

Blazer-Making Process Validation and AHP-Based Prioritisation:

A Foundation for Methodological Pattern Engineering in Bespoke Blazer Making

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ABSTRACT

Purpose

This study aimed to validate nine blazer-making processes, their sequence, and the outcome attributes of Style and Fit, and to determine their relative influence across MTO/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW) segments using the Item-Level Content Validity Index (I-CVI) and Analytic Hierarchy Process (AHP).

Design/methodology/approach

A literature-based framework comprising nine blazer-making processes, their sequence, and Style and Fit was developed and validated by 48 experts representing the four segments using I-CVI. A further 96 experts provided pairwise comparisons of the nine processes, which were analysed using AHP to derive priority weights and rankings.

Findings

Expert validation confirmed the content validity of the nine processes (C1–C9), their proposed sequence (C1→C9), and Style and Fit. AHP identified C3 – Drafting as the most influential process overall, with a priority weight of 0.3150 (31.50%; Rank 1). C3 – Drafting also achieved its highest segment-specific priority weight in MTO/Bespoke (0.3514; 35.14%).

Originality

The study establishes a validated and prioritised framework of nine blazer-making processes and provides an evidence-based basis for subsequent methodological pattern engineering in bespoke blazer making. The identification of C3 – Drafting as the most influential process establishes a defined priority for subsequent methodological improvement and pattern engineering.

Keywords

Blazer-making processes; Style and Fit; Process prioritisation; I-CVI; Analytic Hierarchy Process; Pattern engineering

Paper type: Research paper

I. INTRODUCTION

Suits, coats and blazers are structured tailored garments characterised by fine craftsmanship, individualisation and technical precision. Traditionally rooted in skilled craftsmanship, tailoring has evolved into different production approaches, including Made-to-Order (MTO)/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM) and Ready-to-Wear (RTW), which differ in their degree of customisation and adaptation to individual body characteristics, style and fit preferences [2], [1], [3].

In tailored garments, Fit is determined by the relationship between the wearer's body and pattern geometry. Body measurements establish the dimensional basis for pattern development, while pattern geometry, ease, fabric characteristics and construction techniques

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influence the resulting Fit [4], [3], [5]. In structured garments such as blazers, suits and coats, the precise integration of these factors is essential for achieving the desired Style and Fit.

Blazer making is a complex and sequential process involving interrelated operations from body measurement and material selection through drafting, laying, marking, cutting, sewing, trial/reviewing, and re-sewing and finishing. The output of each process provides the basis for subsequent processes, making their coordination essential for achieving the desired Style and Fit [6], [4], [2], [1].

Although these blazer-making processes are common across MTO/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM) and Ready-to-Wear (RTW), their degree of customisation varies across the segments. MTO/Bespoke and Custom Tailoring provide greater scope for adaptation to individual body characteristics, style preferences and fit requirements, whereas MTM incorporates individual modifications within a more standardised production framework, while RTW relies predominantly on standardised sizing and production methods [2], [1], [3].

Despite the established relevance of measuring, material selection, drafting, laying, marking, cutting, sewing, trial/reviewing, and re-sewing and finishing in tailored blazer development, their relative influence on Style and Fit has not been systematically identified and evaluated across different blazer-making segments. Existing studies have largely examined specific aspects of garment fit, body measurement, pattern development or production methods, rather than prioritising the complete sequence of blazer-making processes according to their relative influence on Style and Fit [4], [1], [3]. Establishing such priorities is important for identifying the processes that require greater attention within particular blazer-making segments for methodological improvement.

Accordingly, this study aimed to validate the identified blazer-making processes, their sequence, and the outcome attributes of Style and Fit using the Item-Level Content Validity Index (I-CVI), and to determine the relative influence and priority ranking of the validated processes using the Analytic Hierarchy Process (AHP) across MTO/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW) segments. The study further aimed to identify the most influential process and the segment in which its influence was highest, thereby providing a basis for methodological improvement and subsequent pattern engineering in bespoke blazer making.

II. REVIEW OF LITERATURE

2.1 Blazer Concept

A blazer is a structured tailored garment developed by transforming two-dimensional fabric and pattern components into a three-dimensional form that conforms to the wearer's body. Its development integrates body measurements, pattern drafting, material selection and construction, while structural components such as interfacing, canvas, lining, sleeves and collars contribute to its form, appearance and Fit [1], [7], [2], [8].

The relationship between body morphology and pattern geometry is particularly important in blazer development. Body measurements, body shape, posture and ease allowances influence pattern construction, garment balance and Fit, while material characteristics and construction methods affect the resulting form and appearance [4], [9], [11], [10]. Thus, blazer development requires the integration of dimensional, structural and aesthetic considerations to achieve the desired Style and Fit.

2.2. Complexity of Blazer-Making Processes

Blazer making is complex because it involves a sequence of interrelated technical processes through which fabric and pattern components are progressively developed into a structured garment. The processes are interdependent, with the outcome of one stage providing the basis for subsequent development, construction, fitting and finishing, requiring precision and coordination throughout garment development [2], [8]. The degree of individualisation, standardisation and process customisation varies across MTO/Bespoke, CT, MTM and RTW, although the underlying processes remain interconnected [1],[2]. The reviewed literature identifies multiple activities within the blazer-making sequence, which were consolidated into process-specific components to establish the scope of the nine identified processes, as presented in Table I.

The interdependence of these processes means that variations or decisions at one stage can influence subsequent pattern development, garment construction, fitting and final appearance. In particular, measuring establishes the dimensional basis for pattern development, while drafting translates body measurements and design requirements into pattern form. Laying, marking and cutting determine the accuracy with which pattern components are prepared, while sewing, trial/reviewing, re-sewing and finishing contribute to the final garment construction and Fit. Thus, the nine processes collectively contribute to the development of the blazer's Style and Fit, making it necessary to examine their relative influence systematically [1], [4], [6], [7], [15].

Table I. *Identified Blazer-Making Processes, Process Components and Supporting Literature*

2.3 Blazer-Making Segments

Blazer making is undertaken through different production segments that vary in their degree of individualisation, standardisation and adaptation to individual requirements. The four segments considered in the present study are Made-to-Order (MTO)/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW) [1], [16], [17], [11]. Their process flows differ in the extent of individual measurement, pattern development, fitting, alteration and production methods. The principal process characteristics of the four segments, as identified from the reviewed literature, are summarised in Table II.

