University of British Columbia

Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Intervention to encourage consumer's choice and willingness to pay for local food Kale University

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PSYC 421

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Executive Summary

This study intends to show how informative posters influence consumers' choice and willingness to pay for food products. To operate the study, we hypothesized the poster with transportation and GHG emissions will have the greatest impact on increasing willingness to buy and choose local foods. The study is a between-subject group design, participants (N=252) were randomly assigned to three conditions: No-Framing condition, GHG Emission condition, and GHG Emission plus Transportation Distance condition, providing them informative posters with different types of local and remote food types. We used an online survey to measure if exposure of informative posters increases the participant's willingness to pay for local food. The data analysis demonstrates that more people would choose local Steak and cheese after seeing information of transport distance and GHG emissions, which supports our hypothesis. Furthermore, the results in our study showed a significant effect of the variable on location of cheese, consumers have a preference for remote cheese over local cheese, regardless of the descriptive transportation information, that did not support our hypothesis and provided itself as a limitation on our study and a piece for consideration to improve upon meeting sustainability goals on UBC's campus in the foods department.

Introduction

A lot of greenhouse gas (GHG) emissions come from food and its related transportation. Specifically, about one-third (34%) of GHG emissions come from food (Crippa et al., 2021). Therefore, how to reduce food contamination is a problem that we continue to pay attention to and try to solve.

The study by Michalský and Hooda (2015) concluded that sourcing fruit and vegetables from Europe instead of non-European countries to the UK could help make considerable GHG emission savings. Choosing local food means shorter distances and less transportation, which helps reduce greenhouse gas emissions from aircraft and trucks and reduces methane emissions (a powerful GHG emission) from rotting food that travels for long periods. Another reason to choose local food is that MacRae et al. (2016) illustrated that the high level of food waste in the Western world is partly due to long-distance food transport. Likewise, Samantha Bayard, the spokeswoman for the Canadian Environment and

Climate Change Association (ECCC), said 20-30% of all food produced in Canada each year is lost to food or wasted. It is not just the food itself that causes waste but also the human resources used in production, transportation, retail/food services and household storage. Previous literature has outlined the benefits and importance of choosing local food, but we are uncertain about people's willingness to choose local food, so we will focus our attention on studying people's willingness to choose local food.

A survey of South Carolina consumers' willingness to spend on local food found they would pay an average premium of 27 percent for local produce and 23 percent for local animal products (Carpio & Isengildina-Massa, 2009). The literature notes that people are willing to pay more for local food, but we are uncertain about what factors influence their local foods buying behaviour, so we will focus on exploring more about the factors that influence local foods buying behaviour in humans. Caputo et al. (2013) explored labelling preferences for food transportation footprints and identified CO2 and food miles labels as the two significant pieces of information to consumers. However, no previous study has examined whether label stacking enhances people's willingness to choose local foods. As Xu et al. (2020) suggest, the Stacking Model predicts user purchasing behaviour that can be improved through information fusion and integrated learning. We predict our intervention could promote willingness to buy local food, so we used the two effective labels mentioned by Caputo et al. (2013) and continued to study if information stacking would increase people's willingness to buy local food.

Therefore, our research question is how do informative posters influence consumers' choice and willingness to pay for food products? We hypothesized that the poster with GHG emissions plus transportation distance of the food item will increase choice and willingness to pay for the local food items, in comparison to a poster containing only GHG emission information and a poster with no framing information provided to the subjects.

Methods

Participants

According to the sample size calculation, as we have 3 groups and we set our effect size as 0.25 and power as 0.95, we aim to collect data from a total population of 252 UBC students. Fortunately, this study has recruited 252 participants from social media (Wechat groups and Instagram posts) in total, and 196 of them are UBC students (N=252, *M*age =22, *SD*=3.8). 65 participants are identified as men and 185 participants are identified as women. In addition, 38% of them are in their 4th year, 19% of them have already graduated, and 17% of them are in their 3rd year. Also, 84% of them identified themselves as Asian, and 13% are White. Participants' self-report feeling of stress about climate change seems to be different among the population: 20% of them have a small amount of stress and 18% of them have a noticeable but tolerable amount of stress. (See appendix 1)

Conditions

This is a between-subjects study design. The independent variable is the different types and amounts of descriptive transportation information presented on the poster. Participants are randomly assigned to one of the three conditions. There are three types of foods in one condition. Also, each kind of food has both local and remote products.

