



APPENDIX GA36d

LEVEL 7 ASSESSMENT SPECIFICATION

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Submission deadline:	19 December 2022	Return date of provisional marks & written feedback:	
Submission method:	All written assessments, where practical and possible, must be submitted via Turnitin unless otherwise instructed by the Lecturer. (Please DO NOT put this assessment specification into Turnitin or it will match many similarities with other students' submissions.) Alternative submission method (if applicable): Late submission of the assessment will result in a late penalty mark. Penalties for late submission: Up to one week late, maximum mark of 50%. Over one week late, 0%. Only the Extenuating Circumstances Panel may approve a change to submission dates.		
Academic honesty / referencing:	Academic honesty is required. In the main body of your submission, you must give credit to authors on whose research and ideas your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have used, cited or quoted in order to complete this assessment.		

Title: “Circular economy in textile and clothing: a quantitative assessment of consumer acceptance in Hong Kong”**1. Abstract**

In recent years there have been growing concerns about the issues arising from the current model of linear economy (“LE”) for the world, as the pace of consuming and depleting natural resources and the creation of wastes has reached at an alarming speed! The call for transition to a circular economy (“CE”) model has gained more attention from environmentalists, academia, scientists, government authorities as well as responsible business organisations. Subsequent to the enactment of the Circular Economy Promotion Law in China in 2008, the European Union has been in the forefront in planning and implementing the concept of circular economy following the publication of its first Circular Economy Action Plan in 2015 (and updated in 2020). These endeavour to close the loop from the LE of the “take-make-use-dispose” mode into the CE of “take-make-use-recycle-reuse” mode. The CE mode can be in the form of passing an existing product from an individual to another for reuse, or by way of extracting ingredients, components, materials or fibres from the unwanted clothing that can be reused or regenerated for manufacturing certain form(s) of useful products. Indeed, the transformation from a linear to a circular economy, has been recommended by the United Nations Sustainable Development Goal #12 relating to the responsible consumption and production.

In Section 3 of this report, literature review has shown that many research papers written in English language on the circular economy and sustainability have been focussing on Europe and Americas, with relatively few papers on Asia, particularly Hong Kong.

To fill the research gap, this research project is an attempt by conducting a quantitative study on the consumer acceptance of circular fashion in Hong Kong, based upon the findings from my previous qualitative research on the perspectives, attitude and motivation of key stakeholders in Hong Kong, towards the forthcoming transformation to a circular economy.

This quantitative research focuses on the textile and clothing sector, simply because this sector uses significant quantity of natural resources, causing much pollution and producing substantial volume of solid wastes upon disposal of unwanted clothing, which has been aggravated by the promotion of fast fashion.

The transition from the linear economy to a circular economy would potentially be the next big thing, other than the climate change, for the sustainable future of humankind.

If the global fashion business can be transformed successfully to the circular economy model, the world can solve multiple fundamental problems, namely: (a) reducing the speed of natural resources depletion, (b) improving substantial energy utilisation, and (c) significantly reducing wastes and pollution.

The research project will focus chiefly on consumers, although their views towards such other stakeholders as governments, producers, retailers, logistical companies, and recycling agents are also being collected and analysed.

After conducting this quantitative research, it is expected to provide better and more concrete understanding of Hong Kong consumers' acceptance and preference of the forms and channels for circular fashion. It may also provide certain updated information to government authorities, non-governmental organisations ("NGOs") and business enterprises in Hong Kong or elsewhere as references for formulating appropriate and timely policies, regulatory framework, strategies and action plans, in the road to the circular economy.

Keywords: Circular economy, circular fashion, recycling, closing the loop, textile and clothing, sustainable development goals, responsible production and consumption, consumer acceptance.

2. Introduction

2.1 Background to the research

This research is a logical next step of my previous research proposal for a qualitative study of the circular textile and clothing with respect to the perceptions, attitude and motivation of stakeholders in Hong Kong. (Lee, 2022a). Based upon the factors and parameters identified from the qualitative analysis, together with the results from similar studies in the European Union under the new Circular Economy Action Plan (European Commission (2020)), this research aims for further quantitative assessment of the consumer acceptance in Hong Kong.

2.2 Rationale for this quantitative research project

The previous qualitative research (Lee, 2022a) has revealed certain research gaps relating to the motivation and acceptance by the consumers of circular fashion services offered from the producers, retailers or recycling agents. While the actual conduct of the large-scale qualitative

investigation is yet to be approved and implemented, some preliminary observations from the mock interviews with fellow researchers reflect that consumer attitude and acceptance of reusing second-hand clothing, recycled apparels or regenerative products deriving from transforming the fibres/materials of old garments could be one of the determining factors for the success of the circular fashion business model, even though the fashion producers or separate recycling agents may have done their parts, providing product offerings for achieving circularity. Consequentially there should be quantitative research at a sufficiently representative scale for gauging consumer acceptance of such circular fashion offerings before the government authorities, business organisations or NGOs are convinced with sufficient grounds to commit substantial resources with comfort in the right direction and sector(s) for promoting circularity.

2.3 Results from the previous study

Another preliminary observation from the previous qualitative study is that it may be advisable to integrate the study with the user-generated online review method adopted by Camacho-Otero et al (2019) in the future research for obtaining quantitative data for hypothesis testing and other analyses. The call for user-generated online data collection method is particularly timely and relevant, amidst the social distancing regulations against the backdrop of the COVID-19 Pandemic. People try to minimise the need of face-to-face contact, making it rather difficult for arranging interviews in the street.

2.4 Research objective

In light of the background in section 2.1 above, the rationale explained in section 2.2 and the results reviewed from the previous study, the objective of this research is to conduct a quantitative study of the acceptance and expectation of consumers in Hong Kong towards the concept of circular fashion and the related offerings the products or services, so as to provide empirical evidence for formulating strategy, policy and action plan for the government, NGOs, or business organisations.

2.5 Why we need to go for circular economy?

The current mode of production and consumption widely practised by most people of the world can be described as a linear economy (“LE”) in which producers take the large amount of non-renewable natural resources for making products that would be thrown away by consumers after a few uses. After that, these materials are disposed of in landfills, resulting in wastes (Doppelt, 2003). The mode of production and consumption adopted would have implications on the environment and the speed of consumption of global resources

(Geissdoerfer, Savaget, Bocken and Hultink, 2017). This linear system is apparently based on a mindset, though not justifiable, that resources are available unlimited. By practising such linear economic model, producers have continuously extracted resources from the Earth without any plans for their reuse, recycling or regeneration of the natural systems from which the resources have been taken. Hence, about 80% of the raw materials have been disposed of after a single use, which creates serious adverse impacts on the environment, the economy and the society. These include depletion of natural resources, reduction of forest cover, global warming, economic damage, human health and wellbeing at risk from disasters due to climate change. Consensus has been growing among governments, academia and businesses about tackling the serious side effects endemic to linear economy with the latest push toward a circular economy model.

2.6 What is circular economy?

The circular economy model can be defined as “an industrial system that is restorative or regenerative by intention and design, using and reusing natural capital as efficiently as possible, and finding value throughout the products’ life cycles” (Ellen MacArthur Foundation, 2013). Recognising the limited supply of natural resources, a circular economy is based upon a restorative production and consumption approach that takes, makes, uses, reuses and/or recycles the materials again and again in a circular manner. This continual system of making, using and reusing of resources would close the loop of material flows and eliminate waste in circular manner (Doppelt, 2003). Although the theoretical foundation of a CE is not new and can be dated back to 1920s (Leontief, 1928, 1991), governments and academia have only recently treated a CE as the solution for a sustainable future! While there have been growing concerns on the climate change and urgent calls for eradicating the greenhouse gas (particularly carbon dioxide gas) emission since the initial signing of the Paris Agreement on Climate Change in 2015, the need for a transition from the linear economy to a circular economy would probably be the next key issue for sustainable future of the humankind.

2.7 Why fashion industry is being focussed?

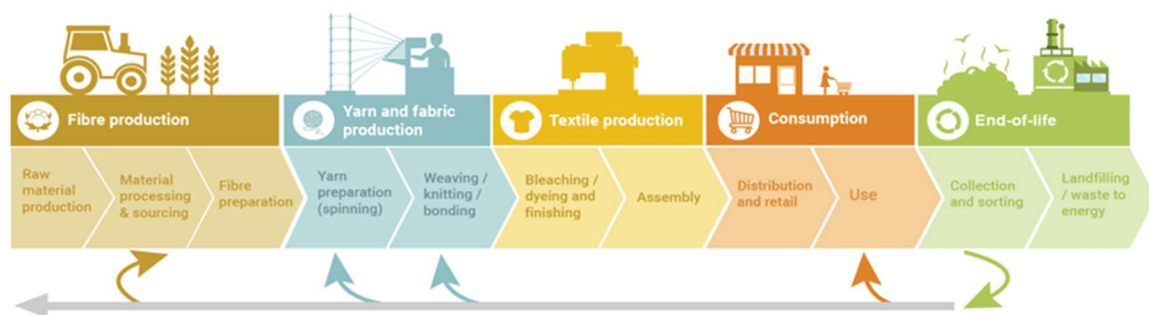
Being a global industry of USD1.9 trillion in 2019 and expected to be of USD3.3 trillion in 2030 (Statista, 2020), the fashion industry is undoubtedly a significant sector in the global economy. Unfortunately, the fashion industry is also regarded as one of the major polluting industries in the world (UN News, 2019), with less than 1% of clothing materials being recycled for the LE system. Indeed, fashion industry is the world’s second worst polluter after the oil industry (UN News, 2019) and the second largest in terms of consumer spending,

just after the food and beverage industry (Ellen MacArthur Foundation, 2013) (Ki, et al (2020a), page 2402) Hence, if the fashion industry can be transformed from the current linear economy model (especially the fast fashion practices) to the circular economy mode, the world can solve multiple issues of (a) fast depletion of natural resources, (b) improved energy utilisation, (c) significant reduction of pollution and wastes.

