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SWOT Analysis for planning development of Agricultural Logistics in Anhui Povince

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Abstract: Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis is a tool widely used to help in decision making in complex systems, with considerations comprehensive but with a certain degree of subjectivity and blindness characteristics. This study proposed Delphi method, AHP and four semi-dimensional plane coordinate system and other methods used in the SWOT analysis to construct quantitative SWOT analysis model. This method is applied to the Agricultural Logistics Industry Analysis. The analysis results show that the model combined quantitative and qualitative analysis, reducing the influence of subjective factors and quantitative analysis of the results after digitization, make the weight of each factor clearly, effectively improving efficiency of analysis of decision-making.

Key words: SWOT analysis, AHP, strategy analysis, agricultural products logistics

INTRODUCTION

SWOT analysis is a useful tool for the planning development and decision making, it was popularised by (Andrews, 1965). He found out that successful organisations should have external purposes and objectives that were directed to determining customer needs and satisfying them. Now SWOT analysis has widely been applied as a means to systematically analyze an organization's internal and external environments management (Saaty, 1977; Tao *et al*., 2012).

Although SWOT analysis is not without deficiencies and weaknesses, literature review shows its extensive use in different cases. Tahernajed *et al.* used Swot-Analytic Hierarchy Process (AHP) approach to define dimensional stone mines decision process in a hierarchical structure of factors; He then quantified the relative importance of each factor to the decision and determine the priorities of the strategies for these mines (Li *et al*., 2011). Lee utilized quantitative SWOT analytical method to locate the competitive relation of global logistics (Lee *et al*., 2009). Yuksel and Dagdeviren performed SWOT analysis using the analytical network process (ANP) to determine the most suitable strategies for a textile firm (Buckley, 1985; Vaidvay and Kumar, 2006). Wu and Tsai used AHP to evaluate the criteria of auto spare parts industry. To deal with uncertainty and imprecision existing in multi-criteria decision process, Chou, proposed a fuzzy AHP approach based on the concept of possibility extent (Chou *et al*., 2011).

In this study, this article use Anhui Agricultural Products Logistics for example, we make use of Delphi (Delphi Method), Analytic Hierarchy Process (AHP Method) and four semi-dimensional and plane coordinate system, will combine quantitative and qualitative analysis to construct SWOT quantitative analysis model, to find reasonable description of each strategic groups and to deal with uncertainty and vagueness of human perception; pairwise comparison values in AHP are directly obtained from the description of objects, This study is organized as follows: In Sect. 2, we give some preliminaries notions of SWOT theory. In Sect. 3, we present an experimental study of the proposed methodology, concluding remarks are given in Sect. 4

SWOT QUANTITATIVE ANALYSIS MODEL

Quantitative SWOT analysis model: Analysis process of SWOT quantitative analysis model: Collecting information, analyzing the external environment and internal environment, fuzzy evaluation by experts identify opportunities and threats, strengths and weaknesses; calculate the total advantage, with a total disadvantage, the total strength of the opportunity and the total threat; build a business strategy quadrilateral; determining strategic position, including strategic type selection (θ azimuth) and strategic strength selection (ρ); develop strategies based on strategic vectors (Andrews, 1965) Fig. 1.

ANALYSIS OF THE INTERNAL AND EXTERNAL ENVIRONMENT

Agricultural products in anhui: Anhui Province is a major agricultural province of China.Since the rural reform, Anhui has a stable and sustainable agriculture and rural

