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The role of age to sustainable fast fashion consumption behaviour: an empirical study of Chinese consumers

Yanghui Cao

Henley Business School

University of Reading

Keywords: Consumer behaviour, Sustainable consumption, Chinese consumers, Fast-fashion, Theory of Reasoned Actions

Abstract

Previous studies implied the different behavioral intention formation of a specific object for individuals in different age groups, but few research to Chinese consumers' sustainable fast fashion behaviour were found considering the enormous amount of consumption and waste of fast fashion products in China. Meanwhile, as a fast developing country, it might be insufficient to conduct research ignoring the consequences of different education level and growing environment among different generations. Thus, to generate in-depth and heuristic Chinese consumers information, this study developed proposed theoretical framework (TORA) based on research by Fishbein and Ajzen (1975), while the validity among Chinese consumers was tested as well.

Following the TORA model, this study aims to investigate if consumers' age will moderate the relationship between attitude and intention, and the relationship between subjective norms to behavioral intention. Through structural equation modelling in AMOS, it was found that the model has a well fit to large sample of Chinese consumers,

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while the moderation effect of age was not significant in the whole sample. Further hierarchical regression analysis conducted in SPSS and Process was able to locate the moderation effect of if divide the consumers into groups by age. Which is, age is significantly and positively moderating the path subjective norms to intention in younger generation (18-25), but significantly positive moderating attitude to intention in consumers aged 26-39. Implications in marketing and to policy makers are discussed at the end of this research.

Keywords: Consumer behaviour, Sustainable consumption, Fast fashion, Chinese market, Millenials

1. Introduction[1]

1.1 Research Background

One foreseeable future for China that the fast fashion industry should not ignore involves an increase in the number and purchasing power of middle-class consumers in China (Welter and Arthur, 2015; Forson et al., 2020). As introduced in Maslow's hierarchy of needs, individuals who have satisfied life's basic needs (i.e., utilitarian needs or safety needs) will consistently seek to satisfy needs at a higher level. Maslow's hierarchy was developed and tested in the Western world and may have a different outcome if applied to Chinese consumers. For instance, Chinese consumers who have satisfied their basic needs may skip several levels and seek self-esteem directly or seek the integrated fulfilment of all levels spontaneously. Notably, recent research by Lang et al. (2018) claimed that through the increase in living standards, younger Chinese consumers have an extreme desire for uniqueness and individuality, and it drives those consumers to seek products that differentiate them from others. Considering China's

[1] Abbreviations:
Sustainable fast fashion consumption - SFFC
Theory of Reasoned Actions - TORA
Subjective Norms - SN (as in TORA model)

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growing economy and Chinese social-face culture, consumers who demand to wear more fashionable elements but are financially incapable of purchasing luxury products may choose to sate their demand by purchasing products from the fast fashion industry (Xu et al., 2014).

Meanwhile, several studies have indicated that, unlike consumers in developed countries who tend to be more receptive to old or 'vintage' items, young Chinese consumers simply dispose of outdated and unwanted fast fashion products, which creates waste and pressure on the environment (Xu et al., 2014; Zamani et al., 2017). At the same time, older Chinese people who have lived through more unstable periods in the country's history adopted a more sustainable lifestyle in their treatment of unwanted clothing (Wang & Ling, 2009). The conflicting habits of different age groups within the same culture should be researched to better understand the future trends of sustainable fast fashion consumption.

It has been proved that sustainable behaviour in China is always perceived as a habit exclusive to older people (Wang & Ling, 2009). Reusing products and purchasing things only when required was a habit promoted by the Confucian culture of previous generations (Beatrice, 2014). However, young people now have been educated against a different economic backdrop, in which China is dramatically growing and connecting to the world's newest fashion products. Although the Chinese government published several policies to implement sustainable consumption, their outcomes are arguably ineffective. The differences in Sustainable Fast Fashion Consumption (SFFC) and anthropogenic between age groups and anthropogenic harm to the environment made it necessary to research the reasons for those differences. To quote a relevant observation from Oscar Wilde's cautionary novel *The Picture of Dorian Gray:* "The tragedy of old age is not just that someone is getting old, it's that someone is still young" (Wilde, 1890). The mainstream population seems only to discover something's importance when it is out of their control, thanks to the iteration of generations. It is the author's hope, therefore, that this research will contribute to the literature by investigating these differences, explaining them and making useful recommendations for the future.

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1.2 Research Aims and Objectives

This study aims to investigate and explore the possible direct or indirect effects of age on consumers' SFFC subjective norms, as well as Chinese consumers' attitudes and behaviour intentions, by adapting the Theory of Reasoned Actions (TORA) model. The TORA model proposes that one's attitude and SN (subjective norms) towards an object or behaviour will influence one's behavioural intentions, which in turn, will affect one's behaviour directly. The TORA model has been empirically tested in Western countries on its ability to predict consumer behaviours, and this study will examine if the model remains sufficiently functional in China.

The research objectives may therefore be itemised as follows:

(1) Identify different SFFC habits in different age groups among Chinese consumers.

(2) Discuss how Chinese consumers' attitudes and SN to SFFC affect their SFFC behaviour.

(3) Demonstrate if age has a moderating effect on SFFC behaviour among Chinese consumers; and

(4) Verify if the TORA model can predict behaviours when adapted to Chinese consumers.

1.3 Research rationale

This study's focus on age-related SFFC behaviour could lead to a more in-depth understanding of Chinese consumers and predict difficulties in implementing SFFC in China. Thus, future researchers and policymakers could gain sufficient information and knowledge on implementing SFFC behaviour as a habit among the next generation to prevent future fast fashion waste.

From an academic viewpoint, there is a gap in the existing literature regarding the differences in SFFC habits among Chinese consumers of different ages, which this research will fill.

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2. Literature Review

2.1 Fast Fashion Industry in China

Some studies claim the Chinese fast fashion industry's significant growth rate indicates further developmental potential (Lang et al., 2018; Sin & Yau, 2004; Welter & Arthur, 2015). Because of its affordable prices and short product lifecycles, the industry has accelerated its development since the first decade of the 21st century (Bhardwaj & Fairhurst, 2010; Siege, 2019). Although the elimination of poverty seems decades away, the significant growth of the Chinese economy has limited opportunities for entrepreneurs to find people worrying about safety and utilitarian needs (Feng et al., 2016). According to Maslow's hierarchy of needs, consumers seek fulfilment at higher levels when their basic needs are met, so improvements in China may indirectly lead to a huge demand for fast fashion products. Furthermore, due to the large population and citizens' desire to differentiate themselves from each other, the fast fashion industry has realised enormous growth in China (Lang et al., 2018; Wei & Jung, 2017). Moreover, the rise of the middle class and its buying power has generated a significant rise in (development-fuelling) sales for the fast fashion industry because of its lower prices and diverse designs that fulfil Chinese consumers' need for uniqueness and individuality (Lang et al., 2018). It drives those consumers to continuously seek products that differentiate them from others (Lang et al., 2018).

However, despite its positive influence on the economy, the effect of an enormous amount of consumption has been criticised by various researchers due to the pressure it puts on the environment. Fast fashion has become immensely popular since its first introduction, and more than 150 billion garments are produced annually worldwide, which could generate huge pressure on the environment from their resource and production wastes (MIT, 2015). According to the literature, more than $500 billion is lost worldwide annually because of the lack of recycling efforts (Ellen MacArthur Foundation, 2017; Xu et al., 2014; Zamani et al., 2017). The IPSOS SBM (sustainability monitor) 2020 data shows that approximately 75% of consumers worldwide who

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participated in the survey agreed that fast fashion is becoming cheaper and more disposable in nature. (Cox, 2021) For example, while Primark's low prices and trendy designs fulfil consumers' fashion requirements, the throw-away culture those qualities serve creates a huge waste of resources.

The fast fashion industry demonstrates considerable waste in its materials (textiles, chemicals) and unwanted or outdated products (Xu et al., 2014). The need to balance consumption against environmental damage is critical, and the consequences of the phenomenon need to be justified beforehand in order to arrive at precise solutions (Colasante & D'Adamom, 2021).

2.2 Chinese fast fashion consumers

Research by Erlandsen and Nymoen (2008) found that age has empirical influences on individuals' saving and consumption behaviours. Waitt et al. (2016) stated that older Chinese people living in Sydney prefer walking instead of driving as they think it is more "sustainable" and healthier. Similarly, the older generations who survived the war developed great frugality in their daily consumption (Wang & Lin, 2009). However, it is claimed by multiple studies that these sustainable habits and the awareness encouraging them were not passed on to millennials. The older generation may continue to apply a sense of war-induced crisis to their daily consumption behaviours and think they ought to maximise the use of products, but younger generations raised in a remarkably different educational and economic milieu do not share concerns about consumption in extreme situations (Zanasi, 2015; Ma, 2019; Zhang, 2017; Wang et al., 2018). At the national level, the population's age distribution significantly affects average consumption styles and fashion tastes. According to Rahmiati (2016), most consumers of fast fashion are young individuals. However, while most of the buying power in China is likely to remain theirs when they grow older, their future fashion tastes may not lead them to favour the fast fashion industry anymore (Ma, 2019). As

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far as the ageing population in China is concerned, the future target consumer group for implementing SFFC needs to be redefined. In this study, consumers in China will be divided into age groups to examine the differences between them, and this study will conduct further analysis of the viability of implementing SFFC behaviour in the future among Chinese consumers.

