

China-Europe Independent Station Electronics Integrator

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Abstract: Cross-border e-commerce usually involves multiple links such as online shopping platforms, payment systems, logistics services, customs clearance, and cross-border sales. From 2015 to 2023, China-Europe cross-border e-commerce has experienced rapid growth. Demand among Chinese consumers for European products has increased significantly, while European interest in Chinese goods has also steadily risen. Many small and medium-sized enterprises and cross-border e-commerce platforms have begun to enter this market. This article explores how independent e-commerce integrator platforms can leverage efficient, cost-effective supply chain services and brand advantages to attract Chinese and German SMEs. By doing so, these platforms can strengthen their market presence, reduce operational costs for SMEs, expand transaction volume, and ultimately create a win-win situation for all stakeholders.

Keywords: Service supply chains; Cross-border e-commerce; Independent station

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1. Cross-border E-commerce

1.1. China E-commerce

In recent years, cross-border e-commerce has become an important engine to support “external circulation”, and various parts of China have also attached great importance to the development of cross-border e-commerce. Based on **Figure 1**, China’s cross-border e-commerce market will reach 15.7 trillion yuan in 2022, a year-on-year growth of 10.56%^[1].

In China’s cross-border e-commerce transaction model in 2022, cross-border e-commerce B2B transactions accounted for 75.6%, and cross-border e-commerce B2C transactions accounted for 24.4% (**Figure 2**).

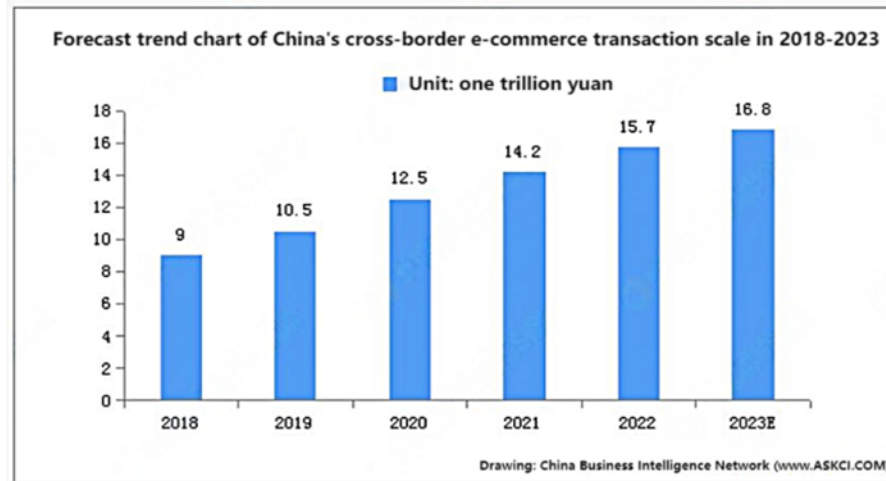


Figure 1. Forecast trend chart of China's cross-border e-commerce transaction scale in 2018–2023

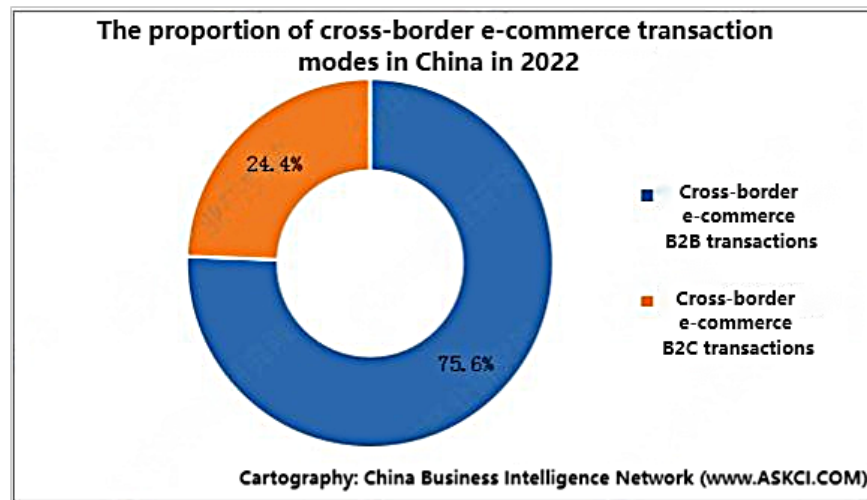


Figure 2. The proportion of cross-border e-commerce transaction modes in China in 2022