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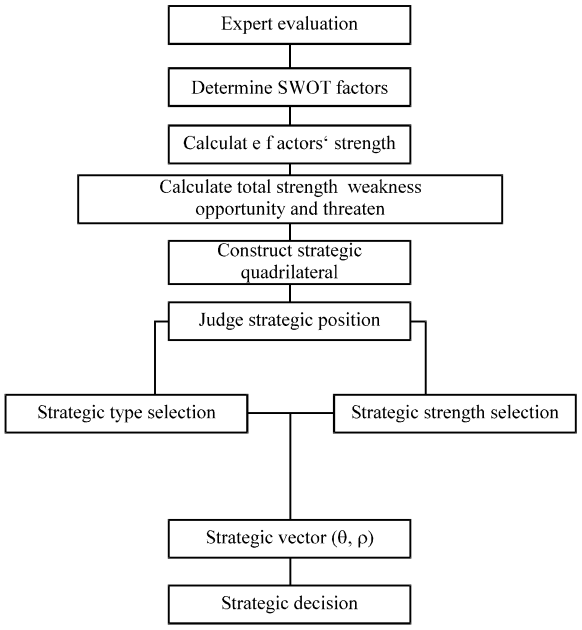

Fig. 1: Work flow of SWOT model

economic development, agricultural productivity greatly improved agricultural production taking an important position in the country, the perennial roots and oil food production both ranks No. 6; Agricultural products and processed into goods exports accounted for over 40% of the province's agricultural basic industry of the national economy (Lei and Wang, 2011). With China's accession to the WTO and the accelerated pace of global economic integration, the logistics industry play as a kind of traditional industries with high technology transformation and integration and the formation of new industries, the development get more and more government attention, which focus on the development of the logistics industry as. So we focus on Anhui Agricultural Products Logistics for research and analysis, not only theoretical significance but also has a strong practical significance.

External environment analysis: Political and legal environment 2003 government promulgated the "Notice of the People's Government of Anhui Province Provincial Communications Department on marketing of agricultural products on the further implementation of the green channel policy advice". The notice invigorated the circulation of agricultural products. Secondly, in 2006 government promulgated the "number of opinions for Anhui Provincial People's Government on accelerating rural modern circulation system" further emphasizes building a modern logistics system in rural areas of importance to the guiding ideology, objectives, priorities and major initiatives such as baking gives advice. In 2009 the first batch of Anhui logistics demonstration zone, third-party logistics demonstration units, training base has also been introduced, in addition, Anhui Logistics Association presents legislative proposals, in January 10, 2009 at the " Anhui Logistics Conference, " unanimously adopted, we can see the Anhui provincial government will vigorously support the development of agricultural product logistics and hope that through the construction of agricultural logistics of agricultural products to promote the province 's market share and promote agricultural efficiency and rural incomes (Cao, 2013).

Economic environment: At present there is a big gap if comparing China's agricultural productivity levels with the developed countries. With gradually raising the level of agricultural productivity, developing agricultural logistics will be an effective way to enhance the value of our agricultural products. As a major agricultural province in central Anhui and strengthening research on agricultural product logistics, booming the development of the agricultural economy, thereby promoting the economic development of Anhui Province, is the new era' mission, a very important practical significance to study the development of Anhui Agricultural Products Logistics (Pan, 2012).

Socio-cultural environment: Currently, the logistics of this term impress many people forming a concept of agricultural logistics more attention, many colleges and universities in Anhui Province have set up a separate logistics engineering curriculum, which provides opportunities for logistics in Anhui Province.

Environmental science and technology: In recent years, a large number of logistics personnel training, logistics and technology has been a great progress. The greatest feature of the logistics industry is the rapid accuracy of the information, with the development of information technology, logistics information has good timeliness. In addition, with some of the logistics software have been generated, effectively improve the efficiency of the logistics industry. There are some investment in new equipment, new technology used, these have greatly promoted the development of agricultural product logistics.

Analysis of the internal environment: Refers to agricultural entities agricultural logistics and information flow process from the producer to the consumer, which

includes agricultural production, transportation, storage, handling, transport, packaging, distribution processing, distribution, information processing and a series of links (Cao, 2013).

