

Research on Risk Management Strategies of Cross-Border Export E-commerce Enterprises in the Context of Information Technology

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Abstract: With the rapid development of information technology, the scale of cross-border export e-commerce has been continuously expanding and has become an important force driving the development of international trade. However, cross-border export e-commerce enterprises face a series of challenges in areas such as marketing, logistics, taxation, and information security. This paper aims to analyze the risks faced by cross-border export e-commerce enterprises in the context of information technology and proposes a series of countermeasures to help these enterprises establish a sound risk management and internal control system, ensuring the steady development of the cross-border export e-commerce industry.

Keywords: Information technology, Cross-border export, E-commerce enterprises, Internal control.

1. Introduction

With the rapid development of information technology, cross-border export e-commerce has become an important force driving the growth of international trade. However, while cross-border e-commerce enterprises benefit from the conveniences brought by new technologies, they also face unprecedented challenges. Therefore, it is of great practical significance to explore the risks and countermeasures faced by cross-border export e-commerce enterprises in the context of information technology.

2. New Risks Faced by Cross-Border Export E-commerce Enterprises in the Context of Information Technology

2.1. Risks Caused by Marketing Fraud

In the context of information technology, cross-border export e-commerce enterprises face new risks not encountered in traditional marketing, especially the risk of marketing fraud through technological means. For instance, some criminals exploit promotional policies and events on e-commerce platforms to gain discounts and rewards through fraudulent transactions or "brushing" (artificially inflating sales through fake orders), causing economic losses to enterprises. The issue of automated brushing is also becoming more serious.

In order to increase product rankings and exposure, some cross-border e-commerce marketing teams may use automated programs to simulate real customer visits and purchase behaviors, thereby inflating product sales. Among these, fake reviews are also a notable problem. Some marketing teams may hire "water army" (paid reviewers) to post fake reviews in order to boost product ratings and influence consumer purchase decisions. These actions not only damage the reputation of the cross-border e-commerce enterprise, but also violate e-commerce platform rules, which could lead to the closure of their stores.

2.2. Risks Due to Inefficiency in Business Systems

Cross-border export e-commerce enterprises deal with a wide range of product categories, long shipping distances, and complex international coordination, making supply chain management difficult. Currently, many small-scale cross-border e-commerce enterprises still rely on traditional ERP (Enterprise Resource Planning) systems. These systems require a lot of manual input, data flow, and processing, and a significant amount of time is spent reconciling sales and inventory data with e-commerce platform bills, making automation low and error-prone. This also hinders the ability to implement fine-grained management. For example, it is difficult to formulate accurate purchasing plans based on historical and real-time data, which increases the costs of procurement, warehousing, and inventory management. Additionally, traditional ERP systems struggle with optimal inventory management. For instance, transferring stock between overseas warehouses might cause inventory aging to be miscalculated, increasing the risk of excess inventory, and sales returns or exchanges might not be correctly matched to the original inventory records, leading to discrepancies in stock counts and errors in revenue and cost calculations.

2.3. Tax Risks Caused by Cross-Border Transactions

Cross-border export e-commerce enterprises deeply engage in overseas markets, and due to significant differences in laws, culture, and language between countries, they face heightened and broader tax risks. Especially in recent years, as the e-commerce industry has flourished, cross-border e-commerce has created significant challenges for domestic businesses, prompting countries in Europe and North America to continuously adjust tax policies and increase regulatory efforts. This has created new challenges for Chinese cross-border e-commerce enterprises, including how to stay abreast of local tax policies and changes, accurately calculate and report taxes, and avoid issues of double taxation. In the area of electronic invoices and tax management, enterprises need to correctly integrate their internal systems

with local tax platforms to ensure the accuracy and completeness of tax data transmission. Moreover, cross-border e-commerce enterprises must also pay attention to technical security and data protection to ensure the safe transmission and storage of tax data.

2.4. Compliance Risks in Cross-Border Information Security

Due to the large volumes of transactional data and user information handled by cross-border export e-commerce enterprises, risks related to cross-border information control and data leakage are significant. For example, according to China's Personal Information Protection Law and the Data Security Law, cross-border data transmission must comply with strict regulations, including obtaining necessary user consent, conducting security assessments, and completing necessary filings. At the same time, laws in the European Union, the United States, and other countries also require cross-border e-commerce enterprises to ensure their data management complies with local requirements and to take necessary measures to protect the integrity and confidentiality of data. Furthermore, some countries, such as Russia and India, require specific types of data to be stored locally and not transferred across borders. These countries mandate that e-commerce enterprises set up local data centers in order to comply with relevant regulations.

