

The Impact of Novel Coronavirus Pneumonia on Cross-border E-commerce Exports and Relevant proposals based on the Interviews and Transaction Data Analysis of Cross-border E-commerce Export Enterprises in Zhejiang Province

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Abstract: The outbreak of COVID-19 had a great impact on global economy and trade. Now it seems that the impact of the epidemic will last for a long time. Since January 2020, many aspects of cross-border e-commerce export business were influenced to various extents. As of April 20, 2020, cross-border e-commerce enterprises in Zhejiang had been selected for investigation and data analysis. Then there were targeted short-term and long-term countermeasures to provide references for cross-border e-commerce management in post-epidemic era.

The outbreak of COVID-19 had a great impact on global economy and trade[1]. Now it seems that the impact of the epidemic will last for a long time. During the domestic epidemic period, cross-border e-commerce once had no goods to sell. With the spread of the epidemic around the world, many countries closed the borders and residents were quarantined in home. Cross-border e-commerce retail exports were in the condition of "hard to sell". The epidemic had greatly affected the cross-border e-commerce retail exports from the supply chain, logistics to the consumer side.

Methodology: On the one hand, through the collected big data, we analyzed sales data of top 20 brand sellers in Zhejiang province on the Amazon US site. These enterprises mainly distributed in Hangzhou, Yiwu, Wenzhou, Ruian, Shaoxing, Lishui, Jiaxing and other places, with sales of 200 million to 700 million yuan in 2019. On the other hand, we investigated and interviewed 9 small and micro sellers who settled in the major cross-border platforms(Express, Amazon, Wish, Ebay), mainly distributed in Hangzhou, Ningbo, Yuyao, Lishui, etc.,with sales of 5 million yuan to 100 million yuan in 2019.

1. Analysis on the impact of novel coronavirus epidemic on cross-border e-commerce exports in Zhejiang province

1.1 Through analyzing sales data of top 20 brand sellers in Zhejiang province on the Amazon US site, the results showed that: the sales volume decreased in the early stage of the epidemic, and the sales volume of 100% brand sellers kept rising with a decrease in growth

This part of data comes from E-data. Collection objects are sales data of top 20 brand sellers on the Amazon US site. These brands are pentair, jet, urban coco, idesign, happybuy, brandlower, venuscelia, vevor, dd demoiselle, easy-going, nicetown, u-max, bleum cade, lb, aps, lookbookstore, kousi, sorbus, wantdo and outime.

1.1.1 The short-term impact of the outbreak was obvious.

The trend of sales curve showed that at the beginning of the domestic epidemic period, the sales volume in December and January of 2019 was at the bottom of nearly a year, and 50% of sellers' sales volume had dropped by more than 30%. Compared with the same period in 2020, the sales volume of 20% of the sellers decreased by 5%-20%.

1.1.2 Sales growth of brand sellers declines.

The sales of 100% brand sellers kept rising for almost a year. But compared with the same period, the growth rate decreased significantly. Brand sellers had rich experience in product selection and changed the way of thinking quickly. Additionally, their brand images were stable, user stickiness was strong and original products were adaptable. So the impact of short-term sales had been resumed. This paper made tracking statistics on 20347 products(one Asin code is one product) of five brands and made a comparative analysis between the data in recent three months and that in the same period last year. The results showed that although 75% of the sellers' sales volume increased in the same period, compared with the sales growth rate of the previous year, the growth rate of more than 50% brand sellers decreased greatly.

Table 1 Tracking statistics data of five brands

brand	Number of products on sale	Sales volume in recent three months	Sales growth rate in recent three months	Sales growth rate in 2019	Growth rate
Pentair	6386	Decrease by 21.0%	Increase by 3.9%	57.9%	Decrease by 54%
Jet	1888	Increase by 18.81 times	Increase by 96%	14.85 times	Decrease by 13.85 times
Urban CoCo	5401	Increase by 42.7%	Increase by 1.25 times	-19.9%	Increase by 1.499 times
iDesign	3868	Increase by 32.7%	Increase by 39.9%	25.5%	Increase by 14.4%
HappyBuy	2806	Increase by 66.2%	Increase by 72.5%	2.86 times	Decrease by 2.135 times