The no-framing condition is our control condition which is only about the origin of food as to where it was produced. Such as the information provided with local strawberries

and remote strawberries are “This product is from Vancouver” and “This product is from Mexico” (see Appendix 2.1).

The GHG emission condition also indicates the amount of CO2 in transportation. The GHG emission of local products is calculated by 3km with is the distance from UBC farm times 153g CO2/km with is according to Canadian fleet of light trucks would match an average level of 153 g CO2/km, and the amount of GHG emission of remote products is collected from the Westjet airline website (see appendix table 1). For example the information provided with local strawberries and remote strawberries is “This product is from Vancouver and the greenhouse gas emissions from transportation are <1 kg CO2” and “This product is from Mexico and the greenhouse gas emissions from transportation are 339 kg CO2” (see Appendix 2.2).

The GHG Emission plus Transportation Distance condition not only indicates the amount of CO2 in transportation, but also the transportation distance. Such information for local strawberries and remote strawberries is “This product is from Vancouver, which is about 3 km in distance and a 10 minute ride away, and the greenhouse gas emissions from transportation are < 1 kg CO2” and “This product is from Mexico, which is 4107 km and 5.5 hours of flight away, and the greenhouse gas emissions from transportation are 339 kg CO2”(see Appendix 2.3). All the information has similar amounts for both steak and cheese in each condition but the figures may be different among products.

Measures

The online survey answers are used to collect the dependent variable, participant’s choice and willingness towards paying for local food. Participants are randomly assigned into three sets of online survey questions corresponding with three conditions, and each set of survey questions could be finished within 3 minutes. The online survey for each condition has two sections with 16 questions in total. (see Appendix 3.1). Section 1 consists of questions 1 to 9. Q1 is to measure a participant's choice when seeing local and remote food at the same time to measure whether the exposure of informative posters encourages the participant's choice to pay for local food. Q2 and Q3 are two fill-in-blank questions that give participants a 0-50 range asking them to write down the amount of money they would be willing to spend on each local and remote food. Their responses are very important to support and analyze whether the exposure of informative posters increases their willingness to pay for local food. The same 1 to 3 questions will be repeated with each food (Vancouver Beef, Alberta Beef Q4-6; Vancouver Cheese, Italian Cheese Q7-9). Section 2 consists of demographic questions 10 to 16. Q10 to 16 are measuring participants' variables, asking their occupation, current school year, gender, age, nationality, political view and stress regarding climate change. It is essential to understand the background information of the participants. The survey answers from three conditions can indicate whether the exposure of informative posters increases the participant’s willingness and choice to pay for local food.

Procedures

We conducted online surveys and collected data by posting on the UBC qualtrics online survey software. The qualtrics survey website automatically created a link after we published the survey, and anyone who received this link can open and see our questions directly. participants are required first to read and sign the consent form of our survey. After the consent form, participants were randomly assigned into one of three sets of questions corresponding with three conditions, in these separate sets of questions different amounts of descriptive transportation information is provided. There are 9 questions asking their choice and willingness to pay for three types of local and remote foods (strawberry, beef and

cheese). The end of the survey contains 7 demographic questions including occupation, current school year, gender, age, nationality, political view and stress regarding climate change. We experienced two different forms of data collection. First, we decided to send the survey links to our UBC classmates and publish this link in all our social media (Instagram, Wechat, Facebook) at 10 pm on Monday . We received almost 200 responses within 24 hours. However, on the next day it seems that we hit a wall, and only a few more participants were willing to fill out the online survey. Because of this, we decided to go to the UBC Nest and pick some random participants to fill it out. with this we finally got the full 252 responses within 2 days and quickly moved on to data analysis. We used JASP for statistical analysis: A Chi-Square test was performed to examine the different types and amounts of descriptive transportation information and the choice of the food item; A Two-Way Mixed ANOVA was performed to analyze the effect of the location of food item and different types and amounts of descriptive transportation information on the willingness to buy each kind of local and remote food had an effect.

Results

A Chi-Square test was performed to examine the different types and amounts of descriptive transportation information and the location of strawberries. The relation between these variables had no significant effect $\chi 2$=1.069, p =.586 (see Appendix Figure 4.1). The results showed that more people would not choose local food after seeing information of transport distance and GHG emissions, which does not support the hypothesis. The relation between these variables was significant, $\chi 2$=7.979, p =.019 (see Appendix Figure 4.2). 66% of participants chose local steak and 34% of them chose remote steak, and after the presentation of the amount of CO2 in the transportation of transportation distance between local and remote food, 77.50% of participants chose local steak as compared to 22.5 % of them chose remote steak (see Appendix Figure 4.2). The results showed that more people would choose local food after seeing information of transport distance and GHG emissions, which supports the hypothesis. The relation between these variables was significant, $\chi 2$=14.125, p<.001 (see Appendix Figure 4.3). 23% of participants chose local cheese and 77% of them chose remote cheese, and after the presentation of the amount of CO2 in the transportation distance between local and remote food, 49% of participants chose local cheese as compared to 51% of them chose remote cheese(see Appendix Figure 4.3). The results showed that more people would choose local food after seeing information of transport distance and GHG emissions, which supports the hypothesis.

