April 14, 2023

Shein, Temu, and Chinese e-Commerce: Data Risks, Sourcing Violations, and Trade Loopholes

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This Issue Brief details the challenges posed by Chinese “fast fashion” platforms, including exploitation of trade loopholes; concerns about production processes, sourcing relationships, product safety, and use of forced labor; and violations of intellectual property rights. These platforms primarily rely on U.S. consumers downloading and using Chinese apps to curate and deliver products. The primary focus of this Issue Brief is first mover Shein, about which the most data is available, with additional discussion of Temu, which has rapidly expanded its U.S. market presence in the past year. These firms’ commercial success has encouraged both established Chinese e-commerce platforms and startups to copy its model, posing risks and challenges to U.S. regulations, laws, and principles of market access.

Key Findings

Founded in 2008, Shein has emerged as a leading player for “fast fashion”* consumers. Shein and similar companies work to market new, fashionable clothes from online and celebrity trends and deliver them quickly to consumers. Amid increased online purchases and fast-shifting trends influenced by social media, fast fashion has grown to a $106.4 billion industry as of 2022.† Using data analysis of its users’ search history and a consolidated and high-speed supply chain, Shein has outpaced competitors—including Zara and H&M—to take a dominant position in the U.S. market, a business model that other Chinese firms are seeking to replicate.

Numerous controversial practices have supported Shein and other Chinese e-commerce firms’ rapid growth. Investigations in 2022 alleged that Shein failed to declare that it had sourced cotton from Xinjiang for its products, a violation of the Uyghur Forced Labor Prevention Act. These claims are exacerbated by further reports of illegal labor conditions among the suppliers of Chinese fast fashion firms as well as findings that Shein products pose

health hazards and environmental risks. Shein and several other Chinese fast fashion firms have also faced a high volume of copyright infringement accusations and lawsuits for intellectual property (IP) rights violations.

Shein and similar companies present a range of challenges to U.S. interests, including difficulties monitoring supply sources and obstacles in ensuring fair market practices with U.S. competitors. These companies also exploit trade de minimis import exemptions, through which firms make shipments to the United States that are below an $800 value and are therefore not subject to import duties. Taken together, Shein and similar firms serve as a case study of Chinese e-commerce platforms outmaneuvering regulators to grow a dominant U.S. market presence.

Shein’s Business Model: User Data and Supply Chain Integration

Shein’s business model is distinguished by its reliance on tracking and analyzing user data. Founded by Chris Xu, a Chinese national with a background in search engine optimization, Shein draws on customer data and search history with the assistance of artificial intelligence (AI) algorithms to discern emerging fashion preferences and patterns. With these rapid insights, Shein can begin manufacturing and delivering clothes to market ahead of competitors. To aid its data collection, the company’s app also requests that users share their data and activity from other apps, including social media, in exchange for discounts and special deals on Shein products.

While Shein has a supplier model built on tech-driven insights, it has struggled to protect user data. New York State fined Shein’s owner, Zoetop—a Hong Kong-based LLC that owns Shein and sister company ROMWE—$1.9 million in 2022 for mishandling credit card and other personal information following an investigation of a 2018 cyberattack that exposed the user data of 39 million accounts, including 800,000 users in New York. The office of the New York attorney general found that Zoetop had misled consumers about the extent of its data breach, had notified “only a fraction” of affected users that data credentials had been compromised, and had not reset the login credentials or otherwise taken steps to protect many of the exposed accounts.

Aside from anticipating trends, Shein’s success also hinges on its ability to deliver products to consumers on a compressed timeline and at low cost. The company’s integrated supply chain enables it to bring clothes to market in about five to seven days, when its competitors may take three weeks or longer. While Shein initially marketed products it purchased from third parties, it has built a sizeable exclusive supplier base in Guangdong Province, allowing it to improve manufacturing and delivery times. According to a 2021 report by United Kingdom (UK)-based Channel 4, nearly half of the clothing suppliers in Guangzhou are partnered with Shein. This control over its own supply enables Shein to produce small batches of apparel quickly, rather than the typical practice of placing bulk orders, as U.S. firms do. Shein may produce as few as 50 pieces of clothing in its first production batch in order to accelerate delivery to buyers.

