

Original Paper

Research on Tax Risk Control in the Biotech Manufacturing

Industry: A Case Study of Company A

Xueying Jiao^{1*}

¹ Xi'an International Studies University, Xi'an Shaanxi, China

* Corresponding Author

Received: December 24, 2025 Accepted: February 28, 2026 Online Published: March 8, 2026

doi:10.22158/ibes.v8n1p240

URL: <http://dx.doi.org/10.22158/ibes.v8n1p240>

Abstract

Against the rapid development of the global biotech manufacturing industry, this study takes Company A, a benchmark biotech enterprise, as the research object to explore tax risk control paths for the industry. Based on 2023-2024 financial and tax data and industry early warning indicators, it adopts literature analysis, indicator comparison and case study methods to identify and analyze tax risks in VAT, corporate income tax and other major taxes of Company A. The research finds prominent risks such as abnormal tax burden fluctuations, non-standard cost accumulation and non-compliant related transactions in the enterprise. It further proposes targeted prevention measures from internal control improvement, core business tax standardization and policy accurate application. The results provide practical references for biotech manufacturing enterprises to strengthen tax risk management and achieve compliant operation, and enrich the industry's tax risk control research system.

Keywords

biotech manufacturing, tax risk control, case study, internal control, tax compliance

1. Introduction

1.1 Research Background

The global biotech manufacturing industry is in a critical stage of technological breakthroughs and strategic competition, with China's biotech market maintaining a high compound annual growth rate driven by policy support and market demand (Ministry of Industry and Information Technology, 2021). Tax preferential policies such as R&D expense additional deduction provide financial support for enterprise innovation, yet the industry's characteristics of complex business chains, frequent cross-border transactions and frequent policy adjustments increase tax compliance difficulty. Biotech enterprises face unique tax risks in R&D investment, related transactions and tax preference application,

and improper risk control may lead to financial losses and reputational damage, making it urgent to explore effective tax risk control methods for the industry.

1.2 Research Significance

Theoretically, this study enriches the research on tax risk control of high-tech manufacturing enterprises, making up for the lack of comprehensive analysis on multi-tax and full business chain risks in the current biotech industry research. Practically, it takes a typical biotech enterprise as a case to identify core tax risks and put forward operable prevention measures, providing practical references for peer enterprises to standardize tax handling and achieve compliant operation, and helping the biotech manufacturing industry develop healthily under the dual constraints of policy supervision and market competition.

1.3 Research Hypothesis

Combined with the industry characteristics and existing research, this study puts forward the following research hypotheses: First, the tax risks of biotech manufacturing enterprises are distributed across multiple taxes and the whole business chain, with prominent risks in R&D expense deduction, related transaction pricing and tax declaration links. Second, the main causes of tax risks include imperfect internal control system, non-standard business tax handling and inaccurate tax policy application of enterprises (Ministry of Industry and Information Technology, 2024). Third, improving internal control, standardizing core business tax-related processing and accurately applying tax policies can effectively reduce the tax risk of biotech manufacturing enterprises and improve their tax compliance level.

2. Overview of Tax Risks of Company A

2.1 Core Tax-related Matters

Company A is a benchmark biotech enterprise with general taxpayer qualification, whose business covers medical devices, functional skin care products and other fields, involving multiple taxes in the whole business chain from R&D to profit distribution. The core tax-related matters of each business link are shown in Table 1.

Table 1. Core Tax Matters Table for each Business Link

Business link	Involved taxes	Key tax-related content
R&D	Corporate income tax	100% additional deduction of R&D expenses for sci-tech SMEs, 15% preferential tax rate for high-tech enterprises
Production	VAT, Consumption tax	Input tax deduction of imported raw materials, consumption tax payment for high-end cosmetics (15% tax rate)
Sales	VAT, Stamp duty	Tax calculation for online and offline sales, stamp

Import and export	VAT, Corporate income tax	duty declaration for sales contracts (0.3‰ tax rate)
Profit distribution	Corporate income tax, Personal income tax	Export tax exemption and refund application, tax handling of cross-border related transactions
		Withholding income tax for shareholder dividends, individual income tax for equity incentives

2.2 Overall Risk Identification

Through indicator comparison, data verification and field investigation, 15 typical tax risk points of Company A are identified, concentrated in VAT, corporate income tax, stamp duty and property tax. The key tax risks and their core manifestations are shown in Table 2, with prominent problems such as abnormal tax burden, false declaration data and non-compliant related transaction pricing, which have triggered the risk monitoring of tax authorities.

