Vipshop form the first tier, scoring 70, 53.5, and 49 (out of 120), respectively. NetEase Yanxuan and Suning.com are categorized in the second tier, with scores of 12 and 10.5, highlighting a substantial gap from the first tier. Pinduoduo, Douyin E-commerce, and Kuaishou E-commerce, which have yet to incorporate packaging issues into their sustainability agendas, received nearly zero scores.

## Summary and Recommendation

This report evaluates the green packaging efforts within the e-commerce and express delivery sectors, highlighting notable differences between the two industries. While the Action Plan for Advancing the Green Transformation of Express Packaging stresses the leadership role of e-commerce platforms, the current landscape reveals significant disparities. A large number of emerging retail platforms, including giants like Pinduoduo, which have market valuations surpassing those of established industry leaders, remain passive in their engagement with green packaging efforts. These platform companies urgently need to establish their own sustainability strategies and incorporate green packaging into them. At the same time, the express delivery industry must continue to innovate and advance in areas such as packaging reduction and reuse to maintain momentum in the green transition.

Based on the identified gaps in action and performance, the report provides the following recommendations to accelerate the green transformation of both sectors:

### Set Measurable and Time-bound Green Packaging Targets

01

E-commerce and express delivery companies should urgently establish measurable and time-bound targets for green packaging, focusing on reducing packaging waste, increasing the use of reusable packaging, improving recycling rates, and utilizing recycled content. Companies with existing carbon reduction goals should integrate packaging-specific objectives into their broader sustainability strategies to contribute to overall corporate carbon reduction efforts.

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02

### **Accelerate the Adoption of Reusable Packaging**

The Action Plan for Advancing the Green Transformation of Express Packaging targets 10% of same-city deliveries using reusable packaging by 2025. Achieving this goal requires broad industry participation, not just the actions of a few leading companies. Businesses that have not yet adopted reusable packaging should make it a priority to incorporate it into their operations. Additionally, e-commerce platforms should offer reusable packaging options at checkout to encourage wider consumer adoption.

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03

### **Build Collaborative Packaging Return and Recycling Systems**

To enable large-scale reuse and recycling of express packaging while minimizing costs, companies must extend beyond internal logistics and delivery networks. E-commerce platforms and express delivery companies should collaborate with wider stakeholders (e.g. brands, reusable packaging suppliers, government bodies, industry associations, and NGOs) to create a shared, cross-enterprise return and recycling infrastructure.

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04

### **Leverage the Leadership Role of E-Commerce Platforms**

E-commerce platforms vary significantly in their green packaging strategies. Platforms lagging in sustainability must accelerate their efforts to prevent free-riding. In addition to refining green packaging objectives for self-operated businesses, platforms should strengthen rule-setting and oversight, establish effective incentive mechanisms, and collaborate with large brands and express delivery companies across the value chain. Joint efforts on packaging reduction design, shipping in product packaging, and large-scale application of reusable packaging will be essential to advancing the industry's green transformation.

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04

### **Foster Continuous and Targeted Consumer Engagement**

E-commerce and express delivery companies should not limit consumer communication on green packaging to ad-hoc environmental campaigns. Efforts should focus on educating consumers about reuse and recycling options while encouraging the adoption of sustainable packaging. By implementing effective messaging and offering incentives, companies can shape long-term consumer preferences for green packaging and promote sustainable consumption habits.

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# 06

## Enhance the Quality of Information Disclosure

Despite high market concentration and the presence of many publicly listed companies in the e-commerce and express delivery sectors, significant gaps persist in the quality and transparency of sustainability-related disclosures, particularly on packaging. Companies should align with recognized sustainability frameworks to provide comprehensive reports on environmental risk assessments, packaging management strategies, and measurable outcomes of green packaging initiatives. Improved transparency will empower stakeholders to evaluate progress effectively and identify areas for improvement.

## Research Limitations

This report recognizes the following limitations in its research methodology:

**1. Dependence on Publicly Available Information:** The ranking methodology is primarily based on information accessible in the public domain. Companies that do not disclose specific green packaging measures may not be adequately represented, even if such initiatives are part of their operational practices.

**2. Scope of Data Coverage:** Data availability constraints may result in the report not fully reflecting all relevant publicly disclosed information from companies for the period between January 1, 2023, and December 31, 2023.

**3. Verification of Data Authenticity:** The evaluation and scoring rely on data disclosed by companies or directly provided by them. However, the report does not independently verify the authenticity of this data or the actual implementation of reported measures.

We are committed to continuously monitoring advancements in green packaging within the e-commerce and express delivery sectors. By refining our evaluation frameworks and research methodologies, we aim to support and accelerate the transition toward sustainable packaging practices in the industry.





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Release date: December 2024

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