A Two-Way Mixed ANOVA was performed to analyze the effect of the location of food items and different types and amounts of descriptive transportation information on the willingness to buy local and remote food. A Two-Way Mixed ANOVA showed revealed no significant main effect of the location of strawberry, F(1, 249) = 2.53, p =.113, η^2=.010 (see Appendix Figure 4.4), and no significant main effect of different types and amount of descriptive transportation information, F(2, 249) = 0.24, p =.788, η^2=.002 (see Appendix Figure 4.4), and no significant interaction between the location of strawberry and different types and amount of descriptive transportation information, F(2, 249) = 1.22, p =.299, η^2=.010 (see Appendix Figure 4.4). People would not increase their willingness to pay for the local food items after the poster with GHG emissions plus transportation distance was displayed, which does not support our hypothesis. A Two-Way Mixed ANOVA revealed no significant main effect on the location of steak, F(1, 249) = 1.68, p =.196, η^2=.007 (see Appendix Figure 4.5), and no significant main effect on different types and amount of descriptive transportation information, F(2, 249) = 0.51, p =.604, η^2=.004 (see Appendix Figure 4.5), and no significant interaction between the location of steak and different types

and amount of descriptive transportation information, $F(2, 249) = 0.52$, $p = .597$, $\eta^2 = .004$ (see Appendix Figure 4.5). The results could not support our hypothesis, our posters do not promote a significant effect on participants' willingness to pay for the local food items. A Two-Way Mixed ANOVA showed revealed a significant main effect of the location of cheese, $F(1, 249) = 61.40$, $p < .001$, $\eta^2 = .20$ (see Appendix Figure 4.6), and no significant main effect of different types and amount of descriptive transportation information, $F(2, 249) = .51$, $p = .601$, $\eta^2 = .004$ (see Appendix Figure 4.6), and also no significant interaction between the location of cheese and different types and amount of descriptive transportation information, $F(2, 249) = 1.31$, $p = .273$, $\eta^2 = .010$ (see Appendix Figure 4.6). Descriptive statistics show that participants were more willing to buy local cheese at conditions when only GHG emission is provided ($M = 10.44$, $SD = 6.72$), when no framing information is provided ($M = 10.40$, $SD = 6.72$), when all transportation information is provided ($M = 10.97$, $SD = 8.82$), as compared to remote cheese at conditions when only GHG emission is provided ($M = 13.30$, $SD = 9.27$), when no framing information is provided ($M = 15.19$, $SD = 10.23$), when all transportation information is provided ($M = 15.15$, $SD = 12.35$)(see Appendix Figure 4.7) the results indicate a significant effect of the variable on location. Which means people are more willing to buy the remote cheese and less willing to buy local cheese, regardless of the descriptive transportation information. Therefore, it also does not support our result.

Discussion

We concluded from our measurement results that in our study the data suggested from the results of the Chi-square test showed that more people would choose local food specifically cheese and steak after seeing information about transport distance and GHG emissions, which supports our initial hypothesis.

In terms of limitations we experienced during and after the survey was published, and things which could be prevented in attempting to re-run this kind of a study. Firstly, the GHG emissions calculation didn't include the amount of food production, it just calculated the emission of planes, and trucks used for transportation. Additionally, there is a lack of evidence in our study which investigated the correlation between the amount of product available for a given food transport vessel in terms of carriage and the maximization of transport practices, relative to the amount of GHG emission created in the transportation process. Additionally, our survey used two slightly different pictures for local and remote products which ultimately could lead to confounding effects in our data collection. Moreover, the difference in visual stimuli could create different responses.

