

Construction of Data Governance Framework for Multinational Enterprises and Exploration of Compliance Path

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Abstract: The purpose of this article is to explore the construction of data governance framework of multinational enterprises and its compliance path, in order to meet the complex challenges of data protection and compliance under the background of globalization. Through in-depth analysis of international laws and regulations, industry standards and best practices, the key elements and effective strategies for building a data governance framework for multinational enterprises are put forward. In terms of methods, firstly, the design principles and objectives of the data governance framework are outlined, and the foundation and orientation of the framework construction are clarified. Then, the elements of the framework are elaborated in detail, including organizational structure, policy system, technical support, process management and supervision and assessment, which provides guidance for the concrete implementation of the framework. In addition, this article also discusses cross-cultural and cross-border adaptation strategies to ensure the applicability and effectiveness of the framework on a global scale. Through research, it is found that the successful construction of data governance framework of multinational enterprises needs to comprehensively consider multiple factors and formulate corresponding compliance strategies and practical methods. The framework and strategy proposed in this article are helpful for multinational enterprises to improve their data management capabilities, ensure the quality, security and compliance of data, and promote the effective use and value creation of data.

1. Introduction

In the wave of global digital economy in the 21st century, data has become a key factor to promote economic growth, innovation and social progress [1]. With the rapid development of information technology and the widespread popularity of the Internet, multinational enterprises, as important participants in global economic activities, are collecting, processing and analyzing massive data from all over the world at an unprecedented speed [2]. However, this process is accompanied by complex and multidimensional challenges, especially in the field of data governance [3]. Multinational enterprises not only need to deal with the differences in data

protection laws and policies between different countries and regions, but also need to ensure that users' privacy is respected, data security is maintained, and cross-border data flows are effectively managed to avoid legal conflicts, trust crises and economic losses [4].

In this context, it is particularly important for multinational enterprises to build an efficient, flexible and adaptable data governance framework. Effective data governance can not only improve the quality and value of enterprise data, promote the scientificity and efficiency of business decision-making, but also enhance customer trust, protect corporate brand image and lay a solid foundation for the sustainable development of enterprises [5]. At the same time, ensuring data compliance and observing national laws and regulations is a necessary condition for multinational enterprises to carry out international business, and it is also the cornerstone for maintaining the global digital economic order and promoting international cooperation and exchanges.

In view of the above challenges faced by multinational enterprises in data governance, this article aims to explore the construction method of data governance framework for multinational enterprises in order to provide a systematic guiding scheme for enterprises under the background of globalization.

2. Theoretical basis of data governance in multinational enterprises

2.1. Basic concepts of data governance

Data governance refers to a set of decision-making rights, responsibilities and processes established within an organization for managing, protecting and utilizing data [6]. It is not only a technical operation, but also a strategic management activity, aiming at ensuring the quality, security, consistency and availability of data to support the business objectives and strategic decisions of the organization. The constituent elements of data governance usually include organizational structure, policy norms, technical standards, process management and supervision and assessment mechanism. These elements interact with each other to form a complete data governance system.

In the theoretical framework, data governance follows a series of basic principles, such as transparency, clear responsibility, consistency, efficiency and effect orientation [7]. Its goal is to enhance data value, promote information sharing, reduce data risks, enhance decision-making ability, and ultimately promote the realization of organizational goals. Data governance not only pays attention to the physical management of data, but also emphasizes the logical management and value creation of data, which is an important support for the digital transformation and intelligent development of organizations.

2.2. Particularity of data governance in multinational enterprises

Multinational enterprises are facing more complex challenges in data governance than single-country enterprises. First of all, legal differences are a significant obstacle [8]. Different countries and regions have different legal provisions on data protection, privacy and intellectual property rights, which requires multinational enterprises to be familiar with and abide by the legal requirements of each operating place to avoid legal conflicts and penalties. Secondly, cultural differences also pose challenges to the data governance of multinational enterprises. Different cultural backgrounds and values may lead to different understandings and expectations of data privacy, security and transparency. Multinational enterprises need to establish a cross-cultural data governance mechanism to ensure consistency and adaptability on a global scale. In addition, technical obstacles are also a problem that cannot be ignored in data governance of multinational enterprises. The cross-border transmission, storage and processing of data need advanced technical

support to ensure the security and integrity of data.

2.3. Current situation of data governance in multinational enterprises

At present, the practice of multinational enterprises in data governance presents diversified characteristics [9]. Some leading enterprises have established a relatively complete data governance system, and achieved efficient data management and utilization by formulating a global unified data policy, establishing a special data governance team, and adopting advanced technical means. These enterprises have made remarkable achievements in data quality, security, compliance and value creation, which provide strong support for the global development of their business.

