



**A STUDY OF THE IMPACT OF LEGAL ENVIRONMENT ON  
LOGISTICS MARKET IN XISHUANGBANNA BASED ON  
PERCEPTION THEORY**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
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This Independent Study Has Been Approved as a Partial Fulfillment of the  
Requirements for the Degree of Master of Business Administration

Advisor.....

(Dr. Zhang Li)

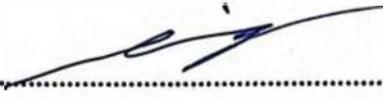
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Dean, Graduate School of Business

Date: 17 / 3 / 2016

**Title:** A Study of the Impact of Legal Environment on Logistics Market in Xishuangbanna Based on Perception Theory  
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### ABSTRACT

Against the background of the China–Laos Railway and the accelerated integration of Xishuangbanna into regional and international logistics corridors, the institutional and legal environment has become a critical factor influencing the development of the local logistics market. However, existing research has largely focused on infrastructure and cost factors, while relatively little is known about how logistics stakeholders’ perceptions of the legal environment shape their evaluation of logistics market development. Guided by Perception Theory, this study investigated the effects of legal environment stability, legal environment fairness and legal environment predictability on logistics market development in Xishuangbanna, with perceived legal environment specified as a mediating variable.

This study adopted a quantitative research method and collected data through a structured questionnaire survey administered to logistics related staff from relevant government departments, foreign trade enterprises and logistics or transport companies in Xishuangbanna. A total of 400 questionnaires were distributed, 352 were returned and 336 valid responses were retained for analysis. Reliability and validity of the scale were examined using internal consistency and construct validity indicators, correlation analysis was used to explore the relationships among the variables, and structural equation modelling was applied to test the direct effects and the mediating effects of perceived legal environment.

The results show that all proposed hypotheses H1 to H5c are supported, indicating that legal environment stability, legal environment fairness and legal environment predictability significantly and positively influence perceived legal environment, that perceived legal environment significantly and positively influences logistics market development, and that perceived legal environment plays a significant mediating role

in the relationships between the three legal environment dimensions and logistics market development in Xishuangbanna.

**Keywords:** perceived legal environment, legal environment stability, legal environment fairness, logistics market development

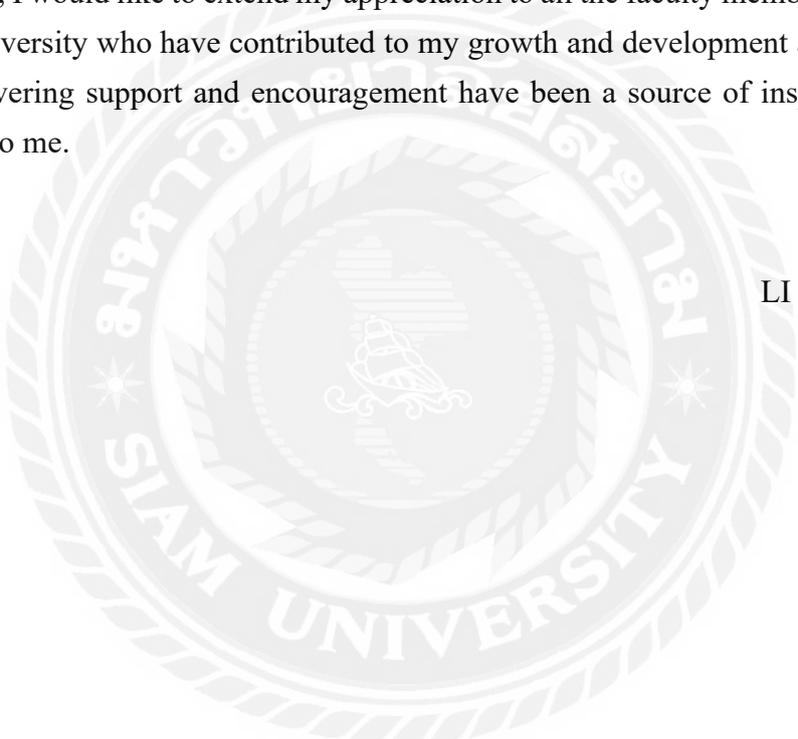


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The seal of Siam University is a large, circular emblem in the background. It features a central shield with a crown on top, surrounded by a wreath. The shield is set within a circular border containing the university's name in Thai script at the top and 'SIAM UNIVERSITY' in English at the bottom. The seal is rendered in a light, semi-transparent grey color.

LI SONGYUN

## DECLARATION

I, Li Songyun, hereby declare that this Independent Study entitled “A Study of the Impact of Legal Environment on Logistics Market in Xishuangbanna Based on Perception Theory” is an original work and has never been submitted to any academic institution for a degree.

(LI SONGYUN)

Dec 15, 2025



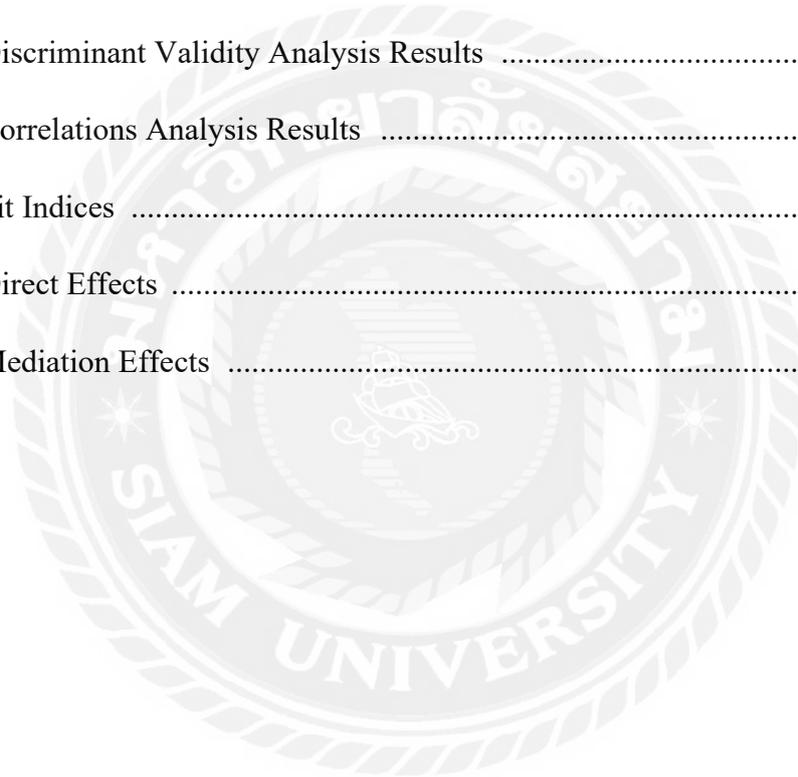
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# Chapter 1 Introduction

## 1.1 Background of the Study

In the contemporary global economy, logistics systems are widely recognised as a core driver of trade competitiveness, regional integration and participation in global value chains. The World Bank's most recent Logistics Performance Index (LPI 2023) shows that countries with higher logistics performance scores tend to enjoy lower trade costs, more reliable supply chains and stronger integration into international markets. Recent empirical work further conceptualises logistics performance, environmental performance, sustainable development and institutional governance as interrelated determinants of national development outcomes (Karountzos et al., 2025). Studies on governance quality and logistics performance indicate that government effectiveness, regulatory quality and institutional policies have significant positive effects on international logistics activities and sectoral growth (Uyar et al., 2021; Wang et al., 2024). These findings underscore that logistics markets develop not only through physical infrastructure, but also through the broader institutional and policy environment in which they operate.

Within this wider context, the China–Laos Railway has become a critical overland corridor linking China with mainland Southeast Asia. Since its opening in December 2021, the railway has substantially reduced freight transit times and logistics costs, facilitated diversified trade flows and strengthened economic ties between China and ASEAN members. Recent reports note that the line has moved tens of millions of tonnes of goods and is increasingly described as a vital artery for regional trade. Xishuangbanna Dai Autonomous Prefecture in Yunnan Province is an important node on this corridor, situated near the Mohan border port that connects to Laos. As rail-based cross-border transport expands, Xishuangbanna is expected to transform from a tourism-oriented border region into a regional logistics hub embedded in the Belt and Road Initiative and the broader Pan Asian railway vision.

Physical connectivity alone, however, does not guarantee efficient or sustainable logistics market development. A growing body of research stresses that legal and governance conditions are fundamental for enabling investment, reducing uncertainty and supporting logistics operations. The literature on the business legal environment highlights that a stable and predictable legal framework is positively associated with business freedom and macroeconomic performance (Nogal-Meger, 2018). Classic and contemporary analyses of law and development similarly emphasise that the rule of law, legal certainty and enforceable rights are essential conditions for private sector growth

and long term investment (Shihata, 1996; Zhan et al., 2024). Policy reports from international business and governance organisations argue that firms require transparent and predictable legal environments in order to commit capital and generate sustainable economic opportunities. Empirical studies confirm that the quality of the legal environment and the rigour of regulatory enforcement are closely linked to organisational performance and sectoral outcomes in various contexts (GuillÃ et al., 2019; Nogal-Meger, 2018). In the field of competition and regulatory law, the lack of predictability in enforcement has been identified as a factor that weakens deterrence and undermines the effectiveness of legal rules (Broulík, 2023).

