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Conference Paper:

Exploring sustainable meat consumption intentions in a collectivist culture: utilizing the theory of planned behaviour

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Abstract:

Increased globalisation, urbanisation and a growing middle class in developing countries have a significant impact on the sustainability of food, especially within the livestock industry. The way meat is produced, processed, transported, and consumed has an immense effect on environmental sustainability. From an environmental perspective, it is vital to gain a better understanding of how consumers can be motivated to restrict meat consumption, particularly in non-Western countries where this area is less explored. The current study proposes a model for Pakistan and emerging countries, where the level of meat consumption has increased rapidly. This paper merely conceptualises how consumers practice the notion of 'sustainable meat consumption' in their everyday life under a collectivist culture. The research uses the theory of planned behaviour, integrating attitudes, perceived behaviour control and collectivist values, to investigate sustainable meat consumption intentions grounded in a specific context. This model may uncover the intentions for sustainable meat consumption in an Asian emerging country, supporting more robust decision making for livestock managers and policymakers.

Keywords: Sustainable meat consumption intentions (SMCI), Collectivist culture, Theory of planned behaviour (TPB), Emerging economy, Organic meat, Environmental sustainability

Introduction:

Meat production and consumption patterns are significant contributors to greenhouse gas emissions (GHG) and environmental deterioration worldwide (Apostolidis & McLeay, 2019; de Boer & Aiking, 2019). Addressing threats from global meat consumption requires in-depth knowledge of consumer intentions to reduce meat consumption and purchase organic meat. As consumers adopt more diverse lifestyles in the globalized world, consumption behaviour becomes more heterogeneous (Verain et al., 2015). Consumers can act as agents of environmental change by adopting sustainable consumption practices that contribute to sustainable development (Barr et al., 2011).

Encouraging consumers' towards a more sustainable meat consumption pattern is a great challenge. Globally, marketers and policymakers are exploring effective ways to persuade consumers towards more sustainable meat consumption and inform them about the social, environmental and economic sustainability-related features of food. Most of the research takes place in wealthy nations where meat consumption levels are on average much higher than those in developing countries (Tucker, 2018). The investigations on the emerging nations' consumers are less explored, although, the consumption patterns, as well as the attitudes and perceptions, do not correspond to those in wealthy nations (Veeck & Veeck, 2000). National culture is an area worthy of research and it is a factor that influences consumer behaviour (Bukhari et al., 2018; Chang & Chuang, 2005).

Studies have shown that increasing consumer awareness, growth in sustainability knowledge related to eco-labelling, group conformity pressures and the availability of organic food, have all improved sustainable choices (Peschel et al., 2016). These perspectives provide an interesting lens through which to view sustainable meat consumptions intentions (SMCI), suggesting that there is still no clear answer. In this empirical study, therefore, we suggest a new domain to capture the impacts of a collectivist culture on sustainable meat consumption. However, the conceptual framework of the current study based on the well-known theory of planned behaviour (TPB), we claim that the presence of environmentally sensitive cultural values would better predict sustainable consumer intentions in South Asian contexts. This

perspective is less explored, especially in the context of meat consumption in the current behavioural change theories. We hope this new avenue would eventually lead to cultivating and applying more effective sustainable strategies by livestock industries in an emerging-economy context.

Literature Review:

Sustainable meat consumption

Increasing environmental deterioration due to overconsumption attracts global attention (Liobikienė & Bernatonienė, 2017). Therefore, a deep understanding of consumers about sustainable consumption intentions has become crucial for policymakers and marketers. The literature defines sustainable meat consumption as the curtailment of meat consumption at an individual level (Austgulen, 2014). The food literature explains three interlinked strategies to achieve the target of sustainable meat consumption. These strategies are named efficiency, sufficiency and consistency (Allievi et al., 2015). Firstly, optimizing the use of resources (land, water, crops) for meat production is called efficiency. Secondly, sufficiency is delineated as the consumer's responsibility to reduce the amount of meat consumed, which is also linked to improved health and avoidance of obesity. Thirdly, consistency is associated with animal welfare (Allievi et al., 2015; Pohjolainen et al., 2016), where it is seen as unethical to slaughter animals just for the pleasure of eating. Hence, sustainable meat consumption means replacing the whole animal-based product with plant-based protein, 'clean meat' or even edible insects (Lazzarini et al., 2018; Nijdam et al., 2012), transitioning towards sustainable agriculture and including more quality organic meat in the diet, and the curtailment of meat from a person's diet (Austgulen et al., 2018).