1.2. European cross-border e-commerce

In 2019, the cross-border B2C e-commerce growth rate of 16 countries in Northern, Western, and Southern Europe (14 EU countries, Switzerland, and Norway) was 14%, as shown in **Figure 3**. Excluding cross-border tourism, the market size was 108.8 billion euros. This accounts for almost 23.5% of the 462 billion euros in e-commerce sales (excluding tourism) in the 16 countries mentioned above. By 2022, the European cross-border e-commerce market will reach 179 billion euros, with a growth of 65.74% in three years ^[2].

Based on **Figure 4**, in Germany, cross-border business-to-consumer (B2C) e-commerce is becoming increasingly important in the online retail sector. In 2019, foreign e-commerce websites accounted for 21.4% of the entire e-commerce revenue. Three years later, the cross-border e-commerce market share increased to 26% ^[3].

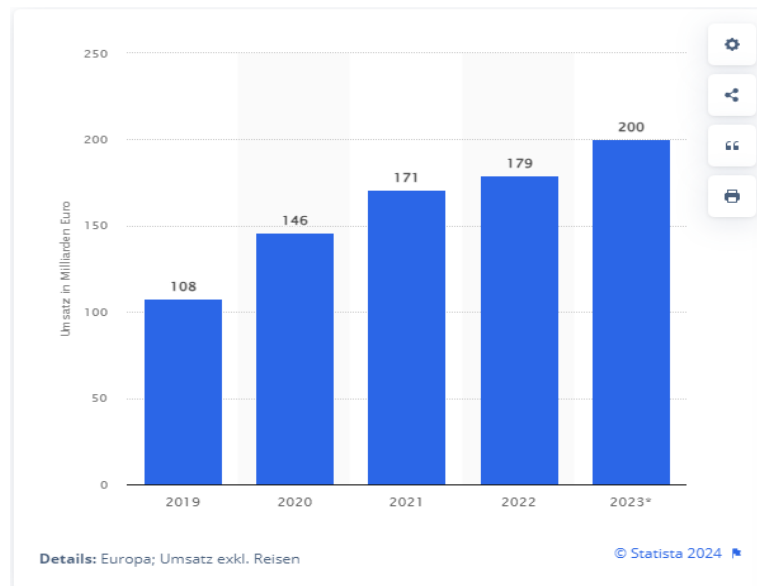


Figure 3. European cross-border e-commerce sales from 2019 to 2022 and forecast for 2023

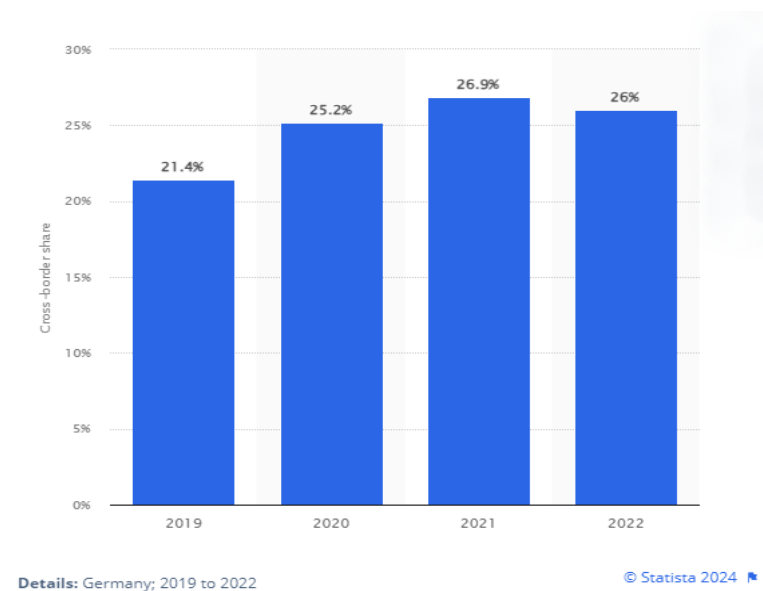


Figure 4. Share of cross-border B2C e-commerce out of total e-commerce revenue in Germany from 2019 to 2022