Specific impacts and cause analysis:

On the whole, opportunities were sought in crisis. 66% of HappyBuy' product selection had changed. Among them, 41% of the outdoor recreational products were off the shelves or stopped selling, which were replaced by indoor gymnastics and other fitness products and housing garden maintenance tools. Then 15% of them' s sales decreased. The product with a sharp increase in sales was airway rolling pad applicable to gymnastics and martial arts and more than 2000 orders were sold per day. Urban coco had the highest user rating among the five brands with the overall score of 4.5 and the largest number of comments, which indicated that user stickiness is strong. The main products of this brand are clothing products featuring soft materials, elastic style, a variety of novel design and color. And they were comfortable and suitable to be worn at home. Therefore, more than 65% of the original products were not affected and the sales volume had maintained a stable growth in the same period. 56% of Pentair's product sales has decreased greatly, 31% of the products were off the shelves or stopped selling. But, 13% of the products were transformed into medical products, such as sterilizers, thermometers and other products, and sales volume increased a lot.

1.2 The investigations and interviews on small and medium-sized enterprises generally showed that enterprises had no goods to sell, lower consumer demand, impeded logistics, rising costs and other negative impacts of the business accounted for more than 50%.

Table 2 Tracking statistics data of five brands

Number	Main targeted cross-border e-commerce platforms	Company size	Annual sales of 2019(yuan)	Regional position
1	AliExpress	4~10 people	30 million~70 million	Lishui
2	Amazon	4~30 people	5 million~70 million	Hangzhou
3	Wish	More than 50 people	100 million	Ningbo, Yuyao
4	Multiplatform(Wish, Amazon, Ebay, Shopee, Lazada)	More than 20 people	70 million	Hangzhou

Specific impacts and cause analysis:

1.2.1 Impeded logistics and rising costs.

During the domestic epidemic, Hangzhou post didn't receive orders from Wish platform and only received goods from some big sellers. Goods needed to be sent to Shanghai for cross-border first leg transportation or through other freight forwarding companies. As logistics price kept rising, costs went up. With continuous deterioration of the epidemic situation abroad, the costs of

international logistics air freight increased by 60-100% and some products with low gross profit rate had to be stopped selling. As the number of international flights decreased and even international routes of many countries were closed, it's necessary to constantly switch to appropriate logistics channels. So the distribution limitation of logistics generally became longer and it took 1-2 weeks more than normal period to send goods to customers. Besides, shipping distribution limitation extended by 15-30 days. The customs of countries strictly inspected goods arriving at the ports and check ratio increased sharply. Since the middle of March, due to the epidemic control in Spain, Italy, France and other countries, the final delivery couldn't be guaranteed. As a result, most of the products sent to these countries and regions had been taken off the shelves and only a small part of the products in stock were on the shelf for sale.

1.2.2 Consumer demand generally declined.

With the outbreak of the epidemic abroad, spending power of foreign countries decreased by more than 40%. Non-livelihood products were affected greatly, especially clothing and outdoor products, more than half of them were affected. Meanwhile, epidemic prevention goods and necessities for people's livelihood made more profits and its sales volume increased by more than 30%.

1.2.3 The supply chain did not recover in time.

At the beginning of February, the epidemic in China was not over yet. Most suppliers in the upstream of the supply chain had not started production. About 90% of the goods sold by companies had no guarantee of supply. Even if manufacturers promised to produce, it couldn't supply goods in time for lack of workers returning to work. For Amazon FBA sellers, the resumption of factories had been delayed for nearly one month since January this year and products in overseas warehouses had been out of stock to various extents. With effective epidemic prevention work in China, most supply chains of FBA products had returned to normal after February. But manufacturing costs of products increased by about 10% due to the shortage of raw materials. For clothing products put on shelves before the new year, price of products purchased on 1688 increased by 25%, which squeezed profits. Moreover, enterprises in Zhejiang had not started working, so they could only seek for factories in other provinces. As for daily necessities like indoor household products, they were either out of stock or delivery time was too long. And the sales volume of individual products dropped by 50% to 80%. Furthermore, due to the shortage of products, the refund rate increased from 5% to more than 15%.