Participants and clients also revealed the ways in which foods from different regions, such as cheese from Italy, showed to have intrinsic value in associated taste just in the name of the region where the food came from, that ultimately corresponds to how consumers perceive the product regardless of the taste even prior to sampling it. In addition, it could be argued that the information which we provided on cheese and steak was not sufficient as to the specificity of the type of product, for example: the type of cheese, or the cut of steak, and this enforces the limitation of our study mentioned in the previous sentence. In terms of the participants it should also be noted that not all participants used in this study were current UBC students, some were graduates, and it was also revealed that some simply did not ever attend UBC. Nonetheless, on this previous point of concern over whether individuals attended UBC the data is still representative of consumer selection bias given information on GHG emissions and travel distance as we set out to do in our hypothesis.Additionally, in our survey questions we did not include a dietary preference for our participants this should considered as a point of revision to make and include in future studies.

Another aspect of the later responses from participants who had taken the survey revealed some demand characteristics, or in other words individuals were trying to determine the goal or aim of the study during the physical survey process, although the degree to which demand characteristic was a confounding factor in our analysis is indeterminable from a numerical standpoint. One other aspect which we received in response to our survey was that participants did not have a good grasp on what the current market price of these products was at the time. This could be due to the current state of food price fluctuations at the time of the study in 2022, this could also be due to our demographic of participants being younger individuals who potentially do not possess good spending habits or a number of other factors related to consumer food purchasing such as green purchasing habits (Witek & Kuźniar, 2020).

Some of the challenges we faced in conducting our study were the lack of time provided to complete the study and the resources available to us. Arguably, with more previous knowledge about the formation of the survey itself there would be a greater ease and less risk associated with formulating the questions and slides in the survey. In summary of the discussion section, however, there are multiple aspects which could be improved upon for further studies examining aspects of consumers' spending habits and the important issue of encouraging green purchasing behaviour in young adults, and more specifically within UBC students and staff.

Recommendation

We suggest that with our findings, there could potentially be further valuable information, investigation, and implementation of a similar style labelling program within UBC's food service department in order to help with SEEDs goal of creating UBC's first climate-friendly food label, with the aim of "developing a methodology and framework that assesses greenhouse gas (GHG) emissions and other attributes for menu ingredients. It also evaluates perceptions and the impacts that Climate-Friendly Food Labels may have on awareness, knowledge and purchasing decisions"(SEEDS, 2022). Moreover, creating a better understanding of these effects on consumers by advertising on the menus or labelling food container could generate a better set of consumer habits. Also, with the added flexibility of increased willingness to pay extra money for local products, as mentioned Isengildina-Massa's (2009) study which found that exactly this, consumers would pay an average premium of 27 percent for local produce and 23 percent for local animal products.

Additionally, on the specific basis of reducing and contributing less to GHG emissions by having these consumer habit provided in our study for consideration, it shouldn't be forgotten that about one-third (34%) of GHG emissions come from food (Crippa et al., 2021), and 21% of UBC's overall emissions in 2019 and 31% of extended emissions (SEEDS, 2022). Moreover, it would be beneficial for UBC to maximize their GHG reduction efforts by taking into account this very important aspect of transportation GHG emissions in the preparation of food for students and staff by the UBC food services network. By doing so and encouraging further green purchasing habits, this can help as a part to consider in reducing the overall GHG emissions of the UBC campus café's, dining halls, and food vendors alike beyond the current goal of 60% of the ingredients that are purchased from local producers (within 400km of UBC) like the UBC Farm (SEEDS, 2019). Additionally, accounting for some of the limitations mentioned above and providing a more rigorous and fool proof method of surveying could generate better findings on the specifics of consumer habits when attempting to calculate their preferences and behaviour towards making green purchasing decisions. Specifically, with regards to the often unthought of factor in food

consumption and production which is the sourcing of the product and the associated GHG emissions that occur when transporting goods from producer to the lunch menu on campus.

