



Applying Kansei engineering to industrial machinery trade show booth design

Ming-Shyan Huang^{a,*}, Hung-Cheng Tsai^a, Tzu-Hua Huang^a

^a Department of Mechanical and Automation Engineering and Graduate Institute of Industrial Design, National Kaohsiung First University of Science and Technology, 2 Jhuoyue Road, Nanzih, Kaohsiung City 811, Taiwan, ROC

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ABSTRACT

Trade shows are considered an important marketing channel for companies since they provide manufacturers and purchasers with a vital commercial platform. Traditionally, plastics and rubber industry trade shows have been ineffective due to poor booth planning. Nevertheless, few studies have examined trade show booth design and planning. Actually, most companies lack distinct goals, and their decisions regarding trade show participation may influence decisions regarding which products should be demonstrated, size of trade booth, and level of advertising. Such a decision-making is a problem involving multi-criteria decisions, and requires a logical and objective operating procedure. This work thus devises an objective procedure for trade show. This investigation focuses on booth design for plastics and rubber industry trade shows and comprises three parts: (1) selecting appropriate assessment criteria for trade show design using the Delphi method and Kansei engineering. (2) Establishing suitable booth design principles and procedures for plastics and rubber industry trade show using fuzzy product positioning. (3) Further employing the proposed method to design trade show booths and verify their performance. The results demonstrate the feasibility of the proposed method.

Relevance to industry: This study was conducted to support machinery vendors as a systematic design flow chart and related criteria to provide an objective approach to trade show booth planning.

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1. Introduction

Trade shows provide vendors and purchasers with a vital platform for commerce. Industrial machinery manufacturers consider trade shows important for promoting global marketing since they focus on marketing to specific customers. However, traditional machinery industry trade shows have been ineffective because of poor booth planning. Little research exists on trade show planning and design. Tanner and Chonko (1995) believed that trade shows provide customers with numerous crucial opportunities for contact and can enable business to be conducted faster. Tanner (2002) reported that trade shows basically provide resource of purchasing and channels for products to achieve market entry. Nevertheless, vendors have strong incentives to participate in trade shows. For example, numerous companies base their decisions of trade show participation on similar decisions made by their competitors. Gopalakrishna et al. (1995) observed that few companies have digitally analyzed their goals and methods with regard to trade show participation. Actually, most companies lack distinct goals, and their decisions regarding trade show

participation depend on policy maker opinions. This situation influences decisions regarding which products should be demonstrated, size of trade booth, and level of advertising. Such a 'black box' decision is not suitable for application to trade show booth design which is a problem involving multi-criteria decisions, and requires a logical and objective operating procedure.

While examining plastics and rubber industry trade shows, this work presents a multiple criteria decision-making method for trade show design. The proposed method includes three parts: (1) choosing appropriate assessment criteria for trade show design using the Delphi method and Kansei engineering, (2) establishing appropriate principles and procedures for booth design for plastics and rubber industry trade shows using fuzzy product positioning, (3) providing an improved trade booth design to realize the goals of trade show participation.

2. Methodology

This investigation comprises three parts: (1) data collection and analysis – including gathering criteria for judging trade show design, listing the weightings of the objectives of trade show participation, selecting samples of good design from trade show booths, and creating image–word datum for trade show description. (2) Product positioning – including designing a decision-making

* Corresponding author at: Tel.: +886 7 6011000x2219; fax: +886 7 6011318.
E-mail address: mshuang@nkfust.edu.tw (M.-S. Huang).