Compared with industrial products, agricultural products with unique natural properties and characteristics of supply and demand, so that the agricultural product logistics exhibit significantly different characteristics from industrial logistics:

- Agricultural logistics, has variety products covering wide range. Today, whether it is food, crops or livestock products and aquatic products, all of which are commodities, not only to meet people's immediate needs but also to provide raw materials to the food industry, textile industry, chemical industry. Therefore, the demand for large agricultural logistics is obvious, meaning heavy logistics capacity, covering a wide range
- Transportation of agricultural products is imbalance, needing the technical requirements for the transport characteristics. First, because of the seasonality of agricultural production, agricultural products transportation volume is large during the harvest season and after-peak time, while at other times the amount in transportation of agricultural products is relatively much less. Secondly, need for adequate transportation capacity is large, there is a multi-farm organic life, most vulnerable perishable, which requires the use of different agricultural products to the appropriate mode of transport according to their physical and chemical properties, such as bulk transport of food, fresh aquatic transport, transport of milk thermostat and so on
- Produce large logistics chain risk. On the one hand, perishable agricultural produce and easy to make bad logistics storage, transport and other sectors to bear greater risk; hand, agricultural production has geographically dispersed and seasonal characteristics and agricultural consumption is year-round and universality, which makes between supply and demand for agricultural produce contradictory information in order to accurately grasp the timely adjustment of supply and demand are more difficult, resulting in a greater risk of agricultural products logistics chain
- Because of single source of agricultural logistics, contradiction relatively exist in regional agricultural production and universality of concentrated consumption. On the one hand, the majority of agricultural production in rural areas, while the vast majority of consumers are living in rural areas far from the city, so the vast majority of agricultural products from the rural to the cities. On the other hand, due to differences in natural conditions, some agricultural products are only suitable for growing in some places, which determines the special agricultural products can only flow from a particular location

Of course, there are many of Agricultural Logistics deficiencies, for example, agricultural products logistics chain is low circulation. Relatively low level of equipment, transport overall is relatively backward, agricultural market system is not perfect, agricultural logistics technology behind the system is imperfect and other agricultural products logistics organization.

Determine the strategic factors:

- **Determine the opportunities and threats factors:** Criteria for the classification opportunities and threats are different. When the probability of a successful is high or external appealing factors are very low, which means that the opportunity scores low but it is still an opportunity and not a threat. This article used the Delphi method to determine for the analysis of Anhui Agricultural Products Logistics opportunities and threats
- **Determine the strengths, weaknesses factors:** Advantages and disadvantages of the division is based on the same, when the internal factors on the development of the industry is a favorable chance that this factor is relatively high, it is the advantage, on the contrary is a disadvantage. In this study, the single factor fuzzy evaluation method is used to determine the strengths and weaknesses of the key strategic factors, first hired experts would give a predetermined evaluation value of each index and Confidence (score 0-10, 0-100% confidence level) Table 1 and then according to the equation calculate their score:

$$t_i^{(k)} = [(a_i^{(k1)} + a_i^{(k2)}) / 2] \times [(p_i^{(k1)} + p_i^{(k2)}) / 2] \quad (1)$$

Formula: k-k-th ratings person; i-i-th factor; $t_i^{(k)}$-the first k ratings people i th factor scores; $a_i^{(k1)}$-the first k ratings people i-th factor scores lower bound; $a_i^{(k2)}$-first k ratings human upper bound on the i-th factor scores; $p_i^{(k1)}$-k ratings first person to score lower bound of the i-th element of the value of the number of self-confidence; $p_i^{(k2)}$-k ratings first person to score the number of i-th element of self-confidence upper bound.