Process	Process Components	Supporting Literature
Measuring	Identification of body height, body weight, age, body landmarks, body symmetry, body planes, plumb lines, measuring tools and techniques, direct and proportionate measurements, body figure variations, postural characteristics, body bulges and irregularities.	[1], [15], [6], [12], [4]
Materials	Selection of shell fabric, interfacing, interlining, canvas, lining, trims and accessories required for blazer construction.	[6], [13], [2]
Drafting	Development and manipulation of shell and internal-component patterns, including interfacing, canvas, facings and lining, with allowances, balance, shaping, articulation, ease, notches and construction markings.	[15], [12], [13], [4]
Laying	Fabric preparation and relaxation, lay planning, spreading, grain and ply alignment, tension control and pattern layout.	[7], [2]
Marking	Pattern positioning, grain alignment, pattern matching, fabric direction and accurate marking of shell and internal components for cutting.	[7], [2]
Cutting	Cutting tools, methods and techniques, cutting layout and precision cutting of shell and internal components, including patterned fabrics such as checks and stripes.	[7], [2], [14]
Sewing	Basting and permanent stitching, machine and hand sewing, component assembly, structural reinforcement, shaping, moulding, constructional pressing and integration of shell and internal components.	[13], [7], [2], [4]
Trial/Reviewing	Fitting and review through basted or progressive fitting, evaluation of Style, Fit, silhouette, balance, posture, ease, mobility and workmanship, followed by alteration planning.	[1], [15], [13], [4]
Re-sewing & Finishing	Corrective re-sewing, construction adjustments, re-basting, component replacement, seam refinement, shaping, final pressing, trimming, workmanship inspection and final Style and Fit evaluation.	[15], [13], [2]

Although the nine fundamental blazer-making processes are common to all four segments, their execution, level of customisation and degree of process intervention differ according to the production system. MTO/Bespoke and CT involve greater individualisation in measurement, pattern development, fitting and alteration, whereas MTM combines individual measurements with comparatively standardised pattern and production procedures. RTW relies predominantly on standardised measurements, sizing, patterns and production methods [13], [15], [19], [18]. These differences provide a basis for comparing the relative influence of the nine processes on the Style and Fit of blazers across the four segments.

Table II. *Process Flow/Sequence of the Four Blazer-Making Segments*

Blazer-Making Segment	Process Flow/Sequence
Made-to-Order (MTO)/Bespoke	Customer consultation → style and fit requirements → material selection → body measurement and postural analysis → pattern drafting → laying →). marking → cutting → sewing → multiple fittings → alteration → re-sewing → finishing [13], [15], [20].
Custom Tailoring (CT)	Customer consultation → style and fabric selection → body measurement → body-shape and posture assessment → adoption or modification of an existing pattern or direct laying and marking → cutting → sewing → trial fitting → alteration → final fitting → finishing [1], [13].
Made-to-Measure (MTM)	Customer consultation → style and fabric selection → body measurement → try-on selection → try-on modification → laying → marking → cutting → sewing → final fitting → minor alteration or adjustment → pressing and finishing [19], [1].
Ready-to-Wear (RTW)	Design development → standard-size specifications → base-pattern development → prototype development → Style and Fit approval → pattern grading → fabric selection → pre-production meeting (PPM) → cut-file preparation → marker planning → pilot-run cutting → pilot-run audit → bulk cutting → sewing → pressing and finishing → final inspection → packaging ([18], [14].

The process flows demonstrate that the broad blazer-making processes are applied differently across the four segments, particularly in terms of individualisation, customisation, standardisation, fitting and alteration. These differences reflect the distinct production characteristics of MTO/Bespoke, CT, MTM and RTW and provide the basis for their comparative consideration in the present study

Table III. *Comparative Application of Blazer-Making Processes Across the Four Segments*

Process/Parameter	MTO/Bespoke	CT	MTM	RTW
Manufacturing approach	Personalised	Customised	Partially customised	Standardised
Measuring	Individual body measurement and postural analysis	Individual body measurement and postural analysis	Key body measurements and postural analysis based on try-on	Standard-size specifications
Materials	Customer-selected	Customer-selected	Limited selection	Manufacturer-selected
Drafting	Individual pattern drafting	Existing-pattern customisation / direct marking	Try-on modification	Standard pattern development
Laying	Single-ply fabric laying	Single-ply fabric laying	Semi-standardised laying	Marker-based / bulk fabric laying
Marking	Individual pattern marking	Direct fabric marking	Marker-based marking	Marker-based marking
Cutting	Individual precision cutting	Individual cutting	Standard cutting	Bulk cutting
Sewing	Handcrafted / specialised sewing	Customised sewing	Semi-standardised industrial sewing	Industrial sewing
Trial/Reviewing	Multiple fittings	Multiple fittings	Limited fitting	Quality inspection
Re-sewing & Finishing	Extensive alteration and finishing	Customised alteration and finishing	Minor alteration and finishing	Standard finishing and quality correction

Process/Parameter	MTO/Bespoke	CT	MTM	RTW
Outcome	Personalised Style and Fit	Customised Style and Fit	Modified Style and Fit	Standardised Style and Fit

Source: Compiled from [1], [16], [13], [2], [19], [15], [20], and [14].

2.4 Style and Fit

Style and Fit are important attributes of tailored garments [4], [1]. Style refers to the visual and aesthetic characteristics of a garment, including its silhouette, proportions, design features and overall appearance, whereas Fit refers to the relationship between the garment and the wearer's body and is influenced by body size and shape, garment measurements, proportions, ease and balance [4], [1]. Research on male consumers has further demonstrated the importance of body size and shape in achieving satisfactory garment Fit [21], while [22] identified garment Fit and sizing as continuing challenges in ready-to-wear apparel, with implications for consumer satisfaction and purchasing decisions. Recent research has also highlighted the importance of personalised garment Fit in relation to individual body characteristics [23]. In the present study, Style and Fit are considered the principal outcome attributes for evaluating the relative influence of the identified blazer-making processes.

2.5 Content Validation Using the Item-Level Content Validity Index (I-CVI)

Content validity assesses whether proposed items adequately represent the intended content domain. Expert evaluation and the Content Validity Index (CVI) provide a quantitative basis for assessing item relevance, with the Item-Level Content Validity Index (I-CVI) indicating the proportion of experts judging an individual item to be relevant [26]. Content-validation procedures have also been incorporated into clothing-related scale development, where items generated from literature and qualitative evidence are subsequently subjected to expert validation [25]. In fashion research, [24] further demonstrated the application of CVI and inter-rater agreement for expert validation of a structured fashion framework. In the present study, I-CVI was used to assess the relevance of the nine blazer-making processes and the outcome attributes of Style and Fit, while the proposed process sequence was assessed separately for appropriateness. The validated framework was subsequently taken forward for AHP-based prioritisation.

2.6 Application of AHP in Textile and Apparel Research

The Analytic Hierarchy Process (AHP) provides a multicriteria decision-making framework for structuring complex problems and deriving relative priorities through pairwise comparisons [33]. Its application in the textile and apparel sector has demonstrated its suitability for evaluating complex decision problems involving multiple criteria and expert judgments [27]. AHP has been applied to apparel-related decisions, including garment-fit evaluation [28],[31], supplier selection [30], and prioritisation of factors in fashion-industry decision making [34], [32]. More recently, [29] applied AHP to prioritise criteria and sub-criteria influencing consumer evaluation of clothing brands. These applications demonstrate the suitability of AHP for deriving relative priorities from expert judgments in textile and apparel decision-making. However, its application to prioritising individual blazer-making processes according to their relative influence on Style and Fit across different blazer-making segments remains insufficiently addressed.

The literature provides substantial information on individual blazer-making activities and their application across MTO/Bespoke, CT, MTM and RTW. However, it does not sufficiently establish a consolidated sequence of blazer-making processes, their process components, and the outcome attributes of Style and Fit against which these processes can be evaluated. Furthermore, the relative influence and priority of individual processes on Style and Fit, and the extent to which these priorities vary across the four blazer-making segments, remain insufficiently established. Determining these priorities can provide a basis for identifying processes requiring methodological improvement and subsequent process re-engineering

III. METHODOLOGY

3.1 Research Design The study employed a two-stage sequential research design comprising Stage I—expert validation of the proposed blazer-making process framework using the Item-Level Content Validity Index (I-CVI) [35], [36], followed by Stage II—AHP-based process prioritisation [33]. Stage II was undertaken based on the validated process framework established through Stage I. The study aimed to determine the relative influence of the nine blazer-making processes on Style and Fit across MTO/Bespoke, CT, MTM and RTW segments, identify the most influential process and the segment in which its influence was highest, and provide a basis for subsequent methodological process re-engineering.