In the logistics domain, recent cross-country evidence shows that governance quality and public sector effectiveness exert direct and indirect effects on logistics performance and logistics growth (Uyar et al., 2021; Wang et al., 2024). Studies on transport and logistics corridors, including those that examine the China–Laos Railway and associated trade facilitation measures, find that reforms which simplify procedures, improve coordination and enhance regulatory efficiency can significantly reduce logistics costs and strengthen corridor performance. Yet many of these analyses employ macro level indicators of governance and legal quality, such as country level rule of law scores or composite indices, and therefore provide limited insight into how frontline stakeholders in logistics markets perceive the legal environment in which they operate.

Perception based approaches offer a complementary perspective. Perception Theory posits that individuals do not respond directly to objective external conditions, but instead interpret and evaluate environmental stimuli through cognitive and affective processes that shape their attitudes and behaviours. Early work on environmental perception argued that people variable internal representations of their surroundings, which then guide action in complex settings (Ittelson, 1973). More recent studies have shown that perceived environmental conditions and situational factors strongly predict pro environmental intentions and behaviours in a variety of contexts, including tourism, cultural heritage conservation and climate related actions (Kotyza et al., 2024; Liu & Geng, 2023; Park & Chang, 2024). Perception based research has also examined how perceived local environment and policy support shape young people’s willingness to return to their hometowns for entrepreneurship, highlighting that environmental perceptions can influence economic decisions and spatial choices (Qi et al., 2023).

In the legal field, there is growing attention to the relationship between perceived legal protection, fairness and institutional trust. Recent empirical work indicates that perceived legal protection and trust in legal institutions can have significant psychological and behavioural consequences for affected groups (Regalado & Sun,

2024). Surveys on trust in public institutions show that citizens' perceptions of transparency, fairness and institutional performance play a decisive role in the formation of institutional trust. These findings are consistent with broader theoretical claims that institutional trust is built through the evaluation of institutional behaviour over time and through the perceived quality of institutional interactions (Kotyza et al., 2024). However, there remains a shortage of studies that apply a perception based framework specifically to legal environments in logistics markets, particularly in emerging cross border rail hubs.

In the specific context of Xishuangbanna, the rapid expansion of rail based cross border logistics associated with the China–Laos Railway has heightened the importance of a legal environment that is perceived as stable, fair and predictable by logistics enterprises, foreign trade firms, transport companies, drivers and relevant government officials. While previous research has emphasised the macroeconomic benefits of the railway and the potential for reduced logistics costs and enhanced regional connectivity, there is limited empirical evidence on how stakeholders perceive the legal environment that governs logistics transactions in this border region and how such perceptions relate to the development of the logistics market. Existing studies on the quality of business legal environments largely adopt national level perspectives and do not capture subnational variations in perception within strategic corridors (Nogal-Meger, 2018).

This study therefore proposed a conceptual framework that links three specific dimensions of the legal environment, namely legal environment stability, legal environment fairness and legal environment predictability, to logistics market development through the mediating variable of perceived legal environment. By grounding the analysis in Perception Theory, the study aimed to elucidate how external legal structures are interpreted by logistics actors in Xishuangbanna, how these interpretations form a global perception of the legal environment and how this perception shapes assessments of logistics market development. In doing so, the research sought to contribute to the literature on logistics markets, law and development and institutional perception by providing subnational, perception based evidence from a key node of the China–Laos Railway corridor.

## **1.2 Questions of the Study**

In order to achieve the objectives of this study and to clarify the relationships among the key variables, the following research questions are formulated. These questions focus on how different dimensions of the legal environment shape the perceived legal environment and, in turn, influence logistics market development in

Xishuangbanna, as well as how perceived legal environment functions as a mediating mechanism.

1. What is the effect of legal environment stability on perceived legal environment in Xishuangbanna?

2. What is the effect of legal environment fairness on perceived legal environment in Xishuangbanna?

3. What is the effect of legal environment predictability on perceived legal environment in Xishuangbanna?

4. What is the effect of perceived legal environment on logistics market development in Xishuangbanna?

5. Does perceived legal environment mediate the relationship between legal environment stability, legal environment fairness, legal environment predictability and logistics market development in Xishuangbanna?

### **1.3 Objectives of the Study**

1. To examine the effect of legal environment stability on perceived legal environment in Xishuangbanna.

2. To examine the effect of legal environment fairness on perceived legal environment in Xishuangbanna.

3. To examine the effect of legal environment predictability on perceived legal environment in Xishuangbanna.

4. To examine the effect of perceived legal environment on logistics market development in Xishuangbanna.

5. To explore the mediating role of perceived legal environment in the relationship between legal environment stability, legal environment fairness, legal environment predictability and logistics market development in Xishuangbanna.

### **1.4 Scope of the Study**

This study focused on the relationship between legal environment and logistics market development in Xishuangbanna Dai Autonomous Prefecture, Yunnan Province, in the context of the China–Laos Railway and related cross border logistics activities. The research concerned logistics activities that are directly or closely connected to cross border trade and transport in Xishuangbanna.

Conceptually, the study covered four main variables. The independent variables are legal environment stability, legal environment fairness and legal environment predictability. The mediating variable is perceived legal environment, defined as the

overall perception of the legal environment held by logistics stakeholders. The dependent variable is logistics market development in Xishuangbanna, which refers to the perceived level of development, attractiveness and institutional quality of the local logistics market. The study did not attempt to include all possible determinants of logistics market development, but focuses specifically on the legal environment and its perception.

Using a quantitative research method, data were collected through a structured questionnaire administered to relevant staff members who are directly engaged in logistics related work in Xishuangbanna. These respondents included staff from key government departments involved in cross border logistics management (such as commerce, foreign trade and customs related offices), as well as staff from foreign trade enterprises and logistics or transport companies that participated in cross border or long distance logistics activities. They were selected because they were directly exposed to the legal environment and have practical experience of the local logistics market.

### **1.5 Significance of the Study**

Theoretically, this study extends Perception Theory into the domain of legal institutional environments and logistics markets by treating the legal environment as a perceived variable rather than only an objective set of rules. By decomposing the legal environment into three dimensions—legal environment stability, legal environment fairness and legal environment predictability—and modelling their effects on logistics market development through perceived legal environment, the study demonstrates that stakeholders' subjective evaluations are a key mechanism linking external legal structures to market level outcomes. Conducted at the subnational level in Xishuangbanna, a key node of the China–Laos Railway, the research also refines the conceptualisation of logistics market development as a perception based outcome, thereby providing a transferable analytical framework for future studies on law, logistics and regional development in other border regions and transport corridors.

Practically, this study offers evidence based guidance for improving the legal and institutional environment of the logistics market in Xishuangbanna. By revealing how the perceived stability, fairness and predictability of the legal environment shape the perceived legal environment and, in turn, logistics market development, the findings help local government departments and logistics related organisations identify which aspects of laws, regulations and enforcement require priority reform.

## **1.6 Definition of Key Terms**

Legal Environment Stability refers to the extent to which laws, regulations and related enforcement practices governing logistics activities in Xishuangbanna remain consistent over time, without frequent, abrupt or arbitrary changes that create uncertainty for logistics stakeholders.

Legal Environment Fairness refers to the extent to which laws, regulations and enforcement practices are applied impartially and equally to different logistics market participants, without unjust discrimination, selective enforcement or undue favouritism.

Legal Environment Predictability refers to the extent to which logistics stakeholders are able to reasonably anticipate the legal consequences of their actions, including how rules will be interpreted and enforced, so that they can plan and conduct logistics activities with a clear understanding of potential legal outcomes.

Perceived Legal Environment refers to the overall evaluation or global impression that logistics related staff in Xishuangbanna hold about the legal environment, integrating their perceptions of stability, fairness and predictability into a general sense of whether the legal environment is reliable, supportive and conducive to logistics activities.

Logistics Market Development refers to the perceived level of growth, vitality and institutional quality of the logistics market in Xishuangbanna, including the attractiveness of the market to logistics and foreign trade enterprises, the perceived ease of market entry and operation and the extent to which existing institutional arrangements support efficient and orderly logistics activities.

## Chapter 2 Literature Review

### 2.1 Perception Theory

Perception Theory provides an important theoretical basis for this study, because it emphasises that people do not respond directly to objective conditions but to their subjective interpretations of those conditions. In classic environmental psychology, Ittelson argued that perception is an active, meaning making process through which individuals variable internal representations of their surroundings, and that “environmental perception” explains how people understand spatial structures and situational cues and then organise behaviour accordingly (Ittelson, 1973). Contemporary social cognition research extends this view, defining perception as the first stage in a broader chain of social information processing that links stimulus input, cognitive appraisal and behavioural response (Cummings & Sanders, 2019). Perception Theory therefore supports the idea that stakeholders in the logistics sector form overall judgements of their legal environment which then guide their decisions and cooperation behaviour, even when the underlying laws and regulations are identical.

Recent work on environmental and spatial perception illustrates how perceived qualities of an environment shape attitudes, intentions and actions. Studies in tourism and environmental psychology show that environmental perception, such as perceived restorativeness, safety or aesthetic quality, significantly influences place attachment and various forms of environmentally responsible behaviour (Qi et al., 2023; Yan et al., 2024; Zhou et al., 2023). Systematic reviews of pro environmental behaviour similarly emphasise that many behavioural models are perception based, focusing on perceived environmental threat, perceived value and perceived responsibility rather than purely objective conditions (Tian & Liu, 2022). These studies consistently support a stimulus perception response logic in which contextual features are filtered through cognitive and affective appraisals before they affect individual or organisational behaviour.

