

The Influence of Internal Control System on the Effectiveness of Risk Management in Tourism Companies of Khanh Hoa Province

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Abstract

This paper assesses the impact of level of internal control system on the effectiveness of risk management in tourism companies of Khanh Hoa province. The author mainly uses quantitative research method, conducting a survey of 182 subjects as company leaders or accounting officers in 76 Khanh Hoa tourism companies. The research result indicates four out of eight factors that constitute internal control system affecting the effectiveness of risk management in Khanh Hoa tourism businesses with the impacting level in descending order as follows: internal environment, information and communication, control activities and risk responses. The internal control system by COSO 2004 explained 44.4% of variation to the effectiveness of risk management in Khanh Hoa tourism enterprises.

Keywords: internal control system of risk management; risk management in tourism companies; risk control.

JEL Classification: G32

1. Introduction

During the operation, companies have to face much risks both inside and outside their organization. The internal control system is established inside companies for the ultimate purpose of minimizing such risks. The COSO 2004, entitled Integrated Risk Management - an integrated framework published in 2004, identified the criteria that underpin the risk assessment as well as proposed a process for developing an effective risk management system for the Management, to help enterprises have a theoretical basis to build an internal control system for preventing possible risks.

Tourism in general and tourism in Khanh Hoa in particular have potential risks and difficulties such as risks due to natural environment, social culture, integration process, human resources, business structure ... Therefore, to exist and develop, it is necessary for tourism companies to set up an internal control system to effective risk management in order to help enterprises identify risks, take preventive measures and deal with risks.

In the world, research on internal control system and risk management is quite sufficient. However, in each country with each different industry, building component parts or level of influence in each part is different, so that researches worldwide have not still dealt with the objectives for Vietnamese enterprises in general and those in Khanh Hoa in particular. Most researches in Vietnam only focus on qualitative research method, exploring the current situation and proposing solutions to

improve the internal control system towards the risk management, however, the solution is still theoretical, reliability is not high. Although there are some quantitative researches on the internal control system towards the risk management, they are still limited. On the other hand, each industry has its own characteristics, so it is necessary to study this issue in each field in order to have appropriate direction. Therefore, the objective of the study is to consider the impact of the internal control system on the effectiveness of the risk management in Khanh Hoa tourism enterprises, thus making appropriate recommendations to improve the internal control system in order to improve effectiveness of the risk management.

2. Theoretical Framework and Research Models.

2.1. Definition of Internal Control

According to COSO 1992 and COSO 2013, “Internal control is broadly defined as a process, effected by an entity’s board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories: Effectiveness and efficiency of operations; Reliability of financial reporting; Compliance with applicable laws and regulations”.

2.2. Definition of Risk

According to John Haynes (1985), risks are the possibility of accidental damage or loss to the entity, uncertainty regarded as a risk when it has detrimental effects on the entity's performance.

According to Frank H.Knight (1921) and Irving Pfeffer (1956), risks are events in the future that could measure the impact and risk associated with the losses, while the uncertainty is the event that can not measure the impact, and it is related to the benefits that the entity receives in the future.

2.3. Overview of Risk Management

Definition of Risk Management:

According to COSO 2004 “Enterprise risk management is a process, effected by an entity’s board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives”.

Objectives of Risk Management:

This enterprise risk management framework is geared to achieving an entity’s objectives, set forth in four categories:

- Strategic– high-level goals, aligned with and supporting its mission
- Operations– effective and efficient use of its resources
- Reporting– reliability of reporting
- Compliance– compliance with applicable laws and regulations.

The Effectiveness of Risk Management:

According to COSO 2004, components of internal control system are also criteria for effective enterprise risk management. For the components to be present and functioning properly there can be no material weaknesses, and risk needs to have been brought within the entity’s risk appetite.

When enterprise risk management is determined to be effective in each of the four categories of objectives, respectively, the board of directors and management have reasonable assurance that they understand the extent to which the entity’s strategic and operations objectives are being achieved, and that the entity’s reporting is reliable and applicable laws and regulations are being complied with.

2.4. Relationship of Objectives and Components

“There is a direct relationship between objectives, which are what an entity strives to achieve, and enterprise risk management components, which represent what is needed to achieve them” (COSO 2004).