Stage I – Expert Validation: Based on the literature review, nine blazer-making processes (C1–C9), their proposed sequence (C1 → C2 → C3 → C4 → C5 → C6 → C7 → C8 → C9), and the outcome attributes Style and Fit were identified and subjected to expert validation. I-CVI was used to assess the relevance of the nine processes and the outcome attributes of Style and Fit, while the proposed process sequence was assessed separately for appropriateness [35], [36]. The I-CVI analysis and sequence assessment were completed to establish the final validated process framework before commencement of Stage II. **Stage II – AHP-Based Process Prioritisation:** Pairwise-comparison data were obtained from experts representing the four blazer-making segments and analysed using AHP to derive

segment-level and overall priority weights and rankings [33]. The priorities were compared across the four segments to identify the most influential blazer-making process and the segment in which its influence was highest.

3.2 Development of the Preliminary Blazer-Making Process Framework

The preliminary blazer-making process framework was developed through a review of relevant literature and contextual industry inputs from the MTO/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW) segments [4], [2]. These inputs were synthesised to establish the processes, their sequence, and the outcome attributes relevant to blazer making. Accordingly, nine interrelated processes were identified: C1 Measuring, C2 Materials, C3 Drafting, C4 Laying, C5 Marking, C6 Cutting, C7 Sewing, C8 Trial/Reviewing, and C9 Re-sewing and Finishing, arranged in the proposed sequence $C1 \rightarrow C2 \rightarrow C3 \rightarrow C4 \rightarrow C5 \rightarrow C6 \rightarrow C7 \rightarrow C8 \rightarrow C9$. Style and Fit were specified as the outcome attributes of the blazer-making process [4], [1]. The preliminary framework was subsequently taken forward for Stage I expert validation using I-CVI.

3.3 Expert Validation Using I-CVI

The preliminary blazer-making process framework was subjected to expert validation to assess the relevance of the nine identified processes and the outcome attributes, Style and Fit, and the appropriateness of the proposed process sequence. An Expert Validation Questionnaire (Table IV) was developed with three sections: Section I – Key Processes, assessing the relevance of C1–C9 with options for retention, addition or deletion; Section II – Process Sequence, assessing the appropriateness and logical order of $C1 \rightarrow C9$; and Section III – Outcome Attributes, assessing the relevance of Style and Fit and providing an option to suggest additional attributes. The questionnaire also recorded expert code, designation, blazer-making segment and professional experience.

A total of 48 experts, comprising 12 experts from each segment—MTO/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW)—participated in the validation. The expert panel included suit makers, coat makers, master tailors, pattern masters, cutters, production managers and fit technicians, selected based on their professional expertise, practical experience and direct involvement in blazer making and related [37]. Their areas of expertise encompassed measurement, material selection, pattern drafting, laying, marking, cutting, sewing, trial fitting, alteration, re-sewing and finishing, thereby providing diverse practical perspectives for evaluating the proposed framework. The nine processes and two outcome attributes were assessed using a four-point relevance scale: 1 – Not Relevant, 2 – Somewhat Relevant, 3 – Quite Relevant, and 4 – Highly Relevant. The I-CVI for each item was calculated as the proportion of experts assigning a rating of 3 or 4, following established content-validity procedures [35], [36]. The proposed process sequence was assessed separately for its appropriateness and logical order. The I-CVI analysis and sequence assessment were subsequently used to establish the final validated blazer-making process framework before commencement of Stage II—AHP-based process prioritisation.

A total of 48 experts, with 12 from each segment—MTO/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW)—participated in the validation. The panel comprised experienced suit makers, coat makers, master tailors, pattern masters, cutters, production managers and fit technicians [37]. The nine processes and two outcome attributes were assessed using a four-point relevance scale, with ratings of 3 or 4 considered relevant for I-CVI calculation [35], [36]. The proposed process sequence was assessed separately for appropriateness and logical order. The I-CVI and sequence assessments established the final validated framework for subsequent Stage II—AHP-based process prioritisation

Figure 1. Two-Stage Research Framework for Blazer-Making Process Validation and AHP-Based Prioritisation

METHODOLOGY

1. LITERATURE REVIEW AND INDUSTRY INPUTS

Research literature and industry practices



2. PROPOSED BLAZER-MAKING PROCESS FRAMEWORK

Nine Processes (C1–C9) and proposed Sequence (C1 → C9)

Outcome Attributes: Style and Fit



STAGE I – EXPERT VALIDATION (I-CVI)

3. EXPERT VALIDATION USING I-CVI

48 Experts – 12 experts/segment

MTO/Bespoke | CT | MTM | RTW

I-CVI assessment of processes, sequence, Style and Fit

Process sequence assessed for appropriateness



4. VALIDATED PROCESS FRAMEWORK

Nine processes • Sequence • Style and Fit



STAGE II – AHP-BASED PROCESS PRIORITISATION



5. AHP DATA COLLECTION

96 Experts – 24 experts/segment

MTO/Bespoke | CT | MTM | RTW



6. AHP HIERARCHY

Goal: Relative influence of processes on Style and Fit

Criteria: Nine Processes (C1–C9)

Segments: MTO/Bespoke | CT | MTM | RTW



7. PAIRWISE COMPARISONS

Nine Processes (C1–C9) • Saaty's 1–9 Scale

36 comparisons/expert



8. AHP ANALYSIS

Geometric Mean Aggregation: Individual Experts → Segment-Level Group Matrices

Priority Weights and Rankings • CI & CR • Microsoft Excel

Overall Consolidation of Segment-Level Priorities



9. COMPARATIVE ANALYSIS

MTO/Bespoke • CT • MTM • RTW

Segment-Level and Overall Priorities



OUTCOME

Most Influential Blazer-Making Process for Style and Fit
and Corresponding Manufacturing Segment for Subsequent Process Re-engineering

MATERIALS

Blazer Specifications

- Men's Single-Breasted
- Two-Button Stance
- Notch Lapel
- Slim Fit
- Poly-Wool Fabric
- Half-Canvassed Construction
- Chest Sizes 37–40 Inches

Table IV. Expert Validation Questionnaire for Blazer-Making Processes, Process Sequence, and Outcome Attributes

Validation Area	Proposed Framework	Expert Response	Action	Process/Attribute to Add/Delete
I. Key Processes	C1 – Measuring C2 – Materials C3 – Drafting C4 – Laying C5 – Marking C6 – Cutting C7 – Sewing C8 – Trial/Reviewing C9 – Re-sewing & Finishing	1 ☐ 2 ☐ 3 ☐ 4 ☐	Retain ☐ Add ☐ Delete ☐	Specify process/attribute: _____
II. Process Sequence	C1 → C2 → C3 → C4 → C5 → C6 → C7 → C8 → C9	Appropriate ☐ Not Appropriate ☐	Retain ☐ Modify ☐	Suggested Change: _____
III. Outcome Attributes	Style and Fit	1 ☐ 2 ☐ 3 ☐ 4 ☐	Retain ☐ Add ☐ Delete ☐	Other Attribute: _____
Relevance Rating:	1 – Not Relevant 2 – Somewhat Relevant 3 – Quite Relevant 4 – Highly Relevant			
Expert Code:		Designation:		
Blazer-Making Segment:		Experience:		