However, there are also many multinational companies that still have many problems in data governance. Some enterprises lack unified data governance strategies and policies, resulting in chaotic data management and uneven data quality. Some enterprises have security risks in cross-border data transmission and storage, and it is difficult to guarantee user privacy and data security. There are also some enterprises facing challenges in data compliance, and it is difficult to adapt to the legal requirements of different countries and regions.

3. Construction of data governance framework for multinational enterprises

3.1. Principles and objectives of frame design

When building a data governance framework for multinational enterprises, a series of basic principles must be followed to ensure the practicability, effectiveness and adaptability of the framework, as shown in Figure 1:

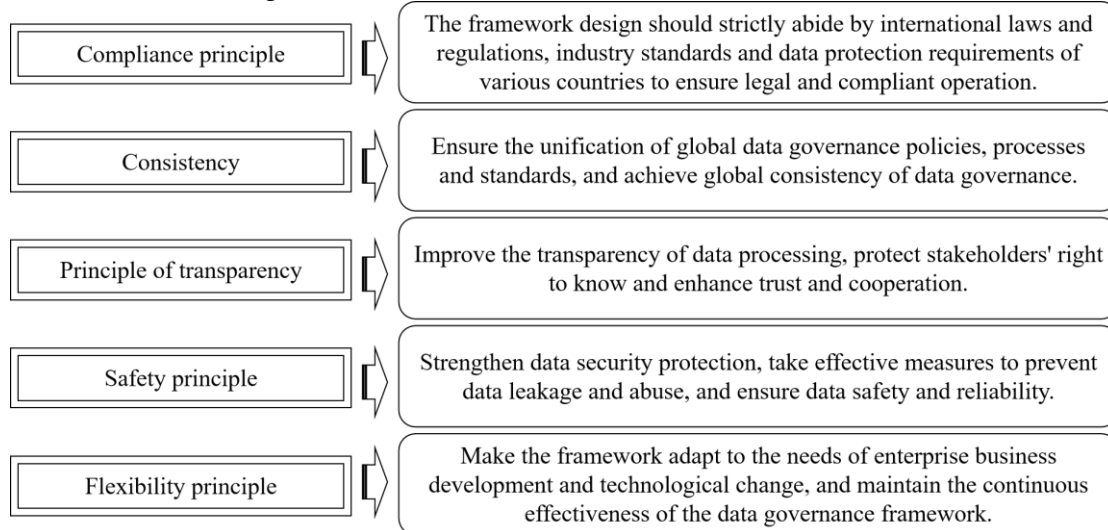


Figure 1: Basic principles of building a data governance framework for multinational enterprises

The core objectives are centered on enhancing the data management capabilities of multinational enterprises to ensure data quality, security, and compliance, while fostering effective data utilization and value creation. Specifically, these core objectives encompass: establishing a globally unified data governance system to improve the efficiency and effectiveness of data management; strengthening data protection awareness to uphold user privacy and data security; facilitating data sharing and collaboration to support global business decision-making and innovation; and continually optimizing the data governance framework to adapt to changes in the external environment and internal demands.

3.2. Elements of framework

The elements of the data governance framework of multinational enterprises mainly include the following aspects:

Organizational structure: Multinational enterprises need to define the organizational structure of data governance, including data governance committee and data management team, as well as the responsibilities and authorities at all levels.

Policy system: Multinational enterprises need to formulate global unified data policies, standards and specifications, covering the whole life cycle of data collection, processing, storage, transmission, use and destruction.

Technical support: Multinational enterprises need to adopt advanced data management technologies and tools, such as data warehouse, data mining and data visualization, to improve the efficiency and accuracy of data processing.

Process management: Multinational enterprises need to establish a process system of data governance, including data quality management, data security protection, data compliance review, etc., to ensure the orderly conduct of data governance activities.

Supervision and assessment: Multinational enterprises need to set up a supervision and assessment mechanism for data governance, regularly evaluate and audit the effect of data governance, and find and solve problems in time.

3.3. Cross-cultural and cross-border adaptive strategies

Integrating cultural sensitivity and transnational legal compliance into the data governance framework of multinational enterprises is the key to promote global cooperation and improve the effect of data governance. To this end, the following strategies can be adopted:

Strengthen cross-cultural communication: Multinational enterprises should establish cross-cultural communication mechanisms to promote understanding and cooperation between employees with different cultural backgrounds and ensure global consistency and local adaptability of data governance policies.

