Analysis on the Influencing Factors of the Quality Traceable System Established by Edible Agricultural Products Enterprises-Taking Sichuan as an Example

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Abstract According to the investigation data from 81 edible agricultural products enterprises in Sichuan Province, the influence factors of establishing quality tracing system are empirically analyzed from four aspects, including the enterprise features, the attitudes of operators, management and market competition by using the Logistic model. The results show that the enterprise can establish the quality tracing system after the comprehensive function of a series of internal and external factors. The four factors include peer pressure; age of enterprise; export and the expectation on improving economic interests have the biggest impact on enterprise to establish the quality tracing system. The factors, including the quality safety certificate obtained by the enterprises, export of products, sampling frequency, peer pressure, the pressure from consumers and media, the expectation on improving the competition of products, the expectation on improving economic interests, play a promotion role in helping enterprises to establish quality tracing system. The countermeasures and suggestion are put forward from strengthening the social responsibility of enterprises; intensifying the law enforcement of government and expanding the experimental enterprises with the quality tracing system.

Key words Edible agricultural products, Quality traceable system, Influencing factors, China

As vicious food borne incidents happen frequently across the world, such as the crisis of mad cow disease in Europe, the traceable system of food quality was proposed by some EU countries, such as France in International Codex Alimentarias Commission, Inter-governmental Biological Technological Food Special Working Group Meeting in 2002, which is a information record system of strengthening the information transmission of food security in nature, controlling foodborne diseases and guaranteeing consumers' benefit. For the time being, although the law in China has made some prescriptions when the agricultural products enterprises and farmers' professional cooperative economic organizations establish production documents, inspection record of purchased goods and test record of exported products, being that the law was implemented not long ago, establishing the traceable system of enterprises is often not compulsory except the meat products industry. The local governments, like Chengdu City, put forward market admission requirement on the traceable system of food quality. The enterprise, as the main body of implementing tracing and taking responsibility[1], should play more active role in establishment of traceable system. Researching the influencing factors of traceable system established by edible agricultural products enterprises has important theoretical significance and realistic significance.

The academic community at home and abroad mainly focuses on the objective, content and relevant main body behavior of realizing traceability of agricultural products. In terms of enterprise behavior, the research main focuses on the cost and benefit of establishing quality traceable system[2-6], and the motive of establishing quality traceable system of enterprise[7-10]. By using game theory tracing model after event, Chen Honghua (2007) analyzed the specific factors impacting function exertion of traceable system of agricultural products[11]. Galliano D(2008) held that the internal characteristics of enterprise and the enterprise environment are the factors impacting choosing tracing of enterprise[12]. On the basis of the research of predecessors, by using the survey data of 81 edible agricultural products enterprises which have established quality traceable system in Sichuan, from interior and exterior of enterprise, we research the influencing factors in the process of establishing quality traceable system of enterprise, in order to promote the construction of food quality security traceable system of enterprise and establishment of quality traceable system of edible agricultural products.

1 Research hypothesis, model establishment and data source

1.1 Research hypothesis The traceable system, a kind of advanced crisis management system, can help enterprise to curtail cost and avoid the losses of sales profit[13]. According to the perspective of Smith's economic liberalism, the capital can be realized by capitalists' investing capital in the sector which is most beneficial to enterprise and comparing cost and benefit. In the process of choosing investing programs, the enterprise will be impacted by enterprise characteristics, managers' favoritism and external environment[6]. Establishing quality traceable sys-

Received: December 29, 2010 Accepted: February 16, 2011
Supported by National Philosophical Social Science Fund (09XJY-024).
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tem of enterprise is the result of interaction of all kinds of factors[1-10]. Consequently, based on the foregoing theoretical analysis and the interview of top managers of edible agricultural products enterprise, this research classify the influencing factors of establishing quality traceable system of edible agricultural products enterprise as internal aspect and external aspect. The internal factors include enterprise characteristics and the enterprise mangers' awareness; the external factors include regulation and market competition. The following hypothesis is put forward.

1.1.1 Enterprise characteristics impact establishing quality traceable system of enterprise. Delmas and the like (2003) hold that even if two organizations bear the same level system pressure, their perception and reaction is different, too. There may be great difference of establishing quality traceable system of different types and different scales of enterprises[14]. The organization characteristics cause the dissimilation of establishing quality traceable system behavior of organization under the same system condition. The enterprise characteristics include enterprise age (X_1), enterprise scale (X_2), enterprise management model (X_3), the quality security test obtained by enterprise (X_4).