“The four objectives categories – strategic, operations, reporting, and compliance – are represented by the vertical columns, the eight components by horizontal rows, and an entity’s units by the third dimension. This depiction portrays the ability to focus on the entirety of an entity’s enterprise risk management, or by objectives category, component, entity unit, or any subset thereof” (COSO 2004).

Figure 1 Relationship of Objectives and Components



(Source: COSO 2004)

2.5. Component parts of Internal control system by COSO 2004

Internal environment:

The internal environment encompasses the tone of an organization, and sets the basis for how risk is viewed and addressed by an entity’s people, and is the basis for all other components of enterprise risk management.

Objective Setting:

Objectives must exist before management can identify potential events affecting their achievement. Enterprise risk management ensures that management has in place a process to set objectives and that the chosen objectives support and align with the entity’s mission and are consistent with its risk appetite.

Event Identification:

Internal and external events affecting achievement of an entity’s objectives must be identified, distinguishing between risks and opportunities.

Risk Assessment:

Risks are analyzed, considering likelihood and impact on achievement of objectives, as a basis for determining how they should be managed.

Risk Response:

methods of risk response including:

- Risk avoidance: Not performing activities that are highly risky.
- Risk reduction: Activities that diminish the possibility of occurrence or level of risk impact or both.

- Risk transferring: Diminishing the possibility of occurrence and level of risk impact by transferring or sharing part of risk
- Risk Acceptance: Do nothing with risk. Accepting risk when potential risk of the event lies in the risk range of the department.

Control Activities:

Policies and procedures are established and implemented to help ensure the risk responses are effectively carried out.

Information and Communication:

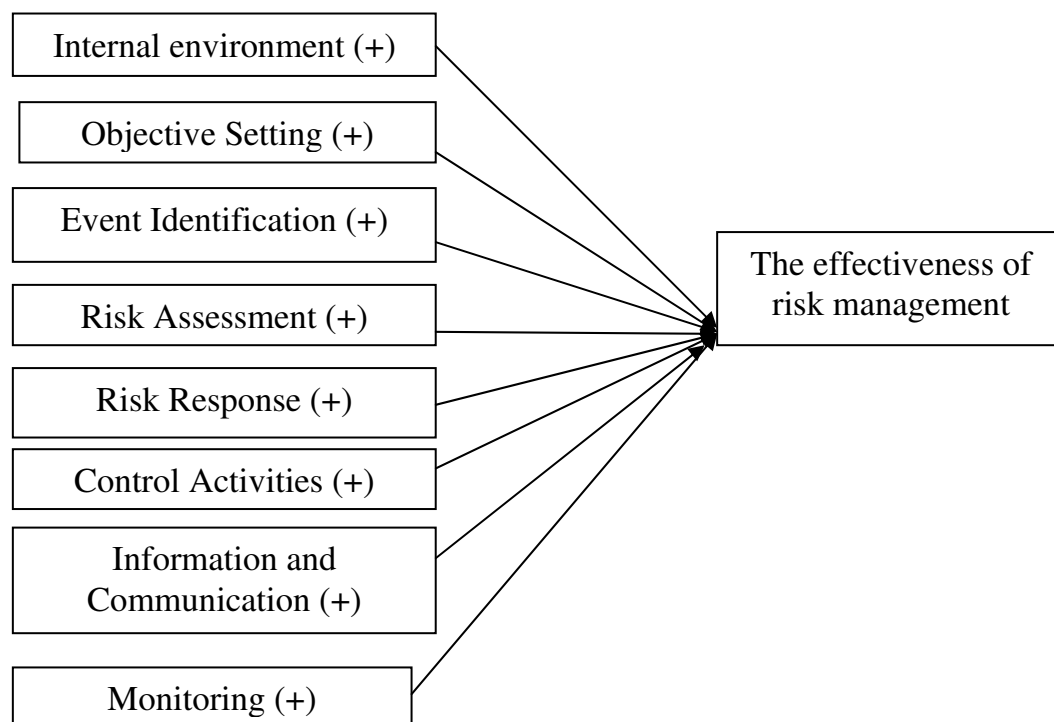
Enterprise risk management emphasizes the quality of information in the context of current strong development of information technology and the content of information associated with the risk management in enterprises.

