

Finding Design & Technical Solutions to Improve the Design Economics of Children's Clothing

Shaima Mustafa Ahmed Muhammad Shehata

Assistant Professor, Apparel Department, Faculty of Applied Arts, Helwan University
shaimaadesign@yahoo.com

Abstract:

The economics of clothing involves three processes: production, manufacturing of clothing, distribution (delivery of clothing from factories to consumers) and actual use of clothing. Although consumption drives production and distribution, the three processes cannot be separated from each other. There is also an inverse relationship between the cost of production and increased productivity. The higher the productivity, the lower the production cost for one product. The problem appears through the following questions: What is the possibility of developing design and technical alternatives for children's clothing? What is the possibility of reducing the cost of a clothing product with keeping its quality and appearance? The significance is contributing to developing design and technical solutions for children's clothing to reduce the cost of the product and highlighting the technologies used and their impact on the economics of clothing design. This research aims to find alternatives and proposed design and technical solutions for the apparel product with the aim of reducing the final cost of the product while maintaining its quality and appearance. The research followed the descriptive approach, using the analysis method in describing and analyzing the technical drawing of the proposed models, analyzing the operating steps and cost calculations. And the experimental approach, which is based on conducting experiments to prove hypotheses through attempts to reduce the cost of the proposed models. Two designs for children's sportswear models (training suits) were developed. The technical drawing of the models was reviewed and the stages of preparation and operation were clarified. Then calculations of the cost of operating the machines, threads, materials, accessories, preparation, packaging were reviewed. Five attempts were proposed to reduce the cost of the product. The attempts varied between design solutions, replacing materials and accessories, or technical solutions. Then a comparison was made of the proposed solutions for each model, and the results were presented and analyzed in terms of the best attempts in terms of the reduction percentage and the least successful attempts for each model separately. The study recommends developing ready-made alternative design and technical solutions with each technical file for the first sample of each product, which is presented to customers with the aim of reducing the total cost of the product if the customer desires, and increasing research that deals with the economics of design for ready-to-wear clothing products because of their significant impact on product pricing and thus on quantitative production. For clothing factories.

Keywords:

Design economics, Improving productivity, Cost, Technique, Children's clothing

References:

- 1- Ahmed, Shaimaa Muhammad (2020): Designing a system for using international quality systems to improve production performance in knitting factories, Journal of Architecture and Arts for the Humanities, Volume 5, Issue 20.
- 2- Ahmed, Shaimaa Mustafa (2014): Virtual reality as an innovative technology for sample development in the ready-made clothing industry, PhD thesis, Faculty of Applied Arts, Helwan University.
- 3- Gohar, Imad El-Din Sayed, Al-Zahrani, Maha Talib Salem (2022): The effect of production line design on the time taken to produce men's clothing, International Arab Journal of Digital Art and Design, Volume (1), Issue (3).
- 4- Gohar, Imad El-Din Sayed, Heikal, Hossam Hosni, Ghoneim, Ahmed Saeed (2010): Factors affecting the decline in productivity within ready-made garment factories, Journal of Science and Arts, Studies and Research, Volume (22), Issue (3).
- 5- Hamouda, Rania Muhammad, Hisham, Maymana Al-Abasiri, Al-Muhar, Walaa Zein Al-Abidin, Salim, Muhammad Salim (2020): Increasing the efficiency of interlocking men's cardigan jackets in ready-made garment factories, International Design Journal, Volume (10), Issue (1).
- 6- Khattab, Ahmed Hosni, Abdel Karim, Muhammad Al-Badri (2004): The effect of different widths of fabrics on the efficiency of interlocking and the total area of men's clothing, Journal of Arts and Sciences, Studies and Research, Volume (16), Issue (3).
- 7- Zaid, Naglaa Ibrahim, Gohar, Imad El-Din Sayed (2021): Design alternatives for women's abayas in light of the economics of clothing production, International Design Journal, Volume (11), Issue (3).
- 8- Amer, Magdy Mohamed Mohamed (2002): Design Economics as an Introduction to Planning Studies and Operations Management of Interior Design and Furniture Projects, PhD thesis, Helwan University.
- 9- Fouda, Mohamed Nabil, Gouda, Ayman Ali (2008): Economic determinants of design and their impact on the functions and aesthetics of the ceramic product, Science and Arts Journal, Helwan University.
- 10- Mohsen, Abeer Abdullah Hassanein (2021): Employing the flat pattern to implement the graduation project for female undergraduate students at the College of Home Economics, International Design Journal, Volume (11), Issue (2).
- 11- Nashat, Shaimaa Mohamed Abdel Latif (2020): The impact of implementing the Intellectual Property Protection Law on raising design awareness among fashion designers, Master's thesis, Department of Ready-to-Wear, Faculty of Applied Arts, Helwan University.
- 12- Hashem, Ashraf Mahmoud Ahmed, (2008): The effect of the needle of pivot knitting threads and some variables of the knitting process on the economics of ready-made garments, Journal of Specific Education Research, No. (12).

Paper History:

Paper received January 2, 2024, Accepted March 5, 2024, Published on line May 1, 2024