3.4 Stage I – Expert Validation and I-CVI Analysis

The 48 selected experts, comprising 12 experts from each blazer-making segment—MTO/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW)—evaluated the nine proposed blazer-making processes (C1–C9) and the outcome attributes Style and Fit using a four-point relevance rating scale: 1 – Not Relevant, 2 – Somewhat Relevant, 3 – Quite Relevant, and 4 – Highly Relevant. The expert ratings were used to calculate the Item-Level Content Validity Index (I-CVI) and establish the content validity of the proposed processes and outcome attributes [35], [36]. The proposed process sequence (C1 → C9) was also reviewed by the experts to assess its appropriateness and logical order based on their professional knowledge and practical experience. An I-CVI value of 0.78 or above was considered acceptable for retaining an item [35], [36]. For each blazer-making segment, the number of experts assigning ratings of 3 or 4 was used to calculate the I-CVI for each proposed process and outcome attribute. The process sequence was assessed separately based on the number and proportion of experts who considered the proposed order appropriate. The validation assessment was conducted segment-wise for MTO/Bespoke, CT, MTM, and RTW to assess the proposed framework within each segment. The segment-wise validation values are presented in Tables V–VIII. The validated processes, process sequence, and outcome attributes were subsequently taken forward as the final framework for Stage II—AHP-based process prioritisation.

Table V. Expert Validation Analysis for the MTO/Bespoke Segment (n = 12)

A. Key Blazer-Making Processes – I-CVI Validation

Process	Experts Rating 3–4	Total Experts	I-CVI	I-CVI (%)	Decision
C1. Measuring	12	12	1.00	100%	Retain
C2. Materials	12	12	1.00	100%	Retain
C3. Drafting	12	12	1.00	100%	Retain
C4. Laying	11	12	0.92	92%	Retain
C5. Marking	12	12	1.00	100%	Retain
C6. Cutting	12	12	1.00	100%	Retain

Process	Experts Rating 3–4	Total Experts	I-CVI	I-CVI (%)	Decision
C7. Sewing	12	12	1.00	100%	Retain
C8. Trial/Reviewing	12	12	1.00	100%	Retain
C9. Re-sewing & Finishing	12	12	1.00	100%	Retain

B. Process Sequence Validation

Proposed Process Sequence	Appropriate	Not Appropriate	Agreement (%)	Decision
C1 → C2 → C3 → C4 → C5 → C6 → C7 → C8 → C9	11	1	91.67%	Retain

Suggested Change: none

C. Outcome Attribute – I-CVI Validation

Outcome Attribute	Experts Rating 3–4	Total Experts	I-CVI	I-CVI (%)	Decision
Style	12	12	1.00	100%	Retain
Fit	12	12	1.00	100%	Retain

Other
Attribute
Suggested:

none

Analysis outcome: All nine blazer-making processes met the specified content-validity criterion and were retained. The proposed process sequence received 91.67% expert agreement and was retained without modification. Style and Fit achieved I-CVI values of 1.00 (100%) and were retained as the validated outcome attributes. No additional process or outcome attribute was suggested by the experts.

Table VI. Expert Validation Analysis for Custom Tailoring (CT) Segment (n = 12)

A. Key Blazer-Making Processes – I-CVI Validation

Process	Experts Rating 3–4	Total Experts	I-CVI	I-CVI (%)	Decision
C1. Measuring	12	12	1.00	100%	Retain
C2. Materials	11	12	0.92	92%	Retain
C3. Drafting	12	12	1.00	100%	Retain
C4. Laying	10	12	0.83	83%	Retain
C5. Marking	11	12	0.92	92%	Retain
C6. Cutting	12	12	1.00	100%	Retain
C7. Sewing	12	12	1.00	100%	Retain
C8. Trial/Reviewing	11	12	0.92	92%	Retain
C9. Re-sewing & Finishing	12	12	1.00	100%	Retain

B. Process Sequence Validation

Proposed Process Sequence	Appropriate	Not Appropriate	Agreement (%)	Decision
C1 → C2 → C3 → C4 → C5 → C6 → C7 → C8 → C9	12	0	100%	Retain

Suggested Change: none

C. Outcome Attribute – I-CVI Validation

Outcome Attribute	Experts Rating 3–4	Total Experts	I-CVI	I-CVI (%)	Decision
Style	12	12	1.00	100%	Retain
Fit	11	12	0.92	92%	Retain

Other Attribute Suggested: none

Analysis outcome: All nine blazer-making processes met the specified content-validity criterion and were retained. The proposed process sequence received 100% expert agreement and was retained without modification. Style achieved an I-CVI of 1.00 (100%), while Fit achieved an I-CVI of 0.92 (92%); both were retained as the validated outcome attributes. No additional process or outcome attribute was suggested by the experts.

Table VII. Expert Validation Analysis for Made-to-Measure (MTM) Segment ($n = 12$)

A. Key Blazer-Making Processes – I-CVI Validation

Process	Experts Rating 3–4	Total Experts	I-CVI	I-CVI (%)	Decision
C1. Measuring	12	12	1.00	100%	Retain
C2. Materials	12	12	1.00	100%	Retain
C3. Drafting	12	12	1.00	100%	Retain
C4. Laying	11	12	0.92	92%	Retain
C5. Marking	12	12	1.00	100%	Retain
C6. Cutting	12	12	1.00	100%	Retain
C7. Sewing	12	12	1.00	100%	Retain
C8. Trial/Reviewing	12	12	1.00	100%	Retain
C9. Re-sewing & Finishing	12	12	1.00	100%	Retain

B. Process Sequence Validation

Proposed Process Sequence	Appropriate	Not Appropriate	Agreement (%)	Decision
C1 → C2 → C3 → C4 → C5 → C6 → C7 → C8 → C9	11	1	91.67%	Retain

Suggested Change: none

C. Outcome Attribute – I-CVI Validation

Outcome Attribute	Experts Rating 3–4	Total Experts	I-CVI	I-CVI (%)	Decision
Style	12	12	1.00	100%	Retain
Fit	12	12	1.00	100%	Retain

Other Attribute Suggested: none

Analysis outcome: All nine blazer-making processes met the specified content-validity criterion and were retained. The proposed process sequence received 91.67% expert agreement and was retained without modification. Style and Fit achieved I-CVI values of 1.00 (100%) and were retained as the validated outcome attributes. No additional process or outcome attribute was suggested by the experts.

Table VIII.

Expert Validation Analysis for Ready-to-Wear (RTW) Segment ($n = 12$)

A. Key Blazer-Making Processes – I-CVI Validation

Process	Experts Rating 3–4	Total Experts	I-CVI	I-CVI (%)	Decision
C1. Measuring	12	12	1.00	100%	Retain
C2. Materials	12	12	1.00	100%	Retain
C3. Drafting	10	12	0.83	83%	Retain
C4. Laying	12	12	1.00	100%	Retain
C5. Marking	12	12	1.00	100%	Retain
C6. Cutting	12	12	1.00	100%	Retain
C7. Sewing	12	12	1.00	100%	Retain
C8. Trial/Reviewing	11	12	0.92	92%	Retain
C9. Re-sewing & Finishing	12	12	1.00	100%	Retain

B. Process Sequence Validation

Proposed Process Sequence	Appropriate	Not Appropriate	Agreement (%)	Decision
C1 → C2 → C3 → C4 → C5 → C6 → C7 → C8 → C9	10	2	83.33%	Retain

Suggested Change: _____ none _____

C. Outcome Attribute – I-CVI Validation

Outcome Attribute	Experts Rating 3–4	Total Experts	I-CVI	I-CVI (%)	Decision
Style	12	12	1.00	100%	Retain
Fit	11	12	0.92	92%	Retain

Other Attribute Suggested: _____ none _____

Analysis outcome: All nine blazer-making processes met the specified content-validity criterion and were retained. The proposed process sequence received 83.33% expert agreement and was retained without modification. Style achieved an I-CVI of 1.00 (100%), while Fit achieved an I-CVI of 0.92 (92%); both were retained as the validated outcome attributes. No additional process or outcome attribute was suggested by the experts.