There are several theories reported in the literature to explain the sustainable behaviour of a consumer, and in this study, we utilize the theory of planned behaviour (TPB) to understand SMCI.

The theory of planned behaviour (TPB):

Most environmental problems are exacerbated by consumers' buying behaviour and therefore, the literature highlights that consumers have become aware of the need to buy environmentally friendly products (de Medeiros & Ribeiro, 2017; Panda et al., 2020). The theory of planned behaviour (TPB) (Ajzen, 1991) has become one of the most widely used rational choice models

to explore the decision-making framework related to ethical behaviour (Chang & Chuang, 2005; Hoeksma et al., 2017). The TPB captures significant factors that explain the behaviour towards a particular issue. It permits the addition of various related variables that may also significantly affect specific behaviour (Ajzen, 1991). This flexibility allows researchers to incorporate additional variables and/or replace constructs of the underlying theory with other variables of interest to bring greater clarity to our understanding of consumer behaviour (Kumar et al., 2017).

Pro-environmental Attitude:

With reference to the TPB, people's intention to perform a specific behaviour is determined by their attitude, subjective norms, and perceived behavioural control (Ajzen, 1991). Attitude toward a behaviour is interpreted as the extent of an individual's favourable or unfavourable assessment of a particular behaviour (Ajzen, 1991). Several studies have verified that pro-environmental attitude is one of the strongest predictor influencing environmental behaviour (Taufique & Vaithianathan, 2018; Wang et al., 2018). Consumers' pro-environmental attitude can drive organic food consumption (Shin et al., 2017). Environmentally sensitive consumers are ready to pay premium prices to protect the environment for society (Campbell-Arvai et al., 2014). In this regard, an individual's pro-environmental attitude can be influenced by collectivist cultural values (Kim & Choi, 2005).

Perceived Behavioural control

Perceived behavioural control (PBC) states an individual's degree of self-control and willingness to execute specific behaviour, which is mostly determined by attitude and subjective norms (Ajzen, 1991). PBC can be divided into external and internal PBC. A person having high internal PBC, has more control over personal resources, like confidence, planning and ability to perform a particular behaviour (Armitage & Conner, 1999). External PBC elucidates the ones' control of external parameters, such as time, money and social pressure. Research, in a Western context, reports that PBC positively affects the organic food purchase decision (Sultan et al., 2020).

Collectivist culture

The culture in which consumption activities occur embraces a dynamic array of entities, processes, events, and rituals that drive SMCI. Hofstede (1980, p.25) defines culture as "a collective programming of the mind which distinguishes one group from another." According