2. Current status and difficulties of cross-border e-commerce

Between 2017 and 2022, the scale of China's cross-border export e-commerce industry continued to maintain a year-on-year growth rate of more than 20%, superimposed by the epidemic's accelerating effect on the online consumption of countries around the world. In 2022, due to the combined impact of supply chain pressure caused by partial lockdowns and changes in the international situation, the marginal growth rate of the cross-border export e-commerce industry was set back, but the year-on-year positive growth of 9.4% was still achieved throughout the year.

After the epidemic is over, the number of new companies entering the China-Europe transnational e-commerce market continues to increase, and small enterprises have also become medium-sized enterprises over time and the market has recovered. However, compared with large capital enterprises Amazon, Alibaba, and JD.com, small and medium-sized enterprises in the China-Europe transnational e-commerce market etc. are still vulnerable groups.

Complex laws and regulations, high logistics and distribution costs, brand building and marketing, language and cultural barriers, market access barriers, consumer brand loyalty, cross-border electronic payments, and customs clearance are all what new companies need to face when entering the market. series of difficulties. Small and medium-sized enterprises that have achieved certain results in the market still have long-term difficulties to face on these issues.

2.1. Cross-border e-commerce logistics

One of the key areas of cross-border e-commerce is international logistics and transportation, which can be boiled down to the following processes: customs clearance of domestic goods to go overseas, customs transportation to overseas warehouses for storage and management of goods, delivery of goods to customers, and returns. Efficient logistics not only attracts new customers (different delivery methods and low-cost transportation) but also retains existing customers who have already placed orders (through timeliness, compliance with orders, lack of damage, etc.)^[4].

2.2. Consumer brand loyalty

Multiple consumer market surveys have shown that consumers are unable to make rational decisions and cannot understand their true motivations and attitudes in making purchasing decisions. The external characteristics of a product, such as packaging design, branding, price, content, and nutritional information, play a central role in consumers' purchasing decisions^[5].

Brand loyalty leads to certain marketing advantages such as reduced marketing costs, more new customers, and greater trade leverage^[6]. According to research, consumers' trust in product brands and the proposed trust dimensions directly affect consumer loyalty^[7].

On the other hand, brand awareness plays a role in consumer loyalty. Brand awareness (BA) refers to the way consumers connect with the products they want. This kind of recognition is not only about consumers' perception of the product, but also reflects their overall understanding and recognition of the brand. In communication and interaction, consumers' level of brand awareness directly shapes their attitude towards the brand and purchasing tendency. Therefore, improving brand awareness can not only increase product exposure and sales but also help strengthen brand loyalty and influence^[8]. There are also some obstacles to improving brand awareness, such as fierce market competition, poor effects, and a lack of sustainability.

3. Cross-border e-commerce supply chain

Cross-border e-commerce supply chains face several challenges, including international logistics, customs clearance, payment and currency exchange, language and cultural differences, and product quality control.

A supply chain includes all products, services, funds, and the flow of information between suppliers and customers, from the original supplier to the final buyer^[9]. In e-commerce, supply chain management mainly involves handling information, logistics, and financial processes.

For example, managing shipping, tracking payments in different currencies, and ensuring smooth communication across countries are all key parts of running an effective cross-border e-commerce supply chain.

4. Independent station electronics integrator

Numerous authors consider that the design of a quality website is a key aspect of e-business strategy since this is the principal medium of communication to interact with current and potential customers. Thus, success in the virtual market requires firms to correctly manage technology and the information provided on its website ^[10].

It is difficult for small and medium-sized enterprises to gain an advantage in the capital market if they work alone. In the capital market, it is often difficult for small and medium-sized enterprises to gain competitive advantages on their own. Therefore, this article aims to propose a new concept, that is, the concept of independent station cross-border electronics integrator. The concept aims to create a unique brand image by establishing an independent e-commerce platform and trademark in Europe. By inviting many small and medium-sized enterprises to join, they become part of the brand, and all products are sold using a unified trademark, thereby rapidly growing the brand's scale. By leveraging brand influence, strong supply chain capabilities, and high-quality after-sales service, a larger share of the cross-border e-commerce market can be captured.