Although founded in China, Shein does not sell domestically, instead marketing products exclusively abroad. Its presence has grown considerably in the United States over the last three years. With an aggressive digital and social media advertising campaign complemented by the expansion of online buying during the COVID-19 pandemic, Shein’s market share of fast fashion sales in the United States rose from 18 percent in March 2020 to 40 percent in March 2022. By November 2022, Shein accounted for 50 percent of all fast fashion sales in the United States, ahead of brands H&M (16 percent) and Zara (13 percent). After surging past Tiktok, Instagram, and Twitter to briefly become the most downloaded app in the United States in May 2022, Shein maintained its growing popularity.

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7 Of the leaked New York resident accounts, 375,000 were via Shein accounts, and 255,294 New York residents were not notified about the breach, according to the New York attorney general’s office. Zoetop did not detect the intrusion until it was later notified by its payment processor that its systems appeared to have been compromised. In addition, Zoetop’s public statements about the breach misrepresented the breach’s size and scope. For example, Zoetop falsely stated that only 6.4 million consumers were affected by the breach and that the company was working notifying all of the impacted customers. Zoetop also represented, falsely, that it “had seen no evidence that [customer] credit card information was taken from [its] systems.” Two years later, Zoetop found customer login credentials for ROMWE accounts available on the dark web. New York State Office of the Attorney General, Attorney General James Secures $1.9 Million from E-Commerce SHEIN and ROMWE Owner Zoetop for Failing to Protect Consumers’ Data, October 12, 2022. https://ag.ny.gov/press-release/2022/attorney-general-james-secures-19-million-e-commerce-shein-and-romwe-owner-zoetop.

finishing the year as the most downloaded platform for beauty and fashion across the U.S. application marketplace. With 27 million downloads, Shein had more than double second-place Nike’s 12.5 million downloads.

The experience of Shein’s expanding presence in the United States runs counter to that of U.S. e-commerce platforms in China. Major digital and e-commerce firms face staunch regulatory barriers establishing operations, including onerous censorship restrictions and stiff legal regulations regarding cybersecurity. These market and non-market barriers forced Amazon to close down its Chinese marketplace in 2019.

### Chinese e-Commerce on U.S. Social Media

Social media increasingly plays a central role in the marketing of goods to U.S. consumers. In 2022, U.S. firms spent an estimated $56 billion promoting their products on social networks. Half of Gen Z (18–25) and Millennial (26–41) consumers made purchases directly via social media platforms, according to the 2022 U.S. Digital Trust Survey.

Among Chinese e-commerce firms, Shein and Temu—another China-based fast fashion app—are particularly well positioned to exploit social media platforms as a key conduit to U.S. consumers. Shein has more than 250 million followers across its social media channels. The “#shein” TikTok tag has over 3.3 billion views. Temu has invested heavily in social media marketing, purchasing 8,900 ads across Meta platforms in January 2023 alone.

Both Shein and Temu partner closely with social media influencers. In a standardized application process on its website, Shein seeks influencer partnerships in exchange for shopping perks, bonuses, and exposure to its “community of 1M+ followers.” Temu, which requires applicants to have at least 300 followers, similarly offers shopping perks and rewards. Influencers are encouraged to post “haul” videos of Shein and Temu products on U.S. social media platforms, where they are shown trying on clothes and other accessories and recommending products to followers.

### Controversies in Shein’s Business Practices

Several concerning patterns and practices have aided Shein’s market approach.