Generally speaking, if the enterprise has big scale and long history, it will have great advantage on capital, technology and human resources, and as for the introduction of new technology and new management method, it has strong acceptance ability. So, we assume that the enterprise age (X_1) and enterprise scale (X_2) is positive correlative with establishing the quality traceable system of enterprise.

The supply chain and production chain involved by production-type enterprises is very complicated. And there are many potential detrimental factors of products quality security of production-type enterprises. In order to guarantee the quality safety from source, the production-type enterprises take greater responsibilities. Trading-type enterprises are in the downstream of supply chain, and more quality security responsibilities tend to be taken by upstream enterprises. Trading-type enterprises can transfer responsibilities by signing contract with quality guarantee with producers, so the trading-type enterprises are inactive in establishing traceable system. Consequently, we assume that the production-type enterprises impact establishing quality traceable system.

Various kinds of quality safety tests obtained by enterprises show that the quality safety awareness of enterprises is strong and they tend to adopt quality safety measures of traceable system. Meanwhile, various kinds of quality safety attestations and the content of quality traceable system cross, share information, and exert role in tandem, so as to construct a safety protection shield for food security, strengthen the coordination and cooperation among sectors and other basic organizing and managing abilities, and lay solid foundation for establishment of quality traceable system[15]. We assume that the larger quantity (X_4) of quality safety attestation the enterprises get, the greater impact it has on establishing the quality traceable system.

1.1.2 The enterprise managers' awareness impacts establishing quality traceable system of enterprise. The enterprise managers' awareness is mainly measured by enterprise managers' awareness of food quality safety (X_5) and the managers' understanding of quality traceable system (X_6). The enterprise managers' awareness of food quality safety (X_5) and the managers' understanding of quality traceable system (X_6) determine managers' attitude towards food quality safety, while managers' attitude may further impacts the decision-making behavior of food safety problems. Hence, we assume that the stronger the enterprise managers' awareness of food safety, the deeper the understanding of quality traceable system, and the greater impact on establishing quality traceable system of enterprise.

1.1.3 The regulation impacts establishing quality traceable system of enterprises. The regulation is measured mainly by using sampling inspection frequency (X_7), export of products (X_8) and the relevant preferential policy of government (X_9).

The government should take the great responsibility of supervision on edible agricultural products safety. The government often poses the requirement of regulation, and reinforces degree of sampling inspection, imposing big pressure on edible agricultural products safety of government. In the regions with developed economy, like Chengdu, the government reinforces the degree of sampling inspection on wholesale market, retail market and the enterprise of production and processing, and forces enterprises to conduct establishment of quality traceable system so as to be suitable for governmental regulation. Consequently, we assume that the sampling inspection frequency (X_7) impacts establishing quality traceable system of enterprise.

In order to meet the requirement of new statute of food safety, the food safety statutes of international community and every country, have become the forcible restriction on realizing quality traceable system of food enterprises, and great external impetus[16]. Being that the exported agricultural products have high standard quality, some developed countries and regions have definitely stipulated that the agricultural products which are exported to the county and region have traceability. So, we assume that the requirements of international market (measured by exported products, X_8) impacts establishing quality traceable system of enterprise.

For the time being, China's establishing traceable system is still at the stage of demonstration point, and many enterprises entertain wait-and-see attitude. The government often offers policy support on financial capital or tax for enterprise, which plays the role of promotion in establishing traceable system of enterprise. For example, Chengdu City has exposed definite market admission requirement regarding the quality traceability of edible agricultural products, such as meat, vegetable, fruit and fungus. The financial sectors at all levels offer certain subsidy for witnessed inspection equipments, traceable electronic scale, and traceable ear tag of wholesale market so as to promote the traceable supervision on edible agricultural products. We assume that the relevant preferential policies of government (X_9) impacts establishing quality traceable system

of enterprise.