2.8 The current state: Linear Economy mode of textile value chain

The current state of the linear economy has been evolving since the end of the World War II and becomes part of the daily life and culture. Figure 1 shows the linear economy for the activities along the textile value chain, from the fibre production, through the yarn and fabric production, textile production, to consumption and finally to the end-of-life, mostly going either to the landfill or to the incinerator for obtaining energy from the waste.

Figure 1: Linear representation of activities along the textile value chain



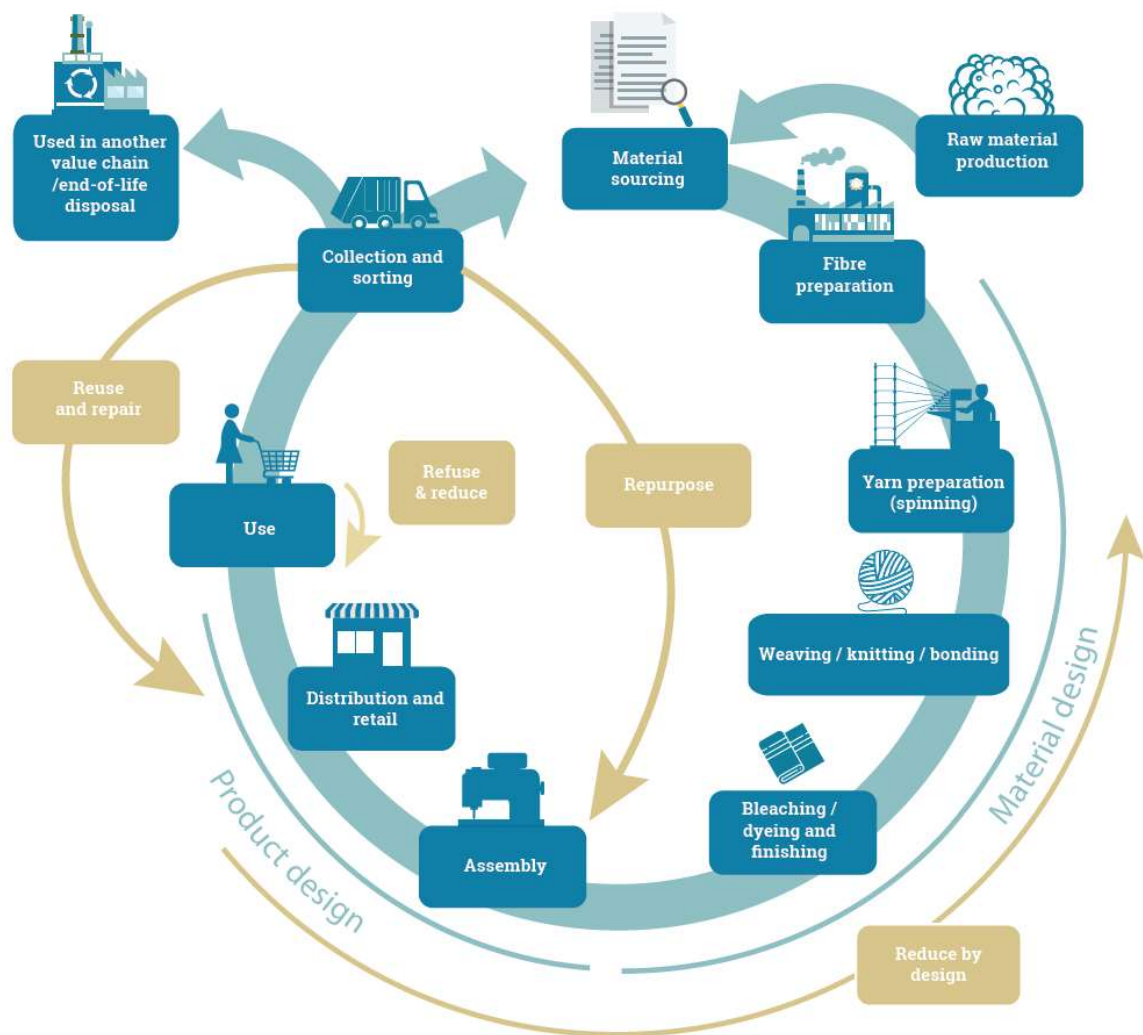
Source: United Nations Environment Programme (2020) Sustainability and Circularity in the Textile Value Chain: Global Stocktaking. page 13.

2.9 Potential new models of consumption in pursuit of circular fashion/textile

Since the resolution of Sustainable Development Goals was passed by the United Nations General Assembly in 2015, a new concept of responsible production and consumption has been postulated. This institutes the principle of promoting circularity of the production and consumption activities. Figure 2 depicts the activities taking place in a circular manner for the textile value chain. By adopting new materials or by reduction of the use of materials, the textile and clothing products either lasting longer (more durable), or can be recycled or reused easily such that these materials can be fed back to the production cycle or to another production system for producing another type of new products. This in essence closes the loop. Much innovative ideas for the pursuit of circular fashion have been evolving in recent years. Ellen MacArthur Foundation (“EMF”) (2017) has postulated certain new models,

including rental subscription, short-term rental, sales of highly durable clothes and resale. (EMF, 2017, page 76, citing the non-exhaustive illustration based on Circular Fibres Initiative research)

Figure 2: Representation of activities taking place in a circular textile value chain



Source: United Nations Environment Programme (2020) Sustainability and Circularity in the Textile Value Chain: Global Stocktaking. page 14.

3. Literature Review

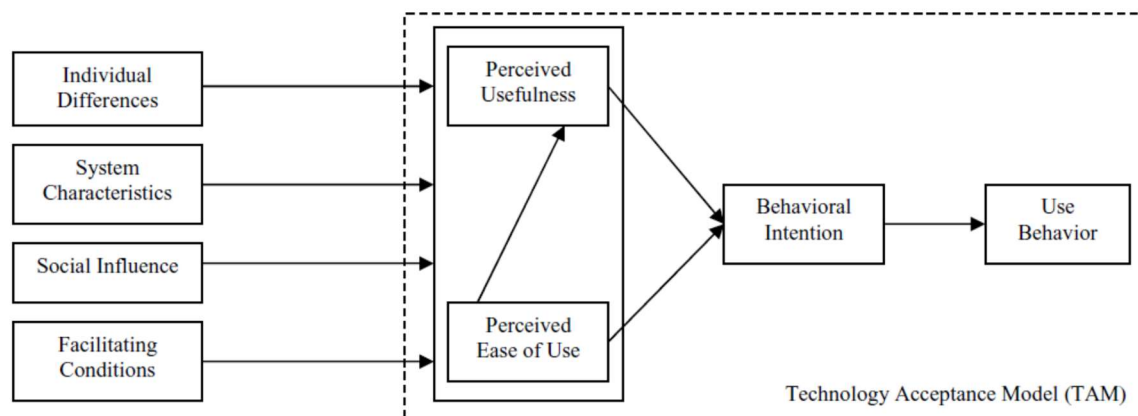
3.1 Theoretical Framework on Awareness, Interest, Desire, Acceptance and Action

In the road to achieving circularity in the new mode of production and consumption, while it is necessary to have new product/service offerings that are based upon new technology or method, it would be a sufficient condition for consumers willing to accept the new features / conditions associated with such new products or services. A review of the literature has revealed that one possible framework for people's understanding and accepting new idea or new concept of products is the Technology Acceptance Model ("TAM").

As illustrated in Figure 3 below, TAM postulates that when a person is presented with a new technology/system, whether the person actually uses ('Use Behavior') this new technology / system is driven by the person's 'Behavioral Intention'. A number of factors affecting his/her decision as to how and when to use it include (a) 'Perceived Usefulness' (PU), (i.e. the degree to which the user believes that using a particular technology/system would enhance his/her job performance) and (b) 'Perceived Ease-of-Use' (PEOU) (i.e. the degree to which such a user believes that using this new technology/system would be free from effort).

External variables, such as social influence, system characteristics, facilitating conditions, are also important to determine the attitude. Hence, according to TAM, when these factors are in place and ready, such a person will have the attitude and intention to use the technology. Such perception may be subject to change from time to time, and also be depending on age and gender (individual differences and characteristics).

Figure 3 Technology Acceptance Model: Theoretical Framework



Source: Venkatesh and Bala (2008), page 3.

Being one of the most influential extensions of the Theory of Reasoned Action ("TRA") spearheaded by Ajzen and Fishbein (1980), TAM was first postulated by Davis (1989), which was further developed by Bagozzi, Davis and Warshaw (1992). TAM replaces many of TRA's attitude measures with the two technology acceptance measures: ease of use, and usefulness. Both having strong behavioural elements, TRA and TAM assume that when someone forms an intention to act, that s/he will be free to act without limitation. However, Bagozzi, Davis and Warshaw (1992) realised that in the real world, there would be many constraints, including the limited freedom to act. Venkatesh (2000) observed that TAM is the most widely applied model of user's acceptance and usage of technology.

In addition, many other scholars, such as Adams, Nelson & Todd (1992), Henrickson, Massey & Cronan (1993), Subramanian (1994), as well as Szahna (1994) replicated Davis's original study (Davis 1989) to provide empirical evidence on the relationships that exist between usefulness, ease of use and system use.