One of the characteristics of an independent website is the integration of its brand influence and trademark. Through effective brand building, independent websites can create a unique brand image and enhance the brand's influence by providing high-quality products and services, establishing good customer relationships, and brand community social spaces.

5. Independent station integrators provide service capability

Independent site Integrators can, to a certain extent, enhance consumers' brand recognition and purchase intent by strengthening brand communities, optimizing logistics and supply chain management, and providing efficient payment and tax solutions. They can also support the growth of SMEs in the global marketplace by enhancing customer satisfaction and market comparison through effective after-sales service and traffic marketing strategies.

5.1. Provide brand benefits and consumer brand loyalty

Research findings indicate that in the general market, consumers who interact with social media brand communities tend to exhibit a probable positive attitude towards the brand, such as trust and loyalty. Consumer brand recognition may serve as the foundation for transforming interactions within consumer brand communities into consumer brand identification. This suggests that when consumers can accurately identify and understand a brand's characteristics and values, they are more likely to form emotional connections with the brand, thereby developing loyalty and a sense of identification. This brand identification extends beyond mere purchasing behavior; it also includes alignment with the brand's philosophy and culture, which in turn encourages consumer participation in brand communities and active engagement within these communities ^[11].

Interactions between members, as well as between members and brands, significantly shape consumers' relationships with the brand and their attitudes toward it (**Figure 5**) ^[12]. This approach actively cultivates emotional bonds with the network subject, crucial for strengthening customer loyalty. Grounded in the understanding that emotional engagement is vital for retention and satisfaction, it enhances the perceived value and stability of customer relationships ^[13].

Brand identity refers to the unique set of characteristics that not only shape the distinct image of a brand but also enable consumers to clearly distinguish it from competitors in the market ^[14]. This concept encompasses the brand's visual elements, linguistic style, values, and the unique experiences it offers, which are crucial for establishing brand loyalty and a sense of identity in a fiercely competitive market. Through consistent and focused communication of the brand message, businesses can ensure the stability and authenticity of the brand image, thereby creating a clear and lasting brand perception in the minds of consumers.

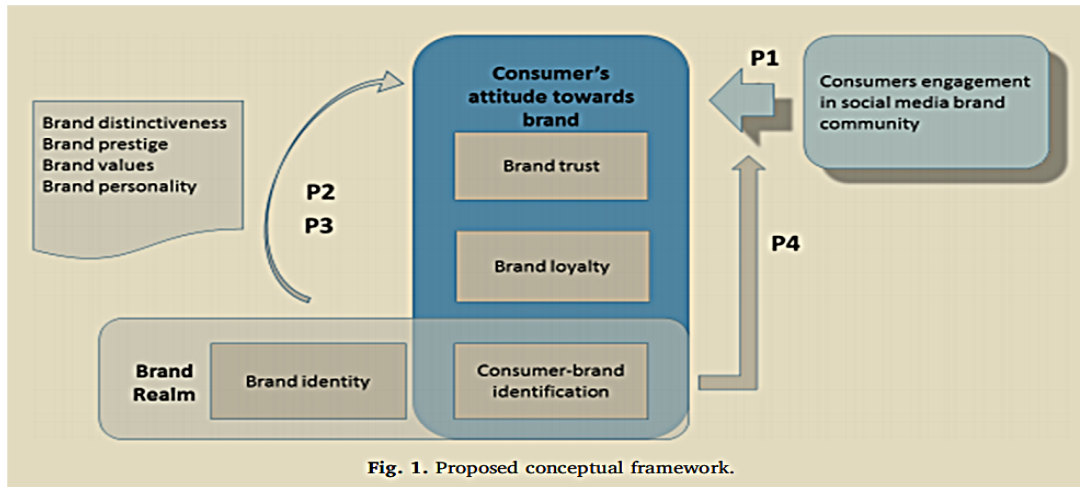


Figure 5. Proposed conceptual framework

Brand communities help companies attract individual customers and strengthen relationships with these customers, thereby building long-term relationships ^[15]. These lasting relationships with customers make the company more competitive, thereby greatly improving its marketing effectiveness ^[16]. Brand communities built by independent site e-commerce integrators enable direct interaction with potential customers, allowing companies to showcase their unique characteristics, core values, and product advantages, ultimately enhancing brand awareness and image.