In the legal and institutional field, perception based approaches have also become central. Research on procedural justice and legal legitimacy shows that citizens’ perceptions of fairness, neutrality, transparency and voice in legal processes are stronger predictors of perceived legitimacy and willingness to comply than case outcomes or formal rules alone (Ansems et al., 2021; Johnson et al., 2014; Somuano Ventura & Takahashi, 2025; Tyler, 2023). Empirical studies find that when the legal system is perceived as fair and predictable, institutional trust increases, whereas perceptions of injustice undermine cooperation, compliance and even broader confidence in state institutions (Frank & Nivorozhkin, 2025; Luo & Kilburn, 2025).

Similar patterns appear in environmental justice research, where perceived environmental and social justice strongly influence satisfaction with public policies and citizens' intention to participate in governance (Chiara & Brondi, 2025; Maleknia, 2025).

This study conceptualises the “perceived legal environment” as a multidimensional cognitive appraisal of the legal context surrounding the logistics market, integrating perceptions of stability, fairness and predictability of laws and their implementation. From the perspective of perception theory, these appraisals function as an internal filter between the objective legal environment and logistics market development outcomes. A legal framework that is objectively similar across regions may generate very different developmental effects depending on how key actors perceive its reliability, impartiality and foreseeability. Positioning “perceived legal environment” as a mediating variable between specific dimensions of the legal environment and logistics market development is therefore theoretically consistent with both classical perception theory and recent empirical research in environmental, institutional and legal perception.

## **2.2 Legal Environment Stability**

The concept of legal environment stability is closely linked to the broader notions of legal certainty and the rule of law. Legal certainty is commonly defined as a condition in which legal rules are clear, consistent and accessible, and where state action is sufficiently foreseeable so that individuals and firms can plan their conduct with confidence (Chen et al., 2021). Recent policy documents emphasise that stable and predictable legal frameworks are a core element of the rule of law and a precondition for economic stability and prosperity. For example, the European Commission's 2025 Rule of Law Report stresses that legal certainty and the stability of the legal environment are essential for business confidence and sustainable growth. Similarly, OECD work on improving the legal environment for business and investment identifies the stability and predictability of laws and regulations as key conditions for private sector development and investor confidence in emerging economies. Legal stability thus refers not only to the existence of formal rules, but to their continuity, coherence and resistance to abrupt, arbitrary or retroactive change.

A large body of recent research shows that legal certainty and the stability of the legal environment are strongly associated with investment decisions and the investment climate. An empirical study on legal certainty and investment decisions in the Indonesian stock market finds that higher perceived legal certainty, understood as

predictability and stability of property and contract rules, significantly increases investors' willingness to invest (Chen et al., 2021). Research on foreign investment in Timor-Leste similarly concludes that legal certainty regarding the consistent implementation of laws and the availability of transparent dispute resolution mechanisms plays a pivotal role in attracting foreign investors (Marsal et al., 2024). Studies of investment law and economic performance in Europe report that a strong rule of law creates a favourable investment climate precisely because it provides stability, predictability and legal protection for businesses (Valcheva, 2024). In the practice of international investment arbitration, tribunals have repeatedly recognised that investors can legitimately expect a certain stability of the legal environment, treating the stability and predictability of the legal framework as essential elements of fair and equitable treatment (Vig, 2022). These findings suggest that stable legal environments reduce perceived risk, support long term planning and form part of the implicit contract between host states and investors.

More recent scholarship explores sectoral and contextual dimensions of legal certainty and stability. Studies of sustainable and green investment policies argue that legal certainty regarding environmental obligations and regulatory frameworks is a fundamental basis for implementing green economic development programs and for integrating environmental goals with investment strategies (Anwar & Fathonah, 2024; Magda et al., 2025). In the European human rights context, legal certainty is analysed through the lens of cultural dimensions, including uncertainty avoidance, to understand how courts calibrate the necessary level of legal predictability in different societies (Blesa, 2025). At the policy level, business advocacy organisations and economic commentators note that a stable legal business corridor is a central demand of enterprises, and that the rule of law reduces institutional transaction costs by providing certainty and reliable enforcement (Valcheva, 2024). Taken together, these strands of literature underscore that legal environment stability comprises the continuity and reliability of legal norms and enforcement practices over time, and that it functions as a key institutional condition for investment, economic development and efficient market operation. Building on this literature, this study conceptualises Legal Environment Stability in the logistics sector of Xishuangbanna as the perceived consistency and continuity of laws, regulations and enforcement practices governing logistics activities, and examines how such stability influences perceptions of the legal environment and, ultimately, logistics market development.

## 2.3 Legal Environment Fairness

Legal environment fairness is usually understood as a combination of equality before the law, non-discrimination in the application of rules, and impartial, independent adjudication. In rule of law frameworks, fairness is treated as a core principle: the law should apply equally to all persons, public officials must also be subject to the law, and no group should enjoy arbitrary advantages or suffer arbitrary disadvantages because of their status. Recent analyses of the rule of law emphasise that fairness in the application of law, together with equality before the law, accountability, and legal transparency, is essential not only for the protection of rights but also for economic growth and institutional effectiveness (Udovičić & Marošević, 2024). In this sense, legal environment fairness refers not only to fair rules on paper, but also to how consistently and impartially those rules are implemented by courts, regulators and enforcement agencies.

In the business and investment context, legal environment fairness has been shown to be closely related to investment climate, business stability and economic performance. Studies of business law and economic regulation argue that a fair legal environment is one in which economic regulations are applied equally, business law ensures that all parties are treated in the same way, and equal legal protection is available regardless of firm size or ownership. Empirical research on local judicial reform in China finds that a fair and impartial judicial system stabilises firms' expectations and supports corporate investment, highlighting that perceived fairness of courts and dispute-resolution mechanisms is a basic institutional guarantee for long term business decisions (Zhao & Zhang, 2022). Work on fair investment environments similarly notes that perceptions of fairness in regulation, anticorruption enforcement and judicial action are key factors shaping investors' willingness to commit capital, particularly in environments where the shadow economy and rent seeking are concerns (Dobrovolska et al., 2024). These findings suggest that legal environment fairness reduces perceived discrimination and arbitrariness, thereby lowering institutional risk and encouraging participation in formal markets.

A growing body of behavioural and institutional research further shows that perceived fairness in law-related processes has strong effects on trust, legitimacy and compliance. Drawing on psychological and policy studies, Lind and Arndt (2016) argued that when citizens experience procedures as fair, respectful and transparent, they are more willing to accept decisions and comply with regulations, even when outcomes are unfavourable, and that perceived procedural fairness is therefore an important design criterion for regulatory policy. Recent work on procedural justice in Mexico

finds that perceptions of fair procedures and adequate representation significantly enhance institutional trust in political and legal institutions (Somuano Ventura & Takahashi, 2025). Research on transparency, accountability and public trust in justice systems also indicates that fair and transparent procedures contribute to higher levels of confidence in courts and legal institutions (Irvita & Asriani, 2025). Taken together, these findings highlight that fairness in the legal environment is not a purely normative ideal; it has measurable behavioural consequences that are mediated by perceptions of fairness and institutional trust.

On this basis, this study conceptualises legal environment fairness in the logistics sector of Xishuangbanna as stakeholders' perception that laws and regulations relevant to logistics are applied impartially, consistently and without unjust discrimination to different types of logistics market participants, including state-owned and private enterprises, domestic and foreign firms, and various categories of transport operators. This dimension captures whether respondents feel that similar cases receive similar treatment, that enforcement agencies are neutral and unbiased and that access to legal remedies is not restricted by status. In line with the literature reviewed above, such fairness is expected to be a crucial component of the perceived legal environment and to play an important role in shaping confidence in, and engagement with, the logistics market.

## **2.4 Legal Environment Predictability**

Legal environment predictability is generally defined as the extent to which legal rules, regulatory processes and enforcement practices allow individuals and firms to foresee how the law will be applied in the future. In rule-of-law theory, predictability is treated as a core requirement: laws should be accessible, intelligible and sufficiently clear so that legal rights and liabilities can be anticipated *ex ante*. Recent work on the “rule-of-law capital” emphasises that a robust rule of law creates legal certainty and predictability, giving economic actors confidence in the stability of legal norms, property rights and contractual arrangements (Zhan et al., 2024). At the level of regulatory systems, OECD analysis stresses that high-quality regulatory management, including impact assessment and systematic review of regulations, is essential to improve legal predictability and reduce fragmentation in complex economic environments. In this sense, Legal environment predictability is not merely the existence of laws, but the foreseeable continuity and application of those laws over time.

A growing empirical literature examines how predictability of the legal and regulatory environment affects economic performance, investment and business

decisions. Studies of the legal environment for business and investment in Central Asia identify the implementation of predictable rules as a cornerstone for private sector development and a level playing field between private firms and state-owned enterprises. In macroeconomic analyses of the rule of law, strong rule-of-law systems are found to create favourable investment climates precisely because they provide stability, predictability and legal protection for businesses (Valcheva, 2024; Zhan et al., 2024). Research on legislative predictability shows that frequent, uncoordinated legal changes reduce the ability of firms to plan, whereas regulatory management tools that stabilise and rationalise law-making are associated with higher growth and productivity (Fazekas et al., 2024). In sector-specific contexts, legal predictability is increasingly highlighted as a prerequisite for long-term strategies: for example, climate and net-zero policy debates note that companies require regulatory stability and legal predictability to justify large investments in decarbonisation.