Analysis by the IPSOS sustainability monitor indicated that consumers in Western countries made purchase decisions by relying on price and quality. The low cost of trial and error made the business model popular among Western consumers, indicating an implicitly rational and individual decision-making process (Cox, 2021). In contrast, the Chinese consumers introduced above may focus more on style and trends. Multiple researchers claim that Chinese consumers' purchase behaviours show some levels of "inertia" and impulsivity, pushed by the high information transparency provided by collectivist culture, which may be defined as irrational (Kuo et al., 2013; Fu et al., 2021). Accepting SFFC should become rational and voluntary for Chinese consumers in the early stages of implementation. Thus, the model adopted in this study should be able to predict rational behaviours.

2.3 The Theory of Reasoned Actions

According to the Theory of Reasoned Actions (TORA), individuals' intention to engage in specific consumer behaviour (i.e., act) is considered the best predictor of that particular action. Diagnosing consumers' attitudes and SN has become one of the most frequently used models for predicting consumers' behaviour (Fishbein & Ajzen, 1975; Netemeyer & Barden, 1992; Ryan, 1982). Generally, attitudes mean individuals' cognitive beliefs (positive or negative) toward a particular action and SN are the individuals' perceptions of a social normative, which is "if a behaviour is commonly accepted or against" (Choo et al., 2004).

However, previous literature claimed that this model might be limited by not being viable in all circumstances (Ryan and Bonfield, 1980; Choo & Pysarchik, 2004). For instance, Ryan and Bonfield (1980) claimed this model is designed to predict voluntary

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acts but cannot, because in reality many involve involuntary behaviour and decisions made due to external pressure. Furthermore, this model may not be capable of predicting impulsive behaviours. The original designer of this model acknowledged similar obstacles and designed the theory of planned behaviour. The modified version of the model added another factor, "Perceived behavioural control", alongside the attitude and SN, to incorporate consumers' self-control and enhance the model's predictive power (Ajzen, 1991).

Regarding the predictability of involuntary and impulsive behaviours, first, as was mentioned above and reported in previous research (Sun and Wang, 2010), the older generations of Chinese consumers habitually (i.e., voluntarily) behave sustainably. As Dunn et al. (2011) stated, habit or past behaviour can influence the strength of the "Perceived behavioural control" variable in the TPB model and cause inaccurate study outcomes, while the TORA model will not be so influenced. Second, according to Gardner and Rebar (2019), long-lasting impulsive behaviour may become habitual, but SFFC behaviour should be treated and implemented as habitual among Chinese consumers to avoid a superficial understanding of the wastage generated in materials and environmental damage. Most importantly, as is claimed by several researchers and as seen in multiple governments' policies, the author perceives the concept of SFFC behaviours to be a voluntary and rational persistent choice made by consumers to behave while considering the sustainability of their society (Yamaguchi, 2014; Buil et al., 2019; Maclnnes et al., 2022) Therefore, the TORA model should be the best framework for this study.

Despite the sufficient theoretical support for the TORA model provided by previous studies, many criticisms have been raised since its publication regarding the interdependency of SN and attitudes. Ryan and Bonfield (1975) claimed that an individual's attitudes and SN to one particular activity or product should be seen as being constituted, while the distinction between the two factors is ambiguous. This has been demonstrated by other researchers (and indeed the creators) of the theory (Fishbein and Ajzen, 1975; Netemeyer and Bearden, 1992). Due to the limit on study

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size, although it is necessary to test the interdependency between attitude and SN, there may not be adequate samples to give a detailed explanation.

In summary, according to Hofstede's cultural dimensions, Chinese culture demonstrates a significantly collectivist character, with individuals highly involved in the prompt transmission of information, resulting in more frequent SN updates. In addition, with the improving average education level and the trend of Western cultural assimilation in China through social media, younger generations have started to form judgements based on significantly different attitudes that do not rely on the experiences of their elders. As a result, TORA seems to be the best model to measure and explain SFFC behaviours among Chinese consumers.

2.4 Impact of Age to Attitude and subjective norms about SFFC in China

Attitude can be defined as "a psychological tendency to express one's degree of favour or disfavour to a specific object" (Eagly and Chaiken, 2007). Attitudes to specific objects or behaviours change over a lifetime and are connected closely to their value, as one's attitudes and motivations towards a specific object or behaviour build ingrained and stable values (England & Lee, 1974; Schade, 2016). Other studies have defined attitude as a learnt predisposition determining how individuals ought to behave (Fishbein and Ajzen, 1975; Parks & Guay, 2009). In other words, one's attitude and correlated behaviour may change over time with the accumulation of personal experiences. For example, most children are attracted to toys, but this attraction wanes as they grow up; most adults are more focused on savings and budgets as things to put their money into.

Furthermore, research by Zulman et al. (2011) indicates that senior individuals with mature value systems of their own are less likely to trust new sources. This lesser trust could manifest in diminished intent towards, and an attitude inimical to, following a new trend or changing behavioural modes. Thus, older consumers prefer to purchase from physical stores instead of purchasing online, a habit that has barely changed even

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though internet shopping is considered safe by younger consumers (McCloskey, 2006; Charkraborty et al., 2016), who are anyway more likely to change their lifestyles. However, a study by Pan and Marsh (2010) contradicted these findings, stating that Chinese elders had taken up online shopping because of its convenience and the relatively affordable prices it offered. The conflicting statements of senior individuals in different country backgrounds may provide insight into different behavioural outcomes among Chinese consumers compared to the previous studies among western consumers, even for the consumers in younger generations. It is, therefore, necessary to research whether online shopping has become more accepted by older Chinese consumers.

Assuming that recent younger consumers accept and are accustomed to unsustainable fast fashion consumption, the possibility of changing that lifestyle to a more sustainable one decreases as their age increases. To the best of the author's knowledge, there has been little evidence of research into whether SFFC behaviour should be cultivated as a habit of younger consumers, and certainly not as regards the future development and promotion of SFFC by governments and marketers.

Following the decision to treat age as both a continuous and discrete variable, it is necessary to divide participants into groups (Mondal, 2017). According to the "Identity Development Process" (Sheldon and Kasser, 2001; Erikson,1963), consumers in Western countries try to engage in different behaviours and identities in different stages of their lives, and further literature claims that during the transition from "late adolescence" (16-25 years) (Group A) through to "young adulthood" (26-39 years) (Group B) to "middle-aged" (40-59 years) (Group C), consumers' sense of identity and behaviour tends to be more stable with increasing age (Schade, 2016). This means that their behaviour is less likely to influence, or be influenced by, their peer group, and they are less concerned when presenting their identity to others. This study will adopt the three age categories mentioned in Schade's research to compare and explore the effect of age on SFFC among Chinese consumers.

In a pervasive collectivist culture such as China, SN could be seen as one of the essential bases for an individual's judgements of specific behaviour. Research by Wei and Jung

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(2017) indicates that the older generation in China prefers to share their ideas frequently with others and persuade younger individuals in their social groups via their life experiences. Furthermore, the Chinese Confucian culture teaches people to learn from elders' life experiences to avoid future failure, which means a higher chance for the convergence of ideas among Group C (Beatrice, 2014).

Because the Chinese economy grew significantly during the childhoods and adolescence of Groups A and B, their search for individuality and uniqueness of fashion might lead to lower convergence of ideas (i.e. attitudes to SFFC) despite the existence of collectivism and social media (Lang et al., 2018). Thus, this study proposes its first hypothesis for all consumer groups:

H1. An increase in consumer age will increase the convergence of attitudes to SFFC.

2.5 Attitudes and Subjective Norms as predictors to Behavioral intention: the moderating effect of consumer age

As the previous sections explain, most literature agrees that attitude and SN toward a certain behaviour will impact further behavioural intentions. Equally, much research compares the strength of attitude and SN (Arie et al., 1979; Ryan & Bonfield, 1980; Chung & Pysarchik, 2000). For instance, it was previously claimed by Lee and Green (1991) that for consumers in the USA or other countries where individualism dominates, consumers' behaviour is more affected by attitudes than by the normative influences on intention. Notably, cultural differences may lead to different decision-making paradigms in different countries. On the other hand, where collectivism dominates, several research papers on Asian countries (South Korea and China) with higher population density claim that normative influences of intention (i.e. SN) take the predominant role in determining consumer behaviour (Bai et al., 2019; James & Leonce, 2019).

Although the researcher expect that SN will be more important for predicting Chinese consumers' behaviour, the possibility remains that the attitudes of younger generations

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will more significantly affect their behaviour due to the different education they received compared to their elders. Furthermore, the rebellious attitude, which leads individuals to emotionally and impulsively make the opposite decision, even they are aware of which one is more suitable and beneficial, might cause the adolescents of Group A to make a negative decision when they receive SN from older groups (Abrahamson et al., 2002). Thus, this study proposes several further hypotheses.

For the consumers in Group A:

H2a. Attitude will positively affect Chinese consumers' intent to engage in sustainable fast fashion behaviour.

H3a. Attitude will have a stronger effect on Chinese consumers' intent to engage in sustainable fast fashion consumption behaviour than Subjective norms.

For the consumers in Groups B and C:

H2b. Subjective norms will positively affect Chinese consumers' intent to engage in sustainable fast fashion consumption behaviour.

H3b. Subjective norms will have a stronger effect on Chinese consumers' intent to engage in sustainable fast fashion consumption behaviour than attitude will.

For the consumers in all Groups:

H4. Age will have a moderating effect on the relationship between attitude, subjective norms, and SFFC intentions.