1.1.4 The market competition impacts establishing quality traceable system of enterprise. The market competition is mainly measured by peer pressure(X_{10}), the pressure of consumers and media (X_{11}) and market motivation. When enterprises conduct the decision-making of management, the peer pressure(X_{10}) is the factor which must be considered. When more and more enterprises in the same industry establish quality traceable system, it will impose pressure on other enterprises in the same industry and force enterprises to imitate the peer and adopt similar actions. Hence, we assume that the greater the peer pressure, the greater impact it imposes on establishing traceable system of enterprises. As the media pays attention to food security and consumers increasingly pay attention to healthy consumption and food security, the enterprises of edible agricultural products bear more and more pressure[17]. So, we assume that the greater the pressure of consumers and media, the greater impact it imposes on establishing traceable system of enterprises.

As for the questions of market motivation variables, there are 12 subjective judging questions in questionnaire, including improving products quality, curtailing production cost, elevating management efficiency of supply chain, strengthening the ability of retaining existing customers, enlarging market share, and branding and differentiation of products. The questionnaire adopts 7-level Likert graduation method (7 match points). The more points the variables get, it indicates that the greater impact the variables imposes on establishing traceable system of enterprises. After test, the Cronbachs coefficient of credibility test (a) is 0.802, and it is high credibility. As KMO value of factor analysis is 0.736, so the applicability of factor analysis can be passed. In detailed analysis, there are 3 common factors whose characteristics value is bigger than 1, and the accumulated contribution rate of variance reaches 68.837%. According to the rotated component matrix table, we define the 3 factors as " the expectancy of elevating competitiveness of products(X_{12})", " the expectancy of elevating quality safety of products and safety management level(X_{13})" and " the expectancy of elevating economic benefit (X_{14})". According to the viewpoint of modern economics, the expectancy is the main factor impacting enterprise economic behavior. If implementing quality traceable system of enterprise expectancy can effectively pare down the recall cost of production and increase benefit of products, elevate the level of products quality safety and safety management, and promote the efficiency of supply chain and internal production procedure, the enterprises will have greater enthusiasm to establish quality traceable system. So, we assume that " the expectancy of elevating competitiveness of products", " the expectancy of elevating quality safety of products and safety management level" and " the expectancy of elevating economic benefit" impact establishing traceable system of enterprises.

According to the foregoing theoretical analysis and research hypothesis, the thesis classifies the influencing factors of establishing quality traceable system of enterprise as four types, and there are 14 variables in the aggregate. If the enterprises establish a set of complete quality traceable system, it can be regarded as establishing traceable system; if the enterprises merely establish part of the content of quality traceable system, it is regarded as having not established traceable system.

After the statistical disposal of questionnaire, assigning value to all variables can be seen in Table 1.

Table 1 The variables of model and the definition

Item	Variable	Evaluation of variables	Expectancy
The explained variables variables explained	Quality traceable system established by enterprise (Y)	" have established" =1;" have not established" =0	
Enterprises characteristics	Enterprise age(X_1)	" more than 20 years" =5;" from 15 to 20 years" =4;" from 10 to 15 years " =3," 5 – 10 years" =2;" below 5 years" =1	+
	Enterprise scale(X_2)	" large enterprises" =3;" medium – size enterprises =2;" small enterprises " =1	+
	Management model of enterprise(X_3)	" production – trading – type" =3;" trading – type" =2;" production – type" =1	+
	The quality safety attestation obtained by enterprise(X_4)		
	The amount of products quality safety attestations and measures of enterprises		+
Managers' awareness	Managers' awareness of food security(X_5)	" very important" =4;" important" =3;" indifferent" =2;" insignificant " =1	+
	Managers' awareness of quality traceable system (X_6)	" very important" =4;" important" =3;" indifferent" =2;" insignificant " =1	+
Regulation	Sampling inspection frequency (X_7)	The sampling inspection frequency of enterprise products every year by government	+
	Products export(X_8)	" have export of products" =1;" have no export of products" =0	+

Continued (Table 1)

Item	Variable	Evaluation of variables	Expectancy
	Relevant preferential policies of government (X_9)	"have preferential policies" =1; "have no preferential policies" =0	+
Market competition	Peer pressure(X_{10})	"Considering peer behaviors when implementing traceable measures" =1; "no consideration" =0	+
	Pressure of public and media(X_{11})	"national brand" =5; "provincial brand" =4; "municipal brand" =3; "general brand" =2; "other" =1	+
	Expectancy of elevating competitiveness of products (X_{12})	The extracted value of factor analysis	+
	Expectancy of elevating level of products quality safety and safety management (X_{13})	The extracted value of factor analysis	+
	Expectancy of elevating economic benefit (X_{14})	The extracted value of factor analysis	+

