

A FRAMEWORK FOR APPAREL DESIGN INNOVATION IN  
THE TEXTILE AND CLOTHING INDUSTRY OF PAKISTAN

BY

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## ABSTRACT

Pakistan's Textile and Clothing sector relies on cotton-based products, of which a major share entails textile raw material. Researchers have identified the importance of design innovation for value-added apparel products in the textile and clothing sector to encounter future challenges. Albeit the eminence of new product development in shaping future lifestyles and environments is realized in other research, it is important to address the apparel design process and what apparel products to design. Therefore, an in-depth study of apparel design practice is needed to facilitate product design innovation within the industrial setup. Consequently, this study proposes a framework to enhance the innovation potential of apparel design in Pakistan's textile and clothing industry. The framework determined factors related to product design components that influence new product development. It developed an outline to strategize the apparel design process by observing the current design practices in an industrial setup. Qualitative research revealed novel approaches for developing new apparel products by investigating the design practices of apparel designers. The study adopted an exploratory investigation of the effectiveness of design practice through the phenomenological empirical approach. The published sources' content analysis was performed, leading to an industrial inventory. Subsequently, concurrent research methods of field observation and semi-structured interviews were conducted to develop an insight into the phenomenon. The results established that the existing design practices focus on product interface and appearance-related chores. Thematic analysis of interviews and graphical analysis of the design processes revealed that design components related to the product's identity, functionality, and execution are less focused during the identification and ideation phase, resulting in limited design possibilities. Identification of design briefs is market-driven and primarily based on lifestyle, culture, events, and seasons. The data analysis revealed that the propositions for innovation strategies in apparel design have four essential components: aesthetics, function, production, and product identity. The study also found that the priorities to engage product design components during the design process vary according to product typology for achieving innovation. The framework classified change factors for each stage of the design process to recommend innovative identification of design briefs, methods of ideation to focus on the multiple design components of the garment, and collaborative ventures with internal and external design environments for improved fabrication of the products. The proposed framework is validated through focus group discussions with experts. The study provides a framework for directing apparel design practice to enhance new apparel products over three stages of identification, ideation, and fabrication in the design development process. The study concludes significant factors influencing apparel design innovation. The proposed framework invites further investigation in apparel design innovation on the degree and nature of design collaborations, design networking systems, the discovery of alternate resources, exploration of new materials, skill development of young designers, and reforms in design education to augment innovation.

## ملخص البحث

إن قطاع الملابس والمنسوجات في باكستان يركز على كمية محدودة من المنتجات معظمها من القطن. وتشتمل الحصة الكبرى منها من المواد الخام للنسيج . نوه الباحثون على أهمية التصاميم المبتكرة الفريدة للملابس بحيث تكون ذات قيمة ورواج كبير في قطاع المنسوجات والملابس في مواجهة التحديات المستقبلية لهذا القطاع. على الرغم من أن تطوير المنتجات الجديدة من الملابس برز بشكل واضح في تشكيل البيئات المستقبلية في أبحاث أخرى كان من الأهمية بإمكانية معالجة طرق تصميم الملابس والمنسوجات وتصميمها، ولأجل ذلك هناك حاجة ماسة لدراسة متعمقة لطرق ووسائل تصميم الملابس بغية تسهيل ابتكار التصاميم الملائمة داخل الصناعة الحديثة وبالتالي تأتي هذه الدراسة في لتعزيز إمكانيات ابتكار التصاميم للملابس والمنسوجات الباكستانية في اطار حدود العمل المتعلقة بتصاميم المنتج التي تؤثر على إبراز وتطوير منتج جديد فريد اثناء التصميم. ويتضمن البحث تخطيطا مفصلا لاستراتيجية تصميم الملابس من خلال مراقبة التصاميم الحالية في المعامل الصناعية وأبان البحث عن مناهج جديدة لتطوير منتجات الملابس الجديدة من خلال المراقبة عن كثب في عمل المصممين. وتبنت الدراسة تحقيقا واسعا شاملا لكيفية وضع التصاميم من خلال المنهج التجريبي ومن ثم استخلاص تحليل المحتوى من المصادر المنشورة للمخازن الصناعية بعد ذلك، تم اتخاذ طرق بحث بالتزامن للملاحظة الميدانية والمقابلات شبه المنتظمة لإبداء نظرة ثاقبة قريبة لهذه الظاهرة. أثبتت النتائج أن التصاميم الحالية تركز على الأعمال المتعلقة بالمظهر الخارجي. أما المقابلات فقد كشفت التحاليل المستنبطة من خلال التحليل البياني أن التصاميم التي تتعلق بالمنتج أقل تركيزا خلا مرحلة تحديد الفكرة ما يؤدي إلى ظهور تصاميم محدودة متداولة. إن التصاميم الحالية تعتمد في خلفياتها وجمالها على ما يرغب فيه السوق وهذا يعتمد بشكل أساسي على نمط الحياة والثقافة وأيضا يعتمد على حسب الأحداث والمواسم والمناسبات. كشفت نتائج التحليل أن الابتكار في تصميم الملابس لها أربعة اركان أساسية: الزينة والوظيفة والإنتاج وهوية المنتج. ووجدت الدراسة أيضاً أن دمج الأركان للتصميم والواحد يختلف وفقا للمنتج وطرق الابتكار لهذا التصميم أن المستخلص في التصميم مبني على التقارير والمبيعات السابقة. وترتكز على واجهة الملابس التصاميم حسب المتعارف بين المصممين وبناء على ما يروونه مناسباً في العمل ومن النادر أن يكون الأمر متعاوناً فيه عدة أطراف لإنتاج تصميم واحد، حيث يعتبر ذلك إما خارج نطاق عملية التصميم أو المشار إليها بإيجاز. تم التحقق من صحة ووضوح الأطروحة من خلال مناقشة مجموعة من الخبراء الذين لهم سوابق أكاديمية وصناعية في هذا المجال. بجانب اهتمام الرسالة بتوجيه المصممين وحثهم على الجديد من المنتجات من خلال مراحل ثلاثة بدءاً من التحديد ومروراً بالتفكير وانتهاءً بالتصنيع لأجل تطوير هذه الصناعات. تخلص الدراسة بالإشارة إلى العوامل المهمة التي تؤثر على الابتكار في تصميم الملابس من قبل المتخصصين في هذا المجال الذين لهم باع طويل في قطاع الملابس في باكستان. وتدعو الرسالة أيضاً إلى المزيد من البحث والاستقصاء في تصميم الملابس بطريقة مبتكرة مناسبة للعصر الحاضر من حيث التعاون في التصميم وإيجاد شبكة منظمة واكتشاف الموارد البديلة لتطوير المهارات الشابة في هذا المجال و الدعوة إلى المزيد من الإصلاح و الابتكار في علم التصميم لزيادة الابتكار فيه.