Table 1: Expert Evaluation

Factors	Evaluation factors	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5
Logistics management	Score	3-4	4-5	3-4	3-4	4-5
	Confidence	80-90	70-80	70-80	60-70	80-90
Traffic network	Score	7-8	6-7	6-7	7-8	5-6
	Confidence	70-80	80-90	65-75	70-80	80-90
Market service	Score	4-5	3-4	3-4	4-5	3-4
	Confidence	70-80	80-90	70-80	80-90	80-90
Environmental pollution	Score	5-6	4-5	5-6	6-7	5-6
	Confidence	65-75	80-90	70-80	70-80	80-90
Policies and regulations	Score	6-7	6-7	7-8	7-8	7-8
	Confidence	65-75	70-80	80-90	80-90	70-80
Logistics structure	Score	5-6	5-6	6-7	6-7	7-8
	Confidence	65-75	80-90	80-90	80-90	70-80

According to the literature experience criteria for the classification as follows: $t_i \leq 5$ as the "vantage" $3 \leq t_i < 5$ designated as "o advantage no disadvantage"; $t_i < 3$ designated as "here is a disadvantage."

Divided by the previous standard, single-factor evaluation value t of value interval [0, 10] into [0, 3), [3, 5), [5, 10]. Fill the single factor score for each factor evaluation matrix T.

Membership of a specific factor within a particular range for the total number of experts rated the interval divided by the participating falling number of factors are calculated for each sequence in the [0, 3), [3, 5), [5, 10] three intervals within the membership, to get the values of the membership matrix R.

The logistics experts on the impact of Anhui Agricultural Products Logistics internal environment assessment, an evaluation form will be developed logistics management, transportation network, marketing services, environmental pollution, policies and regulations, as well as logistics structure building, through evaluation forms, multi-round expert opinion survey questions referred for evaluation form, after repeated consultation, induction, modify, aggregated into a basic consensus from experts.

Available single factor evaluation matrix T1:

$$T1 = \begin{bmatrix} 2.975 & 5.625 & 3.375 & 4.125 & 4.550 & 3.850 \\ 3.375 & 5.525 & 2.975 & 3.825 & 4.875 & 4.675 \\ 2.625 & 4.550 & 2.625 & 4.125 & 6.375 & 5.525 \\ 2.275 & 5.625 & 3.825 & 4.875 & 6.375 & 5.525 \\ 3.825 & 4.675 & 2.975 & 4.675 & 5.625 & 5.625 \end{bmatrix}$$

Membership matrix R1: Based on the above analysis summary, drawing strengths, weaknesses, opportunities and threats SWOT matrix list below.

$$R1 = \begin{bmatrix} 0.6 & 0.4 & 0.0 \\ 0.0 & 0.4 & 0.6 \\ 0.6 & 0.4 & 0.0 \\ 0.0 & 1.0 & 0.0 \\ 0.0 & 0.4 & 0.6 \\ 0.0 & 0.4 & 0.6 \end{bmatrix}$$

Table 2: Agricultural Logistics SWOT Matrix of Anhui Province, China

Strength	Convenient transportation
	Natural local advantage with amble agriculture production
	Booming information tech
	Rising of established or coming logistics center
	Massive and ample products covering a large area
Weakness	Undeveloped agricultural logistics infrastructure equipment
	Lack of experts
	Inefficient circulation of agricultural products logistics chain
	Higher logistics costs, and greater risk of agricultural products
	Poor awareness of market practitioners
Opportunity	Widespread knowledge of logistics
	Broad market space
	Government emphasis on agricultural logistics
	Desire to reduce the cost of farmers
	WTO brings great opportunities of logistics market
Threaten	WTO brings impact on the logistics industry in the Anhui province
	National small efforts to foster agriculture logistic
	Market inadequate demand for modern agricultural logistics
	Imperfect agricultural logistics regulations
	Lack of market macro-control

in Table 2 calculate the intensity of each factor Calculating the relative importance of the factors.