2.5 SFFC intention and SFFC behavior

As mentioned earlier, one of the most important benefits of the TORA model is its ability to predict consumer behaviour (Fishbein & Ajzen, 1975; Netemeyer & Barden, 1992; Ryan, 1982). On the one hand, consumer intention has been criticised by multiple researchers regarding its effectiveness as a mediator of consumer behaviour. Albrecht and Carpenter (1976) found a direct causal relationship between attitudes or SN and

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behaviour and questioned the existence of that mediator. On the other hand, many other researchers have claimed the validity of that mediator in their papers (Ryan and Bonfield, 1980; Choo & Pysarchik, 2004; Ho et al., 2019). The researcher, therefore, propose that the mediating role of behavioural intention can provide this model with more flexibility and error tolerance. Therefore, the author hypothesise that for the consumers in all Groups:

H5. Intention to engage in sustainable fast fashion consumption will positively affect Chinese consumers' behaviour.

2.6 Proposed Conceptual Framework

Based on previous studies, this research will adopt TORA as its main theoretical framework and the variable "age" will be examined to see if it has a moderating influence on paths (1) attitude to SFFC intention, and (2) SN to SFFC intention.

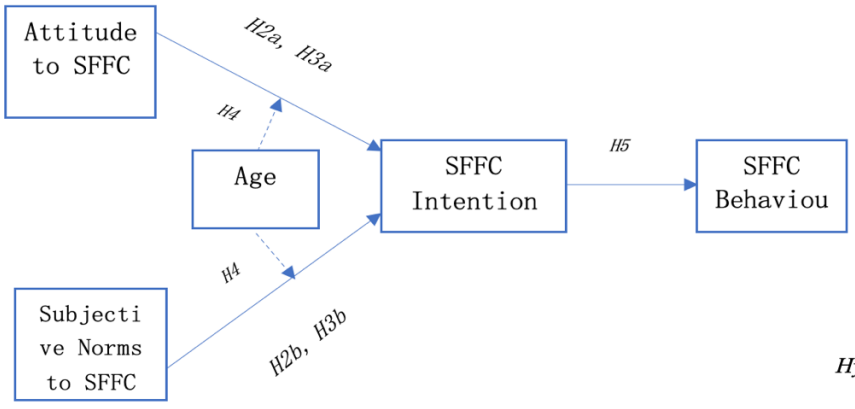

Figure 1 *Hypothesized Construct*

In this conceptual framework, any solid lines indicate proved or highly probable direct or indirect relationships. The dotted line between age and SFFC behaviour intentions means the researcher observes possible connections based on previous research found in the literature.

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3. Methodology

3.1 Determining perceived SFFC behaviours

In order to prevent insufficiently valid data being gathered in the following quantitative study, three interviews and a focus group were conducted to determine perceived SFFC behaviours among Chinese consumers to fulfil the first research objective. Two Chinese consumers from each age group voluntarily participated in a 15-minute video interview to determine three kinds of SFFC behaviours. Thus, the total sample size was six, and this study received permission from each participant to guarantee that they were unrelated and had never met to avoid data repeatability.

The interviews identified four relevant SFFC behaviours as perceived by Chinese consumers:

1. Donation of unwanted or unfit clothing
2. Repurpose the previously purchased and now unwanted clothing or fabrics (redesign or use for other utilitarian purposes)
3. Decrease purchase frequency
4. Re-wear the previously purchased and now unwanted clothes

As the older generations were raised to be more aware of frugal behaviour, the participants in Groups B and C mostly agree on the above behaviours. The consumers from Group A were less conscious of item reuse, while the third sustainable behaviour is the most popular within Group C.

3.2 Measurements

Four parallel survey measurements were developed, along with the three SFFC behaviours, from the responses of Chinese consumers in interviews and focus groups. Multiple studies previously established and tested all the measures used in the Fishbein model, and hence its reliabilities are known (Fishbein & Ajzen, 1975; Choo et al., 2002). Respondents were asked to report their attitudes, SN and behavioural intentions regarding SFFC behaviour through the 4 items previously determined through

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qualitative research by using a Five-point Likert scale. In consideration of the different knowledge distribution and English language education levels in China, the questionnaire and measurements were translated to Chinese for the convenience of the participants. Multiple institutions with qualified translation capabilities translated the questionnaires from English to Chinese and back to see if the meanings were different or misleading (Appendices B and C).

Attitude:

There were 4 items to measure attitude, and one of them was "I believe that it would be good for me to…" The items were measured on a five-point Likert scale, from 1 (Strongly disagree) to 5 (Strongly agree).

Subjective norms:

To measure the relationship of SN to SFFC behaviour, 4 items were used such as "People who are close to me think I would…". The items were measured on a five-point Likert scale, from 1 (Strongly disagree) to 5 (Strongly agree).

Behavioural intention:

4 items were used to measure participants' behavioural intention on the five-point Likert scale from1 (Strongly disagree) to 5 (Strongly agree). One of the questions was "I would repurpose (e.g., use as mops) the previously purchased and now unwanted fast-fashion products".

Behaviour:

Instead of using Likert scales, to measure participants' SFFC behaviour, this study used questions like" How many times did you…" to measure the actual behaviour in order to generate precise data.

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Additional measurements

The age of the participants was asked as an optional question due to ethical considerations; the questionnaires from participants who provided a null answer to the age question will not be analysed from any perspectives. This study did not collect extra socio-demographic information from participants due to the limit of study size. Furthermore, a filter question is included at the start of the questionnaire asking about the purchase frequency of fast fashion products every year; respondents who answer 0 will be excluded for analysis. This study also designed questions to examine different perspectives and reasons consumers behave with SFFC. For example, the size of family, residential location (urban/rural), behavioural lifestyle (refuse plastic bag uses) and purpose of behaving sustainably in fast-fashion consumption (i.e., predominantly economic or environmental motives) and other demographic questions are included to better understand the consumers' intention about behaving sustainably in fast-fashion consumption. Upon finishing designing the questionnaire, the researcher attempted to complete the questionnaire and recorded the time it took to answer it (183 seconds). Furthermore, this study set exclusion criteria for formal data collection and analysis based on initial completion of it and the pilot test.

3.3 Pilot test

Pilot test questionnaires were sent to 95 voluntary Chinese participants aged 18 and above. 92 questionnaires were completed, and 88 were valid according to the exclusion criteria, test questions and duration of answering. The reliability of the data retrieved was evaluated by Cronbach's Alpha and confirmative factor analysis using SPSS. Although a low sample size may lead to lower reliability, the lower bound of Cronbach's Alpha 0.7 were met by every construct, and several questions in different constructs that did not contribute to those constructs' reliability were deleted. The research then proceeded to confirmative factor analysis. All items had a high loading on related factors and a low cross-loading on other factors, showing appropriate convergent and discriminative validities. Based on the pilot test, exclusion criteria were

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set to ensure the questionnaires used for analysis in this study were completed honestly and thoughtfully. The briefest time to accurately complete the questionnaire among the pilot test participants was 206 seconds; any response submitted for formal data collection submitted in less than 206 seconds will be excluded.

Moreover, due to the participants are mostly ingroup members of the author, which may show a convergence in attitude and behaviour. Thus, further data collection was completely conducted through online survey portals to avoid that 'ingroup bias'.

3.4 Quantitative Data collection

To begin with, the questionnaires were sent to a sample respondent group for a pilot test to test the measurements and model. After determining the accuracy of the items and constructs, the formal data collection will be conducted using a widely used voluntary-based survey portal (Wen Juan Xing) in China. The Chinese versions of the questionnaire were distributed and digital information sheets were provided before every survey. There were no demographic or background limits for the participants; the only restriction was that participants were aged between 18 and 59.

3.5 Data analysis method

The data collected were analysed using SPSS and Amos, and credibility tests were conducted before any other data analysis was performed to ensure the reliability of scales and measurements. Afterwards, confirmatory factor analysis was conducted to guarantee that the constructs matched the TORA model.

For hypothesis *H1*, this study compared the coefficient of variation of attitude scores in each age group to reach the result (Bentler, 1989). Structural modelling and path analysis in AMOS was conducted to test *H2a*, *H2b*, *H3a* and *H5*.

To test the moderating effect of age in the relationship of attitude and SN to SPSS intention (*H4*), SPSS, Process macros and Amos were used to conduct the moderation analysis. In this moderation analysis, the independent variables are Attitudes to SFFC

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behaviour and Subjective Norms to SFFC behaviour, and the dependent variable is SFFC behavioural intentions.

Additional analysis was conducted for the whole data set, aiming to explore deeper relationships and perspectives from the Chinese consumers—for instance, the relationship between other demographic data and their effect on SFFC behaviour.

4. Findings

4.1 Manipulation Check and credibility analysis

Before answering questions that directly contribute to the constructs, the participants started the questionnaire with a question asking their approximate frequency of fast fashion product purchases every month. The participants were asked to select one from the following options: 1. Never; 2. 1-2 Times; and 3. More than three times. More than 87.7% of participants in Group A were familiar and frequent consumers (More than once), and more than 41.5% of the participants in Group A chose answer 3 (More than three times). On the other hand, the participants in Groups B and C showed less familiarity and frequency in purchasing fast fashion products, with 76.5 % of participants in Group B choosing option 1 or 2 and 47.3% in Group C choosing Never. The responses to this question showed a diverse purchasing familiarity with fast fashion products among different groups. To clarify the perspectives of participants behaving sustainably in fast fashion consumption, additional questions (five-point Likert scales) were asked, and the results are demonstrated in Tables 1 and 2. Diverse purposes were revealed as 95.6% of the participants chose SFFC for the good of the environment (i.e., scored more than three), and 97.8% focused on the savings to improve their socio-economic status (i.e., scored three and above). More interestingly, although 0.4% of the sample chose one (Strongly disagree) in Likert-scale for the environmentally-friendly-oriented, no participants chose one on the socio-economic-oriented SFFC scale, which shows a possible ‘saving’ preference for SFFC behaviours among all participants.