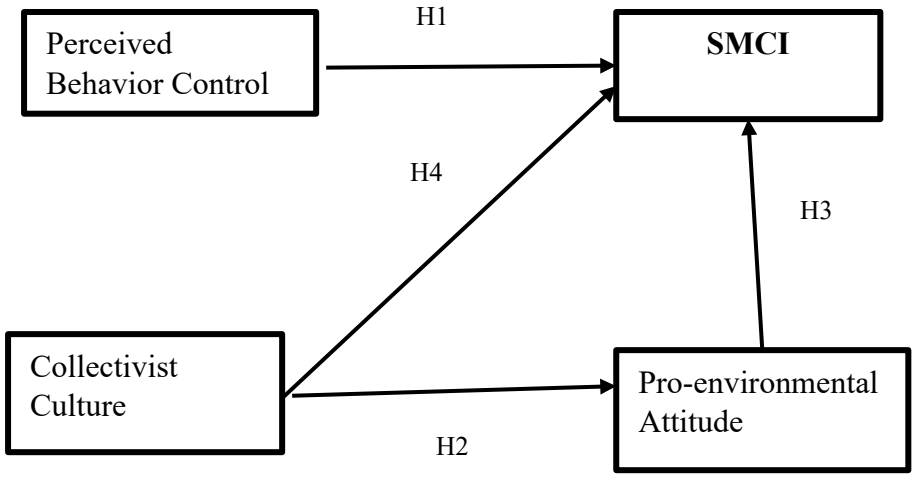
to this definition, it is likely that culture is rooted in each individual, forming a distinct school of thoughts and practices. Traditional food culture may cultivate consumers to choose more quality, healthy organic meat dishes or move towards plant-based protein. Previous studies showed that people choose food that relates to their specific traditions and a variety of festivals as they are familiar and culturally attached with and grown up with eating them (Kapelari et al., 2020).

Cultural values can be separated at the collective, and individual level. Followers of collectivist cultures tend to make decisions according to the group members' opinion (Xu-Priour et al., 2014). In the literature, it is well documented that Western consumers tend to be more individualistic compared to Asians who are collectivist. In a collectivist culture, people decisions are closely binding with group conformity and place importance on the greater good for their extended family (Halder et al., 2020). To further explore the effect of collectivist culture on SMCI in more depth the current study utilizes collectivist culture instead of social norms.

Based on the literature, the present study modifies the existing framework of TPB to examine the impact of collectivist culture instead of subjective norms on sustainable meat consumption intentions (SMCI) and proposes the following framework.

Figure 1.

Theoretical Model



Based on the above discussion, this study proposes the following hypotheses:

H1: Perceived behaviour control affects SMCI.

H2: Collectivist culture supports the pro-environmental attitude

H3: Pro-environmental attitude has an impact on SMCI

H4: Collectivist culture affects SMCI

H5: Pro-environmental attitude mediates the relationship between collectivist culture and SMCI

Methodology:

Research Context

Pakistan is ranked as the fifth most populated country in the world with a population of 233 million, as of July 2020, increasing 2 per cent yearly (CIA, 2020). Pakistan is one of the Muslim states with rich cultural, ethnic, religious and traditional festivals. Food, especially meat dishes, is dominant in these festivals and consumers only prefer Halal meat (Sohaib & Jamil, 2017). Annual meat consumption is expected to reach up to 20 kg per capita by 2022 compared to 16 kg reported in 2016 (OECD, 2019). Rising meat consumption in Pakistan is accelerating environmental hazards. The current study adds to the literature on sustainable meat consumption by focusing on an emerging nation and by proposing a model to capture the effect of cultural values on a consumer's purchase decision.

Survey instrument

The current research survey was divided into two sections: the first section contained demographic information such as age, income, education, marital status, gender, employment

status and location. The second section was comprised of items related to the theoretical model of the current study. The pro-environmental attitude was measured through a four-item scale adapted from the previous study by Biswas and Roy (2015). PBC operationally refers to consumers' perceived control over the decision to reduce meat from diet or eat more quality organic meat. The current study utilized six items scale adapted from Fishbein and Ajzen (2010) to measure PBC. The collectivist culture was measured through a six-items scale adapted from Yoo et al. (2011). SMCI was measured on a three-dimensional scale developed by the study authors having ten items. This scale explicitly measured the consumers' meat attachment, meat curtailment intention and organic meat purchase intentions. The research instruments were attached in Appendix I. All the responses are measured on a seven-point Likert-type scale (1= Strongly agree to 7= Strongly disagree).

Data collection procedure and analysis technique

For data collection, a half-page article published on the following media sources explained the importance of the sustainable meat consumption project. A purposive sampling technique was used to recruit consumers and the sample consisted of consumers who were responsible for grocery shopping for their household. An online survey was created using Qualtrics software.