1.2 Establishment of model What we research is the impact of various kinds of internal and external factors of enterprises on establishing the quality traceable system of edible agricultural products enterprises. According to the preceding assumptions, establishing quality traceable system of enterprises is impacted by 4 kinds of factors: enterprise characteristics, managers' awareness of enterprise, regulation and market competitiveness. And it is impacted by 14 variables in the aggregate. The relations among them can be denoted as the following function form:

$$T_i = f(X_1, X_2, X_3, \cdots, X_{14}, \varepsilon_i) \quad (1)$$

In this form, T_i is the quality traceable system established by the ith enterprise; ε_i reflects other influencing factors we cannot observe, namely the random disturbance terms.

In the analysis, we put establishing quality traceable system of enterprise as dependent variables, namely 0 – 1 dependent variables. The enterprise which has established traceable system is "1"; the enterprise which has not yet established traceable system is "0". Because whether the enterprise establishes quality traceable system is dichotomic qualitative variable of virtual code, so we choose logistic regression analytical method to test hypothesis. Its specific form is as follows:

$$P_i = F(\beta_0 + \sum_{i=1}^{m}\beta_i X_{ij}) = \frac{1}{1+e^{-(\beta_0+\sum_{i=1}^{m}\beta X_{ij})}} + \varepsilon_i \quad (2)$$

P_i is the probability of quality traceable system established by the ith enterprise; β_i is the regression coefficient of factors; m is the factors amount of this probability; X_{ij} is independent variable and the jth influencing factor; β_0 is regression intercept; ε_i is random disturbance item.

1.3 Data source This research data are selected from one questionnaire survey carried out by research group from July, 2010 to October, 2010, on tracing status of edible agricultural products enterprise in Sichuan Province. According to the distribution status of edible agricultural products enterprises in Sichuan Province and the procurability of data, the survey adopts non-random method to sample regions. The sampling regions mainly include 20 districts (counties), such as Chengdu, Suining, Meishan, Leshan and so on, basically covering the main regions of enterprises distribution. We select those enterprises that have passed green food attestation, organic food attestation, HACCP system attestation and other popular attestations at home and abroad, as surveyed objectives, by using the method of combination of questionnaire survey and interview. There are 120 questionnaires which are sent out and 87 questionnaires which are retrieved. We get 81 valid questionnaires ultimately after eliminating invalid and incomplete questionnaires, and the effective retrieve rate is 67.6%.

2 Results and analysis

2.1 The descriptive statistical samples In terms of the distribution of surveyed regions, the enterprises from Chengdu, Suining, Ziyang and Meishan account for 73% of the total surveyed enterprises (Fig.1). According to the types of products, all enterprises are classified as 7 types (Fig.2).

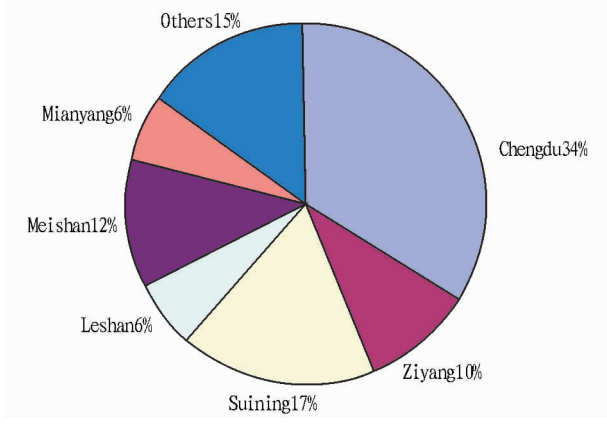

Fig.1 Regional distribution of samples

According to the scale classification, small-scale enterprises account for 60.5%, and the medium-scale enterprises and large-scale enterprises account for 34.6% and 4.9% respectively. According to ownership structure classification, the private-owned enterprises have a large proportion, reaching 72, and accounting for 88.9%; there are 7 state-owned enterprises and 2 foreign-funded enterprises. According to the enterprise age classification, 95.1% enterprises have been established for less than 30 years, and therein the enterprises have been established for 10 –20 years accounting for 29.4%; the enterprises have been established for less than 10 years accounting for