Legal environment predictability is also a central topic in international economic law and competition law, where it is explicitly linked to legal certainty and legitimate expectations. In investment law, reports on the rule of law and investor protection stress that investors rely on the predictability of host state legal frameworks and case law when committing capital, and that inconsistent or retroactive regulatory changes erode confidence and trigger disputes (Riffel, 2025). Comparative studies of international transaction regulation in the United States and the European Union similarly conclude that transparency, predictability and security of legal rules are common goals of both systems, despite different legal traditions (Selimov, 2024). In competition law, Broulík (2023) argued that predictability of enforcement is often undervalued in academic discussions, even though it is crucial for allowing firms to anticipate how their conduct will be assessed and for maintaining deterrence without excessive legal uncertainty. This line of research supports a general view that predictable legal regimes lower institutional risk, support compliance and enable more efficient market behaviour.

Building on these insights, this study conceptualises legal environment predictability in the logistics sector of Xishuangbanna as logistics stakeholders' perception that relevant laws, regulations and enforcement practices are sufficiently stable, clear and consistently interpreted so that they can reasonably anticipate legal consequences when planning logistics activities, including cross-border transport along the China–Laos Railway corridor. In line with the literature reviewed above, a higher level of perceived predictability is expected to reduce uncertainty and perceived risk, contributing to a more positive perceived legal environment and, ultimately, to stronger logistics market development.

## 2.5 Perceived Legal Environment

Perceived legal environment generally refers to actors' subjective evaluation of how protective, fair and effective the surrounding legal order is and how reliably it can be expected to function in practice. Recent work on intellectual property shows that firms' perceptions of the legal environment, including how courts reason and enforce IP rights, shape innovation choices and legal mobilization strategies, highlighting that perceived legal conditions may matter at least as much as formal statutes or case outcomes (Chen et al., 2023). In entrepreneurship research, perceived legal environment has been operationalised through survey-based indices capturing entrepreneurs' views on contract enforcement and judicial performance, and these indicators have been shown to affect expectations about business risk and the propensity to start and grow firms (Ippoliti et al., 2015). Similarly, governance and business-environment studies find that when firms perceive courts and legal institutions as strong and reliable, innovative small and medium-sized enterprises tend to achieve higher sales and profits, whereas a weak perceived legal environment disproportionately constrains more dynamic and innovative firms (Yang, 2017). At a macro level, institutional and strategy research demonstrates that firms continuously update their assessment of the domestic institutional and legal environment by drawing cues from high-profile legal decisions, such as international investment arbitration rulings, which in turn influences how favorable or hostile they perceive the national rule-of-law context to be (Cheng & Jandhyala, 2025). Beyond firms, public-law and justice-policy research shows that people's perceptions of legal protection and institutional trust are important structural determinants of wellbeing, and that stronger perceived legal protection is associated with higher trust in institutions and lower psychological distress (Byrne et al., 2025). Global governance reports further underline that trust in the rule of law depends on whether individuals and businesses experience justice systems as accessible, predictable and responsive in everyday interactions, not only on formal guarantees (Tyler & Huo, 2002). In digital markets, the notion of perceived legal environment has also appeared in the form of perceived legal environment security, capturing consumers' beliefs that the legal framework can effectively protect them in e-commerce transactions, which interacts with privacy and security perceptions in shaping online trust (Chen & Li, 2009). Taken together, these strands of literature support conceptualising perceived legal environment as a latent variable that integrates perceptions of stability, fairness and predictability of legal rules and institutions, and they provide empirical evidence that such perceptions can affect behaviour and

outcomes in domains including innovation, entrepreneurship, market development and individual wellbeing.

## **2.6 Logistics Market Development**

Logistics market development is commonly used to describe the extent to which a country or region has built an efficient, competitive and attractive logistics sector in terms of infrastructure, service quality, institutional environment and integration into global supply chains. Recent quantitative work has treated logistics market development as a multidimensional variable, often measured through composite indices such as the World Bank Logistics Performance Index (LPI) and related market attractiveness indicators, capturing customs efficiency, infrastructure quality, logistics service competence and timeliness (Raimbekov et al., 2017). Using fuzzy clustering and discriminant analysis for a panel of developing economies, Kara (2023) operationalised logistics market development by combining LPI components and market characteristics, and shows that countries with higher logistics market development tend to have better infrastructure, more reliable services and more favourable business conditions. Similarly, studies on the integration of logistics systems of developing countries into international logistics channels underline that low levels of logistics market development are associated with imperfect regulatory frameworks, low purchasing power, inefficient customs control and poor service quality, all of which weaken the country's logistics environment and its ability to participate in global corridors (Al-Ababneh et al., 2021).

A large empirical literature links logistics market development, usually proxied by logistics performance indices, to trade expansion and economic growth. Global comparative studies find that better logistics performance significantly increases trade efficiency and is positively associated with economic growth, with infrastructure quality, tracking and tracing, and customs efficiency emerging as critical drivers (Bugarcic & Kleinert, 2024; Sharipbekova & Raimbekov, 2018; Yangailo, 2024). More focused gravity-model analyses show that higher LPI scores for both exporting and importing countries, and green logistics performance, raise intra regional export values, confirming that advanced logistics markets lower trade costs and improve competitiveness (Gani, 2017; Vu Thi Thu & Thu, 2025). Reviews of trade logistics further conclude that enhanced logistics services enlarge trade volumes and support manufacturing and distribution activities, particularly when combined with open and supportive trade and investment regimes (Salawu & Ghadiri, 2022). Evidence from ASEAN and other developing regions also indicates that improvements in logistics

infrastructure and facilitation are central to building efficient and competitive logistics sectors and to realising the benefits of regional economic integration (Long, 2025; Raimbekov et al., 2017).

Beyond aggregate trade and growth effects, recent research emphasises that logistics market development reshapes a country's position in global value chains and its investment attractiveness. Mishrif et al. (2024) showed that the state of national logistics and supply chain systems significantly influences a country's position in global value chains, with logistics infrastructure, human resources and innovation capacity acting as key mechanisms linking the logistics sector to trade performance and foreign direct investment. Other analyses of emerging markets highlight that the attractiveness of the logistics market, as captured by indices such as the Emerging Market Logistics Index, depends on market size and dynamics, market compatibility, connectivity of transport links and the quality of the regulatory environment, and that these attributes jointly determine the potential returns of logistics investments (Raimbekov et al., 2017). Country level studies, for example on Cambodia, further confirm that the level of logistics development affects productivity, competitiveness and the ability to attract foreign capital across all sectors of the economy (Long, 2025). Taken together, this literature supports conceptualising logistics market development in this study as a latent variable that reflects the overall capability, efficiency and institutional quality of the logistics sector in a given region and shows that higher logistics market development is consistently associated with stronger trade performance, economic growth and integration into regional and global markets.

## **2.7 Conceptual Framework**

The conceptual framework of this study is grounded in Perception Theory and posits that the legal environment influences logistics market development in Xishuangbanna through stakeholders' subjective perceptions. Accordingly, the framework proposes that legal environment stability, legal environment fairness and legal environment predictability each exert positive effects on perceived legal environment, that perceived legal environment has a positive effect on logistics market development and that perceived legal environment mediate the relationships between the three legal environment dimensions and logistics market development.

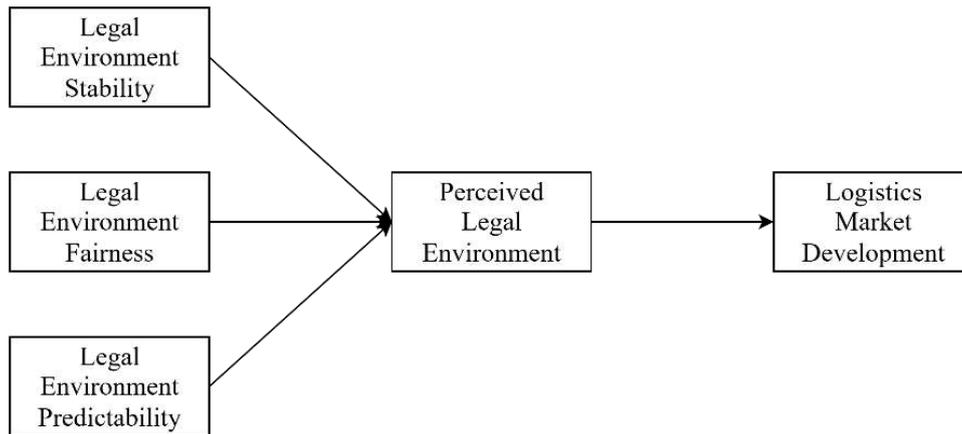


Figure 2.1 Conceptual Framework



## Chapter 3 Research Methodology

### 3.1 Research Design

This study adopted a quantitative research design in order to test the hypothesised relationships among Legal Environment Stability, legal environment fairness, legal environment predictability, perceived legal environment and logistics market development in Xishuangbanna. The study used a questionnaire to collect primary data from relevant staff members who are directly engaged in logistics related work, including staff from core government departments responsible for cross border logistics management as well as staff from foreign trade enterprises and logistics or transport companies operating in Xishuangbanna, by using Likert type scale that captures respondents' perceptions of the stability, fairness and predictability of the legal environment, their overall perceived legal environment and their evaluation of logistics market development. This study conducted correlation analysis and structural equation modelling or regression based mediation analysis, in order to assess the fit of the proposed conceptual framework and to provide support for the research objectives and hypotheses.

### 3.2 Questionnaire Design

The questionnaire for this study was designed as a structured self administered instrument to measure the five main variables, namely Legal Environment Stability, Legal Environment Fairness, Legal Environment Predictability, Perceived Legal Environment and Logistics Market Development. All items are closed ended and use a five point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), allowing respondents to indicate the extent of their agreement with a series of statements about the legal environment and the logistics market. The items for Legal Environment Stability, Fairness and Predictability are developed with reference to existing literature on rule of law, legal certainty, fairness and regulatory predictability, and are adapted to the specific context of logistics activities in Xishuangbanna.