- Print media (Newspapers, three top Food magazines)
- A survey link was published on the websites of meat shops and grocery stores.

To increase the response rate, an incentive was used whereby the respondents were given the opportunity to register in a draw and win a 32GB tablet. Statistical analyses such as exploratory factor analysis (EFA) was conducted using SPSS software, version 26. The research hypotheses were tested using SmartPls 3.3.2. Validity and reliability were assessed through a measurement model and hypotheses were tested via a structural model.

Data analysis

Statistical analysis and results

Overall, 300 responses were collected. First of all, the demographics of the respondents were checked and results were shown in Table I. Most of the respondents were male (54%). Of the total respondents 56.3 % were married, 25.7 % were students, followed by 20% who had their own business, and 40.3 % of respondents have an Inter-Bachelors (14years education) degree.

Half of the respondents (51.3%) live in the city area and 35.7 % from suburb and only 13 % of respondents belonged to the countryside.

Followed by, the research model was tested through the two-step approach (Hair et al., 2014). The model of the study was analyzed for measurement model via the embedded two-stage approach (Cheah et al., 2018), and then the assessment of the relationship among the structures of the underlying constructs was conducted through the disjoint two-stage model.

Table I: Demographics Characteristics of the sample

Variables	category	Percentage
Gender	Male	54
	Female	46
Age	20-29	43.7
	30-39	27
	40-49	16.3
	50 or above	10.6
	Prefer not to say	2.3
Marital status	Married	56.3
	Widowed	2.5
	Divorced	1.3
	Single	39.9
Income*	Less than 25000	8
	25000-49,999	12
	50,000-74,999	13
	75,000-99,999	18
	100,000-124,999	8.3
	125,000-149,999	10.7
	150,000-174,999	8.7
	175,000 and more	21.3
Employment status	Landlord	13
	Own business	20
	Unemployed	16.7
	Employed, part-time	6
	Employed, full-time	18.7
	Student	25.7
Education	Primary (year 5)	6
	Middle- Matric (Year 10)	13.7
	Inter- Bachelors	40.3
	Master- PhD	30.3
	Professional education	9.7
Location	City	51.3
	Suburb	35.7
	Countryside	13

Income: given in Pak Rupees (Rs)

Measurement model

Initially, in SPSS-26, EFA was conducted using the Principle Component Analysis (PCA) with varimax rotation. Kaiser-Meyer-Olkin (KMO) measure (KMO = 0.875) and Bartlett's test (X^2 =2582.234, p<0.001) confirmed the appropriateness of data for EFA analysis (Sultan et al., 2020). The items having communalities less than 0.05 were deleted iteratively (Kaiser, 1974). Results of EFA are reported in Table II.

According to Ringle et al. (2015), before access the proposed hypotheses (the inner model), the reliability and validity of the outer model should be maintained. The outer model in the current study was evaluated by assessing convergent and discriminant validity.

Convergent validity

Three measures may be used collectively to identifying the levels of convergent validity. Factor loading is the first measure that should be statistically robust, significant and greater than 0.7. The average variance extracted (AVE) of every construct should be greater than 0.5, which is the second measure (Fornell & Larcker, 1981). The third measure is the composite reliability (CR) which should be greater than 0.7. All the required criteria, as reported in Tables II having acceptable values.

Discriminant validity

Discriminant validity is established through two statistical tests. The first assumption is established by the Fornell and Larcker (1981) values. By comparing the square root of each AVE in the diagonal with the correlation coefficients (off-diagonal) of each construct in the relevant rows and columns. The second criterion is heterotrait-monotrait (HTMT ratio of correlations) which should be less than 0.85 (Hair et al., 2010). Finally, the model has no convergent and discriminant validity issue.