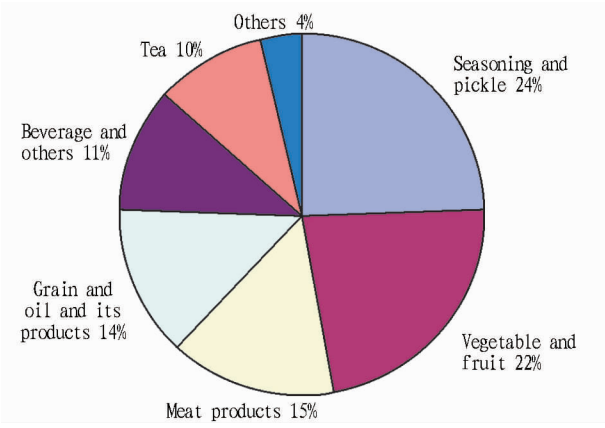

Fig. 2 The surveyed samples distribution according to products types classification

60.5%. According to management model classification, 64.2% of enterprises are production-trading-type enterprises; 34.6% are production-type enterprises; trading-type enterprises only account for 1.2%. In all surveyed enterprises, 82.4% of enterprises have no export and 18.6% of enterprises have export. According to the types of enterprises, the enterprises are classified as 5 types: national-level enterprises(8.60%), provincial-level leading enterprises(39.50%), urban-level enterprises (37.10%), professional cooperative economic organizations (7.40%), and general enterprises(7.40%). In survey, 55.6% of enterprises have established a set of complete quality traceable system; 44.4% of enterprises have only established part of content of quality traceable system, regarding as having not established quality traceable system.

2.2 The test results of whole model By using SPSSI 7.0 statistical software, we conduct Logistic regression disposal on surveyed data. In regression, the regression method we adopt is backward LR mode. In the process of disposal, firstly, we put all the interdependent variables which impact dependent variables in the model to conduct test. According to the test results, we first delete all the interdependent variables which impact insignificantly the dependent variables, then continue the test, until the test results of interdependent variables impacting the dependent variables significantly.

After the model passes 6 iterations, we get 9 variables impacting significantly the dependent variables, and the coefficients of all variables pass test at the level of 90%. By the statistics of −2 Log likelihood, Cox&Snell R^2 and Nagelkerke R^2, we know that the goodness of fit of model on samples is good.

According to the overall test results of model, the chi-square statistic of terminal model is 80.349. Its degree of freedom is 9, and the corresponding P value is 0.000, less than 0.05. The prediction accuracy rate is 91.4%, namely the model has the statistical sense of significance. The smaller the logarithm likelihood value, the bigger the likelihood value of regression equation and the better the goodness of fit of model. According to Table 2, the statistic of −2LL in the model is 30.939, indicating that the goodness of fit of model is good. The statistic of Cox&Snell R^2 is 0.629, and the statistic of Nagelkerke R^2 is 0.842, indicating that the model explains 84.2% of fluctuation of the explained variables, and the goodness of fit of model is good. The specific analysis of model can be seen in Table 2.

Table 2 The model estimation results of impacting factors of quality traceable system established by edible agricultural products enterprises

Factor	Variable	Regression coefficient	Standard error	Statistic	Significance	Exponent value
Enterprise characteristics	Enterprise age	−3.485***	1.198	8.458	0.004	0.031
	Management model of enterprise	−2.059**	0.946	4.737	0.030	0.128
	The quality safety attestation obtained by enterprise	0.664**	0.292	5.160	0.023	1.943
Regulation	Sampling inspection frequency	0.458**	0.219	4.373	0.037	1.580
	Products export	2.649*	1.570	2.845	0.092	14.139
Market competition	Peer pressure	4.219***	1.492	8.000	0.005	67.953
	Pressure of consumers and media	1.884**	0.917	4.221	0.040	6.583
	Expectancy of elevating competitiveness of products	1.799**	0.848	4.505	0.034	6.045
	Expectancy of elevating economic benefit	2.279**	0.981	5.394	0.020	9.769

Note: "*", "**", "***" denotes that it is significant at the level of 10%, 5% and 1% respectively.

