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Mass Customization of Activewear: Gender and Regional Differences

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Abstract
The purpose of this research was to examine how gender and regional differences between consumers influence their preferences for customizing their activewear and willingness to use body scanning and co-design.

Keywords
activewear, body scanning, co-design

Disciplines
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Comments
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With their growing interest in health and well-being, today’s consumers are engaged in exercise and outdoor activities more than ever before. The activewear industry is one of the fastest-growing apparel markets in the U.S, producing total sales of $38.8 billion in 2004, up five percent compared to 2003. The growth of the activewear market is also attributed to a growing female consumer market in yoga and Pilates (Kletter, 2006). While consumers traditionally consider functionality as the most important purchasing criterion of this particular product type, activewear is becoming more fashion forward as consumers demand a variety of colors, fabrics, and style. The activewear industry can benefit from mass customization by allowing individual consumers to modify a company’s product line to meet their design tastes and fit. As a result, retailers have an opportunity to increase satisfaction in both functional and design performances of the products. The purpose of this research was to examine how gender and regional differences between consumers influence their preferences for customizing their activewear and willingness to use body scanning and co-design.

In this study, activewear was defined as any of a wide variety of fashion items designed to be worn for active sports. The types of activewear products included for this study were swimwear, water sportswear, ski wear, bike wear, exercise wear, and athletic shoes. Five hundred and twenty-one students from five public university campuses representing different regions (East coast [Delaware], West coast [California], North Central [Iowa], and Southwest [Texas] and Southeast [Alabama]) of the U.S. participated in this study in exchange for extra credit points towards their course grades. The average age was 21 for the 423 female and 91 male subjects. The majority of the subjects have a European American ethnic background (71%). Statistical analyses used for this study included descriptive statistics, t-tests, Within-subject analysis of variance (ANOVA), and Bonferroni multiple comparisons of means.

There were statistically significant gender differences on the interest level of customizing six activewear product categories (p<.05). Female subjects were more interested in customizing swimwear and exercise wear compared to male subjects. No significant gender differences were identified in other product categories including water-sportswear, ski wear, bike wear and athletic shoes. Female subjects were most interested in customizing swimwear, followed by athletic shoes and exercise wear. Female subjects were least interested in customizing bike wear. Male subjects were interested in customizing athletic shoes only and disinterested in customizing other product categories.

There were statistically significant regional differences on the interest level of customizing six activewear product categories (p<.05). Overall, subjects in Texas had the highest level of interest in customizing all categories of activewear and subjects in Iowa had the lowest overall interest in customization across all product categories. Subjects in all regions had low interest in customizing bike wear.

Crobanch’s alpha determined that internal consistency existed in the willingness for body scanning scale (seven items, \( \alpha = 0.93 \)) and the willingness to use co-design (seven items, \( \alpha = 0.94 \)). Gender and regional differences between subjects significantly influenced willingness to use body scanning and co-design (p<.05). Gender differences existed in that female subjects were more willing to use the co-design process and body
scanning than male subjects. For regional differences, subjects in Texas had the highest willingness to undergo both body scanning and co-design, while subjects in Iowa had the lowest willingness in body scanning and co-design.

The findings of this study suggested that gender and region are important consumer factors to determine success of mass customization in the activewear industry. All activewear product categories might not be appropriate for mass customization in the college student market. Targeting female college student customers, swimwear, athletic shoes, and exercise wear might be the products of mass customization that are most likely to be successful. Targeting male college students, athletic shoes might be the only activewear product category that is likely to be successful. The results of regional differences indicated that mass customization of activewear might be more successful in some regions (such as Texas) than others (such as Iowa). An analysis of potential regions should be carried out before mass customization is implemented.