- **Forced labor.** Shein cotton apparel sourcing practices appear to be in direct violation of the Uyghur Forced Labor Prevention Act. A Bloomberg investigation published in November 2022 cross-referenced climate and weather signatures on cotton fabrics used in clothing from Shein to determine that they originated in Xinjiang. The Uyghur Forced Labor Prevention Act bans the use of Xinjiang cotton in imported clothing unless the supplier can definitively prove that the cotton was not a product of forced labor, a step that Shein has not taken.

- **Other exploitative labor practices and labor violations.** Outside of concerns about forced labor, a 2022 investigation by Channel 4 found a pattern of labor practice violations at Shein-affiliated factories in Guangzhou. In one factory, workers were paid the equivalent of $556 a month to make 500 garments a

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2 Bloomberg contracted Agroisolab GmbH, a lab in Germany, to test the items using stable isotope analysis. This process measures variations in the isotopes of carbon, oxygen, and hydrogen in the cotton’s fibers to determine the climate characteristics and altitude of the region where it was grown. Shein’s cotton was compared with two fabric samples from Xinjiang and. The first batch of Shein garments tested, which included pants and a blouse, matched the Xinjiang samples with only slight variations. Sheridan Prasso, “Shein’s Cotton Tied to Chinese Region Accused of Forced Labor,” Bloomberg News, November 20, 2022. https://www.bloomberg.com/news/features/2022-11-21/shein-s-cotton-clothes-tied-to-xinjiang-china-region-accused-of-forced-labor?sr=mxbIZFB4.

Workers had their first month’s pay withheld in order to ensure worker retention. In another factory, workers had no base pay and were instead paid 4 cents a garment. These workers were fined heavily for mistakes in stitching or sewing. The report further found workers in Shein factories working 18-hour workdays with one day off a month, clear violations of both Chinese labor laws and Shein’s own supplier Code of Conduct. Shein has faced other recent accusations of violating labor laws. Reuters reported in 2021 that Shein made false statements and lacked disclosures regarding its labor conditions, in violation of the UK’s Modern Slavery Act. A 2021 report from Public Eye, a Swiss Human Rights watchdog, described six Shein-affiliated factories without suitable fire exits and workers placed on extended working hours of about 75 hours a week with no overtime pay, another violation of Chinese labor law.

- **Health hazards.** The environmental and health impacts of Shein products are also facing scrutiny. A CBC Marketplace investigation found Shein clothing materials containing high levels of potentially hazardous chemicals, including lead, perfluoroalkyl (PFA), and phthalates. Health Canada tested a Shein jacket for toddlers and found it to have 20 times the amount of lead considered safe for children, while a purse from Shein contained over five times the accepted level for children. Environmental group Greenpeace also released a study alleging that various chemicals used in Shein products exceeded the level permitted by EU regulations.

- **Climate and environmental impact.** The UN Environmental Program estimates that due to its high-volume output, the fashion industry is responsible for 10 percent of annual global carbon emissions, more than all international flights and maritime shipping combined. At its current rate of growth, the fashion industry’s greenhouse gas emissions will surge more than 50 percent by 2030. Shein and other fast fashion platforms are exacerbating this trend by supplying higher volumes of cheaply produced clothing. A Bloomberg report found that Shein products contain 95.2 percent new plastics rather than recycled materials, while the large volume of shipments and low reuse rate among Shein products increases textile waste. Good on You, which ranks the environmental impact of fashion companies, gave Shein its lowest rating.

- **Copyright infringement.** Shein and other Chinese e-commerce platforms and their suppliers have been met with numerous claims that they consistently violate U.S. IP law, with the Wall Street Journal reporting in 2022 that Shein in particular had over 50 outstanding federal cases over three years levied against it alleging trademark or copyright infringement. In a June 2021 case, AirWear International, the parent company of shoe seller Dr. Martens, filed a lawsuit against Shein for its alleged “clear intent to sell counterfeits” and for copying the company’s designs. Complaints and cases against Shein range from major U.S. designers and retailers like Ralph Lauren to independent artists who claim Shein suppliers have used their designs on Shein clothing without permission. Independent designers who earn more of their income online are particularly vulnerable, as they have fewer resources with which to pursue legal action against Shein and its suppliers.