Monitoring:

The entirety of enterprise risk management is monitored and modifications made as necessary. Monitoring is accomplished through ongoing management activities, separate evaluations, or both.

2.6. Expected study model

Figure 2. Study model



Research Method

Quantitative method is mainly used, specifically:

- Using following methods: observation, synthesis, systematic theory, documents related to internal control system in enterprises;
- Using multiple regression analysis to evaluate the causal relation between internal control system and the effectiveness of risk management;

- Basing on the result of the analysis, using deductive method to draw the conclusion and proposing appropriate policies.
- *Questionnaire design:*
- Independent variables of this research include 8 Components of internal control system: Internal environment, Objective Setting, Event Identification, Risk Assessment, Risk Response, Control Activities, Information and Communication and Monitoring)
- Dependent variable used in this research is the effectiveness of risk management. This variable is measured by the enterprise achievement for 4 objectives of enterprise risk management.

Measurement of variables:

Variables are measured using Likert 5 level that ranks from “strongly agree” (scored as 5) to “strongly disagree” (scored as 1).

Sampling method: Non-probability sampling method.

Sample size: 182 samples, satisfying the condition of EFA analysis and multiple regression analysis.

Data collection method: Sending surveys directly and by email to managers or accountants of Khanh Hoa tourism companies.

Data processing: the writers clean collecting data, and then encode them for SPSS software using. The reliability and scale value are verified by Cronbach’s Alpha coefficient and EFA analysis. Multiple regression analysis is carried out to assess the level of influence of each factor to the effectiveness of risk management.

Results and Discussion

Cronbach's alpha reliability coefficients: The Scale Q5.1 “Businesses use risk avoidance methods” does not meet the reliability criteria; all other scales have a Cronbach's Alpha coefficient greater than 0.6 and item total correlation greater than 0.3.

Table 1: Cronbach's alpha reliability coefficients

Code	Factor	Cronbach's Alpha coefficient
X1	Internal Control	0,83
X2	Objective Setting	0,752
X3	Event Identification	0,849
X4	Risk Assessment	0,922
X5	Risk Response	0,714
X6	Control Activities	0,833
X7	Information and Communication	0,831
X8	Monitoring	0,703
Y	The effectiveness of risk management	0,799

Result of EFA Analysis: Author performs EFA analysis 6 times; the final result removes 5 variables including: Q2.3, Q3.3, Q3.4, Q5.2 and Q6.4. Other 28 variables all have loading factor greater than 0.5 ((or approximately), so these variables have practical significance. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) = 0.858 (greater than 0.5), so the EFA corresponds with the data. Approx. Chi-Square of Bartlett's Test of Sphericity reached value of 2.996 with sig = 0,000 <0,05. Eight components with eigenvalues greater than 1 are extracted and the 8 factors were extracted explaining 73,851% of the variance.

As a result, 8 factors were extracted including:

- + Internal control: Including 5 variables: Q1.1, Q1.2, Q1.3, Q1.4, Q1.5
- + Objective Setting: Including 2 variables: Q2.1, Q2.2

- + Event Identification: Including 3 variables: Q3.1, Q3.2, Q3.
- + Risk Assessment: Including 6 variables: Q4.1, Q4.2, Q4.3, Q4.4, Q4.5, Q4.6
- + Risk Response: Including 2 variables: Q5.3, Q5.4
- + Control Activities: Including 3 variables: Q6.1, Q6.2, Q6.3
- + Information and Communication: Including 4 variables: Q7.1, Q7.2, Q7.3, Q7.4
- + Monitoring: Including 3 variables: Q8.1, Q8.2, Q8.3

The reality of internal control system in the direction of risk management in tourism companies of Khanh Hoa province:

Table 2: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Internal Control	182	2,20	5,00	4,1747	0,77987
Objective Setting	182	1,50	5,00	3,8819	0,88950
Event Identification	182	1,33	5,00	3,5641	0,89084
Risk Assessment	182	1,33	5,00	3,6007	0,95506
Risk Response	182	1,00	5,00	3,7527	0,99688
Control Activities	182	1,67	5,00	3,8590	0,83155
Information and Communication	182	1,00	5,00	4,0302	0,79261
Monitoring	182	1,00	5,00	3,4469	0,87559
The effectiveness of risk management	182	2,00	5,00	4,1580	0,60566

From this result, it can be seen that 8 components that make internal control system towards risk management by COSO 2004 all exceeded the average (over 3), some even reach to 4. It can be asserted that tourism companies in Khanh Hoa have existing internal control system in the direction of risk management but not complete and sufficient.