Table 2. Table of Main Tax Risks and Core Performance

Tax type	Risk points	Core manifestations
VAT	Abnormally high tax burden rate	2024 tax burden rate 6.78%, far exceeding the industry early warning upper limit of 4%
VAT	False declaration data	Data export errors lead to underreported tax arrears of 13.3684 million yuan
Corporate income tax	Cliff-like drop in tax burden rate	From 15.77% in 2023 to 5.16% in 2024, a drop of more than 10 percentage points
Corporate income tax	Non-compliant related transactions	Price difference rate of 35%, far exceeding the industry early warning value of 10%
Stamp duty & Property tax	Declaration omissions	Unreported stamp duty for capital increase, incomplete property tax base calculation

3. In-Depth Analysis of Key Tax Risks

3.1 VAT Risks

3.1.1 Abnormally High Tax Burden Rate

Company A's 2024 VAT tax burden rate is significantly higher than the industry normal range, mainly due to three reasons: the input tax gap caused by the inability of overseas suppliers to issue special VAT invoices, the failure to fully deduct input tax corresponding to deemed sales of promotional samples, and the delayed offset of domestic sales tax burden due to unfinished export tax refund declaration. This abnormal tax burden has violated tax regulatory requirements and may trigger special tax inspections by tax authorities.

3.1.2 False Declaration Data

Due to financial system errors, the enterprise filled in incorrect unpaid tax amount in the VAT declaration form, resulting in a large amount of underreported tax arrears. This act violates the provisions of the Tax Collection and Administration Law on truthful tax declaration, constituting a false declaration, and the enterprise faces the risk of tax recovery and fines.

3.2 Corporate Income Tax Risks

3.2.1 Abnormal Tax Burden Fluctuation

The sharp drop in the enterprise's corporate income tax burden rate is related to the large additional deduction of R&D expenses for clinical phase III projects and the application of 15% preferential tax rate for high-tech enterprises. However, such a drastic fluctuation still hides potential risks, including the authenticity of R&D expense deduction and the possibility of profit transfer through related transactions, which need to be verified for compliance.

3.2.2 Non-standard R&D Expense Accumulation

The enterprise has the problem of expanding the scope of R&D expense accumulation, including non-R&D personnel salaries and production equipment depreciation into R&D expenses, which violates the regulatory provisions on the scope of R&D expense additional deduction. This behavior may be identified as tax evasion by tax authorities, leading to the recovery of deducted taxes and the imposition of late fees.

3.3 Other Tax Risks

3.3.1 Non-compliant Related Transaction Pricing

Company A's related transaction price difference rate far exceeds the industry reasonable range, and the pricing of raw material sales to its Hong Kong subsidiary does not conform to the arm's length principle, as the subsidiary does not undertake substantive business functions. According to the Enterprise Income Tax Law, tax authorities have the right to make special tax adjustments to such transactions, and the enterprise faces the risk of large back tax payment.

3.3.2 Tax Declaration Omissions

In terms of stamp duty, the enterprise failed to declare tax for capital account book increase, framework agreements and loan contracts; in terms of property tax, it did not include land use rights and auxiliary equipment value in the real estate original value, resulting in undercalculation of the tax base. These omissions constitute underpayment of taxes, and the enterprise needs to make up the tax payment and bear corresponding legal liabilities.

4. Tax Risk Prevention and Control Measures

4.1 Improve the Internal Control System

4.1.1 Build a Professional Tax Management Structure

Set up full-time tax positions with compound talents of biotech industry background and tax professional knowledge, and establish a three-level review mechanism for tax declaration to avoid data filling errors. Integrate tax risk management into the enterprise's overall internal control system, clarify the tax-related responsibilities of each business department, and form a collaborative management mode of financial department coordination and business department cooperation.