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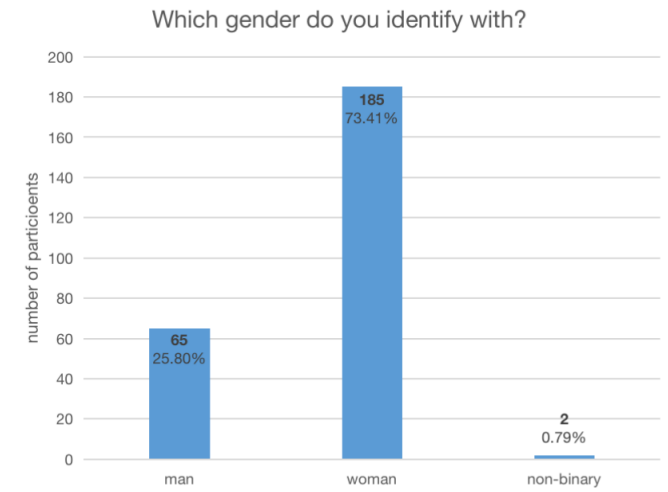
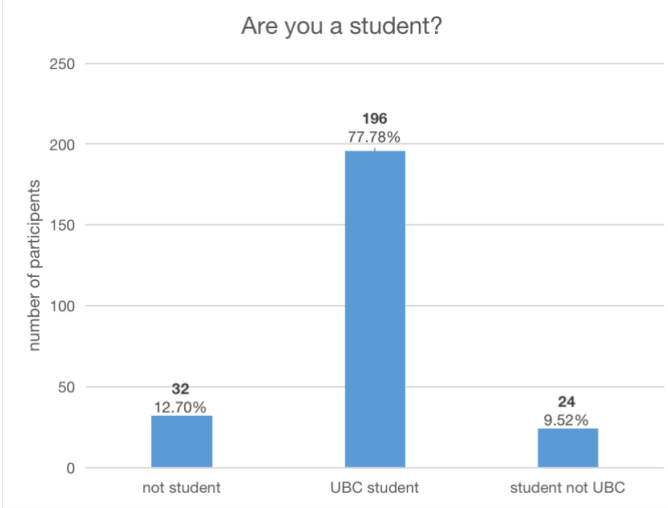
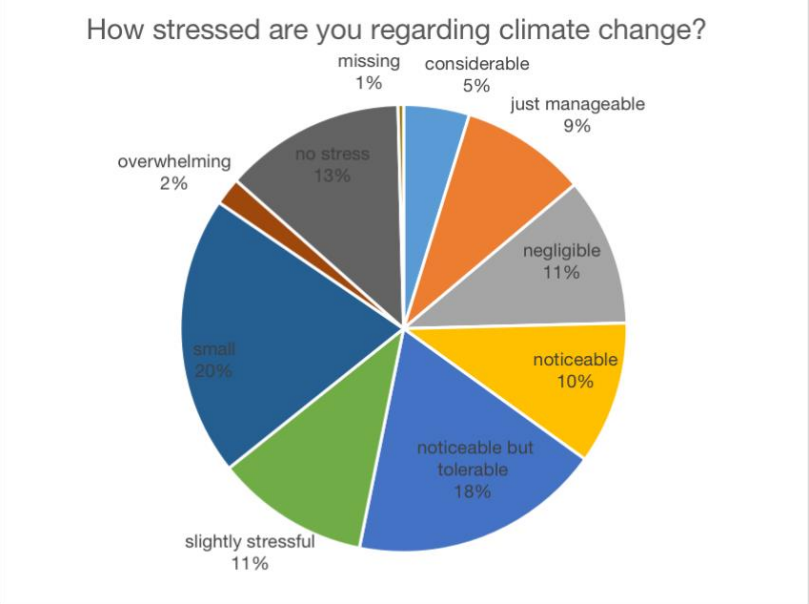
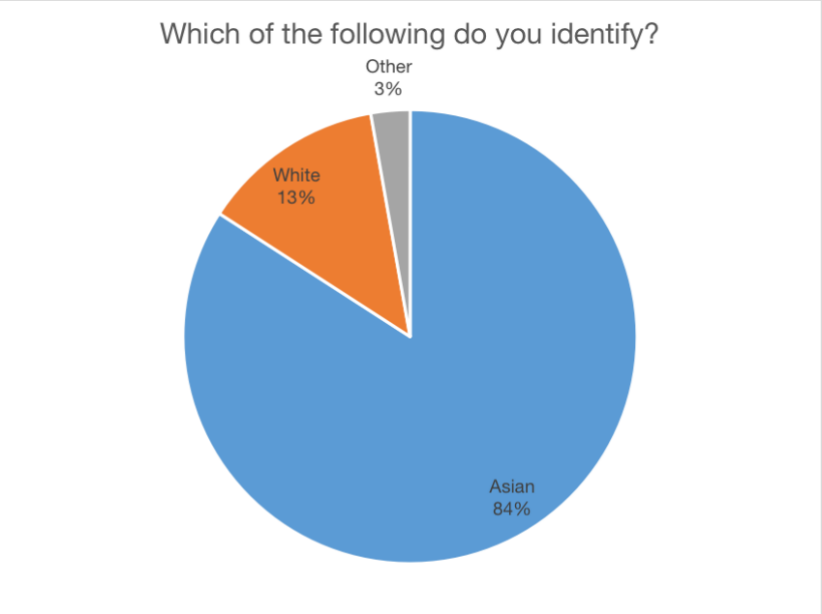
Appendix