- **Avoiding tariffs and customs inspections.** Shein clothing and accessories average about $11 per item. This under-market pricing means Shein is exempt from the standard 16.5 percent import duty and 7.5 percent tariff specific to China. De minimis packages are also exempt from customs inspection, allowing Shein to ship directly to consumers and helping the company avoid scrutiny over its cotton sourcing. Shein also benefits from a tax break in China: in response to the escalating U.S.-China trade dispute, in 2018 China waived export tariffs for direct-to-consumer businesses.

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De Minimis Packages from China Evade Tariffs

Chinese e-commerce’s growth in the United States has been aided by exploitation of favorable import regulations, especially the high de minimis threshold for U.S. customs inspection and tariffs. A de minimis threshold demarcates the value below which goods are considered too small to be subject to tariffs or most inspections. In the United States, this threshold was raised from $200 to $800 in 2016. By contrast, it is roughly $7 (renminbi [RMB] 50) in China. A sizeable majority of de minimis packages, which increased from 410.5 million packages in fiscal year (FY) 2018 to 685.1 million packages in FY 2022, came from China. This correlates closely with the rise of e-commerce deliveries from China to the United States. Shipments of de minimis packages from China in 2021 were about seven times the amount of Canada, the second-largest shipper of de minimis packages to the United States. Customs data indicate that in 2022, more than 10 percent of Chinese imports by value now arrive as de minimis shipments, up from well under 1 percent a decade ago. In 2021, the Federal Reserve Bank of New York estimated that the U.S. Department of the Treasury loses as much as $10 billion a year in tariffs through tariff strategies like de minimis.

Temu, Others Follow Shein’s Model

Temu has replicated Shein’s process of quickly manufacturing and shipping clothing to U.S. consumers. Temu recently sponsored two advertisements that aired during Super Bowl LVII at a cost of approximately $14 million dollars, causing a 45 percent surge in downloads of its app and a daily active user jump of 20 percent on the day of the Super Bowl. As of March 2023, Temu and Shein rank in the top five free apps on the Apple Store, ahead of retailers Amazon and Walmart. Temu’s success raises flags about its business practices. Temu’s lack of affiliation with established brands has brought concerns of product quality as well as accusations of copyright infringement. As of April 2023, Temu has received 235 complaints in the last year with the Better Business Bureau, earning a 2.1 out of 5 stars customer rating. PDD Holdings, Temu’s parent company that operates the related e-commerce platform Pinduoduo in China, was accused by China Labor Watch of “extreme overtime,” requiring employees to work 380 hours per month. The company faced protests online after several worker deaths in 2021. Additionally, in April 2023, CNN reported that multiple cybersecurity teams found sophisticated malware on Pinduoduo’s mobile app for Google Android devices. The malware enabled the Pinduoduo app to bypass user security permissions and access private messages, change settings, view data from other apps, and prevent uninstallation. The investigation followed Google’s suspension of the app from the Google Play store in March 2023.

Numerous other established and emerging Chinese e-commerce firms seek to penetrate the U.S. market by modeling their strategies on Shein and Temu’s businesses. LightInTheBox, an established Chinese e-commerce firm listed on the New York Stock Exchange since 2013, has invested heavily in a social media strategy that mimics Shein’s. With the help of a New York-based advertising agency, LightInTheBox has now partnered with more than 2,000 influencers, and the company’s products reach 200 million people via influencer-posted content. Clothing e-commerce is a surging Chinese industry. Chinese state media outlet Sixth Tone reported that there are more than ten other startup-style Chinese firms founded since 2019 emulating Shein’s business model and expanding their U.S. presence, including Cider, Urbanic, ChicV, DoubleFs, Cupshe, and JollyChic. Though none have the market share of Shein or Temu, all similarly offer products at comparable prices with expedited delivery times.