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Environment-oriented SFFC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	1	.4	.4	.4
	disagree	11	4.0	4.0	4.4
	Neutral	51	18.5	18.5	22.9
	Agree	141	51.3	51.3	74.2
	Strongly agree	71	25.8	25.8	100.0
	Total	275	100.0	100.0	

Table 1 – SFFC for the environment

Finance-oriented SFFC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	6	2.2	2.2	2.2
	Neutral	31	11.3	11.3	13.5
	Agree	131	47.6	47.6	61.1
	Strongly Agree	107	38.9	38.9	100.0
	Total	275	100.0	100.0	

Table 2 – SFFC for socio-economic status

Regarding the in-group differences between different groups, for both questions, the participants from Group B scored the lowest mean (Table 1: Environment focused: 3.97; Table 2: socio-economic status focused: 4.16). Furthermore, the findings agree with the research by Erlandsen and Nymoen (2008), in that the participants in Group C scored the highest among all groups in focusing on socio-economic status in fast fashion purchasing while Group A paid the most attention to environmental protection in fast fashion purchasing.

Cronbach's Alpha coefficients were calculated to examine the reliability of the scales, and the results showed an appropriate but not perfect level of reliability (Attitude α = 0.79; Subjective Norms α = 0.79; Behavioural intention α = 0.82; Behaviour α = 0.80). The researcher investigated the possibility of deleting items to improve overall construct reliability through SPSS 'Cronbach's Alpha if item deleted' function; however, only one question showed a low contribution to the construct 'attitude' and

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deleting it neither improved the overall reliability for a considerable amount nor stands enough theoretical explanations.

4.2 Descriptive analysis

Among the 275 valid responses, the three age groups as divided previously roughly equal percentages of the whole sample, with the largest group consisting of 98 participants from Group B. Table 3, below, demonstrates the frequencies of each age group. There were 98 responses from Group A (M_{age} = 22.24, SD = 2.07) and 97 responses from Group B (M_{age} = 29.31, SD = 3.15). The research received the lowest number of responses (80) from the Middle-Aged group (M_{age} = 44.83, SD = 3.88), as the online questionnaire format may require sufficient technical knowledge to access online sources. Cumulatively, there were 275 responses.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Late Adolescence 18-25	98	35.6	35.6	35.6
	Young Adulthood 26-39	97	35.3	35.3	70.9
	Middle-Aged 40-59	80	29.1	29.1	100.0
	Total	275	100.0	100.0	

Table 3 – Age Group Distribution

There were two questions to verify the preferred SFFC behaviour, and the response indicates a trait in which participants preferred not to donate their purchased but not needed fast fashion products. Instead, the most favoured SFFC behaviour is repurposing, while the least favoured SFFC behaviour is donation. The details are listed in Table 4.

	N	Minimum	Maximum	Mean	Std. Deviation
Repurposing Vs Re-wear	275	1	5	3.80	.945
Reutilizing Vs Donate	275	1	5	3.58	.976
Valid N (listwise)	275				

Table 4 – Preferred SFFC Behaviour

Most participants perceived their residential area as urban and developed, with only a minority of the responses reflecting lower living standards. The concentrated responses

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may cause the results to partially reflect the reality of urban Chinese consumers as most developed cities published strict environmental protection regulations (Wang & Shen, 2016). Results for both tests are shown in Tables 5 and 6, below.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developed Cities	200	72.7	72.7	72.7
	Less Developed Cities	75	27.3	27.3	100.0
	Total	275	100.0	100.0	

Table 5 – Geographic distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urban	245	89.1	89.1	89.1
	Rural	30	10.9	10.9	100.0
	Total	275	100.0	100.0	

Table 6 – Urban/Rural distribution

Participants' preferred purchasing channels (online/in-store) were analysed. In light of the previously-identified geographical distribution of participants, it is worth noting that consumers prefer to purchase fast fashion products online rather than in-store. Given the more convenient location for consumers to visit fast fashion stores in developed cities, the underlying reason could be that individuals' daily work agendas in those cities overlap the stores' opening times. The details are shown in Table 7.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Purchase Online	196	71.3	71.3	71.3
	In-Store purchase	79	28.7	28.7	100.0
	Total	275	100.0	100.0	

Table 7 – Purchase Channel

In addition, separate analyses on the purchasing channel preferences were conducted. For Group A, 64.3% of the participants preferred shopping online; 79.4% of Group B preferred online shopping; and 56% of Group C preferred online shopping. These results did not support the findings of McCloskey (2006) and Charkraborty et al. (2016),

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whose studies suggested that elder generations may prefer to purchase from physical stores.

Habitually, 73.1% of participants chose to take free plastic bags from fast fashion stores whenever they purchased products, demonstrating a saving-oriented but environmentally unsustainable habit, as shown in Table 8 below.

Plastic bag use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Take free plastic bags	201	73.1	73.1	73.1
	Refuse free plastic bags	74	26.9	26.9	100.0
	Total	275	100.0	100.0	

Table 8 – Acceptance of free plastic bags

This habit shows different sustainable choices among groups. For example, the participants from Group A show the highest probability of refusing the free plastic bags (69.4% acceptance rate), while most of the participants in Group C are willing to accept the free plastic bag (81.3% acceptance rate). From another point of view, although some of the younger generations are gradually adapting to a sustainable lifestyle, most late adolescent participants show a lack of sustainability awareness. Meanwhile, it can also be seen that the voices within Group C have higher convergence than younger groups, which this study will further test to see if an increase in age will lead to a convergent attitude to SFFC. More basic validation for descriptive analysis can be found in Appendix A and B.

4.3 Age increases and convergence of Attitude to SFFC

H1 hypothesised that an increase in participants' age would lead to increased convergence of Attitude towards SFFC. This study adopted a one-way test of variance to indicate possible trends within the mean scores of attitude items among different age groups. Among the three pre-determined age groups, an increase in the age of participants led to increasing mean and standard deviation for attitude scores. This

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result indicates that the older generation in China has a divergent and better attitude toward SFFC behaviour, while the younger generation holds a more convergent perspective. Thus, *H1* is rejected as the results showed an opposite trend of data distribution. The results are demonstrated in table 9.

	N	Mean	Std. Deviation	Std. Error
Late Adolescence 18-25	98	2.61	.845	.085
Young Adulthood 26-39	97	2.63	.972	.099
Middle-Aged 40-59	80	2.76	1.070	.120
Total	275	2.66	.958	.058

Table 9 – Standard deviation of attitude

4.4 Structure equation modelling

In order to test hypotheses *H2a*, *H2b*, *H3a*, *H3b* and *H5*, structure equation modelling was adapted using Amos to numerically investigate the correlations among independent variables and determine their effectiveness on dependent variables. In addition, to investigate the moderating effect of age on paths (SN to Intention, and Attitude to Intention), this study conducted moderation analysis with two procedures.

4.4.1 Confirmatory factor analysis

Confirmatory factor analysis was conducted prior to further tests of hypotheses to verify that the constructs' structure matched the previous model. Results of the confirmatory fact analyses for each age group indicate that the model fits the data well. Confirmatory factor analysis on the reliability of constructs was conducted through SPSS, and the suggested lowest factor loading of 0.7 for items in each component was achieved (Hair et al., 2006). Table 10 shows the standardised factor analysis results, and any loadings of less than 0.5 were excluded. The items were displayed in the table using the numbers 1, 2, 3 and 4, representing four items for each factor.

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	Component			
	1	2	3	4
Attitude 1			.760	
Attitude 2			.739	
Attitude 3			.773	
Attitude 4			.763	
SN 1				.761
SN 2				.753
SN 3				.815
SN 4				.787
Intention 1	.731			
Intention 2	.784			
Intention 3	.801			
Intention 4	.785			
Behavior 1		.743		
Behavior 2		.735		
Behavior 3		.723		
Behavioe 4		.812		

Table 10 – Factor loading

The results of the model fit test through SEM are demonstrated below in table 11. According to Hu and Bentler (1999), the x^2/ df index is the most traditional measure of evaluating model fit. An index below 2 demonstrates a perfect fit, while any figure between 2 and 5 shows a good fit of the model to the data. However, considering the small sample size limitation, this study examined additional RMSEA and CFI indexes to test the model fit. All of the CFI indexes met the criteria for good model fit (CFI>0.80), and the RMSEA indexes were close to the suggested figure (RMSEA<0.060) but in an appropriate range (Hu & Bentler, 1999). This study then explored each group more deeply and tested the relationships between constructs.

	CMIN/df	CFI	RMSEA
Group A	2.844	0.892	0.057
Group B	2.298	0.904	0.051
Group C	2.982	0.866	0.068

Table 11 – Goodness-of-fit

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Composite reliability, Convergent Validity and Discriminant Validity was calculated using stats tool package (Gaskin, 2016), CR value were noted to be higher than the suggested value of 0.6 and AVE reached the required level of 0.5(Good convergent validity). Additionally, the square roots of AVE were all higher than the interconstruct correlations which signals a good discriminant validity (Hair et al., 2020).

4.4.2 SEM: Group A

As presented in Fig.2, the structure model shows relationships between the latent variables, measurements, and standardized regression weights. In addition, the standarzied parameters of the constructs are displayed in Table 12.