In this study chromatography analysis process (AHP) to determine the relative importance of each factor (Kurttila *et al*., 2000). The SWOT method four factors as various factors AHP and then use the AHP method to determine the importance of various factors, specific steps are as follows:

Step 1: Level structural analysis model, firstly get problem organized, hierarchical analysis of Anhui Agricultural Products Logistics constructed by the above analysis of external factors chromatographic analysis is present in Fig. 2

Step 2: Judgment matrix

The use of "pairwise comparison method" to build layers of comparison matrix. To answer the question repeated, two factors i, j which affect a particular entry

Table 3: Scale of compared relationship between factors

Comparison result	Scale value
I and j are equally important	1
I more important than j	3
I obviously more important than j	5
I very important than j	7
I extremely important than j	9
Between the above statements	2, 4, 6, 8

Table 4: Judgment Matrix of Opportunity

Opportunity factor	O1	O2	O3	O4	O5
O1	1	1/5	1	1/7	1/7
O2	5	1	5	1/3	1/4
O3	1	1/5	1	1/7	1/7
O4	7	3	7	1	3
O5	7	4	7	1/3	1

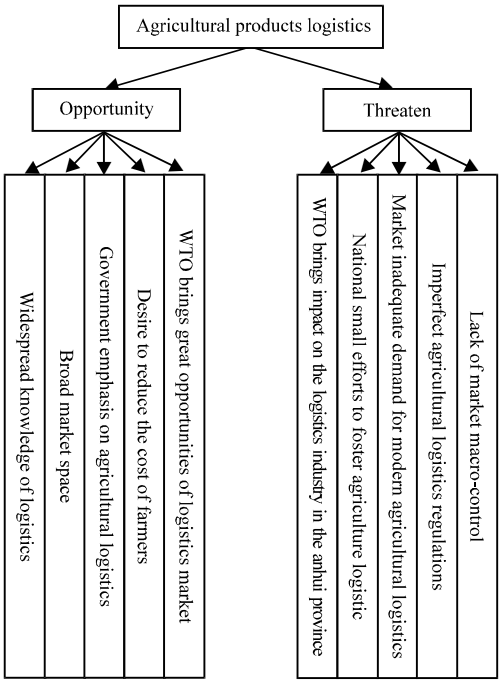

Fig. 2: External factors analysis

level criteria for large, much bigger and using the ratio of 1-9 to its assignment. 1-9 grade scale is defined as shown in Table 3.

According to the scale table, we can construct judgment matrix Table 4 and 5:

$$T = \begin{bmatrix} C_{11}C_{12}\cdots C_{1n} \\ C_{21}C_{22}\cdots C_{2n} \\ \cdots\cdots\cdots \\ C_{n1}C_{n2}\cdots C_{nn} \end{bmatrix}$$

Factors i and j comparison was Cij, the factors j and i compare obtained $C_{ji} = 1/C_{ij}$.

Table 5: Judgment matrix of threaten

Threat factor	T1	T2	T3	T4	T5
T1	1	5	6	5	5
T2	1/5	1	1/3	1	1/2
T3	1/6	3	1	3	1/3
T4	1/5	1	1/3	1	1/2
T5	1/5	2	3	2	1

Structure factor of Agricultural Logistics opportunity structure matrix in the following Table 4.

Step 3: Calculate the next single factor index weight (based judgment matrix A):

- The elements of the matrix by columns normalized calculation:

$$A_{ij}' = a_{ij} / \sum_{i=1}^{n} a_{ij} \quad (2)$$

In columns the elements normalized by the sum of the line is calculated:

$$A_i' = \sum_{j=1}^{n} A_{ij}' \quad (3)$$

Lines and vectors obtained normalized, that was the weight:

$$W_i = A_i' / \sum_{i=1}^{n} A_i' \quad (4)$$

W = (W1, W2, W3,... Wn) T is the vector of the weight required.