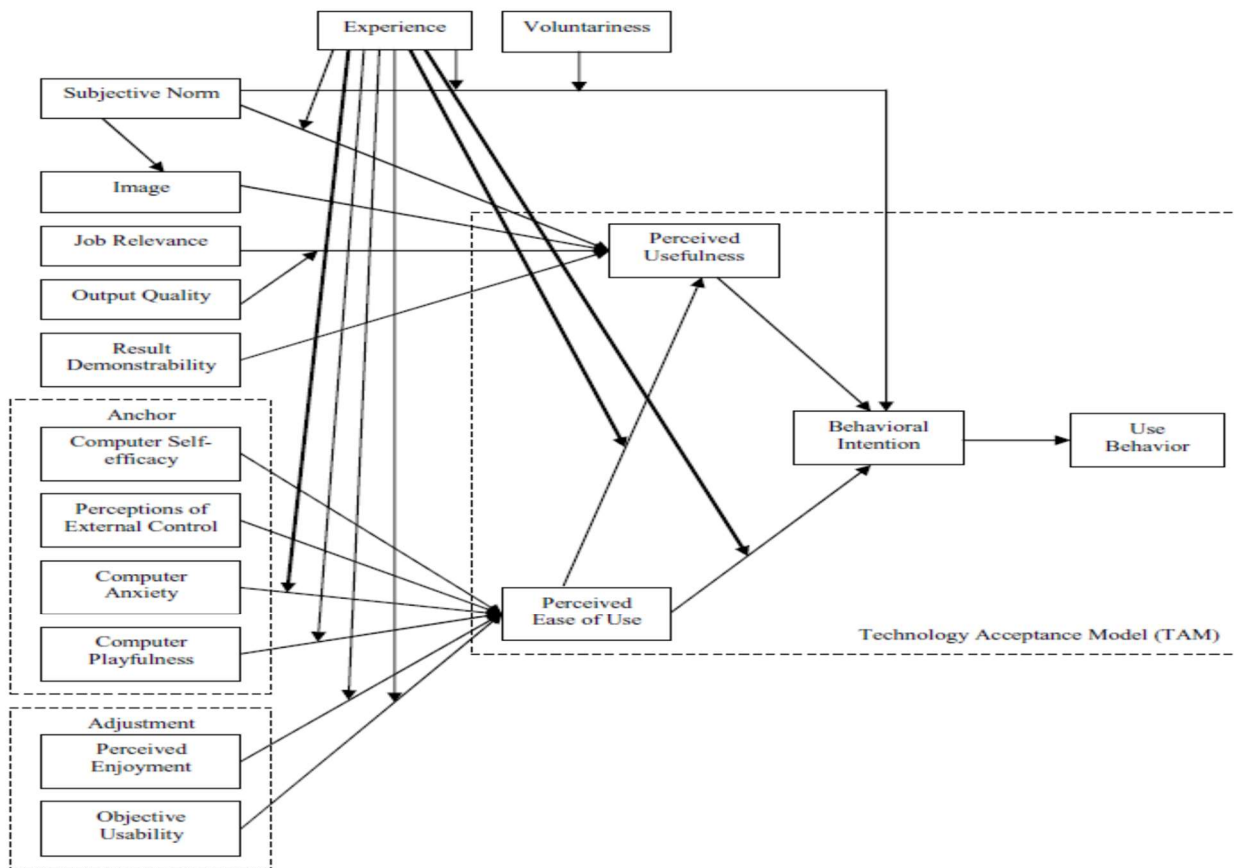
The foundation of TAM is a series of concepts that clarifies, explains and predicts people's behaviours with their beliefs, attitudes and behavioural intention. In TAM, perceived ease of use, perceived usefulness and considered general beliefs play a more vital role than salient beliefs in attitudes toward utilizing a particular technology.

Venkatesh and Davis (2000) proposed an extension of TAM, i.e. TAM2, by identifying and theorizing about the general determinants of perceived usefulness, that is subjective norm, image, job relevance, output quality, result demonstrability and perceived ease of use, and two moderators, i.e. experience and voluntariness.

In an attempt to integrate the main competing user acceptance models, Venkatesh et al (2003) formulated the Unified Theory of Acceptance and Use of Technology ("UTAUT") which was found to outperform each of the individual models with its observed adjusted R square of 60 percent. Therefore, this research project will focus on examining those components within the UTAUT theoretical framework. Indeed, Shrivastava, Jain, Kamble and Belhadi (2020) applied the UTAUT framework for investigating on the sustainability through online renting clothing for achieving circular fashion via Instagram with help of micro-celebrities. The increasing consumer awareness on the environmental impacts of the fashion industry and their willingness to pay more for sustainable clothing has forced many companies to dedicate their efforts towards achieving sustainable goals covering the entire apparel product life cycle (Nayak et al., 2019). Online second-hand clothing rental platforms (OSCRP) is an option available to the sustainability-conscious shoppers that offer clothes on rent to the consumers for a predefined period.

Venkatesh and Bala (2008) combined TAM2 (Venkatesh and Davis (2000) and the model of the determinants of perceived ease of use (Venkatesh, 2000) and developed an integrated model of technology acceptance, TAM3, as depicted in Figure 4. TAM3 puts forward that: (i) the effect of perceived ease of use on perceived usefulness will be moderated by user experience; and (ii) the determinants of perceived ease of use (i.e. computer self-efficacy, perceptions of external control, computer anxiety, computer playfulness, perceived enjoyment, and objective usability) will not have any significant effects on perceived usefulness over and above the determinants of perceived usefulness. The empirical data collected by Venkatesh and Bala (2008) supported the hypothesis that experience moderated the effect of perceived ease of use on perceived usefulness such that with increasing experience, the effect became stronger (page 14). Overall, TAM3 explained between 43% and 52% of variance in perceived ease of use across different points of measurements and models (page 18). Based upon these findings, Venkatesh and Bala (2008) recommended certain intervention measures for pre-implementation phase, i.e. initiation, organizational adoption and adaptation, and also for post-implementation phase, including user acceptance, routinization and infusion, taking in account the framework delineated by Cooper & Zmud (1990). Venkatesh and Bala (2008) recommended that interventions were desirable to ensure accurate perceptions of system characteristics and the importance of instrumental benefits of a system during pre-implementation phase (page 22). To facilitate this, user participation, management support and incentive alignment are instrumental to attaining user experience of adopting a new system or technology. Other post-implementation measures of intervention such as training, organisational support and peer support are also essential to the successful implementation of a new system. (Venkatesh and Bala (2008), pages 26-29).

Figure 4 Technology Acceptance Model 3 (TAM3): Theoretical Framework



^aThick lines indicate new relationships proposed in TAM3.

Source: Venkatesh and Bala (2008), page 8.

Similar to the case of accepting new technology, the acceptance by consumers of a new product or a product made of reused or recycled or regenerative component(s) or fabrics may be subject to scepticism or resentment due to the perception of its quality, usability, hygiene or image. The TAM provides certain useful insights about what key elements this research project should be focussed and be examined. Given its simplicity, TAM (Figure 3), instead of the more complicated TAM3 (Figure 4), is already sufficient enough for illustration for this research project.

3.2 Theoretical Framework on Moral Responsibility: Virtue versus Accountability

In the quest for the ways the fashion industry can gain more circularity, academics have been shifting their attention from the more traditional approach of identifying the supporting and hindering factors based upon the stance of fashion companies at the supply side to more lately to the perception of consumers on the demand side. Ki and Ha-Brookshire (2022) have observed that researches on the supply side have revealed relatively limited contributions as many of these studies were exploratory and skewed toward the views of the fashion companies.

Ki and Ha-Brookshire (2022) hence adopted a mixed-method approach collecting narrative data from 332 respondents, via conducting an online survey questionnaire through Dynata, a survey company that has a representative research panel in the United States (Milne et al, 2019). Basing on this study, they identified whether consumers

(demand side) attribute moral responsibility to fashion companies and to such consumers for creating a circular fashion and whether there are nuanced differences in their perceptions of consumer versus corporate moral responsibilities for a circular fashion.

The focus of the study by Ki and Ha-Brookshire (2022) was on the consumer and corporate moral responsibility as a virtue (MR-V) versus the moral responsibility as accountability (MR-A). A person with MR-A as an actor who is liable for the harmful consequences s/he causes (Dubbink & Smith, 2011). As Velasquez (1998) put it, people feel MR-A when they acknowledge that their own behaviours or actions have harmful consequences on the environment and/or society. This means that people may not only apply moral virtue in judging the company's business ethics but also believe that the company is morally accountable for its business consequences (Ki et al, 2020b). Hence, MR-V is built upon the person's moral standards and attitude (Petersson, 2013) whereas MR-A puts more attention to the person's action-outcomes and their consequential liability. Chryssides & Kaler (1993, Page 269) held companies morally responsible, a step further from the traditional view of applying the moral responsibility only for people. Ha-Brookshire (2017) attributed the corporate moral responsibility to the legal view that a company, as a legal person, has the same legal rights and responsibilities enjoyed by human being. Based upon their research, Jung and Ha-Brookshire (2017) observed that consumer checked on moral values and behaviours of fashion companies and took the sustainability credentials of these companies under serious consideration before buying from these companies. Ki & Ha-Brookshire (2022) identified the research gap that "little empirical evidence obtained from research on whether people truly believe that both consumers and companies are morally responsible for creating a circular economy in the fashion business". The research by Amed et al (2019) indicates that having an opinion about companies, consumers would apply MR-A on the premises that companies are directly accountable and blamable for any unsustainable practices and actions the companies take. To put it in the context of the reality, while the fashion business is producing more than 150 billion items of clothing every year to the market for purchases by only 7 billion potential consumers (Segran, 2019), this implies that everyone on average needs to buy 21 items in a single year ! The production of such vast quantity of clothing would lead to 10% of all human being's carbon emissions and second highest water consumption (Di Benedetto, 2017).

Out of the respondents, while 81.93% felt the need for the demand side of the fashion economy to bear moral responsibility, more people (86.75%) believed that the supply side is also morally responsible for building a CF. Hence, everyone should take part in a CF to show care in reducing their ecological footprint and for handing over a livable world for future generations.

Ki & Ha-brookshire (2022) has found that while people strongly believed that fashion companies should take MR-V as the right thing for them to do, many respondents stated that fashion companies are the ones overproducing and harming the environment, and thereby be highly accountable and morally responsible (MR-A) for building a CF (page 285-286).

Ki & Ha-Brookshire (2022) also advised that future researchers should keep track of consumers' moral perspectives of a CF. It may be also interesting to study further on whether and how consumers perceive their own moral responsibility and corporate moral responsibility for creating a CF change. (page 287).

Ki et al (2020a) highlighted the important role of consumers in returning the value of lost garments to the fashion supply chain, due to their determination as to whether a clothing product ends up in a waste bin or reuse or recycle. However, little has been understood

about whether consumers morally support the idea of a circular fashion (Ki et al., 2020b). Business ethics literature has been discussing how the fashion producers can tackle the ethical criticism of their business behaviour. (Brinkmann, 2004). Other scholars, such as Ha-Brookshire and Hodges (2009) and Joergens (2006), studied on (a) whether fashion consumers would take into consideration ethical values when buying and disposing of the garments, and (b) whether these ethics would result in actions. These studies infer that both the demand and supply facets of the fashion industry hinge on consumers' moral judgment. Accordingly, it is paramount to understand consumers' ethical views towards the circular fashion phenomenon, given that their decisions would in turn affect the path for the unwanted clothes to go for reuse/recycling or for the disposal/waste.