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† Sergey Toshin, director of the app security company Oversecured, found that the Pinduoduo app had exploited about 50 vulnerabilities on the Android operating system. According to CNN, Pinduoduo company insiders said the malware was intentionally developed to spy on users and competitors to boost sales. Following reports that the app included malware, the company disbanded the engineering team charged with developing malware and reportedly transferred most of them to Temu. Nectar Gan, Yong Xiong, and Juliana Liu, “I’ve never seen anything like this: One of China’s most popular apps has the ability to spy on its users, say experts,“ CNN, April 2, 2023. https://www.cnn.com/2023/04/02/tech/china-pinduoduo-malware-cybersecurity-analysis-intl-hnk/index.html.
rapid proliferation raises concerns they will rely on controversial practices similar to those of Shein and Temu to undercut competitors and gain a foothold in the United States.

Considerations for Congress

Given the rapid increase in the market share of Shein and other Chinese e-commerce firms in the United States, the U.S. government should be vigilant in ensuring that these firms adhere to U.S. laws and regulations and are not granted unfair advantages over U.S. firms. Congress can help safeguard U.S. interests by addressing the following gaps in U.S. policy to respond to the business models and practices of Shein and other Chinese e-commerce firms.

- **Shein and perhaps other Chinese fast fashion firms appear to be sourcing goods in violation of the Uyghur Forced Labor Prevention Act.** The investigation by Bloomberg News tracing cotton fibers to Xinjiang highlights not only the platform’s likely violation of U.S. law but also that the U.S. government does not have tools to effectively screen most e-commerce shipments from China. Packages that enter the United States, including the millions that enter below the de minimis threshold, are frequently not inspected. Those that are inspected are often subject to rudimentary visual checks without the technology or screening to trace fabric origin and other violations. Without the proper staffing and technological tools, U.S. customs officials are poorly positioned to identify and cease low-cost shipments that violate U.S. laws and regulations.

- **Chinese e-commerce platforms and suppliers routinely violate U.S. IP rights laws, and the consequences they face are insufficient to deter future violations.** Several U.S. firms, from large brands to in-home studios, have singled out Chinese firms for infringing on their copyrights. This is a particular issue for independent artists who have their designs used without permission by Shein suppliers or other Chinese e-commerce platforms and suppliers, as they may not have the resources to pursue legal remedies.

- **Current customs and tariff levels disproportionately benefit Chinese e-commerce firms.** The de minimis exemption level of $800 allows for packages shipped to the United States under that level to avoid inspection and existing tariffs. Shein and other e-commerce firms are uniquely positioned to exploit this exemption, as their products are shipped individually and nearly all fall below the de minimis threshold.

### Past Congressional and State Efforts on Chinese e-Commerce

Congress and at least one state government have already taken steps to evaluate and address the problematic practices of Chinese fast fashion firms and other Chinese e-commerce platforms.

- In February 2023, Senators Bill Cassidy (R-LA), Elizabeth Warren (D-MA), and Sheldon Whitehouse (D-RI) wrote to Shein’s CEO seeking information on its alleged sourcing of Xinjiang cotton. The letter requested a response within 30 days.\(^{56}\)

- The COMPETE Act of 2022 passed by the House in the 117th Congress included a provision to remove de minimis privileges for goods sourced from nonmarket economies with known IP violations, including China.\(^{57}\) The bill sought to effectively close the de minimis loophole that both Shein and Temu exploit when importing goods into the United States.\(^{58}\) After reconciliation in conference committees, however, the final CHIPS and Science Act did not include language addressing de minimis thresholds.

- At the state level, New York State’s Fashion Sustainability and Social Accountability Act would more closely monitor clothing sourcing and environmental impact. The act would severely limit the market access of Shein and Temu in New York State. The act was reintroduced to the State Assembly in February 2023, with stronger provisions for legally binding environmental and labor standards in the fast fashion industry.\(^{59}\)
Endnotes


2 Needs citation