The above example is calculated chance factor weights W according to the equation:

W = (0.045, 0.164, 0.045, 0.439, 0.307) T

Threats weights:

W= T (0.529, 0.076, 0.147, 0.076, 0.173)

Step 4: Consistency test, step consistency test is as follows:

- To calculate the maximum eigenvalue:

$$\lambda_{max} = 3\,(AW)_i / nW_I \quad (5)$$

- Consistency index calculated:

$$CI = \frac{\lambda_{max} - n}{n-1} \quad (6)$$

When the judgment matrix has complete consistency, CI = 0, for different orders judgment matrix, the CI values are different. Generally, the larger the order n, CI value is larger. In order to measure whether a different order of judgment matrix has satisfactory consistency, the introduction of random consistency index judgment matrix correction value RI. 1-9 order for judgment matrix, RI values are as follows in Table 6.

So the consistency of judgment matrix of random proportion of CR:

$$CR = CI/RI$$

When CR = CI/RI≥0.10, you can consider the judgment matrix has satisfactory consistency, or need to adjust the judgment matrix until it has satisfactory consistency so far.

By Eq. 5-6 obtained the opportunity:

$$\lambda_{max} = 5.324\ CI = 0.081\ CR = CI/Ri = 0.072<0.1$$

to calculate the factor judgment matrix has satisfactory consistency.

Threats of judgment matrix has satisfactory consistency.

Thus the vector can be based on the weight W = (W1, W2, W3,... Wn) T to obtain the relative importance of the factors.

AHP method has now been used to determine the relative importance of each factor SWOT matrix. To calculate the intensity factors also need to be on the strength of each factor score, the intensity is divided into nine, were taken-4,-3,-2,-1, 0, 1, 2, 3, 4, where the opportunities and advantages of using positive value means, threats and weaknesses with a negative value, the greater the absolute value of the intensity. Table specific scores of each factor using expert scoring method (Ghorbani et al., 2011), evaluation forms.We decided to calculate the strength of the factors discussed in the score as Table 7 and 8 after repeated study.

On the basis of the strength and the relative importance, the key factors of strategic score on the strength of each factor can be calculated. Advantage of the intensity of each Si, weaknesses efforts Wj, opportunity intensity Ok, threaten efforts Tl, is calculated as:

$$S_i = I_iP_i,\ i=1, \ldots, ns \quad (7)$$

$$W_i = I_jP_j,\ j=1, \ldots, nw \quad (8)$$

$$O_k = I_kP_k,\ k = 1, \ldots, no \quad (9)$$

Table 6: RI values

n	1	2	3	4	5	6	7	8	9
RI	0.00	0.00	0.58	0.90	1.12	1.24	1.32	1.41	1.45

Table 7: Weight value of opportunity andthreats

Factor	O1	O2	O3	O4	O5	T1	T2	T3	T4	T5
Strength	2.25	3.50	1.75	3.00	3.75	-3.00	-2.25	-3.25	-2.00	-2.50

Table 8: Weight value of strengthand weakness

Factor	S1	S2	S3	S4	W1	W2	W3	W4	W5
Strength	3.25	2.25	2.25	3.25	-2.25	-3.75	-2.25	-2.50	-2.50

$$T_l = I_lP_l,\ l = 1, nt \quad (10)$$

I, P represent estimates of the strength of the factors and the relative importance of the score

The total impact of the advantages of Anhui Agricultural Products Logistics analysis is the combined result of the decision by a number of factors, the same overall weaknesses, opportunities and overall total is also threatened by the combined result of the decision. Therefore, the total advantages and disadvantages of total total total opportunities and threats respectively, by the following equation:

$$S = 3S_i,\ i = 1, \ldots, ns \quad (11)$$

$$W = 3W_i,\ j = 1, \ldots, nw \quad (12)$$

$$O = 3O_k,\ k = 1, \ldots, no \quad (13)$$

$$T = 3T_l,\ l = 1, \ldots, nt \quad (14)$$

Finally, the experts rated value and feature weights to determine the weighted average of the strengths, weaknesses, opportunities and threats scores as follows.