Results of influence of internal control system on the effectiveness of risk management in tourism companies of Khanh Hoa province:

Table 3: Regression results

Mode	Unstandardized Coefficients		Standardized Coefficients	t	Sig	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1,488	0,233		6,394	0,000		
X1	0,221	0,055	0,284	3,993	0,000	0,606	1.650
X2	0,035	0,047	0,051	0,740	0,460	0,653	1.533
X3	0,032	0,048	0,047	-0,660	0,510	0,611	1.635
X4	0,004	0,045	0,007	0,097	0,923	0,617	1.620
X5	0,103	0,041	0,169	2,522	0,013	0,686	1.457
X6	0,136	0,054	0,187	2,497	0,013	0,551	1.816
X7	0,162	0,056	0,212	2,893	0,004	0,570	1.756
X8	0,043	0,046	0,062	0,929	0,354	0,684	1.461

Standardized Coefficients (Beta) and sig in Table 4 show that there are four factors of internal control system impacting on the effectiveness of risk management (sig <0.05) with the level of influence in descending as follows: X1 – Internal control, X7 - Information and Communication, X6 - Control Activities, X5 - Risk Response. At the same time, Standardized Coefficients (beta) of the four factors is positive, indicating that these four factors have a positive effect on the effectiveness of risk management.

5. Conclusion and Recommendations

5.1. Conclusion

The research results show that the internal control systems for risk management have already existed in tourism enterprises in Khanh Hoa province, and the effectiveness of risk management was also quite good. The research also proves that only four out of eight factors that make up the internal control system for risk management truly affect the effectiveness of risk management in Khanh Hoa's tourism companies. These influential factors are internal environment, information and communication, control activities, and risk responses. Moreover, the internal control system under COSO (2004) has explained 44.4% of variation in risk management effectiveness.

The actual regression model is as follows:

$$Y = 0.284 * X1 + 0.169 * X5 + 0.187 * X6 + 0.212 * X7$$

Where Y= The effectiveness of risk management

X1= Internal Environment

X5= Risk responses

X6= Control Activities

X7= Information and Communication

5.2. Recommendations

Internal Environment:

- Create favorable working conditions for employees, provide training programs and courses for employees to improve their professional abilities and skills. For example, enterprises could organize short training courses for their staff annually to improve their knowledge and skills.
- Develop clear criteria for employee evaluation, reward and discipline: Enterprises should have clear and public reward and discipline policies to avoid discouragement and despondency.
- Enhance the role of the Board of Supervisors: The Board of Directors should have clear regulations on administration of the Board of Supervisors to ensure the functions and powers of the Board of Supervisors. The Board of Supervisors should be independent, separate and not affected by manager or the board of directors.
- Enterprises use job descriptions to clearly define the rights and responsibilities of divisions and departments. The job description should be clear and specific. The work must be in line with the expertise and skill of each individual and department.
- Enterprises inform all of their staff about the regulatory documents associated with integrity and ethical standards

Risk Responses:

- Accepting and sharing risks: Buy insurance, such as property insurance, travelers insurance when participating in adventure tourism services ...
- Avoiding risks: When the risk is too great, it can cause significant damage to the company. Companies should choose risk avoidance strategy, i.e. not choose those risky activities.
- Coping with risks: This strategy can be applied in some cases where enterprises have measures to minimize losses such as strengthening the organizational apparatus, reviewing resources, material and human resources.
- Enterprises need to develop methods and techniques to deal with specific risks in order to proactively address risks.

Control Activities:

- Raise awareness of the importance of risk identification and management, and set it as high priority in the operation of enterprises.
- Enterprises need to regularly identify and control risk to reduce their operational risks. Risks need to be monitored in each part of the enterprise at all time with the primary risk hedging strategies.