2.5. Other Risks Caused by the Use of Information Technology

Cross-border export e-commerce enterprises often rely heavily on self-developed systems, such as ERP, order management, warehouse management, or independent websites. During the development and use of these systems, they may face many new risks. For example, unclear development requirements can lead to project delays or systems that do not meet business needs. If the programs are not sufficiently tested before going live, defects and vulnerabilities may go undetected, and the systems may fail to function properly or become vulnerable to hacking. Moreover, the lack of strict access control in program development and usage may lead to unnecessary data access and operational risks.

3. Risk Management Strategies for Cross-Border Export E-Commerce Enterprises in the Context of Information Technology

Based on the above risks, cross-border export e-commerce enterprises should take action in several areas such as formulating information system strategic plans, utilizing artificial intelligence technologies, achieving integration of business and finance, timely system upgrades and updates, standardizing development and change processes, and strengthening access management. These strategies will help establish and improve risk management and internal control systems in the context of information technology, effectively addressing new types of risks.

3.1. Formulating Information System Strategic Plans

Information system strategic planning is the starting point for building information systems in cross-border export e-

commerce enterprises. Its purpose is to align business needs with information technology needs to enhance the value of the information system, with a focus on both the holistic and long-term aspects of the plan. Holistic planning can effectively break down barriers between ERP, order management, warehouse management, and accounting systems, preventing information silos and duplicate efforts. Meanwhile, long-term planning provides a roadmap for the sustained development and application of information systems, which includes upgrading infrastructure and processing capabilities as well as integrating cutting-edge technologies like artificial intelligence. This helps enterprises anticipate future market demand, maintain technological leadership, and remain competitive.

Therefore, cross-border export e-commerce enterprises of a certain scale should prioritize information system strategic planning. They should develop a strategic plan for system construction based on strategic goals and break this plan into specific projects for each phase. This requires not only the participation of the IT department but also close collaboration and coordination with departments such as marketing, supply chain, and finance. Additionally, the support and guidance from the governance layer and senior management are crucial, as they can provide strategic direction for system development and ensure the necessary resources and support are available for the projects.

3.2. Utilizing Cutting-Edge Technologies such as Artificial Intelligence

With the rapid development of new technologies, the use of cutting-edge technologies like artificial intelligence (AI) has provided cross-border export e-commerce enterprises with strategies to manage risks, particularly in the area of marketing fraud. AI-based risk control can leverage deep learning and big data analytics to monitor user behavior patterns in real-time, identifying abnormal purchasing behaviors such as frequent returns or unusual buying frequency, thereby detecting and preventing "free-riding" (fraudulent activities). In terms of brushing (artificially inflating sales), cross-border e-commerce enterprises can analyze user access paths, click-through rates, time spent on pages, and other dimensions to differentiate real users from bots, accurately identifying fake traffic and preventing inflated product sales.

AI can also be applied to manage review systems by using natural language processing technology to analyze review content and identify fake reviews that do not align with actual purchase behavior, ensuring the authenticity and reliability of the review system. However, the application of AI must also address data privacy and security concerns. When cross-border e-commerce enterprises use AI for risk control, they must ensure compliance with data protection regulations and protect consumer privacy rights. Additionally, the decision-making processes of AI systems need to remain transparent, ensuring their decisions are explainable in order to maintain fairness and credibility.

3.3. Building an Integrated Business and Financial Information System

In the cross-border export e-commerce sector, the inefficiency of traditional business and financial systems has always been a pain point in operations. By building an integrated business and financial information system, cross-border export e-commerce enterprises can significantly

improve management efficiency and optimize resource allocation. Integration emphasizes the seamless connection of internal business and financial processes, while also integrating internal systems with external e-commerce platform data in real-time. This enables seamless data sharing and synchronization between internal operations and external platforms, helping businesses monitor sales and inventory status in real-time and respond quickly.