Table 3.1 Questionnaire Items

Variable	Code	Item
Legal Environment Stability	LES1	The laws and regulations governing logistics activities in Xishuangbanna remain relatively stable over time.

	LES2	There are no frequent or sudden changes in logistics related laws that disrupt our work planning.
	LES3	Policy adjustments related to logistics are usually gradual and well communicated in advance.
	LES4	I feel that the overall legal framework for logistics in Xishuangbanna is consistent and continuous.
Legal Environment Fairness	LEF1	Logistics related laws and regulations are applied equally to different types of enterprises.
	LEF2	Enforcement agencies treat logistics companies and drivers in a fair and impartial manner.
	LEF3	Similar logistics cases are handled in a similar way by the relevant authorities.
	LEF4	Access to legal remedies and complaint channels is fair for all logistics market participants.
Legal Environment Predictability	LEP1	It is generally easy to predict how logistics related laws will be applied in practice.
	LEP2	We can reasonably foresee the legal consequences of our logistics decisions and actions.
	LEP3	The interpretation of logistics regulations by authorities is consistent and predictable.
	LEP4	When new regulations are introduced, their impact on our logistics activities is relatively predictable.
Perceived Legal Environment	PLE1	Overall, I consider the legal environment for logistics in Xishuangbanna to be reliable.
	PLE2	In general, the legal environment here supports the healthy development of logistics activities.
	PLE3	I feel confident that the legal environment provides adequate protection for logistics market participants.
	PLE4	Taken together, I have a positive overall impression of the legal environment for logistics in Xishuangbanna.
Logistics Market Development	LMD1	The logistics market in Xishuangbanna is developing in a dynamic and active way.
	LMD2	The logistics market here is attractive for logistics enterprises and foreign trade companies.

	LMD3	Institutional arrangements in Xishuangbanna support efficient and orderly logistics operations.
	LMD4	Overall, I believe the logistics market in Xishuangbanna has good development prospects.

### 3.3 Hypothesis

H1: Legal Environment Stability has a positive effect on Perceived Legal Environment.

H2: Legal Environment Fairness has a positive effect on Perceived Legal Environment.

H3: Legal Environment Predictability has a positive effect on Perceived Legal Environment.

H4: The Perceived Legal Environment has a positive effect on Logistics Market Development.

H5a: Perceived Legal Environment mediates the relationship between Legal Environment Stability and Logistics Market Development.

H5b: Perceived Legal Environment mediates the relationship between Legal Environment Fairness and Logistics Market Development.

H5c: Perceived Legal Environment mediates the relationship between Legal Environment Predictability and Logistics Market Development.

### 3.4 Population and Sample

The population of this study consisted of all relevant staff members who are directly engaged in logistics related work in Xishuangbanna Dai Autonomous Prefecture, including personnel from core government departments responsible for cross border logistics management such as commerce, foreign trade and customs related offices as well as staff from foreign trade enterprises and logistics or transport companies that participate in cross border or long distance logistics activities in the region. Using a quantitative survey approach, by identifying key government units and enterprises involved in logistics activities along the China Laos Railway and associated routes in Xishuangbanna, and then selected respondents within these organisations through purposive and convenience sampling based on criteria including direct involvement in logistics work and a minimum period of work experience in the current position.

### 3.5 Data Collection

Data were collected through a structured self administered questionnaire, with a total of 400 questionnaires distributed, 352 questionnaires returned and 336 questionnaires deemed valid after data screening for completeness and consistency, resulting in an effective response rate that is adequate for reliability and validity testing as well as for multivariate analyses such as structural equation modelling or regression based mediation analysis.

### 3.6 Data Analysis

Data analysis in this study was carried out in several basic steps. First, the collected questionnaire data were screened to remove incomplete or obviously invalid responses. Second, descriptive statistics were used to summarise the characteristics of the respondents and each questionnaire item. Third, reliability analysis and validity analysis were conducted to examine the internal consistency and variable validity of the scales for Legal Environment Stability, Legal Environment Fairness, Legal Environment Predictability, Perceived Legal Environment and Logistics Market Development. Fourth, correlation analysis was used to explore the relationships among the main variables. Finally, a structural equation model or regression based mediation analysis was applied to test the direct effects of the three legal environment dimensions on Perceived Legal Environment, the effect of Perceived Legal Environment on Logistics Market Development and the mediating role of Perceived Legal Environment in the relationships between the legal environment dimensions and Logistics Market Development.

### 3.7 Reliability and Validity Analysis of the Scale

The reliability and validity analysis shows that the measurement scale used in this study has good internal consistency and is suitable for factor analysis.

Table 3.2 Reliability Analysis Result

Variable	Number of items	Cronbach's alpha
Legal Environment Stability	4	0.87
Legal Environment Fairness	4	0.89
Legal Environment Predictability	4	0.88
Perceived Legal Environment	4	0.90
Logistics Market Development	4	0.91

As reported in Table 3.2, the Cronbach's alpha coefficients for all five variables are above the commonly accepted threshold of 0.70, with values ranging from 0.87 for

Legal Environment Stability to 0.91 for Logistics Market Development, indicating high internal consistency among the items within each variable.

Table 3.3 KMO and Bartlett's Test<sup>a</sup>

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.92
Bartlett's Test of Sphericity	Approx. Chi-Square	2150.37
	Df	190
	Sig.	0.000

The overall Kaiser Meyer Olkin (KMO) measure of sampling adequacy is 0.92, which is considered excellent and suggests that the correlations among items are sufficiently large for factor analysis.



## Chapter 4 Findings and Discussion

### 4.1 Demographic Characteristics of Respondents

The demographic characteristics of the respondents indicate that the sample is composed of experienced logistics related staff from both government and enterprise sectors in Xishuangbanna. Among the 336 valid respondents, 58% are male and 42% are female. In terms of age, 12% are 25 years or younger, 38% are between 26 and 35 years old, 32% are between 36 and 45 years old and 18% are 46 years old or above, which shows that the majority of respondents are in the middle stages of their careers. Regarding educational background, 6% hold a diploma or lower qualification, 64% hold a bachelor's degree and 30% hold a master's degree or above, indicating that most respondents have at least undergraduate level education.

With respect to organisational affiliation, 34% of respondents work in government departments related to commerce, foreign trade or customs, 31% are employed in foreign trade enterprises and 35% work in logistics or transport companies. In terms of work experience in logistics related positions, 19% have worked for 3 years or less, 37% for 4 to 7 years, 24% for 8 to 11 years and 20% for 12 years or more. As for job position, 62% identify as general staff, 23% as supervisors and 15% as managers or higher level executives. Overall, these characteristics suggest that the sample is reasonably diverse and includes respondents who are familiar with logistics operations and with the legal environment affecting the logistics market in Xishuangbanna.

Table 4.1 Demographic Characteristics of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	195	58.0
	Female	141	42.0
Age	25 years or younger	40	12.0
	26–35 years	128	38.0
	36–45 years	108	32.0
	46 years or above	60	18.0
Educational Background	Diploma or lower	20	6.0
	Bachelor's degree	215	64.0
	Master's degree or above	101	30.0
Organisational Affiliation	Government departments	114	34.0
	Foreign trade enterprises	104	31.0
	Logistics or transport companies	118	35.0

Work Experience in Logistics	3 years or less	64	19.0
	4–7 years	124	37.0
	8–11 years	81	24.0
Current Job Position	General staff	210	62.0
	Supervisors	76	23.0
	Managers or above	50	15.0

## 4.2 Confirmatory Factor Analysis

The goodness of fit of the measurement model was assessed using several commonly reported indices from confirmatory factor analysis.

Table 4.2 Fit Indices of the Measurement Model

Index	Value
$\chi^2$	261.37
df	142
$\chi^2/df$	1.84
CFI	0.96
TLI	0.95
GFI	0.93
RMSEA	0.050
SRMR	0.041

The chi square statistic for the measurement model was  $\chi^2(142) = 261.37$  and the ratio  $\chi^2/df$  was 1.84, which is below the recommended upper limit of 3. The incremental fit indices CFI and TLI were 0.96 and 0.95 respectively, and the absolute fit index GFI was 0.93, all exceeding the conventional cut off value of 0.90. In addition, the error of approximation indices showed acceptable fit, with RMSEA equal to 0.050 and SRMR equal to 0.041, both lower than the commonly recommended threshold of 0.08. Taken together, these results indicate that the measurement model fits the data well and provides an adequate basis for further examination of convergent validity and discriminant validity.

## 4.3 Convergent Validity

Convergent validity was examined using standardised factor loadings, composite reliability (CR) and average variance extracted (AVE) for each variable.

Table 4.3 Convergent Validity Analysis Results

Variable	CR	AVE
Legal Environment Stability	0.87	0.62
Legal Environment Fairness	0.89	0.66
Legal Environment Predictability	0.88	0.60
Perceived Legal Environment	0.90	0.68
Logistics Market Development	0.91	0.67

As reported in Table 4.3, the CR values were 0.87 for Legal Environment Stability, 0.89 for Legal Environment Fairness, 0.88 for Legal Environment Predictability, 0.90 for Perceived Legal Environment and 0.91 for Logistics Market Development, indicating high internal consistency above the minimum criterion of 0.70. The corresponding AVE values were 0.62, 0.66, 0.60, 0.68 and 0.67, respectively, all greater than the recommended cut off of 0.50. Taken together, these results show that each set of items shares a substantial proportion of common variance and provide strong evidence of adequate convergent validity for all five variables.