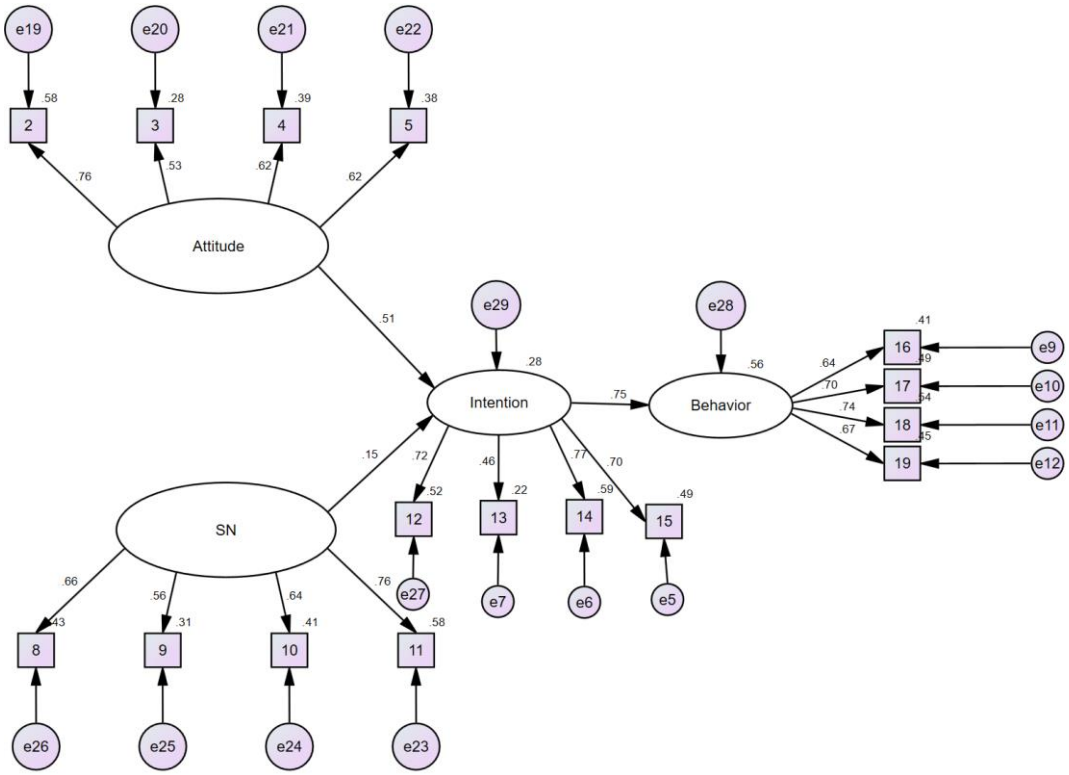

Figure 2- Group A Structure model

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Path	Standardized Coefficients (β)	p-value
Attitude→ Intention	0.51	< 0.01**
Subjective Norms → Intention	0.15	0.284
Intention→ Behavior	0.75	< 0.001***

*: p<0.05
**: p<0.01
***: p<0.001

Table 12 – Group A Estimated Parameters(Standardized)

As can be seen, the path of subjective norms to intention was insignificant for Group A, $\beta = 0.15$, $p = 0.284$. Furthermore, Attitude is significantly and positively related to SFFC intention with $\beta = 0.51$, $p < 0.01$, which has a greater effect on SFFC intention than SN (β: $0.51>0.15$). Thus, *H2a* and *H3a* are supported as the standardized parameter (coefficient) shows that Attitude has a stronger impact on SFFC intention than SN does. Moreover, the relationship between SFFC intention and behaviour is also significant and positive ($\beta = 0.75$, $p < 0.001$).

4.4.3 SEM: Group B

Below, Fig.3 and Table 13 demonstrate the Group B structural model and standardized regression weights calculated by Amos. One can see that all independent origin variables publicised in the TORA model had a significantly positive relationship with the dependent variables.

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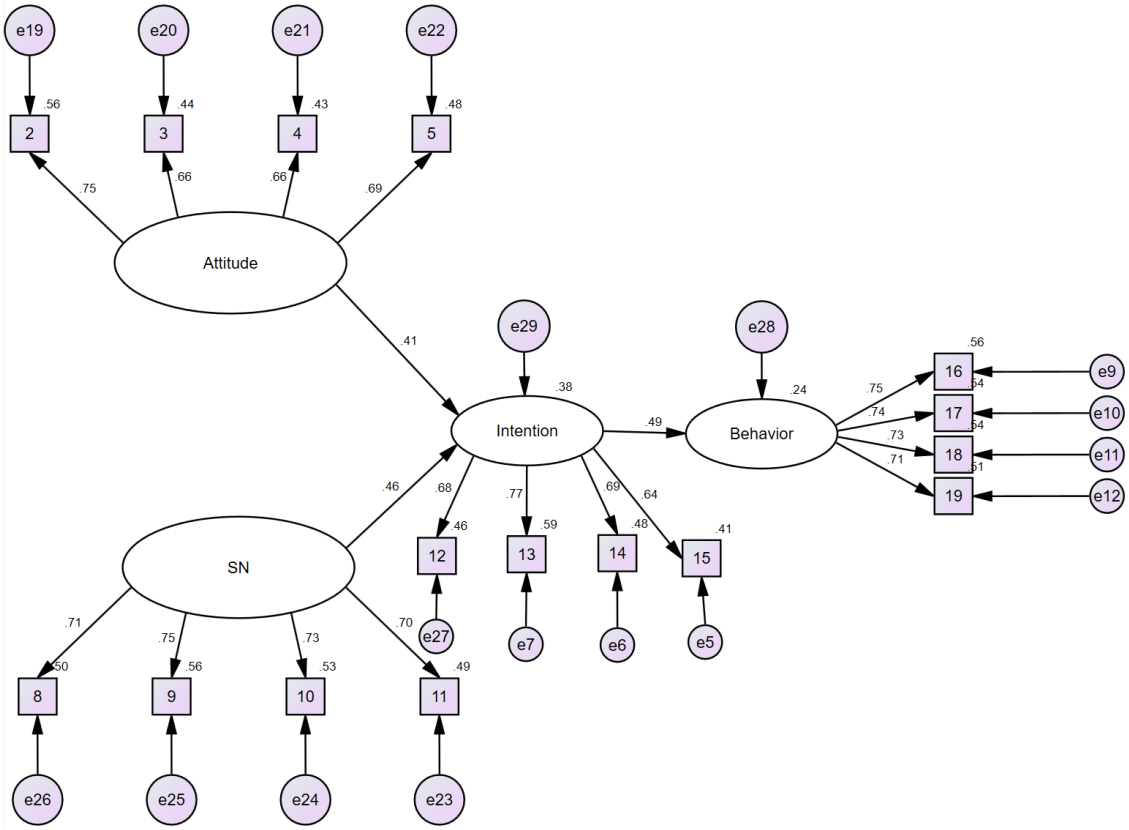

Figure 3 – Group B structure model

Path	Standardized Coefficients (β)	p-value
Attitude→ Intention	0.41	< 0.01**
Subjective Norms → Intention	0.46	< 0.002**
Intention→ Behavior	0.49	< 0.01**

* : p<0.05
** : p<0.01

Table 13 – Group B Estimated parameters(Standardized)

As shown in table 13, the standardized regression weights and p-values show a significant relationship in both paths' attitude to SFFC intention and SN to SFFC intention. In addition, the standardized coefficient demonstrated that SN had a more substantial effect on SFFC intention than Attitude among participants in Group B. Furthermore, in comparison to Group A, there is a significant decrease in the β of Attitude to intention and intention to behaviour, although the relationships were still significant. Therefore, to test hypothees *H2b, H3b* and *H5*, this study conducted further structure modelling for Group C.

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4.4.4 SEM: Group C

Figure 4 and Table 14 display the designed structure diagram and the standardized path parameters for Group C. The relationship between Attitude and SFFC intention is significant, as is the path SFFC intention to behaviour. Thus, *H5* is supported. The path SN to SFFC intention was tested as insignificant at a 5% significance level, but the SN positively impacts the dependent variable SFFC intention (β = 0.23). *H2b*, which hypothesized only a positive effect from SN to intention, is supported by these results. On the other hand, the parameters of Group C did not show that SN has a more substantial impact on SFFC intention than Attitude. Therefore, *H3b* is rejected.