Honderich (2005) defined moral responsibility as the status of morally deserving blame or praise for an act or an omission performed or neglected in accordance with an agent's moral obligations. Driver (2008) pinpointed the two facets of moral responsibility: (a) the judgment about what acts are regarded as morally right or wrong (i.e. virtue) and (b) the judgment as to when a person is responsible for his/her acts (i.e. accountability). Further literature has found that individuals' innate temperament (such as conscientiousness and agreeableness) are critical in affecting the extent to which they feel morally responsible for certain things. (Song and Kim, 2018)

Dubbink and Smith (2011) postulated that the extent to which people feel a sense of moral responsibility as a virtue relies upon their personal temperament and/or the emotional or cognitive attitude developed towards certain issues. They further pointed out that in contrast, moral responsibility as accountability refers to those people who is liable for the harm caused by them. From the above, when considering company's business behaviour has serious adverse effects on the environment and society, not only the moral virtue is being applied in judging the company's business ethics, moral accountability for its business consequences is also the usual standard. (Ki et al, 2020b) Hence, moral responsibility as accountability puts more emphasis on a morally responsible agent's action-outcomes and their consequential liability. On the other hand, moral responsibility as a virtue focuses on the agent's moral standards and attitude. (Petersson, 2013)

While traditionally thought to be related to people only, moral responsibility is in recent years regarded to be applicable also for companies (Chryssides and Kaler, 1993, page 269), based on the rationale that a company has the same legal rights and responsibilities enjoyed by people. (Ha-Brookshire, 2017). Hence, believing that a company should bear the same more responsibility for protecting environment and society as humankind do, consumers look at what a company says and how it operates its business (Ki et al., 2020a). Some consumers even check on fashion companies moral values and behaviours and consider seriously on their sustainability credentials before deciding to purchase. (Jung and Ha-Brookshire, 2017).

3.3 Latest concepts of circular business models

According to Bocken et al. (2016), examples of circular business models include collaborative consumption, Product Service Systems ("PSSs") or Product-as-a Service ("PaaS"), and sharing economy. The sharing economy 'activities' falls into four categories: recirculation of goods, increased utilisation of durable assets, exchange of services and sharing of productive assets. (Camacho-Otero et al, 2019/p. 929). Separately, based on different principles of circular economy, Coscieme et al (2022) categorised the circular business models for textile into four major approaches, namely:

- (a) Access-based models – Based on renting, leasing, and sharing of garments, these models aim to lower utilisation of resource by lifting the use rate of the product inventory. E.g. renting of workwear or restaurant or hospital linen, single-occasion clothing (wedding or party dresses) and baby clothes.
- (b) Collection and resale models – focus on lengthening the useful life of textiles beyond the first user. These models include second-hand retail and collection and resale to the market for reuse and recycling.
- (c) Durability and longevity models – Focussing on extending the lifetime of garments, these models aim to cut down the need for buying new items and to allow for reuse. Quite often, such models have additional features of having design for repair, customized production for promoting emotional product attachment, and offers of repair and maintenance services.
- (d) Recycling and reuse of materials models – Emphasizing turning textile waste into raw materials to produce new textiles, these models involve reusing parts and cuts and producing recycled fibres for re-spinning and use in other products.

The circular fashion questionnaire would reflect the above ways of promoting the goals of a circular economy through reusing, repairing, redistributing, refurbishing and remanufacturing.

3.4 Textile Waste in Hong Kong

In Hong Kong, an average of 392 tonnes of textile waste goes into landfills every day!

It is not difficult to apprehend the strong need for Hong Kong to incorporate sustainable fashion habits into our lives. These habits may include investing in clothing made to last from sustainable fashion brands, shopping at vintage stores, or renting clothes in Hong Kong.

3.5 Role and Policy of the Hong Kong Government on Circular Fashion

As delivered at the second Fashion Summit in Hong Kong on 6 September 2018 by Matthew Cheung, the Chief Secretary of the Hong Kong Government, the circular economy in respect of fashion was perceived by the Government as “an innovative model that would represent a systemic shift that builds long-term resilience, generate business and economic opportunities and provide environmental and societal benefits, promoting closer collaboration at all levels – for large and small businesses, for organisations and individuals globally and locally”.

The HKSARG is committed to promoting sustainable fashion development and has all along supported eco-labels certification schemes and development of new technologies to facilitate green-making and marketing of fashion products. Cheung (2018) pointed it out that to promote sustainable fashion, Government’s efforts alone are never enough. The government needs the fashion industry players to join the government in achieving this goal. Indeed, the Fashion Summit has introduced the Fashion Future Challenge Award to provide a platform for young talents to offer creative ideas on tackling challenges faced by the fashion industry. It further added impetus to the campaign to raise understanding and awareness on the role of the Hong Kong fashion industry in leading the charge for revolutionary change, and the critical role Hong Kong can play in driving sustainability.

3.6 Current state of circular clothing in Hong Kong

3.6.1 Community Used Clothes Recycling Bank Scheme

Hong Kong Government has implemented this Scheme for facilitating the public to donate used clothes via the 18 administrative districts in support of environmental protection and charities. Partnered with non-governmental organisations, this community participation scheme collects used clothes for generating revenue for charity purposes. The current NGOs acting as Scheme Managers are: Friends of the Earth (Hong Kong), Christian Action, Salvation Army and Conservancy Association. The current term of operation lasts for three years, from 1 September 2022 to 31 August 2025. The scheme Managers are usually responsible for:

- (a) Dealing with all matters related to the Scheme, including handling enquiries and complaints;
- (b) Conducting prompt clearance of the banks to maintain environmental hygiene;
- (c) Carrying out timely repair or replacement of the banks;
- (d) Making available no less than 50% of banks to other interested organisations, apart from operating the banks themselves;
- (e) Monitoring the performances of other participating organisations and providing assistance to them where necessary;
- (f) Assuming all risks related to the banks under their management and taking out third party insurance with liability coverage of not less than HKD10 million in aggregate.

(Hong Kong SAR Government Home Affairs Department website, 2022)

3.6.2 Business enterprise fibres recycling system

Novetex opened the first textile mill in Hong Kong in over a half a century which recycles the fibres before being delivered for textile production at Novetex's plant across the border in Mainland China. The mill has installed a proprietary mechanical recycling system, known as Billie System, that takes pre-consumer textile waste in the form of excess inventory or raw material, and regular discarded textiles, and puts them through a six-step process, resulting in sanitized slivers that can be spun into yarn. Once spun into yarn, these can create entirely new, usable products, promoting a circular economy. (O'Neill, 2022)

- Novetex's facility alone can tackle only 1% of the textile waste produced in Hong Kong.
- To really have the full impact, the whole chain from design to sourcing to production to retail must embrace a mindset change in unison. Circular fashion requires creativity and innovation on the part of designers and brands, as well as a change in perspective on the part of consumers. (O'Neill, 2022)

3.6.3 Clothing Rental in Hong Kong

To be a sustainable fashionista, people in Hong Kong now have a number of clothing rental services for choice, including Wardrobista, Style Carousel, Pret-a-Dress, Hong Kong Qipao Photography Experience. Each individual shop targets different segments of customers, such as dress for wedding, cocktail party or gala, or one-time and subscription services for favourite clothes, bags, shoes and accessories from different brands, ranging from Chanel, Hermes, Zimmermann to Off-White. Rentals are usually

at a few hundred Hong Kong dollars for a period of a few days to a few weeks. Some shops offers you up to 60% of the rental fee, if you lend your clothings. Some shops provide fitting service, or home-delivery service, or photo-taking service (for Chinese dress, Qipao). (Nakagawa, 2022)

3.7 Sustainable Fashion Survey 2018: Key Takeaways

The Fashion Summit Hong Kong (2018) commissioned a survey on global perspectives towards sustainable fashion, sponsored by HSBC and supported by KPMG. The survey was carried out in Hong Kong, London, New York, Shanghai and Tokyo, with at least 1,000 people polled in each city, collected views on people's definition of "sustainable fashion", their support for it, their willingness to pay for it, and their ideas on possible measures the fashion industry should adopt to promote sustainability. According to the survey, some significant differences in attitudes among the 5 cities were observed. Respondents from Shanghai seem to be the most enthusiastic supporters of sustainable fashion. Noticeable variations between the East and the West were found, with New York and London regarding socio-economic factors as crucial to sustainability, while those cities in Asia focusing more on environmental factors. (KPMG Survey Report on Sustainable Fashion (2018), page 2).

The vast majority of the respondents (about 4/5) were concerned about environmental issues, and also that nearly two-thirds regard themselves as supportive of sustainable fashion. Across different age groups, nearly half of the younger group (aged 18-24) said they were very supportive to sustainable fashion. (KPMG Survey Report on Sustainable Fashion (2018), page 6)

Notwithstanding the concerns for the environment, vast majority of the respondents preferred the sustainable fashion charging the same price as regular fashion. Only 13% of respondents worldwide were willing to pay more while 21% of respondents would buy sustainable fashion only at cheaper price. The respondents from Hong Kong were less willing to pay a higher price with only 8% were happy to pay more, although close to 80% of respondents in Hong Kong were concerned about the environment. (KPMG Survey Report on Sustainable Fashion (2018), page 10)

For Hong Kong respondents, the top 6 factors for buying fashion were price/value, size/fit, quality, style, convenience of purchasing, and materials on which 30% of respondents said yes. In contrast, only 6% of HK respondents considered environmental friendliness important.

4. Methodology

4.1 Method of research, Data Collection and Analysis

4.1.1 Quantitative methods adopted

This quantitative research project is based upon the factors identified from my previous qualitative investigations on circular fashion (Lee, 2022a). A questionnaire is being prepared, using mainly the Likert 6-point scale, on the awareness, attitude and acceptance of Hong Kong consumers on the circular economy and offerings.