- Enterprises need to design a specific risk control process to respond to risks. This process should be specific to each stage with clear division of rights and responsibilities.

Information and Communication:

- Enterprises should be fully equipped with modern computer systems to secure business information, as well as to grow their customer base.
- The computer at work need to have its own password and login name, only those who have the responsibility can access information in the computer. Therefore, these individuals will share personal responsibilities if any errors occur.
- Enterprises need to regularly update the external information such as new regulatory documents about tourism business in order to comply properly and sufficiently.
- The results of risk identification and control activities should be communicated throughout the enterprise so that employees are aware of and have appropriate control measures as information needs to be timely and accurate.

Objective Setting:

- The Board of Directors regularly builds strategic business objectives which are in line with the market economy at each stage. Enterprises need to develop specific objectives and plans for short and long term activities.
- Enterprises should implement and popularize the strategic business objectives to all employees. The goals of enterprises should be specified by precise working instructions, which then will be widely available to employees.
- Enterprises should carefully analyze and examine the impacts of potentially risky events on the implementation of business strategy objectives.

Event Identification:

- Identify strategic risks: These risks stem from business strategies, capital, customers and competitors. The Board of Directors should self-assess its business entity including strengths, weaknesses, and market volatility to make appropriate business strategies.
- Identify operational risks: These risks are related to governance structure, the risk of corporate culture ..., hence enterprises need to come up with appropriate, specific and serious rules and regulations.
- Identify force majeure risks: These are the risks that enterprises cannot avoid, so that enterprises need to improve knowledge and awareness of these risks, and take preventive measures to minimize losses as well as arrange reasonable resources to cope with these risks.

Risk Assessment:

- For the risk of quality control of products and services: enterprises need to provide moral, ethical standards and rules at workplace for employees to conduct seriously. Moreover, enterprises should increase investment spending in infrastructure to improve customer satisfaction.
- For human resources risks: Enterprises need to allocate their own employee and contractual labor in order to save costs.
- For the risk from the process of attracting customers, stabilizing the number of customers and determining the appropriate products and services: Enterprises should diversify customer base and tourism services to attract customers.
- For risks in ensuring the safety of visitors: There should be clear safety standards when selecting suppliers.

- For risks when there are natural environment and climate change, and disease outbreaks: These are risks not being caused by enterprises, and enterprises cannot avoid it. Therefore, enterprises need to accept it and take appropriate measures to minimize losses.

Monitoring:

- Enterprises need to organize a specialized unit to carry out the inspection and supervision such as internal audit or control committee. This special unit will monitor regularly and periodically to early detect, prevent, and correct violations, hence prevents risks in all aspects of business and financial operations of enterprises.
- Enterprises should have a reporting system to help detect deviations from planned targets. In addition to deviation detection, it is also necessary to find out the causes of these errors to make appropriate adjustments.
- Periodically, the Board of Directors need to review the effectiveness of risk identification and management.

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Appendix: Questionnaire

No	Code	Variables	Likert Scale				
	X₁	GROUP I: INTERNAL ENVIRONMENT					
01	Q1.1	Enterprises always create favorable conditions for employees to attend training courses to improve their professional knowledge and skills.	1	2	3	4	5
02	Q1.2	Managers have clear and specific criteria for evaluating, rewarding and disciplining their employees.	1	2	3	4	5
03	Q1.3	Board of Managers emphasizes the importance of Board of Supervisors.	1	2	3	4	5
04	Q1.4	Companies use “Job description” to distribute the rights and responsibilities clearly among their divisions.	1	2	3	4	5
05	Q1.5	Businesses widely disseminate policy documents associating with integrity and professional ethical standards to their employees.	1	2	3	4	5
	X₂	GROUP II: OBJECTIVE SETTING					