Appendix 1: participant variable results


Which gender do you identify with?
number of particioents
200
180
160
140
120
100
80
60
40
20
0
65
25.80%
185
73.41%
2
0.79%
man
woman
non-binary

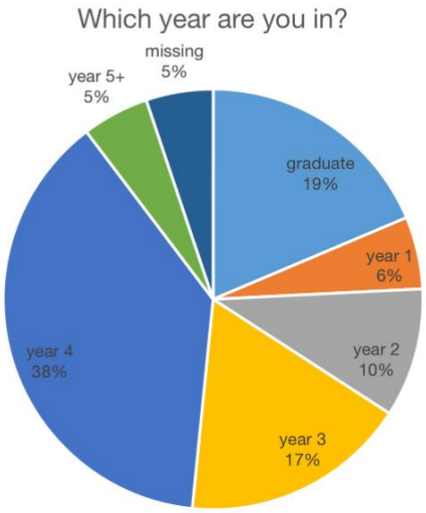

Are you a student?
number of participents
250
200
150
100
50
0
32
12.70%
196
77.78%
24
9.52%
not student
UBC student
student not UBC


How stressed are you regarding climate change?
missing 1%
considerable 5%
just manageable 9%
negligible 11%
noticeable 10%
noticeable but tolerable 18%
slightly stressful 11%
small 20%
overwhelming 2%
no stress 13%


