

Evaluation of Sustainable Development Ability for Logistics Enterprises Based on Unascertained Measure

Yan Huizhe^a, Ma Lihua^a, Shi Fangfang^a*
*Corresponding author. E-mail: yanhuizhe@163.com

^a*School of Economics and Management, Hebei University of Engineering, Guangming South Street 199, Handan, 056038, CHINA*

Abstract

Objective and accurate evaluating the sustainable development ability of logistics enterprises is not only an important method for measuring but also the basis to construct the sustainable development ability. The study of logistics enterprises in this paper aims to improve their sustainable development ability in china. Firstly, analyze sustainable development ability of logistics enterprises and have a systematic study on the characteristics of the system based on the theory of core competence of the enterprises and sustainable development theory. Secondly, construct the evaluation index system of the sustainable development ability on the basis of the characteristics of logistics enterprises. Then carry out an evaluation based on unascertained measure model. Finally, a case study is analyzed.

© 2011 Published by Elsevier Ltd. Selection and/or peer-review under responsibility of [CEIS 2011]

Key words: logistics enterprises; sustainable development ability; unascertained measure

1 Introduction

The modern logistics, as an important part of the modern economy, plays a more and more important role in national economy and social development in the rapid development of science and technology and increasingly global economics^[1]. The development of modern logistics is of great importance to improving the quality and efficiency of national economy, optimizing resource allocation, improving the investment environment, promoting industrial restructuring and improving the economic strength^[2]. According to enterprise life cycle theory, as enterprises have their life cycle in the fierce market competition, their sustainable development abilities are needed to be studied^[3-4]. Research on the sustainable development ability of logistics enterprises can help the logistics enterprises to understand their own strengths, weaknesses and problems fully and clearly, to promote the innovation of organizational structure, management system and development model in the process

* Yan Huizhe. Tel.: 086-0310-8576391; fax: 086-0310-8579567.

E-mail: yanhuizhe@163.com.

of refining and improving core competencies, and to consolidate and maintain a competitive edge to achieve the sustainable development of the logistics enterprises in the market competition.

2 The elements of sustainable development ability of logistics enterprises

The sustainable development ability of enterprises is a dynamic knowledge system of value creation for society, enterprises themselves and other stakeholders in economic activities [5]. Through the comprehensive analysis and summary of structure model supporting the sustainable development of logistics enterprise, the basic elements of evaluation for sustainable development ability can be drawn out according to principles and basic methods of design steps for evaluation index system. These basic elements include the ability resource, capacity state, and the environment of capacity, shown in Table1.

Table1 the elements of sustainable development ability of logistics enterprises

■ Target ^o ■ Logistics enterprises sustainable development ability ^o	Basic elements ^o	Evaluation elements ^o
	Resources guarantee system ^o	Human resources ^o
		Cultural resources ^o
		System resources ^o
	Sustainable development ability state ^o	Asset scale ^o
		Financial situation ^o
		Operation resources ^o
		Creative ability ^o
		Profit ability ^o
		Management ability ^o
		Scale ability ^o
		Marketing ability ^o
		Growth ability ^o
	Environment matching degree ^o	Macroscopic management environment ^o
		Industry development environment ^o
Market competition environment ^o		
Environmentally friendly degree ^o		

3 The indexes system of sustainable development ability logistics enterprises

3.1 The design principle of evaluating indicator system

The design of indexes system for logistics enterprises’ sustainable development ability must adapt to the organizational structure, and meet the characteristics of physical distribution activity. Therefore, the logistics enterprises’ sustainable development ability must follow the following principle.

(1) Integrity principle. Not only enterprises’ own personnel resources but also information, service level, the operation performance and the external environment influence the logistics enterprises’ sustainable development ability.

(2) Operability principle. The target design not only should pay attention to the difficulty level of index collection, simultaneously should pay attention to the clarity of indexes.

(3) Layered principle. The established evaluating indicator system should have the hierarchy. The causal relationship between the indexes and their inclusion relationship and contained relationship should all be taken into account.

(4) Qualitative indexes and quantitative indexes. To make the evaluation results even more objective, we must follow the principle of combining the qualitative indexes with quantitative indexes when setting up the indexes system.

3.2 The evaluation index system of sustainable development ability of logistics enterprises

The evaluation index system of sustainable development ability according to the above principle is established, shown in Table 2.

4 The unascertained measure model

Given that $U = \{x_1, x_2, \dots, x_n\}$ is the space of evaluation object, $I = \{I_1, I_2, \dots, I_m\}$ Attribute space of U, x_{ij} the measured value of index j for object x_i . Suppose evaluation Space $C = \{C_1, C_2, \dots, C_K\}$, in

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات