



**FRAMEWORK OF HANFU FASHION IN THE SLOW FASHION
MOVEMENT THROUGH A CASE STUDY IN CHANGZHUTAN, CHINA**

By

ZUO SHUANGXI

**Thesis Submitted to the School of Graduate Studies,
Universiti Putra Malaysia, in Fulfilment of the Requirements for the
Degree of Doctor of Philosophy**

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in
fulfilment of the requirement for the degree of Doctor of Philosophy

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Amid rapid globalization of the fashion industry, slow fashion has emerged as a critical pathway toward sustainability. While gaining theoretical recognition, its practical adoption remains limited, necessitating deeper insights into user perception—particularly in culturally resonant contexts like China's Hanfu revival. Hanfu, a traditional Chinese garment embodying intangible cultural heritage, has witnessed surging interest among youth driven by "China-chic" trends. However, low conversion rates from admiration to habitual wear highlight persistent gaps between users' cultural aspirations (e.g., connecting with traditions, expressing responsibility) and their pragmatic evaluations of Hanfu's value proposition. To address this paradox, this study positions Hanfu as a slow fashion sample and employs a mixed-methods *Kansei* Engineering framework to decode the psychosocial drivers shaping user perception and acceptance. A Hanfu framework in the slow fashion movement was developed to better understand the emotional and aesthetic responses of users towards Hanfu. Through data collection of

32 *Kansei* words examining design-related goals, standards, and attitudes, we identified 12 strategic *Kansei* descriptors that informed the development of a multidimensional evaluation framework. This framework incorporates seven key factors: (1) style features, (2) craftsmanship, (3) innovation, (4) cultural confidence, (5) sustainability, (6) personality, and (7) pleasure. The findings suggest that user perception significantly impacts the purchasing intent and usage of Hanfu, highlighting the importance of aligning Hanfu design with user preferences and values. By incorporating the identified influencing variables into product development, designers can enhance the competitive advantage of Hanfu and support the sustainability of the Hanfu fashion industry. This study contributes to the understanding of user perception and acceptance in Hanfu fashion and offers practical insights for Hanfu designers to create more appealing and sustainable products.

Keywords: Hanfu; slow fashion; *Kansei* Engineering methodology; user perception and acceptance

SDG: GOAL 12: Responsible Consumption and Production

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**MENEROKA KERANGKA FESYEN HANFU DALAM PERGERAKAN
FESYEN LESTARI MELALUI KAJIAN KES DI CHANGZHUTAN, CHINA**

Oleh

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Dalam era globalisasi pantas industri fesyen, Fesyen Lestari telah muncul sebagai laluan kritikal ke arah kelestarian. Walaupun mendapat pengiktirafan teoritikal, pelaksanaan praktikalnya masih terhad, memerlukan pemahaman mendalam tentang persepsi pengguna - terutamanya dalam konteks budaya signifikan seperti kebangkitan semula Hanfu di China. Hanfu, pakaian tradisional China yang mewadahi warisan budaya tidak ketara, telah menyaksikan peningkatan minat dalam kalangan belia yang didorong oleh tren "China-chic" (fesyen ala China). Namun, kadar penukaran rendah daripada kekaguman kepada pemakaian rutin mendedahkan jurang berterusan antara aspirasi budaya pengguna (contohnya: menghubungkan tradisi, meluahkan tanggungjawab) dan penilaian pragmatik terhadap proposisi nilai Hanfu. Untuk menangani paradoks ini, kajian ini memposisikan Hanfu sebagai sampel Fesyen Lestari dan menggunakan rangka kerja Kejuruteraan *Kansei* berkaedah campuran untuk mendekod pamacu psikososial yang membentuk persepsi dan penerimaan pengguna.

Rangka kerja Kejuruteraan *Kansei* dibangunkan untuk memahami respons emosi dan estetik pengguna terhadap Hanfu. Melalui pengumpulan data 32 perkataan *Kansei* yang mengkaji matlamat, piawaian dan sikap berkaitan reka bentuk, kami mengenal pasti 12 deskriptor *Kansei* strategik yang membentuk pembangunan rangka kerja penilaian multidimensi. Rangka kerja ini menggabungkan tujuh faktor utama: (1) ciri-ciri gaya, (2) kraf tangan, (3) inovasi, (4) keyakinan budaya, (5) kelestarian, (6) personaliti, dan (7) kepuasan. Dapatan kajian menunjukkan persepsi pengguna memberi kesan signifikan terhadap niat pembelian dan penggunaan Hanfu, menekankan kepentingan menyelaraskan reka bentuk Hanfu dengan keutamaan dan nilai pengguna. Dengan menggabungkan pemboleh ubah pengaruh yang dikenal pasti dalam pembangunan produk, pereka boleh meningkatkan kelebihan daya saing Hanfu sekaligus menyokong kelestarian industri fesyen Hanfu. Kajian ini menyumbang kepada pemahaman penerimaan pengguna dalam fesyen Hanfu dan menawarkan wawasan praktikal untuk pereka Hanfu mencipta produk yang lebih menarik dan mampan.

Kata Kunci: Hanfu, Fesyen Lestari, Metodologi Kejuruteraan *Kansei*, Persepsi dan penerimaan pengguna.

SDG: MATLAMAT 12: Penggunaan dan Pengeluaran **Bertanggungjawab**

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LIST OF ABBREVIATIONS

SDGs	Sustainable Development Goals
KE	<i>Kansei</i> Engineering
MANOVA	Multivariate Analysis of Variance
EFA	Exploratory Factor Analysis
FA	Factor Analysis
AR	Augmented Reality



CHAPTER 1

INTRODUCTION

This chapter provides an overview of sustainability, slow fashion, and the challenges faced by Hanfu fashion within the slow fashion movement from the perspective of user perception and acceptance. The study aims to identify the key factors influencing user perception and acceptance of Hanfu fashion and explore how *Kansei* Engineering methodology can be applied to construct a framework for Hanfu fashion in the context of the slow fashion movement. The research objective is to establish a comprehensive framework for Hanfu fashion using *Kansei* Engineering. The scope of this study focuses on young adults aged 18 to 28 in the Changzhutan region of China. This research not only supports the promotion and sales of Hanfu products but also facilitates the expansion of the Hanfu fashion industry, serving as a valuable reference for guiding principles in Hanfu fashion design. The organization of the thesis is outlined at the end of this chapter.

1.1 Background of Study

Fashion represents the distinctiveness of time, place, and culture. Forms of dressing throughout the world and from a historical perspective, “fashion” has become an expression of culture, geography, climate, and personality (Štefko & Steffek, 2018). Following the rapid development of the global fashion industry, sustainability has become a challenge for the fashion industry. The concept of sustainability has been extended to consumption due to the environmental impact of using fashion products. Therefore, user

perception and acceptance have become a crucial aspect of the sustainable fashion industry.

Slow fashion is identified as a pathway for the fashion industry to achieve sustainability. The slow approach promotes responsible production to achieve sustainability, creates value for garments through quality design, and encourages recognition of its link with the environment and the apparel manufacturer (Gardetti & Torres, 2017). This phenomenon is particularly unique given how a corporation considers users to promote personal relations and awareness of the supply chain. Slow fashion is a new model that aims to preserve the ecosystem, in an ethical, and sustainable fashion in a single movement, which serves to meet essential human needs, while allowing for the natural regeneration of Earth. To encourage sustainable consumption of slow fashion, designers must understand and incorporate consumers' expectations and behaviours into the product design (Islam & Ali Khan, 2024).

A survey conducted by Şener et al. (2019) revealed extremely low customer perception of the effects of the fashion industry and identified sustainability as a small niche. Limited perception and acceptance of consumers result in low awareness of the connection of sustainable consumption with the environment. Poor perception and acceptance towards the level of environmental pollution have contributed to ineffective disposal of textiles. (Xu et al., 2019) highlighted the substantial quantities of textile waste in landfill sites every year, resulting in the emergence of critical environmental

pollution involving harmful materials and carbon emissions. Old clothing (or unwanted clothing) is a major part of textile waste. At present, most of the old clothes (or unwanted clothes) are still disposed of at landfill sites, resulting in critical environmental pollution. Many Chinese cities have opted for waste sorting, but the lack of this practice among users cannot effectively reduce the quantities of textile waste. For example, in the first national-level metropolitan area in central China-Changzhutan metropolitan area, textile waste constitutes 7.2% of the total waste composition, which is equivalent to approximately 500 metric tons of textile waste per day (X. Li et al., 2021); this amount steadily increases in Changsha.

Hanfu fashion products were chosen as an example of slow fashion in this study. Hanfu is not just a type of clothing but a cultural symbol that represents the rich history and traditions of the Han Chinese (L. Lin, 2021). It embodies values such as elegance, convenience and innovation, which are in line with the principles of slow fashion. Hanfu fashion can promote sustainable fashion practices (Z. Chen, 2024), such as using natural fabrics, traditional dyeing techniques, and handcrafted details (Y. Li et al., 2020). This can contribute to reducing the environmental impact of the fashion industry.

There is a need to ensure the quality and authenticity of Hanfu products, as the market has been flooded with cheap imitations. This requires stricter regulations and standards for production and sales. Hanfu should be respected as a cultural heritage, and there should be a clear distinction

between cultural appreciation and appropriation (K. Li, 2021). This can be achieved through education and awareness campaigns. While preserving the traditional elements, Hanfu fashion needs to be adapted to modern lifestyles and fashion trends (R. Fan, 2021). This can involve incorporating modern silhouettes, fabrics, and accessories.

Studying Hanfu fashion in the slow fashion movement can help strengthen cultural identity and pride among the Chinese people, especially the younger generation (C. Fan & Ip, 2023). It can provide a platform for educating people about sustainable fashion practices and the importance of preserving cultural heritage. The combination of Hanfu and slow fashion can inspire new designs and innovations, leading to the development of a unique and sustainable fashion style.

In conclusion, addressing the issues related to Hanfu convincingly is crucial for justifying its study in the slow fashion movement and for revising the real problems in Chinese fashion. This requires a combination of cultural preservation, sustainable practices, and modern innovation. Considering the growing extent of environmental degradation, examining consumers' attitudes towards Hanfu fashion and the direction of their disposal behaviour is particularly significant. Their perception and acceptance towards the framework of Hanfu fashion in the slow fashion movement need to be studied urgently for a more sustainable future. More studies on the formulation of a better framework for Hanfu fashion, as well as the relationship between slow fashion and sustainability, including how to

connect and match these overlapping concepts, should be conducted to gain a better understanding of slow fashion from the perception and acceptance of consumers. Constructing a framework of Hanfu fashion in the slow fashion movement is a part of the expansion of sustainable concepts, which can promote design ability and level of slow fashion products for designers and applications for users.

1.2 Problem Statement

This study mainly focused on addressing the issues of sustainability and slow fashion based on user perception and acceptance and to determine the direction of the Hanfu fashion development. Integrating Hanfu fashion within the slow fashion movement can offer an optimized framework for Hanfu design, thereby facilitating the sustainable development of this traditional attire. This approach may enhance the ecological and cultural sustainability of Hanfu fashion by promoting mindful production and consumption practices.

The slow fashion movement has been steadily gaining momentum on a global scale, with a focus on sustainable production, ethical consumption, and the preservation of cultural heritage. This movement underscores the principles of "slow living," which prioritizes cultural depth and quality in fashion. By advocating for thoughtful design, durable materials, and traditional craftsmanship, slow fashion encourages a more mindful approach to clothing production and consumption. It seeks to foster an environment where garments are valued not only for their aesthetic appeal but also for their lasting significance and environmental impact (Jia, 2023). The

popularity of Hanfu also reflects modern people's longing for traditional culture and their aspiration for a slower-paced life. Modern Hanfu, while retaining traditional elements, incorporates more designs that conform to contemporary aesthetics, such as improved styles and lightweight materials, gradually evolving from "costumes for performances" to everyday wear. This combination not only satisfies consumers' sense of identification with traditional culture but also accommodates the fast-paced demands of modern life (White, 2024). The modern innovation of Hanfu is not only a revival of clothing culture but also an inheritance and innovation of traditional culture (L. Lin, 2021). It reinterprets traditional clothing through modern design language, becoming a "slow fashion" product that combines cultural value and fashion sense. This combination of culture and fashion has gained extensive recognition among the younger generation.

1) Challenges for Wearing Hanfu in Daily Life

Hanfu enjoys a relatively high acceptance among young people, especially those born after 1995 and 2000, who view it as a means to express cultural identity and individuality (Tibberts, n.d.). However, there are still numerous challenges for wearing Hanfu in daily life. For instance, the cumbersome process of wearing Hanfu, its relatively high price, and its functional limitations (such as restricted movement) make some users hold a reserved attitude towards wearing it daily (Lee, n.d.). There are still stereotypes about Hanfu in society, such as considering it as "strange clothing" or overly old-fashioned. Such prejudice leads some people to reject Hanfu and even encounter strange looks when wearing it. Moreover, excessive criticism from

some Hanfu enthusiasts towards non-traditional ways of wearing it also limits its popularization in daily life.

2) Severe Homogeneity

Hanfu users generally pursue a sense of cultural identity and aesthetic satisfaction. They express their love for traditional culture by purchasing and wearing Hanfu and hope to obtain a unique sense of identity through this. Merchants meet users' novelty-seeking psychology and aesthetic needs through innovative designs and the integration of modern elements (Hu, 2014).

The Hanfu market has grown rapidly in recent years, reaching a scale of 14.47 billion yuan in 2023. It is projected to increase to 24.18 billion yuan by 2027 (*China_ Hanfu Industry Market Size 2027 _ Statista*, n.d.). However, the promotion of Hanfu still faces problems such as severe homogeneity and small profit margins. Future development requires further optimization of product design to meet consumers' demands for lightness, practicality, and aesthetics.

3) The Lack of Correct Value Determination of Hanfu

The challenges of Hanfu development come from the awareness of consumers. Most consumers prefer new apparel products, resulting in overconsumption and a high elimination rate of apparel products—these patterns hinder the promotion of Hanfu fashion (Ip & Fan, 2024). Hanfu is a typical example of slow fashion based on the definition of slow fashion,

Hanfu cultural inheritance, the durability of quality, and unique Han artistic style, performance, and aesthetics. With the rise of China-chic, Hanfu fashion has provided a way that embrace Chinese culture and express a sense of national and personal identity (X. Li et al., 2024). As the main force of the national tide, Hanfu has gained growing recognition among the younger generation, which has contributed to the significant expansion of the traditional culture and Hanfu market (C. Zhang & Gong, 2023).

Due to the expansion of the consumer base and Hanfu market, the requirements for Hanfu products inevitably increase among consumers. Chinese Hanfu consumers consider factors like style, construction, and durability in Hanfu purchases (X. Li et al., 2023). Users develop certain criteria of preference judgement due to the specific values of Hanfu. The lack of correct value determination of Hanfu has led to users' low desire to purchase Hanfu. User perception and acceptance are considered important sources of competitive advantage.

Hence, understanding user perception and acceptance is vital for the sustainable development of Hanfu. The obtained findings would substantially assist Hanfu designers in their efforts to design more popular and attractive Hanfu products, expanding the Hanfu market.

1.3 Research Questions

The emergence of Hanfu fashion over the past two decades can be traced back to a pivotal moment in 2003. During this landmark event, Wang Letian,

an electrician from Zhengzhou, Henan Province, publicly donned traditional Hanfu attire on the city's streets. This act marked the beginning of the modern Hanfu revival movement. (*Hanfu_ Weaving Pride with Fashion - Global Times*, n.d.). This Hanfu movement has promoted the development of contemporary Hanfu Fashion. This act of public display of traditional attire garnered substantial attention and ignited widespread discussions regarding the cultural significance of Hanfu among the Chinese populace. Wang's deliberate choice to wear Hanfu was not merely a casual gesture but a profound cultural expression, symbolizing a connection to China's rich historical and cultural heritage. This incident is widely recognized as the inception of the modern Hanfu movement (Jia, 2023).

Since then, the Hanfu movement has gained considerable momentum through various channels, including social media platforms, cultural events, and online communities. Today, a growing number of Hanfu enthusiasts across China actively participate in activities such as wearing Hanfu during festivals, attending cultural events, and forming dedicated groups to promote and preserve this traditional practice (R. Fan, 2021). These collective efforts have propelled Hanfu from an obscure subculture to a popular trend, particularly among the younger generation (Williams & Cesarino, 2024).

The resurgence of Hanfu fashion is intrinsically linked to a broader cultural revival in China. As more individuals embrace traditional Chinese culture, Hanfu has evolved into a powerful symbol of national pride and cultural identity (Fu, 2023). This trend underscores a growing interest in exploring

and preserving China's extensive historical and cultural heritage. The act of Wang Letian wearing Hanfu on the streets of Zhengzhou in 2003 stands as a pivotal moment that initiated the modern Hanfu movement. It not only highlighted the cultural significance of traditional Chinese attire but also inspired a new generation to engage with and celebrate their heritage through fashion.

Firstly, Hanfu displays Chinese culture and expresses a sense of national and personal identity (Dai, 2023). When it comes to the development of the Hanfu fashion process, wearing Hanfu has become a fashionable trend for the young generations in China to express their individuality and cultural confidence. Furthermore, contemporary young generations intend to build a pure, utopian social vision and an idealised historical era through the classical and innovative styles of Hanfu (Goring et al., 2023). Chinese young generations pursue cultural reflection and identity in the “virtual community”. Therefore, the Hanfu movement provides the Han youth group with an opportunity to pursue national cultural identity and reflection. In contemporary society, the young generation represents the main pillar of the Hanfu consumption group; wearing Hanfu reflects the inheritance and identification of traditional culture.

Although the Hanfu movement has promoted the development of modern Hanfu, Hanfu fashion is still an emerging fashion. Hanfu fashion in China has just started to develop. There are over 3,500 Hanfu-related enterprises in China in 2015 to 2024, and nearly 80% of these enterprises were

established within five years (*Industry Research Report_ My Country's Hanfu Industry Market Size Has Reached 10.5 Billion Yuan--QYResearch*, n.d.). From 2015 to 2024, the number of Hanfu-related enterprises in China has exceeded 3,500, and nearly 80% of these enterprises were established within the last five years (Yang et al., 2021). The Hanfu market has shown rapid development in the past five years. China's Hanfu fashion industry recorded 11.98 million consumers in 2022, which increased from the recorded figure in 2021 by 17.3% (*Global Hanfu Market Size, Trends and Projections*, n.d.). The expansion of the Hanfu market in the future is projected.

With the increase in the number of consumers and the continuous expansion of the Hanfu market, there would inevitably be more diverse demands from consumers. Therefore, understanding the demands of consumers is vital for the development of Hanfu fashion, especially for designers to design more popular Hanfu products for the Hanfu market expansion and the sustainable development of Hanfu fashion.

Hanfu fashion, which has the characteristics of commercial consumption and cultural identity, is an emerging fashion industry in China (Ip & Fan, 2024). With its detailed dressing requirements and conventional etiquette regulations, this traditional Chinese culture displays significant potential to grow. Besides that, the continuous development of green clothing technology endows Hanfu with the connotation of sustainable development. Style, brand, price, service, and quality of a product are the main factors that affect the

buying decision of users or consumers and constitute key management issues to be addressed (Štefko & Steffek, 2018). The current study focused on analysing the sustainability issues in Hanfu fashion in terms of style, brand, price, service, and quality.

1) Style

Hanfu style is not adjusted to the current lifestyle daily. Firstly, the styles of Hanfu mostly include loose coats with large sleeves and long skirts. Wearers need to match their Hanfu with appropriate makeup, hairstyle, and accessories, which take up too much time (R. Fan, 2021). In other words, wearing Hanfu goes against the current lifestyle in which the young generation pursues a simple, convenient, and comfortable lifestyle. In addition, complicated designs and ways of wearing are not suitable for the daily working environment and habits, which would affect daily activities and can be incredibly inconvenient for movement (Hu, 2014). Therefore, designers should design “daily” Hanfu styles to meet the current needs and demands of consumers for the current lifestyle, which can potentially promote the transfer of the values of Chinese traditional culture.

2) Brand

Many good brands have emerged in the Hanfu market, such as Shisanyu, Return to Hantang, and Hanshang Hualian. However, brand influence, public praise, and brand image have remained inconspicuous and not outstanding. Young consumers represent the main force of Hanfu consumer groups, accounting for as high as 90%. This group mainly consists of generations of

post-90s and post-00s; they like new things and traditional culture. Their consumption needs are diversified and personalised (L. Lin, 2021). As they have low loyalty to the Hanfu brand, it is more challenging to motivate them to repurchase.

3) Price

Mainstream and high-end price ranges are well-accepted among Hanfu consumers today. There is a wide range of prices for Hanfu, ranging from tens of yuan to tens of thousands of yuan. The survey data of Hanfu Information revealed the following: (1) the purchase rate of Hanfu for the price of below 100 yuan was only 1.4%; (2) the purchase rate of Hanfu for the price of 100–299 yuan was as high as 41.8%; (3) the purchase rate of Hanfu for the price of 300–499 yuan was 28.9%; (4) the purchase rate of Hanfu for the price of 500–999 yuan was 5.8%; (5) the purchase rate of Hanfu for the price of more than 1,000 yuan reached 22.2% (Jian, 2024). In other words, the mainstream price range for Hanfu consumption ranges from 100 yuan to 299 yuan. Besides that, there are demands for high-end Hanfu (above 1,000 yuan) with exquisite craftsmanship and fashionable styles(X. Li & Xiong, 2021).

4) Service

The current service of Hanfu may not be able to fully satisfy all consumers' needs. Firstly, the production of Hanfu mainly involves the handmade approach, which results in a long production cycle. It is difficult for its productivity to meet the rapidly growing demands of consumers. Moreover,

the online sales of Hanfu provide customised services and adopt the pre-sale online business model. Delayed gratification is a sense of feeling that manifests when consumers purchase Hanfu online. This business model cannot guarantee the interests of consumers, as they cannot immediately obtain a sense of superior consumption experience and pleasure.

In recent years, the sustainability of supply chains has gained growing attention. Sustainability in fashion and textiles fosters ecological integrity and social equity through products, actions, relationships, and practices (Cegarra-Navarro et al., 2025). Use, reuse, recycling, and disposal of Hanfu products in the supply chain are relevant to sustainability. Hanfu rental service encourages users or consumers to reuse Hanfu products. Rental is a way that can extend the lifespan of slow products, which is a major factor that can reduce the environmental impact of the slow fashion industry (Bodenheimer et al., 2022; Clube & Tennant, 2020).

5) Quality

The products of the upscale Hanfu brands come with a higher price range and exquisite handcraft, but their output is low. The quality is reduced to reduce the costs involved, but this unfavourably affects the Chinese Hanfu market. Natural materials, such as cotton, fibrilla, bamboo fibre, and silk, are used in upscale Hanfu products, resulting in higher costs. Most Hanfu clothing uses polyester, a synthetic fabric manufactured through chemical processes, as its primary textile material (clsrich, 2024). The use of these fabrics decreases the costs of Hanfu products. These fabrics negatively

affect the environment, as these fabrics do not decompose naturally. Therefore, it is a critical issue to balance the relationship between Hanfu production and environmental sustainability for the Hanfu fashion industry.

Without any doubt, all five discussed factors have a significant influence on the sustainable development of Hanfu products. The design of Hanfu can reflect emotional durability involving the wearer's emotion and cultural identity, fostering the sustained use of products among consumers. However, most Hanfu lovers do not translate their positive emotions towards Hanfu to their actual behaviour (consumption). Connor-Crabb & Rigby (2019) described durability as user-based, rather than product-based because it is limited by consumer behaviour and consumption practices. Therefore, the sustainable development of Hanfu should be critically considered to develop Hanfu products that meet the market demand by tapping into consumers' inner needs and understanding user perception and acceptance of Hanfu fashion.

The Hanfu fashion aligns with the global slow fashion movement, which emphasizes sustainable production, ethical consumption, and cultural heritage preservation. As a cultural symbol, Hanfu represents respect for tradition and the pursuit of life aesthetics (Tomasic, 2023). Back then, the widespread adoption of Hanfu in daily life was impeded by a confluence of factors rooted in user perception and acceptance. On one hand, the cumbersome nature of wearing Hanfu, coupled with its relatively high cost and functional limitations such as restricted movement, fosters a reserved

attitude among some users towards incorporating it into their everyday attire (Hu, 2014). Moreover, societal stereotypes marking Hanfu as "strange" or overly old-fashioned further exacerbate the issue, leading to prejudice and even strange looks when it is worn, which in turn prompts some people to reject it (Shi, n.d.). Additionally, excessive criticism from certain Hanfu enthusiasts towards non-traditional ways of wearing it also hampers its popularization (L. Lin, 2021). On the other hand, from a market perspective, the promotion of Hanfu is also hindered by problems such as severe homogeneity and small profit margins (Dong, 2024). Therefore, understanding and addressing these multifaceted challenges from user perception and acceptance is crucial for the future development of Hanfu, which necessitates further optimization of product design to meet consumers' demands for lightness, convenience, practicality, and aesthetics.

The current study addressed the following research questions (RQ):

- RQ1: What are the influencing factors of Hanfu fashion in the slow fashion movement?
- RQ2: What are significant aspects of user perception and acceptance of Hanfu fashion in the slow fashion movement?
- RQ3: How can *Kansei* Engineering methodology be used to construct a framework of Hanfu fashion in the slow fashion movement for designers and users?

1.4 Research Objectives

Based on the highlighted problems, the current study focused on exploring a framework of Hanfu in the slow fashion movement. The research aims to

explore how to enhance the daily adoption of Hanfu by addressing user perception and acceptance challenges, optimizing product design for practicality and aesthetics, and overcoming market barriers such as homogeneity and profit margins, to align its revival more closely with the principles of slow fashion and cultural heritage preservation. The ultimate goal is to optimize Hanfu's design to meet consumer demands for practicality, convenience, and aesthetics, thereby promoting its integration into modern life while preserving its cultural significance.

The specific objectives of this study are presented in the following:

- RO1: To identify the influencing factors of Hanfu fashion in the slow fashion movement
- RO2: To analyse significant aspects of user perception and acceptance of Hanfu fashion in the slow fashion movement
- RO3: To construct a framework of Hanfu fashion in the slow fashion movement using *Kansei* Engineering methodology for designers and users of Hanfu fashion

1.5 Scope of Study

This study identified the dynamic relationship between slow fashion and Hanfu fashion by reviewing the existing literature. The current features of Hanfu fashion and the influencing factors of slow fashion in Hanfu fashion were identified by analysing the existing products. The important user perception of Hanfu fashion were analysed using Experience Map. The good design elements of Hanfu were determined using the *Kansei* Engineering (KE) methodology. An Experience Map was created to assist *Kansei*

Engineering in collecting user perception and acceptance (i.e., *Kansei* words) of Hanfu fashion. This is because KE may gather consumers' perceptual and emotional experiences, which can translate consumers' feelings about the product into the design elements (Zhao et al., 2024). Through KE, the values and the good design elements of products can be discovered and the design of a new product concept can be established based on the knowledge of consumers' emotions and needs (Aydoğan et al., 2020). Exploring the framework of Hanfu fashion in the slow fashion movement based on user perception and acceptance using *Kansei* Engineering Type I was formulated.

Young individuals of the age of 18 to 28 years old study represent the most active and dynamic force in society. They are mainly students from institutions of higher learning and young workers. They would contribute to the awareness and activities of sustainability in the fashion industry, especially when they learn that Hanfu belongs to slow fashion and can efficiently reduce textile waste. They can influence the awareness of the next generation in sustainability. Furthermore, this young generation of the age of between 18 and 24 years is of those who were born after 2000. Their parents are more likely to pay attention to their perspectives and willing to accept most of their ideas and way of life, especially since most families in China are based on having one child only. Focusing on this group would provide more intangible contributions and significance. Moreover, different fashion brands have different positioning consumption groups due to the distinction characteristics of physiology and psychology among specific ages in the fashion industry.

Thus, this study exclusively focused on young individuals between the ages of 18 and 28 years to explore their preference and acceptance of Hanfu fashion in the slow fashion movement. With that, students from institutions of higher learning and young workers in Changzhutan area were targeted. Besides that, this study selected Hanfu fashion that currently represents Chinese traditional Hanfu culture in China. The involvement of these young people in this study was also attributed to their interest in Hanfu for social activities.

In particular, selected respondents from Changzhutan were required to participate in learning about knowledge of fashion trends, before they were able to participate in this study's questionnaire survey. The learning content included the division of the fashion industry, sustainability in the fashion industry, and the future trends of the fashion industry. As these respondents had the opportunity to gain knowledge about sustainability through their participation in learning about knowledge of fashion trends, it was assumed that they had an adequate understanding of the sustainability concept. Furthermore, as they learnt that sustainability is the future trend, it was postulated that their perception and acceptance would influence their intention and actual behaviour in fashion product purchases.

The study will ensure the authenticity of questionnaires and get the slow fashion products of wanting and needs influence factors by consumers to improve slow fashion products design level. Students who had a poor understanding of the sustainability concept were excluded from this study's

questionnaire survey. Concerning the research questions and objectives, the obtained results were expected to validate the proposed sustainability framework of slow fashion effectively.

1.6 Significance of Study

This study aimed to optimize Hanfu design to meet consumer demands for practicality, convenience, and aesthetics, thereby promoting its integration into modern life while preserving its cultural significance, constructing a framework of Hanfu fashion in the slow fashion movement using *Kansei Engineering* methodology for designers and users of Hanfu fashion, which can support the sales of Hanfu products and enhance the expansion of Hanfu fashion industry.

The findings can also help designers design Hanfu products that consider consumers' needs, which can subsequently improve the competitive advantage of Hanfu products in the fashion market. Furthermore, the constructed framework in this study served as a good reference for guiding principles of slow fashion design for designers.

1.7 Thesis Organisation

Overall, this thesis consists of six chapters, with each chapter dealing with different aspects of constructing the framework of Hanfu fashion in the slow fashion movement (Figure 1.1).

Chapter 1 introduced the direction of this study. This chapter also described the background of study, problem statement, research questions and objectives, scope of the study, and significance of the study.

Chapter 2 presents a review of related literature. Firstly, for the first objective of this study, this chapter explores the relationship between sustainability, slow fashion and Hanfu fashion, then collects the current state of Hanfu fashion in China. Secondly, concerning the second objective of this study, this chapter explores the theory of user perception and acceptance. Thirdly, concerning the final objective of this study, this chapter explores the application of the *Kansei* Engineering method within the context of Hanfu fashion in the slow fashion movement regarding user perception and acceptance. The review of related literature contributed to the development of this study's preliminary theoretical framework of Hanfu fashion in the slow fashion movement based on user perception and acceptance.

Chapter 3 explains and justifies the adopted methodology in this study. Firstly, this chapter describes the research framework and explains its relation to the adopted design methods in this study. Secondly, this chapter describes this study's research design concerning each objective. How data were collected and analysed in this study is also described in this chapter.

Chapter 4 presents the data collection of this study through qualitative research. Addressing the research questions (RQ1 and RQ2) and objectives (RO1 and RO2), this chapter discusses the influencing factors of slow

fashion in Hanfu fashion, screening *Kansei* words, the significant aspects of user perception and acceptance of Hanfu fashion, and constructing the preliminary theoretical framework of Hanfu fashion.

Chapter 5 presents the obtained data analysis and discussion of this study through quantitative research. Addressing the research question (RQ3) and objective (RO3), this chapter discusses the goals of users towards Hanfu, the standards of users towards Hanfu, the attitudes of users towards Hanfu and good design elements. Lastly, the construction of a framework of Hanfu fashion in the slow fashion movement, and this chapter interprets the validation results of the constructed framework of Hanfu fashion.

Chapter 6 concludes the overall study. This chapter summarises the key findings of this study and describes this study's contribution of knowledge, limitations of study, and recommendations for future research.

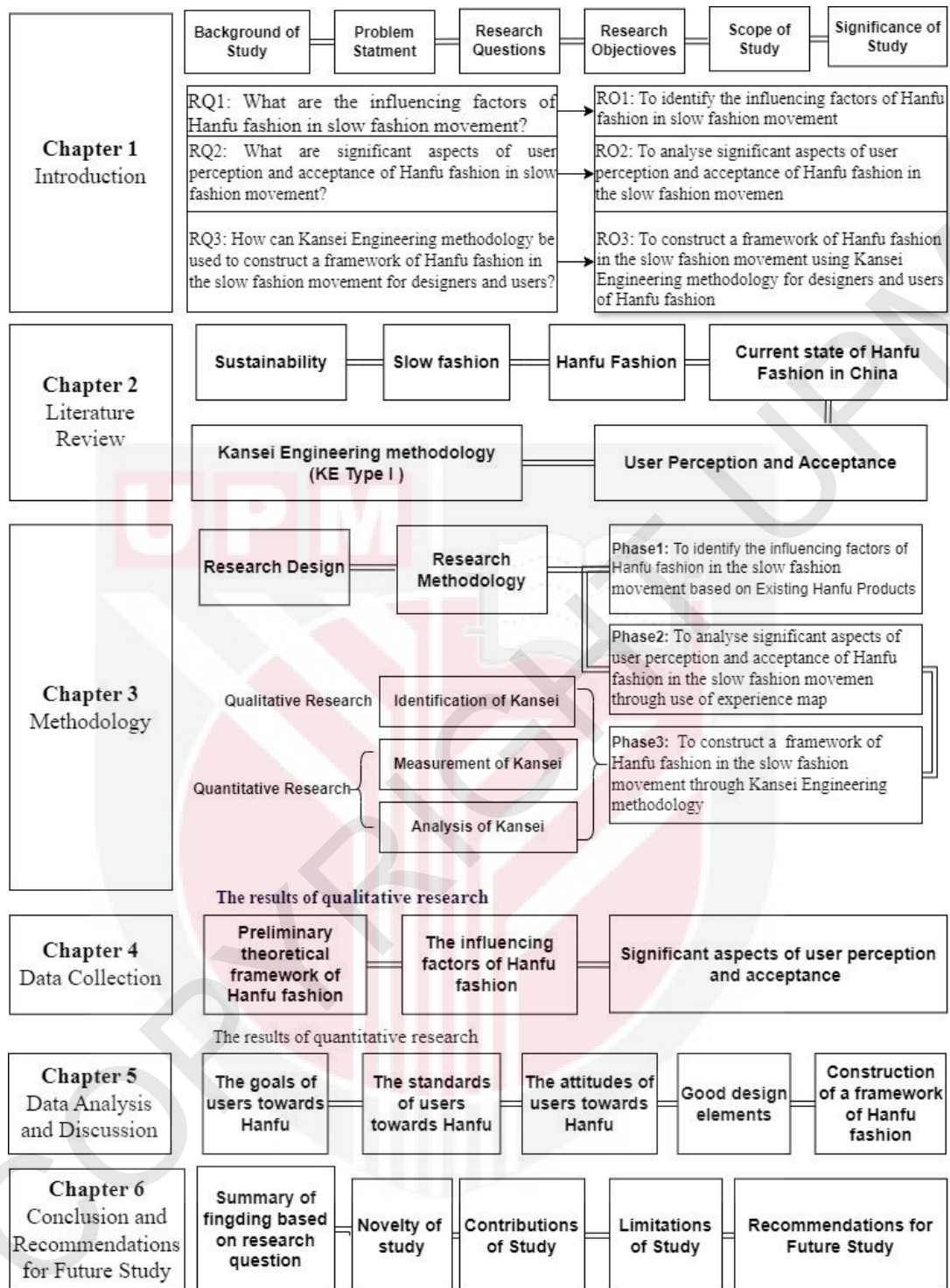


Figure 1.1 : Research Structure
(Source: Author's own illustration)

CHAPTER 2

LITERATURE REVIEW

In recent years, the intersection of sustainability, slow fashion, and traditional cultural revival has gained significant attention within the fashion industry, particularly in the context of Hanfu fashion in China. This literature review aims to explore the current state of Hanfu fashion in China, its alignment with sustainability and slow fashion principles, and the role of *Kansei* engineering methodology in enhancing user perception and acceptance. The resurgence of Hanfu fashion represents not only a cultural renaissance but also a movement towards sustainable and ethical fashion practices. As the Hanfu movement continues to grow, it is essential to understand how this traditional attire is being adapted to modern wearability while maintaining its cultural integrity and sustainability. Additionally, the application of *Kansei* engineering methodology in fashion design offers a promising approach to better understand consumer preferences and enhance the acceptance of Hanfu in contemporary society. This literature review will synthesize existing research to provide a comprehensive understanding of these interrelated themes and identify potential areas for further investigation.

2.1 Sustainability

The major goal of sustainability is to ensure that people can live in peace and harmony with the environment for many years to come (Leal Filho et al., 2019; Purvis et al., 2019). In 1987, Brundtland's report "Our Common Future" offered the classic, modern, and widely accepted definition of sustainability:

“sustainable development pursues a balance among ecosystem and human needs” (Secretary-General & Development, 1987). In other words, sustainability means meeting the present demands without jeopardising future generations’ requirements (Mhlanga, 2023). Sustainable practices are commonly linked to the environmental, economic, and social aspects, which represent the “triple bottom line” of sustainability (Correia, 2019).

The fashion industry contributes substantial environmental impact, primarily through the use of large amounts of water, the emission of carbon dioxide, and the release of harmful chemicals to the environment (e.g., from the dyeing process)(Niinimäki et al., 2020) . The Sustainable Development Goals (SDGs) are a set of 17 global goals adopted by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development. These goals aim to address a wide range of social, economic, and environmental challenges and guide countries towards a more sustainable and equitable future by the year 2030 (Thakker & Sun, 2023). Fashion design can significantly contribute to the SDGs by promoting sustainable energy use and responsible material consumption. Specifically, it can support **SDG 7: Affordable and Clean Energy** through the adoption of renewable energy sources in production processes, such as using solar power in manufacturing facilities (Jayachandran et al., 2022). This reduces the industry's carbon footprint and aligns with global efforts to combat climate change (D'Itria & Vacca, 2024). For **SDG 12: Responsible Consumption and Production**, fashion design can embrace circular economy principles (Gabriel & Luque, 2020). Designers can use sustainable materials like organic cotton and recycled fabrics, and

create zero-waste patterns to minimize fabric waste. Additionally, designing for longevity and recyclability extends the life cycle of garments, reducing overall material consumption (D'Itria & Vacca, 2024; Niinimäki, 2024). Consumer perception is also key. Modern consumers, especially younger generations, are increasingly eco-conscious. Brands must communicate their sustainable practices transparently to build consumer trust and drive the adoption of sustainable fashion (M. Wang et al., 2025). As a result, fashion design can play a crucial role in achieving the SDGs 2030 by integrating renewable energy, adopting circular economy principles, and engaging consumers in sustainable practices. Collaboration across the industry is essential to create a more sustainable fashion ecosystem.

2.2 Slow Fashion

2.2.1 The Definition of Slow Fashion

The concept of slow fashion has emerged as a significant counter-movement to the fast fashion industry, which has long been criticized for its environmental and social impacts. Slow fashion is characterized by a set of principles that prioritize sustainability, ethical production, quality, and durability over the rapid turnover of trends and disposable clothing. The term "slow fashion" as a response to the fast fashion model, emphasizing the need for sustainable and ethical practices in the fashion industry (Cortazar et al., 2025; Heiniemi, 2024). Slow fashion is defined by its commitment to eco-friendly materials, reduced waste, and circular systems, which minimize the environmental footprint of clothing production. It also advocates for timeless

designs, durable craftsmanship, and small-batch production to extend the lifespan of garments (Sarokin & Bocken, 2024; Siaw et al., 2024). Ethical production is another cornerstone of slow fashion, which includes fair wages, safe working conditions, and transparent supply chains (Jamil, 2024). Additionally, slow fashion emphasizes cultural and emotional connections to clothing, often through the use of artisanal techniques and locally sourced materials (Bommanavar & Malipatil, 2024). This approach not only supports local economies but also fosters a deeper emotional bond between consumers and their clothing (A. Liu et al., 2022).

From a consumer perspective, slow fashion offers several transformative benefits. Mindful consumption is a key aspect of slow fashion, as consumers are encouraged to prioritize quality over quantity. This shift leads to more versatile and enduring wardrobes, reducing the psychological pressures associated with trend-driven consumption (Domingos et al., 2022). Ethical alignment is another significant benefit, as consumers can support brands that align with their values regarding human rights and environmental stewardship (Legere & Kang, 2020). Emotional satisfaction is enhanced through the purchase of garments with cultural or artisanal significance, which creates deeper emotional connections and reduces the urge for frequent replacements (Bjerregaard Jensen, 2021; Errázuriz & Müller, 2023; Fletcher, 2012). Cost-effectiveness is also a notable advantage, as the durability of slow fashion items offers long-term savings compared to the frequent repurchases required by fast fashion (Thorisdottir et al., 2024; L. Zhang & Hale, 2022). Finally, consumers become part of a global movement

advocating for systemic change, influencing industry practices through collective demand for transparency and sustainability(Gonçalves & Silva, 2021).

Based on the extant literature on slow fashion, slow fashion is an ideal sustainable product due to its significant role in reducing pollution and addressing the characteristics of local, responsible, and high-quality production (Štefko & Steffek, 2018). Slow fashion represents a vision of sustainability in the fashion industry and embraces the entire “sustainable”, “eco”, “green”, and “ethical” fashion movement (Chhabra et al., 2022). For the Agenda for SDGs 2030 was launched to set up a view for economic, social, and environmental sustainability (Guang-Wen et al., 2023; Shulla & Filho, n.d.).

The 12th SDG (Responsible Consumption and Production) motivates slow fashion development. Textile waste should be cut down, and the durability of fashion products should be improved to extend their life cycle (X. Chen et al., 2021). Balance, cultural diversity, and identity, including durability long-term engagement and quality products, are important considerations of slow fashion (Bommanavar & Malipatil, 2024). Hence, this study sorted out the definition of slow fashion due to the evolving concept of slow fashion. Slow fashion refers to products that have characteristics with local production, tangible and intangible values communication, eco-friendliness, enterprise responsibility, quality, collaboration consumption, and 3Rs (reduce, reuse, and recycle) (Lagnaoui, 2023). For example, Haute Couture, tailored apparel,

traditional craft products, handcraft products, local fashion products, recycled clothing, and redesigned apparel are slow fashion products relying on the concept of slow fashion (e.g., products of Chanel, Dior, Chinese Hanfu, Korean hanbok, and Japanese kimono).

To sum up, slow fashion is a sustainably-oriented fashion philosophy that emphasizes environmental protection, social responsibility and consumer engagement. Its core is to oppose the "fast consumption" model of fast fashion and promote the durability of clothing, handmade and personalized design. Slow fashion not only focuses on the material properties of products but also focuses on design principles such as emotional, structured and classic (Hooge et al., 2024). Slow fashion represents a paradigm shift in the fashion industry, emphasizing sustainability, ethics, and cultural preservation. For consumers, it offers a more mindful and meaningful approach to fashion, fostering a deeper connection with clothing and its origins. By embracing slow fashion, individuals contribute to environmental conservation, social justice, and a more sustainable future for the fashion industry.

2.2.2 Slow Fashion Matrix

Focusing on sustainable fashion, Murzyn-Kupisz and Hołuj (2021) posited aesthetics and artisanal quality as critical aspects when it comes to promoting sustainable fashion. This implies that developing exclusive apparel products that can deliver pleasure and promote individuality may be the most important requirement of slow fashion in the competitive market. Consumers choose clothing that can enhance their self-image perception,

which is an inseparable part of the wearer's style, reflecting their personality (Shetty & Kotian, 2023). Customised services and one-on-one experience provide unique products with distinct personality styles for consumers. For example, tourists focus on locally designed products with a distinctive personal style. Besides that, consumers who seek exclusive value in their apparel purchases are likely to perceive a higher value in slow fashion products (Dangelico et al., 2022). Slow fashion acts as a unique service of slow fashion that can create a key competitive advantage.

Štefko and Steffek (2018) identified eight key factors that influence the fashion industry (Figure 2.1): (1) price; (2) quality; (3) cost; (4) style; (5) service; (6) quantity; (7) customers; (8) response to trends. Among these identified factors, from a consumer perspective, price, quality, brand, style, and service are particularly significant. Price is a critical determinant as it directly affects affordability and perceived value, influencing purchasing decisions (Kung et al., 2021). Quality is equally important, as consumers associate it with durability and satisfaction, which are essential for long-term product use (Brown et al., 2019). Brand plays a pivotal role in shaping consumer trust and loyalty, often serving as a marker of reliability and prestige (Alzoubi et al., 2022). Style, on the other hand, reflects personal identity and alignment with fashion trends, making it a key driver of consumer preference (Gurnani & Gupta, 2022). Lastly, service, including customer support and shopping experience, significantly impacts consumer satisfaction and repeat purchases (Gunawan, 2022). These factors

collectively shape consumer behavior and decision-making in the fashion industry.

Liu et al.(2022) emphasised that integrating considerations of consumer well-being into apparel design processes, alongside a focus on quality and functional designs, can drive sustainable behavioural shifts among consumers. This approach highlights the importance of transcending transient fashion trends to promote long-term sustainability in the fashion industry. Besides, consumers are strongly attracted to slow fashion products due to their quality and classic styles, but they would still limit their purchase or utilisation (e.g., purchase intent, impulsiveness, and habitual purchase) due to the frequency of utilisation or economic constraints (West et al., 2021). Moreover, brand-related factors affect user perception and acceptance. There are various unique styles, brand orientation, quality, and price orientation, but not within the context of sustainability (Bounkhong et al., 2017). Young consumers of slow fashion display a more vital need for uniqueness, prefer excellent brands and are happy to pay premium rates for quality. Jung and Jin (2015) deemed that consumers may buy less and wear items longer, and more often, reduce their resource consumption and waste when slow fashion brands offer high-quality, authentic designs, and unique pieces. Meanwhile, promoting slow fashion as locally grounded branding would be essential for brand positioning (Sarokin & Bocken, 2024). Using local facilities and employing a skilful local workforce also encourage sustainability (Henry & Michell, 2019; Mukendi et al., 2020). Hence, sustaining the slow fashion brand influence is a requirement that can

effectively improve environmental and social health in the long term. Therefore, from a consumer perspective, price, quality, brand, style, and service emerge as the primary drivers in understanding the motivations behind slow fashion consumption, as they collectively influence purchasing decisions, satisfaction, and long-term engagement with sustainable fashion practices.

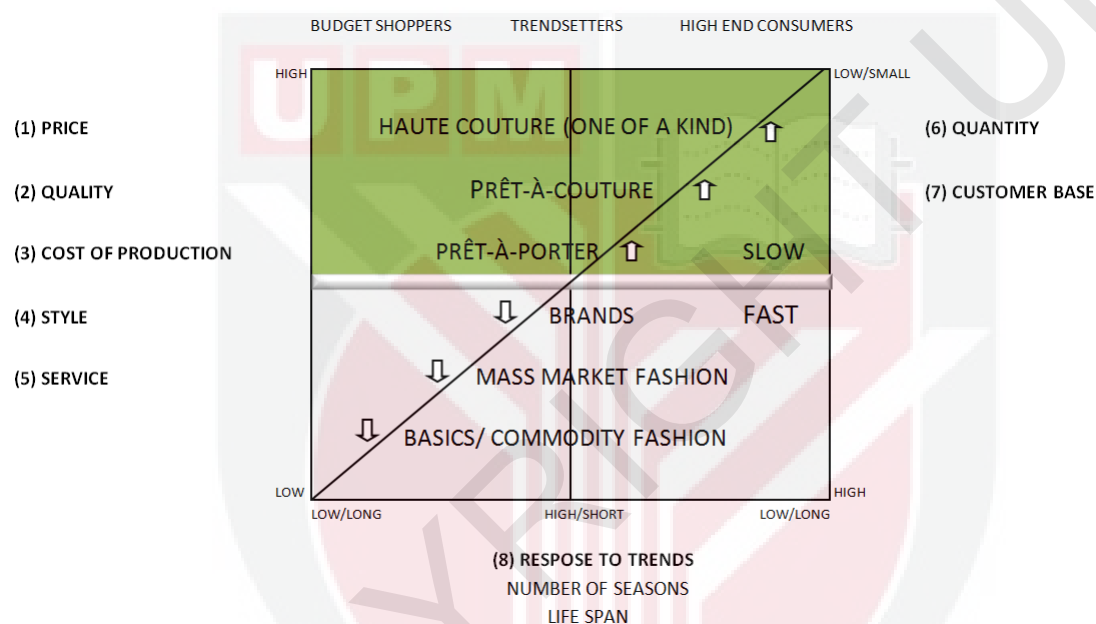


Figure 2.1 : Fashion Matrix
(Source: Štefko & Steffek, 2018)

2.3 Hanfu Fashion

Hanfu is a traditional Chinese costume with a long history and rich cultural connotations. It is not only the daily wear of the ancient Han people but also carries profound cultural and philosophical thoughts. The design of Hanfu focuses on symmetry, balance and layering, reflecting the aesthetic concept of "neutrality" in Confucian culture. The production of Hanfu usually uses natural materials such as silk and linen, which are not only comfortable and

durable, but also environmentally friendly. In addition, a large number of traditional crafts such as embroidery and brocade are incorporated into the design and production process of Hanfu, which not only increases the beauty of the clothing but also reflects the inheritance of traditional skills.

2.3.1 The Definition of Hanfu

Hanfu is a traditional style of clothing worn by the Han Chinese (X. Wang et al., 2020). Hanfu refers to the Han nationality costumes before the late Ming and early Qing dynasties. The costumes are distinctive from other ethnic costumes and express the national characteristics. Hanfu, as a quintessential representation of traditional Chinese attire, is deeply intertwined with the cultural, economic, and political developments of ancient Chinese society. To fully comprehend the definition of Hanfu, it is crucial to trace its origins and consumption patterns in early China.

In ancient China, Hanfu was initially a luxury predominantly consumed by the nobility and scholar-officials. During this period, Hanfu was meticulously crafted from high-quality materials such as silk, reflecting the wearer's social status and cultural refinement (Tomasic, 2023). For example, during the Zhou Dynasty (1046–256 BCE), a strict ceremonial attire system regulated the styles and colours of clothing for different social classes, using clothing as a means to distinguish social ranks. The consumption of Hanfu was not merely materialistic; it was a cultural phenomenon that embodied the aesthetic values, ritual systems, and social hierarchies of the time (Y. Lin et al., 2024). As history progressed, the consumption of Hanfu gradually

expanded from the elite to the common people. This shift was particularly evident during the Tang (618–907 CE) and Song (960–1279 CE) dynasties when economic prosperity and cultural openness led to significant advancements in the design and production techniques of Hanfu (Bhattacharjya, 2017). During the Tang Dynasty, Hanfu became more multicoloured and diverse in style, influenced by interactions with bordering cultures (K. Kang et al., 2024). The attire not only emphasized practicality but also highlighted aesthetics and individuality, reflecting the dynamic and open nature of society at the time. The current study viewed Hanfu as modern Hanfu because today's Hanfu does not belong to the traditional type of Han costume in essence; it is a free creation that retains the verve of Han costume and draws lessons from the traditional Han costume characteristics (K. Li, 2021). In summary, the definition of Hanfu should be contextualized within its early consumption patterns in China. This approach not only elucidates the historical evolution of Hanfu but also underscores its profound significance within Chinese culture.

In general, the style components of modern Hanfu costumes are divided into three categories: upper and lower garments, one-piece style, and combination style. The core features of Hanfu are plane-cutting, cross-collar, and right-sided features (i.e., collars are stacked on the left and right, and the shape looks like the letter “y”) with rope knots (i.e., no buttons and zippers but with ropes). Hanfu also incorporates upper and lower garments with wide robes and oversized sleeves (generally referring to dresses, with narrow sleeves in daily life), robes, and cuff edges. In other words, modern Hanfu is

an inheriting and innovation of Han traditional costume and culture. The current study identified the following key hallmarks of Hanfu: (1) retaining the verve of “traditional Han costume” from diversified costume style; (2) innovation and inheriting the Han national costume and culture.

2.3.2 Sustainability and Hanfu Fashion

Hanfu combines the preservation of cultural heritage with modern sustainability practices. Here are some key aspects of sustainability: sustainable practices in Hanfu production, traditional techniques with a modern twist, recycling and upcycling, cultural heritage and sustainability, and economic viability.

- 1) **Sustainable Practices in Hanfu Production: Use of Eco-Friendly Materials:** Hanfu production emphasizes the use of environmentally friendly materials such as organic silk, cotton, or linen. These materials are grown without harmful pesticides or synthetic fertilizers, reducing their ecological footprint (Qu et al., 2023).
- 2) **Traditional Techniques with a Modern Twist:** While traditional weaving and embroidery techniques are preserved, Hanfu often incorporates modern designs and innovations that reduce waste and enhance durability (Yu et al., 2024).
- 3) **Recycling and Upcycling:** Some designers and brands are experimenting with recycling old Hanfu garments or upcycling materials to create new pieces, promoting a circular economy (Ma et al., 2024).
- 4) **Cultural Heritage and Sustainability:** Sustainable Hanfu is not just about clothing; it's about preserving and promoting Chinese cultural heritage in a way that is respectful to the environment. It represents a

blend of tradition and modernity, where the past is revered without compromising the future (Z. Chen, 2024; Dai, 2023).

- 5) **Economic Viability:** By focusing on sustainability, the Hanfu industry can become more economically viable in the long run. Consumers are increasingly willing to pay a premium for products that are not only beautiful but also sustainable.

In conclusion, Hanfu aims to keep the rich cultural tradition of Hanfu alive while promoting environmental responsibility. It is a testament to the possibility of harmonizing tradition with modern sustainability practices, ensuring that this beautiful aspect of Chinese culture can be enjoyed for generations to come.

2.3.3 Hanfu Fashion and Slow Fashion

Based on the concept of slow fashion reviewed in Section 2.2, Hanfu products, which are locally produced in China, communicate the tangible and intangible values of Chinese traditional culture. Moreover, consumers link the pleasure of wearing Hanfu to inheritance awareness of traditional culture and responsibility. In essence, Hanfu fashion belongs to slow fashion.

From the perspective of fabric utilisation, Hanfu belongs to sustainable clothing. It introduces minimal textile waste through cutting, scientific typesetting, and rational use. Firstly, Hanfu has the characteristics of less cutting and utilisation of the whole piece of cloth. Most of the plane-cutting drawings of Hanfu are simple polygons, such as rectangles, squares, and

trapezoids. Fabric leftovers are relatively minimal, and the design and material use reflect an environmentally friendly way.

Besides that, most of the cutting methods for Hanfu involve direct cutting of the desired shape on a two-dimensional plane cloth. Its structure is a typical linear shape and of a plane structure. The sleeves and bodice are integrated into a single piece, which looks like a cross (Figure 2.2). Therefore, Hanfu has no darts in the bodice construction loose and dangling, and the waist part is fixed by the belt. The plane-cutting drawing of an unfolded Hanfu looks like a rectangle. Only the neckline is cut in the middle of the piece. Hanfu can maximise the wearer's movement in the free space, and reflect the comfortable and natural beauty and pleasure in the wearing experience.

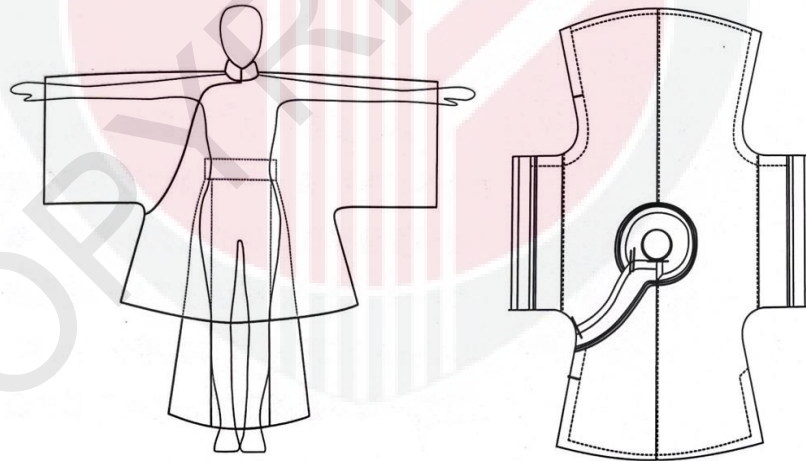


Figure 2.2 : Cross-Shape Outline of Traditional Hanfu
(Source: Yu et al., 2024)

Han costume is the tangible carrier of the Han culture, which incorporates the knowledge, social development, and advanced techniques of the Han Chinese (Xiaodie et al., 2020). The Han costume has led to the creation of

numerous clothing categories that form various styles of ancient Chinese dress. The structure of the Han costume incorporates plane construction and straight-line cutting (ZHAO, 2024). Meanwhile, the superior craftsmanship of traditional Han costumes is exquisite in terms of dyeing, weaving, and embroidery, which represent the inheritance of more than 30 Chinese intangible cultural heritage in Chinese arts and crafts that are to be protected.

For thousands of years, the tone of Chinese aesthetics of Han costume has never been erratic over time, which consistently advocates “aesthetic though with the unity of heaven and humanity”, elegance, and subtlety. Han costume emphasises the comfort between clothing and the human body. Moreover, Chinese youth have displayed a growing interest in traditional culture. People enjoy wearing Hanfu, which has recently become a common sight on the streets and in parks during holidays and traditional festivals. Hanfu carries the concept of slow fashion that is accepted by consumers, resulting in the phenomenon of Hanfu in vogue.

The fundamentals of modern Hanfu lie in its quality and culture, injecting the concept of sustainability and giving a longer life cycle to guide sustainability awareness among consumers. All these reflect the sustainable consumption concept of slow fashion. Therefore, Hanfu is an ideal sample of slow fashion based on the definition of slow fashion, Hanfu cultural inheritance, the durability of quality, and unique Han artistic style, performance, and aesthetics.

As a manifestation of traditional culture, the design of Hanfu is highly consistent with the concept of slow fashion. Slow fashion emphasizes sustainability and cultural heritage, while the design of Hanfu needs to find a balance between tradition and modernity while focusing on material selection, process innovation and the transmission of cultural connotations. Therefore, Hanfu can be regarded as a specific practice of slow fashion in the field of traditional culture.

2.4 Current State of Hanfu Fashion in China

With the growing recognition of the traditional culture of Hanfu among the younger generation as the main force of the national tide, the Hanfu market has significantly expanded (*China Hanfu Industry Market Size 2027* _ Statista, n.d.). The rise of e-commerce has transformed the way traditional Chinese clothing, known as Hanfu, is sold online. With the increasing popularity of Hanfu, various online selling modes have emerged to cater to the growing market demand. These modes can be broadly categorized into four types: e-commerce platforms, specialized Hanfu online stores, social media and live streaming, and second-hand platforms.

- 1) **E-commerce Platforms:** Major online marketplaces such as Tmall.com, Taobao.com and JD.com dominate the Hanfu market, offering a wide array of options ranging from affordable to high-end products. These platforms rely on user reviews, product images, and detailed descriptions to convey the authenticity of Hanfu designs and materials. However, the prevalence of mass-produced and low-cost Hanfu on these platforms may sometimes compromise the quality and historical accuracy of the garments.

- 2) **Specialized Hanfu Online Stores:** Websites like Newhanfu.com and Hanminzu.com focus on traditional Hanfu designs and high-quality materials, often emphasizing historical accuracy and craftsmanship. These stores cater to consumers who prioritize authenticity and are willing to pay a premium for meticulously crafted garments. They may also offer customization services, further enhancing the perceived authenticity of the products.
- 3) **Social-Media and Live Streaming:** social media such as Douyin and Bilibili have emerged as powerful tools for Hanfu marketing. Influencers and Key Opinion Leaders use live streaming to showcase Hanfu designs, often incorporating virtual try-on technologies like AR (Augmented Reality) to provide consumers with an immersive experience. This mode leverages the visual appeal and interactive nature of social media to build trust and enhance consumers' confidence in the authenticity of the products.
- 4) **Second-Hand Platforms:** Websites like Xianyu offer a cost-effective option for consumers seeking affordable Hanfu. However, the authenticity of second-hand Hanfu can be more challenging to verify, as it relies heavily on the credibility of individual sellers.

Each mode of online Hanfu sales has distinct implications for consumers' perceptions of authenticity. E-commerce platforms and specialized stores primarily influence judgments through product presentation and brand reputation, while social media and live streaming enhance trust through interactive demonstrations and influencer endorsements. The pre-sale model and second-hand platforms, on the other hand, present unique challenges related to product inspection and seller credibility. Overall, the effectiveness of these modes in conveying authenticity depends on the balance between price, quality, and transparency in product information.

The young generations in China prefer to purchase products from online retailers (Van Ewijk et al., 2020). Nearly 70% of consumers purchase Hanfu via online shopping platforms (*iiMedia Report*, 2022). The existing Hanfu products are then collected from major online retailers. Tmall.com and JD.com are two websites for business-to-consumer (B2C) online retailers in China. They are two online platforms for local Chinese and international businesses to sell brand-name products to consumers in China. Furthermore, the well-known e-commerce platform Taobao.com belongs to the C2C model of online shopping. As one of China's largest online retailers, it offers consumers a wide range of goods and a convenient shopping experience. Therefore, the current study focused on the existing Hanfu products for women promoted at Tmall.com, JD.com and Taobao.com. The study analysed the key features of Hanfu products based on the current Hanfu products available.

Features of a product refer to the attributes, components and other aspects of the product (C. J. Lin & Cheng, 2017), such as “quality”, “style”, and “service” of Hanfu. Corporations and developers consider various types of features to meet the needs of their target consumers when they develop new products, such as design, function, quality, and experience (MasterClass, 2022). The features of Hanfu fashion emphasise the characteristics of Hanfu fashion products at present.

In the past two decades, most of the Hanfu fashion brands have actively established their online shop at Tmall.com, JD.com and Taobao.com.

Generally, these products are of qualified and reliable brands. Qualified brands in this study referred to the brands that offer Hanfu products under legally registered and established corporations. In addition, Tmall.com, JD.com and Taobao.com have strict standards and conditions for brands to enter. For example, corporations that intend to register and sell their brands on this website must present their brand qualifications, enterprise qualifications, business license, tax registration, and service qualifications. With that, this study referred to the brand ranking information available at iiMedia Ranking (*iiMedia Ranking*, 2022) to select and filter qualified brands of Hanfu from 2019 to 2022.

Subsequently, the main products of the qualified brands were collected from these three platforms. The main products of a brand in this study referred to a brand that offers products with distinguishing features, which encompass the dynasty, design style, construction, silhouette, function, and other aspects. In practice, the evolution of Hanfu fashion throughout historical dynasties and the emergence of diverse Hanfu product styles offer contemporary individuals a wider range of choices (Ding et al., 2020). Hanfu fashion brands classify their styles based on distinguishing features such as dynasty and construction. Only eleven qualified brands meet the criteria of both dynasty and construction in their main products. The present study aims to analyse the structure and style of Hanfu fashion through a comprehensive examination of products offered by the eleven qualified brands, while also analysing their quality and associated services. Consequently, the current

features of Hanfu fashion were analysed by collecting a total of one hundred and twenty-eight styles of Hanfu products from the eleven qualified brands.

The price range of the products offered by these eleven brands was categorised as follows: (1) CNY 0–99; (2) CNY 100–299; (3) CNY 300–499; (4) CNY 500–999; (5) CNY 1,000–1,999; (6) CNY 2,000–2999; (7) others.

The styles or series of Hanfu were then divided according to the distinguishing features of Hanfu, such as style, quality, service, or other aspects of Hanfu. The main products of eleven qualified brands of Hanfu are summarised in Table

Table 2.1 : Main Products of 11 Qualified Brands of Hanfu

Brand 1			Brand 2		
Song Classic	Ming Classic	Song Classic	Tang Classic	Tang Classic	Tang Classic
					
Brand 2		Brand 3	Brand 4		Brand 5
Ming Classic	Other Classic	Song Classic	Tang Classic	Tang Classic	Ming Classic
					

Table 2.1 : Continued

Brand 1			Brand 2		
Brand 6	Brand 7	Brand 8	Brand 9	Brand 10	
Tang Classic	Song Classic	Ming Classic	Han Innovative	Ming Classic	Tang Classic
					
Brand 11					
Song Classic	Han Classic	Other Innovative	Song Innovative	Ming Innovative	Other Innovative
					

(Source: Tmall.com)

2.4.1 Styles of Hanfu Fashion

Based on the features of the gathered Hanfu products, this study sorted out the styles of Hanfu fashion. As shown in Table 2.2, Hanfu products introduced by online sellers consist of six main aspects with different categories, namely dynasty, design style, construction, silhouette, pattern, colour, and function.

Table 2.2 : Styles of Hanfu Fashion

Aspects		Categories and Examples			
Dynasty	 Simple, quaint Han	 Gorgeous, free, beautiful, exquisite Tang	 Simple Elegant Practical Song	 Gorgeous, Diverse metaphorical Ming	Hanfu has different clothing styles that have evolved according to the dynasties, and it is often identified by its specific dynasty style.
	 Retaining its gorgeous characteristics and structure of the Ming dynasty.	 Retaining the shape of style. Materials and patterns have changed. Practical, Modern	The classic style retains the style and detail of the dynasty, but the innovative style only retains the shape of the style.		
Design style	Classical		Innovative		
	 Upper and lower garments	 One-piece style	 Combination		
Construction	According to the cutting method of the clothing to divide.				
	 A-line	 H-line	 T-line	It is mainly divided according to the shape of the letters.	
Silhouette					
	Pattern: Patterns are mainly classified according to their themes.		 Birds and animals		
	 Flowers and plants		 Geometry		

Table 2.2 : Continued

Aspects	Categories and Examples					
Colour:	 Red/Black /Pink	 Purple\Red \Blue\Orange	 Green/ Yellow	 Black and White	 Yellow/ Red	 White / Blue
Function:	 Practical function	 Easy to put on	 Easy to take off	 Easy to walk	According to the basic wearing function of clothing, whether it is convenient to put on and take off, and whether it is conducive to movement.	

(Source: Tmall.com)

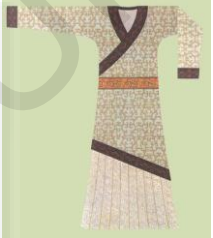
1) **Dynasty:** Han dynasty, Tang dynasty, Song dynasty, and Ming dynasty

According to the official records, Han traditional costumes witnessed prosperity and decline with the growth of the Chinese nation (Ding et al., 2020). Hanfu has experienced more than 3,000 years of history, from the Yellow Emperor's accession to the throne to the end of the Ming Dynasty and the beginning of the Qing Dynasty; each succeeding dynasty produced its distinctive costume images and created substantial clothing categories (*How Hanfu Returned as a Modern Style Statement*, n.d.).

At present, the popular styles of Hanfu are mainly inspired by Han costumes in Tang, Song, and Ming dynasties (*The 4 Main Styles of Hanfu You Need to Know!*, n.d.). For example, the Tang-dynasty style often utilises bright colours that reflect fresh and lively feelings. Contrastingly, the Ming-dynasty style is known for its gorgeous and elegant styles. In order to understand the

features of traditional Han costumes across these four dynasties, this study summarised the evolution of Hanfu and presented the styles of the final wearing state of traditional Han costumes for women, which are presented in Table 2.3.

Table 2.3 : Evolution of Hanfu for Women across Major Dynasties

No.	Dynasty	Components	Apparel Categories	Features	Image
1	Han ((202 BC–9AD, 25–220)	Full-body cloth, or upper and lower garments	Deep clothing (<i>shenyi</i> in Chinese) includes “curving-front gown” and “straight-front gown”, or robe (<i>pao</i> in Chinese)	Simple, quaint	 curving-front gown  straight-front gown
2	Tang (618-907)	Full-body cloth and inner garment, or upper and lower garments	Robe (<i>pao</i> in Chinese), or open cross-collar shirt, a long silk scarf (<i>pibo</i> in Chinese), and tube top	Gorgeous, Free, Beautiful, Exquisite	
3	Song (960-1279)	Full-body cloth and inner and outer garments	Robe (<i>pao</i> in Chinese), <i>beizi</i> (usually regarded as shirt or jacket), matched with <i>ru</i> (jacket), overcoat, and long skirt	Simple, Elegant, Practical	
4	Ming (1368-1644)	Full-body cloth, inner garment, and lower and outer garments	Long skirt, Pleat skirt, and Half-sleeves	Gorgeous, Diverse, Metaphorical	

(Source: Hanfu thinking: Han fashion, 2011)

2) **Design Style:** Classical style and innovative style

The popular styles of Hanfu are mainly inspired by Han costumes of the Han, Tang, Song, and Ming dynasties. Despite that, two key design styles of Hanfu have emerged: classical style and innovative style.

When it comes to classical style, the design of Hanfu follows the conventional structure and retain its characteristics. Several prior studies on Han culture highlighted the importance of preserving the conventional appearance structure for the cultural inheritance of the Han costume (*Hanfu — Traditional Clothing of the Chinese Han Majority*, n.d.). For example, if a Hanfu product is inspired by the costumes of Tang dynasty, the design should follow the conventional appearance structure of the costumes of the Tang dynasty and retain its characteristics.

In contrast, the innovative style reflects more practical and modernised Hanfu (Shanshan et al., 2019). In the recent two decades, the Hanfu styles have changed to innovative style following the human-oriented concepts, the growth of new materials, the development of new craft technology, and new style integration (Xu et al., 2019). For young women, modern Han costumes are one of those clothes that reflect cultural confidence and individuality (Ding et al., 2020). The prioritised preferences for their daily wear are practical and modern. For instance, a *Ma Mian* skirt of the Ming dynasty is matched a t-shirt or a blouse to satisfy enthusiasts who intend to wear Hanfu daily.

In this diversified modern society, the modern reconstruction of Hanfu design must be realised (Hu, 2014). Hence, the existing design products consist of two key attributes: preserving the conventional appearance structure and innovative design that integrates the Han culture (L. Lin, 2021). In short, the evolution of the Hanfu fashion style has gradually formed two main types of style: classical style and innovative style.

3) Construction

The construction idea of Hanfu advocates “harmony between man and nature” (Xin, 2021) and the beauty of elegance and subtlety at all times. Hanfu fashion emphasises the comfort between clothing and the human body. It has always been about a flat structure in terms of its shape and the application of straight-line cutting (Yu et al., 2024). Hanfu fashion is different from a three-dimensional tailoring that advocates the beauty of the human body.

Through continuous accumulation, fusion, transformation, and innovation of the clothing culture of the past dynasties, Hanfu has become increasingly sophisticated, meticulous, and rich. It has also gradually formed clothing aesthetics of Han traditional culture. It is centred on Chinese etiquette culture that shapes and structure form upper garments and lower skirts, with long sleeves and loose characteristics (Hu, 2014). Considering the characteristics of construction, the structure of Hanfu fashion products can be divided into three categories: upper and lower garments, one-piece style, and combination style. The components of the current Hanfu construction were

shown in Table 2.4. The combination style involved upper and lower garments added robe or deep garment.

Table 2.4 : The Components of the Current Hanfu Construction

Construction	Component	Categories	Number of brands
Upper and Lower Garments	Upper Garments	<i>ru</i>	50
		<i>ao</i>	15
		<i>beizi</i> ,	50
		half sleeves	42
		<i>pibo</i>	2
		<i>gua</i>	15
One-Piece Style	Lower Garments	waist <i>ru</i> skirts	2
		chest <i>ru</i> skirts	1
		pleated skirts	50
		<i>mamianqun</i>	50
	Deep Garment (Shenyi)	Basic form	0
		The curving-front gown	0
		The straight-front gown	21
	Robe	Robe with crossing diagonally collar ("y" collar)	9
		Robe with Round Collar	11

(Source: 'List of Hanfu' 2025)

The structures of the "upper and lower garments" (Figure 2.2) and "one-piece style" (Figure 2.3 and Figure 2.4) were of the Shang and Zhou dynasties (1756 BC–249 BC), which established two basic costume shapes for Chinese Han costumes. In the evolution of clothing made of upper and lower garments, there are numerous categories of upper garments, such as *ru*, *ao*, *beizi*, half sleeves, *pibo*, and *Gua* (shown in Figure 2.3) . As for the lower garments, there are waist *ru* skirts, chest *ru* skirts, pleated skirts, and *mamianqun* (horse face skirts) (shown in Figure 2.4) . In addition, trousers

represent another common type of lower garments. For example, *Ruqun* (an upper-body garment with a long outer skirt), *Aoqun* (an upper body garment with a long under skirt), *Beizi* (usually a knee-length jacket).

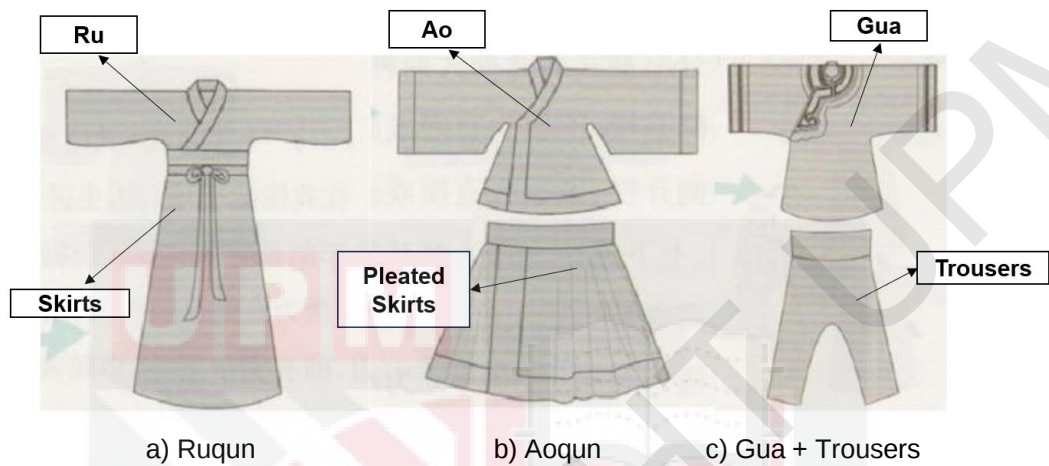


Figure 2.3 : Upper and Lower Garments
(Source: Tu Yimiao, 2017)



Figure 2.4 : Upper Garments
(Source: the photo from Tmall.com)



Figure 2.5 : Lower Garments
(Source: the photos from Tmall.com)

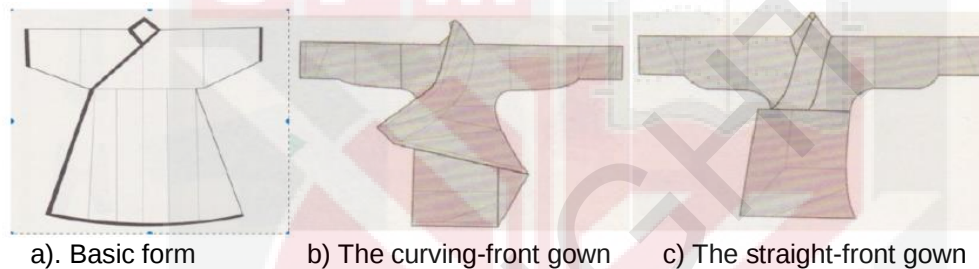


Figure 2.6 : One-Piece Style of Han Costume (Shenyi or Deep Garment)
(Source: Ou, 2024)

As for the one-piece style, *shenyi* (or deep garment), which is a long robe with wide sleeves. *Shenyi* is representative styles of Han costume, but the construction of *shenyi* is different from the construction of robe in terms of cutting panels (Huang Z., 2022). *Shenyi* is the most basic form of Hanfu, and one of the earliest forms of uniform clothing. It refers to the clothing shape in which the upper and lower garments are cut separately before they are sewed and spliced at the waist (Figure 2.6 a). In the Han dynasty, *shenyi* evolved into two categories based on its front part: the curving-front gown and the straight-front gown. Meanwhile, the robe is a loose-fitting outer

garment; upper and lower garments have no seam at the waistline, which is a closed full-body cloth (Figure 2.6, b and c).

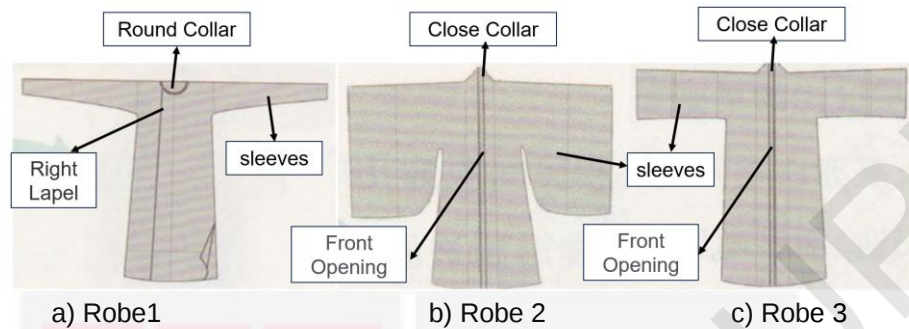


Figure 2.7 : One-Piece Style of Han Costume (Robe)
(Source: ZHAO, 2024)

The robes of the Tang Dynasty were mainly right lapel with round collars, as shown in Figure 2.7 a). The width of the sleeves was variable and varied with fashion (see Figure 2.7). Most of the robes in the Song Dynasty had close collars and front opening. They were cut from top to bottom and wide with straight slits on both sides. The sleeves were either wide or narrow, as shown in Figure 2.7 b) and c).

Last but not least, combination style refers to a dress collocation that involves the one-piece style and the matching of upper and lower garments. For example, the Hanfu of Song dynasty typically refers to a dress collocation that composes *ru* of the upper garment that matches the waist *ru* skirt of the lower garment, with the addition of a robe or *beizi* of one-piece garment as outerwear (Figure 2.4).

4) Silhouette

Silhouette is the shape and outline of someone or something visible. Rudolf Arnheim, which is a famous aesthetician analysed that shape is one of the characteristics of objects grasped by eyes, mainly involving the boundary lines of objects. Clothing is a shape wrapped around the human body, which means that clothing styling design can also shape the human body into various shapes. Usually, letter-shaped silhouettes are also a classification method often used in clothing silhouette design (Qin et al., 2012). H-line, A-line, O-line, T-line, and X-line are commonly used in clothing. By classifying the silhouettes of Hanfu according to letter-shaped types, the Hanfu styles of silhouette can be divided into three main categories: A-Line, H-line and T-line (Show in Figure 2.7).



Figure 2.8 : Silhouette of Hanfu

(Source: Author's own formulation; Notes: the photos from Tmall.com)

5) The Beauty of Patterns and Colour

The Hanfu styles of pattern can be divided into three main categories: birds and animals, flowers and plants, and geometry (Ren et al., 2025) (Figure

2.8). Meanwhile, the Hanfu styles of colour can be divided into eight main categories: red, yellow, blue, black, white, green, purple and orange (Figure 2.9).

Most of the patterns in Hanfu come from the natural elements, which are widely used and designed in clothing. The cultural charm of Hanfu is vividly expressed through these patterns. Processing and beautifying sublimation are based on natural objects and elements with the application of silk weaving or dyeing and other processes, which decorate and exhibit all kinds of patterns on Hanfu. The prominent images of the patterns in Hanfu or the similar meaning of homophony express the people's yearning for a better life.

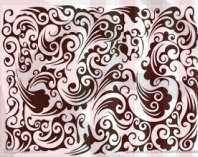
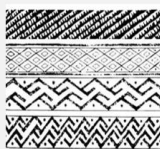
Categories	Classical pattern		Modern pattern	
Birds and animals				
Flowers and plants				
				
Geometry				

Figure 2.9 : Evolution of Hanfu Pattern from 'Classical' to 'Modern'
(Source: the photo from Tmall.com)

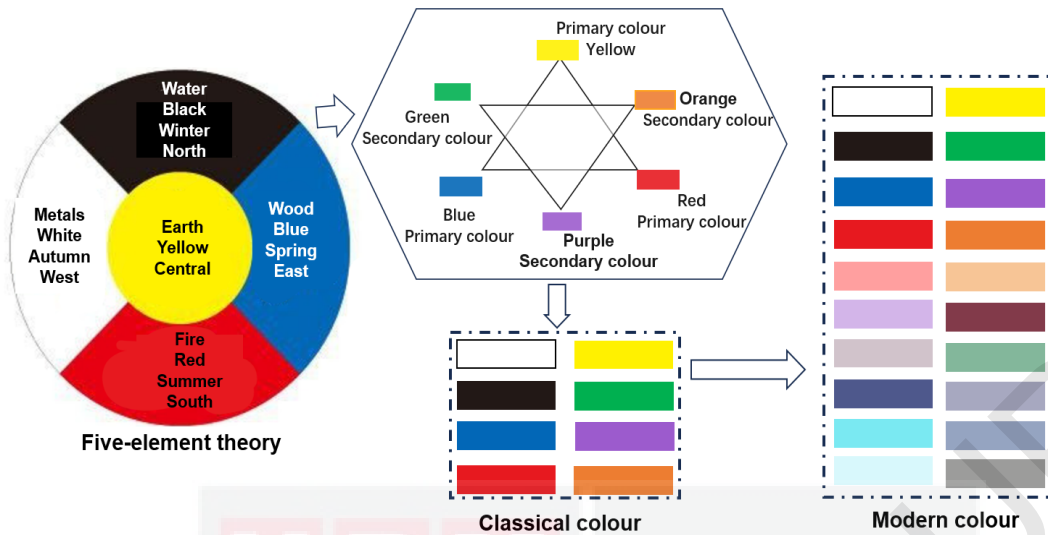


Figure 2.10 : Evolution of Hanfu Colour from Classical to Modern
(Source: LI, 2017; YUZITONGSHANG, 2018)

On the basis of satisfying the decorative effect, colour also highlights the cultural connotation of Hanfu. Thousands of years ago, a unique colour concept system was constructed through the exploration of nature and the processes of summing up, accumulating, and abstraction. Combining the theory of five elements and the development of orientation, colour, and seasons established a Han-style colour system, which has become an indispensable component of the Hanfu culture (X. Wang, 2017). Different seasons have corresponding colours: green for spring; red for summer; yellow at the end of summer; white in autumn; black in winter. The patterns of Hanfu reflect the natural regulations of mutual coexistence, which are combined with the cultural connotation of five colours in representation of the seasons. Modern Hanfu still follows the five-element theory, but the colours are much richer. Through the extraction of the colours of Hanfu, it is found that these colours are on the basis of eight classical colours, the brightness and purity of the colours are changed (Figure 2.9).

6) Function

The Hanfu styles of function can be divided into four categories: practical function, easy to put on, easy to take off, and easy to walk.

In traditional Chinese culture, Hanfu serves a range of practical functions in human society, including protection against cold and heat, shielding from wind and rain, and enhancing aesthetics (Zhou et al., 2019). In the current era of cultural self-confidence promotion, Hanfu plays a vital role in the preservation and development of Chinese culture (Wang J., 2021). It has become the preferred attire for many young individuals in their daily lives. Moreover, an increasing number of people are embracing Hanfu on campuses and streets. During traditional festivals and ceremonies as well, people opt to wear Hanfu to participate activities. For instance, during the Dragon Boat Festival, Hanfu amateurs don Hanfu to pay homage to Qu Yuan while they wear it to appreciate moon on the Mid-Autumn Festival.



a) People offer sacrifices on the Dragon Boat Festival



b) People appreciate the moon in the garden on Mid-Autumn Day



c) People attend Hanfu cultural festival

Figure 2.11 : People Wear Hanfu to Participate Activities

(Source: a):Time interpretation, 2020); b): *People wear Hanfu to visit the park on the night of the Mid-Autumn Festival (In Chinese)*, 2021); c): Cultural travel in China, 2020)

Nowadays, traditional Hanfu is burdensome and unwieldy for people, only for specific occasions (ZHANG & CAI, 2023). To adapt to modern life's fast pace demands effectively, thus a growing trend towards incorporating traditional Hanfu style and elements into daily routines. Compared with its cumbersome Hanfu predecessor mentioned earlier, contemporary designs offer greater innovation by meeting consumer needs and making them convenient for daily life wear functions and purposes such as easy to put on, easy to take off, and easy to walk.



a) A female teacher in Hanfu

b) A woman on her way from work

c) A woman in Hanfu on subway

d) A woman who wears Hanfu is looking at an exhibition in museum

Figure 2.12 : Young Women Wear Hanfu in Their Daily Lives

(Source: Photos from Little Red Book Life Platform)

The resurgence of Hanfu in modern fashion reflects a dynamic interplay between cultural heritage and contemporary aesthetics. Central to this evolution is the reimagining of Hanfu's functions, design principles, and construction methods to align with present-day sartorial demands while preserving its cultural essence (L. Lin, 2021).

Traditional Hanfu, characterized by loose silhouettes and ornate details, has undergone functional modifications to enhance practicality. Modern iterations incorporate Western tailoring techniques, such as fitted cuts and adjustable waistbands, to improve comfort and adaptability to diverse body types (Shanshan et al., 2019). Innovations like pockets, zippers, and lightweight synthetic fabrics address the need for convenience in daily wear, contrasting with the impracticality of historical designs (Hu, 2014). These adaptations reflect a shift toward prioritizing wearability without compromising Hanfu's symbolic identity.

Contemporary Hanfu design embodies a fusion of historical motifs and modern aesthetics. While revivalists advocate for adherence to traditional structures (e.g., cross-collars, flowing robes), reformists experiment with hybrid styles, such as integrating denim or digital-printed patterns (Y. Lin et al., 2024). This duality is evident in haute couture, where designers retain intricate embroidery and silk fabrics but reinterpret them through minimalist silhouettes or modular designs (Tomasic, 2023). Such syntheses highlight the tension between cultural preservation and creative reinvention, a debate central to the Hanfu movement's evolution (L. Lin, 2021).

The transition from traditional materials like silk to synthetic and blended fabrics underscores a response to modern economic and ecological concerns. While natural fibres remain symbolic of Hanfu's heritage, materials such as breathable cotton and recycled polyester align with sustainable fashion trends (clsrich, 2024). Additionally, advancements in digital printing

and laser-cutting technologies enable precise replication of traditional patterns, reducing reliance on labour-intensive handcrafting (Rorah, 2016). These material shifts not only enhance durability but also democratize access to Hanfu by lowering production costs (Ingaramo, 2022).

The modernization of Hanfu transcends aesthetics, serving as a vehicle for cultural diplomacy. International fashion events, such as Shanghai Fashion Week and the Met Gala, showcase Hanfu-inspired collections, positioning them as a global symbol of Chinese identity (Alice, 2025). Academic institutions further legitimize this trend through courses on Hanfu design, fostering cross-cultural dialogues and hybrid innovations (X. Huang, 2023). However, critiques persist regarding the potential dilution of historical authenticity, particularly when Westernized designs overshadow traditional craftsmanship (Liang, 2021).

To sum up, the transformation of Hanfu into a modern fashion choice illustrates a nuanced balance between revering tradition and embracing progress. By redefining functionality, experimenting with materials, and engaging with global audiences, Hanfu exemplifies how cultural artefacts can evolve while retaining their historical resonance.

2.4.2 Quality of Hanfu Fashion

Based on the analysis of the existing Hanfu products, the quality of Hanfu fashion is mainly reflected in its production of crafts and materials. The production crafts of Hanfu are divided into traditional handicrafts and modern

technology, which are mainly subdivided into five categories: printing pattern, embroidery pattern, jacquard, braid, and others. Meanwhile, the materials of Hanfu are divided into three categories: soft fabric, light fabric, and glossy fabric.

2.4.3 Service of Hanfu Fashion

As most Hanfu products are sold by online retailers, the service of Hanfu fashion involves six categories: (1) a 24-hour online shopping guide; (2) no reason to return within seven days; (3) live delivery service; (4) quick refund; (5) return shipping insurance; (6) after-sales consulting service. The Hanfu fashion industry has developed in a standardised manner. The peripheral services and second-hand market of Hanfu continue to develop as well. Peripheral services, such as Hanfu rental, Hanfu cultural experience hall, and Hanfu makeup and photography in the ancient film and television city are aggressively promoted.

2.4.4 Current Situation of Hanfu Fashion in Changzhutan

With the diverse demands of consumers and the expansion of the Hanfu market, the metropolitan area of Changzhutan has laid the foundation for the development of Hanfu in central China. The current study focused on analysing the current situation of Hanfu fashion in Changzhutan in terms of its unique geographical location, the growth of consumer demand, culture and environment, and the formation of the Hanfu fashion industry chain.

Firstly, Changzhutan is a national-level metropolitan area in central China, which was approved by the National Development and Reform Commission of China in February 2022 (hunan.gov, 2024). As shown in Figure 2.13, this metropolitan area consists of three cities: Changsha, Zhuzhou, and Xiangtan. With a total area of 28,100 km², Changzhutan is located in the northeast part of Hunan Province, China. As one of the fastest-growing metropolitan areas in central China, Changzhutan has become the core area for economic development and urbanisation in Hunan Province.

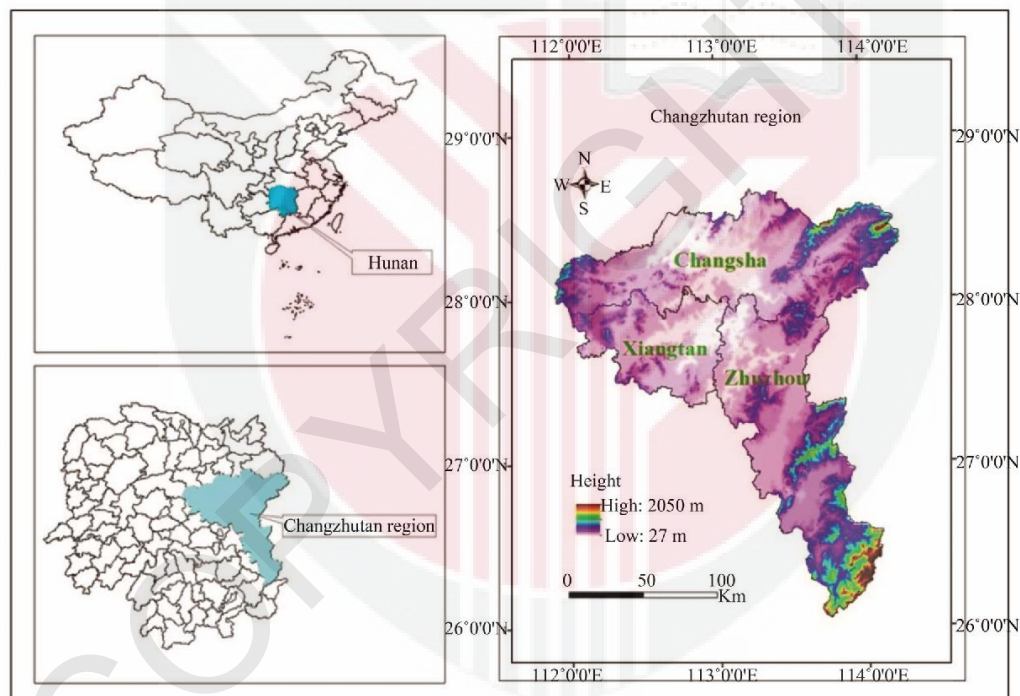


Figure 2.13 : Location of Changzhutan in Hunan Province, China
(Source: *Chang-zhu-tan City cluster Atlas _360 encyclopedia (In Chinese)*, n.d.)

Secondly, economic growth has led to an unprecedented migration from the rural area to the urban area, which has greatly contributed to urbanisation. According to the official statistics (hunan.gov, 2024), the population of the

Changzhutan region increased from 14.84 million persons in 2021 to 16.68 million persons in 2022. The Changzhutan region recorded GDP increased from 1.79 trillion yuan in 2021 to 2.03 trillion yuan in 2022. The increase in population and the growth of GDP have led to growing demands for Hanfu fashion products.

Thirdly, the culture and environment have influenced the development of Hanfu. Clothing is the main way to strengthen national cohesion, and Hanfu carries the Chinese cultural symbol (C. Fan & Ip, 2023). The conventional etiquette of wearing Hanfu continues until today (Xiaodie et al., 2020), such as wearing Hanfu for the Hanfu Cultural Festival, coming-of-age ceremonies, and weddings. In particular, since 2019, the Chinese Hanfu Cultural Festival in Changsha has promoted the exchange of Hanfu culture. Additionally, Changzhutan provides a solid foundation for the development of Hanfu due to its long history and rich cultural background. A plain unlined gauze gown, which is a type of silk clothing from the Han dynasty, was unearthed in Mawangdui, Changsha. It embodies the exquisite silk-weaving technology of the Han dynasty, which is the pride of Changzhutan. In other words, Changzhutan offers a unique complex for Hanfu development.

Last but not least, three market development models of the Hanfu fashion industry chain (Figure 2.14) were formed based on the design, manufacture, and academic research of Hanfu: (1) Hanfu brand management model (e.g., Congyi Hanfu and Dongting Hanfeng); (2) service platforms that include Hanfu customisation studio and Hanfu experience store for Hanfu rental,

makeup, and photography (e.g., Yuzitongpao Studio, Baixiju Original Hanfu Studio, and Panzi Women Square); (3) Hanfu cultural communication platform that supplies learning and communication space for Hanfu lovers (e.g., Hanfu Changsha, Hunan Hanfu, and online platforms of TikTok, Sina Weibo, and Bilibili). Hanfu cultural communication platforms have played an effective role in promoting the development and promotion of Hanfu. The supply chain of Hanfu fashion provides convenient channels for consumers to achieve sustainability in Hanfu fashion. In general, the Hanfu support chain promoted the development of the Hanfu market in Changzhutan area. The number of Hanfu enterprises in the Changzhutan area continues to grow, with two new Hanfu enterprises added in 2018, and the number has increased to 94 so far (November 18, 2023). From the data of new Hanfu enterprises in Changzhutan area from the year 2018 to 2023 (Figure 2.15), it can be seen that the Hanfu market is gradually expanding. However, the development of Hanfu fashion in Changzhutan lags behind other cities like Guangzhou and Hangzhou. The competitiveness of local Hanfu brands, which are still in their infancy and development stages, is relatively weak. Local Hanfu brands can enhance their competitive advantage by making use of the unique features of Hanfu: style, quality, and service. Moreover, sustainability has recently become a fashion trend. Understanding the sustainability issues about the features of Hanfu can create value for Hanfu products, and creating good products that consider the needs and demands of consumers enables the entry of worthwhile products into the market (Todeschini et al., 2017).

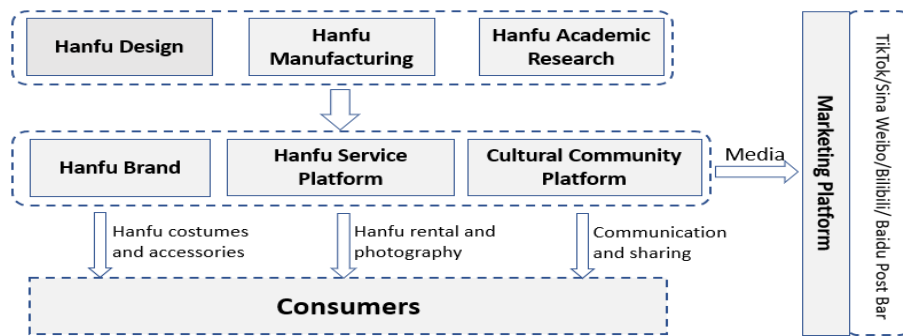


Figure 2.14 : Supply Chain of Hanfu

(Source : iimedia New Economy Industry Research Center, 2022)

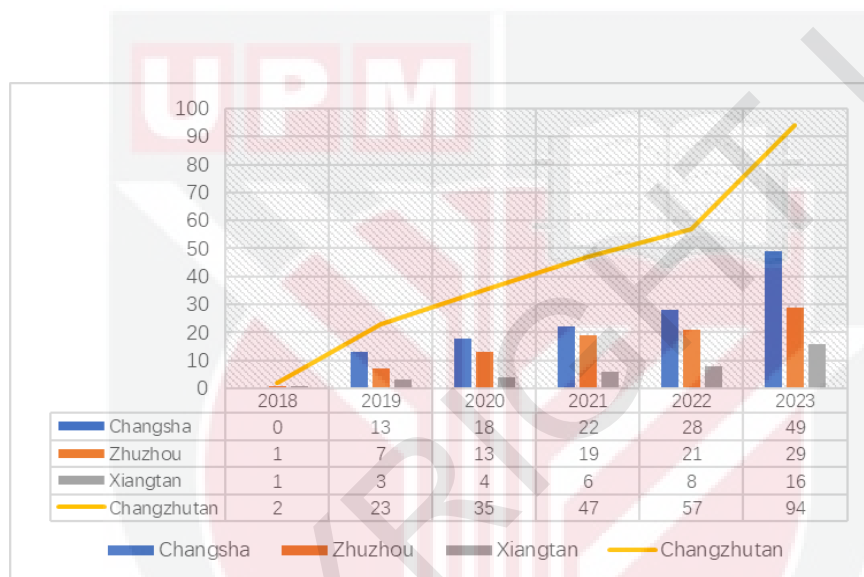


Figure 2.15 : Market Trend of Hanfu in Changzhutan Area

(Source: Chang-Zhu-Tan City Cluster Development Report, 2024)

/Note: All data are from Qi Chacha (www.qcc.com). Qi Chacha is the official record of the enterprise credit bureau, which can provide the national enterprise information inquiry.

Table 2.5 : The Proportion of Young People Wearing Hanfu in Changzhutan

Location	Number of people	Number of young people wearing Hanfu	Proportion	Time	Date	Events
Changsha Xiyuehui Mall	About 1000	About 200	20%	9:00 am-5:00 pm	13-14, November 2021	National Hanfu Festival in 2021
Zhuzhou City Jiuxian Lake scenic spot Yingyue square	About 3000	About 200	7%	9:00 am-5:00 pm	30, April 2022—21, May 2022	Flower Festival
Xiangtan Yaowan Square	About 1000	About 160	16%	8:00 pm-9:00 pm	3, September 2022	Hanfu parade

Note: 1. In this study, no matter how many people wearing Hanfu, only young people wearing Hanfu are counted.

Besides, the proportion of young people wearing Hanfu in Changzhutan area is less than twenty percent according to the observation of this study, as shown in Table 2.5. Usually, young people are the main consumers of Hanfu. Therefore, this study focused on 18 to 28-year-old young people. as a unit to count the proportion. They are mainly students from institutions of higher learning and young workers. Setting the observation location in Changzhutan and the time during the Hanfu festival activity can facilitate this study to observe the wearing of Hanfu. Changzhutan is one of the fastest-growing metropolitan areas in China and has one of the largest clothing market groups in the country. Hanfu is of important historical and cultural significance for the people in the Changzhutan region. Young People here are more likely to access the latest information on Hanfu. The date during the Hanfu festival activity is the peak period for people to wear Hanfu, this is one of the best times to observe whether people wearing Hanfu or not. Since

many young people wear Hanfu during the Hanfu festival, it would be hard work to observe for accurate data on young people who wear Hanfu. Therefore, this study estimated the number of young people wearing Hanfu by observing the actual number of individuals at Hanfu festival activities and combining it with approximate data from news reports to assess the proportion of young people wearing Hanfu. However, both such two conditions showed that the proportion of young people wearing Hanfu remains very low and the market for Hanfu continues to be limited in scope.

2.5 User Perception and Acceptance

The current study focused on exploring user perception and acceptance of Hanfu fashion. In general, “user” refers to a typical user who uses a product on behalf of most individuals (*USER Definition & Meaning | Dictionary.Com*, n.d.). Keywords that are associated with “users” are “consumers” and “customers” (Geng et al., 2020). With that, this study termed consumers and customers as “users”.

Regarding to user emotional experience (sensation, pleasure) in relation to a product, numerous prior studies supported the notion that sensations stimulate one’s liking (Hayes, 2023), and liking drives one’s purchase or utilisation. In practice, Hayes (2023) found that much of the work sensory scientists involve four essential aspects in user perception and acceptance: (1) reliably assess the sensations elicited by a product; (2) the pleasure obtained from a product; (3) the pleasure obtained from a product (which can be a major motivator for product use); (4) consumption behaviour (e.g., use,

purchase and wearing). More broadly, these aspects can be viewed as part of a larger causal chain that begins with perception and ends with utilisation or consumption. Adding to that, a fifth aspect, namely the consequences of utilisation or consumption for users (Hayes, 2023), as illustrated in Figure 2.16.

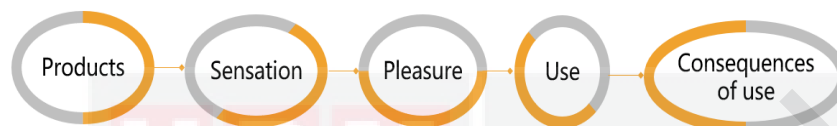


Figure 2.16 : Hayes' Conceptual Model of Perception
(Source: Hayes, 2023)

Similarly, the fashion design protocol, which is a systematic framework guiding the creation, development, and commercialization of apparel. It also involves the above five aspects in the whole products process of user perception and acceptance. This adaptation involves systematically assessing the sensory and emotional experiences associated with Hanfu and their impact on user perception and acceptance. Below provide five phases the conceptual model of perception in line with the fashion design protocol:

Table 2.6 : Fashion Design Protocol

Hayes' model Phase	Design Phase	Fashion Design Protocol Stage	Objective
1. Products	1. Sensory Elicitation & Cultural Semiotics	Concept Development & Material Selection	Map multisensory stimuli to Hanfu's cultural narratives.
2. Sensation	2. Hedonic Engagement & Emotional Resonance	Prototyping & User Co-Creation	Quantify pleasure from cultural identity and aesthetic novelty.
3. Pleasure	3. Behavioural Drivers & Cultural Consumption	Market Positioning & Storytelling	Link pleasure to purchase intent via cultural capital.
4. Use	4. Utilization Dynamics & Contextual Adaptation	Functional Iteration & Sustainability	Optimize wearability and lifecycle sustainability.
5. Consequences of use	5. Post-Consumption Impact & Cultural Legacy	Community Building & Feedback Loops	Measure cultural legacy and user self-actualization.

User perception and acceptance refers to consumers' cognition and evaluation of product appearance, function and cultural connotation. This concept is particularly important in the study of Hanfu, because Hanfu, as a carrier of traditional culture, must be designed in accordance with consumers' aesthetic preferences and cultural identity.

In a certain sense, as modern Hanfu is an inheriting and innovation of Han traditional costume and culture, Hanfu fashion design focused on innovation in style design and inheriting in structure design today. These two design contents belong to the appearance designs of fashion products. Wearing Hanfu fashion products become a tendency for young Chinese people (Cultural travel in China, 2020). Young people are the major consumer and user group who will ultimately be using the product. Fashion products refer to what users wear or put on, with vision as the primary way of perception and experience, which offers functional utility, material enjoyment, spiritual

pleasure, image experience, and value realisation, such as clothing, leather goods, luggage, jewellery, and watches (John S. & Valerie, 2025). Hanfu fashion product is a typical sample of slow fashion that allows users to experience functional utility, material enjoyment, spiritual pleasure, image experience, wearing experience, and value realisation. Hanfu fashion products have distinctive user perception characteristics, and their attributes can only be experienced when users purchase and wear them.

The complexities of the market have grown following the high level of consumer awareness (Balasubramanian & Sheykhmaleki, 2024). Studies have observed the change in consumer behaviour regarding slow fashion and pointed out that consumers think twice before buying (Domingos et al., 2022; Harris et al., 2016). Despite the distinctive sensory experience characteristics of fashion products, user intent can only be clearly understood through their purchase and utilisation. Sensation significantly affects one's desire to purchase, use frequency, and service life. Meanwhile, perception bridges users regarding their purchase intent, use frequency, and service life to a product (J. Wang & Hsu, 2019).

To sum up, the study's perception and acceptance of Hanfu fashion involve five aspects: (1) The sensations elicited by Hanfu product. This initial stage involves the user's first impressions and sensory experiences when encountering Hanfu. This includes visual appeal, fabric texture, and overall aesthetic. (2) The pleasure obtained from Hanfu product appearance. The sensations elicited by Hanfu, such as comfort, fit, and movement, directly

influence the user's emotional response. These sensory experiences are critical in shaping the user's liking for the garment. (3) The pleasure obtained from Hanfu product function (which can be a major motivator for wearing Hanfu). The pleasure derived from wearing Hanfu, which can be influenced by factors such as cultural significance, personal identity, and aesthetic satisfaction, serves as a major motivator for continued use. Emotional durability, a concept in sustainable fashion design, also plays a role in maintaining long-term user satisfaction. (4) Use, purchase and wearing. This stage examines how the pleasure and emotional connection with Hanfu translate into actual usage, purchase decisions, and long-term loyalty. It includes aspects such as frequency of wear, willingness to recommend, and repeat purchases. (5) the consequences of utilisation for users. Finally, the consequences of using Hanfu extend beyond individual satisfaction to broader social and cultural impacts. This includes the expression of cultural identity, social acceptance, and the potential for Hanfu to become a sustainable fashion choice. The five aspects established a preliminary user perception and acceptance framework for Hanfu fashion. Since user perception and acceptance include many aspects, such as perception of utility, aesthetic perception, ease of use, and product efficiency, the current study opted to analyse the significant aspects of user perception and acceptance of slow fashion in Hanfu fashion. The significant aspects of user perception and acceptance in this study included the experience that users can describe. Through the analysis of the significant aspects of user perception and acceptance of Hanfu fashion, positive user perception and

acceptance was identified for the construction of the framework of Hanfu fashion.

User perception and acceptance are key factors in the success of Hanfu design. Consumers' acceptance of Hanfu depends not only on its appearance design, but also on its cultural connotation and emotional value. Besides, the *Kansei* engineering is also a theory that can help designers better capture consumers' perception or emotion and incorporate them into Hanfu design.

2.6 *Kansei* Engineering Methodology

Kansei Engineering can be used as a tool to evaluate users' emotional responses to Hanfu in the slow fashion movement. By collecting users' subjective evaluations of clothing, designers can better understand users' needs and preferences and thus optimize Hanfu designs. This approach will not only help improve user acceptance of Hanfu, but also promote the spread of these slow fashion concepts and culture.

In the field of *Kansei* Engineering (KE), the development of products that convey happiness and satisfaction to consumers is performed technologically based on the analysis and incorporation of emotions into the product design (López et al., 2021). “*Kansei*” is a Japanese term that denotes human feelings and emotions. KE is a technology that translates consumers' feelings about the product into the design elements and combines *Kansei* and engineering to realise a product that matches

consumers' needs and desires (Dou et al., 2021; Jin et al., 2022; X. Kang & Nagasawa, 2023). It gathers consumers' perceptual and emotional experiences and establishes models of how *Kansei* can be connected to the physical characteristics of a product. KE seeks to enhance the well-being of users or consumers by exploring physiological and psychological factors that can lead to satisfaction. Through KE, the implicit needs of consumers can be discovered, and the design of a new product concept can be established based on the knowledge of consumers' emotions and needs (Quan et al., 2018).

KE focuses on the emotional aspect of consumers' experience with the current products or product concepts based on the producer's objectives (X. Liu & Yang, 2022). Regardless of the situation, KE concerns three key points (Coronado et al., 2021; Nagamachi & Lokman, 2016; Wei et al., 2025): (1) grasping a consumer's feeling (*Kansei*); (2) identifying the design features of the product based on a consumer's *Kansei*; (3) making the product design according to a consumer's current preference trends.

The current study similarly focused on these three key points. Firstly, user perception and acceptance of Hanfu fashion are psychological performances of users' feelings (*Kansei*). One of the study's specific objectives was to identify significant aspects of user perception and acceptance of Hanfu products, which involved grasping or identifying their feelings (*Kansei*) of Hanfu products. Secondly, the design features of Hanfu products based on users' *Kansei* were identified. The current design features of Hanfu fashion

should emphasise the products' style, quality and service. However, user perception and acceptance of slow fashion in Hanfu fashion were mainly generated based on five factors (price, quality, style, service, and brand). Therefore, apart from identifying the design features of Hanfu products based on users' *Kansei*, this study also specifically identified user perception and acceptance of the price and brand. Finally, this study considered the making of Hanfu product design according to the users' current preferences. Analysing the current preference trends of Hanfu can contribute to the construction of a framework of Hanfu fashion. The constructed framework can then guide designers in their design of new Hanfu products that can satisfy users' or consumers' inner demands. Therefore, the KE methodology was deemed highly appropriate for this study.

Nagamachi founded KE in 1970. KE technology has been developed for over 50 years through many scholars' contributions (Nagamachi, 1995; Lokman, 2010; Lu et al., 2024). *Kansei* expression has changed in accordance with the changing times. Lokman (2010) proposed eight types of KE that are directed to a mutual goal—product development. These eight types of KE implementation methods, including category classification, KE System, KE modeling, hybrid KE, virtual KE, and collaborative KE, Concurrent KE, and Rough Sets KE. Each type of KE methodology achieves distinct objectives or strategies.

KE type I: Category Categorization is a method that dissects the notion of a novel product into qualitative research techniques, encompassing both

subjective and objective factors. Mazda's accomplishment in crafting the Miata sports car serves as an exemplification of this approach.

KE type II: The KE System enables the interpretation of consumers' emotional responses and perceptual evaluations towards various design elements through the integration of databases and inference engines.

KE type III: KE Modelling employs mathematical model as a basis for computerized systems. Its primary function is to manage fuzzy logic and develop artificial intelligence in machines.

KE type IV: Hybrid KE is a Hybrid KE system that integrates both Forward and Backward KE systems, facilitating an iterative process from design element to *Kansei* evaluation.

KE type V: Virtual KE. The integration of KE techniques into Virtual Reality through the Virtual KE allows consumers to virtually experience *Kansei* products and their exploration.

KE type VI: Collaborative KE refers to designers and/or consumers who are geographically separated but utilize a shared *Kansei* database, collaborating through a network to collectively generate and refine new product designs.

KE type VII: Concurrent KE involves the collaboration of representatives from various departments within a company or experts in relevant disciplines to conduct *Kansei* evaluation and analysis, thus facilitating the development of targeted product design concepts. This approach allows for a comprehensive perspective on product design that encompasses engineering, product quality, and marketing aspects.

KE type VIII: Rough Sets KE is considered the most suitable approach for handling *Kansei* data that is ambiguous and uncertain. It enables the separate analysis of nonlinear features and facilitates the establishment of decision rules based on collective interpretation in an If-Then style.

The above eight KE methods mentioned above are employed for product development across various dimensions including domain decision-making, emotional dimension, product design dimension, and comprehensive dimension. Among these methods, both KE Type I and Type VII represent novel product developments conducted within the realm of product design.

The selection of *Kansei* Engineering (KE) as the primary methodology in this study because KE has unique ability to bridge subjective user perceptions with objective design parameters, particularly in contexts prioritizing emotional resonance and sustainability. Below is an elaboration addressing the appropriateness of KE over other methodologies:

To begin with, capturing subjective user perceptions and emotional resonance. *Kansei* Engineering is explicitly designed to decode users'

affective responses (or *Kansei*) and translate them into tangible design elements (Shaari, 2016). Unlike traditional surveys or focus groups, KE employs structured semantic differential scales and multivariate statistical analyses to quantify abstract feelings (e.g., "traditional," "elegant," or "sustainable") into actionable design attributes (Aydoğar et al., 2020). This is critical for Hanfu fashion, which embodies cultural identity and emotional values that are deeply rooted in users' sensibilities. For instance, KE has been validated in fashion and space design to objectively map subjective experiences, ensuring designs align with users' psychological needs (Feng et al., 2024; Xue et al., 2020)

Besides, holistic integration of functional and emotional needs. KE uniquely integrates emotional and functional requirements through methodologies like KE Type I, which distinguishes between "must-have" and "attractive" qualities (M.-C. Chen et al., 2015; X. Kang & Nagasawa, 2023). In slow fashion, where sustainability and emotional durability are paramount, KE enables designers to balance practical elements (e.g., material longevity) with affective qualities (e.g., cultural authenticity). For example, KE has been applied to sustainable product design to translate "green" perceptions into material and process choices (Hartono, 2020), aligning with slow fashion's emphasis on environmental and emotional sustainability (Hariningsih et al., 2024; Srivastava et al., 2024).

In addition, structured methodology for cross-disciplinary design. KE provides a systematic framework spanning from qualitative user insights to

quantitative design specifications. Its eight established types (e.g., Type I for brand alignment, Type II for parameter optimization) allow flexibility in adapting to diverse contexts (Nagamachi & Lokman, 2016). In the Changzhutan case, KE's structured phases—such as *Kansei* word elicitation, semantic differential surveys, and regression model—ensure rigor in linking Hanfu's cultural aesthetics (e.g., silhouette, fabric) to user perceptions (Feng et al., 2024). This contrasts with less structured approaches like participatory design, which may lack statistical validation.

Furthermore, compatibility with slow fashion's ethos. Slow fashion emphasizes quality, sustainability, and emotional attachment—values that KE is uniquely positioned to operationalize (Jatmiko & Nugroho, 2022). KE's focus on total quality design ensures products meet both functional standards (e.g., durability) and emotional expectations (e.g., heritage pride). For example, KE has been used to design products that evoke "authenticity" and "localism," key dimensions of slow fashion. By quantifying how specific design elements, (e.g., embroidery patterns) evoke particular *Kansei* responses (e.g., "timelessness"), KE facilitates the creation of garments that emphasize the emotional expression and cultural identity associated with Hanfu fashion.

Moreover, validation in cultural and sustainable contexts. KE's efficacy in cross-cultural and sustainability-driven projects is well-documented. For instance, it has been applied to harmonize global brand values with local user preferences in logistics and e-commerce (M.-C. Chen et al., 2015). In

sustainable fashion, KE's hybrid approaches (e.g., integrating grey neural networks) have decoded "green" perceptions into eco-friendly materials (Xiaodie et al., 2020). This aligns with the study's focus on Hanfu, where cultural specificity and sustainability are intertwined.

Therefore, *Kansei Engineering* surpasses other methodologies by offering a rigorous, yet flexible, framework to decode and operationalize the complex interplay of emotion, culture, and sustainability inherent in Hanfu and slow fashion. Its ability to transform subjective perceptions into design parameters—validated across industries and cultures—makes it indispensable for studies aiming to harmonize tradition with contemporary user-centric and sustainable practices.

2.6.1 KE Type I

KE Type I is a foundational method within *Kansei Engineering* (KE) that focuses on categorizing and structuring emotional responses to enhance product design and user perception. This method, introduced by Nagamachi, emphasizes the systematic classification of *Kansei* words—emotional descriptors provided by users—to create a hierarchical structure that links abstract emotional needs with concrete design elements (Nagamachi & Lokman, 2016). By decomposing user emotions into a layered framework, KE Type I facilitates the translation of subjective feelings into actionable design insights, and KE Type I is a category classification method used in the development of new products. It focuses on categorizing new products based on their design elements and consumer feelings. This type of *Kansei*

Engineering is particularly useful for understanding how different design features can evoke specific emotional responses in consumers.

The core process of *Kansei* Type I involves several key steps. Initially, researchers identify a set of *Kansei* words through user surveys, interviews, or data mining techniques (Jiao & Qu, 2019). These words are then organized into a hierarchical structure, typically progressing from lower-order *Kansei* words to higher-order concepts. This categorization is followed by the construction of semantic differential scales to quantify the relationships between emotional descriptors and design attributes (S. Lin et al., 2021). Statistical methods such as Factor Analysis and principal component analysis are employed to identify key emotional dimensions that influence user perceptions (W. M. Wang et al., 2018).

Kansei Type I has been widely applied across various domains, including product design, interface development, and cross-cultural studies. For instance, in the automotive industry, Type I methods have been used to analyse consumer perceptions of vehicle design elements, such as the front mask, to identify emotional factors like "luxury" and "sportiness" that influence aesthetic preferences (Lu et al., 2024). Similarly, in the context of user interface design, *Kansei* Type I has been employed to optimize the emotional appeal of websites and mobile applications by identifying key emotional dimensions such as "usability" and "trustworthiness" (Ramadhan et al., 2022).

The method's adaptability has also been demonstrated in cross-cultural research. Studies have shown that different cultural backgrounds can significantly impact emotional responses to product designs. For example, research comparing consumer perceptions of kawaii packages design across various countries revealed distinct preferences influenced by cultural values (Zhou et al., 2022). This cross-cultural applicability underscores the versatility of *Kansei* Type I in addressing diverse user needs.

Recent advancements in *Kansei* Type I have integrated modern technologies such as virtual reality (VR) and artificial intelligence (AI) to enhance its effectiveness. For instance, VR systems have been developed to visualize emotional responses in real-time, allowing designers to make more informed decisions (Nik Ahmad et al., 2023). Additionally, AI techniques, including natural language processing and machine learning, have been employed to automate the extraction and analysis of *Kansei* words from large datasets, thereby improving the efficiency and accuracy of the method (Schütte et al., 2024).

KE Type I (*Kansei* Engineering Type I) systematically translates users' ambiguous emotional needs (*Kansei*) into quantifiable engineering parameters. (JU et al., 2023) applied KE Type I to optimize the "futuristic" and "eco-friendly" of electric vehicle (EV) designs. The process involves four stages:

- 1) ***Kansei* Word Selection:** 35 initial descriptors (e.g., "sleek," "innovative") were refined to 8 core terms through PCA.

- 2) **Physical Feature Extraction:** Body profiles, grille angles, and light strip ratios were quantified into 14 parameters.
- 3) **Quantitative Model:** Combined AHP (subjective weights) and entropy weighting (objective data) to prioritize features (e.g., grille angle contributed 28% to "futuristic" scores).
- 4) **Design Translation:** NSGA-II algorithm generated Pareto-optimal solutions, reducing surface curvature errors by 21% compared to baseline models.

The optimal design reduced aerodynamic drag by 12% while enhancing perceived "innovation" scores by 34% in user tests. Adopted by a leading EV manufacturer, the solution cut clay modeling iterations by 40% (Huang et al., 2023).

By aligning product design with consumer emotions, KE type I can significantly enhance consumer satisfaction and loyalty. Products that resonate emotionally with consumers are more likely to be successful in the market. By focusing on unique design elements that evoke specific emotions, companies can create products that stand out in a crowded market.

The *Kansei* Gateways, as depicted in Figure 2.17, is a pivotal framework that elucidates the intricate process of *Kansei* engineering, a methodology that has achieved significant success in Japan. The *Kansei* integrates both psycho-physiological and psychosocial analyses to assess and analyse *Kansei*, which refers to the subjective feelings and emotions evoked by a product or design (López et al., 2021). This comprehensive approach is

crucial for understanding consumer responses in diverse cultural contexts (Goh et al., 2013; Čok & Duhovnik, 2016; Hadiana, 2018; S.-F. Liu et al., 2019; Maidom et al., 2021), including Hanfu products. The psychophysiological analysis component includes EEG (Electroencephalography), EMG (Electromyography), and HR (Heart Rate) measurements. These metrics provide objective data on the physiological responses of individuals to stimuli, which can be particularly useful in understanding the emotional and cognitive reactions of consumers. The psychosocial analysis component encompasses eye movement, face expression, words, and attitude/action. These factors are essential for understanding the social and cultural dimensions of consumer behaviour (X. Kang & Nagasawa, 2023; Xiaodie et al., 2020). In Hanfu fashion culture, the words and actions of consumers can reveal their attitudes and preferences, which are shaped by cultural values and norms. By assessing and analysing the *Kansei* responses of consumers, Hanfu fashion designers can gain a deeper understanding of their emotional and psychological needs. This understanding can then be translated into innovative product designs that resonate with consumers on an emotional level (Shakirova, 2021; Wei et al., 2025). Therefore, testing the model in Hanfu fashion culture is essential for validating its applicability and effectiveness in Hanfu fashion market.

Figure 2.17 depicts the processes involved in KE Type I. Overall, there are three stages: (1) *Kansei* identification; (2) *Kansei* assessment; (3) *Kansei* analysis. The results of the *Kansei* analysis are applied to develop a new product concept.

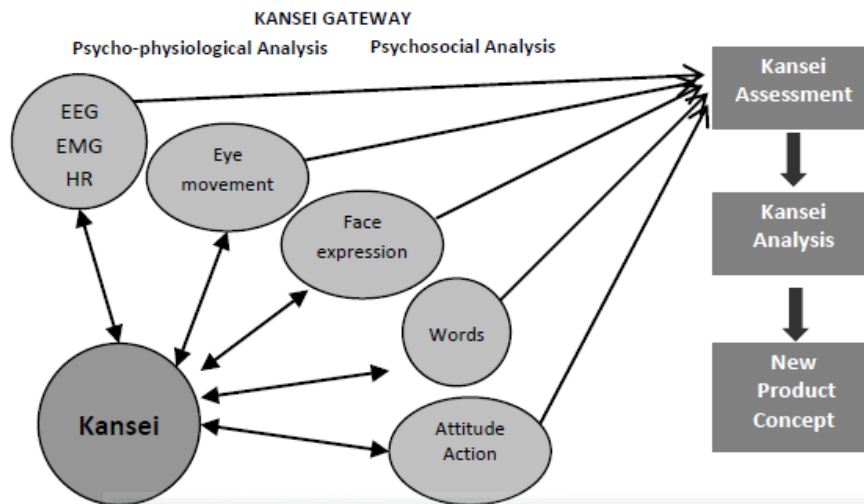


Figure 2.17 : Kansei Gateways

(Source: M. Lokman & Antitawati, 2010)

Firstly, *Kansei* identification involves identifying the key design elements of a product. These elements can include colour, shape, texture, and other physical attributes that contribute to the overall aesthetic and functionality of the product.

Next, *Kansei* assessment is collected to understand how these design elements are perceived and what emotions they evoke. This can be done through surveys, focus groups, or other qualitative research methods.

After that, *Kansei* analysis is the collected data is then analysed to categorize the products based on the identified design elements and the associated consumer feelings. This helps in understanding which design features are most effective in eliciting positive responses.

The insights gained from this categorization are used to guide the design and development of new products. By focusing on the design elements that resonate most with consumers, companies can create products that better meet consumer needs and preference.

In summary, *Kansei* Type I remains a valuable tool in the field of *Kansei* Engineering, offering a structured approach to understanding and integrating user emotions into design processes. Its continued evolution through technological advancements and cross-disciplinary applications promises to further enhance its utility in creating emotionally resonant products and experiences.

2.6.2 *Kansei* Identification

Kansei is generally referred to sensitivity, sensibility, feelings, and emotion (Nagamachi, 1995; Shakirova, 2021; Schütte et al., 2024). The term of *Kansei* used in KE refers to an organised state of mind in which emotions and images are held in the mind towards physical objects, such as products or the environment (Nagamachi & Lokman, 2016). The founder of KE interpreted *Kansei* as “psychological feelings” one has towards artefacts, situations, or surroundings (Nagamachi, 1995). Figure 2.18 shows the sources of *Kansei* in the brain of a user via five senses: cognition, vision, hearing, smell, and taste.

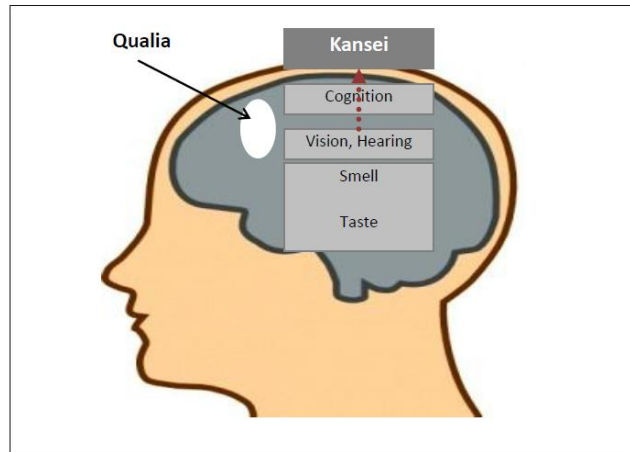


Figure 2.18 : The Process of *Kansei*

(Source: A. M. Lokman & Nagamachi, 2009)

Psychological cognition related to perception, judgement, and memory emerge when these senses are stimulated. For example, one's vision and cognition would judge whether the garment style is "beautiful" or "elegant" when one needs to purchase clothes. Generally, words are a way to express user *Kansei*. Words can express user *Kansei*, which are named *Kansei* words. User *Kansei* can be expressed or identified through *Kansei* words. With that, this study viewed user perception and acceptance as part of *Kansei* words.

Figure 2.19 presents a general template of Experience Map. Firstly, the guiding principles need to be understood. Secondly, the output elements must be identified based on the guiding principles. Thirdly, the input elements must be determined according to the needs of output elements. Finally, the content of each element must be completed.

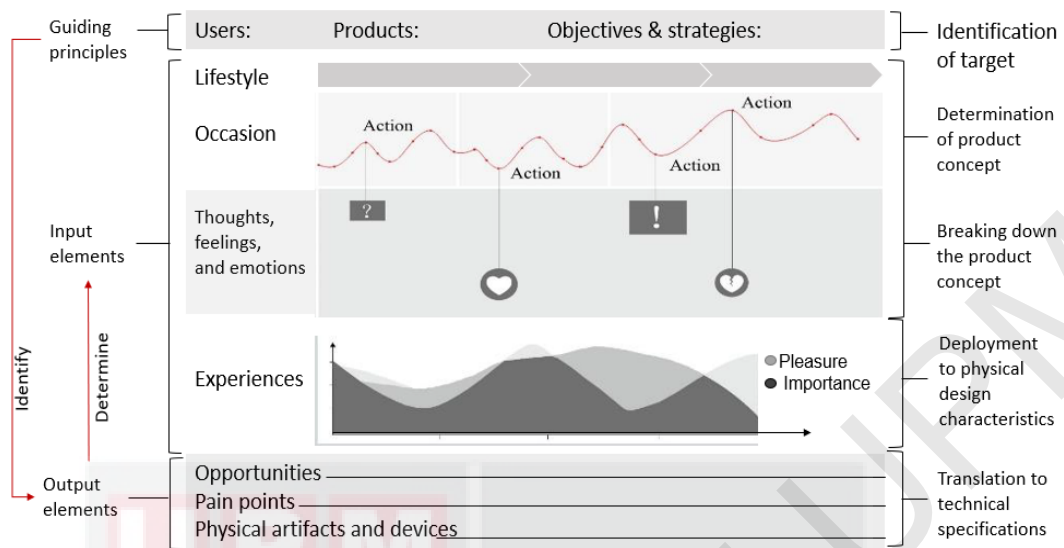


Figure 2.19 : A General Template of Experience Map
(Source: Anneli & Anna, 2017; Nagamachi & Lokman, 2016)

Nagamachi of KE founder used five steps of KE Type I and successfully developed MX5 and Wacoal brassiere products based on five steps. The current study formulated the Experience Map template with the combination of Experience Map by Anneli & Anna (2017) and the five steps of KE Type I (Nagamachi & Lokman, 2016). The layout of the general template in Figure 2.19 is divided into five zones: (1) identification of target; (2) determination of product concept; (3) breaking down the product concept; (4) deployment to physical design characteristics; (5) translation to technical specifications.

Firstly, identification of target involves establishing the guiding principles to create an Experience Map in regards to users, the product, objectives, and strategies to achieve a particular goal. Users refer to specific people or consumers who have experienced the product. The product may be goods or services, such as clothing, shoes, and photography services. Objectives

present information to illustrate tasks that the Experience Map has to complete. Based on the objectives, the output elements of the map are identified. Strategies represent the reference to achieve the goal of the map. The identification of the target market group of Hanfu fashion was determined by identifying the users of Hanfu products and how to handle the target market group. The young generation in China represents the main group of Hanfu consumption; they express their inheritance and identification of traditional culture by wearing Hanfu (Chi et al., 2021; C. Fan & Ip, 2023; K. Li, 2021). With that, this study identified the young generation of between 18 and 28 years as the target market group of Hanfu fashion.

Secondly, determination of product concept involves its incorporation into the product for user perception by studying and surveying users' lifestyle and other relevant aspects, such as dress occasion. Actions are things that users do during the dress occasion. An action is a key element in the analysis of human behaviour. A reasonable segmentation of dress occasion or transfer channel can help to realise the goal of the Experience Map.

Thirdly, the product concept is grouped into several elements, which can be adjusted based on the goal of the Experience Map. Acquiring information to break down the product concept can be performed through a qualitative approach, such as interview, survey, observation, or other feasible methods.

Fourthly, physical design characteristics are determined and constructed for comprehension. At this point, designers and businesses can figure out the

key appearance and functions of the product from the perspectives of users, such as attractive design and the feature of easy to put on. The concept can be linked to technical words using keywords like conventional or innovative in order to figure out users' preferred style. Based on keywords like comfortable and easy to put on, the function of the design of clothing can be determined, whereas based on keywords like gorgeous, the colour and fabric for the appearance design can be derived. With that, designers and businesses can understand the situation at each phase more intuitively and make reasonable conclusions. The development of physical design characteristics can be added or removed flexibly from the constructed Experience Map according to the objective requirements.

Finally, translation to technical specifications is the results of the Experience Map, which often lead to the next project phase. Pain points, opportunities, and design artefacts and devices are the typical elements of translation to technical specifications. Pain points are the problems related to the product, which should be solved. Meanwhile, opportunities are the chances for product development, whereas physical artefacts and devices represent the strategies or solutions for product development. The translation to technical specifications can be adjusted. Desmet et al. (2001) and Kuo (2018) highlighted the need to examine the concerns of target market users in regards to product type when it comes to designing products of *Kansei* value. Therefore, correctly determining the framework of Hanfu fashion should take into account users' *Kansei* value or emotion value. Desmet & Hekkert (2007) distinguished three types of product emotion; each related to a distinct type

of concern. These three concerns are goals, standards, and attitudes, which are shown in Figure 2.20. As posited by Desmet & Hekkert (2007), the development of Hanfu fashion products encompasses critical considerations such as goal orientation, quality standards, and cultural attitudes, reflecting broader sociocultural dynamics within contemporary sartorial practices, thereby illuminating critical intersections between traditional sartorial revival and modern consumer behaviour paradigms to construct a framework of Hanfu fashion in the slow fashion movement.

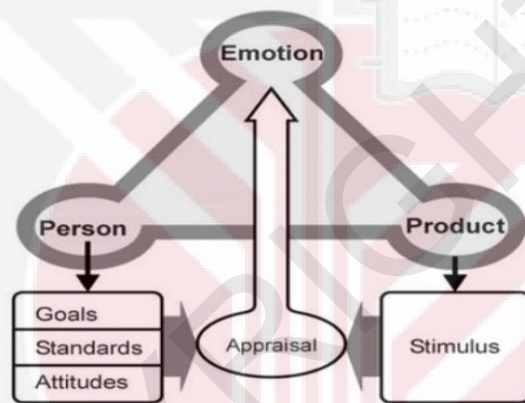


Figure 2.20 : Desmet & Hekkert's Model of Product Emotion
(Source: Desmet & Hekkert, 2007)

As empirically demonstrated in Figure 2.21, the *Kansei* engineering-based analytical framework elucidates causal interactions between Hanfu product design, consumer perception and acceptance, and framework of Hanfu fashion ultimately establishing a pathway for innovative Hanfu product development.

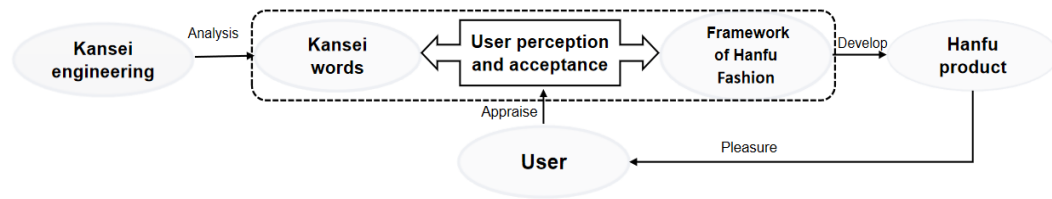


Figure 2.21 : Relationship of *Kansei*, Framework of Hanfu Fashion, and User Perception
(Source: Maidom et al., 2021)

2.7 Chapter Summary

This study aimed to construct a framework of Hanfu fashion in the slow fashion movement based on user perception and acceptance. This chapter presents the definitions of sustainability, slow fashion, and Hanfu fashion, including the relationship between slow fashion and Hanfu. Hanfu fashion is a typical sample of slow fashion according to their definition and characteristics, the current state of Hanfu fashion in China. In addition, user perception and acceptance of Hanfu fashion was incorporated into the framework. To increase the product value of Hanfu with the consideration of these five factors (i.e., price, quality, style, service, and brand) to cater to the needs of users or consumers. An in-depth analysis of user perception and acceptance of Hanfu fashion in relation to price, quality, style, service, and brand is necessary to construct an appropriate framework of Hanfu fashion in the slow fashion movement. Besides, *Kansei* Engineering provides a rigorous yet adaptable methodological framework to decipher the dynamic interplay of emotional dimensions, cultural, and sustainability inherent in Hanfu and slow fashion offering foundational support for theoretical construction in this study. Moreover, *Kansei* words related to user perception and acceptance in terms of purchase and utilisation (or wearing) were

gathered in terms of price, quality, style, service, and brand. Therefore, the data collection of user perception and acceptance of Hanfu fashion was conducted in a systematic and comprehensive manner. The current study opted for the use of Experience Map as a tool to assist KE Type I in the data collection of user perception and acceptance (i.e., *Kansei* words) of Hanfu fashion. Then, the preliminary theoretical framework of Hanfu fashion in the slow fashion movement was constructed. Based on the review of related literature in this chapter, the appropriate methodology and research design were established for this study, which are discussed in the next chapter.

CHAPTER 3

METHODOLOGY

This chapter describes the adopted methodology and research design of this study. To measure perception and acceptance analysis opted for both qualitative and quantitative methods. This study chose Changzhutan as a pilot. Hanfu is of important historical and cultural significance for the people in Changzhutan region. Meanwhile, Changzhutan is a national-level metropolitan area in central China. In order to achieve Objective 1, the influencing factors of Hanfu fashion in slow fashion movement based on the existing Hanfu products (Phase1) were analysed and determined in literature review. Phase 2 to analyse significant aspects of user perception and acceptance Hanfu fashion in the Slow Fashion movement through assistance use of the Experience Map. Process to construct the framework of Hanfu fashion in slow fashion movement through KE Methodology are described in this chapter.

3.1 Research Design

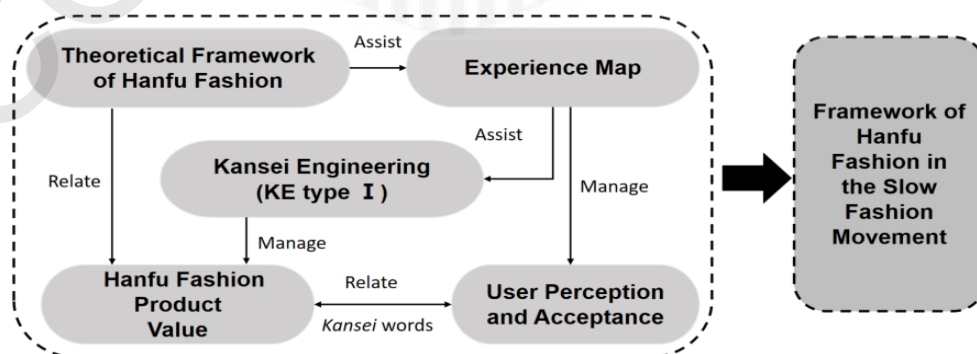


Figure 3.1 : Methodology for Determining Framework of Hanfu Fashion
(Source: Author's own illustration)

Based on the literature review, a theoretical framework of Hanfu fashion was formulated for this study. Figure 3.1 illustrates the systematic approach for establishing the Hanfu fashion framework by linking product value with user perception and acceptance based on the theoretical framework. Figure 3.2 visually details the procedural steps, ensuring clear understanding of the research progress in Hanfu fashion using KE.

In order to construct the framework of Hanfu fashion in the slow fashion movement for supporting the sales of Hanfu and development of Hanfu fashion industry, this study decided to employ the methodology of *Kansei* engineering (KE type I). Since user perception and acceptance represented the key criteria for framework of Hanfu fashion, this study referred user perception and acceptance as *Kansei* words. Experience Map was used to assist the application of KE Type I in collecting data on user perception and acceptance (*Kansei* words) of Hanfu fashion. The experience map serves as the foundational axis, capturing the holistic journey of user engagement with Hanfu, from cultural admiration (look) to habitual adoption (use or wear). At its core, the framework integrates 'user perception' and 'product value' as pivotal determinants of 'acceptance' within culturally resonant fashion systems. User perception and acceptance were merged five aspects using the Experience Map: (1) the sensations elicited by Hanfu product; (2) the pleasure obtained from Hanfu product appearance; (3) the pleasure obtained from Hanfu product matching (which can be a major motivator for wearing Hanfu); (4) use, purchase and wearing; (5) the consequences of utilisation for users. The framework of Hanfu fashion in this study was constructed

using KE methodology (KE type I) to analyse user perception and acceptance (*Kansei* words) of Hanfu fashion.

This study opted for both quantitative and qualitative methods for different research requirements of each phase. A quantitative method was used to identify positive user perception in order to determine the framework of Hanfu fashion. Meanwhile, a qualitative method was deemed appropriate for this study to collect *Kansei* words in relation to the influencing factors of Hanfu fashion and user perception and acceptance of Hanfu fashion. With respect to the research questions and objectives, this study employed a mixed-methods research design.

In order to present detailed research methodology more clearly, we formulated specific research design in Figure 3.2 based on Figure 3.1. Figure 3.2 shows this study's three phases according to the objectives. Hanfu fashion was identified as a typical sample of slow fashion in this study. The definitions and characteristics of Hanfu were reviewed and discussed in Section 2.3. Hanfu fashion represented this study's case study to construct a framework of Hanfu fashion in the slow fashion movement. This study focused on the product domain of Hanfu fashion, and young individuals of 18 to 28 years of age represented the target market users of Hanfu. Phase 1 aimed to identify the influencing factors of Hanfu fashion. Phase 2 aimed to identify significant aspects of user perception and acceptance of Hanfu fashion. Phase 3 aimed to construct the framework of Hanfu fashion in the slow fashion movement.

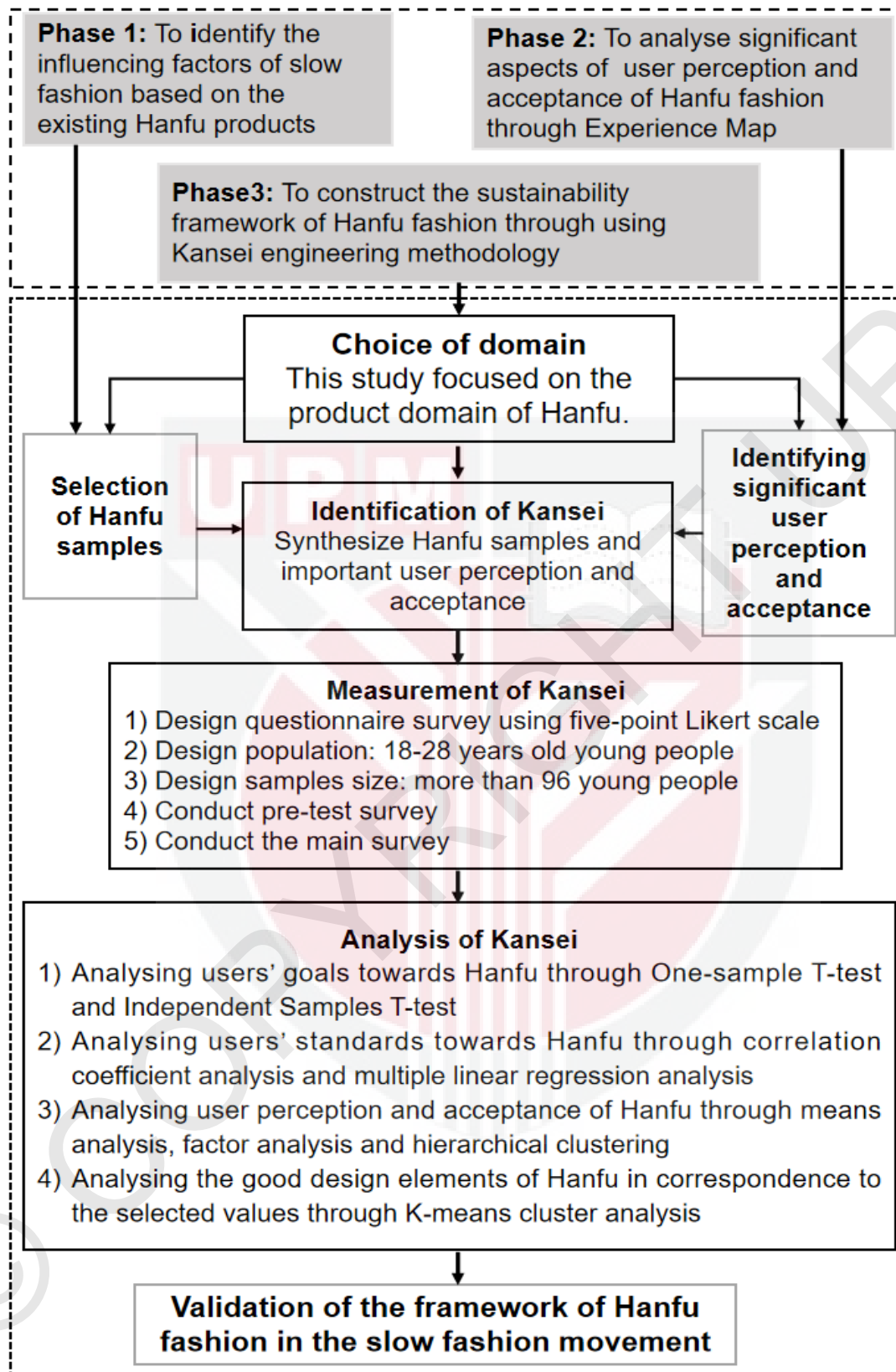


Figure 3.2 : Research Design
(Source: Author's own illustration)

3.2 Research Methodology

Regarding the research method, Table 3.1 listed the detailed contents of the research method, which involved location, sample size, Hanfu product samples, and research method.

Table 3.1 : Research Method

No.	Research Scope	The detailed Contents	The chosen Reason
1	Location	Changzhutan, China	Changzhutan is one of the fastest-growing metropolitan areas in China and has one of the largest clothing market groups in the country. Hanfu is of important historical and cultural significance for the people in Changzhutan region. As a result, many young individuals who live, work, and study in this area tend to be Hanfu users.
2	Sample Size	Pre-test Survey: 11 experts Main Survey	Before the actual data collection, a total of eleven experts are invited to administer a pre-test questionnaire, encompassing two specialists in textile engineering, two professionals in clothing engineering, two Hanfu designers, two Hanfu scholars, and three <i>Kansei</i> Engineering experts to ensure the reliability and validity of the results. To increase the accuracy of the analysis, this study opted to gather more than 96 respondents . The required sample size for this study's questionnaire survey was determined based on the following: $n = Z^2 \times P \times (1 - P) / e^2$
3	Hanfu Product Samples	24 Hanfu product Samples from the 11 qualified Hanfu Brands	1) As the identification of the main products of all qualified brands relies on two key criteria: dynasty and construction, only 11 qualified brands possess both two key criteria. 2) 128 styles of Hanfu products from the 11 qualified brands to identify the influencing factors of Hanfu from the perspectives of Hanfu users. 3) A total of 24 Hanfu product samples, which are from the 11 qualified brands. These selected Hanfu products represented a variety of different attributes.

Table 3.1 : Continued

No.	Research Scope	The detailed Contents	The chosen Reason
4	Research Method	KE (KE Type I)	1) KE is a technique specifically utilised to evaluate users' implicit needs and establish connections between them and product design attributes, with the ultimate goal of establishing a framework for generating innovative product concepts. 2) Through KE Type I, this study was able to analyse the existing products and significant aspects based on user perception (perception and acceptance), then constructed the sustainable framework of slow fashion based on user perception and acceptance of Hanfu.

(Source: Author's own formulation)

3.3 Phase 1: To Identify the Influencing Factors of Hanfu Fashion

This phase consisted of three key steps.

In step 1, qualified brands and their corresponding main products were identified based on the data provided by iiMedia Ranking (iimedia, 2022). Qualified brands included legally registered and established corporations that design or produce Hanfu fashion products. Hanfu fashion products referred to clothing of Han characteristics. The iiMedia Ranking is an authoritative ranking institution that works on the big data owned by iiMedia Research. The iiMedia Ranking is committed to building a scientific and authoritative brand evaluation system through in-depth big data mining and analysis, comprehensive ranking of brands, and neutral and objective brand information for consumers. The sales data of the sales platforms serve as the main scientific basis of iiMedia Ranking. Therefore, the qualified brands obtained by iiMedia Ranking are relatively authoritative, its brand ranking has referred to relevant data from Tmall.com, JD.com and Taobao.com. The

iiMedia Ranking identified a total of 50 Hanfu fashion brands in 2021. At present, most consumers prefer to shop for Hanfu products via three online platforms, namely Tmall.com, JD.com and Taobao.com (iiMedia New Economy Industry Research Center, 2022). The initial search for Hanfu products on these three e-commerce platforms were conducted based on the top 50 Hanfu brands ranked by iimedia.cn (*TOP50 Chinese Hanfu Brands in 2021*, n.d.).

The main products of a brand refer to the distinctive features that set them apart from other brands. The classification of Hanfu styles or series by these brands is based on their unique distinguishing features, which encompass the dynasty, design style, construction, silhouette, function, and other aspects. The styles of Hanfu have undergone evolution in accordance with different dynasties, and it is commonly recognized by its distinctive characteristics associated with specific dynastic periods, such as Han, Tang, Song, and Ming dynasties (Dai, 2023). Thus, the identification of the main products of all qualified brands relies on two key criteria: dynasty and construction. After compiling the main products offering of fifty qualified brands, it was discovered that only eleven qualified brands possess both two key criteria of Hanfu. Consequently, the current features of Hanfu fashion were analysed by collecting a total of one hundred and twenty-eight styles of Hanfu products from the eleven qualified brand.

In Step 2, the current features of Hanfu fashion were identified by analysing the products of selected qualified brands. This study first analysed and

counted the components of the main products from each selected qualified brand, and illustrated the construction of Hanfu. Subsequently, categorising and identifying the various styles within Hanfu fashion based on this comprehensive analysis. Additionally, this study assessed the quality of Hanfu fashion through material and production craft of collected products. Furthermore, it classified and categorized the services associated with Hanfu fashion based on an in-depth analysis of these products, thus providing a comprehensive understanding regarding its current features.

In Step 3, the influencing factors (i.e., price, quality, style, service and brand) of Hanfu fashion were identified by the current features of Hanfu fashion. This study first analysed the current situation of Hanfu fashion in China, and then further analysed the current situation of Hanfu fashion in Changzhutan. Third, this study focused on analysing the sustainability issues in Hanfu fashion (Chunmei & Tong, 2021) in terms of style, brand, price, service, and quality. Finally, identifying influencing factors (i.e., price, quality, style, service and brand) of Hanfu fashion from the sustainability issues in Hanfu fashion. For example, Hanfu style lacks adaptability to modern lifestyle, making it challenging to retain young consumers. Mainstream and high-end price ranges are popular among Hanfu consumers. The current service may not fully meet consumer needs. Balancing Hanfu production with environmental sustainability is a critical issue for the industry. In this way, the influencing factors of slow fashion based on existing Hanfu products were identified.

3.4 Phase 2: To Analyse Significant Aspects of User Perception and Acceptance

This study developed an Experience Map to collect data on user perception and acceptance of Hanfu due to the absence of an appropriate template on user perception of Hanfu. The process of developing an Experience Map of Hanfu consisted of four steps.

Step 1: The first step involved understanding the guiding principles. The objective of this Experience Map was to identify the target users of Hanfu fashion products, which supported KE Type I to determine user perception and acceptance of Hanfu fashion. Accordingly, Hanfu represented the product of this Experience Map. The young generation is the main user group of Hanfu and represents an important group of Hanfu users. The objective of this Experience Map was to collect data on user perception and acceptance of Hanfu.

Step 2: The step involved identifying the output elements. User perception and acceptance of Hanfu fashion represented the output elements.

Step 3: Following that, the third step involved determining the input elements. As user perception and acceptance represented the output elements that emerged from thoughts, feelings, and emotions, these input elements represented users' lifestyle and dress occasions when they put on Hanfu. Prior to that, product concept was first determined, which involved identifying all touchpoints to generate the influencing factors of Hanfu

fashion. Hanfu was selected as a case study of slow fashion products because it can express users' cultural identity and personalities. Thus, the lifestyle and dress occasion were used as the key domains to determine the product concept for the framework of Hanfu fashion. Meanwhile, actions were the touchpoints for the framework of Hanfu fashion due to the association of subjective perception and acceptance with actions. Therefore, the determination of product concept in the Experience Map of Hanfu consisted of lifestyle, dress occasion, and actions. Based on the product concept, user perceptions and acceptance of each touchpoint were determined. User perception was expressed in the form of sentences and then be identified from the conveyed sentences. User acceptance was determined based on their appraisal of online retailers.

Step 4: Following the determination of both output and input elements, an Experience Map template of Hanfu was designed, which is presented in Figure 3.3. The step was to complete the content of each listed element.

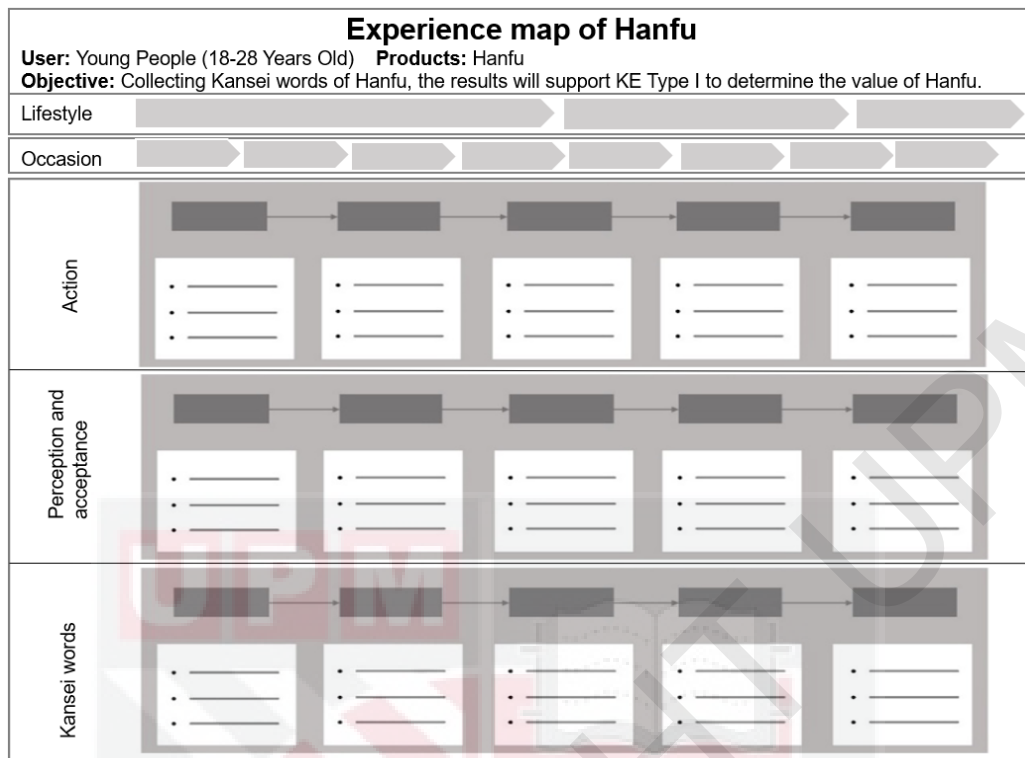


Figure 3.3 : The Experience Map Template of Hanfu
(Source: Author's own illustration)

Step 4 involved completing the details of the output and input elements. User perception and acceptance for each touchpoint were identified based on the following details: (1) evaluation of Hanfu features from the historical aesthetic perspective; (2) design concept by designers; (3) users' appraisal of online platform retailers. The sales volume and user's appraisal of each product at the selected online shopping platforms (Tmall.com , JD.com and Taobao.com) were gathered.

When it comes to the evaluation of Hanfu features from the historical aesthetic perspectives, this study reviewed the findings of prior studies on historical aesthetics of Hanfu, which were presented in Chapter 2. Meanwhile, as for the design concept by designers, this study screened one hundred

and twenty-eight styles of Hanfu products to collect adjective words or sentences pertaining to the design concepts of Hanfu. Each design concept of Hanfu can be expressed in terms of design inspiration, themes, and concept. As for user appraisal, this study screened the eleven qualified Hanfu brands to collect user perception. Each Hanfu has thousands of user appraisal cases. As a result, this study reviewed more than 38,450 consumer appraisal cases (Appendix B2) of one hundred and twenty-eight styles of Hanfu products and categorised them according to their characteristics. Sales were deemed as the optimal way to elucidate user perception and acceptance, which were subjected to three rounds of screening.

In the first round of screening, each user perception gathered was analysed. Certain cases of user perception would have similar meanings or similar attributes, which would adversely affect the design of the questionnaire survey. Thus, such cases were removed during the second round of screening. In the final round of screening, certain cases of user perception that were deemed irrelevant to the current study were removed. Only significant aspect of user perception and acceptance of Hanfu were collected.

3.5 Phase 3: To Construct the Framework of Hanfu Fashion

Phase 3 involved the application of KE Type I. Overall, there were three main stages of KE Type I: (1) identification of *Kansei*; (2) measurement of *Kansei*; (3) analysis of *Kansei*.

3.5.1 Identification of *Kansei*

The developed framework of Hanfu fashion in this study represented users' inner implicit needs and thoughts in terms of five factors (i.e., style, brand, price, service, and quality) towards Hanfu, which are generally subjective and ambiguous in nature. User perception and acceptance were conceived as individual senses with emotional value based on its interactions with style, brand, price, service, and quality of Hanfu fashion. As such, the definitions of the framework of Hanfu fashion and user perception and acceptance in this study described the same event from multifaceted perspectives.

User perception and acceptance can promote a product within the framework of users' sense and pleasure, which reflect a certain form of emotional stimulus. The closest meaning of *Kansei* is "psychological feeling", which is generally referred to as sensitivity, sensibility, feelings, and emotions. As a result, user perception and acceptance and *Kansei* are related. User perception and acceptance can act as an intermediary to associate *Kansei* with the framework of Hanfu fashion.

In order to facilitate the understanding of the definition of *Kansei* in this study, *Kansei* was referred to as user perception and acceptance. This study used Experience Map to collect data on user perception and acceptance of Hanfu. The process of developing and using the Experience Map to collect data on perception and acceptance of Hanfu was described in Section 3.4 (Phase 2).

3.5.2 Measurement of *Kansei*

In general, *Kansei* is implicit, ambiguous, and subjective in nature. The states of emotions and images are held in the users' or consumers' mind towards physical objects, such as products. Considering the difficulty of measuring the states of emotions and images directly, an indirect measurement approach is preferred. There is an alternative expression approach to measure *Kansei*, which is classified into physiological and psychological categories. Accordingly, physiological measure targets capturing users' behaviour, response, and body expression, whereas psychological measure deals with users' mental state, such as the degree of liking, satisfaction, and acceptance.

Kansei measurement is a process of capturing user *Kansei* to help designers understand the user's emotional needs and preferences. Data on user perception and acceptance of Hanfu were gathered in this study. User perception and acceptance in this study were conceived as personal perceptions with emotional value (Scussel, 2019), involving different kinds of human mental state. Since it is difficult to directly measure *Kansei* due to its subjectivity, this study opted for a psychological measure—an indirect measurement method—to evaluate *Kansei* words. This type of measure is widely used when it comes to the implementation of KE. *Kansei* words play an intermediary role of conveying user *Kansei* and framework of Hanfu fashion. For examples, there are self-reporting system like Likert scale, different emotional scale (DES), semantic differential (SD) scale, or free labelling system. As this study aimed to measure user perception and

acceptance, Likert scale was considered. A Likert scale is commonly used in survey research to measure respondents' attitudes in terms of the level of their agreement (or disagreement) towards a particular statement or aspect (Joshi et al., 2015).

Questionnaire: As for the design of the questionnaire survey, the samples and user perception and acceptance of Hanfu were first established. The developed instrument was then posted on an online survey platform, namely Wenjuanxing (Wjx.cn) (*myquestionnaires*, 2022).

Meanwhile, as for the sample selection, adequate samples of Hanfu for different categories (Table 3.2) were acquired accordingly. Based on the analysis of the existing Hanfu products, this study selected a total of 24 Hanfu products, which are presented in Table 3.3. These selected Hanfu products represented a variety of different attributes.

Table 3.2 : Classification List of Items and Categories

Items	Categories
Design style	(1) Classic; (2) Innovative
Construction	(1) Upper and lower garments; (2) One-piece; (3) Combination
Dynasty	(1) Han dynasty; (2) Tang dynasty; (3) Song dynasty; (4) Ming dynasty
Silhouette	(1) A-Line; (2) H-line; (4) -line
Pattern	(1) Birds and animals; (2) Flowers and plants; (3) Geometry
Colour	(1) Red/Black/Pink; (2) Purple\Red\Blue\Orange; (3) Green/Yellow; (4) Black and white; (5) Yellow/Red; (6) White/blue
Material	(1) Soft fabric; (2) Light fabric; (3) Glossy fabric
Fabric	(1) Recycled polyester; (2) Cotton; (3) Spandex; (4) Tencel; (5)
Component	Mulberry silk; (6) Imitation Tencel; (7) Metallic yarn; (8) Nylon
Handcraft	(1) Traditional handcraft; (2) Advanced technique
Function	(1) Practical function; (2) Easy to put on; (3) Easy to take off; (4) Easy to walk
Opening method	(1) Front opening; (2) Right overlapping part; (3) Buttons; (4) Frog button
Collar/Neckline	(1) "Y" collar; (2) Chinese stand collar; (3) Round collar; (4) Open collar
Sleeves	(1) Loose; (2) Long
Cuff size	(1) Loose; (2) Tightened
Bustline	(1) Loose; (2) Tightened
Waistline	1) Loose, 2) tightened, 3) high-waisted.
Size	(1) XS, 84A/155; (2) S, 88A/160; (3) M, 92A/165; (4) L, 96A/170
Quality	(1) Printing patterns; (2) Jacquard; (3) Braid; (4) Embroidered patterns; (5) Others
Price	(1) CNY 0–99; (2) CNY 100–299; (3) CNY 300–499; (4) CNY 500–999; (5) CNY 1,000–1,999; (6) CNY 2,000–2999; (7) others
Service	(1) 24-hour online shopping guide; (2) No reason to return within seven days; (3) Live delivery service; (4) Quick refund; (5) Return shipping insurance; (6) After-sales consulting service
Brand	(1) Domestic brands; (2) Brand with innovative characteristics; (3) Brand with traditional cultural characteristics

(Source: Author's own formulation)

Table 3.3 : Samples of Hanfu

Sample	1	2	3	4	5
Price Style Material Dynasty Product	CNY 228 Classic Soft Fabric Song 	CNY 178 Classic Soft Fabric Tang 	CNY 172 Classic Soft Fabric Tang 	CNY 937 Classic Light Fabric Song 	CNY 319 Classic Glossy Fabric Tang 
Sample	6	7	8	9	10
Price Style Material Dynasty Product	CNY 318 Classic Soft Fabric Tang 	CNY 2480 Classic Glossy Fabric Ming 	CNY 248 Classic Light Fabric Ming 	CNY 356 Classic Light Fabric Song 	CNY 2800 Classic Soft Fabric Tang 
Sample	11	12	13	14	15
Price Style Material Dynasty	CNY 628 Classic Light Fabric Song	CNY 578 Classic Soft Fabric Tang	CNY 767 Classic Glossy Fabric Ming	CNY 1568 Classic Glossy Fabric Ming	CNY 516 Classic Soft Fabric Ming

Table 3.3 : Continued

Product					
Sample	16	17	18	19	20
Price	CNY 468	CNY 348	CNY 798	CNY 458	CNY 428
Style	Classic	Classic	Classic	Classic	Innovative
Material	Soft Fabric	Soft Fabric	Soft Fabric	Glossy Fabric	Light Fabric
Dynasty	Tang	Song	Han	Other	Other
Product					
Sample	21	22	23	24	
Price	CNY 219	CNY 600	CNY 238	CNY 348	
Style	Innovative	Innovative	Innovative	Innovative	
Material	Soft Fabric	Glossy Fabric	Soft Fabric	Glossy Fabric	
Dynasty	Song	Han	Ming	Other	
Product					

(Source: Author's own formulation)

In Phase 2, significant aspects of user perception and acceptance were identified. The following five-point Likert scale was applied in the questionnaire survey: (a) “1” denotes “not at all”; (b) “2” denotes “slightly”; (c) “3” denotes “moderately”; (d) “4” denotes “very much”; “5” denotes “extremely”.

Participants' characteristics: Potential Hanfu users, consumers, designer, and Hanfu lovers from the age group of 18 to 28 years represented this study's target respondents. They are mainly a variety of students from institutions of higher learning and young workers in Changzhutan, China. Young individuals of the age of 18 to 28 years old study represent the most active and dynamic force in society in the Hanfu fashion movement.

Sample size: The required sample size for this study's questionnaire survey was determined based on the following:

$$n = Z^2 \times P \times (1 - P) / e^2$$

where n denotes sample size; Z denotes Z-statistic for the level of confidence (e.g., 1.96 for 95%); P denotes expected proportion; e denotes precision.

In general, when an unknown population size is concerned, the sample size can be derived by computing the minimum sample size required, with the standard normal deviation set at 95% confidence level (1.96), expected proportion of (50%=0.5), and precision of (0.05 =±5%). Considering the number of questions (i.e., 1,440 questions) included in the questionnaire

survey and the time required to answer all questions, this study increased the precision to 10%. Thus, the minimum sample size required was around 96 for the population with 95% confidence level, expected proportion of 50%, and precision of 10%. In order to increase the accuracy of the analysis, this study opted to gather more than 96 respondents.

Location: The questionnaire survey was conducted in the metropolitan area of Changzhutan, central China. Changzhutan is one of the fastest-growing metropolitan areas in China and has one of the largest clothing market groups in the country. Hanfu is of important historical and cultural significance for the people in Changzhutan region. As a result, many young individuals who live, work, and study in this area tend to be Hanfu users.

Survey time: The online survey was conducted from 28 December 2021 to 27 January 2022 (one month). Respondents were allowed to complete the online survey during their free time. The time required to complete the questionnaire survey ranged from 30 minutes to 60 minutes.

Pre-test survey: Prior to the actual data collection, a pilot test was conducted to ensure the reliability and validity of the results.

Main survey: After the successful implementation of the pilot test, the main survey was implemented.

3.5.3 Analysis of *Kansei*

Through *Kansei* evaluation, similar meanings, structures, and concepts in user *Kansei* can be explored (Ishihara et al., 2008). In the practical application of KE, *Kansei* analysis is necessary. There are several statistical analysis methods that are commonly used in KE (Akram et al., 2024; Coronado et al., 2021; Maidom et al., 2021; Quan et al., 2018; Todorean, 2017; Wei et al., 2025). These statistical analysis methods include descriptive statistics, reliability analysis, one-sample t-test, Exploratory Factor Analysis (EFA), Factor Analysis (FA), correlation analysis, k-means cluster analysis, hierarchical cluster analysis, multivariate analysis of variance (MANOVA), multiple linear regression analysis, and status quo analysis.

The main purpose of the current study was to construct a sustainable framework of slow fashion based on user perception and acceptance of Hanfu. The obtained results were expected to benefit designers in their design of Hanfu products that can meet users' needs and feelings. Hanfu products that incorporate KE are referred to as *Kansei* Hanfu products, which come with higher competitive advantage and valuable content; in other words, these are good, comparatively inexpensive products.

Accordingly, goals are things or events that are intended to occur. Standards are beliefs, norms, or conventions of thinking regarding how things or events ought to be. Last but not least, attitudes refer to dispositional liking or disliking. With that, three types of user concerns (i.e., goals, standards, and

attitudes) towards Hanfu products were first explored before the framework of Hanfu fashion was determined in this study.

In China, most Hanfu lovers are of the young generation. Therefore, their concerns towards Hanfu, especially of those between 18 and 28 years of age, were explored for the construction of this study's framework of Hanfu fashion. The preliminary conceptual framework of slow fashion in this study incorporated five factors: style, quality, brand, price, and service. Their concerns would define whether the goals of this young generation in relation to Hanfu fashion can be achieved.

The correlations of these five factors potentially influence the decision-making process of this young generation. The correlations among the five factors would represent the standards of users towards Hanfu. Different user perception and acceptance result in different attitudes towards Hanfu, thereby affecting their decision-making. Positive perception and acceptance would prompt users to buy Hanfu, and negative perception and acceptance would discourage users from buying Hanfu. The current study identified goals, standards, and user perception and acceptance of the young generation towards Hanfu for the construction of the framework of Hanfu fashion.

After all data were successfully collected, IBM SPSS 26.0 software was used for the analysis of *Kansei*. The main purpose of this study was to construct the framework of Hanfu fashion. Based on the literature review, adequate

understanding of the three types of users' concerns (i.e., goals, standards, and attitudes) towards Hanfu and identification of good design elements of Hanfu were necessary for the development of the framework of Hanfu fashion. Prior to the analysis, the appropriateness of the data collected was verified and validated through descriptive analysis, reliability analysis, and validity analysis (EFA). Overall, there were four parts of the analysis of *Kansei*. The proposed framework of Hanfu fashion in this study was expected to benefit designers in their design of Hanfu products with higher competitive advantage. Thus, good design elements in correspondence to the constructed framework of Hanfu were identified.

3.5.3.1 Analysis of Users' Goals towards Hanfu

The one sample t-test is a statistical procedure used to determine whether the mean of a sample is significantly different from a known or hypothesized population mean (Muhammed Al-Kassab, 2022). The primary purpose of the one-sample t-test is to compare the mean of a single sample to a specified value. One-sample t-test was considered for the analysis of purchase intention or satisfaction. When analysing the purchase intention or satisfaction of consumers or users towards 24 Hanfu product samples, the One-sample T-Test can be a suitable choice, because it allows for comparison against a hypothesized value, is suitable for data that may be normally distributed with an unknown population variance, and is appropriate for the given sample size. Thus, One-sample t-test is appropriate to analyse consumers' purchase intention or satisfaction from five factors (style, brands, price, service and quality) towards 24 Hanfu product samples. The values of

mean, mean difference, and standard deviation were obtained after the one-sample t-test. Users' purchase intention for 24 Hanfu samples were determined based on the mean values. The differences in purchase intention for 24 Hanfu samples were determined based on the mean difference values. The consistency of users' attitudes towards their purchase intention for 24 Hanfu samples was determined based on the values of standard deviation. Independent samples t-test was performed to evaluate the difference between female and male groups' acceptance intention of good Hanfu samples (from the results of one-sample t-test).

3.5.3.2 Analysis of Users' Standards towards Hanfu

Pearson correlation coefficient analysis was used to analyse the correlations of style, price, quality, brand, and service. The standards of user perception and acceptance were identified based on the correlation coefficients of the constructs. Multiple linear regression analysis was performed in this study to examine user perception and acceptance of all five factors. The analysis identified which factor was the dependent variable that affects other factors.

3.5.3.3 Analysis of Users' Attitudes towards Hanfu

Mean analysis and FA were used to examine user perception and acceptance. The significant aspects of user perception and acceptances were identified based on the results of factor loadings. Subsequently, hierarchical cluster analysis was used to filter a cluster of the most influential user perception and acceptance (i.e., positive perception and acceptance). Finally, the selected positive perception and acceptance were analysed.

Based on the results of *Kansei* analysis, the framework of Hanfu fashion was constructed.

3.5.3.4 Analysis of Good Design Elements of Hanfu in Correspondence to the Selected Values

K-means cluster analysis was performed for the classification of 24 Hanfu samples. Through this analysis, this study also screened and identified a cluster of Hanfu with the best user perception and acceptance. The design elements of the selected Hanfu were subsequently identified, which were used as samples for the identification of good design elements in correspondence to the determined values.

3.5.3.5 Validation

After the analysis of *Kansei*, the aspects of framework of Hanfu fashion were determined. In order to ensure the accuracy and reliability of value determination, another survey was performed for the validation purpose. The questionnaire survey employed the semantic differentiation scale, specifically a five-rating scale. The range of each *Kansei* word was set from 1(very unimportant) to 5 (very important). The designed questionnaire survey was then posted at a professional online questionnaire website, specifically Wenjuanxing (*myquestionnaires*, 2022).

The target group of respondents (i.e., young individuals of between 18 and 28 years) for this online survey was similar to that for the prior online survey.

These respondents must be Hanfu designers, Hanfu users, lovers, or potential Hanfu consumers.

The sample size for this online survey was determined in consideration of the number of respondents in the prior online survey. The current online survey only required equal or more than two-thirds of the initial sample size in order to prove the validity of framework of Hanfu fashion.

Likewise, the sampling location for this online survey was similar to that of the initial online survey, specifically the metropolitan area of Changzhutan. The online survey was conducted from 26 December 2022 to 6 January 2023. The time required to complete the questionnaire survey ranged from five minutes to 10 minutes.

3.6 Chapter Summary

This chapter presented this study's methodology and research design to achieve the objectives. Firstly, this chapter described the methods and procedures of identifying the influencing factors of Hanfu fashion. Secondly, the development of an Experience Map to collect data on user perception and acceptance of Hanfu was also described. KE Type I was used to determine the significant aspects of user perception and acceptance of Hanfu fashion. Thirdly, this chapter discussed how KE Type I was employed in this study to construct the framework of Hanfu fashion. In order to achieve the three segment objectives of this study, analysing users' goals towards Hanfu through one sample t-test analysis and independent samples t-test;

analysing users' standards towards Hanfu through correlation analysis and multiple linear regression analysis; analysing users' attitudes towards Hanfu through mean analysis, FA and hierarchical clustering. At last, analysing the good design elements of Hanfu in correspondence to the selected values through k-means cluster analysis. The obtained results of this study are presented and discussed in the next chapter.



CHAPTER 4

DATA COLLECTION

This chapter presents the qualitative research conducted to analyse the body of literature established in Chapter 2 literature review, with the objectives of identifying the influencing factors of Hanfu fashion and analysing significant aspects of user perception and acceptance.

The qualitative methodology adopted to 1) investigate the characteristics of fashion products, 2) phenomenological research techniques—including in-depth interviews, observational studies and focus groups, 3) content analysis, framing analysis of designers' narratives revealed how professional intent shapes product descriptions (e.g., emphasizing sustainability or innovation). To ensure rigor, triangulation verification cross-referenced findings across datasets. This study establishes connections between Hanfu fashion products and user *Kansei* through *Kansei* words. The chapter is organized into three principal analytical dimensions: Section 4.1 develops the Preliminary Theoretical Framework. Section 4.2 identify the Influencing Factors. Section 4.3 examines significant aspects of user perception and acceptance. This qualitative exploration serves as the critical bridge between the literature foundation established in Chapter 2 and data analysis in Chapter 5. The analytical outcomes not only validate and extend existing theoretical constructs in Hanfu fashion studies but also reveal influencing factors of Hanfu fashion in the slow fashion movement. Particular emphasis

is placed on tracing the connection between user perception and acceptance toward Hanfu in the slow fashion movement.

4.1 Preliminary Theoretical Framework of Hanfu Fashion

With slow fashion, user's sensations are mainly generated by slow fashion product's price, quality, style, service, and brand. For instance, users' inner pleasure (e.g., liking and wanting), which contributes to their perception of utility and aesthetic perception, may be attributed to the style of products. These five key factors (price, quality, style, service, and brand) influence consumers' purchase and consumption. At the same time, the quality and style can influence the frequency of use, which involves the length of a product's lifetime and the consequences of its use (e.g., recycling, reuse, reduce, and upcycling).

The preliminary theoretical framework of Hanfu fashion (Figure 4.1) integrates *Kansei* Engineering principles, conceptual model of perception and slow fashion matrix to explore consumer perceptions and experiences associated with Hanfu fashion products. This framework is designed to provide a comprehensive understanding of how various attributes influence consumer behaviour and satisfaction. As depicted in Figure 1, the framework is structured around several key components that interact to shape the consumer's overall experience and perception of Hanfu fashion products: *Kansei* Assessment and Analysis, Factors of Influencing Perception, Consequences of Use, and New Product Concept.

First of all, *Kansei* assessment and analysis are foundational to this framework. *Kansei* refers to the emotional and sensory responses that consumers have towards products. The assessment phase involves gathering initial perceptions and emotional responses from consumers regarding Hanfu fashion products. This is crucial for identifying the key attributes that resonate with consumers and trigger specific emotions or sensations.

The analysis phase then delves deeper into these perceptions, breaking them down into actionable insights. This involves categorizing the responses into specific attributes such as pleasure, liking, wanting, and use. By understanding these emotional responses, designers and marketers can tailor their strategies to enhance the appeal of Hanfu fashion products.

Besides, the framework identifies five factors that significantly influence consumer perception of Hanfu fashion products. These factors include:

- Price: The affordability and perceived value of Hanfu fashion products.
- Quality: The craftsmanship, durability, and overall quality of the products.
- Style: The aesthetic appeal and design elements that make Hanfu fashion products attractive.
- Service: The customer service experience, including after-sales support and service quality.
- Brand: The brand reputation and image associated with Hanfu fashion products.

These factors are interconnected and collectively influence the consumer's overall perception and acceptance with Hanfu fashion products.

In addition, the consequences of use refer to the outcomes and experiences that consumers derive from using Hanfu fashion products. This includes:

- Sensations: The physical and emotional sensations experienced while wearing or using the products.
- Pleasure: The enjoyment and satisfaction derived from the product's use.
- Liking: The overall preference and affection for the product.
- Wanting: The desire to continue using or purchase more of the product.

Understanding these consequences is essential for assessing the long-term appeal and sustainability of Hanfu fashion products in the market.

Furthermore, the framework also considers the development of new product concepts based on the insights gained from *Kansei* assessment and analysis. By leveraging the emotional and sensory responses identified, designers can create new product concepts that better align with consumer preferences and needs. This iterative process ensures that new products are not only aesthetically pleasing but also emotionally resonant with the target audience.

This theoretical framework sets the stage for further research and development within the field of Hanfu fashion, offering a robust foundation for understanding consumer/user perceptions and acceptance.

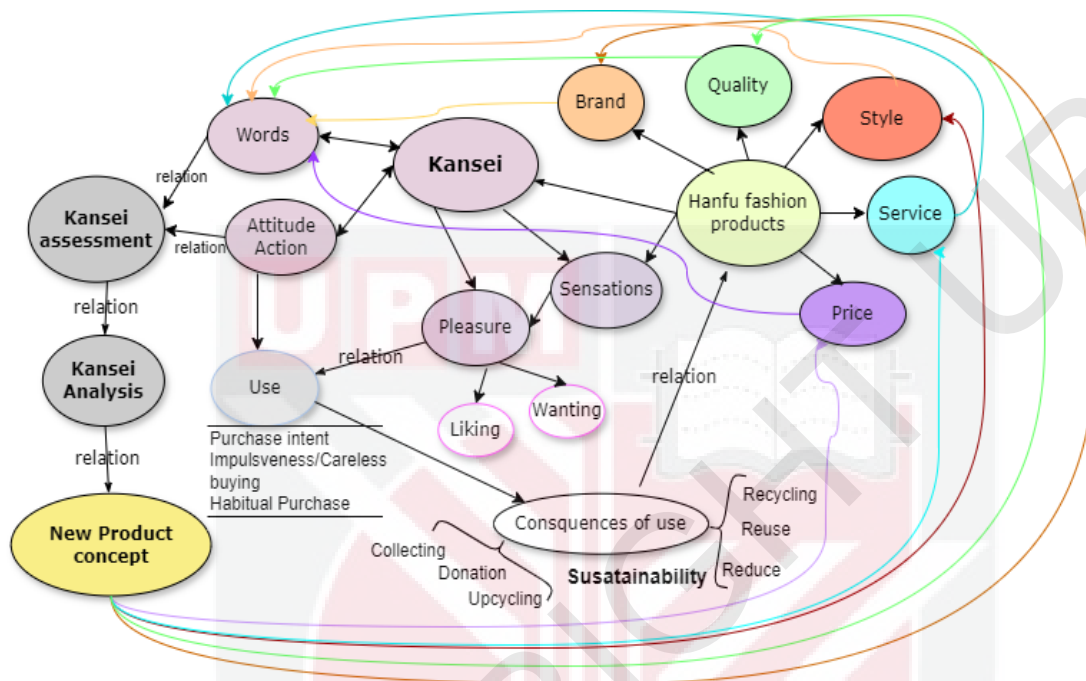


Figure 4.1 : Preliminary Theoretical Framework of Hanfu Fashion
(Source: Author's own illustration)

In the context of the slow fashion movement, Hanfu, as a traditional Chinese attire, has garnered significant attention for its cultural significance, sustainable production practices, and alignment with the principles of slow fashion. The Hanfu fashion in slow fashion movement necessitates a comprehensive examination of five key dimensions: Style, Brand, Price, Service, and Quality.

Hanfu distinct aesthetic, deeply rooted in historical and cultural traditions, is a defining feature of its appeal in the slow fashion movement. The intricate

designs, high-quality materials, and traditional craftsmanship employed in Hanfu production reflect the movement's values of sustainability and durability. Techniques such as embroidery, silk weaving, and the use of natural dyes not only enhance the cultural authenticity of Hanfu but also align with the principles of slow fashion. However, these techniques are labor-intensive and require specialized skills, significantly increasing production costs. For instance, the production of a single Hanfu garment using traditional embroidery can take several weeks, contributing to higher material and labour costs. This highlights the necessity of addressing cost when discussing style, as it directly impacts the feasibility and accessibility of producing high-quality, culturally authentic Hanfu.

Brand value in the slow fashion industry is closely linked to sustainability, ethical practices, and cultural significance. Hanfu brands often emphasize their commitment to traditional craftsmanship, sustainable materials, and fair labour practices, which resonate with consumers prioritizing ethical consumption. However, these practices come at a higher cost compared to fast fashion. Sourcing organic or recycled materials and ensuring fair wages for artisans increase production expenses, which are often reflected in higher retail price. This can affect brand accessibility and market penetration. Therefore, managing cost effectively while maintaining brand integrity is critical for Hanfu brands to achieve long-term sustainability and consumer loyalty.

Price is a direct reflection of production costs and plays a pivotal role in the market adoption of Hanfu. Slow fashion products, including Hanfu, typically have higher price points due to the use of high-quality materials, traditional craftsmanship, and ethical production practices. Research indicates that consumers are often willing to pay a premium for sustainable and ethically produced clothing; however, the extent of this willingness varies. Studies have shown that consumers may be willing to pay up to 20% more for sustainable fashion products, but higher premiums may deter broader market adoption. Therefore, understanding and managing costs is essential to strike a balance between maintaining the quality and ethical standards of Hanfu and ensuring it remains accessible to a wider consumer base.

Service standards in the slow fashion industry extend beyond the product itself to include aspects such as customization, repair services, and transparency in production. Hanfu brands often offer personalized services, such as custom fittings and alterations, to enhance consumer satisfaction and product longevity. Additionally, some brands provide repair and maintenance services to extend the life cycle of Hanfu garments, which aligns with the slow fashion principle of reducing waste. However, these services come at an additional cost, both in terms of labour and resources. Therefore, cost considerations are vital in determining the feasibility and scalability of these services, as well as their impact on overall brand sustainability and consumer loyalty.

Quality is a cornerstone of the slow fashion movement, and Hanfu is no exception. High-quality materials, traditional craftsmanship, and durable designs contribute to the longevity and sustainability of Hanfu garments. Achieving high quality often requires significant investment in materials, labour, and production processes. For example, using organic silk or natural dyes increases the cost of production, but it also enhances the product's durability and environmental sustainability. Therefore, cost is intrinsically linked to quality in Hanfu production, and managing cost effectively is crucial to ensure that high-quality, sustainable Hanfu remains viable in the market.

Consumers consider that Hanfu fashion products convey significantly higher values (i.e., perceived customer value), resulting in higher intention to buy and pay the additional costs for Hanfu fashion products. In the case of slow fashion, higher value would increase opportunities for purchase at premium price. When consumers view slow fashion products as significantly higher values (i.e., perceived customer value), they would display the intention to buy and pay the additional cost for slow fashion products ((Jung & Jin, 2016). In short, cost is an essential factor. It directly impacts the style, brand value, price, service standards, and quality of Hanfu products. By understanding the relationship between cost and these elements, Hanfu producers and brands can better navigate the challenges of balancing sustainability, cultural authenticity, and market accessibility. Effective cost management, combined with transparent communication and consumer education, can help bridge the gap between the high costs of sustainable production and the market's

willingness to pay, ultimately contributing to the long-term success of Hanfu in the slow fashion movement.

4.2 Identification of the Influencing Factors

A total of one hundred and twenty-eight styles of Hanfu products from eleven qualified brands were collected for analysis in this study. In terms of the characteristics of the collected Hanfu products and the conceptual framework pertaining to Hanfu fashion, this study identified the influencing factors of Hanfu from the perspectives of Hanfu users. This study examined Hanfu fashion in terms of style, brand, price, service, and quality.

The style factor consists of different items, and each item has different categories. The style factor mainly includes eight items: (1) dynasty; (2) design style; (3) construction; (4) silhouette; (5) pattern; (6) colour; (7) material; (8) function. Firstly, there are four categories for dynasty: Han dynasty, Tang dynasty, Song dynasty, and Ming dynasty. Secondly, there are classical design style and innovative design style. Thirdly, there are three categories of construction, namely upper and lower garments, one-piece style, and combination style. Next, there are six categories of silhouette, namely A-Line, H-line, T-line. Likewise, there are three categories of pattern: (1) birds and animals; (2) flowers and plants; (3) geometry. As for colour, there are also six categories: (1) red/black/pink; (2) purple/red/blue/orange; (3) green/yellow; (4) black and white; (5) yellow/red; (6) white/blue. Add to that, there are three categories of material: (1) soft fabric; (2) light fabric; (3)

glossy fabric. Last but not least, there are four categories of function, namely practical function, easy to put on, easy to take off, and easy to walk.

Brand, price, service, and quality factors also consist of different categories.

Figure 4.2 shows the different categories of all five factors.

Influencing factors		
Style		
Brand	Domestic brands, Brand with Innovation Characteristics, Brandwith Tradition cultural Characteristics.	Dynasty: Han, Tang, Song, and Ming
Quality Printing patterns, Jacquard, Braid, Embroidered Patterns, Others		Design style: Classical style, Innovative style
Price		Construction: Upper and lower garment, One-piece style, Combination style
CNY 0–99, CNY100–299, CNY 300–499, CNY 500–999, CNY 1,000–1,999, CNY 2,000–2999, Others		Silhouette: A-Line, H-Line, T-line
Service		Pattern: Birds and Animals, Flowers and Plants, Geometry
24-hour onlineshopping guide, No reason to return within seven days, Live deliveryservice, Quick refund, Return shipping insurance, After-salesconsulting service	Material: Soft fabric, Light fabric, Glossy fabric	Color: Red/Black/Pink, Blue/Red/ Blue/Orange, Green/ Yellow, Black and White, Yellow/Red, White/Blue
	Function: Pratical Function, Easy to put on, Easy to take off, Easy to walk	

Figure 4.2 : Influencing Factors of Hanfu Fashion
(Source: Author's own illustration)

The style, brand, price, service, and quality as the main factors are grounded in a theoretical framework that aims to capture the most salient dimensions influencing user perception and acceptance. However, this approach overlooks the subjective nature of price, which can be influenced by various factors such as material type, quality, pattern design, and colour (Bósquez et al., 2022). For instance, in Germany, the same product in black may be priced higher than other colours, demonstrating that price is not solely an objective measure but is also influenced by subjective perceptions and market dynamics (An et al., 2024).

The style, brand, service, and quality for data analysis is justified by their direct impact on consumer perception and acceptance. Style and design are critical in shaping the aesthetic appeal and functionality of a product, influencing how consumers perceive its value and relevance to their needs. Brand, on the other hand, encapsulates the reputation, trustworthiness, and emotional connection consumers have with a product or company. Service quality, particularly in terms of customer support and after-sales care, significantly affects consumer satisfaction and loyalty. Lastly, quality is a fundamental factor that directly impacts the durability, performance, and overall value of a product.

While price is an important factor, its inclusion as a primary factor in this study may introduce complexities due to its subjective nature. Price can vary based on market conditions, perceived value, and consumer expectations, making it less stable and more context-dependent compared to the other

factors. Therefore, the focus on style, brand, service, and quality allows for a more stable and objective analysis of user perception and acceptance. For the influencing factors of Hanfu fashion, this study identified four factors, which are style, brand, service, and quality.

4.3 Significant Aspects of User Perception and Acceptance

This study developed an Experience Map template of Hanfu fashion (Figure 4.3) to collect data on significant aspects of user perception and acceptance. This study successfully gathered a total of 117 cases (*Kansei* words) on user perception and acceptance for the first round of screening. This study identified four key data categories on user perception and acceptance: behavioural response, physiological response, conscious response, and emotional response. These four categories were then grouped as experience of purchasing, experience of wearing, experience of styling, and experience of maintaining, which consisted of several subgroups, such as style/appearance, construction, material, craft, quality, brand, and service. Certain cases with similar meanings or similar attributes were removed in the second round of screening, resulting in 90 cases (*Kansei* words).

In the third and final round of screening, irrelevant cases were removed. For example, cases of emotional responses—users' emotion can be obtained by evaluating other categories of user perception. In addition, the "considerate" perception was evaluated twice following the evaluation of different categories of function and service of Hanfu products for reasonability purpose. As a result, 32 significant aspects of user perception and

acceptance (*Kansei* words) (Table 4.1) were identified and included as part of this study's questionnaire survey. These aspects were then divided into four categories: purchasing, wearing, styling, and maintaining.

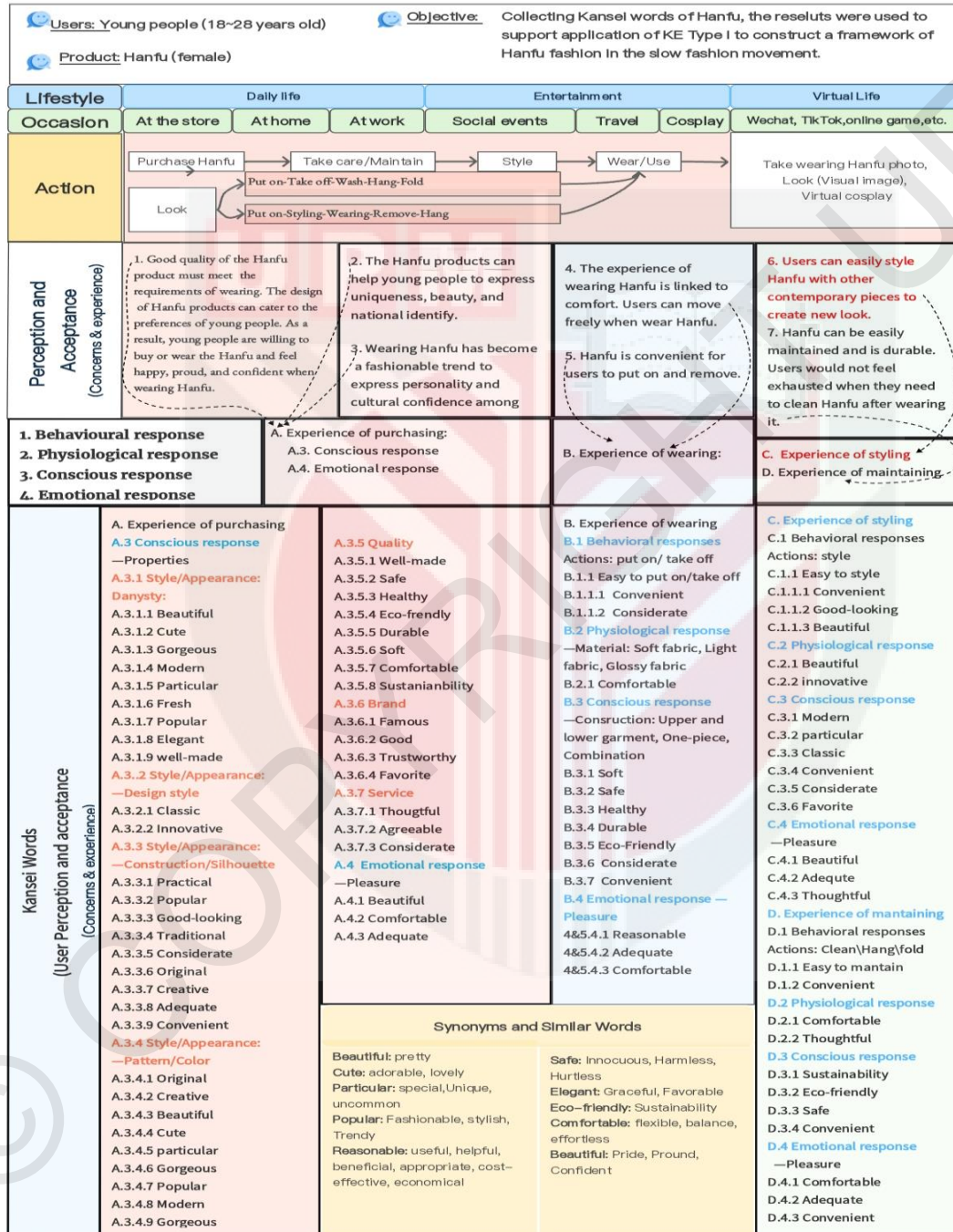


Figure 4.3 : Significant Aspects
(Source: Author's own illustration)

Firstly, the experience of purchasing is characterized by user perception, which encompasses both conscious and emotional responses. These perceptions are articulated through 47 *Kansei* words, categorized into four principal factors: style, brand, quality, and service. In terms of **style**, the conscious response is defined by a multitude of attributes. Properties such as being beautiful (A.3.1.1), cute (A.3.1.2), and modern (A.3.1.4) are highly valued, reflecting a spectrum of aesthetic preferences. Additionally, the design style is significant, with classic (A.3.2.1) and innovative (A.3.2.2) styles appealing to different tastes. The construction and silhouette also play a crucial role, with practicality (A.3.3.1) and popularity (A.3.3.2) being key considerations. Furthermore, the pattern and color are important, with originality (A.3.4.1) and creativity (A.3.4.2) being particularly valued. **Quality** is another critical factor, with attributes such as well-made (A.3.5.1), safe (A.3.5.2), and eco-friendly (A.3.5.4) being essential. The durability (A.3.5.5) and comfort (A.3.5.7) of products also significantly contribute to user satisfaction, sustainability (A.3.5.8) is a key factor that users consider, reflecting a growing awareness and importance of long-term environmental impact and responsible consumption. **Brand** reputation is also a significant factor, with famous (A.3.6.1), good (A.3.6.2), and trustworthy (A.3.6.3) brands being preferred, indicating that brand image greatly influences purchasing decisions. **Service** quality is a key determinant, with thoughtful (A.3.7.1), agreeable (A.3.7.2), and considerate (A.3.7.3) service being highly appreciated by users. **Emotionally**, the experience is largely defined by pleasure (A.4), which is further nuanced into beautiful (A.4.1), comfortable

(A.4.2), and adequate (A.4.3) responses, indicating that emotional satisfaction is closely tied to the overall purchasing experience.

Furthermore, the Hanfu experience of wearing (Figure 4.3 B), user perception—comprising behavioural response, physiological response, conscious response, and emotional response—was characterized by 13 *Kansei* words. For example, the feature of being "easy to put on or take off" is closely associated with the *Kansei* words "convenient" and "considerate". This perception stems from the thoughtful structural design of Hanfu, which often incorporates adjustable fastenings, loose-fitting silhouettes, and simplified closures. For instance, the use of ties, belts, or buttons instead of complex fasteners ensures that the garment is accessible and user-friendly. Additionally, the lightweight and breathable fabrics commonly used in Hanfu further enhance the convenience of wearing, aligning with the user's desire for comfort and practicality. These design choices not only reflect the cultural heritage of Hanfu but also cater to the modern user's need for ease and efficiency in daily wear.

Additionally, the experience of styling, which reflects behavioural, physiological, conscious, and emotional responses, was represented by 12 *Kansei* words. Hanfu experience of styling "easy to style" resonates with the *Kansei* words "convenient", "good-looking", and "beautiful". This perception is rooted in the versatility of Hanfu's design, which allows for effortless customization and personalization. The layered structure of Hanfu, such as the combination of robes, skirts, and sashes, provides users with the

flexibility to mix and match different pieces, creating diverse looks that suit various occasions. Moreover, the intricate yet functional details, such as embroidered patterns, flowing sleeves, and asymmetrical hemlines, contribute to the aesthetic appeal of Hanfu, making it visually captivating while remaining easy to style. The balance between traditional elegance and modern adaptability ensures that Hanfu not only preserves its cultural essence but also meets contemporary fashion preferences.

Also, the experience of maintaining was analysed through user perception, which encompassed behavioural, physiological, conscious, and emotional responses, and was characterized by 11 *Kansei* words. The experience of maintaining was analysed through user perception, which encompassed behavioral, physiological, conscious, and emotional responses, and was characterized by 11 *Kansei* words. Specifically, within the behavioral responses, the actions of cleaning, hanging, and folding were perceived as both easy to maintain (D.1.1) and convenient (D.1.2). Physiological responses indicated that users felt comfortable (D.2.1) and thoughtful (D.2.2) during the maintenance process. Conscious responses highlighted the importance of sustainability (D.3.1), eco-friendly (D.3.2), safe (D.3.3), and convenient (D.3.4), reflecting a broader awareness of environmental and personal well-being considerations. Emotional responses were predominantly characterized by pleasure (D.4), with further nuances of comfort (D.4.1), adequacy (D.4.2), and convenience (D.4.3), suggesting that the maintenance experience was not only functional but also emotionally satisfying. This comprehensive analysis underscores the multifaceted nature

of user perceptions in maintenance activities, integrating practical ease with emotional and ethical considerations.

In summary, the design of Hanfu emphasizes both practicality and beauty, addressing user perceptions through thoughtful structural and aesthetic choices. By focusing on ease of wear and styling versatility, Hanfu designers can create garments that are not only culturally significant but also aligned with the values of convenience, consideration, and visual appeal. This approach not only enhances the wearing experience but also ensures that Hanfu remains relevant and appreciated in the context of modern fashion and sustainability.

Table 4.1 : Significant Aspects of User Perception and Acceptance of Hanfu Fashion

Categories	Kansei Words	Categories	Kansei Words
Style/ Appearance	1) beautiful 2) cute 3) gorgeous 4) traditional 5) particular 6) fresh 7) popular 8) innovative 9) modern 10) elegant	Style/ Construction	17) creative 18) adequate 19) convenient 20) famous 21) good 22) trustworthy 23) favourite
Style/ Construction	11) well-made 12) good-looking 13) classic 14) practical 15) considerate 16) original	Brand	24) thoughtful 25) agreeable 26) considerate 27) safe 28) healthy 29) eco-friendly 30) durable 31) soft 32) comfortable
		Service	
		Quality/ Material	

(Source: Author's own formulation)

4.4 Chapter Summary

The qualitative analysis in this chapter constructed a preliminary theoretical framework of Hanfu fashion. By identifying key influencing factors such as style, brand, quality, and service, the study highlights the connection between Hanfu fashion and slow fashion. By analysing the significant aspects of user perception and acceptance, 32 *Kansei* words were identified across four categories (purchasing, wearing, styling, and maintaining) related to Hanfu fashion products. These *Kansei* words are integrated into the questionnaire to serve as crucial data for gauging user perception and acceptance. These findings set the stage for the quantitative of data analysis presented in the following chapter, providing a comprehensive view of the construction Hanfu framework in the slow fashion movement.

CHAPTER 5

DATA ANALYSIS AND DISCUSSION

Chapter 5 presents a comprehensive quantitative analysis of 32 *Kansei* words derived from the four factors of Hanfu fashion products, as established in Chapter 4. This chapter aims to construct a framework for Hanfu fashion within the context of the slow fashion movement. The discussion is structured into three main sections to provide a clear and detailed exploration of the findings.

Section 5.1 delves into three types of user concerns regarding Hanfu products: goals, standards, and attitudes.

Section 5.2 focuses on the construction of the Hanfu fashion framework. This section outlines the methodological approach and theoretical underpinnings that guide the development of the framework, ensuring it is robust and reflective of the slow fashion principles.

Section 5.3 presents the validation process of the proposed Hanfu fashion framework. Through rigorous analysis, this section confirms the validity of the theoretical framework and identifies strategic *Kansei* words that are pivotal to understanding user perceptions of Hanfu fashion. Special attention is given to elucidating the critical aspects of user *Kansei* towards Hanfu fashion.

Overall, this chapter not only validates the theoretical constructs but also provides the critical aspects of user *Kansei* that can guide Hanfu designer to

develop new Hanfu fashion products, and can enhance understanding and appreciation of Hanfu fashion in the context of slow fashion.

5.1 Construction of Hanfu Fashion Framework

In this study, 24 Hanfu samples were selected for investigation and analysis. For the convenience of research, the 24 Hanfu samples were numbered from S01 to S24, as shown in Appendix 1. A total of 97 respondents participated in this study's online survey. As previously discussed, respondents were of the age between 18 and 28 years old in Changzhutan, China and expressed their keen interest to wear Hanfu. No missing data were found. In particular, 60 (62%) respondents were of under 21 years old, while 32 (33.0%) respondents were of between 22 and 23 years old. Only 5 (5%) respondents were above 24 years old. Besides that, 25 (25.8%) men and 72 (74.2%) women participated in the online survey. All respondents reported to have high education level (Bachelor's degree).

IBM SPSS 26.0 software was used for data analysis. Firstly, reliability analysis was performed. With that, only 32 items were retained. The final results of reliability analysis are presented in Table 5.1. The recorded Cronbach's alpha for 24 Hanfu samples exceeded 0.7 (Hutchings et al., 2015; Rodríguez-Martín et al., 2022; Thigpen et al., 2017), which indicated good internal consistency.

Table 5.1 : Results of Reliability Analysis (S01 to S24)

Cronbach's Alpha									
Factor	No. of Items	S01	S02	S03	S04	S05	S06	S07	S08
Style	19	0.946	0.963	0.969	0.970	0.962	0.973	0.962	0.972
Brand	4	0.899	0.923	0.877	0.883	0.919	0.922	0.922	0.912
Service	3	0.863	0.913	0.891	0.875	0.910	0.893	0.897	0.903
Quality	6	0.898	0.919	0.909	0.908	0.886	0.923	0.914	0.927
Total	32	0.960	0.975	0.976	0.974	0.975	0.979	0.968	0.981
Factor	No. of Items	S09	S10	S11	S12	S13	S14	S15	S16
Style	19	0.971	0.982	0.975	0.979	0.964	0.974	0.976	0.975
Brand	4	0.901	0.948	0.885	0.914	0.873	0.933	0.910	0.924
Service	3	0.903	0.894	0.871	0.871	0.868	0.858	0.902	0.886
Quality	6	0.911	0.954	0.913	0.922	0.918	0.923	0.944	0.922
Total	32	0.981	0.982	0.981	0.984	0.976	0.981	0.984	0.982
Factor	No. of Items	S17	S18	S19	S20	S21	S22	S23	S24
Style	19	0.974	0.972	0.978	0.982	0.981	0.977	0.979	0.971
Brand	4	0.924	0.864	0.925	0.938	0.935	0.929	0.945	0.932
Service	3	0.907	0.807	0.914	0.922	0.928	0.897	0.908	0.886
Quality	6	0.942	0.920	0.939	0.940	0.942	0.918	0.942	0.919
Total	32	0.981	0.977	0.985	0.987	0.985	0.985	0.984	0.979

(Source: Author's own formulation)

Secondly, validity analysis or construct validity was performed. Accordingly, a construct is a hypothetical theoretical framework or psychological trait used to explain individual behaviour.

For the Chapter 4-data collection, which identified the key influencing factors (style, brand, quality, and service). Following that, a series of items were designed for each latent variable to form the questionnaire survey. Two potential variables of “brand”, and “service” were designed by referencing questionnaire design of M. Wang et al.(2020), Mainolfi (2020) and Hur (2020). As for the other two potential variables of “style” and “quality”, items were created based on the *Kansei* descriptions of Hanfu product appearance

and structure. These items may not correspond to the latent variables (may not demonstrate construct validity).

At the same time, each Hanfu sample has individual features in terms of “style” and “quality”. As a result, the pre-designed 32 items may not be suitable for all samples. Therefore, all 24 Hanfu samples were individually screened one through EFA in order to verify that all items are assigned to their corresponding factor. In Principal Component Analysis (PCA), eigenvalue is typically set to exceed 1 for the purpose of validity testing. If each sample’s items with individual features can be gathered together, the items of gathering together indicated they were related and can be explained by the same latent variable. Otherwise, the corresponding items may need to be deleted.

Based on the obtained results, items were found to be in correspondence to the respective latent variables for the following samples: S03, S05, S06, S08, S09, S10, S11, S12, S16, S17, S18, S19, S20, S21, S22, and S23. Thus, this study confirmed to retain 32 items. However, if each sample’s items with some individual features cannot be gathered together, these individual features were not related and cannot be explained by the same latent variable. Thus, the corresponding items may need to be deleted. Several items for the other eight Hanfu samples did not correspond to the respective latent variables accordingly, which indicated inadequate construct validity . These items had to be deleted: (1) two items (“classic” and “practical”) for S01; (2) two items (“classic” and “elegant”) for S02; (3) three items

("innovative", "modern", and "convenient") for S04; (4) two items ("modern" and "consideration") for S05; (5) five items ("gorgeous", "classic", "elegant", "well-made", and "convenient") for S07; (6) two items ("convenient" and "adequate") for S013; (7) two items ("beautiful" and "modern") for S14; (8) one item ("particular") for S15; (9) two items ("gorgeous" and "traditional") for S24.

The appropriateness of the data collected was verified through descriptive analysis, reliability analysis, and validity analysis (EFA).

5.1.1 The Goals of Users towards Hanfu

The one-sample t-test is a statistical method designed to compare the mean of a single sample to a known or hypothesized population mean (Ross & Willson, 2017). In this context, the goal is to assess whether the average purchase intentions or satisfaction score of the respondents for each product is significantly different from a predetermined standard value. This standard value could represent a desired level of purchase intentions or satisfaction that the products are expected to achieve. One-sample t-test was performed to understand user perception and acceptance of 24 Hanfu fashion products in four factors (style, brand, service, and quality) based on 97 respondents (25 males and 72 females) in this study. Overall, the results of mean analysis demonstrated the favourable willingness to buy the 24 Hanfu products among the 97 respondents. The results of standard deviation demonstrated the consistency of the 97 respondents' views towards each Hanfu sample.

Firstly, when it comes to the style factor (Figure 5.1), the results of the mean difference analysis showed higher preference for S07, S13, S09, S04, S06, and S08. On the other hand, respondents demonstrated lower preference for S10, S14, S21, and S19. Basically, the young generation prefers classical Hanfu and innovative Hanfu, but there are certain classical Hanfu and innovative Hanfu that they dislike. In other words, the young generation does not particularly emphasise their selection of Hanfu to provide them with classical and innovative styles, but they are more likely to consider the overall Hanfu design and other influencing factors. For example, both S10 and S19 display classical construction, but these Hanfu samples are not convenient and practical for everyday wear due to their elaborate decoration. As a result, the young generation is less interested to buy them. Taking the case of S07, it also displays classical construction, but its outstanding pattern design, especially with the use of traditional embroidery handcraft and beautiful matching glossy material, gain the interest of young individuals to wear them and to express the national cultural identity.

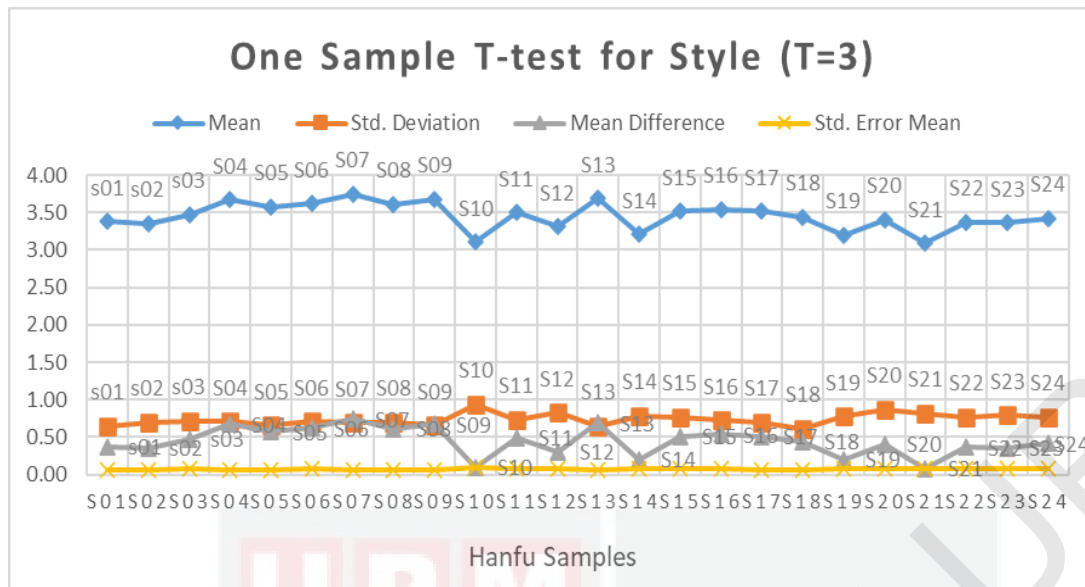


Figure 5.1 : Results of One-Sample T-Test for Hanfu Style
(Source: Author's own illustration)

Secondly, when it comes to the brand factor (Figure 5.2), the results of the mean difference analysis showed higher preference for S07, S08, and S09 but lower preference for S10 and S14.

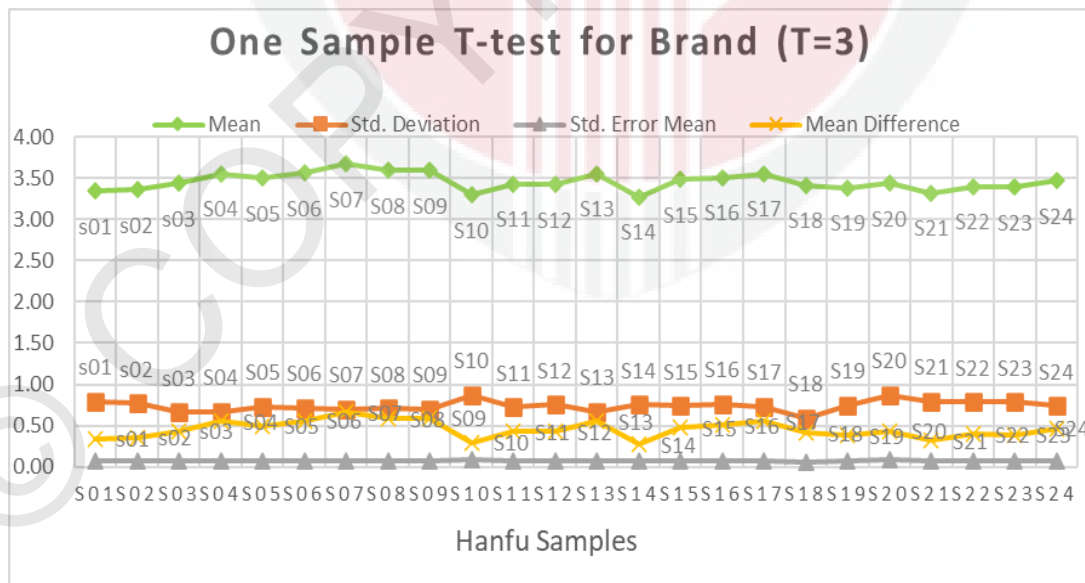


Figure 5.2 : Results of One-Sample T-Test for Hanfu Brand
(Source: Author's own illustration)

Thirdly, as for the service factor (Figure 5.3), the results of the mean difference analysis showed higher preference for S08, S09, and S13 but lower preference for S10.

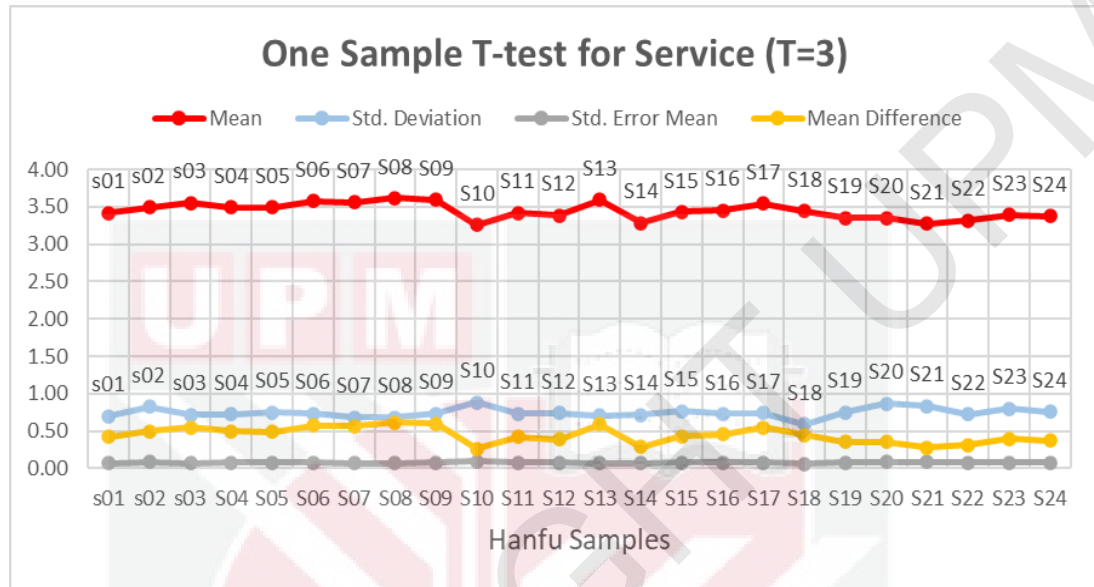


Figure 5.3 : Results of One-Sample T-Test for Hanfu Service
(Source: Author's own illustration)

Regarding the quality factor (Figure 5.4), the results of the mean difference analysis showed higher preference for S07, S13, S08, and S09 but lower preference for S14 and S19.

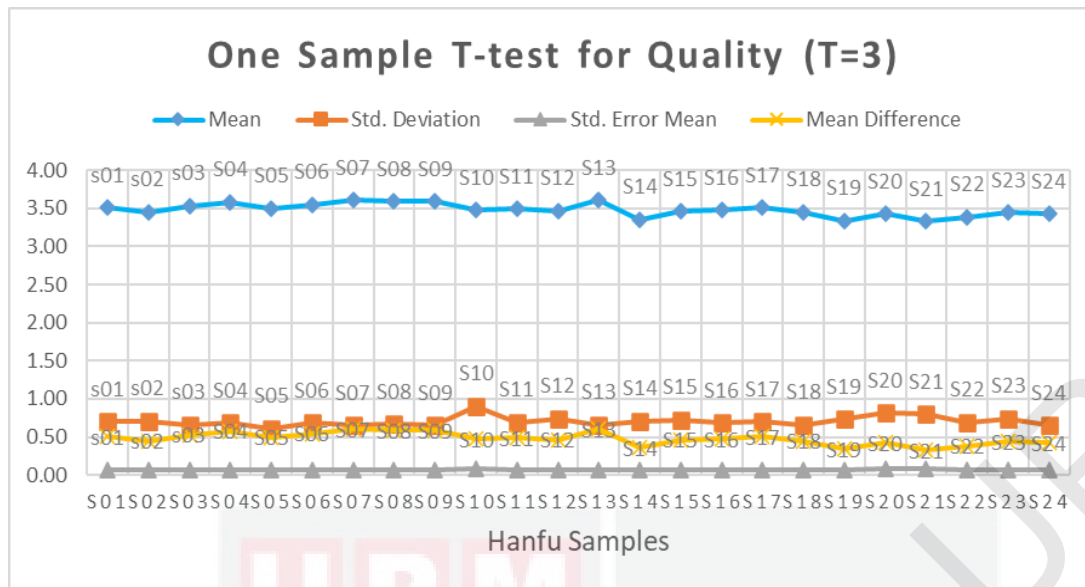


Figure 5.4 : Results of One-Sample T-Test for Hanfu Quality
(Source: Author's own illustration)

In addition, mean analysis was performed to understand the characteristics of user perception and acceptance towards all four influencing factors of Hanfu fashion. The obtained results as shown in Figure 5.5.

The results revealed S07 as the most recognised style and brand, which was followed by S09 and S08. In regards to the quality factor, respondents strongly recognised S07, which was followed by S13 and S09. Besides that, the results revealed user perception of the style factor as the most prominent factor among all four factors, which was followed by the brand factor, service factor, and quality factor. Based on the results of mean values, S07 and S08 were ranked top (Figure 5.6).

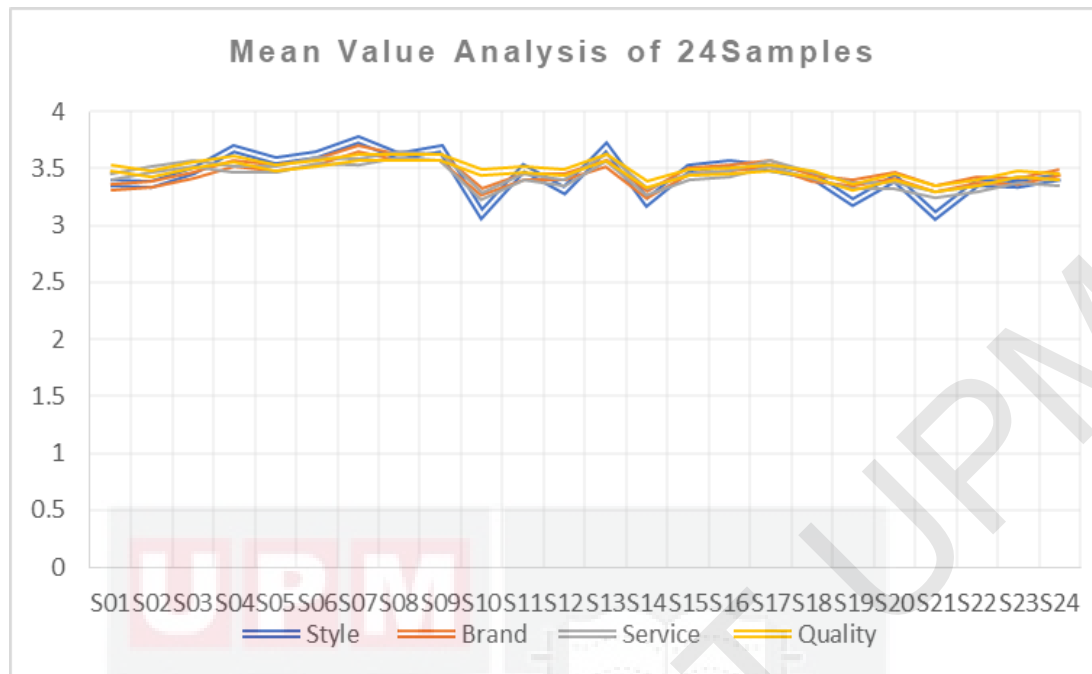


Figure 5.5 : Results of Mean Analysis of 24 Hanfu Samples
(Source: Author's own illustration)

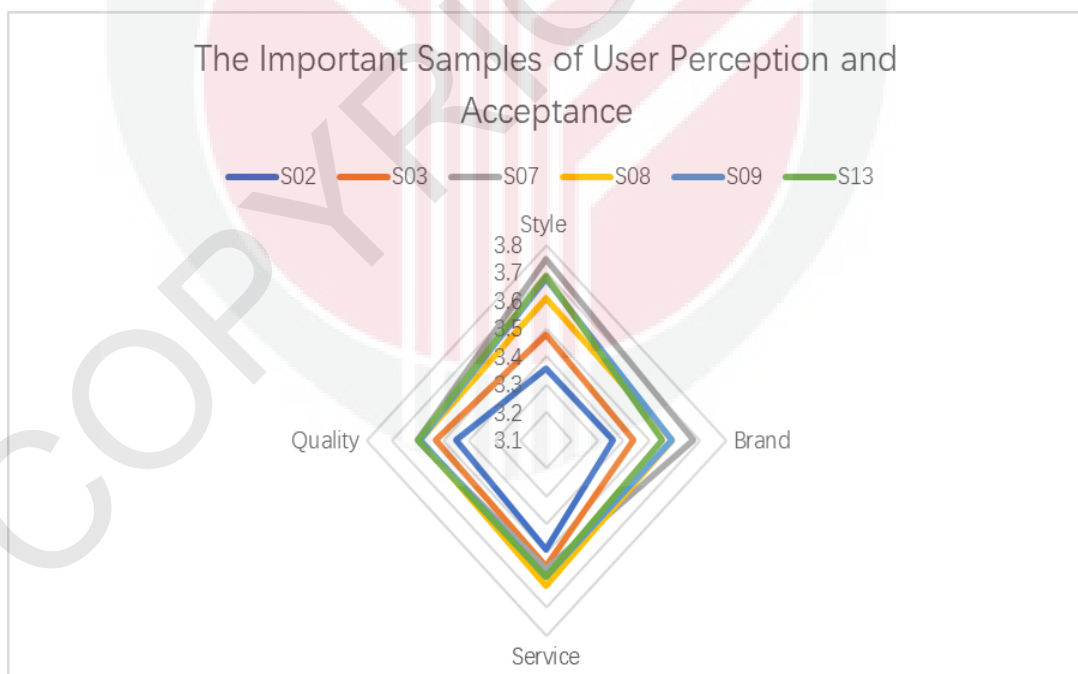


Figure 5.6 : Radar Chart of the Mean Values of Four Factors
(Source: Author's own illustration)

Following that, an independent samples t-test was performed to examine the mean differences in style, brand, service, and quality of S07 and S08 between male and female respondents in this study. The obtained results are presented in Table 5.2 and Table 5.3.

As shown in Table 5.2, the results of the independent samples t-test revealed insignificant statistical differences in the mean values for all five factors between male and female respondents for the case of S07. The significant probability values ($p > 0.05$, 95% confidence interval) of the differences included zero, which indicated insignificant statistical differences in the perceptions of style, brand, service, and quality for S07 between male and female respondents. In other words, these results indicated the recorded mean values for all four factors among male and female respondents were close for S07.

Table 5.2 : Comparison of Mean Differences for Five Factors of S07 between Men and Women

Factors	Gender	N	Mean	Std. Deviation	t-value
Style	Male	25	3.57	0.675	-1.463
	Female	72	3.81	0.697	
Brand	Male	25	3.59	0.750	-0.639
	Female	72	3.69	0.688	
Service	Male	25	3.57	0.589	0.112
	Female	72	3.56	0.716	
Quality	Male	25	3.52	0.574	-0.739
	Female	72	3.63	0.677	

Notes: * denotes $p < 0.05$; *** denotes $p < 0.001$.

(Source: Author's own formulation)

As shown in Table 5.3, the results of independent samples t-test statistics also revealed insignificant statistical differences in the mean values for all

four factors between male and female respondents for the case of S08. The significant probability values ($p > 0.05$, 95% confidence interval) of the differences included zero, which indicated insignificant statistical differences in the perceptions of style, brand, service, and quality for S08 between male and female respondents. In other words, these results indicated the recorded mean values for all four factors among male and female respondents were close for S08.

Table 5.3 : Comparison of Mean Differences for Four Factors of S08 between Men and Women

Factors	Gender	N	Mean	Std. Deviation	t-value
Style	Male	25	3.554	0.630	0.488
	Female	72	3.634	0.731	
Brand	Male	25	3.570	0.619	0.886
	Female	72	3.594	0.742	
Service	Male	25	3.520	0.667	0.420
	Female	72	3.648	0.687	
Quality	Male	25	3.447	0.690	0.224
	Female	72	3.637	0.661	

Notes: * denotes $p < 0.05$; *** denotes $p < 0.001$.
(Source: Author's own formulation)

5.1.2 The Standards of Users towards Hanfu

5.1.2.1 Pearson Correlation Coefficient Analysis

Correlation analysis involves the association between two or more random variables of equal status. For the first objective of this study, six samples with the top three mean values were selected for analysis. The results of correlation analysis are presented in Table 5.4.

Table 5.4 : Results of Correlation Analysis

Samples	Factors	Style	Brand	Service	Quality
S02	Style	1			
	Brand	.800**	1		
	Service	.740**	.725**	1	
	Quality	.753**	.756**	.763**	1
S03	Style	1			
	Brand	.760**	1		
	Service	.700**	.712**	1	
	Quality	.767**	.687**	.692**	1
S07	Style	1			
	Brand	.696**	1		
	Service	.459**	.557**	1	
	Quality	.637**	.598**	.687**	1
S08	Style	1			
	Brand	.816**	1		
	Service	.826**	.831**	1	
	Quality	.838**	.719**	.810**	1
S09	Style	1			
	Brand	.792**	1		
	Service	.836**	.785**	1	
	Quality	.816**	.775**	.826**	1
S13	Style	1			
	Brand	.786**	1		
	Service	.702**	.750**	1	
	Quality	.773**	.799**	.823**	1

Notes: * denotes $p < 0.05$ (2-tailed); ** denotes $p < 0.01$; correlation is significant at 0.01 level (2-tailed).
(Source: Author's own formulation)

The obtained results demonstrated statistically significant correlations of all factors with each other. Accordingly, values of between 0.4 and 0.5 indicate a moderately strong correlation. Most of the recorded values in this study exceeded 0.5. As shown in Table 5.4, the recorded values for S07 exceeded 0.4, while the recorded values for S13 exceeded 0.6. These results indicated significant correlations between the corresponding factors for both Hanfu samples.

Based on the obtained results, user perception and acceptance in this study were mainly based on the influence of these four factors (i.e., style, brand,

service, and quality). These four factors had different association levels. These factors were found to be significant predictors due to their linear relationships with each other. The results of the correlation analysis confirmed the influence of these four factors as the significant predictors of the framework of Hanfu fashion. Therefore, designers should pay attention to these four influencing factors of Hanfu fashion when it comes to designing classical and innovative Hanfu products.

5.1.2.2 Multiple Linear Regression Analysis

Concerning the second objective of this study, significant aspects of user perception and acceptance of Hanfu fashion were identified with all five significant factors through multiple linear regression analysis. Taking the style factor as the dependent variable, the analysis proceeded with brand, service, and quality factors as independent variables. Both S07 and S08 were selected for the analysis based on their mean ranking. The obtained results are presented in Table 5.5 (S07) and Table 5.6 (S08). Figure 5.7 (S07) and Figure 5.9 (S08) present the normal p-p plots of regression standardised residual for influencing factors on the style, while Figure 5.8 (S07) and Figure 5.10 (S08) present the scatterplots of regression standardised residual for influencing factors on the style.

Table 5.5 : Results of Multiple Linear Regression Analysis for S07

S07	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistic
Model	Beta	Std. Error	Beta			VIF
(Constant)	0.720	0.290		2.487	0.015	
Brand	0.433	0.090	0.437	4.819	0.000	1.867
Service	-0.146	0.098	-0.143	-1.492	0.139	2.079
Quality	0.417	0.105	0.390	3.978	0.000	2.176
R ²	0.771 ^a					
F	33.656					
p	< 0.001					

a. Dependent Variable: Style

(Source: Author's own formulation)

Table 5.6 : Results of Multiple Linear Regression Analysis for S13

S08	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistic
Model	Beta	Std. Error	Beta			VIF
(Constant)	0.041	0.193		0.214	0.831	
Brand	0.354	0.084	0.357	4.212	0.000	3.347
Service	0.179	0.106	0.173	1.692	0.094	4.871
Quality	0.469	0.088	0.447	5.306	0.000	3.308
R ²	0.896 ^a					
F	93.678					
p	< 0.001					

a. Dependent Variable: Style

(Source: Author's own formulation)

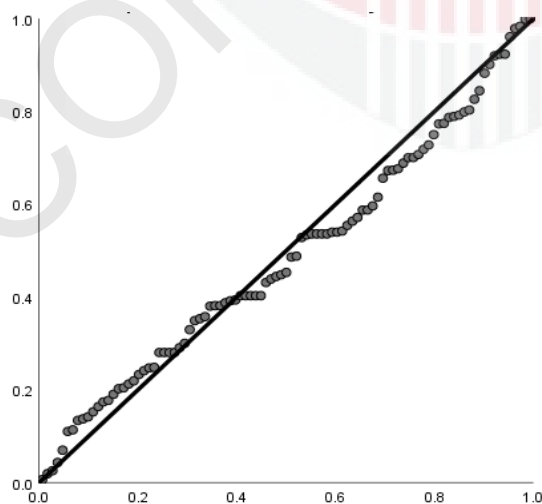


Figure 5.7 : Normal P-P Plot of Regression Standardised Residual for Influencing Factors on the Style of S07

(Source: Author's own illustration)

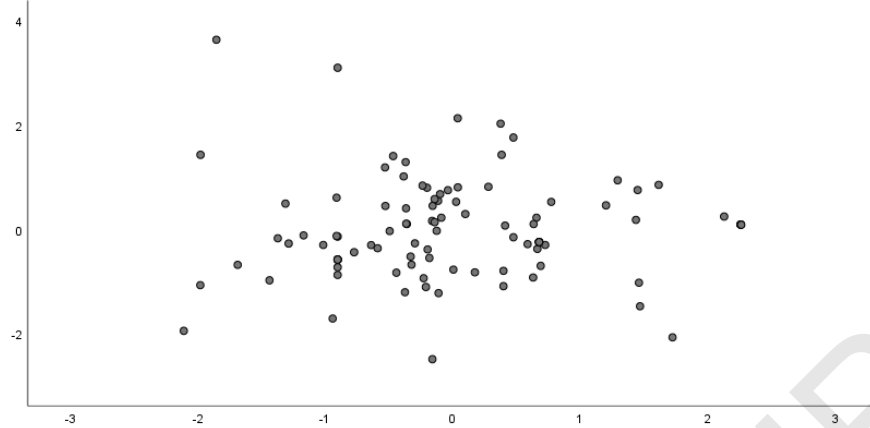


Figure 5.8 : Scatterplot of Regression Standardised Residual for Influencing Factors on the Style of S07

(Source: Author's own illustration)

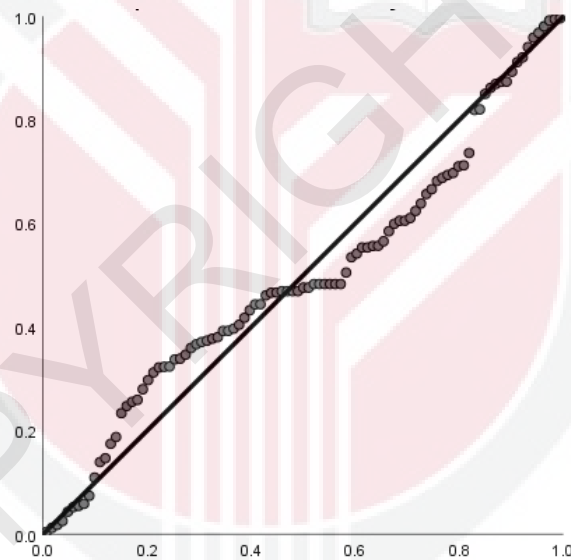


Figure 5.9 : Normal P-P Plot of Regression Standardised Residual for Influencing Factors on the Style of S08

(Source: Author's own illustration)

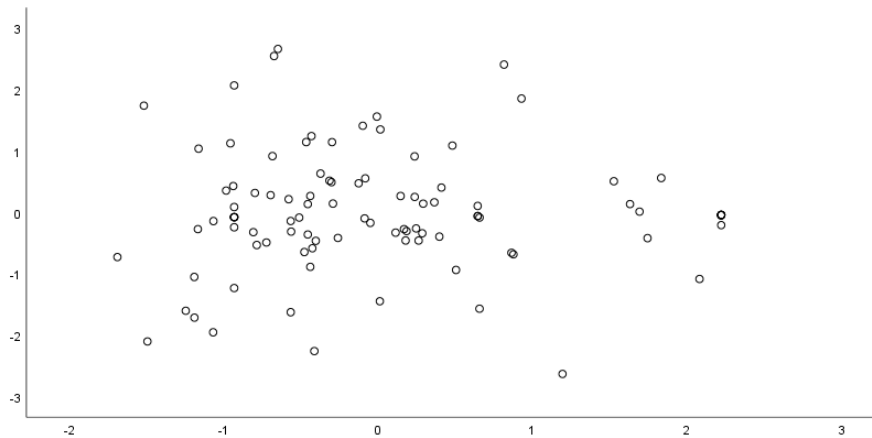


Figure 5.10 : Scatterplot of Regression Standardised Residual for Influencing Factors on the Style of S08
(Source: Author's own illustration)

Based on the obtained results, it was evident that the linear regression model for the case of S07 was good ($R^2 = 0.720 > 0.6$), which indicated that the outcomes can reflect the influence of the brand, service, and quality factors on the style factor very reliably. Secondly, the recorded VIF values (< 5) confirmed the absence of multicollinearity among the four independent variables. Thirdly, the regression equation was found to be statistically significant ($F = 33.656$, $p < 0.001$), which indicated that at least one of the four independent variables can significantly influence the style factor. In addition, the brand factor ($\beta = 0.433 > 0$, $p < 0.05$), and quality factor ($\beta = 0.417 > 0$, $p < 0.05$) exhibited significant and positive influence on the style factor. However, the service factor was found to exhibit an insignificant influence on the style factor ($\beta = -0.146 < 0$, $p = 0.139 > 0.05$). Last but not least, the following regression equation was obtained based on the results:

$$\text{Style} = 0.720 + (0.433 \times \text{Brand}) + (0.417 \times \text{Quality})$$

Based on the obtained results, the fit of the linear regression model for the case of S08 was also deemed good ($R^2 = 0.896 > 0.6$), which indicated that the outcomes can reflect the influence of the brand, service, and quality factors on the style factor very reliably. Secondly, the recorded VIF values of lower than 5 confirmed no multicollinearity issue among the four independent variables. Thirdly, the regression equation was statistically significant ($F = 93.678$, $p < 0.001$), which implied that at least one of the four independent variables can significantly influence the style factor. Besides that, the brand factor ($\beta = 0.354 > 0$, $p < 0.05$) and quality factor ($\beta = 0.469 > 0$, $p < 0.05$) significantly and positively affected the style factor in this study. Meanwhile, service factor ($\beta = 0.179 > 0$, $p = 0.094 > 0.05$) did not significantly influence the style factor. Finally, the following regression equation was obtained:

$$\text{Style} = 0.041 + (0.354 \times \text{Brand}) + (0.469 \times \text{Quality})$$

Multiple linear regression analysis was performed to determine a linear combination of independent variables (regression equation as shown in Table 5.7) that can succinctly describe the relationship between a set of predictor variables and validity variables. Based on the presented results, it was evident that the brand and quality factors can significantly and positively influence the style factor.

Table 5.7 : Regression EQUATIONS

Samples	Regression Equations
S07	$\text{Style} = 0.720 + (0.433 \times \text{Brand}) + (0.417 \times \text{Quality})$
S08	$\text{Style} = 0.041 + (0.354 \times \text{Brand}) + (0.469 \times \text{Quality})$

(Source: Author's own formulation)

5.1.3 The Attitudes of Users towards Hanfu

Mean analysis and Factor Analysis were performed on 97 cases of user perception and acceptance towards 24 Hanfu samples, which involved all five identified factors and 35 *Kansei* words. Significant aspects of user perception and acceptance were identified based on mean and factor loadings. *Kansei* evaluation was deemed significant in terms of matching Hanfu's appearance with feelings (Shaari et al., 2001). This setting was to establish the suitable demand for wearing Hanfu and the feeling of wearing Hanfu in regards to style, brand, service, and quality of Hanfu (through *Kansei* words).

These *Kansei* words were chosen from numerous keywords—approximately 19 terms described Hanfu visual appearance features; four terms described Hanfu brand features; two terms described both Hanfu and perception status; three terms described both Hanfu service and status; and six terms described Hanfu product quality features. Selected *Kansei* words were adjective words with their lowest value ranking of “1” and the highest value ranking of “5” (Likert scale), which were used to evaluate the relationship strength of user perception and acceptance (Taherdoost, 2019).

All collected data were subjected to mean analysis and FA. Through factor analysis, a set of factors of user perception and acceptance that significantly contributed more weight was established. In this case, the style and quality factors were deemed appropriate for FA. This study further performed a

hierarchical cluster analysis to identify the most significant aspects of user perception and acceptance.

5.1.3.1 *Kansei* Evaluation of Hanfu Style

As previously discussed, *Kansei* words were used for this study to examine user perception and acceptance of the Hanfu style.

1) Mean Analysis

In statistics, the mean is often used to represent the general level of a statistical object. It describes the position of the statistical object in a data set. It can be used to reflect the general situation and average level of a group of data and to compare different groups of data to observe the differences between groups. Using a means to represent a set of data is intuitive and concise.

This study identified 19 *Kansei* words that expressed Hanfu style based on the views of 97 Hanfu users towards a total of 24 Hanfu samples, resulting in a total of 456 (24×19) scoring results. Mean values were taken as the final scores. The obtained results are tabulated in Table 5.8, which shows various feelings towards the diverse styles of Hanfu.

Table 5.8 : Results of Mean Analysis of *Kansei* Words That Expressed Hanfu Style

No.	1	2	3	4	5	6
Samples	Beautiful	Cute	Gorgeous	Traditional	Particular	Fresh
S01	3.75	3.42	3.22	3.35	3.25	3.20
S02	3.63	3.44	3.46	3.63	3.25	3.25
S03	3.64	3.34	3.51	3.61	3.58	3.45
S04	3.90	3.44	3.92	3.81	3.59	3.69
S05	3.73	3.36	3.62	3.79	3.67	3.66
S06	3.90	3.47	3.70	3.73	3.65	3.69
S07	3.95	3.61	4.12	4.01	3.86	3.80
S08	3.77	3.84	3.59	3.70	3.64	3.69
S09	3.87	3.70	3.59	3.66	3.63	3.72
S10	3.01	2.84	3.01	3.47	3.12	3.07
S11	3.71	3.60	3.38	3.55	3.48	3.51
S12	3.35	3.16	3.30	3.37	3.30	3.36
S13	3.88	3.54	3.89	3.89	3.73	3.71
S14	3.15	2.88	3.24	3.38	3.31	3.19
S15	3.58	3.49	3.40	3.54	3.70	3.57
S16	3.66	3.65	3.46	3.52	3.52	3.58
S17	3.65	3.48	3.52	3.60	3.57	3.62
S18	3.51	3.38	3.42	3.44	3.52	3.55
S19	3.15	3.06	3.04	3.26	3.09	3.27
S20	3.51	3.60	3.29	3.18	3.43	3.63
S21	3.03	2.99	2.94	3.09	3.12	3.09
S22	3.55	3.34	3.28	3.33	3.45	3.48
S23	3.31	3.31	3.27	3.28	3.35	3.41
S24	3.36	3.47	3.28	3.18	3.41	3.51
No.	8	9	10	11	12	13
Samples	Innovative	Modern	Elegant	Well-made	Good-looking	Classic
S01	3.31	3.21	3.57	3.44	3.61	3.46
S02	3.26	3.05	3.58	3.44	3.45	3.46
S03	3.43	3.35	3.40	3.54	3.51	3.45
S04	3.54	3.31	3.91	3.96	3.71	3.70
S05	3.60	3.41	3.56	3.64	3.63	3.59
S06	3.66	3.48	3.84	3.65	3.76	3.62
S07	3.70	3.60	3.95	4.10	3.92	3.92
S08	3.56	3.52	3.55	3.71	3.73	3.56
S09	3.68	3.52	3.72	3.74	3.86	3.62
S10	3.02	2.85	3.16	3.35	3.15	3.34
S11	3.42	3.49	3.52	3.55	3.60	3.42
S12	3.28	3.22	3.37	3.38	3.34	3.38
S13	3.52	3.56	3.82	3.81	3.79	3.70
S14	3.08	2.99	3.31	3.29	3.23	3.26
S15	3.57	3.52	3.47	3.54	3.59	3.42
S16	3.54	3.41	3.60	3.64	3.62	3.52
S17	3.55	3.49	3.37	3.52	3.55	3.42
S18	3.36	3.42	3.40	3.49	3.52	3.43
S19	3.13	3.21	3.29	3.35	3.27	3.28
S20	3.54	3.44	3.37	3.42	3.51	3.13
S21	3.07	3.16	2.98	3.14	3.11	3.06
S22	3.30	3.30	3.37	3.37	3.45	3.33
S23	3.37	3.48	3.24	3.38	3.38	3.34
S24	3.52	3.48	3.31	3.40	3.42	3.26

Table 5.8 : Continued

No.	15	16	17	18	19
Samples	Considerate	Original	Creative	Adequate	Convenient
S01	3.27	3.45	3.38	3.24	3.24
S02	3.35	3.44	3.30	3.24	3.24
S03	3.41	3.59	3.66	3.36	3.41
S04	3.57	3.64	3.61	3.42	3.49
S05	3.53	3.58	3.61	3.40	3.39
S06	3.52	3.61	3.63	3.43	3.46
S07	3.68	3.72	3.71	3.52	3.46
S08	3.53	3.62	3.64	3.47	3.55
S09	3.65	3.72	3.73	3.59	3.63
S10	3.03	3.21	3.11	3.04	3.18
S11	3.46	3.51	3.45	3.41	3.46
S12	3.25	3.32	3.34	3.22	3.39
S13	3.49	3.66	3.64	3.43	3.48
S14	3.19	3.30	3.33	3.16	3.18
S15	3.48	3.55	3.59	3.46	3.47
S16	3.55	3.53	3.66	3.47	3.52
S17	3.49	3.60	3.58	3.41	3.43
S18	3.41	3.54	3.51	3.36	3.31
S19	3.21	3.31	3.28	3.10	3.26
S20	3.29	3.46	3.46	3.26	3.40
S21	3.09	3.22	3.24	3.08	3.21
S22	3.26	3.34	3.51	3.23	3.40
S23	3.38	3.44	3.46	3.27	3.44
S24	3.42	3.48	3.43	3.39	3.49

(Source: Author's own formulation)

For a more accurate analysis, this study proceeded with the perceptual psychological scores (through a five-point Likert scale) to determine the perceived strength of perceptual words. The average value for each *Kansei* word was calculated. A score that approaches 5 denotes stronger perception in correspondence to the perceptual word, and vice versa for a score that approaches 1. In this study, the three most prominent perceptual psychological scores on style for each Hanfu sample were identified. As shown in Appendix B3, “beautiful”, “elegant”, and “good-looking” recorded the most prominent perceptual psychological scores for S01. Based on the recorded scores, the style of S02 was mainly perceived as “beautiful”, “traditional”, and “elegant”, while the style of S03 was primarily considered as

“beautiful”, “traditional”, and “creative”. Appendix B3 presents the main perceptual psychological scores on style for each Hanfu sample.

Despite various perceptual impressions of each Hanfu sample, certain styles of Hanfu display similar features; different appearances and structural styles may give users the same feeling. In this study, the mean values of the perceptual words were sorted. *Kansei* words with a score of more than 3.5 (Mean > 3.5) were selected as the representative impression of the Hanfu samples. The style features of Hanfu were extracted and summarised after the stimulus map was compared with the perceptual adjective words. Table 5.9 presents the different characteristics of the stimulus map under the same adjective words.

Table 5.9 : Different Hanfu Samples under the Same Adjective Words That Described Hanfu Style

<i>Kansei</i> Words	Samples	<i>Kansei</i> Words	Samples
1) Beautiful (17)	S01, S02, S03, S04, S05, S06, S07, S08, S09, S11, S13, S15, S16, S17, S18, S20, S22	11) Well-made (11)	S03, S05, S06, S07, S08, S09, S11, S13, S15, S16, S17
2) Cute (7)	S07, S08, S09, S11, S13, S16, S20	12) Good-looking (15)	S01, S03, S04, S05, S06, S07, S08, S09, S11, S13, S15, S16, S17, S18, S20
3) Gorgeous (9)	S03, S04, S05, S06, S07, S08, S09, S13, S17	13) Classic (8)	S04, S05, S06, S07, S08, S09, S13, S16
4) Traditional (13)	S02, S03, S04, S05, S06, S07, S08, S09, S11, S13, S15, S16, S17	14) Practical (5)	S07, S08, S09, S13, S15
5) Particular (12)	S03, S04, S05, S06, S07, S08, S09, S13, S15, S16, S17, S18,	15) Considerate (7)	S04, S05, S06, S07, S08, S09, S16

Table 5.9 : Continued

<i>Kansei</i> Words	Samples	<i>Kansei</i> Words	Samples
6) Fresh (14)	S04, S05, S06, S07, S08, S09, S11, S13, S15, S16, S17, S18, S20, S24	16) Original (12)	S03, S05, S06, S07, S08, S09, S11, S13, S15, S16, S17, S18
7) Popular (6)	S04, S05, S06, S07, S09, S13	17) Creative (13)	S03, S04, S05, S06, S07, S08, S09, S13, S15, S16, S17, S18, S22
8) Innovative (12)	S04, S05, S06, S07, S08, S09, S13, S15, S16, S17, S20, S24	18) Adequate (2)	S07, S09
9) Modern (5)	S07, S08, S09, S13, S15	19) Convenient (3)	S08, S09, S16
10) Elegant (11)	S01, S02, S04, S05, S06, S07, S08, S09, S11, S13, S16		

(Source: Author's own formulation)

2) Factor Analysis

This study's online survey involved 25 male respondents and 72 female respondents. Factor Analysis was performed to evaluate the differences in the factors of consumer experiences of Han costumes. The analysis was conducted to evaluate all 19 *Kansei* words for 24 Hanfu samples, and the two most significant factors emerged.

To simplify the overall sensory impressions of the Hanfu style, FA was carried out on 19 *Kansei* words to identify the main perceptual factors (or the main perceptual evaluation dimensions) of user perception of the Hanfu style. FA, specifically PCA, was performed using IBM SPSS 26.0 software. The number of factors with an eigenvalue of more than 1 was identified. The

results of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity are shown in Table 5.10.

Table 5.10 : Results of Factor Analysis on *Kansei* Words of Hanfu Style

<i>Kansei</i> Words	Factor 1	Factor 2	Extraction
Modern	0.940		0.881
Convenient	0.896		0.805
Practical	0.869		0.940
Innovative	0.860		0.921
Cute	0.836		0.879
Fresh	0.831		0.921
Popular	0.828		0.953
Adequate	0.828		0.941
Creative	0.803		0.912
Considerate	0.767		0.909
Original	0.732 [#]	0.637 [#]	0.932
Particular	0.725		0.945
Traditional		0.934	0.952
Classic		0.931	0.932
Elegant		0.879	0.940
Gorgeous		0.851	0.941
Well-made		0.851	0.900
Beautiful		0.733	0.936
Good-looking	0.667 [#]	0.708 [#]	0.865
KMO and Bartlett's Test			
KMO	0.829		
Sig.	0.000		
Rotation Sums of Squared Loadings			
Total	9.721	7.685	
% of Variance	51.162	40.448	
Cumulative %	51.162	91.610	

Notes:

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalisation.

a. Rotation converged in three iterations.

(Source: Author's own formulation)

As shown in Table 5.10, these two factors recorded a cumulative contribution of 91.610%. In particular, Factor 1 contributed 51.162% of the total variance, while Factor 2 contributed 40.448% of the total variance. Therefore, this study confidently used both factors for the *Kansei* evaluation of Hanfu samples in terms of style. In addition, the recorded values of KMO (0.829 >

0.600), chi-square of 796.317, degree of freedom (df) of 171, and sig. of .000 (< 0.005) were found to be within the credible range. The common factor variances of 19 *Kansei* words exceeded 0.500, which confirmed the validity of these 19 perceptual words. Based on the results of PCA, “original” and “good-looking” recorded scores of (0.732, 0.637) and (0.667, 0.708), respectively, which indicated both of these *Kansei* words expressed the characteristics of two factors at the same time. Thus, these two *Kansei* words were deleted (indicated as # in Table 5.10), resulting in a total of 17 *Kansei* words for the subsequent analysis.

The scree plot is presented in Figure 5.11, which revealed relatively high eigenvalues of the first factor and the second factor. These two factors contributed the most in explaining the original variables. The eigenvalues of the remaining factors were lower and decreased starting from the third factor onwards. Thus, it was deemed more appropriate to select the first two factors for interpretation. The analysis involved orthogonal rotation (varimax rotation) with the Kaiser normalisation method, and the rotated component matrix table is presented in Table 5.10. A rotated component matrix table directly reflects the closeness of the factor and the constructs under study. A larger absolute value suggests the closeness of the factor to the corresponding construct, resulting in a higher factor contribution.

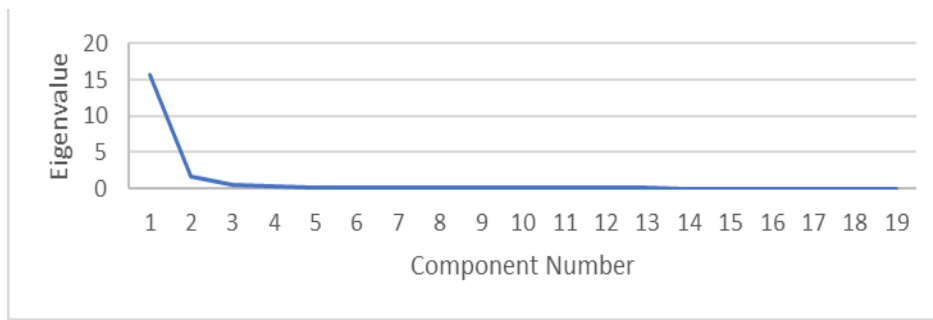


Figure 5.11 : Scree Plot (Style)
(Source: Author's own illustration)

The obtained results revealed high loadings of 11 *Kansei* words, specifically “modern”, “convenient”, “practical”, “innovative”, “cute”, “fresh”, “popular”, “adequate”, “creative”, “considerate”, and “particular”, on the first-factor component. Based on the meaning of these adjective words, this first-factor component represented the innovative style. The results further revealed high loadings of six *Kansei* words, specifically “traditional”, “classic”, “elegant”, “gorgeous”, “well-made”, and “beautiful”, on the second-factor component. With that, the second-factor component represented the classical style.

The analysis of the rotated component matrix confirmed two factors that represented the perceptual needs of users of the Hanfu style: innovative and classical characteristics. In other words, users mainly pay attention to two aspects of Hanfu style, either Hanfu style that is more modern, convenient, practical, and innovative or Hanfu style that is more elegant and classic and retains the traditional characteristics.

3) Hierarchical Cluster Analysis

Cluster analysis divides the objects of interest into different levels of categories or groups and intuitively classifies the objects based on the similarity between the objects (Dalmaijer et al., 2022). In hierarchical cluster analysis, there are several basic steps involved. Taking N samples as a cluster, the distance between samples and the distance between clusters are specified. These samples are then merged step by step until all samples belong to a single cluster. There are no specific classification criteria and a fixed number of categories. These samples are classified objectively from the data itself.

Taking two common factors obtained in the prior Factor Analysis, 24 Hanfu samples were subjected to hierarchical cluster analysis. Euclidean distance (Mussabayev, 2024) was used to evaluate the similarity between 24 Hanfu samples. Cluster analysis in this study employed the between-groups linkage method. The samples were merged step by step based on the average value of the distance between all indicators of the two samples (at its minimum). The results of hierarchical cluster analysis are shown in Figure 5.12.

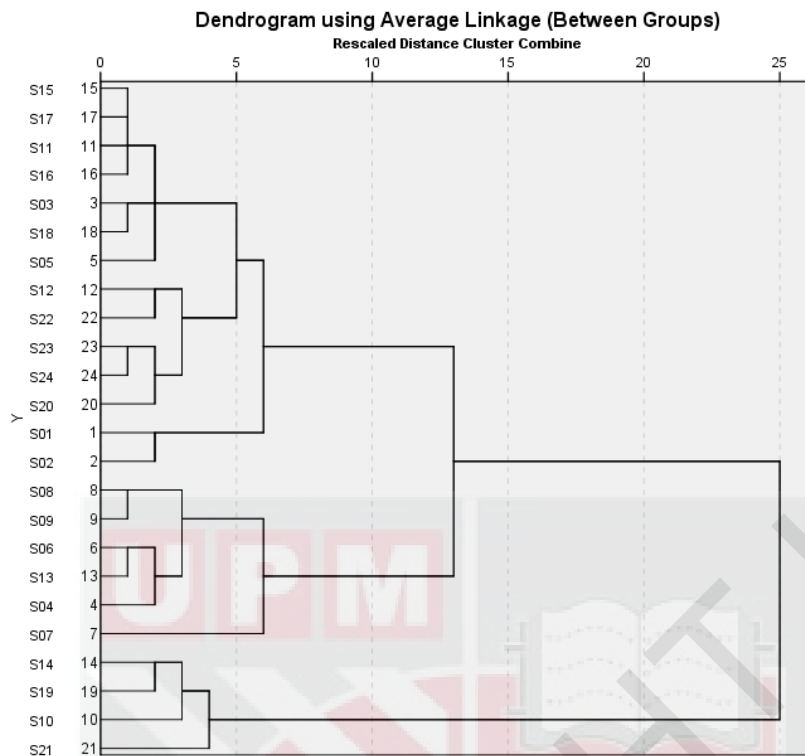


Figure 5.12 : Results of Cluster Analysis (Style)
(Source: Author's own illustration)

The results in Figure 5.12 revealed six initial clusters of Hanfu samples: (1) S10, S14, S19, and S21 in one cluster; (2) S07 in its cluster; (3) S04, S06, S08, S09, and S13 in one cluster; (4) S01 and S02 in one cluster; (5) S12, S20, S22, S23, and S24 in one cluster; (6) S03, S11, S15, S16, S17, and S18 in one cluster. However, these results were deemed unreasonable due to the significant number of clusters. The analysis proceeded and resulted in the formation of three clusters: (1) S01, S02, S05, S11, S12, S15, S16, S17, S18, S20, S22, S23, and S24 in one cluster (moderate mean score of user perception and acceptance); (2) S04, S06, S07, S08, S09, and S13 in one cluster (highest mean score of user perception and acceptance); (3) S10, S14, S19, and S21 in one cluster (lowest mean score of user perception and acceptance).

5.1.3.2 *Kansei* Evaluation of Hanfu Brand

1) Mean Analysis

This study identified four *Kansei* words that expressed the Hanfu brand based on the views of 97 Hanfu users towards a total of 24 Hanfu samples, resulting in a total of 96 (24×4) scoring results. Likewise, mean values were taken as the final scores. The obtained results are shown in Table 5.11, which shows various feelings towards different brands of Hanfu.

Table 5.11 : Results of Mean Analysis of *Kansei* Words That Expressed Hanfu Brand

Samples	Famous	Good	Trustworthy	Favourite
S01	3.15	3.37	3.44	3.40
S02	3.33	3.38	3.42	3.31
S03	3.49	3.32	3.52	3.41
S04	3.60	3.54	3.54	3.54
S05	3.55	3.51	3.44	3.49
S06	3.60	3.51	3.54	3.62
S07	3.72	3.63	3.66	3.66
S08	3.61	3.51	3.55	3.69
S09	3.59	3.66	3.51	3.62
S10	3.34	2.26	3.33	3.26
S11	3.47	3.44	3.37	3.42
S12	3.43	3.39	3.41	3.46
S13	3.56	3.52	3.58	3.57
S14	3.31	3.26	3.26	3.27
S15	3.51	3.42	3.54	3.45
S16	3.51	3.48	3.52	3.52
S17	3.57	3.49	3.52	3.63
S18	3.40	3.41	3.40	3.44
S19	3.42	3.35	3.40	3.34
S20	3.47	3.35	3.45	3.46
S21	3.33	3.29	3.35	3.30
S22	3.45	3.38	3.39	3.36
S23	3.34	3.39	3.37	3.35
S24	3.43	3.45	3.54	3.45

(Source: Author's own formulation)

Despite various perceptual impressions of each Hanfu sample, certain brands of Hanfu display similar features; different brands may give users the same feeling. In this study, the mean values of the perceptual words were sorted. *Kansei* words with a score of more than 3.5 (Mean > 3.5) were selected as the representative impression of the Hanfu samples. The brand features of Hanfu were extracted and summarised after the stimulus map was compared with the perceptual adjective words. Table 5.12 presents the different characteristics of the stimulus map under the same adjective words.

Table 5.12 : Different Hanfu Samples under the Same Adjective Words That Described the Hanfu Brand

<i>Kansei</i> Words	Samples
1) Famous	S04, S05, S06, S07, S08, S09, S13, S15, S16, S17
2) Good	S04, S05, S06, S07, S08, S09, S13
3) Trustworthy	S03, S04, S06, S07, S08, S09, S13, S15, S16, S17, S24
4) Favourite	S04, S06, S07, S08, S09, S13, S16, S17

(Source: Author's own formulation)

5.1.3.3 *Kansei* Evaluation of Hanfu Service

1) Mean Analysis

This study identified three *Kansei* words that expressed Hanfu service based on the views of 97 respondents towards a total of 24 Hanfu samples, resulting in a total of 72 (24×3) scoring results. Similarly, mean values were taken as the final scores. The obtained results are presented in Table 5.13, which shows various user perceptions of different Hanfu-related services provided.

Table 5.13 : Results of Mean Analysis of *Kansei* Words That Expressed Hanfu Service

Samples	Considerate	Agreeable	Thoughtful
S01	3.39	3.42	3.44
S02	3.58	3.46	3.44
S03	3.58	3.51	3.57
S04	3.54	3.43	3.52
S05	3.58	3.43	3.46
S06	3.62	3.57	3.54
S07	3.64	3.46	3.58
S08	3.71	3.57	3.57
S09	3.67	3.52	3.60
S10	3.36	3.12	3.29
S11	3.49	3.33	3.43
S12	3.44	3.32	3.39
S13	3.69	3.51	3.58
S14	3.37	3.26	3.23
S15	3.48	3.38	3.42
S16	3.51	3.43	3.42
S17	3.57	3.52	3.55
S18	3.49	3.45	3.38
S19	3.37	3.32	3.36
S20	3.46	3.29	3.31
S21	3.35	3.24	3.24
S22	3.39	3.27	3.29
S23	3.41	3.36	3.41
S24	3.40	3.32	3.40

(Source: Author's own formulation)

There are different Hanfu-related services provided by businesses, and good services would always bring pleasurable experiences. Based on the mean values, this study selected *Kansei* words with a score of more than 3.5 (Mean > 3.5) as the representative impression of the Hanfu samples. The service features of Hanfu were summarised after the collected service information and user perception of the adjective words were compared. Table 5.14 presents different Hanfu samples under the same adjective words that described the service factor.

Table 5.14 : Different Hanfu Samples under the Same Adjective Words That Described Hanfu Service

Kansei Words	Samples
Considerate	S02, S03, S04, S05, S06, S07, S08, S09, S13, S16, S17
Agreeable	S03, S06, S08, S09, S13, S17
Thoughtful	S03, S04, S06, S07, S08, S09, S13, S17

5.1.3.4 Kansei Evaluation of Hanfu Quality

1) Mean Analysis

This study identified six *Kansei* words that expressed Hanfu quality based on the views of 97 Hanfu users towards a total of 24 Hanfu samples, resulting in a total of 144 (24×6) scoring results. Mean values were taken as the final scores. The obtained results are shown in Table 5.15, which showed various feelings towards the quality of Hanfu products.

Table 5.15 : Results of Mean Analysis of Kansei Words That Expressed Hanfu Quality

Samples	Safe	Healthy	Eco-Friendly	Durable	Soft	Comfortable
S01	3.44	3.52	3.40	3.35	3.65	3.70
S02	3.51	3.35	3.36	3.41	3.63	3.44
S03	3.52	3.46	3.46	3.57	3.62	3.56
S04	3.64	3.57	3.58	3.46	3.57	3.66
S05	3.53	3.42	3.46	3.56	3.52	3.49
S06	3.58	3.44	3.48	3.53	3.68	3.56
S07	3.71	3.53	3.59	3.66	3.53	3.61
S08	3.61	3.51	3.54	3.61	3.62	3.65
S09	3.66	3.53	3.49	3.53	3.67	3.66
S10	3.55	3.44	3.46	3.34	3.51	3.54
S11	3.51	3.40	3.42	3.49	3.57	3.54
S12	3.48	3.41	3.41	3.46	3.54	3.47
S13	3.60	3.56	3.58	3.66	3.55	3.67
S14	3.36	3.34	3.35	3.39	3.26	3.43
S15	3.47	3.34	3.45	3.47	3.55	3.48
S16	3.49	3.46	3.43	3.42	3.56	3.48
S17	3.53	3.41	3.46	3.55	3.55	3.55
S18	3.49	3.41	3.31	3.53	3.49	3.47
S19	3.32	3.30	3.27	3.35	3.37	3.42

Table 5.15 : Continued

Samples	Safe	Healthy	Eco-Friendly	Durable	Soft	Comfortable
S20	3.43	3.32	3.32	3.47	3.54	3.48
S21	3.35	3.27	3.30	3.28	3.37	3.38
S22	3.46	3.33	3.30	3.40	3.39	3.42
S23	3.41	3.44	3.35	3.51	3.51	3.45
S24	3.43	3.37	3.43	3.47	3.43	3.39

The quality of Hanfu products can be varied, and certain level of quality or material experience result in similar user perception. Based on the mean values, *Kansei* words with a score of more than 3.5 (Mean > 3.5) were selected as the representative experience of samples. The quality features of Hanfu were summarised after the collected quality information and the adjective words that described user perception were compared. Table 5.16 presents different Hanfu samples under the same adjective words that described the quality factor.

Table 5.16 : Different Hanfu Samples under the Same Adjective Words That Described Hanfu Quality

<i>Kansei</i> Words	Samples
Safe Healthy	S02, S03, S04, S05, S06, S07, S08, S09, S10, S11, S13, S17
Eco-friendly	S04, S07, S08, S13
Durable	S03, S05, S06, S07, S08, S09, S13, S17, S18, S23
Soft	S01, S02, S03, S04, S05, S06, S07, S08, S09, S10, S11, S12, S13, S15, S16, S17, S20, S23
Comfortable	S01, S03, S04, S06, S07, S08, S09, S10, S11, S13, S17

2) Factor Analysis

In order to further simplify the overall sensory impressions of Hanfu quality, Factor Analysis was carried out on 19 *Kansei* words to identify the main perceptual factors (or the main perceptual evaluation dimensions) of user

perception of Hanfu quality. PCA was performed using IBM SPSS 26.0 software. The number of factors with eigenvalue of more than 1 was determined. The results of KMO measure of sampling adequacy and Bartlett's test of sphericity are shown in Table 5.17.

Based on the obtained results, the recorded values of KMO ($0.851 > 0.600$), chi-square of 796.317, degree of freedom of 171, and sig. of .000 (< 0.005) were found to be within the credible range. The common factor variances of six *Kansei* words exceeded 0.500, which indicated the validity of these 6 *Kansei* words. These identified *Kansei* words expressed Factor 1 and Factor 2 well. Thus, all six *Kansei* words were retained.

The analysis of the rotated component matrix further confirmed two factors that represented the perceptual needs of users on the quality of Hanfu: material performance and sustainability. In other words, users mainly pay attention to two quality aspects of Hanfu, either Hanfu quality that emphasises "material performance" (comfortable, soft, and healthy) or Hanfu quality that emphasises sustainability (durable, eco-friendly, and safe).

Table 5.17 : Results of Factor Analysis on *Kansei* Words of Hanfu quality

<i>Kansei</i> Words	Factor 1	Factor 2	Extraction
Comfortable	0.861	0.367	0.870
Soft	0.850	0.172	0.858
Healthy	0.763	0.526	0.856
Durable	0.177	0.918	0.874
Eco-friendly	0.576	0.723	0.752
Safe	0.622	0.695	0.876
KMO and Bartlett's Test			
KMO	0.851		
Sig.	0.000		
Rotation Sums of Squared Loadings			
Total	2.796	2.796	
% of Variance	46.602	38.168	
Cumulative %	46.602	84.770	

Notes:

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalisation.

a. Rotation converged in three iterations.

(Source: Author's own formulation)

The scree plot in Figure 5.13 revealed relatively high eigenvalues of the first factor and the second factor. These factors contributed the most to explaining the original variables.

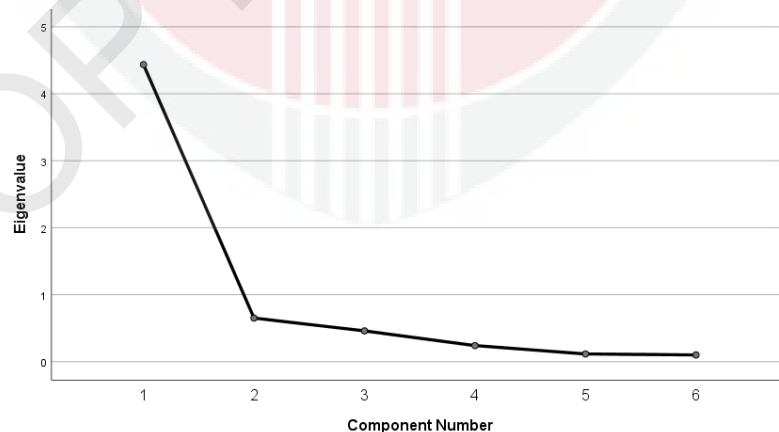


Figure 5.13 : Scree Plot (Quality)

(Source: Author's own illustration)

The obtained results revealed high loadings of three *Kansei* words, specifically “comfortable”, “soft”, and “healthy”, on the first-factor component. Based on the meaning of these adjective words, this first-factor component represented the “material performance” factor. The results also revealed high loadings of three *Kansei* words, specifically “durable”, “eco-friendly”, and “safe”, on the second-factor component. With that, the second-factor component represented the “sustainability” factor.

3) Hierarchical Cluster Analysis

The results in Figure 5.14 revealed four initial clusters of Hanfu samples: (1) S02, S03, S05, S06, S10, S11, S16, S17, S18, S20, and S23 in one cluster; (2) S01 in its cluster; (3) S04, S07, S08, S09, and S13 in one cluster; (4) S14, S19, S21, S22, and S24 in one cluster. However, these results were deemed unreasonable due to the significant number of clusters. The analysis proceeded and resulted in the formation of three clusters: (1) S01, S02, S03, S05, S6, S10, S11, S16, S17, S18, S20, and S23 in one cluster (moderate mean score of user perception and acceptance and accounted a large proportion of the “material performance” factor); (2) S04, S07, S08, S09, and S13 in one cluster (highest mean score of user perception and acceptance and accounted a large proportion of the “sustainability” factor); (3) S14, S19, S21, S22, and S24 in one cluster (lowest mean score of user perception and acceptance).

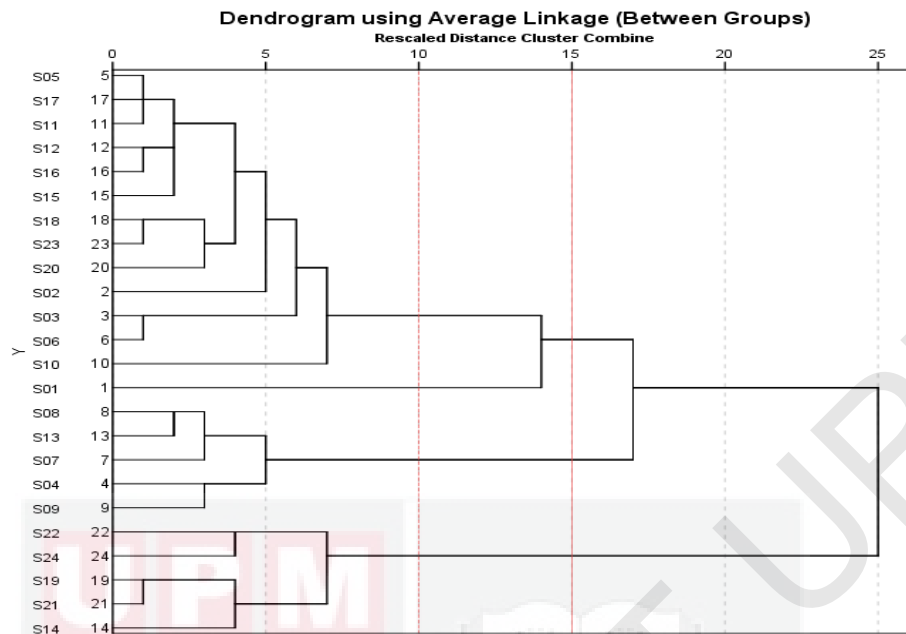


Figure 5.14 : Results of Cluster Analysis (Quality)
(Source: Author's own illustration)

5.1.4 Good Design Elements in Correspondence to the Selected Values

5.1.4.1 K-means Cluster Analysis on the Style Factor

K-means cluster analysis was performed to identify strategic *Kansei* words and the optimal or good design samples regarding the style factor. The incorporation of design characteristics associated with *Kansei* words that favourably expressed innovative style and classical style can create good Hanfu style design. *Kansei* words within the yellow-shaded region in Figure 5.15 fulfilled the criterion of strategic *Kansei* words based on the results of the k-means cluster analysis. Referring to the source of *Kansei* words in the Experience Map for the cases of S04, S06, S07, S08, S09, and S13, the design elements associated with the strategic *Kansei* words were identified. As a result, this study selected eight strategic *Kansei* words (i.e., beautiful,

well-made, traditional, gorgeous, good-looking, elegant, fresh, and particular) based on the results of the K-means cluster centre that best described the innovative style and classical style simultaneously.

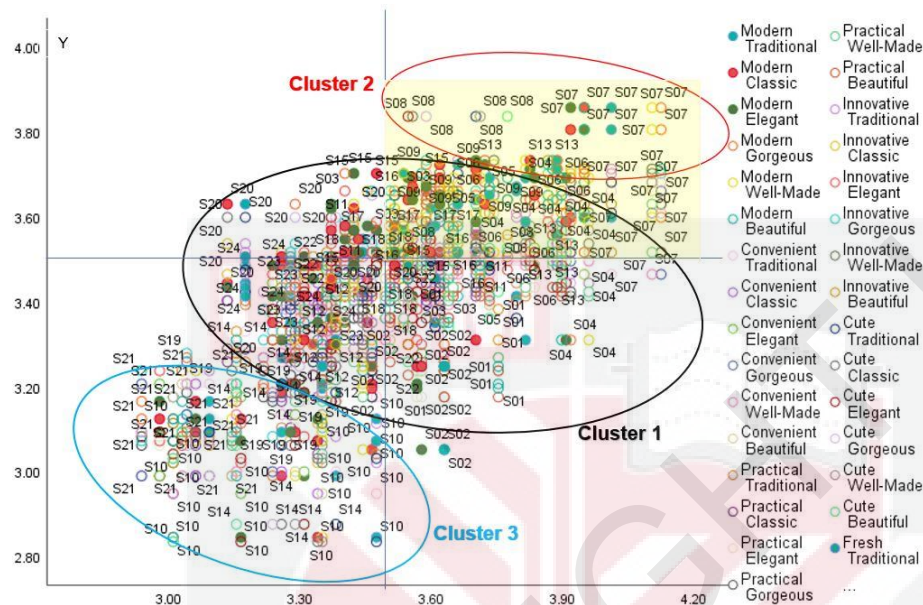


Figure 5.15 : Results of K-Means Cluster Analysis Based on Factor Analysis (Style)
(Source: Author's own illustration)

These eight strategic *Kansei* words were sorted and then classified into six categories, namely (1) pleasure, (2) style features, (3) craft technique, (4) cultural confidence, (5) personality performance, and (6) innovation capacity. These six categories represented important values of Hanfu style, which should be considered and incorporated as key design elements of Hanfu products by designers for optimal user perception. Table 5.18 presents items or categories associated with the selected *Kansei* words that were sorted according to their attribution.

Table 5.18 : Strategic *Kansei* Words on Hanfu Style

<i>Kansei</i> Words	Mean	Rank	Factor Components	<i>Kansei</i> Value
Beautiful	3.86	1	Classical elements	Pleasure
Well-made	3.80	2		Craft technique
Traditional	3.80	3		Cultural confidence
Gorgeous	3.77	4		Style features
Good-looking	3.77	5		Style features
Elegant	3.76	6	Innovative elements	Style features
Fresh	3.71	7		Innovation capacity
Particular	3.68	8		Personality

The results of the k-means cluster analysis were used to identify good Hanfu samples, which contributed to a better understanding of the advantages and disadvantages of the selected Hanfu samples. The results in Figure 4.18 confirmed S07 as a good sample that positively contributed to the style factor (i.e., classical and innovative elements).

5.1.4.2 K-means Cluster Analysis on the Brand Factor

K-means cluster analysis was performed to identify strategic *Kansei* words and the optimal or good design samples regarding the brand factor. The incorporation of design characteristics associated with *Kansei* words that expressed favourable characteristics of user perception and acceptance of the brand can create good Hanfu brand design. *Kansei* words within the yellow-shaded region in Figure 5.16 fulfilled the criterion of strategic *Kansei* words based on the results of k-means cluster analysis. Referring to the source of *Kansei* words in the Experience Map for the cases of S07, S08, S09, and S13, the design elements associated with the strategic *Kansei* words were identified. As a result, this study selected three strategic *Kansei*

words (i.e., famous, favourite, and good) that best described the user impression of a brand.

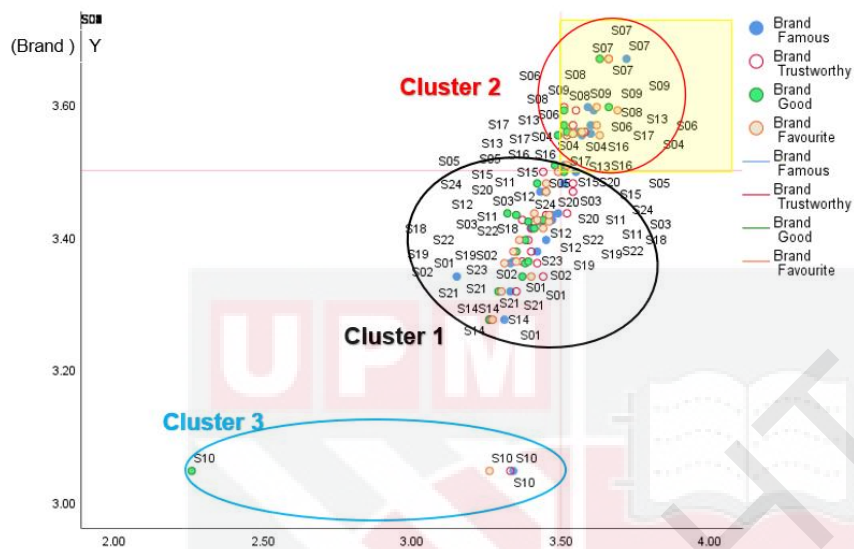


Figure 5.16 : Results of K-Means Cluster Analysis (Brand)
(Source: Author's own illustration)

These three strategic *Kansei* words were sorted and then classified into three categories, namely brand influence, public praise, and brand image. These categories represented important values of the Hanfu brand, which should be considered and incorporated as the Hanfu brand development strategy by businesses to deliver optimal user perception.

5.1.4.3 K-means Cluster Analysis on the Service Factor

K-means cluster analysis was performed to identify strategic *Kansei* words and the optimal or good design samples regarding the service factor. Based on the service perception and acceptance associated with the identified *Kansei* words, good service can be extracted and established. *Kansei* words

within the yellow-shaded region in Figure 5.17 fulfilled the criterion of strategic *Kansei* words that described the service factor based on the results of k-means cluster analysis. Referring to the source of *Kansei* words in the Experience Map for the cases of S02, S03, S06, S07, S08, and S17, the service perception and acceptance associated with the strategic *Kansei* words were identified. As a result, this study confirmed three strategic *Kansei* words (i.e., considerate, thoughtful, and agreeable) that best described the service factor.

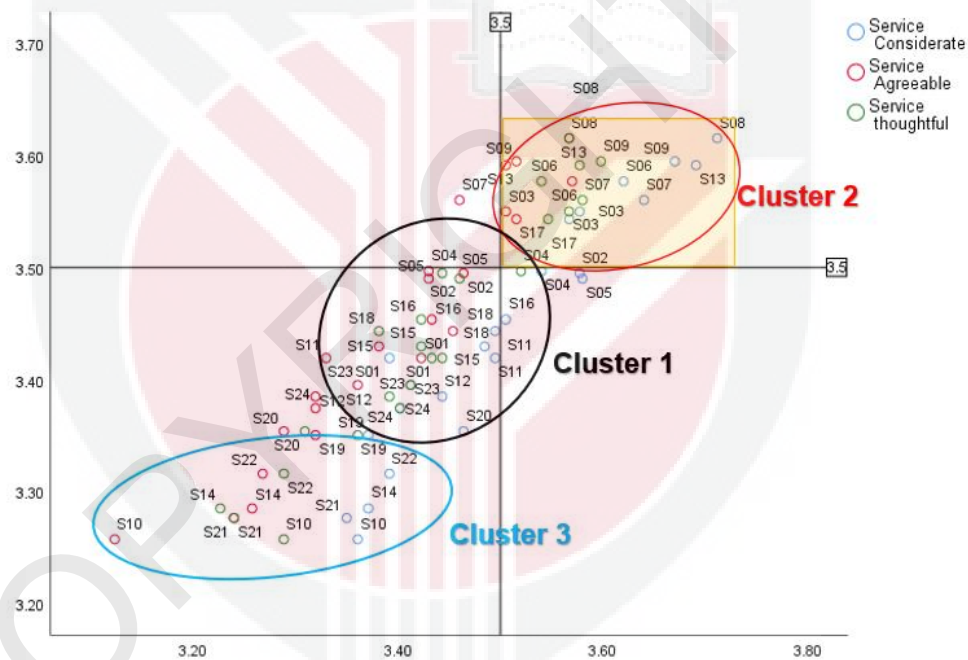


Figure 5.17 : Results of K-Means Cluster Analysis (Service)
(Source: Author's own illustration)

5.1.4.4 K-means Cluster Analysis on the Quality Factor

K-means cluster analysis was performed to identify strategic *Kansei* words and the optimal or good design samples regarding the quality factor. Based on the quality perception and acceptance associated with the identified

Kansei words, good quality in terms of material performance and sustainability factors can be incorporated into Hanfu products.

Kansei words within the yellow-shaded region in Figure 5.18 fulfilled the criterion of strategic *Kansei* words that described the quality factor based on the results of the k-means cluster analysis. Referring to the source of *Kansei* words in the Experience Map for the cases of S04, S07, S08, S09, and S13, the quality perception and acceptance associated with the strategic *Kansei* words were identified. As a result, this study confirmed six strategic *Kansei* words (i.e., safe, comfortable, soft, durable, healthy, and eco-friendly) that best-described material performance and sustainability factors simultaneously.

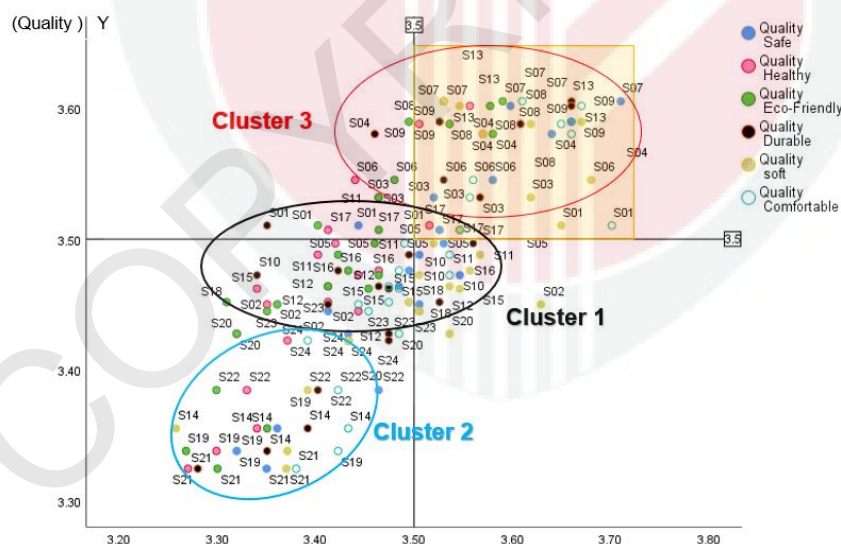


Figure 5.18 : Results of K-Means Analysis Based on Factor Analysis (Quality)
(Source: Author's own illustration)

These five strategic *Kansei* words were sorted and classified into three categories: material sensation, sustainability, and comfortableness or pleasure. These categories represented essential quality values of Hanfu, which should be considered and incorporated into Hanfu products by designers for optimal user perception.

5.1.4.5 Good Design Elements and Design Samples

A good Hanfu product offers an attractive style, brand, service, and quality to consumers. Good Hanfu products that are associated with strategic *Kansei* words can satisfy consumers' needs. Products are deemed valuable and attractive to consumers when products are designed and produced in consideration of their points of view. Hanfu designers have to design Hanfu products that can satisfy consumers' needs for good and valuable Hanfu products (Nagamachi & Lokman, 2016). Good design elements and samples help designers improve the design of Hanfu products according to consumers' *Kansei* needs.

In this study, 19 *Kansei* words were initially used to evaluate the style of 24 Hanfu samples. The outstanding characteristics of each Hanfu sample were mapped out. Each *Kansei* word that represented similar characteristics or meanings was identified and summarised. Referring to Table 5.9, the *Kansei* word "beautiful" was linked to a total of 17 Hanfu samples. This specific *Kansei* word reflects users' sense of style and pleasure needs for style. Following that, *Kansei* words of "traditional" (12), "creative" (12), "well-made" (11), "particular" (11), and "innovative" (11) were linked to a substantial

number of Hanfu samples, respectively. This indicated the significant interest of users towards these five characteristics of the Hanfu style.

In addition, the results of Factor Analysis in Table 5.10 revealed 11 *Kansei* words under Factor 1 (innovative style) and six *Kansei* words under Factor 2 (classical style). These results confirmed users' emphasis on two main aspects of Hanfu style, either Hanfu style that is more popular, convenient, practical, and innovative or Hanfu style that is more classic and elegant and retains the traditional characteristics. Based on these results, Hanfu products should incorporate both classical style and innovative style simultaneously for the current market.

With respect to the identified strategic *Kansei* words, inappropriate *Kansei* words found in the k-means cluster analysis were filtered. Table 5.19 presents strategic *Kansei* words and their corresponding technical specifications.

Table 5.19 : Selected Design Elements of Hanfu

Factors	<i>Kansei</i> Words		Design Elements	
	Strategic Words	<i>Kansei</i> Values	Items	Categories
Style	Beautiful	Pleasure	Silhouette construction	A-Line, H-Line, upper and lower garments, long gown
	Well-made	Craft technique	Technique colour	Advanced technique, blue/green with pattern
	Traditional	Cultural Confidence	Dynasty style, technique Collar, cuff size, opening method	Ming dynasty (MaMianqun), traditional handicraft, Chinese stand

Table 5.19 : Continued

Factors	Kansei Words		Design Elements	
	Strategic Words	Kansei Values	Items	Categories
Quality	Gorgeous	Style features	Pattern	collar, loose, Chinese frog button Flowers and Plants, traditional handicraft
	Good-looking Elegant	Style features Style features	Construction	Upper and lower garments
	Fresh	Innovation capacity	Pattern, fabric, colour	Birds and Animals, Geometry Pattern, Soft Fabric
	Particular	Personality	Opening method, material opening method Function	Front opening, light fabric, buttons
	Eco-friendly Comfortable	Sustainability Pleasure	Fabric component Technique	Easy to put on, take off, walk Recycled polyester Hand embroidery, machine embroidery, loose
Brand	Famous	Pleasure	Brand influence	Domestic brands, brand with traditional cultural characteristics
Service	Considerate	Pleasure	Acceptance	24-hour online shopping guide, no reason to return within seven days, a quick refund

(Source: Author's own formulation)

As for good Hanfu samples, the results in Figure 5.15 revealed that S07, S08, and S13 recorded prominent performance in style. Based on the results in Figure 5.16, S07, S08, and S09 demonstrated strong brand perception. S08 also recorded outstanding performance in service (Figure 5.17). Referring to Figure 5.18, S07, S08, S09, and S13 satisfied the criterion of good Hanfu samples in terms of quality.

The two good Hanfu samples were identified in Figure 5.19. The results of the K-means cluster analysis confirmed the good performance of S08 in terms of all four factors. Meanwhile, S07 recorded poorer performance in terms of service based on the results of a one-sample t-test, but its style, brand, and quality performance were excellent. Considering the design domain of Hanfu, S07 was also considered a good Hanfu sample. This study proved the intention of users to buy Hanfu and their willingness to pay additional costs for Hanfu fashion products when they regard Hanfu as fashion products with significantly higher values (i.e., perceived customer value).



Figure 5.19 : Good Hanfu Samples
(Notes: Tmall.com, Brand: S07; S08)

Based on the results of *Kansei* evaluation, this study identified the following features as the best or good elements of Hanfu from user perspectives: (1) design silhouette of A-line; (2) the construction of upper and lower garments; (3) a combination of upper and lower garments with loose and long gowns, such as the MaMianqun from the Ming dynasty; (4) easy to style; (5) the detail design of Chinese stand collar; (6) the front opening of Chinese frog button or buttons; (7) colour design of light/bright tone, such as blue/green

colour; (8) the pattern design of flowers, plants, butterfly, or snowflakes; (9) glossy and soft fabric material; (10) basic functions that are easy to put on, take off, walk, and style; (11) traditional handicraft, embroidery craft.

Special attention should be paid to the use of recycled polyester as a fabric component to ensure the sustainability of Hanfu and improve the eco-friendly aspect concerning Hanfu. Traditional handicrafts and embroidery crafts were used in the design of S07, this Hanfu sample has obvious features of craft value. As S07 was taken the high cost of working hours, the cost of production would increase accordingly. Furthermore, the service system for Hanfu products should consider incorporating a 24-hour online shopping guide, no reason to return within seven days, and quick refunds.

Certain classical design elements with innovative design elements can be integrated into Hanfu fashion products. Domestic Hanfu brands with traditional cultural characteristics can also increase cultural confidence and national pride, resulting in higher values for Hanfu fashion products and the pleasure of wearing Hanfu. With that, the competitive advantages of Hanfu products and the desire of consumers to purchase Hanfu would increase.

5.2 Proposed Framework of Hanfu Fashion in the Slow Fashion Movement

This study employed a mixed-methods approach integrating qualitative and quantitative analyses to establish the framework for Hanfu fashion through three systematic phases: identification of influencing factors, significant aspect of user perception and acceptance of Hanfu fashion, and *Kansei*

analysis. The research process culminated in a synthesized discussion integrating empirical data and analytical outcomes to formulate the Hanfu fashion framework. Figure 5.20 presents the framework of Hanfu fashion about user perception and acceptance based on the obtained data collection and results of KE analysis.

Phase I commenced with a qualitative analysis of existing Hanfu products, resulting in the identification of four primary influencing factors. Phase II implemented *Kansei* Engineering methodology to systematically collect and analyse user perception data. From 24 representative Hanfu samples, 32 *Kansei* words were extracted as critical indicators of user perception and product acceptance, aligned with the identified influencing factors (style, brand, quality and service).

The final phase incorporated quantitative analysis through a specially designed questionnaire assessing the 32 *Kansei* words across three evaluative dimensions: objectives, standards, and attitudes. Statistical analysis revealed 12 strategic *Kansei* words and identified two optimal Hanfu fashion samples. These validated strategic *Kansei* words demonstrate direct correlations with good design elements, providing empirical evidence for the framework's theoretical propositions. This rigorous methodology advances traditional fashion research paradigms by establishing measurable connections between cultural product attributes and consumer perception metrics.

Figure 5.20 illustrates the four influencing factors (style, brand, service, and quality) influencing user perception and acceptance of Hanfu fashion in the slow fashion movement. The two factors (brand and quality) influence style. At the centre of the diagram is "Hanfu," which is connected to two key elements that contribute to its appeal and acceptance. Hanfu style is categorized into classical elements and innovation elements.

The classical elements of Hanfu include six *Kansei* words such as being well-made, gorgeous, good-looking, elegant, traditional, and beautiful. These *Kansei* words are linked to the style features, cultural confidence, pleasure, and craft technique, which further enhance the user's perception and acceptance. The innovation elements of Hanfu are described as particular and fresh, indicating a modern twist on traditional designs. The brand and service factors are associated with being famous and considerate. The quality of Hanfu is highlighted by two *Kansei* words (comfortable and eco-friendly). The comfortable and eco-friendly are connected to pleasure and sustainability.

Additionally, the diagram shows that user perception and acceptance of Hanfu are also influenced by factors such as pleasure, sustainability, and innovation capacity. These factors are interconnected with the classical and innovation elements, as well as the overall style, brand, price, service, and quality of Hanfu. Ultimately, the diagram provides a comprehensive overview of the multifaceted factors that contribute to the user's perception and acceptance of Hanfu.

Based on the obtained results of this study, the preliminary theoretical framework and the main four influencing factors were adequately supported. All four factors demonstrated statistical significance. The proposed framework of Hanfu fashion would provide a good guiding foundation for designers in designing Hanfu fashion products. The study identified the style factor as the most important design element of Hanfu fashion. The style factor was found to be highly associated with users' interests in classical and innovative elements of Hanfu. The identified good Hanfu samples of S07 and S08 in this study demonstrated users' interest in preserving the traditional Hanfu design construction with traditional cultural characteristics and innovative style, colour, and patterns, along with the use of sustainable fabric materials and considerate service provided by local Hanfu brands.

These results indicated the importance of understanding the awareness and interests of consumers of Hanfu to produce Hanfu fashion products with higher competitive advantages. For example, the adoption of hand embroidery or machine embroidery for Hanfu products is often perceived and accepted as a way of preserving traditional cultural characteristics.

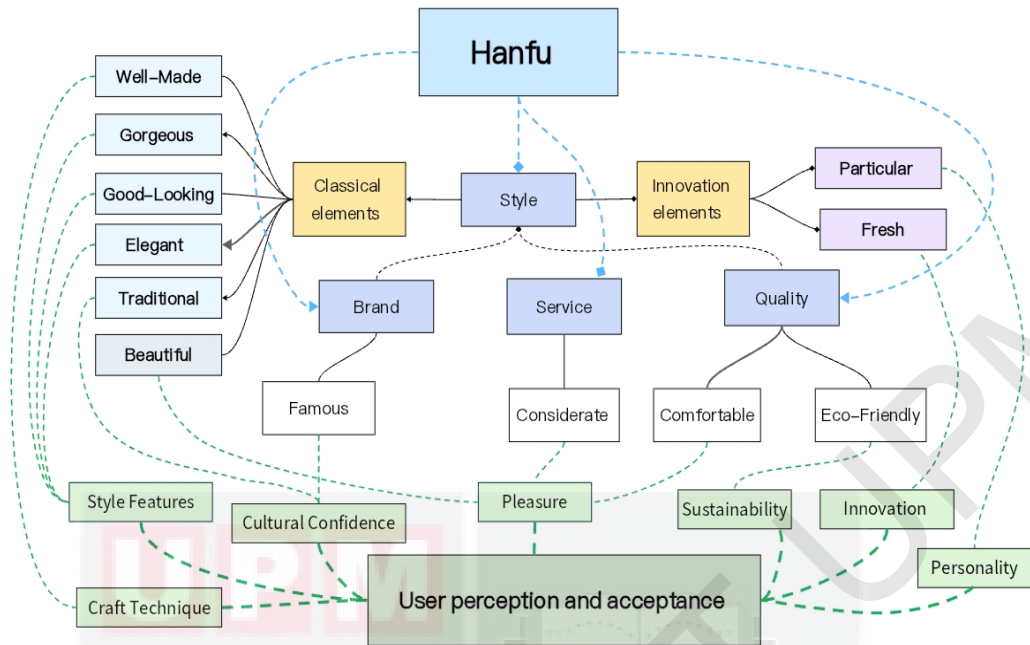


Figure 5.20 : Framework of Hanfu Fashion in the Slow Fashion Movement
(Source: Author's own illustration)

For Hanfu fashion designers, the proposed framework serves as a guide for the development and design of new Hanfu products. According to the four key factors (style, brand, service, and quality) within the framework, designers should focus on maintaining the core traditional elements of style design while integrating innovative features. They must also consider the alignment between the brand's concept and the design style, as well as the interplay between product quality and style. This approach can enhance brand awareness and influence through the style design. Furthermore, when creating new styles, designers should prioritize the comfort and sustainability of the product, paying attention to the comfort and eco-friendliness of fabric materials. By incorporating the seven aspects of user perception (pleasure, style features, Craft technique, cultural confidence, innovation capacity, sustainability and personality) and aligning with strategic *Kansei* words,

designers can develop Hanfu products that not only meet aesthetic and functional needs but also adhere to corresponding technical specifications.

5.3 Validation of the Hanfu Fashion Framework

Following *Kansei* analysis, this study determined the proposed Hanfu fashion framework in the slow fashion movement. Designers should prioritize seven critical aspects of *Kansei* value in their practice, including pleasure, style features, craft technique, cultural confidence, innovation capacity, sustainability, and personality. To ensure the correctness and reliability of seven critical aspects of *Kansei* value, validation was done by this study.

The validation analysis was designed to ensure methodological rigour and establish a foundation for practical implementation (Lewis et al., 2016). A verification questionnaire was developed based on seven aspects of *Kansei* value identified in the Hanfu framework and twelve supporting *Kansei* words. Thirty-five participants completed the survey, comprising three stakeholder groups: 10 Hanfu designers, 15 active Hanfu users, and 10 Hanfu cultural enthusiasts. Quantitative analysis revealed consistently high agreement scores, with mean values ranging from 4.50 to 4.84 on a 5-point scale. Results demonstrate strong consensus regarding the significance of all seven aspects of *Kansei* value in characterizing pleasure, style features, craft technique, cultural confidence, innovation capacity, sustainability, and personality. Furthermore, the twelve *Kansei* words exhibited substantial discriminant validity across these aspects (see Table 5.20).

The validation outcomes confirm both the reliability of the measurement model and the theoretical validity of the proposed framework. These findings substantiate the framework's effectiveness in capturing Hanfu's *Kansei* attributes while establishing its relevance to slow fashion development. The validated framework provides a robust methodological foundation for subsequent research in Hanfu fashion revitalization and culturally sustainable design practices.

Table 5.20 : Validation of *Kansei* Value Determination

No.	<i>Kansei</i> Value	<i>Kansei</i> Words	Score	Overall Score
1	Pleasure	Beautiful	4.83	4.65
		Comfortable	4.69	
		Considerate	4.43	
2	Style features	Gorgeous	4.33	4.54
		Good-looking	4.75	
		Elegant	4.65	
3	Craft technique	Well-made	4.84	4.84
4	Cultural confidence	Traditional	4.75	4.50
		Famous	4.26	
5	Innovation capacity	Fresh	4.63	4.63
6	Sustainability	Eco-friendly	4.57	4.57
7	Personality	Particular	4.59	4.59

Notes: 35 participated in this survey

(10) Hanfu designers, (15) active Hanfu users, and (10) Hanfu cultural enthusiasts

Age: 18 to 28 years

(Source: Author's own formulation)

5.4 Chapter Summary

This chapter presented and discussed the findings of the study, demonstrating the achievement of the third research objective (RO3). A framework for Hanfu fashion was successfully constructed, encompassing seven critical aspects of user *Kansei*: (1) style features, (2) craft techniques, (3) innovation capacity, (4) cultural confidence, (5) sustainability, (6)

personality, and (7) pleasure. Through the analysis of 32 cases of user perceptions and acceptance, 12 strategic *Kansei* words were identified: beautiful, comfortable, considerate, gorgeous, good-looking, elegant, well-made, traditional, famous, fresh, eco-friendly, and particular. These words capture the essence of user preferences and emotional responses toward Hanfu fashion.

Furthermore, based on the results of KE Type I, users' concerns—categorized into goals, standards, and attitudes—were thoroughly examined, alongside an analysis of good design elements of Hanfu and their corresponding technical specifications. This detailed exploration provided valuable insights into the alignment between user expectations and design practices.

Finally, the study culminated in the establishment of a framework for Hanfu fashion in the slow fashion movement, integrating the identified *Kansei* dimensions, strategic keywords, and user-centric design principles. This framework not only advances the understanding of Hanfu within the context of sustainable fashion but also offers practical guidance for designers and stakeholders aiming to enhance user satisfaction and promote cultural heritage in the slow fashion movement.

CHAPTER 6

CONCLUSION, CONTRIBUTION OF KNOWLEDGE, AND RECOMMENDATIONS FOR FUTURE RESEARCH

This chapter serves as the culmination of the study, synthesizing the key findings, theoretical contributions, and practical implications derived from the research. It begins by revisiting the research questions and summarizing the principal outcomes, providing a cohesive understanding of how the Hanfu fashion in the slow fashion movement addresses the identified research gaps. Subsequently, the chapter highlights the contributions of this work to the body of knowledge in Hanfu fashion, slow fashion, and *Kansei* engineering, emphasizing its significance for Hanfu designers and Hanfu enterprise. Finally, the chapter outlines the limitations encountered during the research process and proposes actionable recommendations for future studies, aiming to inspire further exploration and refinement of Hanfu fashion and its sustainability. By integrating these elements, this chapter not only concludes the present research but also lays the groundwork for advancing the Hanfu field in meaningful ways.

6.1 Summary of Findings Based on Research Questions

This study primarily aimed to construct the framework of Hanfu fashion using KE methodology. Based on the obtained results, the research findings answered the research questions of this study. Regarding the research questions in this study, the results are listed below:

a) The Influencing Factors of Slow Fashion in Hanfu Fashion

The first research question of this study was related to identifying the influencing factors of slow fashion in Hanfu fashion. Considering the concept of sustainability in slow fashion, this study selected Hanfu as an example to identify the influencing factors of slow fashion. Hanfu is a typical sample of slow fashion based on the definition of slow fashion, Hanfu cultural inheritance, the durability of quality, and unique Han artistic style, performance, and aesthetics. Hanfu fashion products are locally produced in China and reflect Chinese traditional culture that communicates tangible and intangible values. Users link pleasure and Hanfu fashion with inheritance awareness of traditional culture and responsibility. Through the integration of the theory of perception and acceptance and the slow fashion matrix, this study framed the conceptual framework of Hanfu fashion and identified four influencing factors of Hanfu fashion, namely style, brand, service, and quality.

This study identified different items of the style factor, and each item was found to be linked to different categories. The style factor in this study consisted of the following items: (1) dynasty; (2) design style; (3) construction; (4) silhouette; (5) pattern; (6) colour; (7) material; (8) function. Firstly, there are four categories of dynasties: Han Dynasty, Tang Dynasty, Song Dynasty, and Ming Dynasty. Secondly, the design style consists of classical style and innovative styles. Thirdly, there are upper and lower garments, one-piece styles, and combination styles. Besides that, there are six categories of silhouette: A-line, empire silhouette, H-line, slender, long

and loose, and a tight waist. Adding to that, there are six main categories of pattern: natural flowers, birds, animals, plants, snowflakes, and free design. Meanwhile, there are (1) red, (2) pink, (3) blue/green, (4) black/white, (5) light yellow, and (6) light/bright tone for colour. Last but not least, function consists of basic functions, easy to put on, easy to take off, easy to walk, easy to style, and easy to maintain.

As for the quality factor, this study identified (1) printing patterns, (2) jacquard, (3) braid, and (4) embroidered patterns. As for the service factor, this study identified the following categories: (1) 24-hour online shopping guide; (2) no reason to return within seven days; (3) live delivery service; (4) quick refund; (5) return shipping insurance; (6) after-sales consulting service. Lastly, this study identified (1) domestic brands, (2) brands with innovation characteristics, and (3) brands with traditional cultural characteristics.

b) The Significant Aspects of User Perception and Acceptance of Slow Fashion in Hanfu Fashion

The second research question of this study was related to analysing the significant aspects of user perception and acceptance of slow fashion in Hanfu fashion. This study gathered a total of 35 cases on user perception and acceptance for the development of Experience Map. These cases on user perception and acceptance were classified into four categories: (1) experience of purchasing; (2) experience of wearing; (3) experience of styling; and (4) experience of maintaining.

Firstly, the experience of purchasing category consists of the following: (1) style/appearance (beautiful, cute, gorgeous, classic, particular, fresh, popular, innovative, modern, elegant, and well-made); (2) style/construction (good-looking, traditional, practical, considerate, original, creative, adequate, and convenient); (3) brand (famous, good, trustworthy, and favourite); (4) service (thoughtful, agreeable, and considerate). Meanwhile, the experience of wearing, the experience of styling, and the experience of maintaining include being easy to put on or take off, easy to style, and easy to maintain. These various types of experience are mainly related to quality and material (comfortable, soft, healthy, eco-friendly, durable, and safe).

C) *Kansei* Engineering Methodology in Constructing a Framework of Slow Fashion for Designers and Users of Hanfu Fashion

The third research question of this study was related to constructing a framework of slow fashion using KE methodology for designers and users of Hanfu fashion. With that, this study analysed three key concerns among users: goals, standards, and attitudes.

When it comes to the goals of users, the obtained results revealed the willingness to buy Hanfu and the consideration of all five factors in choosing Hanfu. Among all the Hanfu samples, S07 was the most recognised sample in terms of style, brand, and quality, whereas S08 recorded the most acceptable service. In the case of both S07 and S08, this study observed no significant differences in user perception of style, brand, service, and quality between men and women.

As for the standards of users, the obtained results confirmed the important influence of style, brand, service, and quality factors on user perception and acceptance of Hanfu fashion. These five factors were found to be the best predictors, which were incorporated into the framework of Hanfu fashion. The results also revealed the significant and positive influence of both brand and quality factors on the style factor. The proposed framework of Hanfu fashion in this study established a good guiding foundation for designers in designing Hanfu fashion products.

Lastly, as for the attitudes of users, the style factor was revealed to be a crucial factor in the purchase of Hanfu products, particularly in regards to users' interest in the classical and innovative elements of Hanfu. The results also revealed users' interests in the following elements: preserving the traditional Hanfu construction; innovative style, colour, and patterns; the use of sustainable fabric material; considerate service; domestic Hanfu brands with traditional cultural characteristics. These results demonstrated that Hanfu products that offer pleasure, style features, craft technique, cultural confidence, innovation capacity, sustainability, and personality elements donate highly competitive advantage.

6.2 Novelty of Study

Addressing the identified gaps in the current literature, this study constructed a framework of Hanfu fashion in the slow fashion movement based on user perception and acceptance. Firstly, based on the comprehensive review of the literature, this study identified gaps in the knowledge of the dynamic

relation between slow fashion and Hanfu fashion. The findings reaffirmed that Hanfu is an ideal sample of slow fashion. Thus, this study proceeded to identify the influencing factors of slow fashion in Hanfu fashion. Besides that, this study examined the significant aspects of user perception and acceptance of slow fashion in Hanfu fashion, which ensured the research novelty.

Although the topic of slow fashion or Hanfu fashion with consumer awareness has been studied, the current study introduced novelty by exploring the application of KE methodology and developing an Experience Map of Hanfu fashion, which provided new insights and perspectives. To date, an Experience Map has not been used in other studies to analyse the experience of Hanfu fashion users or consumers. Moreover, the application of KE methodology to explore the significant aspects of user perception and acceptance towards Hanfu fashion has not been employed in other studies, specifically in the determination of Hanfu product value concerning user perception.

Based on the obtained results and findings, 35 significant aspects of user perception and acceptance from four categories (i.e., purchasing, wearing, styling, and maintaining) were identified in this study. These results and findings significantly enriched the knowledge of applying KE methodology and provided design references for designers and businesses of slow fashion. To sum up, the constructed framework of Hanfu fashion in the slow

fashion movement addressed the contributions of knowledge of product competition advantages and design value of Hanfu fashion products.

6.3 Contributions of Study

This study addressed the specific contribution of knowledge on Hanfu and the slow fashion industry. The findings on influencing factors of Hanfu products, significant aspects of user perception and acceptance, and good design elements of Hanfu can support designers in designing high-value Hanfu products, thereby supporting the sales of Hanfu and enhancing the expansion of the Hanfu fashion industry. These findings were not covered by previous studies. This study provided a better understanding of user perception and acceptance of Hanfu, which would benefit designers in designing new Hanfu fashion products with a higher competitive advantage for the current market.

Another significant contribution of this study was the construction of a framework of Hanfu fashion. The framework of Hanfu fashion in the slow fashion movement was constructed to determine the value of Hanfu fashion products from a new perspective. The proposed framework was of mighty significance to the sustainable development of slow fashion. This study associated Hanfu product value with user perception and acceptance and employed KE methodology to determine Hanfu product value about user perception. At the same time, this study developed an Experience Map, along with the application of KE Type I, to collect and analyse user

perception and acceptance of Hanfu fashion. Overall, this study significantly enriched the knowledge of KE methodology application.

After all, to date, no specific study has been conducted on the slow fashion industry, specifically Hanfu in China, and there was no framework for Hanfu fashion concerning user perception and acceptance. Measuring user perception and acceptance from the perspectives of users is rather new, and its implementation is still limited. Therefore, the proposed framework of Hanfu fashion with user perception and acceptance in this study was expected to improve sustainability and slow fashion awareness of Hanfu, regardless of the user's professional background. Add to that, users have different levels of preferences in terms of style and quality of products that may provide design advantages for Hanfu designers. Hanfu designers may determine design elements of product development such as style and quality according to the framework of Hanfu fashion.

Based on *Kansei* Engineering's methodology in constructing a framework of Hanfu fashion, this study not only validates the preliminary theoretical framework but also establishes the brand and quality factors can significantly and positively influence the style factor. Furthermore, design elements (*Kansei* words) support the four factors of style, brand, service, and quality. Regarding style, it is further determined that classical elements and innovation elements are its main components. Classical elements are perceived by users through six *Kansei* words: beautiful, well-made, traditional, gorgeous, good-looking, and elegant. On the other hand,

innovation element styles are mainly associated with *Kansei* words (fresh and particular) in user perception. In terms of brand perception by users, it is considered as famous. When it comes to service perception by users, it is mainly characterised by considerate aspects. As for quality perception among users, two *Kansei* words dominate: comfortable and eco-friendly. Additionally, the framework highlights significant aspects of user's *Kansei* value (pleasure, style features, technique, cultural confidence, innovation capacity, sustainability and personality), thereby correspondent good design elements. For instance, users predominantly favour Hanfu products that fall into the following categories: A-line silhouettes, upper and lower garment constructions, machine or hand embroidery techniques, domestic brands with traditional cultural characteristics, 24-hour online shopping guidance services, a seven-day no-reason return policy with prompt refunds. Hanfu products encompassing these attributes tend to be more appealing to consumers or users. The other detailed design categories reference Table 5.20.

The proposed framework was also deemed useful for users in assessing product competitiveness and value about their levels of pleasure of product experience, style features, craft technique, innovative capacity, sustainability, and personality for the key factors of style, brand, quality, and service. Improving the overall understanding of user perception and acceptance is essential to encourage users or consumers to purchase and wear Hanfu and improve their understanding of the value of Hanfu culture and sustainability. Furthermore, the study provided a mechanism that addressed seven key

aspects of user *Kansei* regarding good design elements of Hanfu for users to improve their selection of Hanfu products. The proposed sustainability framework may also address issues of mismatch with user perception and acceptance, which can mitigate potential conflicts and disputes in Hanfu product selection.

6.4 Limitations of Study

Considering the complexities of user perception and acceptance and the extensiveness of slow fashion products, this study only focused on Hanfu fashion (an example of slow fashion) and young individuals of the age of between 18 and 28 years (the main target group in Hanfu market in China) at Changzhutan, China, specifically sustainability-sensitive young workers and design students with higher education level. Furthermore, this study was limited by the presence of unknown factors. Considering the possibility of mischaracterisation regarding the concept of Hanfu due to a poor understanding of Hanfu fashion, this study focused on Hanfu users, consumers, designer, and Hanfu lovers.

6.5 Recommendations for Future Research

This study has laid the groundwork for understanding user perceptions and acceptance of Hanfu within the context of the slow fashion movement, utilising *Kansei* Engineering as the primary research methodology. However, several areas warrant further exploration to deepen the understanding of this field and address its limitations. The following recommendations are proposed for future research:

1. Expansion of Sample Demographics

This study focused on young people between the ages of 18 to 28 years in Changzhutan, China, which may limit the generalisability of the findings. Future research should expand the sample to include a more diverse range of participants, such as different age groups, cultural backgrounds, and geographic regions.

To enhance the applicability of the findings, it is crucial to consider replicating the study in other Chinese cities with distinct socio-economic and cultural characteristics. For instance, cities like Beijing, Shanghai, and Guangzhou, which are major economic hubs, could provide insights into how urbanisation and economic development influence the behaviours and attitudes of young people. Similarly, smaller cities or rural areas, such as those in the western regions of China, could offer perspectives on the impact of regional disparities and traditional values.

Moreover, the study could be extended to include older age groups, such as individuals in their 30s and 40s, to explore how life stage and generational differences shape the outcomes. Additionally, incorporating participants from diverse cultural backgrounds, including ethnic minorities, would provide a more comprehensive understanding of the cultural dynamics at play.

In terms of methodology, future research could employ longitudinal studies to track changes over time, as well as comparative studies across different regions to identify patterns and variations. This would not only enhance the

robustness of the findings but also contribute to a more nuanced understanding of the factors influencing young people in China.

This would provide a more comprehensive understanding of how various user groups perceive and accept Hanfu in the context of slow fashion.

2. Integration of Advanced Technologies

Future studies could incorporate advanced technologies, such as eye-tracking, biometric sensors, or artificial intelligence, to complement *Kansei* Engineering. These tools could provide deeper insights into users' physiological and emotional responses, enhancing the accuracy and richness of the data collected.

3. Exploration of Sustainable Practices

While this study touched on sustainability as a factor in user perception, future research could delve deeper into the role of sustainable practices in Hanfu design and production. Investigating user attitudes toward eco-friendly materials, ethical production processes, and circular fashion models would align with the principles of slow fashion and provide actionable insights for designers and enterprises. By addressing these recommendations, future research can build on the findings of this study, further advancing the understanding of Hanfu within the slow fashion movement and contributing to the broader discourse on sustainable and culturally significant fashion.

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APPENDICES

Appendix A

Questionnaire

Appendix A1

Questionnaire of Hanfu (English Version)

Dear users,

Greetings! The purpose of this questionnaire is to understand the user's perception and acceptance of Hanfu, it can design Hanfu that meets the user's real needs. The data obtained is only used for research purposes, not for other purposes. Please rest assured to fill out the questionnaire. Your participation is our greatest support, thank you!

Note: This questionnaire is for lovers and potential consumers of Hanfu aged 18-28 years old. Please fill out the questionnaire based on your perception and acceptance. A total number of 24 Hanfu samples need to be evaluated in this survey.

1. Gender: ☐ male ☐ female

2. Age: ☐18-20 ☐21-23 ☐22-23 ☐24-26 ☐26-28

3. Regarding the Hanfu design in Figure 1-18, how likely are you to choose it for major festivals or special occasions?

Not at all	Slightly	Moderately	Very much	Extremely
☐	☐	☐	☐	☐

4. Referring to Figures 19-24, how likely are you to choose innovative designs of Hanfu elements in your daily life?

Not at all	Slightly	Moderately	Very much	Extremely
☐	☐	☐	☐	☐

5. Hanfu samples 1: User perceptions of looking at the Hanfu?

Brand—Chixia; Price—228RMB;

Style construction: upper garments + suspenders + three-pleated skirt

Material: 100% Polyester; Size: S\M\L

Features: Song dynasty, fresh, elegant, natural, beautiful



Style/ Appearance:	Not at all	Slightly	Moderately	Very much	Extremely
1. Beautiful (Design/Pleasure)	☐	☐	☐	☐	☐
2. Cute (Design)	☐	☐	☐	☐	☐
3. Gorgeous (Design)	☐	☐	☐	☐	☐
4. Traditional (Design)	☐	☐	☐	☐	☐
5. Particular (Design)	☐	☐	☐	☐	☐
6. Fresh (Design)	☐	☐	☐	☐	☐
7. Popular (Design)	☐	☐	☐	☐	☐
8. Innovative (Design)	☐	☐	☐	☐	☐
9. Modern (Design)	☐	☐	☐	☐	☐
10. Elegant (Design)	☐	☐	☐	☐	☐
11. Well-made (Design)	☐	☐	☐	☐	☐
Style/ structure	Not at all	Slightly	Moderately	Very much	Extremely
12. Good-looking (Design)	☐	☐	☐	☐	☐
13. Classic (Design)	☐	☐	☐	☐	☐
14. practical (Design)	☐	☐	☐	☐	☐
15. Considerate (Design)	☐	☐	☐	☐	☐
16. Original (Design)	☐	☐	☐	☐	☐
17. Creative (Design)	☐	☐	☐	☐	☐
18. Adequate (Design)	☐	☐	☐	☐	☐
19. Convenient (Design)	☐	☐	☐	☐	☐
Brand	Not at all	Slightly	Moderately	Very much	Extremely
20. Famous (Brand)	☐	☐	☐	☐	☐

Influence)					
21. Good (Brand Reputation)	☐	☐	☐	☐	☐
22. Trustworthy (Brand Authority)	☐	☐	☐	☐	☐
23. Favourite (Brand Image)	☐	☐	☐	☐	☐
Price	Not at all	Slightly	Moderately	Very much	Extremely
24. Cheap (pleasure)	☐	☐	☐	☐	☐
25. Reasonable (pleasure)	☐	☐	☐	☐	☐
26. Expensive (rationality)	☐	☐	☐	☐	☐
Service	Not at all	Slightly	Moderately	Very much	Extremely
27. Thoughtful (User: Convenience)	☐	☐	☐	☐	☐
28. Agreeable (User: Convenience)	☐	☐	☐	☐	☐
29. Considerate (User: Comfortableness)	☐	☐	☐	☐	☐
Quality	Not at all	Slightly	Moderately	Very much	Extremely
30. Safe (User: Safety)	☐	☐	☐	☐	☐
31. Healthy (Chemical properties)	☐	☐	☐	☐	☐
32. Eco-friendly (sustainability)	☐	☐	☐	☐	☐
33. durable (Mechanical properties)	☐	☐	☐	☐	☐
34. soft (Physical properties)	☐	☐	☐	☐	☐
35. comfortable (User: Comfortableness/pleasure)	☐	☐	☐	☐	☐

Repeat the above questions for each Hanfu sample (2-24)

Table of Hanfu samples (1~24)

	Products	Information	Style construction:	Features
S01		Brand—Chixia; Price—228RMB; Material: 100% Polyester; Size: S\ML	upper garments + suspenders + three-pleated skirt	Song dynasty, fresh, elegant, natural, beautiful
S02		Brand - Return to Han and Tang; Price - 178RMB/set; Material: 97% Polyester 3% Spandex, Size: S\ML\XL	Straight-collar paired cardigan + one-piece pleated skirt (chest length)	Tang dynasty, Inspired by the Dunhuang murals, which are lively and lovely
S03		Brand - Return to Han and Tang; Price - 178RMB; Material: 100% Polyester Size: S\ML\XL	Beizi + straight collar paired with fir + 10 pieces of skirt	Tang dynasty, Elegant, delicate, delicate, traditional, comfortable
S04		Brand - Zhong Ling Ji; Price - 937RMB/set; Material: Tencel blended/beautiful yarn, Yangzhou yarn, custom digital printing Size: XS\S\ML:	Outer Gown + Inner Gown + Airplane Sleeves + Pleated Skirt Classical, Light,	Song dynasty, Romantic, Fresh, Elegant, Soft, Delicate\Modern Digital Printing, Heavy Industry Embroidery One Million Stitches, Patchwork Embroidery
S05		Brand - Hua Chao Ji; Price - 319.8RMB/set; Material: 100% Polyester Size: S\ML	half-sleeved, under-waist pleated skirt	Tang dynasty, gorgeous, generous, dignified, elegant

S06		Brand - Hua Chao Ji; Price - 318RMB/set; Material: 100% Polyester Size: S\M\L	Large-sleeved shirt + suspenders + waist skirt + drape	Tang dynasty, Light and agile, elegant and gentle, graceful, slim and beautiful, elegant
S07		Brand - Tongguan; Price - 2480RMB/set; Material: custom-woven cordyceps flower pattern chemical fibre flower 100% polyester Size: S\M\L\XL\XXL	Cape - gown with stand-up collar, Mamianqun skirt	Ming dynasty, Traditional weaving technology is exquisite, gentle, delicate and rich
S08		Brand-Chi Xia; price— 168RMB/set; Material: 95% polyester + 5% spandex Size: S\M\L\XL Style Combination:	Short Shirt with Front Opening, Blouse, Pleated Skirt	Ming Dynasty, Gentle and lovely, elegant and generous
S09		Brand - Chixia; Price— 356RMB/set; Material: 100% Polyester Size: S\M\L	Outer long shirt + inner long shirt	Song Dynasty, Tender, Sweet, Delicate
S10		Brand - Sangval; Price - 2800RMB/set; Material: 100% mulberry silk	Luo shirt + long skirt + a Long Silk Scarf (Pibo, Chinese),	Tang dynasty, Elegant, delicate, retro
S11		Brand - Rumeng Nishang; Price— 628RMB/set; Material: 99% Polyester 1% Others Size: S\M\L\XL	Upper garment (Ru) + The breasted Skirt	Song Dynasty, Gorgeous, luxurious, elegant and vivid

S12		Brand—Back to Han and Tang Dynasty Price—578RMB/set; Material: Imitation Tencel/70% Rayon 30% Polyester 100% Polyester Fiber, Huayao Crepe Size: S\M\L\XL	Cardigan + Crossover Skirt	Tang Dynasty, beautiful traditional Comfortable
S13		The brand returned to Han and Tang; Price—767RMB/ Material: Polyester 8% Lacquer 2% Nylon, Jacket Lining 100% Cotton Size: S\M\L\XL	An upper garment with a front opening +Maaminqun	Ming dynasty, Dignified, auspicious, rich, noble and beautiful
S14		Brand: Hanke Silk Road Price 1568RMB Material: 100% Polyester Size: One Size	A long upper garment with a stand collar and the letter of “y” collar	Ming Dynasty, Introverted, reserved, gentle, soothing and leisurely, peaceful and quiet, Dignified and elegant. Low-key, luxurious, rich (wedding)
S15		Brand: more than thirteen; Price—516RMB/set; Material: 100% Polyester Size: XS\S\M\L\XL	Long Shirt with Front Opening, pleated skirt	Ming Dynasty, Comfortable, simple and exquisite, fresh and elegant, elegant, quiet and practical Using ink smudging technique.
S16		Brand—Thirteen; Price—468RMB Material: 100% Polyester Size: XS\S\M\L\XL	Front Opening skirt, lower garment (or two-piece skirt)	Tang Dynasty, Elegant, gorgeous, good-looking, rich, romantic, original, innovative

S17		Brand—Thirteen; Price— 347RMB/set; Style combination: Material: 100% Polyester Size: XS\ S\ M\ L\ XL	Front Opening skirt, suspenders, one-piece skirt	Song Dynasty, Personality, originality, unique and exquisite, hazy beauty, good-looking
S18		Brand—Thirteen; Price— 797RMB/set; Material: 1000% Polyester	Light and soft upper garment with straight train tightened waist decoration.	Han Dynasty, Elegant, dignified, gorgeous, elegant, high-end, ancient charm, extravagant, original, beautiful and practical
S19		Brand—Back to Han and Tang Dynasties; Price— 458RMB/set; Material: 100% Polyester Size: XXS\ XS\ S\ M\ L\ XL	Half-sleeves, upper garment with stand collar and the letter of “y” collar, lower skirt	beautiful, delicate, simple and luxurious Sophisticated, beautiful, elegant and chic
S20		Brand—Thirteen; Price— 428RMB/set; Material: 100% Polyester	Long-sleeved dress with bow	gorgeous, original, exquisite, cute Prototype design of Princess Yaoyao, a joint model with the game King of Glory.
S21		Brand—Thirteen; Price— 219RMB/set; Material: 100% Polyester Size: XS\ S\ M\ L\ XL	Front Opening skirt, breasted gown, suspenders, pleated skirt	Song Dynasty, Youthful, auspicious, romantic, beautiful, original
S22		Brand - Hanshang Huating; Price - 600RMB/set; Material: 100% Polyester 95.6% Polyester 4.4% Elastane Size: XS\ S\ M\ L\ XL	Upper garment with stand collar and the letter of “y” collar, lower skirt	Han Dynasty, elegant, pure, beautiful, exquisite embroidery

S23		Brand—Thirteen; Price— 238RMB/set; Material: 100% Polyester Size: S\ML	An upper garment with a round neck, the Mamianqun Skirt	Improved Ming Dynasty Romantic, graceful, gentle, elegant, elegant, calm
S24		Brand—Thirteen; Price—348RMB/ Material: polyester fibre, nylon, composite fibre Size: XS\S\ML\XL	Upper garment, suspender, mid-length skirt	Simple, cute, versatile, practical, improved, innovative

Appendix A2

Questionnaire of Hanfu (Chinese Version)

汉服的用户体验调查问卷

尊敬的用户：您好！

本次调查问卷主要是为了了解用户对汉服的体验需求，以设计出满足用户体验需求的汉服。所得数据结果仅用于调研分析,不作他用,请您放心填写！您的参与是对我们的最大支持，谢谢！
备注：此问卷面向 18~28 岁年轻用户和汉服爱好者。本次问卷总共有 24 款汉服需要进行调研，如下表所示。其中样板（图 19 至 24）是融合汉服元素进行的现代创新服饰设计。问卷都是单选题，采用五级量表进行评估，从左到右表示程度在递增。本问卷提供介绍图片方便用户了解各款汉服的特色，请根据您的经验填写问卷。

1. 您的性别？[单选题] *

- ☐男
☐女

2. 您的年龄？[单选题] *

- ☐18-19 岁
☐20-21 岁
☐22-23 岁
☐24-25 岁
☐26 岁以上

3. 针对图 1-18 的汉服设计，您在重大节日或者特定场合选择的可能性？[单选题]

- 很不可能 ☐1 ☐2 ☐3 ☐4 ☐5 很可能

4. 针对图 19-24，您在日常生活中选择融合汉服元素的现代创新设计的服饰可能性？[单选题] *

- 很不可能 ☐1 ☐2 ☐3 ☐4 ☐5 很可能

5.Hanfu samples 1: 您看到这款汉服的体验（感受）是怎样的呢？

品牌—池夏；价格—228RMB/套；

款式组合：上衫+吊带+三裯裙

材料：100%聚酯纤维；尺码：S\M\L

特征：宋制、清新、淡雅、自然、唯美



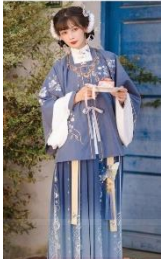
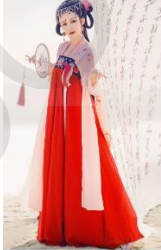
	非常不	很不	一般	很	非常
款式\外观					
漂亮的（外观：设计）	☐	☐	☐	☐	☐
可爱的（外观：设计）	☐	☐	☐	☐	☐
华丽的（外观：设计）	☐	☐	☐	☐	☐
传统的（外观：设计）	☐	☐	☐	☐	☐
独特的（外观：设计）	☐	☐	☐	☐	☐
新鲜的（外观：设计）	☐	☐	☐	☐	☐
流行的（外观：设计）	☐	☐	☐	☐	☐
创新的（外观：设计）	☐	☐	☐	☐	☐
现代的（外观：设计）	☐	☐	☐	☐	☐
优雅的（外观：设计）	☐	☐	☐	☐	☐
制作精良的（外观：制作工艺）	☐	☐	☐	☐	☐
款式\内部结构					
好看的（内部结构：设计）	☐	☐	☐	☐	☐
传统的（内部结构：设计）	☐	☐	☐	☐	☐
实用的（内部结构：设计/功能）	☐	☐	☐	☐	☐
考虑周到的（内部结构：设计/功能）	☐	☐	☐	☐	☐
原创的（内部结构：设计）	☐	☐	☐	☐	☐
有创意的（内部结构：设计）	☐	☐	☐	☐	☐
合乎需要的（内部结构：设计）	☐	☐	☐	☐	☐
方便穿用的（内部结构：设计）	☐	☐	☐	☐	☐
品牌					

有名的 (品牌:影响力)	☐	☐	☐	☐	☐
好的 (品牌:口碑)	☐	☐	☐	☐	☐
可信任的 (品牌:权威性)	☐	☐	☐	☐	☐
喜爱的 (品牌:形象)	☐	☐	☐	☐	☐
价格					
便宜的 (价格:合理性)	☐	☐	☐	☐	☐
合理的 (价格:合理性)	☐	☐	☐	☐	☐
昂贵的 (价格:合理性)	☐	☐	☐	☐	☐
服务					
体贴的 (用户: 便利性)	☐	☐	☐	☐	☐
可接受的 (用户: 便利性)	☐	☐	☐	☐	☐
周到的 (用户: 舒适性)	☐	☐	☐	☐	☐
品质/材料					
安全的 (材料:化学属性)	☐	☐	☐	☐	☐
健康的 (材料: 化学属性)	☐	☐	☐	☐	☐
生态友好的 (材料: 化学属性)	☐	☐	☐	☐	☐
耐用的 (材料: 材料属性)	☐	☐	☐	☐	☐
轻便的 (材料: 物理属性)	☐	☐	☐	☐	☐
舒适的 (材料: 物理属性)	☐	☐	☐	☐	☐

为汉服样本 2-24 重复以上问题

Table of Hanfu samples (1~24)

	Products	Information	Components	Features
S01		Brand: 池夏 Price: 228RMB/套 Material: 100%聚酯纤维 Size: S\M\L	上衫+吊带+三衿裙	宋制 清新淡雅自然唯美
S02		品牌——重回汉唐; 价格——178RMB/套; 材料: 97%聚酯纤维 3%氨纶, 尺码: S\M\L\XL	直领对襟衫+一片式褶裙 (齐胸)	唐制 灵感来自敦煌壁画灵动, 可爱
S03		品牌——重回汉唐; 价格——172RMB/套; 材料: 100%聚酯纤维 尺码: S\M\L\XL	背子+直领对襟衫+10破交寄裙	唐制, 淡雅, 娇俏、精致, 传统, 舒适
S04		品牌——钟灵记; 价格——937RMB/套; 材料: 天丝混纺\美丽纱, 扬州纱, 定制数码印花 尺码: XS\S\M\L	款式组合: 外长衫+内长衫 +飞机袖+百迭裙	古典、轻盈、浪漫清新, 优雅, 柔美、精致\现代数码印花 重工刺绣100万针, 拼布刺绣
S05		品牌——花朝记; 价格——319.8RMB/套; 材料: 100%聚酯纤维 尺码: S\M\L	款式组合: 晋制半袖襦齐腰褶裙	唐制 流光溢彩、艳丽, 大方、端庄、飘逸
S06		品牌——花朝记; 价格——318RMB/套; 材料: 100%聚酯纤维 尺码: S\M\L	款式组合: 大袖衫+吊带+齐腰裙+披帛	唐制 轻盈灵动, 淡雅温婉、婀娜、窈窕秀丽, 飘逸

S07		品牌——瞳莞；价格——2480RMB/套； 材料：定织虫草花卉纹化纤花罗100%涤纶 尺码：S\M\L\XL\XXL	款式组合：披风—竖领长衫，马面裙	明制 传统织造工艺、精美、温柔、细腻富丽
S08		池夏；价格——168RMB/套； 材料：95%聚酯纤维+5%氨纶 尺码：S\M\L\XL	款式组合：对襟衫+对襟短衫+褶裙	明制 温柔可爱、优雅大方
S09		品牌——池夏；价格——356RMB/套； 材料：100%聚酯纤维 尺码：S\M\L	款式组合：外长衫+内长衫	宋制 温柔、甜美、精致
S10		品牌——桑纛；价格——2800RMB/套； 材料：100%桑蚕丝	款式组合：罗衫子+长裙+披帛	典雅、精致、复古
S11		品牌——如梦霓裳；价格——628RMB/套； 材料：99%聚酯纤维1%其他 尺码：S\M\L\XL	款式组合：上襦+齐胸下裙+衬裙	华丽、奢华、优雅、生动
S12		品牌——重回汉唐价格——578RMB/套； 材料：仿天丝/70%人造棉30%涤纶 100%聚酯纤维、花瑶绉 尺码：S\M\L\XL	款式组合：对襟衫+交寄裙	复古、美丽、传统、舒适
S13		品牌重回汉唐；价格——767RMB/套； 材料：聚酯纤维 8%金银丝 2%尼龙，对襟袄里料100%棉，尺码：S\M\L\XL	款式组合：对襟袄+马面裙	明制 大气端庄，吉祥富贵、高贵美丽

S14		品牌：汉客丝路 价格1568RMB 材料：100%涤纶 尺码：均码	款式：竖领斜襟长衫	明制 内敛、含蓄、温柔、 舒缓闲适、安然静谧、 端庄、雅致。 低调、奢华、富贵 (婚服)
S15		Brand: 十三余; 价格—516RMB/套; 材料：100%聚酯纤维 尺码：XS\SM\L\XL	款式组合：对襟衫+对襟短衫+吊带+褶裙	舒适惬意、简单精致、清新雅致、素雅、文静、实用 利用水墨晕染的手法，
S16		品牌—十三余；价格—468RMB 材料：100%聚酯纤维 尺码：XS\SM\L\XL	款式组合：对襟衫+两片式下裙	唐制，优雅华丽好看、富、浪漫、原创、创新
S17		品牌—十三余；价格—347RMB/套；款式组合： 材料：100%聚酯纤维 尺码：XS\SM\L\XL	对襟衫+吊带+一片式下裙	宋制，个性、原创、独特精致、朦胧美感、好看的
S18		品牌—十三余；价格—797RMB/套； 材料：1000%聚酯纤维	款式组合：素纱单衣+直裾+腰饰	汉制，优雅、端庄、华丽、典雅、高级、古韵、贵气、原创、美观实用
S19		品牌—重回汉唐；价格—458RMB/套； 材料：100%聚酯纤维 尺码：XXS\XS\SM\L\XL	款式组合：半臂+上襦+下裙	美丽精致简洁贵气 精巧绝美清雅别致
S20		品牌—十三余；价格—428RMB/套； 材料：100%聚酯纤维	款式组合：长袖连衣裙+蝴蝶结	华丽、原创、精美、可爱 与游戏王者荣耀的联名款瑶瑶公主原型设计，

S21		品牌—十三余；价格—219RMB/套； 材料：100%聚酯纤维 尺码：XS\SM\XL	款式组合：对襟长衫+吊带+百迭裙	宋制 青春感、寓意好吉祥、浪漫、美好、原创
S22		品牌—汉尚华庭；价格—600RMB/套； 材料：100%聚酯纤维 95.6%聚酯纤维 4.4%氨纶 尺码：XS\SM\XL	款式：晋制套装	汉制，高贵、优雅、纯净、美轮美奂、精湛刺绣工艺
S23		品牌—十三余；价格—238RMB/套； 材料：100%聚酯纤维 尺码：S\ML	款式组合：双层短袄+马面裙	明制改良 浪漫、婉约、温柔、雅致、典雅、沉稳
S24		品牌—十三余；价格—348RMB/套； 材料：聚酯纤维、锦纶、复合纤维 尺码：XS\SM\XL	款式组合：上衣+吊带中长裙	简洁、可爱、百搭、实用、改良、创新

Appendix A3

Questionnaire of Validation (English Version)

Dear users,

Greetings! The purpose of this questionnaire is to assess the framework of Hanfu fashion. The data obtained is only used for research purposes, not for other purposes. Please rest assured to fill out the questionnaire. Your participation is our greatest support, thank you!

Note: This questionnaire is for lovers and potential consumers of Hanfu aged 18-28 years old. Please fill out the questionnaire based on your experience.

1. Gender: ☐ male ☐ female

2. Age: ☐18-20☐21-23 ☐22-23 ☐ 24-26 ☐ 26-28

No.	Value	scores
1	Do you think the beauty of Hanfu fashion is important?	☐ ☐ ☐ ☐ ☐
2	Do you think the well-made craft of Hanfu fashion is important?	☐ ☐ ☐ ☐ ☐
3	Do you think the inheriting tradition of Hanfu fashion is important?	☐ ☐ ☐ ☐ ☐
4	Do you think the gorgeous feature of Hanfu fashion is important?	☐ ☐ ☐ ☐ ☐
5	Do you think the construction of Hanfu fashion is important?	☐ ☐ ☐ ☐ ☐
6	Do you think the elegance of Hanfu fashion is important?	☐ ☐ ☐ ☐ ☐
7	Do you think the innovation of Hanfu fashion is important?	☐ ☐ ☐ ☐ ☐
8	Do you think the personality of Hanfu fashion is important?	☐ ☐ ☐ ☐ ☐
9	Do you think the sustainability of Hanfu's quality/material is important?	☐ ☐ ☐ ☐ ☐
10	Do you think the comfortableness of Hanfu quality/material is important?	☐ ☐ ☐ ☐ ☐
11	Do you think the brand influence of Hanfu is important?	☐ ☐ ☐ ☐ ☐
12	Do you think considerate service of Hanfu fashion is important?	☐ ☐ ☐ ☐ ☐
13	Do you think the High quality and inexpensive Hanfu are important?	☐ ☐ ☐ ☐ ☐
14	Do you think the Highly cost-effective Hanfu is important?	☐ ☐ ☐ ☐ ☐

Appendix A4

Questionnaire of Validation (Chinese Version)

验证汉服可持续框架的问卷

尊敬的用户们：

你们好！本次调查问卷主要是为了评估汉服的可持续框架，以设计出更加有竞争优势的汉服产品。所得数据结果仅用于调研分析，不作他用，请您放心填写！您的参与是对我们的最大支持，谢谢！

备注：此问卷是面向有 18-28 岁汉服爱好者，业余爱好者，以及潜在的消费者。

本次问卷总共有 14 个单选题(不包括问卷前面的 2 个信息单选题)，采用五级量表进行评估，从左到右表示程度在递增，依次是非常不重要，不重要，中立，重要，非常重要。请被调研者们根据您的消费经验填写问卷。

1. 您的性别：☐男 ☐女

2 您的年龄：☐18-20☐21-23 ☐22-23 ☐24-26 ☐26-28

编号	问题	得分
1	你认为汉服的美感性重要吗？	☐ ☐ ☐ ☐ ☐
2	你认为汉服精湛考究的工艺重要吗？	☐ ☐ ☐ ☐ ☐
3	你认为传承汉服传统重要吗？	☐ ☐ ☐ ☐ ☐
4	你认为汉服的华丽性重要吗？	☐ ☐ ☐ ☐ ☐
5	你认为汉服的款式造型重要吗？	☐ ☐ ☐ ☐ ☐
6	你认为汉服的优雅性重要吗？	☐ ☐ ☐ ☐ ☐
7	你认为汉服的创新性重要吗？	☐ ☐ ☐ ☐ ☐
8	你认为汉服的个性表现重要吗？	☐ ☐ ☐ ☐ ☐
9	你认为汉服的可持续性重要吗？	☐ ☐ ☐ ☐ ☐
10	你认为汉服的舒适性重要吗？	☐ ☐ ☐ ☐ ☐
11	你认为汉服的 brand 影响力重要吗？	☐ ☐ ☐ ☐ ☐
12	你认为汉服周到的服务重要吗？	☐ ☐ ☐ ☐ ☐
13	你认为物美价廉的汉服重要吗？	☐ ☐ ☐ ☐ ☐
14	你认为高性价比的汉服重要吗？	☐ ☐ ☐ ☐ ☐

Appendix B

Tables of Results

Appendix B1

Perception and Acceptance of Classic and Innovative Hanfu

The first part of the questionnaire data is collected in Appendix 5, this data can help the researcher to understand the current situation of sustainability and slow fashion in Changsha. According to the literature review found that some scholars argued the debate problem is that inheritance the classical Hanfu or developing innovation Hanfu. The survey data in the table of Appendix 5 states the current status of potential user perception and acceptance of Hanfu. For the traditional Hanfu, among 97 respondents, 34 (35.1 %) were neutral, 15 (15.5 %) were acceptable, and 8 (8.2%) were strongly acceptable. The mean was 2.71. Regarding the innovation Hanfu, 34 (35.1 %) were neutral, 25 (25.8 %) were acceptable, and 14 (14.4%) were strongly acceptable. The mean was 3.21. The results demonstrated young user Perception and acceptance of Hanfu remains low users' low desire to purchase Hanfu.

Table of Perception and acceptance of classic and innovative Hanfu

		Frequency	Per cent	Mean
Classic Hanfu	strongly unacceptable	19	19.6	
	unacceptable	21	21.6	
	neutrality	34	35.1	
	acceptable	15	15.5	
	strongly acceptable	8	8.2	
	Total	97	100.0	2.71
Innovative Hanfu	strongly unacceptable	9	9.3	
	unacceptable	15	15.5	
	neutrality	34	35.1	
	acceptable	25	25.8	
	strongly acceptable	14	14.4	
	Total	97	100.0	3.21

Appendix B2

Hanfu Consumer Appraisal Cases (2020-2024)

Category	Keyword	Frequency	Description
Overview	Year	-	2020: 75%, 2021: 78%, 2022: 82%, 2023: 85%, 2024: 88%
	Key Trends	-	Increasing positive reviews, design innovation, improved quality, and enhanced consumer experience.
Positive Reviews	Comfort	1200	Soft fabric, easy to wear, suitable for daily life
	Quality	850	High craftsmanship, durable materials
	Aesthetic	700	Elegant design, traditional and modern elements
Negative Reviews	Counterfeit	1500	Issues with original design protection
	Poor Quality	800	Fabric roughness, poor stitching
	Slow Shipping	600	Long production cycles
	High Price	400	Perceived overpricing
	Poor Service	300	Difficult returns, unresponsive customer service
Neutral Reviews	Average	Moderate	Neutral opinions on basic quality
	Okay	Moderate	Lack of standout features
	Ordinary	Moderate	Neutral stance
	Normal	Moderate	General satisfaction
Product Quality	Fabric	3000	Importance of comfort and texture
	Craftsmanship	2500	Attention to detail, embroidery quality
	Fit	2000	The desire for a modern and traditional fit
	Durability	1500	Long-lasting materials, resistance to wear and tear
Design Style	Traditional	4000	Strong preference for authentic elements
	Modern	3500	Integration of contemporary design
	Minimalist	3000	Preference for simplicity and practicality
	Luxurious	2500	Desire for opulent and detailed designs
Wearing Experience	Comfort	3000	Importance of soft and breathable fabrics
	Convenience	2500	Ease of wear and movement
	Fit	2000	Personalized and flattering designs
	Breathability	1500	Suitable for various weather conditions
Price Factors	Good Value	500	The balance between price and

			quality
	Affordable	300	Satisfaction with budget-friendly options
	Worth the Price	200	Recognition of quality and design
	Overpriced	100	Concerns about pricing relative to value
Total Appraisal cases		38450	

Appendix B3

Main Perceptual Psychological scores on Style for 24 Hanfu Samples

Samples	Kansei Words	Mean	Samples	Kansei Words	Mean
S01	Beautiful	3.75	S13	Beautiful	3.88
	Elegant	3.57		Gorgeous	3.89
	Good-looking	3.61		Traditional	3.89
S02	Beautiful	3.63	S14	Traditional	3.38
	Traditional	3.63		Particular	3.31
	Elegant	3.58		Creative	3.33
S03	Beautiful	3.64	S15	Particular	3.70
	Traditional	3.61		Good-looking	3.59
	Creative	3.66		Creative	3.59
S04	Beautiful	3.90	S16	Beautiful	3.66
	Gorgeous	3.92		cute	3.65
	Elegant	3.91		Creative	3.66
S05	Beautiful	3.73	S17	Beautiful	3.65
	Traditional	3.79		Fresh	3.62
	Particular	3.67		Original	3.60
S06	Beautiful	3.90	S18	Fresh	3.55
	Elegant	3.84		Good-looking	3.52
	Good-looking	3.76		Original	3.54
S07	Gorgeous	4.12	S19	Elegant	3.29
	Traditional	4.01		Well-made	3.35
	Well-made	4.10		Original	3.31
S08	Beautiful	3.77	S20	Cute	3.60
	Cute	3.84		Fresh	3.63
	Good-looking	3.73		Innovative	3.54
S09	Beautiful	3.88	S21	Original	3.22
	Good-looking	3.86		Creative	3.24
	Creative	3.73		Convenient	3.21
S10	Traditional	3.47	S22	Beautiful	3.55
	Well-made	3.35		Fresh	3.48
	Classic	3.34		Creative	3.51
S11	Beautiful	3.71	S23	Modern	3.48
	Cute	3.60		Original	3.44
	Good-Looking	3.60		Classic	3.44
S12	Traditional	3.37	S24	Fresh	3.51
	Classic	3.38		Cute	3.47
	Convenient	3.39		Convenient	3.49

(Source: Author's own formulation)

BIODATA OF STUDENT

Zuo Shuangxi' 45 grew up in China and graduated from Wuhan Textile University in 2002 with a bachelor's degree (Fashion Design) and Xi'an Polytechnic University with a Master's in Textile Engineering in 2010. She is currently a Ph. D. candidate for Integrated Design Studies, at the Faculty of Design and Architecture, Universiti Putra Malaysia. In addition, she has worked as a lecturer in fashion design at Hunan Institute of Engineering since August 2007 in China.

Previously, she was the Head of the Department of Fashion Design program from 2017 to 2019, School of Textile and Clothing. Her research areas of interest are Chinese clothing culture as well as women's clothing product design, and sustainable fashion design, *Kansei* in Fashion Design. She also plays the role of a design consultant at Suzhou Shanfeisiwu Dress Co., Ltd. China in 2015-2016 and she has published 16 academic research papers in local and international design and scientific journals.

She received one Teaching Achievement Award and 4 Outstanding Instructor Awards in China such as "Textile Light" Third Prize for Textile Higher Education Teaching Achievement Award from China Textile and Apparel Industry Federation, China 2019; "Excellent Instructor Award" for International Fabric Creativity Competition in 2013; "Puyuan Cup" Excellent Instructor Award in 2017; "Xurong Cup" Excellent Instructor Award in 2017; China International Fabric Creativity Competition Organization Won the "Excellent Guidance Award" in 2019. Furthermore, she received the Second

Prize Young Teachers Classroom Teaching Competition in 2010 and Won the Teaching Quality Excellence Award twice in 2011 and 2017 respectively, Hunan Institute of Engineering. Moreover, she guided students to participate in several design competitions and achieved gratifying efforts, such as the first prize in the Hunan College Student Fashion Design Competition in 2018 and the third prize in the Chinese University Textile Design Competition in 2021; the third prize in China University Textile Design Competition in 2022; the second prize of Hunan College Student Fashion Design Competition in accessories design in 2023.

In June, 2019, she was awarded the opportunity to study for PhD at Universiti Putra Malaysia in 2019 with her persistent learning ability and excellent work performance. While studying at UPM, she published two papers in Scopus-indexed journals, participated in 2 international conferences and published two conference papers. She has three times of experience submitting JCR journal papers (two times for the Journal of Cleaner and Production and one time for the Journal of Sustainability MDPI). She received a finalist for the Creative Convergence Awards 2022 for the paper '*Kansei* evaluation on Hanfu style diversities based on user perception and acceptance'. She is also a member of the Clothing Subcommittee of the Textile Major Teaching Steering Committee of Higher Education Institutions of the Ministry of Education in China from 2018-2022. She was hired as a national undergraduate thesis (design) sampling inspection expert in China from January to December 2022. She actively participates in various

research fields, specifically in sustainable fashion design, Chinese clothing culture, *Kansei* in Fashion Design, and art and design competitions.



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