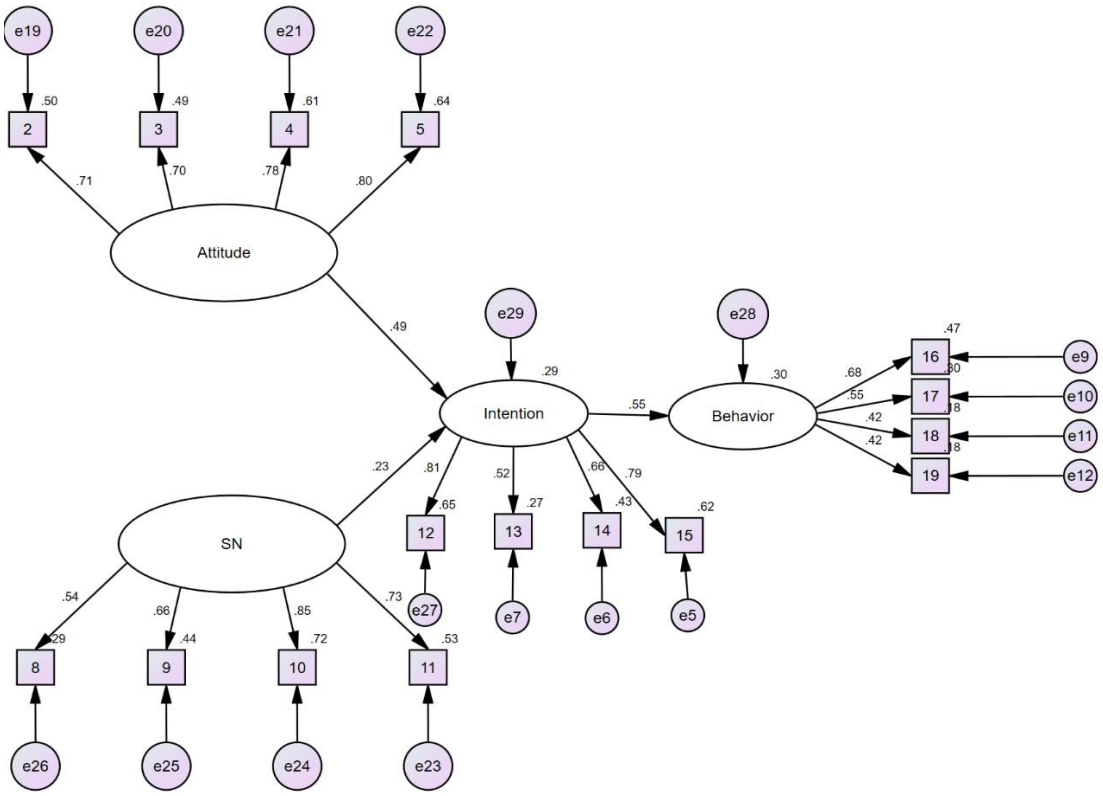

Figure 4 – Group C Structure model

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Path	Standardized Coefficients (β)	p-value
Attitude→ Intention	0.48	< 0.01**
Subjective Norms → Intention	0.23	0.128
Intention→ Behavior	0.55	< 0.01**

*: p<0.05
**: p<0.01

Table 14 – Group C Estimated Parameters(Standardized)

The TORA model, as tested with the three age groups, shows two positive but insignificant paths from SN to intention. A possible reason for this could be an insufficient sample size in each age group. Thus, to further test the capability of the TORA model among Chinese participants, this study conducted another structure model without dividing the participants into age groups.

4.4.5 SEM: All participants

As it was stated in the chapter offering a literature review, the model was revised to add a covariance path between Attitude and SN. The model fit is demonstrated in Table 15.

	CMIN/df	CFI	RMSEA
Group A	2.844	0.892	0.057
Group B	2.298	0.904	0.051
Group C	2.982	0.866	0.068
All Participants	2.702	0.936	0.047

Table 15 – All participants goodness of fit indices

The x^2/ df index indicated that the revised model, which added the path between subjective norms and attitude, fit the data very well (2<CMIN/df<5), with Root mean squared error of approximation (RMSEA) = 0.047 (RMSEA<0.060) and comparative fit index CFI = 0.936 (CFI>0.9) (Hu & Bentler, 1999). The All Participants structure

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model and its standardised parameters are demonstrated in Figure 5 and Table 16 respectively.

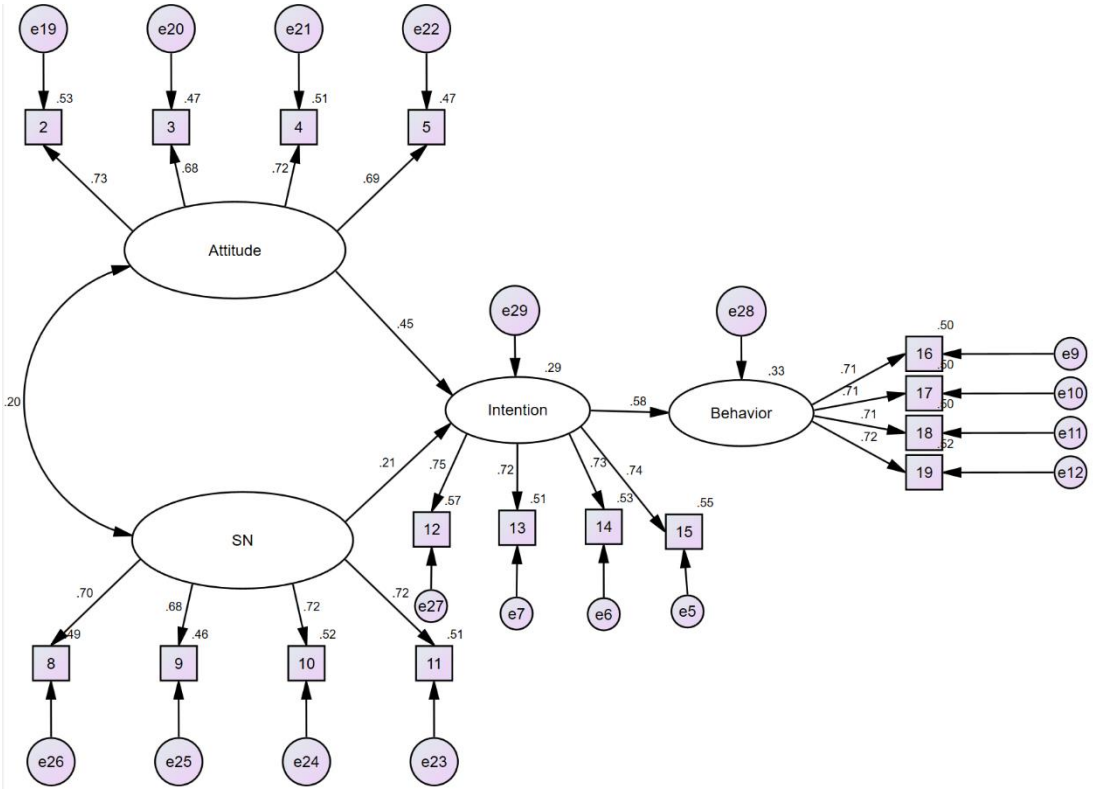

Figure 5 – All participants Structure model

Path	Standardized Coefficients (β)	p-value
Attitude→ Intention	0.45	< 0.001***
Subjective Norms → Intention	0.21	0.005**
Attitude←→ Subjective Norms	(Correlation) 0.20	0.009**
Intention→ Behavior	0.58	< 0.001***

* : p<0.05
** : p<0.01
***: p<0.001

Table 16 – All participants Estimated Parameters (Standardized)

As Figure 5 and Table 16 indicate, all relationships published by the TORA model (Fishbein & Ajzen, 1975) are significant among Chinese participants, which means the model has an excellent fit to the Chinese fast fashion market. Furthermore, the revised model shows a significant correlation between attitude and SN, which shows that the constructs SN and attitude are linearly related or have the chance to change together at

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a constant rate as proposed by previously published research (Fishbein and Ajzen, 1975; Netemeyer and Bearden, 1992).

4.5 Moderation effect of Age

As suggested by Baron and Kenny (1986), 'moderator' refers to the continuous or categorized variable that affects the relationship strength or direction between independent and dependent variables. Thus, to interpret the moderating effect of age, it is necessary to consider age as both a categorizable and continuous variable..

4.5.1 Amos moderation analysis

To measure the moderating effect of age on paths, the multi-group comparison test was conducted. Equality constraint is imposed, and following constraints were set for different models to compare among groups 1: Attitudes and SFFC intention, Model 2: SN and SFFC intention, and Model 3: SFFC intention and behaviour was equalized among all groups to test the moderating effect of age in different age groups. The results are shown below, in Table 17.

	Δdf	ΔCMIN	p-value
Model 1	2	0.924	0.63
Model 2	2	3.6	0.165
Model 3	2	3.689	0.158

Note:
Model 1: Path Attitude to SFFC intention is constrained among 3 groups

Model 2: Path SN to SFFC intention is constrained among 3 groups.

Model 3: Path Intention to SFFC behavior is constrained among 3 groups

Table 17 – Moderation Constrained model analysis in Amos(Standardized)

The results for all three models demonstrated statistical insignificance (all p value >0.05). Thus, age does not significantly moderate the relationship between: 1.

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Attitude and SFFC intention; 2. SN and SFFC intention; and 3: SFFC intention and behaviour. This in turn means that the data collected does not support Hypothesis 5. However, as one of the limitations of Amos is that it may not be able to test continuous moderating variables, this study conducted further moderation analysis taking age as a continuous variable in SPSS.

4.5.2 SPSS moderation analysis

To examine age as continuous moderator, this study adapted the hierarchical regression model with the following equations to examine the validity of the moderating effect by comparing and examining the significance of the differences between $R1^2$ (Model 1) and $R2^2$ (Model 2), as well as the p-values of the interaction variable (X*Z).

$$Y = \mathrm{b}_0 + b_1X + b_2Z + e$$

$$Y = \mathrm{b}_0 + b_1X + b_2Z + b_3(X * Z) + e$$

In both equations, Y and X stand for the dependent and independent variables respectively (i.e., the SFFC intention and attitude in this study), and the variable Z is the moderating variable (i.e., Age). However, equation 1 is used for examining the different impacts of independent variables on the dependent variable, while equation 2 has the interaction variable of X and Z (X*Z) to test the moderation effect. As both equations involved one independent variable at a time, this study investigated the paths separately.

The independent and moderating variables were used to simplify the process of interpretation by creating the new centred variables M_Attitude, M_SN and M_Age, which equal the origin scores minus the mean of each scale but did not change the origin distribution. Meanwhile, the interaction variables (X*Z) were calculated by multiplying M_Attitude and M_Age or M_SN and M_Age. Afterwards, the linear regression analysis technique was adapted to test the moderating effect. Table 18, below, shows the moderation analysis for Groups A, B, C and all participants separately.