Contents of the questionnaire are adapted from the Survey of EU consumer attitudes to sustainability and supply chain transparency in the fashion industry, conducted by Fashion Revolution in August 2020 and published in December

2020. References are also made to Fashion Summit Hong Kong 2018: Sustainable Fashion Survey Report.

4.1.2 Scope and focus

To supplement the under-researched situation for Asia (5.7% only from the literature review), this quantitative research project intends to fill the gap identified by Ki et al (2020a) and Ki et al (2022), focussing on the experience, motivation and acceptance of consumers in Hong Kong, rather than other stakeholders, towards the CF product offerings.

Reasons:

(a) To fill the research gap of having little quantitative study on the awareness, attitude and acceptance of a circular economy mode for Hong Kong consumers.

(b) particularly focusing on fashion – The current literature on CE does not cover and understand much about the CE drivers and barriers for catering a specific industry. Moreover, it has been concluded that the policy maker of the government did not collect sufficient data for facilitating them to design and execute more feasible driving policies for circular fashion. (Ki et al (2020a), page 2421)

4.1.3 Research structure and approach

As explained in Section 2.1 and 2.2 above, this research project will be conducted through online platform with the use of Microsoft Forms to be circulated through email or social media such as WhatsApp. Any person ordinarily living in Hong Kong for more than 183 days in the last 12 months period, with the age ranging between 16 and 85, would be included as the in-scope submission.

The distribution of the questionnaire will not be restricted, but determination of an in-scope submission is by checking against the answer to a specific question in the questionnaire. The plan is to obtain at least 400 valid responses (sample size) which provides data sufficiently enough for statistically meaningful analysis, according to the Standard Error Formula method for determining the sample size, using confidence level of 95%, standard deviation of 0.5 and margin of error (confidence interval of +/- 5%). (Chan (2022), page 90).

To prove the concepts and obtain hands-on experience, a pilot research with peers and friends (26 responses) was conducted in December 2022. Any initial expectation found to be incorrect, any questions or statements being regarded as unproductive, boring, illogical, or missing some important points, or even misleading or likely to be causing confusion or emotion reaction, have been adjusted accordingly.

In the questionnaire, questions about certain demographical attribute data have been included, to understand the profile of respondents for further analysis and to minimise the potential bias of views from a narrow group of consumers.

Microsoft Forms, the online platform, was adopted for creating the survey and collecting data, due to its convenience, ease of use and almost instantaneous and automated analysis embedded in the Excel worksheet linked to the Microsoft Forms. The Excel worksheet also facilitates descriptive presentation of the statistics derived from the survey responses, as well as provision of raw data for further analysis using the statistical software, Jamovi, (The jamovi project, 2022)

which is a free and open-source software comparable to and compatible with SPSS. (Şahin and Aybek, 2019)

Questions would be adopted for understanding the attitude, motivation and acceptance of consumers towards clothing, shoes and accessories with reused or recycled fabric or components. Figure 6 shows a provisional draft of the Circular Fashion Hong Kong Consumer Survey 2022, which may be modified after receiving feedback from other researchers and peers on the pilot survey.

The proposed use of pilot survey is to obtain images and ideas of the experience of the simulated interviews, rather than surmise. In case of any initial expectation which is found to be incorrect, or any points of the interview guide and questions being regarded as unproductive, boring, illogical, missing some important and critical point(s), or even misleading or likely to be causing confusion or emotional reaction, the observed irregularities would be adjusted accordingly.

4.1.4 Approval and Conduct of Research

After finalisation of the research project and the questionnaire, approval is sought from the supervisors and the Research Ethics Committee of the UWTSO.

- Conduct of the survey using the finalised questionnaire
- Data collection: Based upon the user-generated online review method adopted by Camacho-Otero et al (2019).
- Intended platform: Microsoft Forms linked with Microsoft Excel Worksheet.

4.2 Research Questions

- (1) How significant are the key factors affecting Hong Kong consumers' acceptance and adoption of fashion firms' circular offerings during the consumption stage?
- (2) What are the current treatments by Hong Kong consumers of their clothing in use?
- (3) What are the drivers for Hong Kong consumers in their recent purchases of clothing?
- (4) What are the consumption patterns and level of satisfaction of Hong Kong consumers on second-hand clothing or clothing using recycled fabric or components?
- (5) What expectation of Hong Kong consumers on the roles of the government and of the fashion companies in building more circularity?

5. Results

5.1 Descriptive Statistics – Respondents Profile and other variables

A total of 26 responses were received from the pilot research which was done in December 2022. Of the 26 respondents, about 58% were women and 42% men. All being of the age of 46 or above, half of the respondents are either not working or retired. Eighty percent of them are graduates from post-secondary colleges or with bachelor degrees or above. About 73% of the respondents will spend more than HK\$500 each year on clothing.

Results

Descriptive statistics

Descriptives

	12. Your Gender	13. Your Age	14. You_Where live	15. Your Ethnic Grp	16. Your Work status	17. Your Education	5. Buy new: Budget (HK\$)
N	26	26	26	26	26	26	26

Frequencies

Frequencies of 12. Your Gender

12. Your Gender	Counts	% of Total	Cumulative %
Man	11	42.3 %	42.3 %
Woman	15	57.7 %	100.0 %

Frequencies of 13. Your Age

13. Your Age	Counts	% of Total	Cumulative %
46 - 60	15	57.7 %	57.7 %
61 - 75	10	38.5 %	96.2 %
76 and above	1	3.8 %	100.0 %

Frequencies of 14. You_Where live

14. You_Where live	Counts	% of Total	Cumulative %
Hong Kong	24	92.3 %	92.3 %
a place outside Hong Kong	2	7.7 %	100.0 %

Frequencies of 15. Your Ethnic Grp

15. Your Ethnic Grp	Counts	% of Total	Cumulative %
Chinese	25	96.2 %	96.2 %
European	1	3.8 %	100.0 %

Frequencies of 16. Your Work status

16. Your Work status	Counts	% of Total	Cumulative %
Do not work	2	7.7 %	7.7 %
Retired	11	42.3 %	50.0 %
Self-employed	4	15.4 %	65.4 %
Work full-time	8	30.8 %	96.2 %
Work part-time	1	3.8 %	100.0 %

Frequencies of 17. Your Education

17. Your Education	Counts	% of Total	Cumulative %
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Frequencies of 12. Your Gender

12. Your Gender	Counts	% of Total	Cumulative %
Bachelor degree or above	11	42.3 %	42.3 %
Post-secondary college	10	38.5 %	80.8 %
Professional qualification	3	11.5 %	92.3 %
Secondary school or less	2	7.7 %	100.0 %

Frequencies of 5. Buy new: Budget (HK\$)

5. Buy new: Budget (HK\$)	Counts	% of Total	Cumulative %
0 - 500	7	26.9 %	26.9 %
1,001 - 2,000	5	19.2 %	46.2 %
2,001 - 3,000	3	11.5 %	57.7 %
3,001 or above	2	7.7 %	65.4 %
501 - 1,000	9	34.6 %	100.0 %

References: The jamovi project (2022). *jamovi*. (Version 2.3) and R Core Team (2021).

5.2 Inferential Statistics – Hypothesis Testing and Reliability of the Instrument

5.2.1 Development of hypothesis

a) Attitude and behaviour intention

Attitude is the psychological condition of an individual towards the purchase intention of a product/service (Ajzen and Fishbein, 2005). Literature reveals that strong overall beliefs, e.g. enjoyment, liking and pleasure, lead to positive outcomes (David (1989), Taylor and Todd (1995)). In this research on the acceptance of the circular fashion business model (e.g. clothing rental, use /purchase of second-hand clothing, or purchase of a reused/recycled/regenerative clothing), the positive attitude of an individual would lead to actual purchase behaviour (Helander and Khalid (2000))

For the Unified Theory of Acceptance and Use of Technology (UTAUT), the hypothesis to be tested:

H1: Attitude positively affects the behavioural intention to adopt the circular fashion offering.

Using 1(b)_No harm_ Environ as the proxy of attitude for environmental sustainability, find its relationship with actual behaviour of buying product made with environmentally sustainability 3(c)_Act_Made_Envir.

b) Performance expectancy and behavioural intention

Performance expectancy is the degree to which an individual expects that using the new system/technology. For this research project, circular fashion will help the individual to attain gains in 'job performance' (i.e. the utility arising from using circular fashion) (Venkatesh et al., 2003). The literature review reveals that positive

performance expectancy would lead to an increase in the individual's intention to use or adapt the technology. Hence, the hypothesis for testing:

H2: Performance expectancy is positively related to behavioural intention to adopt the circular fashion offering.

Using SAT7(b)_Comfort as the proxy of performance expectancy from using circular fashion, find its relationship with intended behaviour of recycling clothing, 2(e)_Recycle clothes.

c) Effort expectancy and behavioural intention

The effort expectancy is "the degree of ease associated with the use of the existing system (or the circular fashion for this research)". (Venkatesh et al., 2003). Many consumers may adopt the circular fashion if the platform is user friendly, and convenient to use.

H3: Effort Expectancy is positively related to behavioural intention to adopt circular fashion offering.

Using 2(a)_Wear years as the proxy for Effort Expectancy, find its relationship with intended behaviour of recycling clothing, 3(b)_Act_Durability.

d) Social influence and behavioural intention

H4: Social influence is positively related to the behavioural intention to adopt circular fashion.

Using 8(a)_Sustain. Cert. as the proxy for Social Influence, find its relationship with intended behaviour of recycling clothing, 3(b)_Act_Durability.

e) Facilitating conditions and behavioural intention

Facilitating conditions (FCON) are the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the system (for this research, the circular fashion) (Venkatesh et al., 2003). Previous studies have found that facilitating conditions may not directly influence behavioural intention but affects the actual usage behaviour (Huang et al., 2012; Oliveira et al., 2014).

H5: Facilitating conditions are positively related to the actual use of circular fashion.

