



To Explore the Relationship Between Purchase Intentions and Covid-19 Pandemic by Linear Regression on SPSS

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Abstract. The Covid-19 pandemic has brought various negative influences to people's life since 2020. However, does the covid-19 have a positive impact on people's lives? More people are trying to live better, therefore, an increasing number of people are willing to buy organic products. Thus, the paper conducted a research to explore whether the covid-19 pandemic indirectly stimulated people's willingness to buy organic food. First, the research put forward some hypotheses through previous researches. Next, a questionnaire was designed, and 46 participants were randomly recruited to fill out the questionnaire via the online survey platform. Then the research utilized linear regression on SPSS to test the hypothesis. Finally, the empirical results reflect that health consciousness is positively related to the Covid-19 pandemic, and also the health consciousness has an indirect effect on green food purchase intention through the Covid-19 pandemic. Specifically, many people would like to buy organic food to ensure their health during the pandemic because people are concerned about their health. The research provides important implications for the market dynamics of organic food in the context of the covid-19 pandemic. Future research directions and limitations are also discussed.

Keywords: Organic food · Covid-19 Pandemic · Health Consciousness · Purchase intention

1 Introduction

In the past decades, the market of organic food in both Europe and the United States has developed rapidly, and the market gradually consummates. Most consumers are satisfied with organic foods rather than inorganic foods. Many scholars are researching the factors that influence purchase intention and consumer behavior for organic food. Some factors such as Health, Availability, and demographic factors like education level positively impact consumer purchase intention [1]. However, not all the factors have the same level of influencing consumer purchase intention. Some factors are most important, and some are not. Health Consciousness, Environment Friendly, food quality, and safety are the most important factors influencing consumer purchasing Organic food. Other factors

such as Social consciousness, Fashion Trend, and Unique lifestyle are less important in influencing consumers' attitudes toward buying organic food [2].

Other researchers conduct the relationship between purchase intention and purchase behavior. People might have purchase intentions, but they still will not buy any organic food. This phenomenon is called IBG (Intention-Behavior Gap). Health consciousness, Perceived attributes, Environmental consciousness, and social influence are the essential factors that drive consumers' purchase intentions. The higher price, unavailability, distrust, and limited knowledge are the factors that hinder consumers purchase organic food [3].

Affected by the 2020 Covid-19 pandemic, social distancing, Working from home, and Quarantine have dramatically changed people's lifestyles. Not only people's lifestyles are affected, but the industry is also affected. Higher prices and unavailability weakened people's willingness to buy organic food. However, people are still faithful to buy healthier food to keep themselves healthy during the pandemic. However, we still do not have strong evidence to prove the Covid-19 pandemic affects people's health consciousness and motivates people to buy organic food. Therefore, this paper is conducting the relationship between the health consciousness and the organic food purchase intention under the influence of the Covid-19 pandemic.

2 Theory and Hypothesis

Health consciousness is the extent to which people take actions on health [4]. Health-conscious people are more taken notice of their health and have healthy habits. Therefore, they are more motivated to enhance or maintain their health situations and prevent ill health by self-directed health-conscious behavior. In the context of the Covid-19 pandemic in 2020 globally, will these health-conscious consumers be more concerned about the influence of the Covid-19 pandemic and more care about maintaining their healthy lifestyle in daily life? For instance, due to the closure of gyms and other facilities during the pandemic, home-based exercise became popular, people increased the frequency of workouts at home [5], some fitness enthusiasts even converted their garage into a private gym. People did not stop working out because of the pandemic, and they still keep working out at home instead of the fitness club. In addition, people who pay attention to the diet are more attached to the balance of diet collection and the intake of organic food during the pandemic situation. All of these actions are the rational response of health consciousness to the Covid-19 pandemic. Thus, the research proposed our hypothesis:

Hypothesis 1: Health Consciousness is positively related to the Covid-19 pandemic.

In the previous research, many research scholars have studied the factors that affect consumers' purchase behavior of organic food. Many factors affect consumers' purchase behavior, including health consciousness, availability, food safety Concern, and demographic factors [1]. However, during the covid-19 pandemic, the relationship between pandemic and purchase intention has not been supported in all studies. Therefore it leads to another hypothesis:

Hypothesis 2: Covid-19 pandemic is positively affecting people's purchase intention of organic food.

Health-conscious individuals might be more concerned about the health conditions during the Covid-19 Pandemic, and they might adjust their healthy living habits, which will affect their willingness to buy organic food. Therefore, we proposed the following hypotheses:

Hypothesis 3: Health Consciousness has an indirect effect on green food purchase intention through the Covid-19 pandemic.