## APPROVAL PAGE

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## DECLARATION

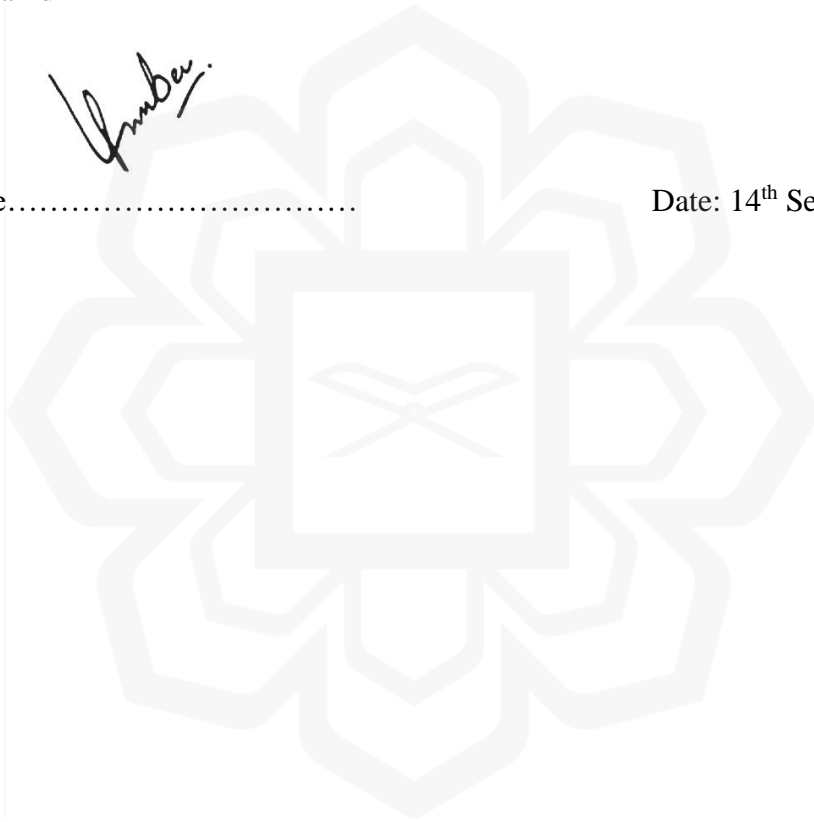
I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted for any other degrees at IIUM or other institutions.