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		Group A	Group B	Group C	All participants
Age: Attitude→SFFC intention	Δ R^2	0.019	0.053	0.005	0.002
	p-value	0.148	0.016*	0.508	0.448
	β (Int)	0.143	0.233	-0.076	0.043
Age: SN→SFFC intention	Δ R^2	0.057	0.291	0.005	0.003
	p-value	0.016*	0.291	0.532	0.345
	β (Int)	0.24	-0.1	-0.069	0.056

*: Sig. F change: p<0.05

Table 18 – Hierarchical regression analysis(Standardized)

According to Hayes (2017), a statistically significant change in R^2 signified the moderating effect. The hierarchical regression analysis indicated that the moderating effect of age was insignificant in both paths among all participants without group division. As the analysis of the moderating effect of age shows it to be insignificant in both Amos and SPSS software, *H5* is rejected. However, when investigating the in-group paths, there were significantly positive moderating effects of age in path SN to SFFC intention in Group A and Attitude to SFFC intention in Group B. This means the increased age of participants in Group A increase SN's effect on SFFC intention. Group B and path Attitude to SFFC intention found a similar significantly positive moderating effect.

4.6 Additional data analysis

Additional demographic and geographic data collected was interpreted to gather more perspectives in order to fully utilize the data set. Several more linear regression analyses were conducted and demonstrated interesting relationships. Although most of the additional constructs tested showed no relationships, the number of old (above 70) family members and number of old family members in household are significantly positively related ($p < 0.01$, standardized $\beta = 0.456$).

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5. Discussion

This chapter will synthesis and discuss the findings and consequences for the hypotheses. It will address the implications for the objectives, questions and aims of the study, as well as how the model fits Chinese consumers.

5.1 Among generations

Assessing the difference among age groups in their formation of SFFC behaviours was the core of this study. Among the participants in Group late adolescence, Attitude was found to be significantly positively related to SFFC intention, while the path SN to SFFC intention was found not significant but positive. This means that the younger generation makes the decision based primarily on their Attitude, while subjectively minimizing external factors ($\beta_{Attitude} = 0.51$, $\beta_{SN} = 0.15$). A similar decision-making technique was also found in Group C ($\beta_{Attitude} = 0.49$, $\beta_{SN} = 0.23$), indicating that the older participants were also likely to base their decision on their attitude without relying on the opinions of their family and friends, although the collectivist culture increased the exchange of information. This finding agrees with previous literature that the older generation is less likely to be influenced by their peer group when making decisions, especially in a Confucian culture where elders hold social dominance (Schade, 2016; Beatrice, 2014). Thus, the statements of Bai et al. (2019) and James and Leonce (2019) are not supported by the results of this study for Groups A and C.

On the other hand, Group B is the only group to display a significant relationship between SN and SFFC intention. The correlation between subjective norms and SFFC intention was found to be significantly positive and even to exceed Attitude within the Group B ($\beta_{Attitude} = 0.41$ $\beta_{SN} = 0.46$). The statement that "cultural differences may cause subjective norms to outweigh the attitude in decision making" was partially supported in Group B (Bai et al., 2019). One reason for that could be that, in comparison with the other groups, participants in Group B (young adults) may experience the greatest number of subjective norms and stimuli, as recipients of subjective norms from the

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workplace, social media and family. They may therefore struggle to decide whether to make the decision to form their behavioural intention based on their Attitude or subjective norms.

The findings of McCloskey (2006) and Charkraborty et al. (2016), which state that older generations may prefer not to purchase goods online, were not supported. In fact, the older Chinese generation is adapting well to online shopping, using it, like younger consumers, because of its convenience and affordability, as reported by Pan and Marsh (2010). Which also partially supports the statements by other researchs that Chinese elders may habitually adapt to the more affordable and "cheap" way of living (Erlandsen and Nymoen, 2008; Waitt et al., 2016; Wang & Lin, 2009). More heuristically, it is thus necessary to stop claiming the stereotypes of older generations, as they may have more willingness than expected to adapt new technology and lifestyle as long as it is viable and convenient. And such attempt of discriminating people by age may be a type of ageism, which is not fair for both older and younger generations. This study contributes to contradict the previous statements about elders do not adapt to the new trends of lifestyle. However, this result may be effectively only to the future studies focusing on Chinese market.

In conclusion, the impact of Attitude to SFFC intention was the lowest in Group B while the relative importance of SN to SFFC intention reached its peak in that same group, and path intention to behaviour was significantly positive. Thus, the hypotheses *H2a*, *H2b*, *H3a* and *H5* were supported, and *H3b* was rejected because Attitude had a more substantial impact on SFFC intention than SN. The results of this study show a convergence of decision-making techniques between Chinese and Western consumers, in that the majority of them form their behavioural intention based on their own attitude (Lee & Green, 1991).

5.2 How time change people

This study proposed that people may experience an increasing or decreasing importance in their attitude or subjective norms towards a specific object in accordance with their

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age. *H1* proposed that an increase in age would increase the convergence of attitude towards SFFC and was rejected as the standard deviation of attitude toward SFFC tends to increase with an increase in participants' age (Table 7). This hypothesis was proposed based on the research conducted by Lang et al. (2018) who suggested that the younger generation chased uniqueness and increasingly used social media. The need for uniqueness may increase their awareness of fashion elements and cause them to keep tracking fashion trends. However, the researcher ignored that social media may lead the same generation in the same direction, while the older generation, who lack access to social media, may keep perceive the world while maintaining a consistent perspective over time. At the same time, the need to stay within the group (ingroup bias) and not be seen as an outsider may also push late adolescents to follow the same fashion style, thus increasing the convergence of attitude towards SFFC (Coleman, 2013). As Lang et al. (2018) mentioned, the sociological phrase "social face" could also explain this phenomenon as well as argued in another research by Qi and Ploeger (2019). The self-perception of a specific social role than motivate the individuals to behave in a certain order, for example, to perform SFFC (Park & Ha, 2012).

The moderation analysis was conducted twice in different software, with different approaches to age (continuous or categorizable variable). Analysis conducted in Amos with constrained models found no statistically significant moderating effect from age among different groups. At the same time, the results from SPSS showed that two ingroup paths have a significantly positive moderation effect (Attitude to SFFC intention in Group B and SN to SFFC intention in Group A). In general, the results indicate that within the participants in Group A, age positively moderates the relative importance of SN to SFFC intent; in Group B, age moderates the effect of SN on SFFC intent; but age is not significantly (within the terms of the inquiry) moderating any paths in Group C.

A reasonable explanation for the moderating effect of age in the separated samples is that as the participants grow older, there is an increased chance that they are subject to more subjective norms when they acquire a job or have increasing social and familial responsibilities. Thus, determinedly chasing individuality, as indicated by Lang et al.

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(2018)and Erlandsen and Nymoen (2008), may be inapplicable for most individuals who become more amenable to SN as an approach to the next stages of their lives.

For the young adults in Group B, the impact of attitude and subjective norms tends to reach a balanced status, as occurs in Group A. The balance between taking subjective norms and attitude to make decision shifts as their ages increase, resulting in attitude gradually becoming more important again.

Decision-making techniques do not, however, change once a certain age (Group C) is reached, as no moderating effect of age was found in Group C. Citing one line from the movie "Interstellar" (2014) by Christopher Nolan: a little older, a little wiser, but still happy to see you the old way. If the insignificant SN to SFFC intention can be seen as chasing uniqueness and following one's own attitude, then the results of this study attribute the same phenomenon to the accumulation of personal experience, which enhances the consistency of one's intention formation structure. Thus, the moderating effect of age in the path Attitude to SN can be seen as the product of the life experiences and knowledge that form a comprehensive world view, taste in fashion and development of a complete identity (Sheldon and Kasser, 2001; Erikson,1963). Individuals become adept at using their life experiences and knowledge to make decisions (Schade, 2016).

In conclusion, the findings were not able to fully support *H4*, though the model showed that age has a partial moderating effect.

5.3 TORA model among Chinese consumers

Considering the cultural differences mentioned in previous chapters, it is necessary to consider whether a model designed for Western consumers will adapt well to Chinese consumers. The goodness of fit of the TORA model designed by Fishbein and Ajzen (1975) was tested in this research, and the whole data set shows a good fit of the model to the data, as presented in Table 9. However, the data also revealed that SN does not significantly contribute to SFFC intention in Groups A and C, meaning that the constructs or paths may require further revision before specific adoption. In addition,

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the path proposed by previous research (Fishbein and Ajzen, 1975; Netemeyer and Bearden, 1992; Ryan & Bonfield, 1975) between SN and Attitude was found to be significantly correlated in the whole data set, which means the attitude and subjective norms impact each other and may show a trend of convergence (Netemeyer and Bearden, 1992). In other words, the subjective norms received by participants may positively affect their attitude about a specific object. Hence, adopting the perceptual filtering theory (Broadbent, 1958) here explains the phenomenon by which individuals may trigger vigilance about inconsistent stimuli, thus defending their self-consistency by filtering and selecting the subjective norms that agree with their attitude towards a specific object..

5.4 Additional regression analysis

This study conducted additional regression analysis on extra information gathered by questionnaire (which were demographic, geographic and investigated the cognitive purposes underlying sustainable behaviour). However, only one significant relationship was found: it exists between the number of old family members and the number of old family members living together. This finding indicates a cultural factor affecting Chinese individuals, who may prefer to live with elders, or feel responsible for taking care of older family members due to cultural expectations.