3 Methodology

3.1 Participants and Measure Procedure

The research designed a questionnaire with four sections to test our hypothesis. All data sources are collected from the survey platform Sojump (WJX.cn). All of the items on the questionnaire are in English, and they are assessed on a 7-point Likert scale which is from 1 (strongly disagree) to 7 (strongly agree).

In the first part of the questionnaire, the research asked the participants to assess their health awareness. In the second part of the survey, the research asked the participants to evaluate their personal beliefs of the covid-19 pandemic. In the remaining part of the questionnaire, the research asked the participants about their current and future purchase intentions for organic food and asked them to provide demographic information.

All participants are people living in the United States, including local Americans and foreigners. Among the participants, 45.7% were male, and 54.3% were female. Most of them had obtained a master's degree (41.3%). Before Starting, every participant was informed that their responses would be kept confidential and anonymous, and all the information will be used for academic purposes only.

3.2 Health-Consciousness

The questionnaire used six questions about health to assess participants' health consciousness. Sample question: I take responsibility for the state of my health. The Cronbach's alpha of Health-consciousness is 0.864.

3.3 Pandemic

There were three questions to evaluate participants' beliefs on the Covid-19 pandemic. Sample question: Respond to the Covid-19 pandemic is a priority of mine. The Cronbach's alpha of Pandemic is 0.794.

3.4 Purchase Intention

There were five questions to assess participants' willingness to choose organic food. Sample question: I will buy organic food products in the near future. The Cronbach's alpha of purchase intention is 0.950.

3.5 Control Variables

The survey included several demographic variables as control variables, because these variables affect people's behavioral outcomes and social interaction. Thus, we controlled for participants gender (1 = Male; 2 = Female), age (1 = Under 14 years old; 2 = 14–19 years; 3 = 20–29 years; 4 = 30–39 years; 5 = 40–49 years; 6 = 50–59 years; 7 = 60 years or above), education (1 = Up to high school; 2 = Bachelor's degree; 3 = Master's degree or higher), marriage (1 = Single/Not married; 2 = Married/Domestic Partnership) and class (1 = Lower; 2 = Working; 3 = Middle; 4 = Upper middle; 5 = Upper).

4 Results

The research used SPSS to do the linear regression analysis and each variable's reliability, correlation, and significance to process and analyze the survey's data results.

4.1 Reliability and Validity

Before starting the linear regression analysis, the research performed a reliability analysis on all variables first. As a result, all the Cronbach values of each variable are higher than 0.7, which are above the recommended level [6]. Among them, the value of purchase intention is 0.950, reaching an excellent level.

4.2 Hypothesis Tests

Table 1 reflects the means and standard deviations of each variable and the value of correlation and significance. In Table 1, ** indicate variables that can be considered highly correlated, * can be considered correlated. In addition, the coefficient value of pandemic and health consciousness is 0.119 ($P = 0.057 < 0.1$), so these two variables are marginally significant.

4.3 Test of Direct Effects

Hypothesis 1 proposed that people's health consciousness and the Covid-19 pandemic are positively related. The results of Table 2 indicated that the health consciousness is positively associated with pandemic [$b = 0.509$, Standard error (SE) = 0.23, $p < 0.05$]. Hypothesis 1 is supported.

Hypothesis 2 proposed that the Covid-19 pandemic is positively affecting the purchase intention of consumers on organic food. The results in Table 2 indicated that the Covid-19 is positively associated with organic food purchase intention [$b = 0.524$, Standard error (SE) = 0.22, $p < 0.05$]. Hypothesis 2 is supported.

Table 1. Means, Standard deviations, correlations, and reliabilities among studied variables

Variables	Mean	SD	1	2	3	4	5	6	7
1. Gender	–	0.504	–						
2. Age	–	0.442	0.137	–					
3. Education	–	0.617	0.263	–0.101	–				
4. Marriage	–	0.252	0.071	0.564**	–0.321*	–			
5. Class	–	0.799	0.124	0.07	0.046	0.127	–		
6. Health	5.525	0.8	0.002	–0.005	0.046	0.096	–0.153	–	
7. Critical	5.196	1.173	–0.171	0.018	0.08	–0.017	0.047	0.283	–
8. Purchase	4.53	1.769	0.173	0.04	0.279	0.012	0.066	0.119	0.334*

Table 2. Hierarchical Regression Results

Variables	Pandemic		Purchase Intention		
	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	4.676	1.954	1.170	–1.281	–1.189
Controls					
Gender	–0.541	–0.557	0.314	0.598	0.601
Age	0.159	0.262	0.011	–0.072	–0.077
Education Level	0.256	0.160	0.818	0.684	0.687
Marriage	0.004	–0.358	0.644	0.642	0.657
Class	0.089	0.172	0.070	0.023	0.019
Independent Variable					
Health-consciousness		0.509			–0.021
Mediator					
Pandemic				0.524	0.529

Notes: N = 46.