Besides, some value-added services were suspended. For example, there was no way to carry out offline training (mainly paid training) in the first half of the year and online training could only be free.

2. Countermeasures and proposals on cross-border e-commerce retail exports in China.

2.1 Top priority should be given to increase "Yiwu- Xinjiang- Europe" trains and seize the opportunity to construct a cross-border e-commerce logistics information sharing platform.

The epidemic will not be over in a short time [2]. Increasing "Yiwu- Xinjiang- Europe" trains can solve some logistics problems along the line. It's also essential to set up a special fund to promote the rapid construction of the cross-border e-commerce logistics information sharing and monitoring platform, which can comprehensively and accurately track and broadcast logistics information in real time, predict and detect the abnormality and risk of logistics structural chain breaking in advance.

2.2 Support sellers according to their levels to help sellers successfully achieve the smooth transition.

The first is launching a special action to support small and micro sellers. The next two months will be a hard time for small and micro sellers to survive. It's necessary to encourage supply chain manufacturers who produce epidemic prevention and household products to return to work,

promote some businesses of sellers to transform and make the joint between sellers and domestic e-commerce channels, so as to reduce losses and cultivate their abilities to save themselves. The second thing is building the platform to support brand sellers to maintain faster development. For medium-sized and larger brand sellers, it's important to build online supply chain docking platform, enhance the level of intelligent logistics management, prevent structural logistics chain breaking and improve cooperation management ability. Moreover, it's advisable to integrate overseas warehousing resources, strengthen the ability of overseas warehouse to exchange information, nurture a number of overseas warehouse that don't rely on third-party platforms and support large and medium-sized sellers to guarantee sales volume and boost growth.

2.3 Take multi-faceted measures to boost confidence of enterprises.

The first is continuing to introduce inclusive support policies including site rental subsidy, internship and employment subsidy for college graduates, partial social security fee reduction, loan cost reduction, consumption tickets issuance and other relevant polices.[3][4][5]. The second is setting up online help channel and organizing public welfare training. It's critical to share industry dynamics in time, pay attention to the development of global epidemic, encourage enterprises to turn crisis into opportunities and boost their confidence to develop.

2.4 Make prospective planning and improve China's cross-border e-commerce ability to cope with changes in the international situation.

The first is to design prospective spatial layout and development orientation of cross-border e-commerce, give full play to the demonstration effect of the first batch of cross-border e-commerce comprehensive experimental zones in China, form a nationwide pattern of pointing to an area with other four batches and form an optimized layout of cross-border business with complementary advantages and misplace development. The second is to promote the transformation and upgrade of industrial supply chains with global advantages in comprehensive experimental zones, give full play to the advantages made in China and enhance the intelligent upgrade of making in China. Facing the hard test of the epidemic, enterprises' awareness of digital transformation and upgrade has been greatly strengthened. Government can seize the opportunity to launch new measures of digital upgrade. The third is to put great effort to facilitate and support the construction of local cross-border e-commerce platforms and independent stations and optimize the ecology of cross-border e-commerce platforms. Among the top cross-border e-commerce third-party platforms Aliexpress, eBay, Amazon and Wish, three are European and American platforms. During the period of the epidemic, the government could not control the introduction of policies on European and American third-party platforms such as stopping products being put in storage in overseas warehouses, rising logistics prices and restricting product selection on platforms. Making the local platforms and independent stations bigger and stronger and optimizing the platform ecology can further strengthen the ability to respond to changes in the international situation and global emergencies, and also reduce the long-term impacts brought by the outbreak of uncertain factors as far as possible.

2.5 digital empowerment boosts evolution of cross-border e-commerce to a new form of digital trade.

Continue to perfect digital construction of online single window in national cross-border e-commerce comprehensive experimental zones and accelerate the construction of a strategic hub of digital silk road. Furthermore, boost the overseas operation process of Electronic World Trade Platform, put more efforts to construct domestic innovation centers of EWTP and expand radiation effect on countries and regions along the belt and road. Besides, based on digital trade online and offline platforms, it's vital to accelerate the agglomeration of economic elements such as information flow, talent flow, capital flow, goods flow and service flow, so as to empower digital economy and boost the evolution of cross-border e-commerce to a new form of digital trade.

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