Table II: Measurement Model assessment (First-order)

Constructs		Com.	Outer loading	AVEs	α	CR	A	B
A. Collectivist Culture				0.574	0.753	0.843		
	ColCul 1	0.572	0.773					
	ColCul 2	0.620	0.755					
	ColCul 5	0.587	0.746					
	ColCul 6	0.687	0.756					
B. Perceived Behaviour control				0.548	0.725	0.829	(0.595)	
	PBC2	0.562	0.714					
	PBC4	0.547	0.763					
	PBC5	0.556	0.714					
	PBC6	0.553	0.768					
C. Pro_ Environmental Attitude				0.699	0.857	0.903	(0.540)	(0.417)
	ATT1	0.660	0.748					
	ATT2	0.734	0.855					
	ATT3	0.765	0.891					
	ATT4	0.687	0.844					

Notes: AVE: Average variance extracted, CR: Composite reliability, α: Cronbach alpha, Values in parenthesis are HTMT values for discriminant estimates.

Table III: Fornell-Lacker estimates for Discriminant validity

Constructs	A	B	C	D
A. Collectivist _Culture	**0.758**			
B.Perceived Behaviour_ control	0.438	**0.740**		
C.Pro_Environmental_Attitude	0.445	0.446	**0.836**	
D.SMCI	0.564	0.415	0.441	**0.798**

Structural Modeling and hypotheses testing

The current study assessed the structural model to meet the criteria of the three most robust methods: firstly the path coefficients, with t-statistics values; secondly, the coefficient of determination (R^2) and thirdly the stone-Geisser criterion (Q^2) (Geisser, 1975). Bootstrapping sample of 5000 with a bias-corrected confidence interval method (0.05) was utilized to test all hypotheses.

Table IV represented the path coefficients (β), t- statistics and P-values for all hypotheses. Results showed that all the hypotheses having significant values (β>0.1, t>1.96, P<.05) and accepted. The result also analysed the indirect effect of collectivist culture on SMCI with a mediating effect of Pro-environmental attitude and supported the hypothesis. The results showed a partially mediated model.

The R^2 values for both pro_environmental attitude (0.198) and SMCI (0.379) indicate that the proposed model has good predictive accuracy (Hair et al., 2014). The current study also analysed Q^2 values greater than zero by using a blindfolding procedure to cross-validate the predictive relevance of the constructs pro_environmental attitude (0.131) and SMCI (0.223) (Ringle et al., 2015).

Figure II: The structural model with T-values and P-values.