Which of the following do you identify?
Other 3%
White 13%
Asian 84%

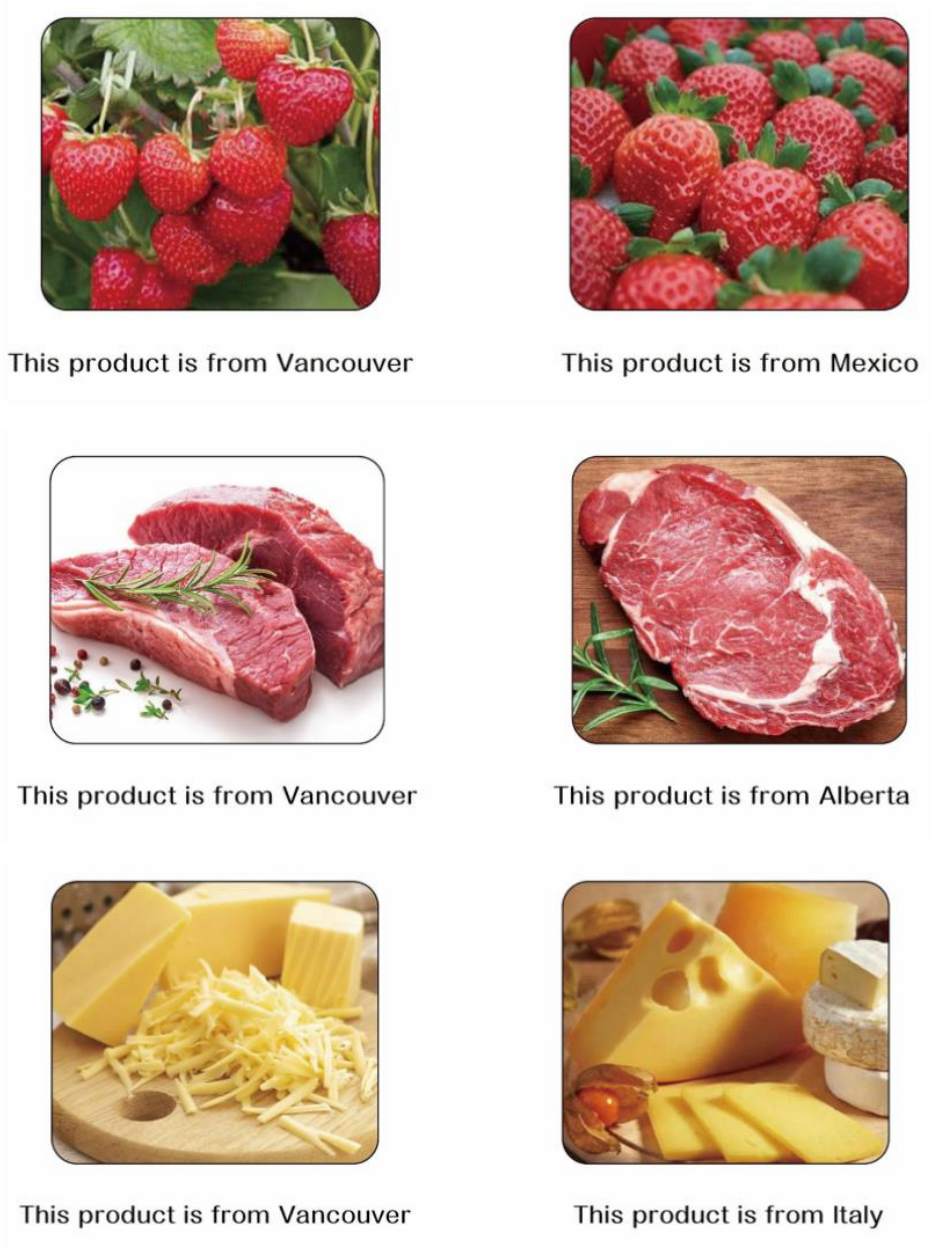
Descriptive Statistics

	What is your age (in years)?
Valid	252
Missing	0
Mean	22.536
Std. Deviation	3.840
Minimum	10.000
Maximum	53.000



	Vancouver Strawberry	Mexico Strawberry	Vancouver Steak	Alberta Steak	Vancouver Cheese	Italian Cheese
Distance	3km	4107km	3km	1350km	3km	9900km
GHG Emission	< 1kg CO2	339kg CO2	<1kg CO2	95kg CO2	<1kg CO2	906kg CO2

Appendix Table 1: This distance and GHG emissions for the foods featured in the experiment. The GHG emission of local products is calculated by 3km with is the distance from UBC farm times 153g CO2/km (Canadian fleet of light trucks would match an average level of 153 g CO2/km), and the amount of GHG emission of remote products is collected from the Westjet airline website.



Appendix 2.1: Poster of No-Framing Condition

Appendix 2.2: Poster of GHG Emission Condition

Appendix 2.3: Poster of GHG Emission plus Transportation Distance Condition

Appendix 3: Survey Questions:

This product is from Vancouver and the greenhouse gas emissions from transportation are 1 kg.

This product is from Mexico and the greenhouse gas emissions from transportation are 339 kg.

Which product would you choose?

Vancouver Strawberry

Mexico Strawberry

How much are you willing to pay for a box (340g) of Vancouver strawberry? ($0 to $50)

How much are you willing to pay for a box (340g) of Mexico strawberry? ($0 to $50)

This product is from Vancouver

This product is from Alberta

Which product would you choose?

Vancouver Steak

Alberta Steak

How much are you willing to pay for one pound of Vancouver steak? ($0 to $50)

How much are you willing to pay for one pound of Alberta steak? ($0 to $50)

This product is from Vancouver

This product is from Italy

Which product would you choose?

Vancouver Cheese

Italian Cheese

How much are you willing to pay for one piece (500g) of Vancouver cheese? ($0 to $50)

How much are you willing to pay for one piece (500g) of Italian cheese? ($0 to $50)

Are you a student?

- Yes, I'm a UBC student
- Yes, but I'm not a UBC student
- No

Which year are you in?

- Undergraduate Year 1
- Undergraduate Year 2
- Undergraduate Year 3
- Undergraduate Year 4
- Undergraduate Year 5+
- Graduate

Which gender do you identify with?

- Woman
- Man
- Non-binary
- Transgender
- Two spirited
- Other

What is your age (in years)?

With which of the following do you identify? (select all that apply)

- White
- Asian
- Indigenous peoples of North America
- Arab
- Latin, Central or South American
- Black
- Other

Which gender do you identify with?

- Woman
- Man
- Non-binary
- Transgender
- Two spirited
- Other

What is your age (in years)?

With which of the following do you identify? (select all that apply)

- White
- Asian
- Indigenous peoples of North America
- Arab
- Latin, Central or South American
- Black
- Other

Contingency Tables

Condition	Strawberry Choice		Total
	Mexico Strawberry	Vancouver Strawberry	
GHG EMISSION	27	59	86
GHG Emission plus Transportation Distance	26	54	80
No Framing	33	53	86
Total	86	166	252

Chi-Squared Tests

	Value	df	p
X^2	1.069	2	0.586
N	252		

Appendix Figure 4.1

Contingency Tables

Condition	Steak Choice		Total
	Alberta Steak	Vancouver Steak	
GHG EMISSION	31	55	86
GHG Emission plus Transportation Distance	18	62	80
No Framing	37	49	86
Total	86	166	252