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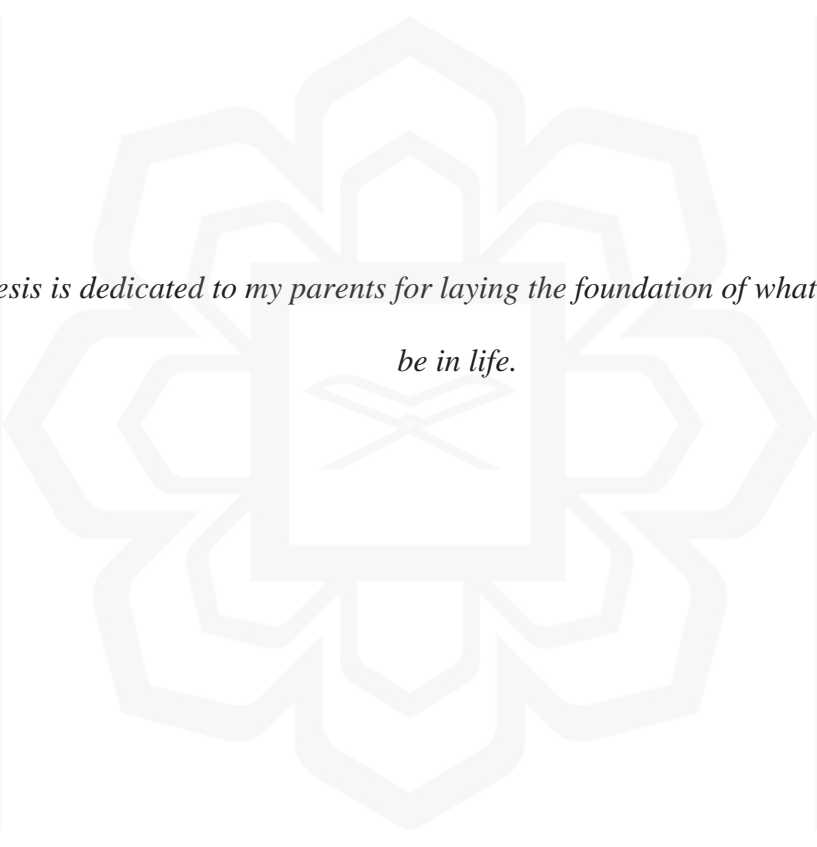
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*This thesis is dedicated to my parents for laying the foundation of what I turned out to  
be in life.*

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## LIST OF ABBREVIATIONS

AD	Apparel Design
ADI	Apparel design innovation
APTMA	All Pakistan Textile Association
AW	Activewear/ sportswear/knitwear
DM	Denim
EPB	Export Promotion Bureau of Pakistan
FA	Fashion Garments, fashion Apparel, Pret
FF	Finished Fabrics
NPD	New product development
MM	Martial arts, bikers, military garments
PRGMEA	Pakistan Readymade Garments Manufacturers and Exporters Association
SME	Small manufacturing enterprise
T&C	Textile and Clothing also Textile and Apparel
TT	Hand-crafted, traditional textiles
UN	United Nations
WTO	World Trade Organization
WEF	World Economic Forum

# CHAPTER ONE

## INTRODUCTION

### 1.1 INTRODUCTION

The changing lifestyles, the pursuit of environment-responsible product developments, the advancements in textile materials, and reforms in production technology require a revisit to apparel design practices to mend new textile and clothing product developments accordingly (Hodges, n.d.; Horne, 2011; Mazzarella, 2017; Perivoliotis, 2005; Silva et al., n.d.; Starbuck, 2011; Vila, 2007). The apparel industry is one category of the textile industry. It is the main category of Pakistan's textile sector and has earned a good name in manufacturing textile goods. Figure 1.1 illustrates the three categories of the textile industry and the types of products under each category.