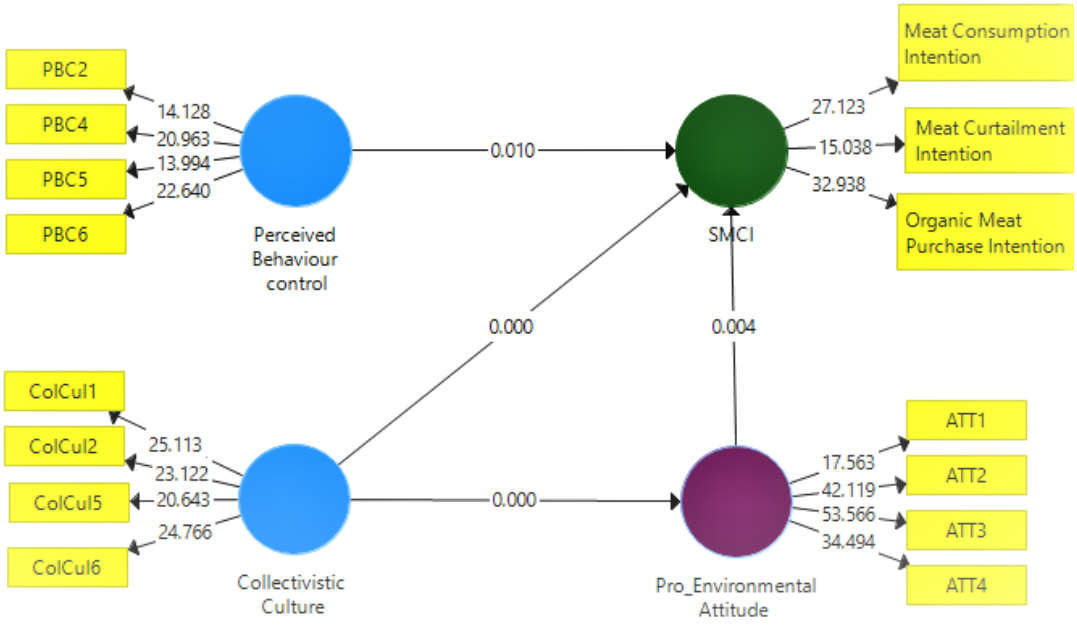


Table IV: Hypotheses results

Hypotheses	β	t-statistics	P-values	Decision
H1: Perceived Behaviour_ control -> SMCI	0.148	2.590	0.010	Supported
H2: Collectivist _Culture-> Pro_Environmental_Attitude	0.445	8.216	0.000	Supported
H3: Pro_Environmental_Attitude -> SMCI	0.191	2.991	0.004	Supported
H4: Collectivist _Culture ->SMCI	0.414	6.625	0.000	Supported

H5: Collectivist _Culture Pro_Environmental_Attitude->SMCI	0.143	2.794	0.005	Supported

Discussion and implications:

The present empirical study was designed entirely around the TPB model (Ajzen, 1991) to understand the effects of different antecedents on consumers' SMCI in Pakistan. Food choice is a complex behaviour highly intertwined with culture (Wang & Basso, 2019). Therefore the role of adding the collectivist culture in the TPB model significantly increased the explanatory capability of the model in the Pakistani context where the people lived in an extended family system and are bounded in their decisions.

The findings of the study have some policy implications. First, the results revealed that consumers' pro-environmental attitudes are strongly related to sustainable meat consumption intentions. The result is consistent with the recent study conducted in the context of young Indian consumers' pro-environmental behaviour (Taufique & Vaithianathan, 2018). Similar to this study, we recommend that the local marketers and environmentalists should communicate environmental and sustainability-related information on the organic meat packages to create favourable attitudes towards organic meat in a developing country such as Pakistan.

Second, the statistical findings verified that PBC influences SMCI. Therefore, the concept of PBC and their application to products were considered effective in promoting favourable attitudes and SMCI. A sustainable meat consumption intention may occur when an individual has the ability and motivation to perform a certain behaviour. The findings are consistent with previous studies conducted in green hotels (Han & Kim, 2010), organic food (Maichum et al., 2016; Zhu et al., 2013) and sustainable consumption (Wong & Aini, 2017) areas. The study findings suggesting that the Government, organic meat producers, NGO's should develop such strategies that motivate consumers for sustainable meat consumption in their meal for environmental safety in Pakistani culture.

Third, the results proved that collectivist culture is one of the strong predictors of pro-environmental attitude that leads towards SMCI. This phenomenon is most likely a consequence of the Pakistani culture, where consumers rely on the opinions of others and past

experiences instead of rationally analyzing the products during the food purchase stage. These findings are consistent with the studies conducted in emerging economies (Qi & Ploeger, 2019; Xu-Priour et al., 2014). These cultural dynamics can help advertisers of organic meat companies and producers to create and develop more efficient advertising campaigns; by introducing self-enhancing promotional messages, such as "step forward for the societal good" in traditional societies. In other words, promoting general sustainable attitudes requires an understanding of the consumers' specific sustainable behaviours (Minton et al., 2018; Thøgersen, 2010). Livestock marketers and sustainable activists alike need to help consumers to build positive impressions of sustainable consumption before expecting consumers to engage in sustainable meat consumption. The current study helps fill a gap in the literature by investigating how consumers who belong to an emerging nation react to sustainable meat consumption using the lens of collectivist culture.