Using 8(d)_Srvc_R&R as the proxy for Facilitating conditions, find its relationship with intended behaviour of recycling clothing, 3(c)_Envir_Sustain.

f) Behavioural intention and actual use

The behavioural intentions could be the best predictors of actual usage of systems (i.e. circular fashion in this research)

H6: Behavioural intention is positively related to actual usage.

Using 2(e)_Recycle clothes as the proxy for intended behaviour of recycling clothing, find its relationship with actual behaviour of buying product made with environmentally sustainability, 3(c)_Act_Made_Envir.

g) Satisfaction and behavioural intention

H7: Satisfaction is positively related to behavioural intention.

Using 7(b)_R&R_Comfort as the proxy of satisfaction from using circular fashion, find its relationship with the intended behaviour of recycling clothing, 2(e)_Recycle clothes.

5.3 Findings and Discussions

a) Attitude and behaviour intention

H1: Attitude positively affects the behavioural intention to adopt the circular fashion offering.

Linear Regression

Model Fit Measures

Model	R	R ²	Overall Model Test			
			F	df1	df2	p
1	0.708	0.501	3.18	6	19	0.025

Model Coefficients - 3(c) Act_Made_Environ

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept ^a	-0.40266	1.326	-0.3036	0.765	
1(b) To Buy_No harm_Environ:					
2 – 0	0.61285	1.498	0.4092	0.687	0.43269
3 – 0	1.81074	1.292	1.4015	0.177	1.27842
4 – 0	3.46223	1.247	2.7755	0.012	2.44441
5 – 0	2.79513	1.286	2.1735	0.043	1.97342
7(c) Happy-R&R_Hygiene	0.08330	0.133	0.6268	0.538	0.12021
7(a) Happy-R&R_Quality	-0.00346	0.168	-0.0206	0.984	-0.00427

^a Represents reference level

b) Performance expectancy and behavioural intention

H2: Performance expectancy is positively related to behavioural intention to adopt the circular fashion offering.

Linear Regression

Model Fit Measures

Model	R	R ²	Overall Model Test			
			F	df1	df2	p
1	0.496	0.246	1.31	5	20	0.301

Model Coefficients - 2(e) Will_Recycle

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept ^a	4.000	0.587	6.809	< .001	
7(b) Happy-R&R_Comfort.:					
1 – 0	-3.000	1.314	-2.284	0.033	-2.479
2 – 0	-1.64e-15	1.314	-1.25e-15	1.000	2.83e-17
3 – 0	-1.250	0.831	-1.505	0.148	-1.033
4 – 0	-0.667	0.706	-0.944	0.356	-0.551
5 – 0	-0.857	0.736	-1.164	0.258	-0.708

^a Represents reference level

c) Effort expectancy and behavioural intention

H3: Effort Expectancy (2(a) Will_Wear years) is positively related to behavioural intention to adopt circular fashion offering (3(b) Act_Durability).

Linear Regression

Model Fit Measures

Model	R	R ²	Overall Model Test			
			F	df1	df2	p
1	0.524	0.275	1.51	5	20	0.230

Model Coefficients - 3(b) Act_Durability

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept ^a	1.000	1.14	0.875	0.392	
2(a) Will_Wear years:					
1 – 0	2.000	1.40	1.429	0.168	1.67
2 – 0	1.200	1.25	0.959	0.349	1.00
3 – 0	2.000	1.62	1.238	0.230	1.67
4 – 0	2.571	1.22	2.105	0.048	2.14
5 – 0	2.200	1.20	1.836	0.081	1.83

^a Represents reference level

d) Social influence and behavioural intention

H4: Social influence is positively related to the behavioural intention to adopt circular fashion.

Linear Regression

Model Fit Measures

Model	R	R ²	Overall Model Test			
			F	df1	df2	p
1	0.846	0.716	10.1	5	20	< .001

Model Coefficients - 3(b) Act_Durability

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept ^a	1.500	0.505	2.968	0.008	
8(a) Wish_Co_Sustain. Cert.:					
1 – 0	-0.500	0.652	-0.766	0.452	-0.417
2 – 0	1.700	0.598	2.843	0.010	1.417
3 – 0	1.833	0.584	3.142	0.005	1.528
4 – 0	2.667	0.584	4.570	< .001	2.222
5 – 0	1.250	0.619	2.019	0.057	1.042

^a Represents reference level

e) Facilitating conditions and behavioural intention

H5: Facilitating conditions are positively related to the actual use of circular fashion.

Linear Regression

Model Fit Measures

Model	R	R ²	Overall Model Test			
			F	df1	df2	p
1	0.564	0.318	1.87	5	20	0.146

Model Coefficients - 3(c) Act_Made_Environ

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept ^a	1.333	0.755	1.766	0.093	
8(d) Wish_Co_Srvs_Reuse_recycle:					
1 – 0	5.11e-16	1.068	4.79e-16	1.000	5.79e-16
2 – 0	1.267	0.955	1.326	0.200	0.894
3 – 0	1.167	0.925	1.262	0.222	0.824
4 – 0	2.167	0.925	2.343	0.030	1.530
5 – 0	0.333	1.068	0.312	0.758	0.235

^a Represents reference level

f) Behavioural intention and actual use

The behavioural intentions could be the best predictors of actual usage of systems (circular fashion in this research)

H6: Behavioural intention is positively related to actual usage.

Linear Regression

Model Fit Measures

Model	R	R ²	Overall Model Test			
			F	df1	df2	p
1	0.549	0.301	1.72	5	20	0.175

Model Coefficients - 3(c) Act_Made_Environ

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept ^a	3.000	1.32	2.266	0.035	
2(e) Will_Recycle:					
1 – 0	-2.000	1.62	-1.233	0.232	-1.412
2 – 0	0.500	1.62	0.308	0.761	0.353
3 – 0	-0.625	1.40	-0.445	0.661	-0.441
4 – 0	-0.273	1.38	-0.197	0.846	-0.193
5 – 0	-2.500	1.62	-1.542	0.139	-1.765

^a Represents reference level

g) Satisfaction and behavioural intention

H7: Satisfaction is positively related to behavioural intention.

Linear Regression

Model Fit Measures

Model	R	R ²	Overall Model Test			
			F	df1	df2	p
1	0.496	0.246	1.31	5	20	0.301

Model Coefficients - 2(e) Will_Recycle

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept ^a	4.000	0.587	6.809	< .001	
7(b) Happy-R&R_Comfort.:					
1 – 0	-3.000	1.314	-2.284	0.033	-2.479
2 – 0	-1.64e-15	1.314	-1.25e-15	1.000	2.83e-17
3 – 0	-1.250	0.831	-1.505	0.148	-1.033
4 – 0	-0.667	0.706	-0.944	0.356	-0.551
5 – 0	-0.857	0.736	-1.164	0.258	-0.708

^a Represents reference level

5.4 Reliability of the research model

Due to time limitation, a preliminary pilot survey was conducted with peers and friends, with 26 responses being received for preliminary analysis and evaluation for its reliability.

According to Baykul (2000), reliability refers to the extent to which the measurement tool is free of random faults. While reliability also has other definitions and meanings, the Cronbach Alpha (α) coefficient is most frequently used as an indicator of internal consistency due to its applicability and interpretability (Padilla & Divers, 2016). In addition to Cronbach's alpha, Jamovi also allows for the reporting of McDonald's Omega (ω) coefficient, which has lately been included in recent research as "composite reliability", as an indicator of reliability in the sense of internal consistency."

(Şahin, M.D. and Aybek, E.C., 2019, page 689)

From the analysis using Jamovi, the statistical software system comparable to SPSS but is open-sourced and available free, the Cronbach's Alpha coefficient has been observed as 0.905 for all variables and 0.790 for selected variables as proxies for a manageable scale, both of which are greater than 0.7 and are considered reliable. (The jamovi project (2022), R Core Team (2021))

Reliability Analysis (All variables)

Scale Reliability Statistics

	Mean	SD	Cronbach's α	McDonald's ω
scale	2.74	0.638	0.905	0.913

Source: Jamovi (2022) Version 2.3 (Appendix 2)

Reliability Analysis (Selected variables)

Scale Reliability Statistics

	Mean	SD	Cronbach's α	McDonald's ω
scale	2.81	0.695	0.790	0.799

Source: Jamovi (2022) Version 2.3 (Appendix 3)

6. Discussions

Kirchherr et al (2017) observed that the lack of consumer interest in CE and the lack of support networks for a wide range of actors would be the impediments for implementing a CE strategy and innovation. Consumer interest can be expressed in terms of the consumers' attitude, motivation and acceptance of CE offerings, such as clothing rental, sharing or selling of second-hand clothing or recycled/regenerative clothing. Support networks are the facilitating conditions and infrastructure that provide the convenient, efficient, low-cost channels for facilitating the transfer or shared use of circular fashion.

This research is intended to explore ways to encourage the consumers, in collaboration with the governments, the producers, retailers and recycling agents to make post-consumption behaviours, so that internal fashion stakeholders can reuse the returned materials again.

7. Conclusions and Limitations

Circular economy is one of the Sustainable Development Goals ("SDGs") supported by the United Nations. Pursuant to the SDG #12 for ensuring responsible production and consumption, circular economy deserves more attention at higher level of adoption in the global supply chain systems and consumption pattern in order to achieve efficiency in the utilization of finite supply of natural resources on the Planet Earth, ensure sustainability of humankind future. This research project, an logical next step to the qualitative investigation of similar topic on circular fashion, is to fill the gap in the body of knowledge about the acceptance of the circular fashion by Hong Kong consumers. The preliminary result of the pilot quantitative research has shown the general awareness and positive attitude of Hong Kong consumers towards circular fashion, although there seemed to be reservation by a rather

significant proportion of Hong Kong consumers to the use of second-hand and recycled clothing. A rather substantial proportion of the pilot survey respondents seems to reflect the unwillingness of Hong Kong people to pay a higher price for buying circular fashion. However, a majority of respondents think that the Hong Kong Government has a role to play in building the culture, regulatory framework and the system of circular fashion. Fashion companies are also expected to do more for providing circular fashion offerings.