Based on the segment-wise expert validation across MTO/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW), the validated blazer-making process framework was subsequently taken forward for Stage II AHP-based process prioritisation.

3.5 Stage II – AHP-Based Process Prioritisation

Following completion of Stage I expert validation, the final validated blazer-making process framework, comprising the nine processes (C1–C9), their proposed sequence (C1 → C2 → C3 → C4 → C5 → C6 → C7 → C8 → C9), and the outcome attributes of Style and Fit, was taken forward for AHP-based process prioritisation. The AHP analysis was undertaken to determine the relative influence and priority of the nine processes with respect to Style and Fit and to compare their priorities across MTO/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW) segments based on expert judgments. AHP provides a structured multicriteria decision-making approach for deriving relative priorities through pairwise comparisons and has been applied in textile and apparel research to evaluate complex decision problems involving multiple criteria and expert judgments [33], [27]. The analysis aimed to identify the most influential blazer-making process and the segment in which its influence was highest, thereby providing a basis for subsequent process re-engineering. The AHP evaluation was conducted using the following blazer specifications: single-breasted design with a two-button stance, notch lapel, slim fit, poly-wool fabric, half-canvassed construction, and chest sizes of 37–40 inches.

3.5.1 AHP Data Collection

Expert Panel. Primary AHP data were collected from 96 industry experts, comprising 24 experts from each blazer-making segment—MTO/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW). Experts were purposively selected

based on professional expertise, practical experience, and direct involvement in blazer making and related production processes. The panel included suit makers, coat makers, pattern masters, cutters, master tailors, fit technicians, production managers, and other relevant industry professionals [37].

AHP Questionnaire. A structured pairwise-comparison questionnaire was developed to obtain expert judgments on the relative influence of the nine validated processes (C1–C9) on Style and Fit. The questionnaire also recorded the expert code, designation, blazer-making segment, and professional experience. Each expert compared every process with every other process using Saaty’s fundamental 1–9 scale, where 1 indicated equal influence, 2–8 intermediate levels, and 9 extreme influence; reciprocal values were assigned when the opposite process was judged more influential [33]. For nine processes, the number of unique pairwise comparisons was calculated as:

$$N = \frac{n(n-1)}{2} = \frac{9(9-1)}{2} = 36$$

where N is the number of unique pairwise comparisons and n is the number of processes. Thus, each expert provided 36 pairwise judgments, generating complete comparative data for the nine processes. The pairwise-comparison questionnaire is presented in Table IX.

Table IX. AHP Pairwise-Comparison Questionnaire for the Nine Blazer-Making Processes

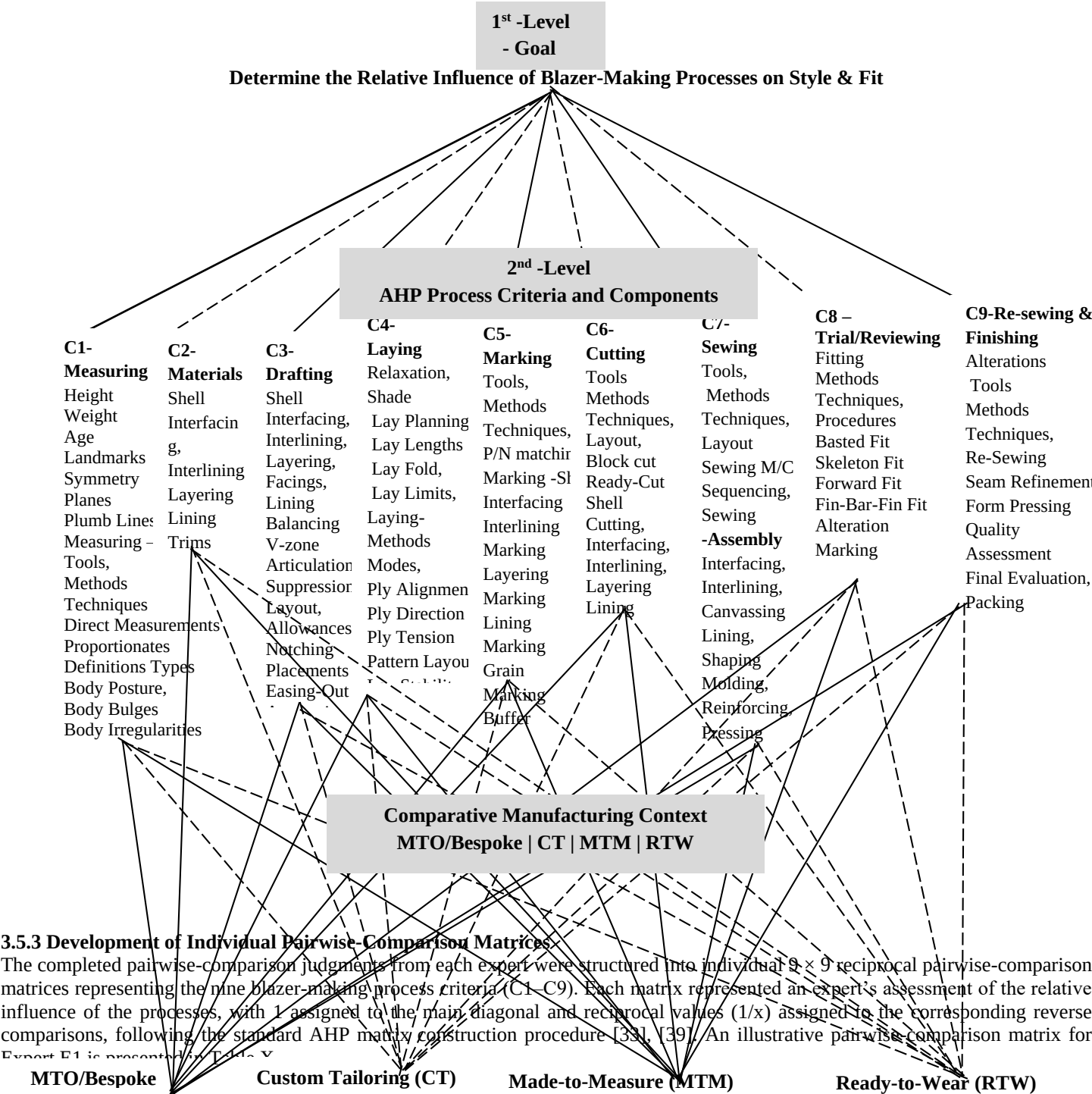
Expert Code: E1			Designation: Coat Maker																	
Blazer-Making Segment: ☒ MTO/Bespoke ☐ CT ☐ MTM ☐ RTW			Experience: 14 Years																	
Relative Influence Scale																				
Process A More Influential			Equal Influence										Process B More Influential							
SN.	Expert	Process A	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Process B