Limitations and future research direction

The present study provides interesting information but still has some limitations. First, the study is limited only to measuring intentions and not actual consumer behaviour, although there is evidence that intentions are related to behaviour. Second, the study is conducted in the Pakistani culture and the results are not generalizable to consumers living in rural areas and other emerging nations. The current study makes an important contribution to the literature by examining the antecedents of SMCI in an emerging country, where sustainable consumption research is at a nascent stage.

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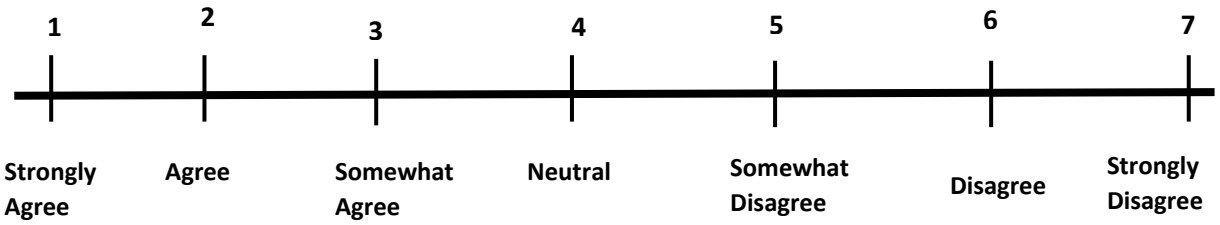
Appendix I: Research Survey

Response Scale:



Theoretical constructs

Perceived behaviour control								
1	I am confident that if I want, I can buy organic meat.	1	2	3	4	5	6	7
2	To buy or not to buy organic meat is entirely up to me.	1	2	3	4	5	6	7
3	It's inconvenient to purchase organic meat, although I have the purchase intention	1	2	3	4	5	6	7
4	I understand the environmental phrases and symbols on the product package.	1	2	3	4	5	6	7
5	I am very knowledgeable about environmental and social issues.	1	2	3	4	5	6	7
6	I know how to select products and packages that reduce the amount of waste ending up in landfills	1	2	3	4	5	6	7
Attitude								
7	Buying organic meat is a good idea.	1	2	3	4	5	6	7
8	Buying organic meat is a wise choice.	1	2	3	4	5	6	7
9	I like the idea of buying organic meat.	1	2	3	4	5	6	7
10	Buying organic meat would be pleasant.	1	2	3	4	5	6	7
Collectivist culture								
11	Individuals should sacrifice self-interest for the group	1	2	3	4	5	6	7
12	Individuals should stick with the group even through difficulties	1	2	3	4	5	6	7
13	Group welfare is more important than individual reward	1	2	3	4	5	6	7
14	Group success is more important than individual success	1	2	3	4	5	6	7

15	Individuals should only pursue their goals after considering the welfare of the group	1	2	3	4	5	6	7
16	Group loyalty should be encouraged even if individual goals suffer	1	2	3	4	5	6	7
Sustainable meat consumption intentions								
Meat consumption intention								
17	My meal is incomplete without meat	1	2	3	4	5	6	7
18	I am attracted to more meat dishes.	1	2	3	4	5	6	7
19	I can't reduce meat from my diet.	1	2	3	4	5	6	7
Meat curtailment intention								
20	By eating meat, I engage with industry responsible for significant environmental damage	1	2	3	4	5	6	7
21	I know my meat consumption habit harms the environment.	1	2	3	4	5	6	7
22	I feel motivated when I see that other people also reduce meat from their diet.	1	2	3	4	5	6	7
Organic meat purchase intention								
23	I prefer to buy organic meat due to my health concerns.	1	2	3	4	5	6	7
24	I know if I buy organic meat, it is a step towards sustainability.	1	2	3	4	5	6	7
25	I would like to pay more for organic meat for a quality of life.	1	2	3	4	5	6	7
26	If I have a choice, I prefer to buy organic meat.	1	2	3	4	5	6	7