Chi-Squared Tests

	Value	df	p
X^2	7.979	2	0.019
N	252		

Appendix Figure 4.2

Contingency Tables

Condition	Cheese Choice		Total
	Italian Cheese	Vancouver Cheese	
GHG EMISSION	46	40	86
GHG Emission plus Transportation Distance	41	39	80
No Framing	66	20	86
Total	153	99	252

Chi-Squared Tests

	Value	df	p
X^2	14.152	2	< .001
N	252		

Appendix Figure 4.3

Repeated Measures ANOVA

Within Subjects Effects

Cases	Sum of Squares	df	Mean Square	F	p	η_p^2
Strawberry	59.176	1	59.176	2.529	0.113	0.010
Strawberry ✻ Condition	56.850	2	28.425	1.215	0.299	0.010
Residuals	5825.952	249	23.397			

Note. Type III Sum of Squares

Between Subjects Effects

Cases	Sum of Squares	df	Mean Square	F	p	η_p^2
Condition	51.996	2	25.998	0.238	0.788	0.002
Residuals	27170.540	249	109.119			

Note. Type III Sum of Squares

Appendix Figure 4.4

Repeated Measures ANOVA

Within Subjects Effects

Cases	Sum of Squares	df	Mean Square	F	p	η_p^2
Steak	59.821	1	59.821	1.683	0.196	0.007
Steak ✻ Condition	36.724	2	18.362	0.517	0.597	0.004
Residuals	8851.045	249	35.546			

Note. Type III Sum of Squares

Between Subjects Effects

Cases	Sum of Squares	df	Mean Square	F	p	η_p^2
Condition	202.193	2	101.097	0.506	0.604	0.004
Residuals	49754.489	249	199.817			

Note. Type III Sum of Squares

Appendix Figure 4.5

Repeated Measures ANOVA

Within Subjects Effects

Cases	Sum of Squares	df	Mean Square	F	p	η_p^2
Cheese	1910.564	1	1910.564	61.401	< .001	0.198
Cheese ✻ Condition	81.320	2	40.660	1.307	0.273	0.010
Residuals	7747.944	249	31.116			

Note. Type III Sum of Squares

Between Subjects Effects

Cases	Sum of Squares	df	Mean Square	F	p	η_p^2
Condition	142.426	2	71.213	0.510	0.601	0.004
Residuals	34754.098	249	139.575			

Note. Type III Sum of Squares

Appendix Figure 4.6

Descriptives

Descriptives

Cheese	Condition	Mean	SD	N
Local	GHG Emission plus Transportation Distance	11.113	9.124	80
	GHG EMISSION	10.442	6.715	86
	No Framing	10.395	6.722	86
Remote	GHG Emission plus Transportation Distance	15.150	12.351	80
	GHG EMISSION	13.302	9.271	86
	No Framing	15.186	10.229	86

Appendix Figure 4.7

PSYC 421 Whole Project Contributions

Each person in our group contributed equally throughout the whole project.

For the proposal, we had consistent online and in person meetings to discuss and integrate our ideas together. Spencer was responsible for creating google docs and making plans for each of us. Haiqing was responsible for sending emails to TAs and professors to book office hours. Wenjia, Yumeng and Wei were responsible for taking notes during the meetings and trying to give improvement suggestions. We all wrote together in a proposal and Spencer was also responsible for checking grammar.

For the running of data collection, everyone made a great effort to collect data, we would do both online collection and face to face collection on UBC campus. Everyone tried their best to find UBC students on social media and Nest Center. We finished the whole data collection in a day and half.

For running data analysis, everyone in our group watched JASP videos in order to learn how to operate the system. Spencer was responsible for downloading and transferring the data from qualtrics in appropriate format. Yumeng, Wenjia and Wei booked office hours with TAs and took notes for improvement. Haiqing ran the data and graphs in JASP. All other people checked the data and graphs before the formal meeting with the professor.

For the presentation and report, we divided our research into individual parts, Wenjia was responsible for the introduction part, Wei was responsible for participants and condition parts, Yumeng was responsible for the measurements and procedures parts, Haiqing was responsible for results, and Spencer was responsible for discussion and recommendation sections. Besides that, Haiqing was responsible for communicating with clients and instructors through email. Yumeng did a fantastic job with creating illustrations and organizing the survey questions on qualtrics. Wenjia did a lot of work in finding previous research and deciding our topic according to her findings. Wei took control of the research posters. Spencer checked everyone’s grammar and ways of formal expression before submission on each of the documents throughout the process.

Everyone in our group put equal effort and tried their best to complete the whole project.