

Identification of Indian Handloom Industry Customer's Requirements by Using an Integrated AHP and QFD Approach

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Abstract

The handloom industry in India has been facing a decline in attracting consumers. This study aims to identify and prioritize Customer Requirements (CRs) and propose solutions to meet these requirements in order to address this problem and attract customers. The study combines the Quality Function Deployment (QFD) method and the Analytical Hierarchy Process (AHP) approach. AHP is used to prioritize Customer requirements, and Quality Function Deployment is used to establish the relationship between Customer requirements and Technical Requirements (TR). In addition, Quality Function Deployment is also used to rank the TRs. The study finds that customers are concerned about the genuineness of the handloom product, price, fabric, colour, and comfort. The study suggests that to develop the business and fulfil these customer requirements, weavers must provide product certifications by using handloom marks, geographical indication tags, and silk marks. Additionally, weavers should adopt online marketing and sales strategies to reduce the price of their products by eliminating intermediaries. Weavers should also need to consider the location of their stores to ensure proximity to the customers. The handloom industry can improve its business and satisfy customer requirements by following these suggestions.

Keywords

Customer requirements, Indian handloom industry, Quality function deployment, Analytical Hierarchy Process, Handloom weavers.

Biographies

Prabhas Bhardwaj is a full professor in the Mechanical Engineering Department, Indian Institute of Technology (BHU), VARANASI, UP, India. His research area includes Operations and Supply Chain Management, Production System Design, Cellular Manufacturing, etc. He has published many international, national, research and conference papers. Over the 27 years of experience, he had dedication to student mentorship of for B. Tech (more than 40 groups), IDD & M. Tech. (more than 50) and Ph D projects and thesis work including recent innovative research in the area of Handloom. He attended IEOM conferences twice and presented three conference papers. His recent research includes

MSD study of Professionals working in a leading telecom company and Varanasi handloom weavers. An ergonomic seat for a handloom weaver was designed under his supervision. He has also worked on the authenticity of handloom products by implementing a novel approach of weaving codes.

MKP Naik is an Assistant Professor in the Operations and Supply Chain Management department at the New Delhi Institute of Management (NDIM). He completed his B.Tech from NITK Surathkal and earned his M.Tech and Ph.D. from IIT (BHU) Varanasi. His research interests include supply chain management, sustainable logistics, facility location planning, green and circular supply chains, and technology integration in operations. He is particularly focused on applying supply chain concepts to real-world challenges in sustainability, MSMEs, and rural development.