Furthermore, integrated systems also include the optimization of decision support systems. By constructing a unified information platform, cross-border e-commerce enterprises can gain comprehensive control over the supply chain, manage each link in detail, and improve customer satisfaction. In terms of tax risks, an integrated system enables enterprises to collect, organize, and analyze cross-border transaction tax data in real-time, including order information, customs clearance documents, and logistics status. Automated compliance checks and declaration processes can help ensure timely tax reporting. By connecting with tax and customs authorities in different countries, the system can automatically verify the consistency of export customs declarations and domestic procurement data, generating corresponding export tax refund lists and declarations. This can significantly reduce human errors and improve reporting efficiency.

Additionally, an integrated business and financial information system can help cross-border e-commerce enterprises with tax risk early warning and monitoring. By analyzing enterprise transaction data, changes in tax policies, and other factors, the system can conduct intelligent risk analysis and forecasting to avoid or mitigate the impact of tax risks.

3.4. Timely System Upgrades to Respond to Changes in Laws and Regulations

Cross-border export e-commerce enterprises should promptly upgrade their business and financial systems to comply with changes in the laws and regulations of the jurisdictions in which they operate. These regulations may include tax practices, cross-border information security management, or other areas related to cross-border e-commerce operations. For example, regarding tax regulations, cross-border export e-commerce enterprises need to stay updated on changes to the European Union's unified VAT system. Based on changes to VAT registration and declaration thresholds in destination countries, enterprises should timely update system triggers to avoid the risk of tax violations due to failure to declare once the threshold is reached.

Similarly, in the area of cross-border information security, the California Consumer Privacy Act (CCPA) requires businesses to provide appropriate transparency, security, and choice when handling the personal information of California residents. Therefore, when cross-border e-commerce businesses deal with California consumers, they must comply with the relevant provisions of this law regarding the processing of personal data. With the rapid development of the industry, laws and regulations related to cross-border e-commerce in various countries and regions are also quickly evolving. Therefore, cross-border export e-commerce enterprises should continuously update their understanding of these laws and regulations, adjust strategies in a timely manner, and ensure that their information systems adapt to policy changes and technological developments.

3.5. Standardizing Information System Development and Change Management

For cross-border export e-commerce enterprises, self-developed business and financial systems are key to optimizing processes and improving competitiveness. However, poor management during the development process can lead to project delays, cost overruns, and system instability. Therefore, enterprises need to strengthen system development and change management to ensure the efficiency and quality of system development.

First, strict process control for development and changes is crucial for information system development. Any adjustments to the project scope or resources should undergo formal approval processes to ensure the project remains manageable.

Second, effective requirement analysis directly impacts the success of the project. The development team should collect and organize the requirements from business departments in detail, clarifying functional objectives and performance metrics to ensure that the developed system truly meets business needs.

Third, when designing the system, cross-border e-commerce enterprises should consider the system's scalability and maintainability. Modern design concepts such as modular design and service-oriented architecture should be adopted, with necessary interfaces and extension points reserved to accommodate potential market changes and business growth.

Fourth, testing and acceptance processes are essential to ensure project quality. Cross-border e-commerce enterprises should establish comprehensive testing strategies to ensure the final system is fully quality-assured before going live.

3.6. Strengthening Access Control Management of Information Systems

During the use of information systems, cross-border export e-commerce enterprises need to strengthen the management of system access control, including account permissions (e.g., account creation, modification, and termination). This is crucial for enhancing data security and improving the transparency and auditability of business and financial information.

First, cross-border e-commerce enterprises should establish formal access control policies that clearly define the permission levels for different roles and responsibilities. These policies should adhere to the "least privilege" principle to reduce unnecessary information exposure risks.

Second, the granting and modification of permissions should undergo a strict review process to ensure that only authorized users are given the appropriate permissions.

Third, enterprises should regularly review system access permissions, promptly modifying or revoking permissions that are no longer applicable. This helps detect and correct improper access rights.

Fourth, all changes to permissions should be documented to facilitate traceability in case of issues. By strengthening the management of system access control, cross-border e-commerce enterprises can effectively address the risks associated with information system usage, protect key information assets, and improve the reliability of business and financial data, thus laying a solid foundation for healthy and stable development.

4. Conclusion

The rapid development of cross-border export e-commerce has greatly promoted China's "going global" strategy. However, cross-border export e-commerce enterprises still face many new risks in the context of information technology. Only by improving and perfecting their risk management and internal control systems can these enterprises better manage these risks and contribute to the healthy and sustainable development of the cross-border e-commerce industry.

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