2.3 The analysis of model estimation results According to the regression analysis results in Table 2, it shows that establishing quality traceable system of enterprises is impacted by many factors.

2.3.1 The variable of enterprise characteristics. Firstly, the variable of enterprise age is significant at the level of 1% ($P < 0.01$). The coefficient is negative, indicating that if the enterprises have been established for a short time, the enterprises will be more active in establishing quality traceable system of enterprises. It indicates that the preceding hypothesis is not tenable. The probable reason is that if the newly founded enterprises want to survive the drastic market competition, they should take the traceability of products quality as a strategic consideration. While the enterprises, have been established for a long time accumulate competitive advantage, and they are inactive in establishing quality traceable system of enterprises.

Secondly, the wald test value of variable of enterprise scale is not significant in the model, indicating the preceding hypothesis is not tenable. The probable reason is that there are many medium-small-size enterprises, accounting for 60.5%, and some enterprises are the newly established medium-small-size enterprises. Most of the mangers of new enterprises hold that establishing quality traceable system is future developmental tendency, and they incorporate it in their strategic plans, but

due to the restriction of capital, technology and human resources, they have not yet put establishing quality traceable system into practice; on the contrary, the large enterprises have a set of relative complete quality safety system, and strong competitiveness, hence, they are inactive in establishing traceable system.

Thirdly, the variable of enterprise management model is significant at the level of 10% ($P<0.1$), impacting establishing quality traceable system of enterprises. The coefficient is negative, indicating that production-type enterprises are more active in establishing quality traceable system of enterprises, which is identical with the hypothesis in this thesis.

Fourthly, the variable of quality safety attestation obtained by enterprises is significant in the model($P<0.05$). It is positive and impacts positively establishing quality traceable system of enterprises, which is identical with the hypothesis of this research. Some enterprises which have implemented ISO9000 attestation, HACCP system attestation, and organic food attestation, tend to establish quality traceable system. Various kinds of quality attestations crossing the content of quality traceable system, sharing information and the coordination and cooperation among sectors, lay solid foundation for establishing quality traceable system.

2.3.2 The managers' attitude of enterprises. The variables of enterprise managers' awareness of food security and understanding of traceable system impact inconspicuously establishing quality traceable system of enterprises. The probable reason is that although the managers pay attention to establish traceable system of food security and quality, they only put the products quality control and management which have close relationship with food security as the internal-control program of enterprises. Realizing products quality control and management which is completed by some other measures of quality control or attestation, which contradicts obviously that the variable of quality safety attestation obtained by enterprises passes test in the model. And the further reason may be that whether the managers establish quality traceable system is based on that the quality traceable system can bring expectancy benefit for enterprises or there are other factors of market competitiveness. This is not for solving the problem of products quality safety, and it explains that the coefficients of two variables of expectancy of elevating competitiveness of products and expectancy of elevating economic benefit impacting establishing quality traceable system of enterprises are 1.799 and 2.279 respectively, and they pass test at the significant level of 5%, while the influencing coefficient of peer pressure variable reaches 4.219, and it passes test at the significant level of 1%.

2.3.3 Regulation. Firstly, in the model, the variable of sampling inspection frequency is positive, and significant at the level of 5%($P<0.05$). It indicates that regulation is powerful external impetus of establishing quality traceable system of enterprises, which is identical with the hypothesis in this thesis. The reason may be that China's quality traceable system is still at early stage, and it is mainly dominated by government.

According to the survey, regulated by government, some enterprises actively implement green food attestation, organic products attestation, non-pollution agricultural products attestation or HACCP system attestation. After initiating the market admission system of agricultural products, such as pork, vegetable, fruit, fungus and so on in Chengdu City, it promotes the enterprises to establish quality traceable system.

Secondly, the wald test value of variable of products export is significant ($P<0.1$), indicating that the enterprises with exported products have interest drive of establishing quality traceable system, which is identical with the hypothesis in this thesis. For the time being, many counties in the world require that the agricultural products which are exported to the local areas have traceability, and the enterprises with overseas market voluntarily establish quality traceable system in order to increase export better. The survey also proves this. Gaojin Food Corporation and Lanyan Corporation take the lead in establishing pork quality traceable system in order to export products to Russia and other countries.