Advantage in total intensity S, total disadvantage intensity W, the total opportunity intensity O, the total intensity of the threat of T four variables each axle, constitute four half-dimensional coordinate system. Corresponding, respectively, to calculate the value of the variable in the coordinate system of tracing point S axle according to the equation, W', O'T', followed by a four-point even get strategic quadrilateral S'W'O'T' (Fig. 3). This strategy is to represent the strategic position of the quadrilateral Anhui Agricultural Logistics.

In Strategic quadrilateral S'W'O'T ', Center of gravity:

$$P(X, Y) = (3X_i/4, 3Y_j/4) = ((1.531\text{-}1.56)/4, (1.609\text{-}1.406)/4) = (-0.007, 0.051).$$

In the second quadrant of Center of gravity, Strategic type azimuthθ

Table 9: Value of each factor

First quadrant	Second quadrant	Third quadrant		Fourth quadrant			
Pioneering strategic area		Striving strategic area		Conservative strategic area		Fighting strategic area	
Type	Azimuth domain	Type	Azimuth domain	Type	Azimuth domain	Type	Azimuth domain
Strength	(0, π/4)	Strive	(π/2, π3/4)	Retreat	(π, π5/4)	Adjust	(π3/2, π7/4)
Opportunity	(π/4, π/2)	Adjust	(π3/4, π)	Evade	(π5/4, π3/2)	Strive	(π7/4, 2π)

Table 10: Corresponding Relation between θ and strategic type

SWOT	CR	Factors	Score	Factors strength	Factors weighted points	Total
Strength	0.035	S1	3.25	0.159	0.517	1.531
		S2	2.25	0.026	0.059	
		S3	2.25	0.068	0.153	
		S4	3.25	0.088	0.286	
		S5	3.25	0.159	0.517	
Weakness	0.013	W1	-2.25	0.066	-0.148	-1.560
		W2	-3.75	0.274	-1.027	
		W3	-2.25	0.066	-0.148	
		W4	-2.50	0.066	-0.165	
		W5	-2.50	0.028	-0.070	
Opportunity	0.027	O1	2.25	0.022	0.049	1.609
		O2	3.50	0.082	0.287	
		O3	1.75	0.022	0.039	
		O4	3.00	0.220	0.660	
		O5	3.75	0.153	0.574	
Threaten	0.098	T1	-3.00	0.264	-0.792	-1.406
		T2	-2.25	0.038	-0.086	
		T3	-3.25	0.073	-0.237	
		T4	-2.00	0.038	-0.076	
		T5	-2.50	0.086	-0.215	

$$\tan\theta = Y/X,\ 0<\theta<2\pi$$

$$\tan\theta = Y/X = 0.051/(0.007) = -7$$

$$\text{So, } \theta = \arctan(-7) = -1.4289$$

$\Theta = 11/20\ \pi$, 或 $\theta = 31/20\ \pi$, because Center of gravity in the second quadrant:

- So $\theta = 31/20\ \pi$ do not match
- So $\frac{1}{2}\pi < \theta < 3/4$ v

Strategic strength coefficient:

$$\rho = U/(U+V) = O*S/(O*S+T*W) = 1.609*1.531/1.609*1.531+, -1.560*, -1.406 = 0.529>0.5$$

In summary, the SWOT analysis model to identify strategic azimuth θ corporate strategy types to determine the strategic factor ρ strategic strength (Table 10). Type in strategic and strategic intensity spectrum coordinate system,

Coordinates (ρ, θ) = (0.529, 11/20).

Azimuth θ mold to form a strategic vector of ρ. As shown, can be identified through the strategic vectors and strategies to determine the type and intensity of corporate strategy and then select corporate strategy.