#### 4.4 Discriminant Validity

Discriminant validity was assessed using the Fornell Larcker criterion.

Table 4.4 Discriminant Validity Analysis Results

Variable	LES	LEF	LEP	PLE	LMD
LES	0.79				
LEF	0.58	0.81			
LEP	0.55	0.57	0.77		
PLE	0.60	0.65	0.63	0.82	
LMD	0.50	0.54	0.52	0.70	0.82

Note: Values on the diagonal are the square roots of AVE for each variable. All diagonal values are greater than the corresponding off diagonal correlations, indicating adequate discriminant validity.

As shown in Table 4.4, the square root of the AVE for each variable was greater than the correlations between that variable and all other variables. The square roots of AVE were 0.79 for Legal Environment Stability, 0.81 for Legal Environment Fairness, 0.77 for Legal Environment Predictability, 0.82 for Perceived Legal Environment and 0.82 for Logistics Market Development. These values are all higher than the corresponding inter variable correlation coefficients.

## 4.5 Correlation Analysis

Pearson correlation analysis was conducted to examine the relationships among the five main variables, namely Legal Environment Stability, Legal Environment Fairness, Legal Environment Predictability, Perceived Legal Environment and Logistics Market Development.

Table 4.5 Correlations Analysis Results

Variable	LES	LEF	LEP	PLE	LMD
LES	1.00				
LEF	0.58**	1.00			
LEP	0.55**	0.57**	1.00		
PLE	0.60**	0.65**	0.63**	1.00	
LMD	0.50**	0.54**	0.52**	0.70**	1.00
Mean	3.78	3.72	3.69	3.82	3.76
SD	0.68	0.71	0.70	0.66	0.69
Note: $p < 0.01$ .					

As shown in Table 4.5, all three dimensions of the legal environment are positively and significantly correlated with Perceived Legal Environment and with Logistics Market Development at the 0.01 level. Legal Environment Stability, Legal Environment Fairness and Legal Environment Predictability are also positively correlated with one another, with correlation coefficients ranging from 0.55 to 0.58, which indicates that they are related but not redundant as separate variables. Perceived Legal Environment has the strongest correlation with Logistics Market Development ( $r = 0.70$ ,  $p < 0.01$ ), which is consistent with the theoretical expectation that overall perceptions of the legal environment play an important role in shaping assessments of logistics market development. All correlation coefficients are below 0.80, which suggests that multicollinearity is unlikely to be a serious problem for subsequent regression or structural equation modelling analyses.

## 4.6 Structural Equation Modelling Analysis

Structural equation modelling was employed to examine the direct relationships among Legal Environment Stability, Legal Environment Fairness, Legal Environment Predictability, Perceived Legal Environment and Logistics Market Development.

Table 4.6 Fit Indices

Index	Value
$\chi^2$	274.62

df	146
$\chi^2/df$	1.88
CFI	0.95
TLI	0.94
GFI	0.92
RMSEA	0.052
SRMR	0.046

The overall fit of the structural model was first evaluated. The chi square statistic was  $\chi^2(146) = 274.62$ , with a  $\chi^2/df$  ratio of 1.88, which is below the recommended upper limit of 3. The incremental fit indices CFI and TLI were 0.95 and 0.94 respectively, and the absolute fit index GFI was 0.92, all exceeding the conventional cut off value of 0.90. In addition, the error indices indicated acceptable fit, with RMSEA equal to 0.052 and SRMR equal to 0.046, both lower than the recommended threshold of 0.08. These results suggest that the structural model fits the data well and is appropriate for testing the hypothesised direct effects.

Table 4.7 Direct Effects

Hypothesis	Path	$\beta$	p value	Result
H1	LES $\rightarrow$ PLE	0.21	0.003	Supported
H2	LEF $\rightarrow$ PLE	0.36	< 0.001	Supported
H3	LEP $\rightarrow$ PLE	0.29	< 0.001	Supported
H4	PLE $\rightarrow$ LMD	0.68	< 0.001	Supported

The path estimates show that all three dimensions of the legal environment have positive and statistically significant effects on Perceived Legal Environment. Legal Environment Stability has a significant positive effect on Perceived Legal Environment ( $\beta = 0.21$ ,  $p < 0.01$ ), Legal Environment Fairness has a stronger positive effect ( $\beta = 0.36$ ,  $p < 0.001$ ) and Legal Environment Predictability also exerts a significant positive effect ( $\beta = 0.29$ ,  $p < 0.001$ ). These findings support Hypotheses H1, H2 and H3, indicating that greater stability, fairness and predictability in the legal environment are associated with a more favourable overall perception of the legal environment among logistics related staff. In addition, Perceived Legal Environment has a strong and significant positive effect on Logistics Market Development ( $\beta = 0.68$ ,  $p < 0.001$ ), which supports Hypothesis H4 and suggests that a more positive Perceived Legal Environment is linked to higher perceived levels of logistics market development in Xishuangbanna. The model explains approximately 67% of the variance in Perceived

Legal Environment and 46% of the variance in Logistics Market Development, indicating substantial explanatory power.

#### 4.7 Mediation Analysis

The mediating role of Perceived Legal Environment in the relationships between the three legal environment dimensions and Logistics Market Development was tested separately using a bootstrapping procedure with 5 000 resamples. Indirect effects and their 95% confidence intervals were estimated to determine whether the mediation effects were statistically significant. As shown in Table 4.8, the indirect effect of Legal Environment Stability on Logistics Market Development through Perceived Legal Environment is positive and significant ( $\beta = 0.14$ ,  $p < 0.01$ ), and the 95% confidence interval does not include zero, supporting Hypothesis H5a. This indicates that a more stable legal environment enhances Logistics Market Development primarily by improving stakeholders' overall Perceived Legal Environment. Similarly, the indirect effect of Legal Environment Fairness on Logistics Market Development via Perceived Legal Environment is positive and significant ( $\beta = 0.24$ ,  $p < 0.001$ ), supporting Hypothesis H5b. This suggests that when the legal environment is perceived as fair and impartial, it strengthens the Perceived Legal Environment, which in turn promotes perceptions of Logistics Market Development. The indirect effect of Legal Environment Predictability on Logistics Market Development through Perceived Legal Environment is also positive and significant ( $\beta = 0.20$ ,  $p < 0.001$ ), supporting Hypothesis H5c.

Table 4.8 Mediation Effects

Hypothesis	Indirect path	Indirect $\beta$	95% CI (lower, upper)	p value	Mediation type
H5a	LES $\rightarrow$ PLE $\rightarrow$ LMD	0.14	0.05, 0.24	0.004	Significant
H5b	LEF $\rightarrow$ PLE $\rightarrow$ LMD	0.24	0.14, 0.35	< 0.001	Significant
H5c	LEP $\rightarrow$ PLE $\rightarrow$ LMD	0.20	0.11, 0.31	< 0.001	Significant

#### 4.8 Discussion

H1 being supported means that greater stability in logistics related laws and regulations leads to a more positive overall Perceived Legal Environment among logistics staff in Xishuangbanna.

H2 being supported means that when laws are applied more fairly and impartially, respondents are more likely to evaluate the legal environment positively.

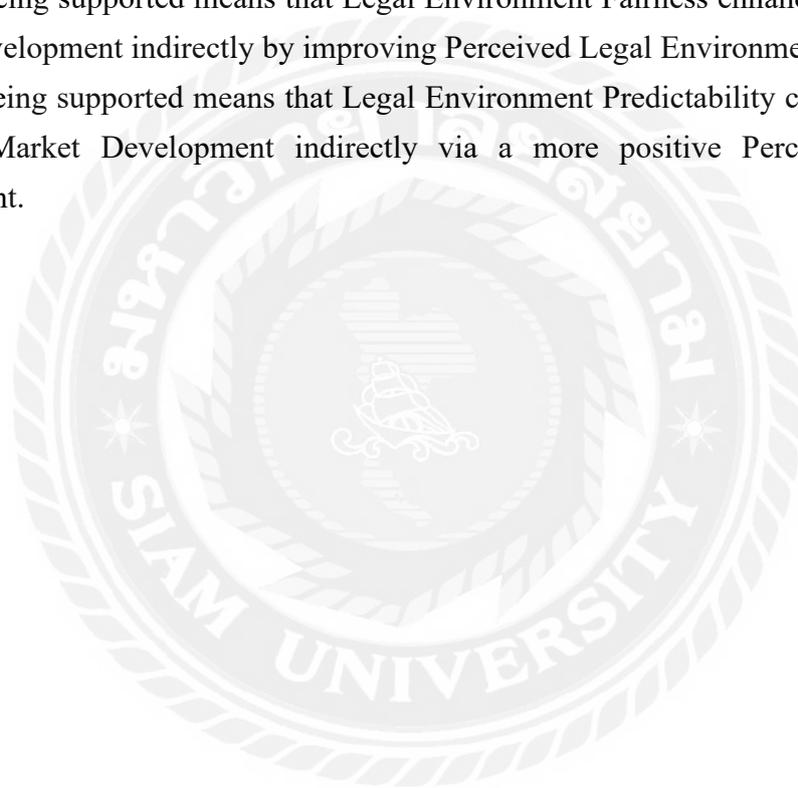
H3 being supported means that higher predictability of how laws are interpreted and enforced strengthens stakeholders' positive Perceived Legal Environment.

H4 being supported means that a more favourable Perceived Legal Environment is associated with higher perceived levels of Logistics Market Development in Xishuangbanna.