Thirdly, the variable of relevant preferential policies of government impacts inconspicuously establishing quality traceable system of enterprises. The probable reason is that the degree of encouragement and support of government is not enough and has not impacted enterprises in nature.

2.3.4 Market competition. Firstly, in this model, the variable of pressure of consumers and media is significant at the level of 5%, ($P<0.05$), which is identical with the hypothesis in this thesis. It indicates that China's consumers pay attention to food security and need of safe food, which promotes enterprises to establish traceable system voluntarily; the supervision of media is imposing pressure on enterprises.

Secondly, the variable of peer pressure plays conspicuous role in establishing quality traceable system of enterprises(the coefficient is 4.129, and it is significant at the level of 1%($P<0.01$), which is identical with the hypothesis in this thesis. It indicates that the peer action imposes great competitive pressure on enterprises, and impacts greatly establishing quality traceable system of enterprises. It not only imposes compulsory drive on organizations, but also promotes organizations to conduct competitive imitation. From interview we know that some enterprises adopt imitative actions immediately so as to elevate competitiveness after witnessing that the same-type enterprises take the lead in establishing quality traceable system.

Thirdly, the variable of expectancy of elevating competitiveness of products is significant at the level of 5% in the model and the relevant coefficient is positive($P<0.05$), which is identical with the hypothesis in this thesis. It indicates that establishing quality traceable system of enterprises, to some extent, is for strengthening competitiveness of products so as to enlarge market share and increase sales.

Fourthly, the variable of expectancy of elevating level of products quality safety and safety management is not significant in the model, which is not identical with the hypothesis in this thesis. It may be identical with explanation of reason of insignificant impact of establishing traceable system of enterprises and managers' attitude of enterprises.

Fifthly, the variable of expectancy of elevating economic benefit in the model is significant at the level of 5% ($P<0.05$), which wi identical with the hypothesis in this thesis. The expectancy of establishing quality traceable system of enterprises can promote the efficiency of supply chain and internal production process, decrease cost of accident and increase benefit.

3 Conclusion and enlightenment of policy

3.1 Conclusion Firstly, the internal factors, such as enterprise age, management model of enterprise and the quality safety attestation obtained by enterprise, and the external factors, such as sampling inspection frequency, products export, consumers, pressure of consumers and media, peer pressure, expectancy of elevating competitiveness of products and the expectancy of elevating economic benefit, to some extent, impact establishing quality traceable system of enterprises, and the role of other factors is not obvious. Only influenced by a series of internal and external factors can enterprise conduct decision-making on quality traceable system.

Secondly, according to the degree of importance, the factors impacting establishing quality traceable system of enterprises are peer pressure, enterprise age, products export, and expectancy of elevating economic benefit in turn; the lesser important factors are management model of enterprise, pressure of consumers and media, the expectancy of elevating competitiveness of products, the quality safety attestation obtained by enterprise, sampling inspection frequency.

Thirdly, the factors of quality safety attestation obtained by enterprise, sampling inspection frequency, products export, peer pressure, pressure of consumers and media, expectancy of elevating competitiveness of products and the expectancy of elevating economic benefit promote establishing quality traceable system of enterprises. The young enterprises and production-type enterprises are more active in establishing quality traceable system of enterprises.

3.2 The enlightenment of policy Firstly, the managers of enterprises should strengthen awareness of food security and traceability; reinforce social responsibilities of enterprises in order to offer more safe food for consumers; strengthen the training and learning of employees; promote the ability of quality management so as to elevate competitiveness of products.

Secondly, the governmental departments should strengthen degree of law execution and degree of watch and control in terms of food security; reinforce regulation of food safety. Some regions can promote the market admission system construction of food security gradually; reinforce the traceable watch and control degree of food; quicken the pace of establishing quality traceable system of enterprises.

Thirdly, by the forms of preferential tax and financial policies and technological support, the government should strengthen the degree of encouragement and support in establishing quality traceable system of agricultural products of enterprises so as to promote more enterprises to actively and voluntarily establish traceable system.

Fourthly, we should expand the range of demonstration point enterprises which have established quality traceable system of agricultural products, so as to make the demonstration point enterprises play the role of leading in the region or industry; strengthen sharing of experience of establishing quality traceable system and operation among peers so as to guide more enterprises to participate in the establishment of quality traceable system of enterprises.

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