No	Code	Variables	Likert Scale				
06	Q2.1	Management regularly builds objectives of business strategy that are appropriate to the market economy in each stage.	1	2	3	4	5
07	Q2.2	Businesses are constantly deploying and disseminating business strategic objectives to all employees.	1	2	3	4	5
08	Q2.3	Companies take interest and research carefully in the impact of potential risk on the implementation of business strategic objectives.	1	2	3	4	5
	X₃	GROUP III: EVENT IDENTIFICATION					
09	Q3.1	Strategic risks - involving in business strategies, capital, customers, competitors.	1	2	3	4	5
10	Q3.2	Operational risks - Leadership, corporate culture, regulatory violations, financial control, information system ...	1	2	3	4	5
11	Q3.3	Compliance risks - deriving from laws, regulations, policies, and corporate governance issues.	1	2	3	4	5
12	Q3.4	Financial risks - emerging from market fluctuations, economy.	1	2	3	4	5
13	Q3.5	Force Majeure risks: Due to natural disasters, floods, storms, earthquakes; diseases, changes in natural conditions, climate, tourism resources; Risk due to legal regulations.	1	2	3	4	5
	X₄	GROUP IV: RISK ASSESSMENT					
14	Q4.1	Risks in quality control of products and services: Management and control face difficulties because products of tourism are intangible and associated with customers; customer satisfaction depends on each customer and the attitude of staff service.	1	2	3	4	5
15	Q4.2	Risk of pricing policy: It is difficult to offer an appropriate seasonal price to attract customers but not to lose money.	1	2	3	4	5
16	Q4.3	Human resources risk (professional level and technical skills, work attitude, professionalism and ability to grasp customer psychology, staff numbers in high season, labor safety).	1	2	3	4	5
17	Q4.4	Risks from attracting customers, stabilizing the number of customers and pricing products and services appropriately.	1	2	3	4	5
18	Q4.5	Risks in ensuring the safety for tourists: food safety, safety when traveling and participating in tourist services (such as diving), burglary, conflict ...	1	2	3	4	5
19	Q4.6	Risks when changing natural environment, natural resources, climate change, outbreaks of epidemics affecting tourism.					
	X₅	GROUP V: RISK RESPONSE					
20	Q5.1	Businesses use risk avoidance methods to deal with risks.	1	2	3	4	5
21	Q5.2	Businesses face risks but make solutions to diminish risk for limiting losses.	1	2	3	4	5
22	Q5.3	Accepting and sharing risk to minimize damage (such as insurance).	1	2	3	4	5
23	Q5.4	Businesses set up situations to cope with risks: Presented in the financial statements; Set operational goals for risk situations.	1	2	3	4	5
	X₆	GROUP VI: CONTROL ACTIVITIES					

No	Code	Variables	Likert Scale				
			1	2	3	4	5
24	Q6.1	Businesses regularly identify, control risks well to limit risks in their business operations	1	2	3	4	5
25	Q6.2	Enterprises are aware of the importance of identifying and controlling risk and give priority to their operations	1	2	3	4	5
26	Q6.3	Enterprises have specific design about control process to deal with risks.	1	2	3	4	5
27	Q6.4	Businesses supervise, protect and maintain their assets, inventories, equipments from loss, attrition, damage or inappropriate use.	1	2	3	4	5
	X₇	GROUP VII: INFORMATION AND COMMUNICATION					
28	Q7.1	Enterprises are equipped with a modern computer system to protect their business operations and help enterprises easily access to customers.	1	2	3	4	5
29	Q7.2	The results of identification or risk assessment activities are communicated throughout the enterprise to disseminate appropriate control measures	1	2	3	4	5
30	Q7.3	Enterprise regularly update information from outside to implement and comply with the law.	1	2	3	4	5
31	Q7.4	It is compulsory for employees to ask for a username and password when using computer system for working.	1	2	3	4	5
	X₈	GROUP VIII: MONITORING					
32	Q8.1	Enterprises build functional departments such as internal control, internal audit to support and participate in risk control.	1	2	3	4	5
33	Q8.2	Enterprises have a reporting system to detect deviations from planned targets. When there is a bias, company deploys appropriate adjustment measures.	1	2	3	4	5
34	Q8.3	Management board regularly evaluates the effectiveness of the identification and risk control.	1	2	3	4	5
		The effectiveness of risk management					
35	Y1	Enterprises achieved strategic goals	1	2	3	4	5
36	Y2	Enterprises used effective and efficient resources	1	2	3	4	5
37	Y3	The reports of enterprise are made and presented reliably.	1	2	3	4	5
38	Y4	Related laws and regulations are complied sufficiently by enterprises.	1	2	3	4	5

Source: designed by the author