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5.5 Table of hypothesis results

Hypothesis	Results
H1. An increase in consumer age will increase the convergence of attitude to SFFC.	Rejected
H2a. Attitude will positively affect Chinese consumers' intention to sustainable fast fashion behavior.	Supported
H3a. Attitude will have a stronger effect on Chinese consumers' intention to sustainable fast fashion consumption behavior than Subjective norms.	Supported
H2b. Subjective norms will positively affect Chinese consumers' intention to sustainable fast fashion consumption behavior.	Supported
H3b. Subjective norms will have a stronger effect on Chinese consumers' intention to sustainable fast fashion consumption behavior comparing to Attitude.	Rejected
H4. Age has moderation effect on the relationship between attitude, subjective norms and SFFC intentions.	Rejected
H5. Intention to Sustainable fast fashion consumption will positively affect Chinese consumers' behavior.	Supported

Table 19 – Hypothesis results

6. Conclusion and Recommendation

6.1 Conclusion

This study aimed to investigate whether age has a moderating effect on the behavioural intent resulting from Chinese consumers' SFFC SN and attitudes. It explored the differences in the impact of SN and attitude on intent among Chinese consumers in different age groups, as well as the fit of Fishbein and Ajzen's (1975) TORA model to Chinese consumers. This study's findings can be summarized in light of the accomplishment of its aims.

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To begin with, the moderating effect of age was found to be insignificantly positive in the complete sample but significantly positive in Groups A (subjective norms to SFFC intention) and B (Attitude to SFFC intention).

Secondly, as indicated by the research findings, the relative importance of attitude and SN to SFFC intention changes between the age groups, while attitude seemed to be more effective in forming SFFC intentions among all groups. Regarding cultural differences between China and Western countries, the SN was found to significantly impact the SFFC intention only in Group B. This research also finds that SFFC intention was a precise predictor of actual SFFC behaviour for consumers in all age groups.

Finally, the mutual impact of SN and attitude proposed by previous research was found in the complete data set but not in the separated groups. Despite the research may have insufficient data to divide the consumers into three groups, the prediction power of SN to intention, as publicized by Fishbein and Ajzen (1975), was found not to be significant among consumers in Groups A and C.

6.2 Limitation and recommendation for future research

As mentioned above, the findings are statistically robust but not free of limitations. There were several flaws found in the methodology adopted, and the most common bias of the questionnaire survey could be the nature of self-reported answers may involves participants' over-reporting of their sustainability traits because of social desirability. However, this is currently, to the best of the author's knowledge, difficult to solve as it initiate psychologically from the participants.

First of all, categorizing 275 participants into three groups may cause the in-group analysis not to be well supported because of insufficient data, and the population in each group may not be sufficiently representative of trends in the entire population. Thus, the recommendation for future research could be to research each group separately and assess the in-group relationships among constructs (e.g., Gen Z) with a larger sample size (i.e., conducting a longitudinal study with a large sample size).

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Otherwise, it might be better to adopt a G*Power test for required sample size before collecting data

Second, the data collection method of using an online questionnaire may be straightforward for most younger generations (Groups A and B) and may represent those specific age groups well. However, the older participants who took part in this survey were mainly well-educated, while the majority of Chinese consumers aged 40 and above may not have access to or realize the existence of that platform. Thus, for future studies on elderly Chinese consumers, it might yield a more representative sample to collect data physically (e.g., market intercept or drop-off & pick-up), and further study could collect more socio-demographic data to test potential relationships.

Third, although this study proposed to determine if SFFC behaviour was rational behaviour and the results showed the rational "saving-the-environment" trend of Chinese participants, the results still imposed some limitations on the cognitive analysis of behaviours. It remains necessary to research the existence of impulsive SFFC behaviour or the self-control preventing unsustainable fast fashion behaviour by adapting further emotional or habitual related models.

Furthermore, as shown in the SEM results, the SN and SFFC intentions were examined and found not to have a significant relationship but showed significantly positive in further analysis of the whole data set. Therefore, it is worth conducting further research to examine the compatibility of the subjective norms construct within Chinese consumers.

Finally, the results show that as the only group with a significant path from SN to SFFC intention, participants in Group B also contribute the most to the online shopping population. Thus, possible future research could investigate the relationship between decision-making techniques and purchasing channel preferences.

Notably, the main aim of this study, to verify the existence of a moderating effect by age on the paths 'SN to intention' or 'Attitude to intention', was not fulfilled, as shown in the data analysis chapter. To clarify, taking age as a categorizable variable (the approach taken by this study) may insufficiently represent the moderation effect expected by this research. As the participants in different groups were of different

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generations with different experiences and education, collecting longitudinal data in similar area of research is strongly recommended for in-depth analysis (Sun & Wang, 2010). Thus, future studies can segment the consumers through determine different age criterion. Or to expand the analysis to other cultural-specific constructs to compare and contrast the behavioural differences and discuss the effect and consequences (See, for example, Qi & Ploeger, 2019; Xu et al., 2020; Lang et al.,2018)

6.3 Implications

This study provides valuable empirical data and information for international businesses willing to adapt sustainable fast fashion concepts to the Chinese market and for policymakers promoting sustainability in China. As stated in previous chapters, the fast fashion industry generates an enormous amount of waste every year, and China has the world's second largest population. Thus, changes among Chinese consumers could contribute significantly to worldwide sustainability and the protection of the environment.

The results of this study suggest that for the majority of participants, individuals' attitudes are the dominant force when making decisions. Additional questions also determined that most participants prefer to purchase fast fashion products online. Thus, social media promotion of sustainable lifestyles should be efficiently harnessed, along with celebrity or influencer endorsements, to foster implicit associations and precipitate the habitual "inertia" mentioned earlier in the Literature review (Lim et al., 2017).

Second, according to results from additional demographic questions, consumers prefer to take free plastic bags while intending to behave so as to sustain their socio-economic condition. Therefore, replacing plastic bags with bags made from sustainable materials might be appropriate, as might charging relatively low prices for the bags instead of providing them for free. The fundamental perceptual threshold theory indicates that individuals may pay more attention to the minor stimuli they can sense (Levitin & Rogers, 2005; Vastani & Monroe, 2019). Thus, charging for shopping bags may trigger further consumer thought and contribute to the formation of an SFFC habit.

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Finally, for the policymakers, the results in chapter 4.1 show that the participants from the Group B scored the lowest compared to other groups in subjective sustainability cognition while contributing the most to online fast fashion purchases. Meanwhile, the older generations who suffer from the lowest living standards or worry about their socio-economic status behave sustainably in their fast fashion purchases/utilization for different purposes (Tables 1&2) but result in the same direction to sustainability. Furthermore, Groups A and B contribute the majority of fast fashion purchasing, while the Group C may have consolidated perspectives on specific objects (Schade, 2016). Thus, promoting a sustainable lifestyle among the younger generations (aged 18-39) is necessary to maximize the efficiency and power of policies for the policymakers. Finally, donation stations and vintage stores for unwanted clothing should be planned to promote the recycle of resources.

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Ethics

The University of Reading ethics approval board approved the study design (Ethical approval code: SREC-HBS-20220519-YACA0384). This research considered research ethics to be the most critical factor of its conduct, as direct contact with participants may cause potential harm or unethical data leakage (Malhotra et al., 2017). Therefore, in this study, an information sheet was provided in advance to participants in research, which will help them better understand the purpose and contents of this study. Additionally, at the beginning of each data collection, participants will be informed of their right to leave, to ask the researcher to delete their information at any time during the research and their right to anonymize their email addresses and names. Finally, all information acquired from the participants will be stored in a computer without internet connection but with password protection, and will be destroyed and cleared after the completion of this study.

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Appendices

Appendix A – Descriptive analysis

Scale	Sample (N=275)		Group					
			Group A (N=98)		Group B (N=97)		Group C (N=80)	
	M	*(SD)*	*M*	*(SD)*	*M*	*SD*	*M*	*SD*
Attitude	2.59	0.72	2.57	0.68	2.53	0.70	2.68	0.78
Subjective Norms	2.56	0.74	2.57	0.73	2.63	0.76	2.50	0.73
Intention	2.46	0.75	2.52	0.73	2.38	0.70	2.51	0.78
Behavior	2.73	0.74	2.75	0.76	2.68	0.80	2.75	0.61
Environmental-oriented	3.98	0.80	3.98	0.77	3.97	0.88	4.03	5.32
Financial-oriented	4.23	0.73	4.29	0.73	4.16	0.75	4.25	5.19
Age	31.31	9.67	22.24	2.07	29.31	3.15	44.83	3.88

(Note: except for age, all above variables were measured with 5 point likert scale, there ranged from 1 to 5.)

Appendix B – Mean, Standard deviation Pearson correlation matrices, CR and AVE values for constructs

	Mean	Std. Deviation
Attitude	2.5900	0.71852
SN	2.5627	0.73521
Inten	2.4636	0.74881
Behavior	2.7273	0.74278
Age	31.31	9.668

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	CR	AVE	Subjecitvenorms	Att	Intentionn	Behaviour
Subjecitve Norms	0.757	0.510	**0.714**			
Attitude	0.753	0.504	0.2**	**0.710**		
Intentionn	0.828	0.546	0.295**	0.457**	**0.739**	
Behaviour	0.858	0.502	0.222	0.531**	0.547***	**0.709**

*： p<0.05

**： p<0.01

***： p<0.001

Note: Required Discriminant validity ($\sqrt{AVE}$ is higher than all the constructs' correlations) convergent validity (AVE larger than 0.50) were met. CR (composite reliability value) are all higher benchmark.