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# Sustainability in Straightening and Cutting of the Digital Printed Designs on Fabrics for Some Traditional Clothes in the Kingdom Saudi Arabia in Ready-Made Garments Factories

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## *Abstract:*

**Objective**: The study aimed to determine the methods of straightening and cutting of digital printed fabrics in ready-made garment factories and achieving sustainability through straightening and cutting of digital printed fabrics to produce traditional clothing for the traditional Asiri Thobe in the southern region of Saudi Arabia. **Methodology**: The study followed the descriptive analytical approach to achieve the objectives of the study, and the quasi-experimental approach to achieve the hypotheses of the study, in addition to the applied study through straightening and cutting of digital printed fabrics of the traditional Asiri dress. The study sample consisted of (21) specialists' members from universities faculty members, and (10) factories represented by producers in ready-made garment factories. The study tools consisted of evaluating scale to measure the opinions of specialists and producers in evaluating the cutting of the designs in a sustainable way. **Results:** The result of the study showed that the production stage in garment manufacturing includes the most important processes, including fabric straightening, cutting, assembly, and knitting, and that the process of fabric straightening is the preparation process for cutting process in ready-made garment factories. Also, the study clarified methods of sustainability and reducing the percentage of fabrics wastage, and different ways of preparing the marker to achieve high marker efficiency, including fabric cutting, fabric width, and fabric amount. The study also found suggested procedures for straightening and cutting the layers of digital printed fabrics for the Al-Asiri velvet dress without wasting large amount of the fabric used, while taking advantage of the proposed method in the quantitative production of traditional clothes. The proposed method consists of six stages, starting with printing the designed marker, designing the pins, insert fabric layers on pins, cover the pin for the safety and security, cutting the fabric layers, and making sure that the cut samples are matching for the two marker layers that included (72) pieces, each marker layer included (36) pieces, and for each size (12) pieces. In addition, As it was clear from the results that the first hypothesis was achieved, it clears that there were differences statistically between the opinions of specialists in the matching of the cut samples and the traditional printed trappings, but the differences are not significant and that all the differences are greater than 50%, and all the cut pieces were accepted by specialists, which includes front and back of the Badanah, sleeve, and collar, Al-Takhrasah. As well as the results of the second hypothesis was achieved, it clears that there were differences statistically between the opinions of producers in the matching of the cut samples and the traditional printed trappings, but the differences are not significant and that all the differences were greater than 50%, and all the cut pieces were accepted by specialists, which includes front and back of the Badanah, Sleeve, Collar, and Al-Takhrasah. It also became clear that there were statistically differences between the opinions of specialists and producers, but the differences were not significant, as the average value of the specialists' opinions reached (96.5710) and the standard deviation (1.13014), while the average of producers' opinions reached (90.5470) and the standard deviation (4.43904). This indicates that the matching of the cut samples and the traditional printed trapping designs has obtained a positive result from specialists from the faculty members, as well as the producers in the ready-made garment factories. This confirms the success of achieving sustainability through the proposed method for straightening and cutting of digital printed fabrics in producing traditional clothing for the Al-Asiri velvet dress in the southern region of the kingdom of Saudi Arabia. The study recommended reviving the Saudi heritage represented in traditional women's clothing for all regions of the Kingdom of Saudi Arabia, by implementing modern technical methods, and supporting and developing methods of quantitative production of the digital printed traditional clothes. Also, following the proposed method of inserting pins in ready-made garment factories to achieve sustainability and reduce fabrics waste. Also, the study recommended the usage of technology in the production stages of traditional clothing in ready-made garment factories to achieve sustainability in all production stages, including straightening and cutting. In addition to encouraging the preservation of the traditional heritage that represented in traditional clothing and conducting more studies in the field of traditional clothing.

## *Keywords:*

Sustainability, Digital printing, Traditional clothing, Fabric straightening, Fabric cutting.

 

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