1	E1	C1–Measuring	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	C2–Materials
2	E1	C1–Measuring	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	C3–Drafting
3	E1	C1–Measuring	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	C4–Laying
4	E1	C1–Measuring	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	C5–Marking
5	E1	C1–Measuring	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	C6–Cutting
6	E1	C1–Measuring	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	C7–Sewing
7	E1	C1–Measuring	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	C8–Trial/Reviewing
8	E1	C1–Measuring	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	C9–Re-sewing & Finishing
9	E1	C2–Materials	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	C3–Drafting
10	E1	C2–Materials	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	C4–Laying
11	E1	C2–Materials	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	C5–Marking
12	E1	C2–Materials	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	C6–Cutting
13	E1	C2–Materials	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	C7–Sewing
14	E1	C2–Materials	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	C8–Trial/Reviewing
15	E1	C2–Materials	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	C9–Re-sewing & Finishing
..... Remaining pairwise comparisons (16–33) omitted for brevity																				
34	E1	C7–Sewing	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	C8–Trial/Reviewing
35	E1	C7–Sewing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	C9–Re-sewing & Finishing
36	E1	C8–Trial/Reviewing	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	C9–Re-sewing & Finishing
Note: ✓ = Expert’s selected judgment. The left side of the scale indicates greater influence of Process A, while the right side indicates greater influence of Process B. 1 = Equal influence. Scale Interpretation: 1 = Equal; 2 = Equally Moderate; 3 = Moderate; 4 = Moderate to Strong; 5 = Strong; 6 = Strong to Very Strong; 7 = Very Strong; 8 = Very Strong to Extreme; 9 = Extreme. Source: Adapted from Saaty (1980)																				

3.5.2 AHP Hierarchy

The AHP goal was to determine the relative influence of the blazer-making processes on Style and Fit using the Analytic Hierarchy Process (AHP) framework [33]. The nine validated processes—C1 Measuring, C2 Materials, C3 Drafting, C4 Laying, C5 Marking, C6 Cutting, C7 Sewing, C8 Trial/Reviewing, and C9 Re-sewing & Finishing—were established as the process criteria. The operational components within each process defined its scope and provided the basis for expert evaluation. The analysis was conducted separately for MTO/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW). These four segments constituted the comparative context for the AHP analysis, while pairwise comparisons were performed only among the nine process criteria (C1–C9). The resulting AHP hierarchical model is presented in Figure 2.

Figure 2. AHP Hierarchical Model for Blazer-Making Process Prioritisation



3.5.3 Development of Individual Pairwise-Comparison Matrices

The completed pairwise-comparison judgments from each expert were structured into individual 9 × 9 reciprocal pairwise-comparison matrices representing the nine blazer-making process criteria (C1–C9). Each matrix represented an expert’s assessment of the relative influence of the processes, with 1 assigned to the main diagonal and reciprocal values (1/x) assigned to the corresponding reverse comparisons, following the standard AHP matrix construction procedure [33], [39]. An illustrative pairwise-comparison matrix for Expert E1 is presented in Table X.

Table X. Illustrative Pairwise-Comparison matrix for Expert E1

Criteria	C1	C2	C3	C4	C5	C6	C7	C8	C9
C1 – Measuring	1	2	1/3	4	5	3	2	1	3
C2 – Materials	1/2	1	1/5	2	3	2	1/2	1/3	1
C3 – Drafting	3	5	1	7	8	7	4	3	6
C4 – Laying	1/4	1/2	1/7	1	2	1	1/3	1/4	1/2
C5 – Marking	1/5	1/3	1/8	1/2	1	1/2	1/5	1/6	1/3
C6 – Cutting	1/3	1/2	1/7	1	2	1	1/3	1/4	1

Accordingly, 96 individual pairwise-comparison matrices were constructed from the responses of the 96 experts, comprising 24 experts from each blazer-making segment. The individual matrices were subsequently aggregated within each segment using the geometric mean (GM) method to obtain a representative group judgment for each pairwise comparison [38]. The geometric-mean aggregation was applied independently to the MTO/Bespoke, CT, MTM, and RTW segments.

For each pairwise comparison between processes i and j , the geometric mean was calculated as:

$$GM_{ij} = \left(\prod_{k=1}^{24} x_{ij}^{(k)} \right)^{1/24}$$

where $x_{ij}^{(k)}$ denotes the judgment of the k th expert for the pairwise comparison between processes i and j . The resulting geometric-mean matrices were used for subsequent AHP priority-weight and consistency calculations. An illustration of the geometric-mean aggregation for the MTO/Bespoke segment is presented in Table XI.

The aggregation process produced one representative pairwise-comparison matrix for each blazer-making segment, reflecting the collective judgment of the 24 experts within that segment. These segment-level matrices formed the basis for deriving the priority weights and rankings of the nine blazer-making processes in the subsequent AHP analysis. The segment-wise aggregation also preserved the distinct judgment patterns associated with each blazer-making system, allowing differences in process importance to be examined across production contexts. This provided a consistent basis for comparing the influence of C1–C9 across MTO/Bespoke, CT, MTM and RTW while maintaining the collective perspective of experts within each segment.

Table XI. Geometric Mean Aggregation of MTO/Bespoke Expert Judgments

Expert	C1/C2	C1/C3	C1/C4	C1/C5	C1/C6	C1/C7	C1/C8	C1/C9
E1	2	0.3333	4	5	3	2	1	3
E2	2	0.25	5	5	4	2	1	3
E3	3	0.3333	4	6	4	2	0.5	3
E4	2	0.3333	4	5	3	2	1	3
E5	2	0.3333	5	6	4	2	0.5	3
E6	3	0.3333	4	6	3	2	1	3
E7	3	0.5	4	7	3	2	2	4
E8	2	0.3333	4	6	3	0.5	0.5	3
E9	3	0.3333	4	6	3	2	0.5	3
E10	2	0.5	4	5	3	2	2	3
E11	2	0.3333	3	5	2	0.5	0.5	3
E12	2	0.3333	4	6	3	0.5	0.3333	2
E13	3	0.5	4	5	2	0.5	0.5	3
E14	2	0.3333	4	6	3	0.5	0.5	3

3.5.4 AHP Analysis

The four segment-level 9×9 aggregated pairwise-comparison matrices were normalized to derive the priority weights and rankings of the nine blazer-making processes (C1–C9). Consistency was assessed using the weighted-sum vector, consistency vector, principal eigenvalue ($\lambda_{\max}$), Consistency Index (CI), and Consistency Ratio (CR), following the standard AHP procedure

3.5.4 AHP Analysis

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$$CI = \frac{\lambda_{\max} - n}{n - 1} \quad \text{and} \quad CR = \frac{CI}{RI}$$

where n is the number of processes and RI is the Random Index. A CR value of ≤ 0.10 was considered acceptable, indicating an acceptable level of consistency in the expert judgments [33], [39]. The resulting segment-level priority weights, percentages and rankings were compared across MTO/Bespoke, CT, MTM and RTW and subsequently consolidated to obtain the overall priority weights, percentages and rankings.

