



Minnesota Textile and Apparel Industry: Assessing Current Customization Characteristics and Needs

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ABSTRACT

The purpose of this study was to profile the current computer technologies, manufacturing strategies, and business practices occurring in the Minnesota textile and apparel industry. Currently, the industry is undergoing a shift from mass production of standardized products to mass customization of individualized products. Advances in computer technology and management methods allow customized products to be produced at a low cost, increasing consumer demand for individualized products and services. The survey was sent to 400 Minnesota textile and apparel manufacturers selected randomly from those identified by the Standard Industrial Classification (SIC) code to document the level of mass customization based on 1) product development 2) computer technology, 3) business strategy, 4) manufacturing strategy, and 5) business environment. Results indicated that Minnesota textile and apparel industry showed great diversity in company size and product type. There was a wealth of expertise in customized products, so the potential for the development of mass customization is strong. Use of computer technology was low, so considering the increased and strategic use of computer technology, and the development or expanded use of a website to build potential markets would strengthen the industry.

Keywords: Apparel and textile industry, customization, computer technology, product development, Minnesota

Introduction

The textile and apparel industry is changing from a product-driven system to a consumer-driven system (Taplin, 1999). Changing consumer demands and the development of new computer technology support a move towards the concept of mass customization. To be successful, mass customization requires that the consumer be involved with the specifications of the product design at some point in the production cycle. In order to respond to consumer needs, manufacturers must take

advantage of current computer technology and utilize modular design concepts to gain efficiencies (Duray, Ward, Milligan & Berry, 2000). This shift requires new perspectives in manufacturing and retailing.

Minnesota has over 700 textile and apparel manufacturers, the second highest number in the North Central region, who contribute over \$44 million to the state's export economy (Minnesota Department of Trade and Economic Development, 2001). Over half the jobs in Minnesota are located in rural areas, where there is an increasing