Respect local laws and culture: When formulating data governance policies, multinational enterprises should fully consider local laws and cultural factors to ensure the legitimacy and acceptability of the policies.

Training and education: Multinational enterprises should strengthen training and education on data governance for employees, improve their awareness of data protection and compliance ability, and promote the formation of a global data governance culture.

Establish a compliance review mechanism: Multinational enterprises should establish a compliance review mechanism to review the compliance of transnational data transmission, storage and processing activities to ensure compliance with national laws and regulations.

Enhance adaptability by technical means: Multinational enterprises should adopt advanced technical means to improve the flexibility and adaptability of data governance framework and support the global operation and innovative development of multinational enterprises.

3.4. Data governance framework

Figure 2 shows the composition of the data governance framework of multinational enterprises and their interrelationships. Based on the organizational structure, the framework realizes the goal of data governance through the joint action of policy system, technical support, process management and supervision and assessment.

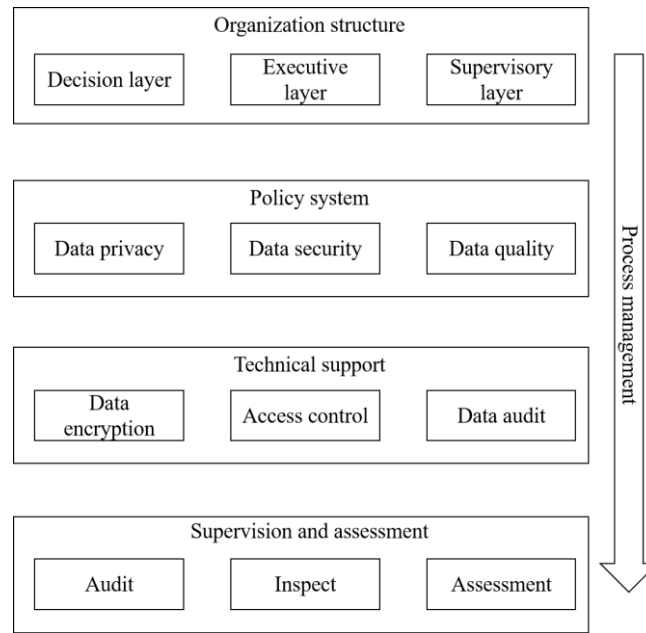


Figure 2: Data governance framework

The organizational structure defines the decision-making layer, execution layer and supervision layer of data governance. The decision-making layer is responsible for formulating the strategy and policy of data governance, the executive layer is responsible for specific data governance work, and the supervisory layer monitors and evaluates the implementation effect of data governance. Policies and systems provide guidance and norms for data governance. These policies and systems include data privacy policy, data security policy and data quality standard. Technical support is an important means of data governance. By adopting advanced technical means, such as data encryption, access control, data audit, etc., technical support ensures the safety, quality and efficiency of data. Process management focuses on all aspects of the data life cycle. From data collection, storage and processing to analysis and utilization, process management ensures the accuracy and timeliness of data. Supervision and Assessment Monitor and evaluate the implementation effect of data governance. Through regular audit, inspection and assessment, supervision and assessment ensure the continuous improvement of the data governance framework.

By constructing a perfect data governance framework, multinational enterprises can improve their data management capabilities, ensure the quality, security and compliance of data, and promote the effective use and value creation of data.

4. Exploration on data compliance path of multinational enterprises

4.1. International data protection and compliance requirements

Under the background of globalization, multinational enterprises are facing the challenges of data protection laws and regulations from different countries and regions. Among them, EU General Data Protection Regulation (GDPR) and California Consumer Privacy Act (CCPA) are two representative international data protection regulations.

GDPR is one of the strictest data protection regulations in the world, which requires enterprises to follow a series of strict principles and regulations when dealing with personal data in the EU, including legality, transparency, purpose restriction, data minimization, accuracy, storage restriction, integrity and confidentiality. GDPR also gives individuals a series of rights, such as access, correction, deletion, restriction of processing, data portability and opposition. Enterprises that

violate GDPR will face high fines and reputation losses.

CCPA, on the other hand, is a state-level data protection regulation in California, USA. It is mainly aimed at enterprises that conduct business in California and collect personal information of California residents. CCPA requires enterprises to disclose how they collect, use and share personal information, and provides consumers with a series of rights, including the right to access, the right to delete and the right to oppose the sale of personal information. In addition, CCPA has also set up a data protection officer system, requiring enterprises to designate someone to be responsible for data protection.