4.1.2 Strengthen Bill and Contract Management

Standardize the acquisition process of input invoices, conduct compliance screening of suppliers, and establish a three-in-one verification mechanism of "contract-invoice-fund" to ensure the authenticity and consistency of tax-related documents. Build an electronic contract management system to classify and manage all types of contracts, and set up automatic reminders for stamp duty declaration nodes to avoid declaration omissions.

4.1.3 Establish a Normalized Risk Self-inspection Mechanism

Carry out monthly self-inspection of key tax indicators such as tax burden rate and related transaction pricing, and compare with industry early warning intervals to timely identify abnormal situations. Hire third-party tax firms to conduct quarterly special audits on high-risk links such as R&D expense deduction, form risk self-inspection reports and implement rectification measures in a timely manner.

4.2 Standardize Tax-related Handling of Core Businesses

4.2.1 Refine R&D Expense Management

Establish a detailed R&D project ledger, clarify the accumulation standards of R&D personnel, equipment and materials, and require the filling of working hour records and equipment usage logs to ensure accurate expense classification. Strictly distinguish R&D expenses from production and management expenses, and hire third-party institutions to issue special audit reports on R&D expenses to improve the compliance of additional deduction declaration.

4.2.2 Standardize Related Transaction Operation

Introduce third-party evaluation institutions to issue transfer pricing reports, determine related transaction prices in accordance with the arm's length principle, and control the price difference rate within the industry reasonable range. Improve the transfer pricing contemporaneous documentation, record the functional risk analysis of related parties and the screening of comparable companies in detail, and minimize unnecessary related transactions.

4.2.3 Standardize Income and Tax Refund Handling

Strictly confirm the income recognition time point in accordance with tax laws, implement the "invoice issuance upon delivery" mechanism for advance payments to avoid delayed income recognition. Standardize the whole process management of export tax refund documents, establish a special tax refund position to track the declaration progress, and ensure the timely arrival of tax refund funds and

the consistency of document data.

4.3 Accurately Apply Tax Policies

4.3.1 Establish a Dynamic Policy Tracking Mechanism

Set up a tax policy research group to regularly collect and sort out biotech industry-related tax policies, focus on the adjustment of preferential policies such as R&D expense deduction and export tax refund, and organize regular special training for financial and business personnel to improve policy understanding and application capabilities.

4.3.2 Compile Special Business Tax Handling Manual

For special businesses such as cross-border transactions and R&D activities of biotech enterprises, sort out special tax handling rules, compile a standardized tax handling manual, clarify the key points of tax declaration and supporting materials for each link, and avoid policy understanding deviations leading to tax risks.

4.3.3 Strengthen Communication with Tax Authorities

Conduct pre-filing for major tax-related matters such as large R&D project approval and related transaction pricing adjustment, take the initiative to report to tax authorities and obtain guiding opinions. Establish a normalized communication mechanism, regularly feed back enterprise operation and tax policy implementation problems, and actively participate in industry tax seminars to strive for a favorable tax collection environment.

5. Conclusion

5.1 Research Conclusions

This study takes Company A as a case to conduct a systematic analysis of the tax risk control of biotech manufacturing enterprises, and verifies the three proposed research hypotheses. First, the tax risks of biotech manufacturing enterprises show the characteristics of multi-tax and full business chain distribution, with core risks concentrated in R&D expense accumulation, related transaction pricing, tax declaration and other links, such as abnormal tax burden, non-compliant cost classification and declaration omissions. Second, the formation of tax risks is the result of the combination of internal and external factors, including internal factors such as imperfect enterprise internal control, non-standard business tax handling and inaccurate policy application, and external factors such as the complex business characteristics of the biotech industry and frequent policy adjustments[3]. Third, targeted prevention and control measures from three dimensions: improving the internal control system, standardizing the tax-related handling of core businesses and accurately applying tax policies can effectively identify and resolve tax risks, and improve the tax compliance level of biotech manufacturing enterprises.

5.2 Theoretical and Practical Value

Theoretically, this study makes up for the deficiencies of the existing research on the tax risk control of the biotech manufacturing industry, which mostly focuses on a single tax or a specific business link,

and constructs a comprehensive tax risk analysis and control framework for the biotech manufacturing industry covering multi-tax and full business chain, enriching the research system of tax risk management of high-tech manufacturing enterprises. Practically, the study takes a typical benchmark enterprise as a case, identifies the prominent tax risk points and their root causes in the actual operation of biotech enterprises, and puts forward specific and operable prevention and control measures, which provide direct practical references for biotech manufacturing enterprises to standardize tax handling, strengthen risk management and achieve compliant operation, and also provide a reference for tax authorities to carry out targeted tax supervision on the biotech industry (Li & Wang, 2023).

5.3 Research Limitations and Prospects

This study takes a single biotech enterprise as a case study, and the research conclusions characteristics of biotech enterprises of different scales and different business types. In addition, the study focuses on the static analysis of tax risks and control measures, and lacks the dynamic tracking and effect evaluation of the implementation of risk prevention and control measures.

In the follow-up research, multi-case analysis can be adopted to select biotech enterprises of different scales, different business fields and different ownership types for comparative research, to summarize the common and individual tax risk characteristics of the industry, and to improve the universality of research conclusions (Yan & Chen, 2026). At the same time, the dynamic tracking research on the implementation effect of tax risk prevention and control measures can be carried out, to analyze the implementation effect of different control measures and optimize the tax risk control system of biotech manufacturing enterprises in combination with the actual operation of enterprises. In addition, with the continuous adjustment of tax policies and the rapid development of the biotech industry, follow-up research can focus on the new tax risk points generated by emerging business models such as cross-border technology authorization and cooperative R&D, and explore targeted risk control methods to adapt to the new development characteristics of the industry.

5.4 Industry Enlightenment

For biotech manufacturing enterprises, it is necessary to establish a tax risk prevention and control awareness of “compliance first”, abandon the concept of “valuing R&D over tax management”, and integrate tax risk management into the whole process of R&D, production, sales and import and export. Enterprises should strengthen the construction of professional tax teams, equip compound talents with industry background and tax professional knowledge, and carry out regular tax policy and risk prevention and control training (Chen, 2021). It is also necessary to promote the integrated management of business and tax, establish a linkage mechanism between business and financial departments, and carry out tax risk assessment in the early stage of business decision-making to realize the source control of tax risks.

For the biotech manufacturing industry, industry associations can play a bridge and link role, organize the compilation of industry tax risk control guidelines, carry out tax compliance exchange activities, and promote the sharing of advanced experience in tax risk management among enterprises. For tax

authorities, it is necessary to carry out targeted tax policy publicity and guidance for the biotech industry, improve the efficiency of tax policy interpretation, and establish a scientific tax risk monitoring system to realize the accurate supervision of tax risks of biotech enterprises, so as to create a good tax environment for the high-quality development of the biotech manufacturing industry.

References

- Chen, H. P. (2021). Environmental Tax Incentives, Flow of Innovative Elements and Green Transformation of Manufacturing Enterprises. *Accounting communications*, (22), 60-63.
- Li, L. M., & Wang, C. (2023). Innovation Input, Enterprise Scale and Government Support: An Analysis from the Perspective of Enterprise Heterogeneity. *Economic Theory and Economic Management*, 2023(5), 55-72.
- Ministry of Industry and Information Technology. (2021). *14th Five-Year Plan for Biotechnology Economic Development*.
- Ministry of Industry and Information Technology. (2024). *The Development Situation and Outlook of China's Pharmaceutical Industry in 2024*.
- The State Council. (2017). *Provisional Regulations of the People's Republic of China on Value-Added Tax*. Order No. 691 of the State Council, revised in 2017.
- Yan, H. G., & Chen, W. J. (2026). Tax Preferences, Capital Allocation Efficiency and Green Technological Innovation: An Analysis Based on Chinese Manufacturing Listed Companies from 2008 to 2022. *Accounting Research*, (02), 9-16.