H5a being supported means that Legal Environment Stability promotes Logistics Market Development indirectly through its positive effect on Perceived Legal Environment.

H5b being supported means that Legal Environment Fairness enhances Logistics Market Development indirectly by improving Perceived Legal Environment.

H5c being supported means that Legal Environment Predictability contributes to Logistics Market Development indirectly via a more positive Perceived Legal Environment.



## **Chapter 5 Conclusion and Recommendation**

### **5.1 Conclusion**

This study set out to examine how Legal Environment Stability, Legal Environment Fairness and Legal Environment Predictability shape Logistics Market Development in Xishuangbanna through the mediating role of Perceived Legal Environment, based on Perception Theory. Using a quantitative cross sectional survey of logistics related staff from government departments, foreign trade enterprises and logistics or transport companies, and applying a structured questionnaire and structural equation modelling, the study tested seven hypotheses concerning the direct and indirect relationships among the five variables.

The results show that all three dimensions of the legal environment have significant positive effects on Perceived Legal Environment, and that Perceived Legal Environment in turn has a strong positive effect on Logistics Market Development. Furthermore, the mediation analysis confirms that Legal Environment Stability, Legal Environment Fairness and Legal Environment Predictability each influence Logistics Market Development indirectly through Perceived Legal Environment, highlighting this variable as a key psychological mechanism linking institutional conditions to perceived market outcomes. These findings support the applicability of Perception Theory in the context of legal and logistics research and underline that it is not only the objective content of laws but also how the legal environment is perceived that matters for the perceived development of the logistics market in Xishuangbanna.

### **5.2 Recommendation**

#### **1. Enhance the stability of logistics related laws and policies**

Relevant authorities in Xishuangbanna should prioritise maintaining continuity and stability in logistics related laws, regulations and policy measures, avoiding frequent abrupt changes and ensuring that any necessary amendments are gradual and well communicated. This can help strengthen Legal Environment Stability and, through Perceived Legal Environment, support more positive perceptions of Logistics Market Development.

#### **2. Strengthen fairness and consistency in law enforcement**

Law enforcement and regulatory agencies involved in logistics supervision (such as commerce, foreign trade, customs and transport authorities) should focus on improving fair, impartial and non-discriminatory enforcement, ensuring that similar cases are handled in similar ways and that different types of logistics market

participants receive equal treatment. Enhancing Legal Environment Fairness is likely to significantly improve Perceived Legal Environment and thereby promote a more favourable view of the logistics market.

### 3. Improve the predictability and transparency of legal implementation

To increase Legal Environment Predictability, authorities should provide clear guidelines, explanatory documents and regular training or information sessions for logistics enterprises and practitioners so that stakeholders can reasonably anticipate how laws and regulations will be interpreted and enforced. Strengthening transparency in regulatory processes and publicising stable enforcement standards will help reduce perceived uncertainty and improve Perceived Legal Environment.

### 4. Build continuous communication mechanisms with logistics stakeholders

It is recommended to establish or reinforce regular consultation and feedback mechanisms between government departments and logistics market participants, such as joint meetings, consultation platforms or hotlines. By systematically collecting and responding to stakeholders' perceptions of stability, fairness and predictability, authorities can monitor changes in Perceived Legal Environment in a timely manner and adjust institutional arrangements to better support Logistics Market Development in Xishuangbanna.

## **5.3 Further Study**

Future studies could expand the model by incorporating additional institutional or market variables (such as perceived infrastructure quality, competition intensity or digitalisation of logistics services), compare Xishuangbanna with other border regions or conduct longitudinal research to track how changes in the legal environment and its perception affect Logistics Market Development over time, thereby providing more comprehensive evidence for policymaking and regional logistics planning.

## References

- Al-Ababneh, H. A., Dumanska, I., Derkach, E., Sokhetska, A., & Kemarska, L. (2021). Integration of logistics systems of developing countries into international logistics channels. *Acta logistica*, 8(4), 329-340.
- Ansems, L. F. M., van den Bos, K., & Mak, E. (2021). The Importance of Perceived Procedural Justice Among Defendants With a Non-Western Background Involved in Dutch Criminal Cases [Original Research]. *Frontiers in Psychology, Volume 12 - 2021*.
- Anwar, M., & Fathonah, R. (2024). Quo Vadis: Legal certainty of environmental protection in investment activities post job creation law. *International Journal on Social Science, Economics and Art*, 14(1), 87-97.
- Blesa, J. G. (2025). The Cultural Dimensions of Legal Certainty: A Study on the Use of Intercultural Knowledge in European Law-Application. *European Papers- A Journal on Law and Integration*, 2025(2), 405-434.
- Broulík, J. (2023). Predictability: a mistreated virtue of competition law. *Journal of Antitrust Enforcement*, 12(3), 362-377.
- Bugarčić, F., & Kleinert, J. (2024). *Estimating the effects of logistics performance on trade: Evidence from different gravity model approaches*.
- Byrne, J. L., Tan, K., Polkinghorne, T. H., Ker, A., Bailey, S., & Veale, J. F. (2025). Perceived legal protection and institutional trust predict a lower psychological distress level for transgender people in Aotearoa/New Zealand. *International Journal of Transgender Health*, 26(4), 1177-1191.
- Chen, J., Li, Y., Otto, J. M., & Michiel Otto, J. (2021). *Implementation of Law in the People's Republic of China*. Brill | Nijhoff.
- Chen, S., & Li, J. (2009). An empirical research on consumer trust in e-commerce. 2009 International Symposium on Information Engineering and Electronic Commerce,
- Chen, T., Su, Y., Liu, Y., & Zhou, Y. (2023). Legal Environment of Intellectual Property and Innovation: The Moderating Role of Legal Mobilization. *Academy of Management Proceedings*, 2023(1), 14920.
- Cheng, S., & Jandhyala, S. (2025). International institutions and firms' assessment of the domestic institutional environment: Evidence from the investor-state dispute settlement system. *Strategic Management Journal*.
- Chiara, G., & Bronzi, S. (2025). The Role of Psychology in Environmental Justice Debates: A Scoping Review on Key Contributions, Emerging Challenges, and Future Responsibilities. *Ecopsychology*, 17(4), 346-360.

- Cummings, J. A., & Sanders, L. (2019). *Introduction to psychology*. University of Saskatchewan Open Press.
- Dobrovolska, O., Sonntag, R., Mynenko, S., & Kosyk, D. (2024). A fair investment environment: the impact of the shadow economy, the harshness of the courts against corrupt officials, tax pressure and restrictions on business. *Business Ethics and Leadership*, 8(2), 200-218.
- Fazekas, M., Brenner, D., & Ladegaard, P. F. (2024). *Measuring Legislative Predictability: The Case of the Kingdom of Jordan and Implications for the MENA Region*.
- Frank, E., & Nivorozhkin, A. (2025). Legal status and refugees' perceptions of institutional justice: The role of communication quality. *Public Administration Review*, 85(4), 1004-1018.
- Gani, A. (2017). The Logistics Performance Effect in International Trade. *The Asian Journal of Shipping and Logistics*, 33(4), 279-288.
- GuillÃ, R. H., Gratchev, S. D., & Mohsin, H. B. (2019). The Influence of the Legal Environment on Performance of Small and Large Enterprises in Venezuela. *Journal of Public Policy & Governance*, 3(2), 73-79.
- Ippoliti, R., Melcarne, A., & Ramello, G. B. (2015). Judicial efficiency and entrepreneurs' expectations on the reliability of European legal systems. *European Journal of Law and Economics*, 40(1), 75-94.
- Irvita, M., & Asriani, A. (2025). Transparency and accountability in the justice system: Building public trust and justice: The Role of Public Trust in Fair Law Enforcement. *Priviet Social Sciences Journal*, 5(4), 26-40.
- Ittelson, W. H. (1973). *Environment and cognition*. Seminar Press.
- Johnson, D., Maguire, E. R., & Kuhns, J. B. (2014). Public Perceptions of the Legitimacy of the Law and Legal Authorities: Evidence from the Caribbean. *Law & Society Review*, 48(4), 947-978.
- Kara, K. (2023). Clustering of Developing Countries in Terms of Logistics Market Development with Fuzzy Clustering and Discriminant Analysis [Gelişmekte Olan Ülkelerin Lojistik Pazar Gelişimi Bakımından Bulanık Kümeleme ve Diskriminant Analizleriyle Kümelenmesi]. *Yaşar Üniversitesi E-Dergisi*, 18(69), 19-40.
- Karountzos, P., Sakas, D. P., Nasiopoulos, D. K., & Toudas, K. (2025). Redefining Development Through Logistics Performance and ESG Metrics. *Accounting and Auditing*, 1(3), 11.