The AHP results were used to identify the processes receiving greater relative importance within each blazer-making segment and to examine the consistency of these priorities across segments. Particular attention was given to processes showing consistently higher priorities, providing a basis for identifying the most influential process for further investigation and methodological improvement

Table XII. Normalized Matrix and AHP Priorities – MTO/Bespoke

Criteria	C1	C2	C3	C4	C5	C6	C7	C8	C9	Weighted Sum Vector	Priority Weight	Consistency Vector (λ_i)	Rank
C1 – Measuring	0.136	0.146	0.125	0.156	0.149	0.164	0.118	0.104	0.136	1.234	0.136	9.083	3
C2 – Materials	0.070	0.075	0.071	0.097	0.081	0.070	0.069	0.066	0.082	0.681	0.075	9.064	5
C3 – Drafting	0.382	0.372	0.351	0.289	0.234	0.393	0.489	0.431	0.294	3.245	0.351	9.204	1
C4 – Laying	0.039	0.035	0.055	0.045	0.057	0.038	0.048	0.045	0.045	0.406	0.045	9.039	7
C5 – Marking	0.027	0.027	0.044	0.023	0.030	0.030	0.031	0.032	0.025	0.268	0.030	9.000	9
C6 – Cutting	0.056	0.072	0.060	0.078	0.066	0.067	0.059	0.070	0.079	0.607	0.067	9.083	6
C7 – Sewing	0.157	0.148	0.098	0.128	0.131	0.155	0.136	0.155	0.137	1.246	0.136	9.149	2
C8 – Trial/Reviewing	0.153	0.134	0.095	0.118	0.109	0.111	0.103	0.117	0.127	1.067	0.117	9.125	4
C9 – Re-sewing & Finishing	0.043	0.040	0.052	0.043	0.052	0.037	0.043	0.040	0.043	0.393	0.043	9.053	8

Consistency Parameters

Parameter Value

n	9
$\lambda_{\max}$	9.089
CI	0.011
RI	1.45
CR	0.0076

Note: Priority weights and ranks were determined using unrounded values; values are displayed to three decimal places. The consistency ratio (CR) of 0.0076 (<0.10) indicates an

Table XIII. Normalized Matrix and AHP Priorities – Custom Tailoring (CT)

Criteria	C1	C2	C3	C4	C5	C6	C7	C8	C9	Weighted Sum Vector	Priority Weight	Consistency Vector (λ_i)	Rank
C1 – Measuring	0.176	0.444	0.117	0.135	0.254	0.163	0.163	0.106	0.170	1.725	0.176	9.83	2
C2 – Materials	0.054	0.138	0.256	0.069	0.049	0.075	0.192	0.375	0.162	1.370	0.138	9.95	3
C3 – Drafting	0.394	0.139	0.258	0.223	0.251	0.270	0.353	0.407	0.232	2.522	0.258	9.78	1
C4 – Laying	0.072	0.110	0.064	0.055	0.055	0.057	0.030	0.034	0.057	0.533	0.055	9.70	6
C5 – Marking	0.028	0.115	0.042	0.040	0.041	0.044	0.037	0.028	0.025	0.400	0.041	9.81	9
C6 – Cutting	0.058	0.100	0.052	0.052	0.051	0.050	0.049	0.073	0.044	0.533	0.054	9.84	7
C7 – Sewing	0.106	0.071	0.072	0.183	0.109	0.109	0.099	0.093	0.105	0.946	0.099	9.60	5
C8 – Trial/Reviewing	0.225	0.050	0.086	0.223	0.200	0.151	0.144	0.136	0.156	1.322	0.136	9.69	4
C9 – Re-sewing & Finishing	0.045	0.038	0.049	0.043	0.071	0.054	0.041	0.039	0.044	0.425	0.044	9.60	8

Consistency Parameters

Parameter Value

n	9
$\lambda_{\max}$	9.759
CI	0.095
RI	1.450
CR	0.066

Note: Priority weights and ranks were determined using unrounded values; values are displayed to three decimal places for presentation. The consistency ratio (CR) of 0.066 (<0.10) indicates an acceptable level of consistency in the aggregated Custom Tailoring (CT) judgments.

Table XIV. Normalized Matrix and AHP Priorities – Made-to-Measure (MTM)

Criteria	C1	C2	C3	C4	C5	C6	C7	C8	C9	Weighted Sum Vector	Priority Weight	Consistency Vector (λ_i)	Rank
C1 – Measuring	0.156	0.143	0.180	0.143	0.176	0.160	0.139	0.144	0.212	1.452	0.156	9.286	3
C2 – Materials	0.067	0.061	0.059	0.075	0.057	0.072	0.052	0.053	0.064	0.560	0.061	9.223	5
C3 – Drafting	0.295	0.348	0.339	0.331	0.298	0.343	0.346	0.356	0.512	3.168	0.339	9.334	1
C4 – Laying	0.043	0.032	0.041	0.040	0.036	0.043	0.039	0.040	0.050	0.370	0.040	9.326	6
C5 – Marking	0.029	0.035	0.038	0.036	0.033	0.039	0.028	0.030	0.037	0.306	0.033	9.243	8
C6 – Cutting	0.038	0.033	0.038	0.042	0.033	0.039	0.035	0.036	0.070	0.364	0.039	9.366	7
C7 – Sewing	0.124	0.128	0.108	0.113	0.130	0.121	0.110	0.132	0.036	1.002	0.110	9.112	4
C8 – Trial/Reviewing	0.161	0.170	0.141	0.146	0.162	0.161	0.123	0.148	0.151	1.364	0.148	9.223	2
C9 – Re-sewing & Finishing	0.055	0.070	0.049	0.047	0.066	0.041	0.224	0.073	0.074	0.697	0.074	9.425	9

Consistency Parameters

Parameter	Value
n	9
$\lambda_{\max}$	9.2822
CI	0.0353
RI	1.450

Note: Priority weights and ranks were determined using unrounded values; values are displayed to three decimal places for presentation. The consistency ratio (CR) of 0.0243 (<0.10) indicates an acceptable level of consistency in the aggregated RTW judgment.

Criteria	C1	C2	C3	C4	C5	C6	C7	C8	C9	Weighted Sum Vector	Priority Weight	Consistency Vector (λ_i)	Rank
C1 – Measuring	0.161	0.196	0.121	0.258	0.202	0.209	0.198	0.081	0.128	1.558	0.161	9.650	2
C2 – Materials	0.069	0.084	0.105	0.143	0.093	0.134	0.052	0.055	0.070	0.806	0.084	9.590	5
C3 – Drafting	0.410	0.249	0.311	0.390	0.288	0.344	0.375	0.362	0.263	2.991	0.311	9.610	1
C4 – Laying	0.040	0.037	0.050	0.063	0.089	0.126	0.043	0.058	0.092	0.598	0.063	9.430	6
C5 – Marking	0.032	0.036	0.043	0.029	0.040	0.054	0.067	0.043	0.036	0.380	0.040	9.470	9
C6 – Cutting	0.047	0.038	0.055	0.030	0.045	0.061	0.134	0.091	0.070	0.572	0.061	9.440	7
C7 – Sewing	0.077	0.152	0.078	0.141	0.057	0.042	0.094	0.184	0.082	0.905	0.094	9.600	4
C8 – Trial/Review	0.285	0.219	0.123	0.158	0.134	0.098	0.074	0.143	0.145	1.375	0.143	9.610	3
C9 – Re-Sew & Finishing	0.053	0.050	0.050	0.029	0.046	0.036	0.048	0.041	0.042	0.394	0.042	9.450	8

Consistency Parameters

Parameter	Value
n	9
$\lambda_{\max}$	9.539
CI	0.067
RI	1.450

Note: Priority weights and ranks were determined using unrounded values; values are displayed to three decimal places for presentation. The consistency ratio (CR) of 0.047 (<0.10) indicates an acceptable level of consistency in the aggregated RTW judgment.