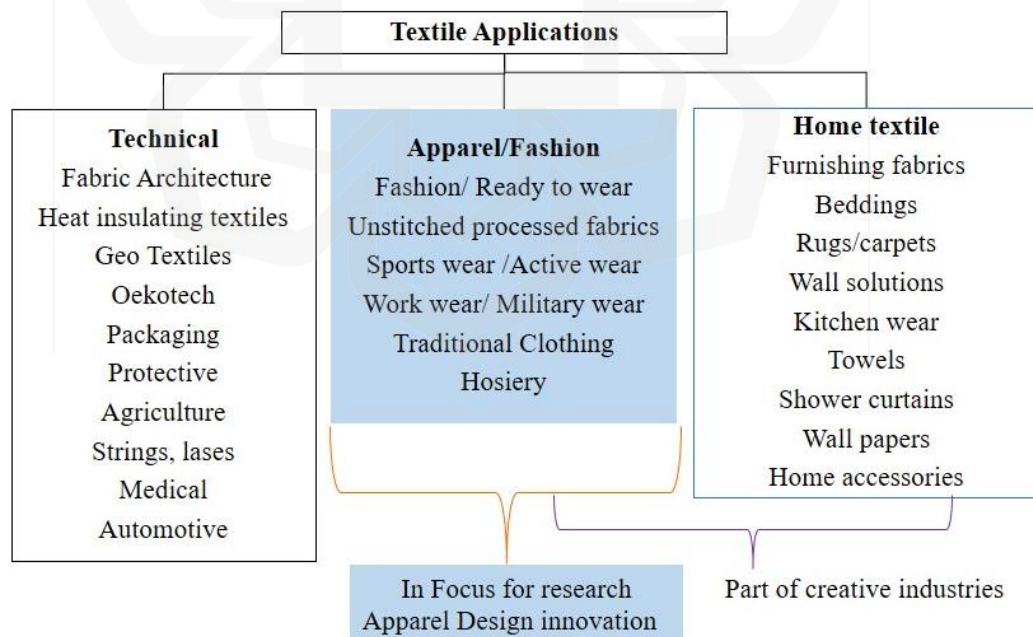


Figure 1.1 Textile applications based on Jacquie Wilson (2001) and (Horne, 2011)

According to Nayak (2015), the apparel industry manufactures outer and inner clothing, including work, leisure, sportswear, jersey goods, and lingerie. Pakistan's clothing sector produces products for many types of apparel for domestic and export markets. The products manufactured for the export market are mostly inclined towards cotton fabrics and made-up such as denim, active wear, hosiery, and outerwear. The products for the domestic market have a wider product range, including fashion wear. Over the past few decades, the need to bring reforms in product innovation has been realized to upgrade and excel further in the field (Baffes, 2005; James Howe, Tineka Michelle Smith, 2018; Pakistan, 2019).

Apparel design is one stream of textile product development that contemplates shaping products formed as body coverings (Tabassum, 2020; Brannon, 2011). Apparel design involves many products of use for men, women and children as well as multiple functions such as jackets, accessories, scarfs and dresses. However, fabrics and fabric adornment techniques are integral to apparel design. The aspects of fabric materials and their processing are like other textile products. The required fabric quality determines the production and fabrication techniques for all types of textile products. Therefore, the term Textile and Clothing (T&C) is also used to refer to the fields related to textiles and apparel. Most of the mainstream textile firms in Pakistan produce apparel and interior textile products. Some SMEs and fashion labels concentrate only on styling and stitching apparel products and outsource fabrics from other setups. Similarly, some apparel firms only focus on designing fabrics and fabric surfaces and do not use styling and stitching. Hence, clothing firms do not have to be engaged in a complete value chain; instead, they work as loops of the textile value chain (Uddin, 2019).

Innovation in apparel design refers to design solutions that are more effective and suitable for the users, the environment, and the producer (Gupta, 2022; McBee-Black, 2022). The predominantly digital revolution in the Textile and Clothing (T&C) sector, sustainability, environmental concerns, elimination of cross-cultural boundaries, social media, and post-pandemic protective clothing challenges have universally changed the social setup (Sayem, 2022; Wijewardhana, 2021; Islam, 2021). Emerging consumer trends and user behaviour have raised new challenges for designers to design relatable and suitable

apparel for users. The innovation and new product development frameworks suggested multi facets solutions specifically for apparel design and generally for industrial design. The researches in this regard suggest various strategies such as introducing technological reforms, developing an insight into the meaningfulness of the product, addressing functional aspects of the product, improving user experiences, introducing sustainable materials, encouraging small enterprises, and establishing brand identities (Gupta, 2022, Andersson, 2003; Frumkin et al., 2011; Lommerse et al., 2011a; Lucia Rampino, 2016; Mazzarella et al., 2017; Mohd Tajuddin et al., 2017; Smelik, 2018; Trott, 2012).

The domestic market has shown immense competition in clothing brands majorly producing finished products, whereas the share of value-added products in the export sector is still less. Despite being 57% of the country's export is Textile's 8<sup>th</sup> largest textile exporter in Asia (Dawn News 2018), the industry has not achieved competitiveness in product innovation amongst its regional competitors such as China, Bangladesh and India. In Pakistan, the T&C industry has to develop product innovation and adapt to change because it is no longer enough to rely on manufacturing, cost-cutting, and improving production efficiency (Klaus Schwab, 2018).

Identifying and mapping the key points related to apparel design developments to encounter innovation directed that reforms in design practices can lead to improvements. The inquiry on what design practices should lead to innovative apparel products was considered indispensable. This study investigated the current design development process being practised in the design departments of the textile product industry to identify the factors that affect the innovation process. The framework for innovation in apparel design developed in the context of Pakistan's clothing industry has addressed the factors that affect new product developments and suggested ways through which improved product functions and aesthetics can be achieved for Pakistan's T&C sector.

This research focuses on the apparel design practices that lead to new and improved product developments in Pakistan's textile and clothing sector. The reforms in designing would affect the complete apparel product from its birth to its use, reuse, and disposal. The