- Kotyza, P., Cabelkova, I., Pierański, B., Malec, K., Borusiak, B., Smutka, L., Nagy, S., Gaweł, A., López Lluch, D., Kis, K., Gál, J., Gálová, J., Mravcová, A., Knezevic, B., & Hlaváček, M. (2024). The predictive power of environmental concern, perceived behavioral control and social norms in shaping pro-environmental intentions: a multicountry study. *Frontiers in Ecology and Evolution*, 12.
- Lind, E. A., & Arndt, C. (2016). Perceived fairness and regulatory policy: A behavioural science perspective on government-citizen interactions.
- Liu, Y., & Geng, S. (2023). A study on the influence mechanism of perceived situational factors on young tourists' pro-environment behaviors: Taking perceived coolness as an example. *Journal of Hospitality and Tourism Management*, 57, 349-363.
- Long, R. (2025). The Role of Logistics in Cambodia's and Development Infrastructure, Road and Waterway for a Growing Economy.
- Luo, F., & Kilburn, J. C. (2025). Migrant Perceptions of Criminal Justice Systems: A Comparative Study of U.S. and Home Country Systems. *Social Sciences*, 14(6), 341.
- Magda, M., Sinulingga, T., & Suwanto, S. (2025). Legal Certainty for Investors in the Green Economy Ecosystem: An Analysis of Sustainable Investment Regulations in Indonesia. *Ipsa Jure*, 2, 57-66.
- Maleknia, R. (2025). How perception of environmental and social justice drive citizen's satisfaction and intention to engage with urban forests management? *Heliyon*, 11(1), e41274.
- Marsal, A. P., Da Silva, E. B., da Cruz, C., & Quintas, L. (2024). Legal Certainty in Guaranteeing Foreign Investment in Timor Leste to Improve The National Economy. *Rechtsnormen Journal of Law*, 2(4), 466–474-466–474.
- Mishrif, A., Antimiani, A., & Khan, A. (2024). Examining the Contribution of Logistics and Supply Chain in Boosting Oman's Trade Network. *Economies*, 12(3), 70.
- Nogal-Meger, P. (2018). The Quality of Business Legal Environment and Its Relation with Business Freedom. *International Journal of Contemporary Management*, 2018(Issue 17(2)), 111-136.
- Park, J., & Chang, K. (2024). How Perceived Proximity to Climate Change Threats Affects Pro-Environmental Behaviors in South Korea? *Sustainability*, 16(17), 7298.

- Qi, R., Wang, D., Yang, Y., & Wu, F. (2023). How does environmental perception affect the willingness of university students to return home to start a business? *Cogent Business & Management*, 10(3), 2288720.
- Raimbekov, Z. S., Syzdykbayeva, B. U., Mussina, K. P., Moldashbayeva, L. P., & Zhumataeva, B. A. (2017). The study of the logistics development effectiveness in the Eurasian Economic Union countries and measures to improve it.
- Regalado, J., & Sun, I. Y. (2024). Trust in Legal Institutions: An Examination of the Philippines. *Asian Journal of Criminology*, 19(4), 527-550.
- Riffel, C. (2025). International Investment Law, Rule of Law, and Democracy: When the Solution Is Part of the Problem. *German Law Journal*, 26(4), 613-635.
- Salawu, Y. O., & Ghadiri, S. M. (2022). Roles of trade logistics to the development of international trade: A perspective of Nigeria. *Journal of transport and supply chain management*, 16, 764.
- Selimov, A. (2024). Comparative analysis of legal regulation of international transactions in the USA and the EU. *International Journal of Scientific Research and Engineering Development*, 7(6), 480-483.
- Sharipbekova, K., & Raimbekov, Z. S. (2018). Influence of logistics efficiency on economic growth of the CIS countries.
- Shihata, I. F. (1996). The role of law in business development. *Fordham Int'l LJ*, 20, 1577.
- Somuano Ventura, M. F., & Takahashi, Y. (2025). Procedural Justice, Representation, and Institutional Trust in Mexico. *Journal of Politics in Latin America*, 17(1), 105-130.
- Tian, H., & Liu, X. (2022). Pro-Environmental Behavior Research: Theoretical Progress and Future Directions. *International Journal of Environmental Research and Public Health*, 19(11), 6721.
- Tyler, T. R. (2023). Whither Legitimacy? Legal Authority in the Twenty-First Century. *Annual Review of Law and Social Science*, 19(Volume 19, 2023), 1-17.
- Tyler, T. R., & Huo, Y. J. (2002). *Trust in the law: Encouraging public cooperation with the police and courts*. Russell Sage Foundation.
- Udovičić, A., & Marošević, K. (2024). Rule of Law and Its Effects on Economic Growth. *Interdisciplinary Description of Complex Systems: INDECS*, 22(5), 510-525.

- Uyar, A., Fernandes, V., & Kuzey, C. (2021). The mediating role of corporate governance between public governance and logistics performance: International evidence. *Transport Policy*, *109*, 37-47.
- Valcheva, K. S. (2024). From Justice to Prosperity: The Rule of Law's Impact on Economic Performance in the European Union. *Economic Alternatives*(4), 895-913.
- Víg, Z. (2022). Legitimate expectations in the arbitral practice of green energy cases under the Energy Charter Treaty. *Hungarian Journal of Legal Studies*, *62*(2), 115-130.
- Vu Thi Thu, H., & Thu, T. N. (2025). The impact of logistics performance and green logistics performance on intra-ASEAN goods exports. *The Asian Journal of Shipping and Logistics*.
- Wang, W., Wu, Q., Su, J., & li, B. (2024). The impact of international logistics performance on import and export trade: an empirical case of the “Belt and Road” initiative countries. *Humanities and Social Sciences Communications*, *11*(1), 1028.
- Yan, Y., Wang, X., Tse, S., & Wang, L. (2024). Connecting Environmental Perception, Awe, Face Consciousness, and Environmentally Responsible Behaviors: A Mediated-Moderated Analysis. *Behavioral Sciences*, *14*(7), 540.
- Yang, J. S. (2017). The governance environment and innovative SMEs. *Small Business Economics*, *48*(3), 525-541.
- Yangailo, T. (2024). The Impact of Logistics Performance on Trade Efficiency and Economic Growth: a Global Comparative Study. *Economia Aziendale Online-*, *15*(4), 733-756.
- Zhan, Q., Zhao, J., & Zou, H.-f. (2024). The rule-of-law capital, growth, and development. *Central University of Finance and Economics*.
- Zhao, R., & Zhang, J. (2022). Local judicial system reform and corporate investment: Evidence from unified management of local courts below the province. *China Economic Quarterly International*, *2*(4), 290-303.
- Zhou, B., Wang, L., Huang, S., & Xiong, Q. (2023). Impact of perceived environmental restorativeness on tourists' pro-environmental behavior: Examining the mediation of place attachment and the moderation of ecocentrism. *Journal of Hospitality and Tourism Management*, *56*, 398-409.

# Appendix

## Part 1: Demographic Information

Instructions: Please tick (✓) the option that best describes you.

1. **Gender**
  - Male
  - Female
2. **Age**
  - 25 years or younger
  - 26 to 35 years
  - 36 to 45 years
  - 46 years or above
3. **Educational Background**
  - Diploma or lower
  - Bachelor's degree
  - Master's degree or above
4. **Organisational Affiliation**
  - Government department related to commerce, foreign trade or customs
  - Foreign trade enterprise
  - Logistics or transport company
5. **Work Experience in Logistics related Positions**
  - 3 years or less
  - 4 to 7 years
  - 8 to 11 years
  - 12 years or more
6. **Current Job Position**
  - General staff
  - Supervisor
  - Manager or above

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## Part 2: Main Questionnaire Items

### Instructions:

Please indicate how much you agree or disagree with each of the following statements.

Scale:

1 = Strongly disagree    2 = Disagree    3 = Neutral    4 = Agree    5 = Strongly agree

You may circle the number or tick (✓) one option for each statement.

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### **Section A: Legal Environment Stability (LES)**

LES1. The laws and regulations governing logistics activities in Xishuangbanna remain relatively stable over time.

1    2    3    4    5

LES2. There are no frequent or sudden changes in logistics related laws that disrupt our work planning.

1    2    3    4    5

LES3. Policy adjustments related to logistics are usually gradual and well communicated in advance.

1    2    3    4    5

LES4. I feel that the overall legal framework for logistics in Xishuangbanna is consistent and continuous.

1    2    3    4    5

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### **Section B: Legal Environment Fairness (LEF)**

LEF1. Logistics related laws and regulations are applied equally to different types of enterprises.

1    2    3    4    5

LEF2. Enforcement agencies treat logistics companies and drivers in a fair and impartial manner.

1    2    3    4    5

LEF3. Similar logistics cases are handled in a similar way by the relevant authorities.

1    2    3    4    5

LEF4. Access to legal remedies and complaint channels is fair for all logistics market participants.

1    2    3    4    5

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### **Section C: Legal Environment Predictability (LEP)**

LEP1. It is generally easy to predict how logistics related laws will be applied in practice.

1    2    3    4    5

LEP2. We can reasonably foresee the legal consequences of our logistics decisions and actions.

1  2  3  4  5

LEP3. The interpretation of logistics regulations by authorities is consistent and predictable.

1  2  3  4  5

LEP4. When new regulations are introduced, their impact on our logistics activities is relatively predictable.

1  2  3  4  5

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#### **Section D: Perceived Legal Environment (PLE)**

PLE1. Overall, I consider the legal environment for logistics in Xishuangbanna to be reliable.

1  2  3  4  5

PLE2. In general, the legal environment here supports the healthy development of logistics activities.

1  2  3  4  5

PLE3. I feel confident that the legal environment provides adequate protection for logistics market participants.

1  2  3  4  5

PLE4. Taken together, I have a positive overall impression of the legal environment for logistics in Xishuangbanna.

1  2  3  4  5

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#### **Section E: Logistics Market Development (LMD)**

LMD1. The logistics market in Xishuangbanna is developing in a dynamic and active way.

1  2  3  4  5

LMD2. The logistics market here is attractive for logistics enterprises and foreign trade companies.

1  2  3  4  5

LMD3. Institutional arrangements in Xishuangbanna support efficient and orderly logistics operations.

1  2  3  4  5

LMD4. Overall, I believe the logistics market in Xishuangbanna has good development prospects.

1 2 3 4 5