Limitations

Although consumer acceptance is an important factor for the market dynamics, the willingness and capability (such as adoption of appropriate technology at affordable costs) of the producers, retailers and recycling agents and the regulatory framework on the standardisation of circular offerings and the incentives provided by the government (such as tax incentives) are also important. These are beyond the scope of this research and can be regarded as topics for future research studies.

Appendices

Appendix 1 Results of the Circular Fashion Hong Kong Consumer Survey 2022

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Circular Fashion HK Consumer Survey 2022 (Academic Research)

Circular Fashion HK Consumer Survey 2022 (Academic Research)

26

09:55

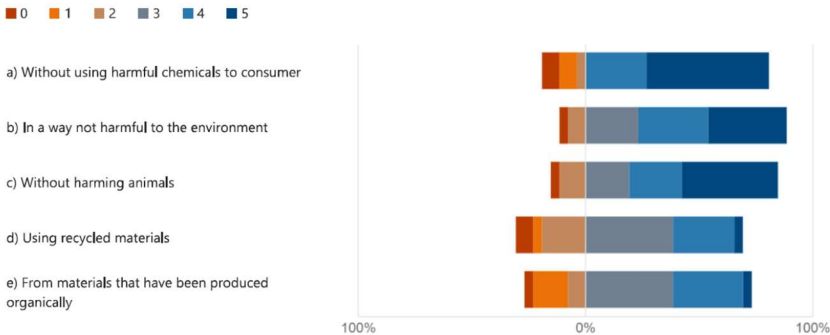
使用中

回應

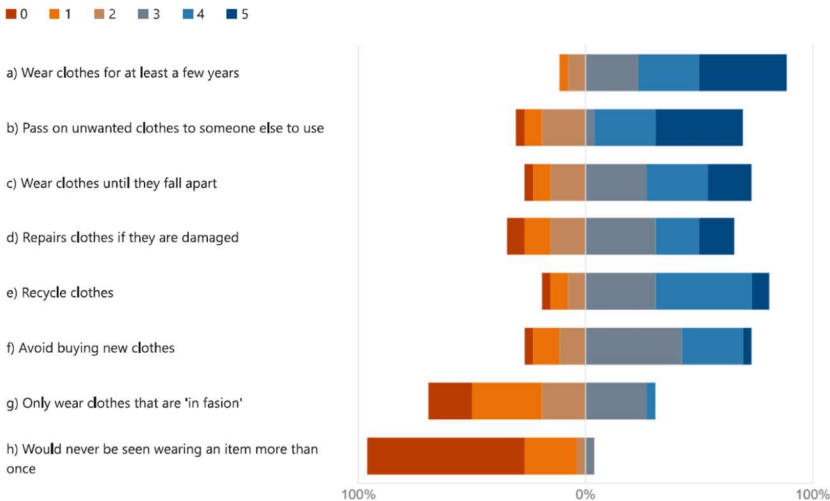
平均完成時間

狀態

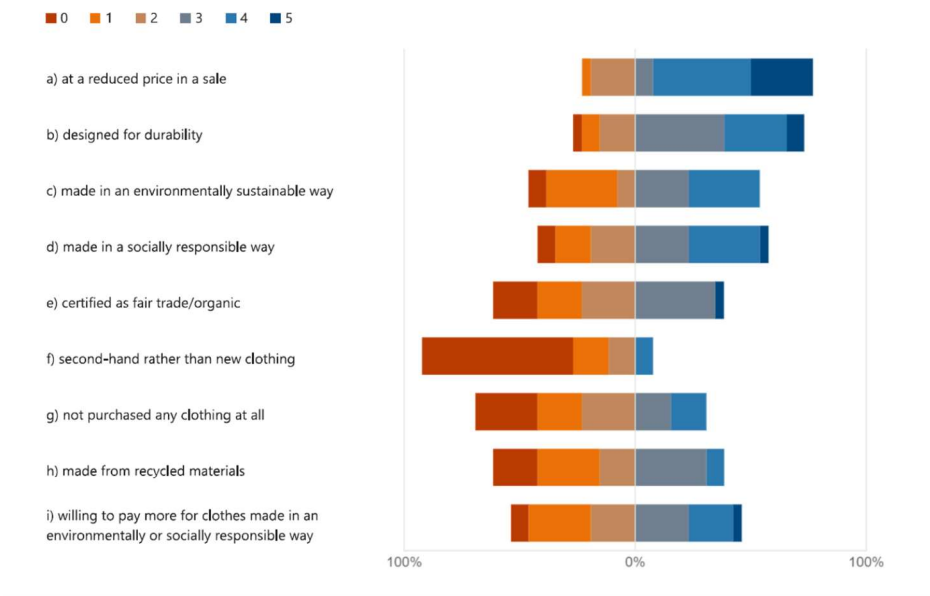
1. What factor(s) would you think important when deciding to buy clothing (hereinafter, including: clothes, shoes and accessories):



2. In your own wardrobes, how would you treat your clothing?



3. In the last 12 months, how did you try to buy clothes in any of the following ways?



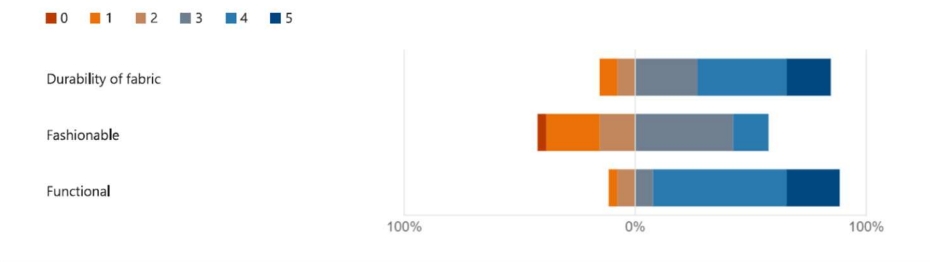
4. Purchase of new clothing: Quantity each year (pieces)



5. Purchase of new clothing: Consumption budget (HK\$)



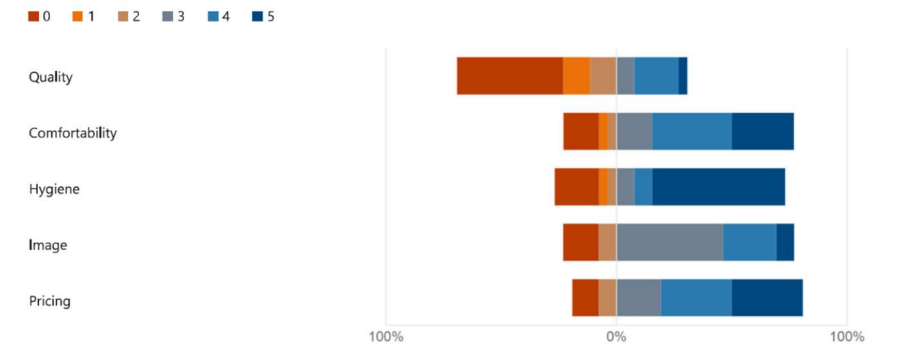
6. How important is each of the below attributes in your choice of materials?



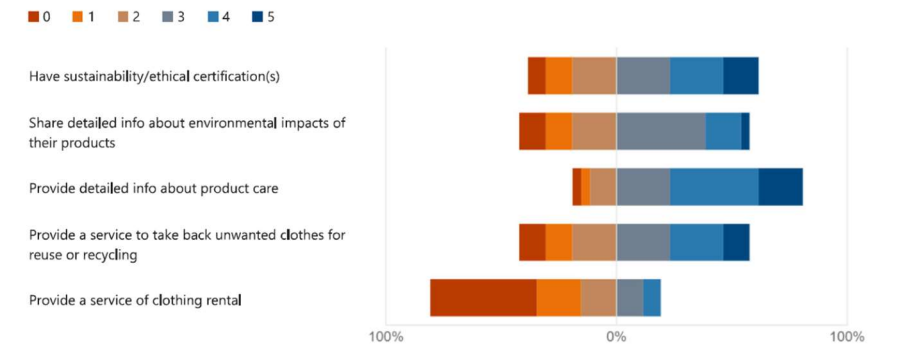
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Circular Fashion HK Consumer Survey 2022 (Academic Research)

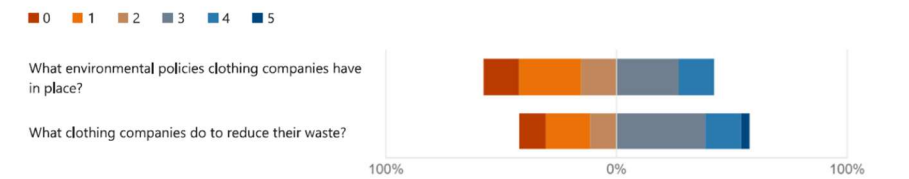
7. To what extent were you satisfied with the use of second-hand clothing or clothing using recycled fabric or components?