Statistics reported are unstandardized regression coefficients (and standard errors).

4.4 Test of Indirect Effects

Hypothesis 3 proposed that people’s health consciousness indirectly affects green food purchase intention through the Covid-19 pandemic. The results in Table 2 indicated that the pandemic has an indirect effect on health consciousness and the purchase intention of organic food [b = 0.529, Standard error (SE) = 0.24, p < 0.05]. Hypothesis 3 is supported.

Overall, hypothesis 1, hypothesis 2, and 3 are fully supported by the research data. There is a positive correlation between health consciousness and the Covid-19 pandemic. The Covid-19 pandemic is also positively correlated with consumers' willingness to purchase organic food. Moreover, the Covid-19 pandemic plays an indirect effect role between health consciousness and purchase intention.

5 Discussion

5.1 Implications

In today's highly competitive food market, the investigating factors that change people's purchase intention on organic food will significantly impact the future development of the organic food market. Since the beginning of 2020, COVID-19 has dealt a severe blow to the world economy. Our research conducts the relationship among health consciousness, COVID-19 pandemic, and consumers' purchase intention on organic food. The results show that health-conscious people are more concerned about their health conditions during the pandemic, and the pandemic has also positively affected consumers' willingness to buy organic food. In addition, Health awareness has an indirect impact on green food purchase intentions through the COVID-19 pandemic. Therefore, organic food manufacturers and sellers can promote the advantages of organic food and attract more people to buy organic food during the pandemic, thereby expanding the entire market of organic food.

5.2 Limitations

Although our survey design is perfect and the sample collection process is successful, there are still several limitations in our studies. First of all, since the samples are mostly concentrated in the 20–30 years old middle class with bachelor degree, the sample of other age group and educational backgrounds are slightly insufficient, so we assume the external generality of our results is limited. Therefore, in order to alleviate this problem and enhance the generalizability and accuracy of our findings, the research suggest to increase the total number of samples and collect samples from multiple groups of different backgrounds in the future studies.

Second, since are the surveys were answered by same person at single time point, common method variance may affect our hypothesized relationships. Thus, we encourage to design a multi-time survey in the future study.

Third, people are likely to buy organic food, but the purchase behavior does not necessarily happen. This phenomenon is called the intention-behavior gap. The participants may not distinguish between the purchase willingness and the purchase behavior in the questionnaire, so this may cause errors in the sample results. Therefore, it is significant to explain the differences between purchase intentions and purchase behavior to participants before they start to fill out the survey. It will ensure the accuracy of the sample results in future studies,

5.3 Directions of Future Studies

The future research direction can also in-depth study the factors that affect people's actual purchase behavior of organic food under the Covid-19 pandemic background. Here are some suggested possible factors that might affect people's actual purchase behavior. Due to some transportation restrictions under the Covid-19 pandemic, there will be issues of affordability and accessibility, which may cause organic food shortage in the market and the price going up, in this way people can't afford the price and their purchase intention will go down. In addition, people may think that avoiding going to high foot traffic areas such as supermarkets can help prevent diseases because of health awareness. The mentioned above possible factors still need more in-depth research in the future.

In addition, the future research direction could also place emphasis on the influential factors of the Intention-Behaviour Gap on green food purchase. The different factors might positively influence the purchase intention of organic food rather than the actual purchase behavior. For instance, environmental consciousness, health consciousness, and enjoyable shopping experience might positively relate to the purchase intention of organic food. However, some of the factors like high prices, unavailability, and limited knowledge might stop consumers from buying organic food in real life, thus resulting in an Intention-Behaviour Gap [3]. In the context of the Covid-19 pandemic, the IBG phenomenon would be more obvious. The high demand and low supply of organic food market might cause high prices and unavailability, which leads to the reverse effect of consumers' actual purchase behavior. Therefore, the more in-depth research on the Intention-Behaviour Gap of organic food purchase would bring the improvement for the future organic food market a far-reaching influence.

6 Conclusion

The study found that the self-health consciousness of people makes them pay more attention to the covid-19 pandemic, indirectly affects their organic food purchase willingness. Specifically, the research identified that health consciousness indirectly affects green food purchase intention through the Covid-19 pandemic. Furthermore, during the pandemic, consumers are more willing to choose organic food. Therefore, manufacturers and sellers of organic food can take this opportunity to expand the existing organic food market by providing a wider variety of organic products. In addition, organic food buyers can take this opportunity to change their consumption habits to improve their healthy living standards. Thus, the Covid-19 pandemic provides an opportunity to build a more well-established organic food market.

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