

Accepted Manuscript

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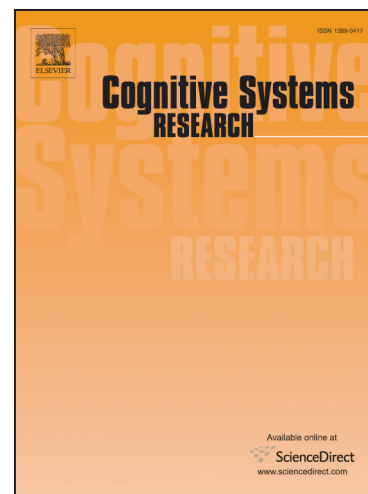
PII: S1389-0417(18)30210-9
DOI: <https://doi.org/10.1016/j.cogsys.2018.06.016>
Reference: COGSYS 646

To appear in: *Cognitive Systems Research*

Received Date: 27 May 2018
Revised Date: 24 June 2018
Accepted Date: 28 June 2018

Please cite this article as: Yuan-Qiang, L., T-S Fuzzy Prediction on Competitive Structure Model and Evaluation System of Emerging Industry Innovation Alliance, *Cognitive Systems Research* (2018), doi: <https://doi.org/10.1016/j.cogsys.2018.06.016>

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T-S Fuzzy Prediction on Competitive Structure Model and Evaluation System of Emerging Industry Innovation Alliance

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Abstract. In order to improve the effectiveness of research on the evaluation system of emerging industry, a competitive analysis model of industry innovation alliance based on the simultaneous evaluation of fractional T-S fuzzy system is proposed. Firstly, considering the relevant requirements of industry transformation and upgrading, establish a structural evaluation model for the competitiveness of emerging industry innovation alliance; secondly, give the T-S fuzzy prediction and prove the asymptotic stability theorem of prediction system, and on this basis, prove the asymptotic stability of the fractional T-S fuzzy error system, and give the selection method of the gain matrix, to achieve effectiveness of the structural evaluation model for the competitiveness of the industry innovation alliance; finally, the effectiveness of the proposed algorithm is verified by empirical analysis.

Keywords: Emerging industry, Innovation alliance, Competitiveness, Evaluation system

1 Introduction

In recent years, the overall scale, profitability, labor productivity and others of the domestic engineering industry have steadily grown, and the rate of technical equipment has also been greatly improved, economic benefit is in the front rank in China and the status of the industry has been continuously improved [1]. From the perspective of competitiveness analysis, the domestic engineering construction market is still dominated by the domestic market, the international market share is very low, and it is mainly concentrated in developing countries and regions [2]. There are few businesses in developed countries and regions, and the degree of internationalization is very low [3-5]; the general labor productivity of engineering construction enterprises is very low, and the rate of technology equipment and power equipment is low; the contracting method of projects is relatively backward, compared with foreign advanced engineering enterprises, the advantages of domestic engineering enterprises are mainly in labor costs, prices, etc. otherwise, many aspects are at a disadvantage, such as management, technology, finance, equipment, etc., with a weak ability to enter the engineering markets of developed

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