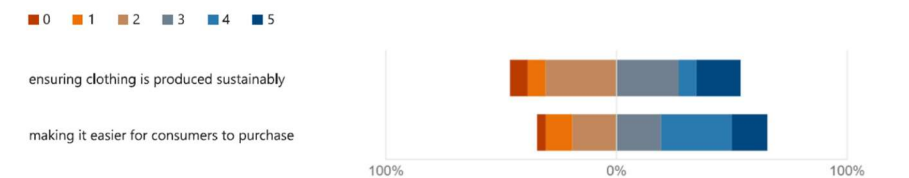
8. When choosing a clothing brand to buy from, how would you agree that it is important for brands to:



9. Are you interested in learning about any of the following?



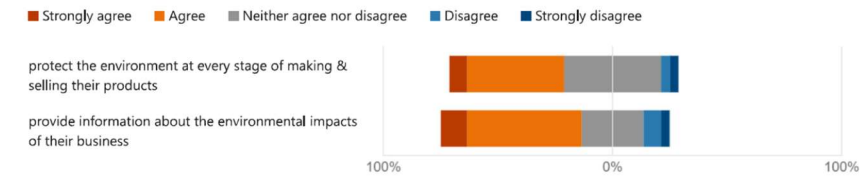
10. Would you agree that the government should have the role to play in



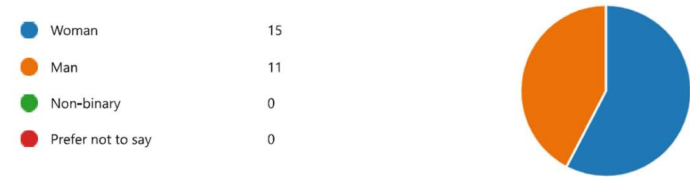
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Circular Fashion HK Consumer Survey 2022 (Academic Research)

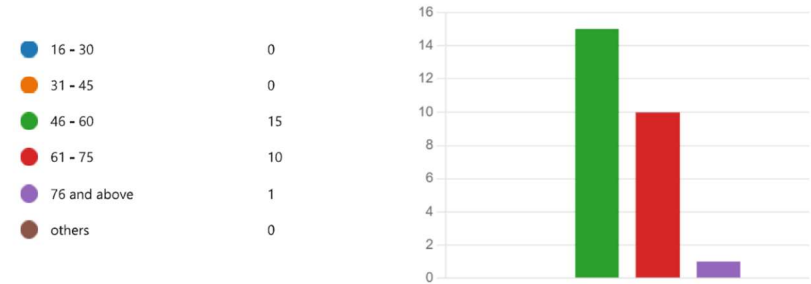
11. Would you agree that fashion brands should be required by law to



12. Your gender:



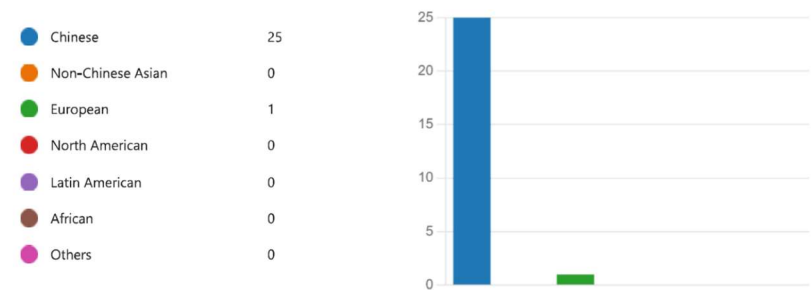
13. Your age:



14. Where you ordinarily live



15. Your ethnic group:



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Circular Fashion HK Consumer Survey 2022 (Academic Research)

16. Your employment status:

Work full-time	8
Work part-time	1
Self-employed	4
Retired	11
Do not work	2



17. Your education:

Secondary school or less	2
Post-secondary college	10
Professional qualification	3
Bachelor degree or above	11
Others	0



Appendix 2 Reliability Analysis of the Circular Fashion Hong Kong Consumer Survey 2022

Reliability Analysis (all variables)

Scale Reliability Statistics

	Mean	SD	Cronbach's α	McDonald's ω
scale	2.74	0.638	0.905	0.913

Item Reliability Statistics

	Mean	SD	Item-rest correlation	If item dropped	
				Cronbach's α	McDonald's ω
8(e) Wish_Srvc_Clothing rental	1.154	1.347	0.3781	0.903	0.911
8(d) Wish_Co_Srvc_Reuse_recycle	2.692	1.543	0.5512	0.900	0.909
8(c) Wish_Co_Info_Prod. care	3.462	1.272	0.3352	0.903	0.912
8(a) Wish_Co_Sustain. Cert.	2.885	1.505	0.6023	0.900	0.909
8(b) Wish_Co_Share info_envir. impacts	2.462	1.334	0.6676	0.899	0.907
10(b) Wish_Govt_easier to buy	3.077	1.412	0.5738	0.900	0.909
10(a) Wish_Govt_ensure prod. sustain.	2.769	1.478	0.5097	0.901	0.910
6(c) Choice_Functional	3.885	0.993	0.2893	0.904	0.913
6(b) Choice_Fashionable	2.423	1.137	0.2362	0.904	0.913
6(a) Choice_Durable	3.538	1.140	0.5015	0.901	0.910
7(e) Happy-R&R_Pricing	3.500	1.581	0.1810	0.906	0.914
7(d) Happy-R&R_Image	2.846	1.434	0.2420	0.905	0.914
7(c) Happy-R&R_Hygiene	3.538	2.044	0.2604	0.906	0.913
7(b) Happy-R&R_Comfort.	3.308	1.738	0.4449	0.902	0.911
7(a) Happy-R&R_Quality	1.538	1.749	0.2629	0.905	0.913
3(i) Act_Pay more_envir-soc	2.308	1.379	0.5665	0.900	0.909
3(h) Act_Made_recycled mat.	1.808	1.297	0.3936	0.903	0.911
3(g) Act_Not buy	1.731	1.430	0.3492	0.903	0.912
3(f) Act_Sec-hand	0.692	1.192	0.3112	0.904	0.912
3(e) Act_Certified fair	1.885	1.306	0.6633	0.899	0.907
3(d) Act_Made_Soc	2.654	1.384	0.6912	0.898	0.907
3(c) Act_Made_Environ	2.385	1.416	0.7502	0.897	0.906
3(b) Act_Durability	3.000	1.200	0.5230	0.901	0.910
3(a) Act_Px_cut_Sale	3.692	1.192	0.5278	0.901	0.910
2(h) Will_Wear once	0.423	0.758	0.2808	0.904	0.913
2(g) Will_In fashion	1.654	1.198	0.1330	0.906	0.914
2(f) Will_No buy new	2.885	1.177	0.3087	0.904	0.912

Item Reliability Statistics

	Mean	SD	Item-rest correlation	If item dropped	
				Cronbach's α	McDonald's ω
2(e) Will_Recycle	3.231	1.210	0.0270	0.907	0.915
2(d) Will_Repair	2.885	1.479	0.2673	0.905	0.913
2(c) Will_Wear last	3.231	1.366	0.4613	0.902	0.910
2(b) Will_Pass clothes	3.885	1.143	0.5039	0.901	0.910
2(a) Will_Wear years	3.577	1.554	0.2800	0.904	0.913
1(e) To Buy_Mat. organic	2.885	1.243	0.6953	0.899	0.907
1(d) To Buy_Use Recycled mat.	2.846	1.223	0.5069	0.901	0.909
1(c) To Buy_No harm_animals	3.846	1.317	0.4424	0.902	0.910
1(b) To Buy_No harm_Environ	3.808	1.234	0.3608	0.903	0.911
1(a) To Buy_No harm_chemicals	3.923	1.647	0.2513	0.905	0.913
9(a) You_know_Co. envir. policy	2.000	1.356	0.6778	0.899	0.907
9(b) You_know_Cos. do_cut waste	2.385	1.388	0.6750	0.899	0.907

Source: Jamovi (2022) Version 2.3

Appendix 3 Reliability Analysis of the Circular Fashion Hong Kong Consumer Survey 2022 (Selected variables)

Reliability Analysis (Selected variables)

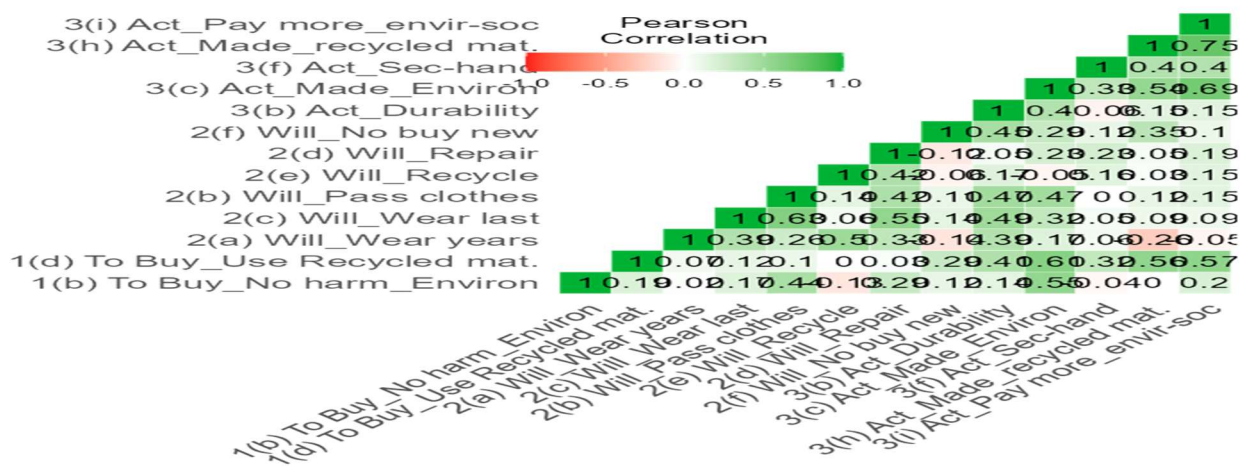
Scale Reliability Statistics

	Mean	SD	Cronbach's α	McDonald's ω
scale	2.81	0.695	0.790	0.799

Item Reliability Statistics

	Mean	SD	Item-rest correlation	If item dropped	
				Cronbach's α	McDonald's ω
1(b) To Buy_No harm_Environ	3.808	1.23	0.301	0.786	0.796
1(d) To Buy_Use Recycled mat.	2.846	1.22	0.513	0.768	0.777
2(a) Will_Wear years	3.577	1.55	0.262	0.794	0.801
2(c) Will_Wear last	3.231	1.37	0.492	0.769	0.785
2(b) Will_Pass clothes	3.885	1.14	0.531	0.767	0.781
2(e) Will_Recycle	3.231	1.21	0.225	0.792	0.805
2(d) Will_Repair	2.885	1.48	0.420	0.776	0.791
2(f) Will_No buy new	2.885	1.18	0.235	0.791	0.800
3(b) Act_Durability	3.000	1.20	0.498	0.770	0.782
3(c) Act_Made_Environ	2.385	1.42	0.735	0.743	0.751
3(f) Act_Sec-hand	0.692	1.19	0.308	0.785	0.797
3(h) Act_Made_recycled mat.	1.808	1.30	0.421	0.776	0.784
3(i) Act_Pay more_envir-soc	2.308	1.38	0.530	0.765	0.775

Correlation Heatmap



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