4.2. Compliance strategy and practice

In order to meet the challenge of international data protection regulations, multinational companies need to formulate a comprehensive compliance strategy. The following are some common compliance strategies and practices:

Localization of data: In some countries and regions with strict data protection requirements, enterprises can choose to store data locally to reduce the risk of cross-border data transmission. This will help reduce the risk of data leakage and compliance violations, and enhance the trust of local governments and consumers.

Cross-border transmission mechanism: When cross-border data transmission is needed, enterprises can adopt standard contract terms and other mechanisms to ensure data compliance. Standard contract terms are a data transmission agreement approved by regulatory authorities, which stipulates the responsibilities and obligations of data exporters and importers to ensure that data is fully protected during cross-border transmission.

Privacy design: Privacy design is a method of integrating data protection principles into the design process of products and services. By adopting the principle of privacy design, enterprises can consider the demand of data protection at the product design stage, thus reducing the cost and risk of subsequent compliance.

In the process of data compliance, multinational enterprises need to establish an effective risk management system to identify, evaluate and deal with potential risks. Figure 3 shows some key risk management and coping mechanisms:

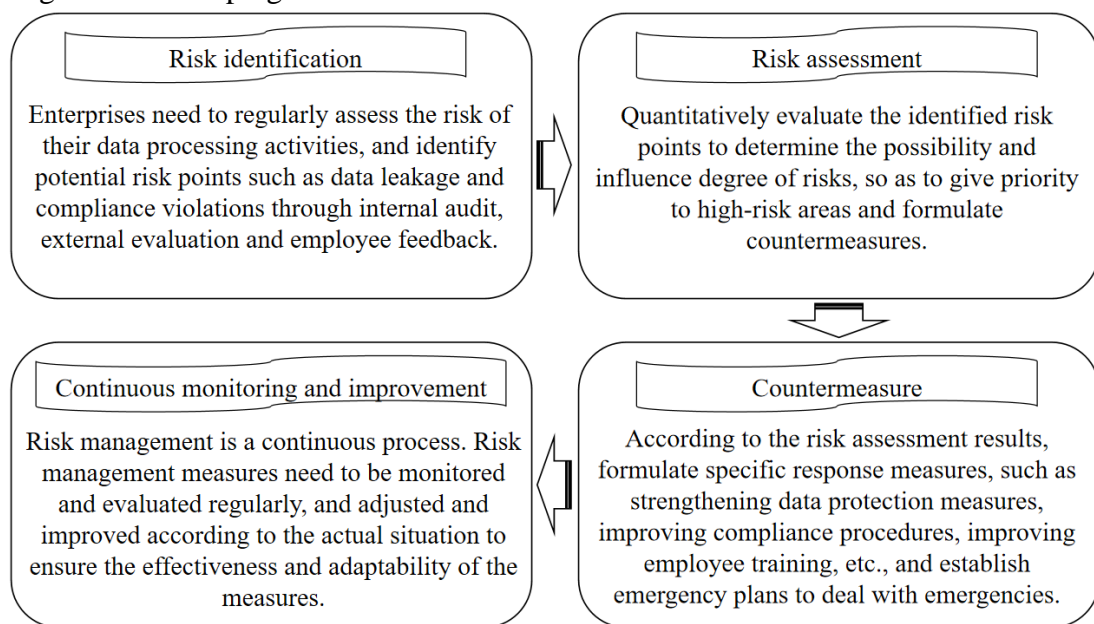


Figure 3: Data compliance risk management and response mechanism of multinational enterprises

5. Conclusions

This study deeply discusses the construction of data governance framework of multinational enterprises and its compliance path. The main findings include: the complexity and challenge of data governance of multinational enterprises are mainly due to the diversity of international laws and regulations, cultural differences and technical obstacles. When building a data governance framework, the key elements include clear design principles and objectives, perfect framework components, and cross-cultural and cross-border adaptive strategies. In addition, the study also reveals effective strategies of compliance path, such as deeply understanding and following international data protection regulations, formulating comprehensive compliance strategies and practical methods, and establishing an effective risk management system.

For multinational enterprises, this study provides the following practical guidance: first, enterprises should establish a sound data governance system, clarify the responsibilities and authorities of all levels, and ensure the orderly conduct of data governance activities. Secondly, strengthen the awareness of data protection, improve the data compliance ability of employees, and promote data sharing and collaboration. Finally, continuously optimize the data governance framework to adapt to the changes of external environment and internal demand, so as to enhance the competitiveness and sustainable development ability of enterprises.

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