Understanding the Selection of Intelligent Engineering B2B Platform in China through the Fuzzy DANP and TOPSIS Techniques: A Multi-Study Analysis

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二.成果简介：

This study aims to investigate the factors affecting intelligent engineering B2B platforms and develop an indicator system based on the theory of resource complementarity. We used the Fuzzy Decision-Making Trial and Evaluation Laboratory and Analytic Network Process (fuzzy DANP) method to determine the weights of the dimensions and indicators. The Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method ranks the well-known intelligent engineering B2B platforms in China. The results show that platform transaction volume, relationship stability and durability, and degree of dependence are key elements affecting the platforms.

三. 主要研究内容及创新点：

We use centrality as the horizontal axis, cause as the vertical axis, and centrality and cause as the coordinates to draw the evaluation indicator relationship diagram to more intuitively establish each indicator's impact and effect relationship, as shown in Figure 1. This study used the fuzzy DANP method to determine the weights of the dimensions and indicators. The ranking of dimensional importance is CP (0.3216) > RQ (0.3128) > CR (0.2049) > PF (0.1607). We define a similar correlation degree indicator based on the idea of gray correlation degree and the principle of deviation analysis in numerical analysis. The validity test of the indicator system is completed by discriminating the similarity degree between the experts' ratings of the indicators

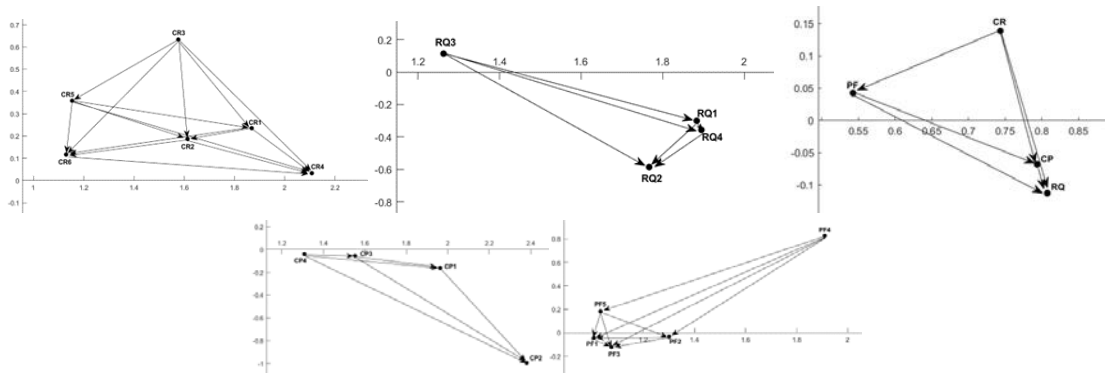


Fig. 1. INRM of the evaluation dimensions and indicators of the intelligent engineering B2B platform

四. 主要研究成果及应用情况

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