5.2. Efficient logistics and warehousing

A prominent feature of cross-border e-commerce is the increased costs associated with logistics. International transport of goods inherently results in higher logistics expenses compared to local deliveries. This not only raises the operational expenses for companies but can also deter consumer purchases, particularly for low-value products. Research indicates that higher shipping fees directly influence consumer buying behavior, as consumers are particularly sensitive to elevated shipping costs ^[17].

The intricacies inherent in cross-border logistics have been demonstrated to result in prolonged delivery times and heightened quality uncertainty. Multi-node transportation and customs clearance processes have been identified as factors that exacerbate the risks and delays associated with international shipping. In this context, delivery efficiency and accuracy have emerged as critical indicators of e-commerce platform competitiveness.

Conversely, the intricacies and expenses associated with international returns have the potential to impede consumer experience and impose a substantial burden on merchants. To address these challenges, it is imperative for e-commerce platforms to optimize their returns processes, maintain cost control, and offer flexible options, thereby enhancing customer satisfaction and strengthening their competitive position in the market.

According to data collected from offline interviews, the charges for storage in overseas warehouses are based on either volume or weight, with a daily rate of 0.99 euros (including a 28-day free storage period). Furthermore, the charges for storage exceeding 180 days are merely 1.5 euros per day. Incoming and shelving costs are waived, and the fee for drop-shipping is only 0.6 euros per SKU.

Partnering with logistics service providers enables independent stations to integrate all logistics links from suppliers to consumers, facilitating bulk processing and shipment of parcels. This integration allows stations to take advantage of economies of scale, thereby reducing costs. Supply chain optimization has also been demonstrated to reduce delivery times and enhance the precision and dependability of distribution.

5.3. Management and after-sales cost reduction

When cross-border e-commerce expands the international market, it needs to invest a lot of resources in brand promotion, advertising, online and offline promotion, and other activities. However, these initiatives are not always successful and may sometimes bring greater risks and uncertainties.

In the context of cross-border e-commerce, language differences often serve as a substantial impediment to effective communication. E-commerce platforms and sellers must therefore provide multilingual support to ensure effective communication and the provision of clear product information and customer service. This includes specialized language translation functions online, which are necessary to manage events such as returns and exchanges and to address customer queries.

A lack of adequate language support may lead to misinterpretations of product details, elevating the risk of disputes and negatively impacting customer loyalty and satisfaction. Independent site integrators address these challenges by providing comprehensive multilingual support, including localized website content, product descriptions, customer service, and technical support in multiple languages.

5.4. Payments, finance, and tax

Cross-border e-commerce is characterized by numerous challenges related to payment and currency settlement. Initially, cross-border transactions are subject to compliance with relevant European currency trading regulations and financial system requirements, thereby increasing the complexity of the payment process. Secondly, exchange rate regulatory measures have led to heightened uncertainty and cost risk in transactions. In terms of taxation, the independent tax policies of European countries necessitate that enterprises possess an in-depth understanding of and strictly comply with these policies to ensure tax compliance. Consequently, cross-border e-commerce companies operating within the European market must meticulously assess the constraints imposed by legal and regulatory frameworks to ensure compliance and facilitate sustainable growth.

Professional tax advisors within independent site integrators play a crucial role in ensuring compliance with European tax regulations. They possess a thorough understanding of both national tax laws across European countries and broader EU tax directives, as well as international tax treaties. Their expertise helps businesses operate in full compliance, avoid tax-related risks, optimize tax structures, and minimize tax costs. As a result, partners benefit not only from reduced tax and financial labor costs but also from improved financial and tax outcomes.

5.5. Brands influence purchase intentions

Core brand image and brand attitude have a positive effect on customers' purchase intention^[18]. Shwu-Ing *et al.* portrayed research on a larger scale, suggesting the major components of core-brand image are awareness of

the brand and preference for the brand. The two components of core brand image, awareness of the brand and preference for the brand, have an impact on core brand image and are positively associated with the attitude of the core brand ^[19].

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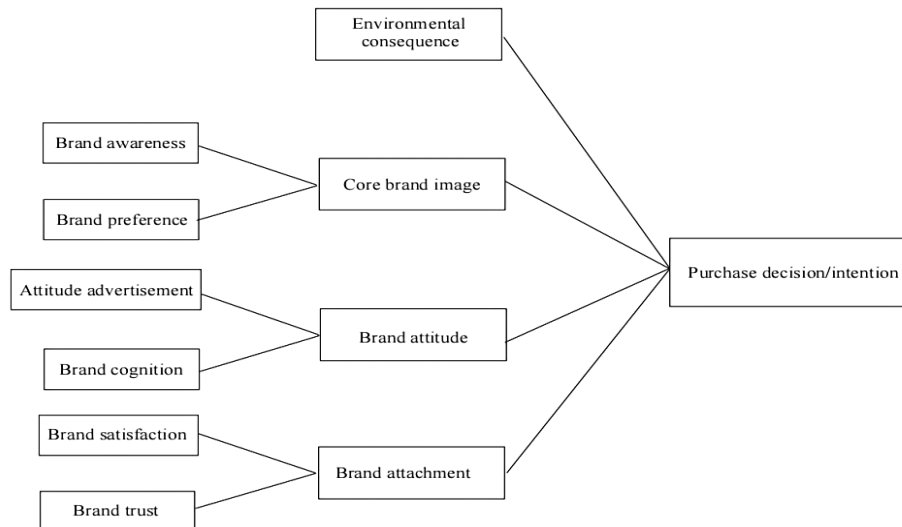


Figure 6. Model of factors influencing purchase decision/intention through brand image, attitude, and attachment

5.5.1. Brand attachment

Aspects of public interactions include emotional responses and sensations toward others. Trust, in particular, emerges as a critical outcome of these interactions. Previous research in both psychology and marketing has consistently identified trust as a vital component of close interpersonal and consumer-brand relationships. Brand trust is impact-based, meaning it stems from emotional impressions formed through public interactions associated with the brand. These interactions create a lasting psychological connection, reinforcing the consumer's attachment to the brand ^[20].

5.6. Traffic marketing

Larger social media campaigns tend to result in significantly higher number of orders and sale income. The results of the research also reveal that the effectiveness of social media marketing varies across products depending on their complexity, cost, and brand status ^[21].

Social media has indeed transformed the way people exchange opinions and experiences about brands (**Figure 7** and **Figure 8**). Positive interactions and endorsements have the potential to rapidly spread across vast geographical regions, reaching a large audience. Conversely, negative comments can also propagate just as swiftly, emphasizing the importance of maintaining a positive brand image and promptly addressing any issues. The visual and interactive features of social media endow it with a profound ability to enhance brand reputation. Users can easily engage with and share content, thereby enhancing the brand's visibility and credibility.