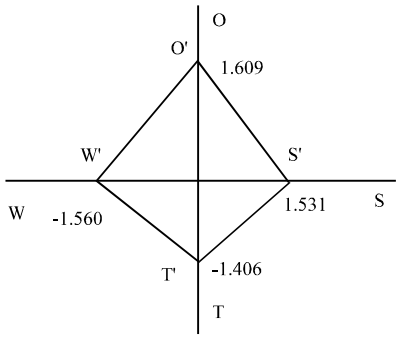

Fig. 3: Strategic quadrilateral

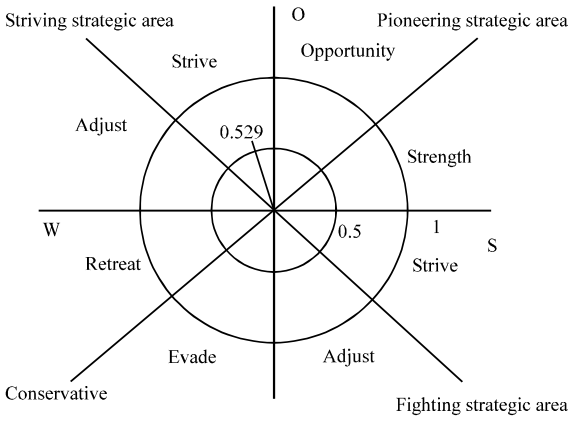

Fig. 4: Types of strategy and strategic strength spectrum coordinate system

So strategic positioning in the second quadrant and in the area, located in a strategic area of fighting type should take aggressive strategy, mainly in WO portfolio based. Meanwhile according to the strategic strength coefficient ρ = 0.529, should take an active fight-type strategy Fig. 4.

RECOMMENDATION OF ANHUI AGRICULTURAL PRODUCTS LOGISTICS DEVELOPMENT STRATEGY

Based on the above qualitative and quantitative analysis shows that the development opportunity of Agricultural Logistics large but there are some internal weaknesses, an analysis of the numerical results show that Anhui Agricultural Products Logistics should take an

aggressive strategy to fight Strategic area. The main implementation strategies WO internal weaknesses and external opportunities and combining full advantage of external opportunities and overcome internal weaknesses. And because of the strategic strength coefficient $\rho > 0.5$, the strategy adopted by the intensity slightly larger, it should adopt a positive and aggressive strategy.

The main strategy is as follows:

- Government-funded infrastructure and logistics to improve Anhui Agricultural equipment level (W1, O3, O4)
- Reduce the logistics chain, improve circulation efficiency (W3, O5, O4)
- Multi-offer some logistics training, logistics practitioners to enhance decision-making capacity and market awareness (W2, W5, O1, O2, O3, O4)
- To attract foreign capital, the construction of logistics centers, expanding agricultural logistics market (O2, O5)
- To encourage major universities offering logistics professionals, reserve logistics personnel (O1, O3, W2)

CONCLUSION

SWOT analysis has been a widely used tool for evaluating the Strengths, Weaknesses, Opportunities and Threats involved in business endeavour. Even though it is a well-structured and generally accepted way of evaluating business situations, as is the case in any tools of this kind, the quality and usefulness of its outcome depends upon the data and analysis go into defining its structure.Traditional SWOT analysis method employs arbitrary ranking of factors and assumes independence (ignores the potential interdependencies) of factors to each other. In order to overcome the above mentioned shortcomings of the traditional SWOT analysis, we established a quantitative SWOT analysis model based on traditional qualitative analysis. This allows us to analyze some of the companies in strategic decision-making more scientific, more maneuverability, more comparable data. This article focuses on the models used in the analysis of Anhui Agricultural Logistics. Of course, the model and its application is still there are many shortcomings, the study when using the analytic hierarchy process also ignored some of its complex steps, simplifying its use. This study argues that the two parameters in both parameters compared with each other factors if the result is 1, then they are completely equivalent and compare them with the values ??of other parameters are identical. The conclusion that decisions not implemented, as one step is not very scientific, so the results may be biased, as decision-making reference. In this study, a large number of formulas are calculated by simulation software but need to be improved, so that it can be considered intelligent.

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