IV. RESULTS AND DISCUSSIONS

The proposed blazer-making process framework was validated through the assessments of 48 experts representing the four blazer-making segments, with 12 experts from each segment. As presented in Table XVI, all nine blazer-making processes (C1–C9) achieved overall I-CVI values ranging from 0.92 to 1.00, exceeding the recommended acceptance criterion of 0.78 [36]. The proposed process sequence received 91.67% overall expert agreement, while Style and Fit achieved I-CVI values of 1.00 and 0.98, respectively. Accordingly, all nine processes, their proposed sequence, and the two outcome attributes were retained for subsequent AHP analysis.

Table XVI. Consolidated Expert Validation Results for the Blazer-Making Process Framework Across the Four Blazer-Making Segments

I. Consolidated Validation of Blazer-Making Processes Across Four Expert Segments (N = 48)									
Process		MTO	CT	MTM	RTW	Total Rated 3–4	Overall, I-CVI	Overall, I-CVI (%)	Final Decision
C1 – Measuring		12	12	12	12	48	1.00	100%	Retain
C2 – Materials		12	11	12	12	47	0.98	98%	Retain
C3 – Drafting		12	12	12	10	46	0.96	96%	Retain
C4 – Pattern		11	12	11	12	46	0.96	96%	Retain
C5 – Cutting		12	12	12	12	48	1.00	100%	Retain
C6 – Sewing		12	12	12	12	48	1.00	100%	Retain
C7 – Finishing		12	12	12	12	48	1.00	100%	Retain
C8 – Pressing		12	12	12	12	48	1.00	100%	Retain
C9 – Quality Check		12	12	12	12	48	1.00	100%	Retain
II. Consolidated Process Sequence Validation Across Four Expert Segments (N = 48)									
Expert Segment	No. of Experts	Appropriate (A)		Not Appropriate (N/A)		Agreement (%)		Decision	
MTO	12	11		1		92%		Retain	
CT	12	12		0		100%		Retain	
MTM	12	11		1		92%		Retain	
RTW	12	10		2		83%		Retain	
Total	48	44		4		91.67%		Retain	

Validated process sequence: C1 → C2 → C3 → C4 → C5 → C6 → C7 → C8 → C9

III. Consolidated Validation of Outcome Attributes Across Four Expert Segments (N = 48)

Outcome Attribute	MTO	CT	MTM	RTW	Total Rated 3–4	Overall, I-CVI	Overall, I-CVI (%)	Final Decision
Style	12	12	12	12	48	1.00	100%	Retain
Fit	12	11	12	12	47	0.98	98%	Retain

Note: I-CVI was calculated as the number of experts rating an item as 3 (Quite Relevant) or 4 (Highly Relevant) divided by the total number of experts (N = 48). An I-CVI value of ≥ 0.78 was considered acceptable for content validity. The process sequence was assessed separately based on the percentage of experts rating the proposed sequence as “Appropriate.”

The high level of expert agreement confirms that the proposed framework adequately represents the key blazer-making processes (C1–C9) across the four blazer-making segments. Agreement on the proposed process sequence (C1 → C9) supports its use as a coherent representation of the sequential blazer-making process, while validation of Style and Fit establishes their suitability as outcome attributes for assessing process influence. Thus, the validated framework provided the basis for taking the nine processes forward as AHP criteria for comparative prioritisation across the four blazer-making segments.

4.1 Comparative AHP Priority Weights, Percentages, and Rankings of Blazer-Making Processes Across the Four Blazer-Making Segments

Following validation of the blazer-making process framework, the AHP-derived priority weights for the nine processes (C1–C9) were used to compare their relative influence on Style and Fit across the Made-to-Order (MTO)/Bespoke, Custom Tailoring (CT), Made-to-Measure (MTM), and Ready-to-Wear (RTW) segments. The comparative AHP results, including priority weights, percentages, and rankings, are presented in Table XVII.

Table XVII. Comparative AHP Priority Weights, Percentages and Rankings of Blazer-Making Processes Across the Four Blazer-Making Segments

Process	MTO	CT	MTM	RTW	Overall Weight	Overall (%)	Rank
C1 – Measuring	0.1359	0.1755	0.1564	0.1614	0.1573	15.73	2
C2 – Materials	0.0751	0.1377	0.0607	0.0840	0.0894	8.94	5
C3 – Drafting	0.3514	0.2577	0.3394	0.3114	0.3150	31.50	1
C4 – Laying	0.0449	0.0549	0.0396	0.0635	0.0507	5.07	8
C5 – Marking	0.0297	0.0408	0.0331	0.0401	0.0359	3.59	9
C6 – Cutting	0.0668	0.0541	0.0389	0.0606	0.0551	5.51	6
C7 – Sewing	0.1361	0.0986	0.1100	0.0943	0.1097	10.97	4
C8 – Trial/Reviewing	0.1169	0.1364	0.1479	0.1431	0.1361	13.61	3
C9 – Re-sewing & Finishing	0.0434	0.0442	0.0741	0.0417	0.0509	5.09	7

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4.2 Most Influential Blazer-Making Process

Among the nine processes evaluated across the four blazer-making segments, C3 – Drafting emerged as the most influential process in relation to Style and Fit, with an overall AHP priority weight of 0.3150 (31.50%; Rank 1). Its highest segment-specific priority was observed in MTO/Bespoke (0.3514; 35.14%). Accordingly, C3 – Drafting was selected for subsequent methodological pattern re-engineering in bespoke blazer making.

Table XVIII – Most Influential Blazer-Making Process Across the Four Blazer-Making Segments

Blazer-Making Segment	Most Influential Process	AHP Weight	AHP (%)	Segment Rank
Made-to-Order (MTO)/Bespoke	C3 – Drafting	0.3514	35.14	1
Made-to-Measure (MTM)	C3 – Drafting	0.3394	33.94	2
Ready-to-Wear (RTW)	C3 – Drafting	0.3114	31.14	3
Custom Tailoring (CT)	C3 – Drafting	0.2577	25.77	4

Note: Segment rank indicates the relative ranking of the four segments based on the AHP priority weight of C3 – Drafting.

5. CONCLUSION

Stage I – Expert Validation. The nine blazer-making processes (C1–C9), the proposed process sequence (C1 → C2 → C3 → C4 → C5 → C6 → C7 → C8 → C9), and the outcome attributes of Style and Fit were validated using the Item-Level Content Validity Index (I-CVI) with 48 experts representing the four blazer-making segments. All nine processes demonstrated strong content validity, with I-CVI values of 0.92 or above. The proposed process sequence received 91.67% overall expert agreement, while Style and Fit achieved I-CVI values of 1.00 and 0.98, respectively.

Stage II – AHP-Based Process Prioritisation. AHP was conducted with 96 experts to determine the relative influence of the nine processes on Style and Fit across the four blazer-making segments. C3 – Drafting emerged as the most influential process, with an overall priority weight of 0.3150 (31.50%; Rank 1), and attained its highest segment-specific priority in MTO/Bespoke (0.3514; 35.14%). Accordingly, C3 – Drafting was identified as the priority process for subsequent methodological improvement and pattern re-engineering in bespoke blazer making

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