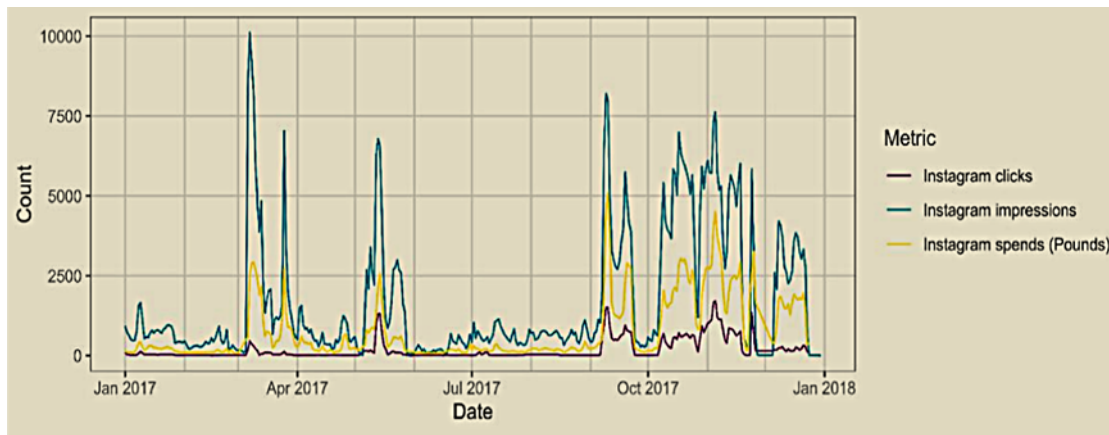


Figure 7. Trends in Instagram clicks, impressions, and advertising spend (Jan 2017 – Jan 2018)

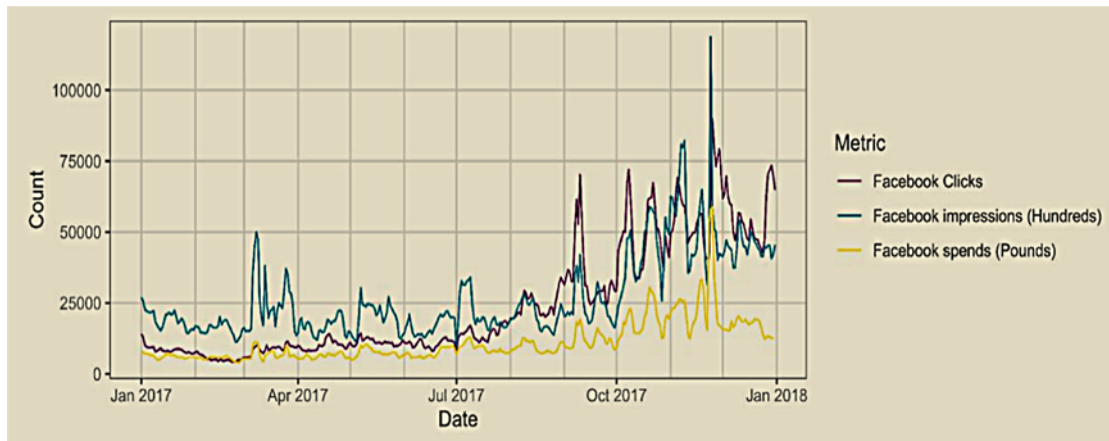


Figure 8. Trends in Facebook clicks, impressions, and advertising spend (Jan 2017 – Jan 2018)

As can be seen from the chart, the click-through rate and the degree of impression left on consumers are directly proportional to the marketing investment in social media. In other words, achieving good marketing results in e-commerce marketing is often accompanied by high advertising costs. But it's unclear whether this will maximize positive transaction volume from consumers. This is a high cost for small and medium-sized cross-border e-commerce companies. While it can increase awareness and make more consumers aware of their product, it cannot clearly define return on investment. In the model of an independent station cross-border electronics integrator, this portion of the work is handled by the integrator. As a result, small and medium-sized cross-border e-commerce businesses can eliminate these associated costs and instead allocate their resources to other critical areas such as product design, quality improvement, and innovation.

6. Conclusion

This article explores the rapid growth of China-Europe cross-border e-commerce and the challenges it faces. It also provides a detailed analysis of how independent electronics integrators can effectively leverage their supply chain service capabilities and brand strengths to attract small and medium-sized enterprises, thereby increasing transaction volume and achieving mutually beneficial outcomes. Independent website integrators offer a range

of valuable services to small and medium-sized cross-border e-commerce businesses, including support in building brand loyalty, streamlining logistics, reducing management and after-sales costs, and providing solutions for payments, finance, and taxation. Research indicates that by strengthening brand communities, optimizing supply chain operations, and delivering efficient payment and tax services, these integrators can significantly boost consumer brand awareness and purchase intent. Additionally, through targeted service offerings and traffic marketing strategies, they enhance customer satisfaction and competitiveness, ultimately supporting the sustainable growth of SMEs in the global marketplace.

Disclosure statement

The author declares no conflict of interest.

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