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Forming Purchase Intentions on Plant-Based Food Products During Covid-19 Pandemic

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ABSTRACT

This research intends to test and analyze the influence of influences factors such as health consciousness, environmental concern, social influence, and perceived attributes on plant-based food products purchase intention. The aim of this research also wants to know the impact of covid-19, which acts as a moderator, and consumer attitudes as a mediator of the influences factors tested on purchase intention. Our research was conducted on 338 respondents using google form as the distribution medium, of which 283 respondents were Indonesian, and 55 respondents were Taiwanese respondents. Data processing in this research used the partial least squares structural equation model (PLS-SEM) with SmartPLS 3 software. The result shows the direct influence of influence factors, namely health consciousness, social influence, and perceived attributes to plant-based food product purchase intentions. In addition, indicators that act as mediators and mediation on social influence and perceived attributes factors, namely covid-19 impact and attitude, also give positive results to plant-based food products purchase intention. However, this research also found no direct effect of influences factors environmental concern on plant-based food products purchase intention.

Keywords: Covid-19 Impact, Purchase Intention, Plant-Based Food

INTRODUCTION

The rapid development of technology today certainly helps consumers obtain information and scientific insights that are spread globally. This directly or indirectly has an impact and influence on consumer behavior. Today's World Communities tend to start paying attention to their healthy lifestyle and diet, which is influenced by certain factors. Data from the World Health Organization also influence this change in consumer behavior. Every year, more than 41 million people die due to non-communicable chronic diseases caused by unhealthy eating patterns. Where this death case reaches 71% of the total global death case. The Corona Virus (Covid-19) pandemic, which in early March 2020 was determined by WHO as a global pandemic, has also greatly affected the lifestyle of consumers, both directly and indirectly, from changes in people's mindsets and behavior and decision-making of these consumers (Di Crosta et al., 2021).

This pandemic indirectly impacts increasing public awareness of health and hygiene because today's world community is generally very concerned about their health and immune system. Based on a research by Yousfi, Bragazzi, Briki, Zmijewski, and Chamari (2020), humans can maintain their immune system by doing regular exercise, adequate rest, and sleep, consuming healthy and nutritious food, and sunbathing in the morning to get vitamin D in the morning. So, what needs to be considered by consumers to maintain their body's immunity is not only their lifestyle but also their diet. Consumers must also regulate a healthy diet by reducing consuming unhealthy foods (high in sugar, salt, fat, and others) and limiting the number of daily food calories consumed by the body. Changing lifestyle and eating patterns to be healthier will undoubtedly be a challenge for consumers. People living in urban areas have hectic schedules in today's era, so it will be more challenging to regulate their lifestyles. In addition, consumers' eating patterns are now accustomed to consuming fast food and unhealthy foods. This is evidenced by data obtained from the World Health Organization regarding obesity in 2016. The data show that around 1.9 billion people worldwide are overweight, and 650 million of them are obese. According to data from The Global Burden of Disease in 2017, more than 4 million people die every year because of overweight or obesity cases, which has undoubtedly become a serious global problem.

In this research, the researchers focus on plant-based food products because previous studies have shown that plant-based food consumption can maintain health and help weight loss (Turner-McGrievy et al., 2014). The changes in people's lifestyles and eating patterns are certainly not influenced by the health aspect alone, whereas other factors still influence changes in diet. Advances in technology and social media that exist today have also indirectly affected the world's beauty standards, where this has caused many consumers, especially teenagers, to try to regulate their diet and lose weight to follow the influence of

public figures. They try to get the ideal body shape, so generally, some consumers do unhealthy diets and do harmful things to their bodies.

In recent years, the consumption of plant-based food products has become a trend and is widely followed by the public. Consumers' reasons for consuming plant-based food are different. Some consumers follow plant-based food consumption because of the above factors. However, some also follow plant-based food consumption for environmental concerns. Whereas we know that the world is currently facing global warming, greenhouse gas emissions are a significant problem to face. Without us realizing it, the process of raising and breeding animals is one of the most critical contributors to gas emissions, where animal breeding produces around 14.5% of the total global greenhouse gas emissions (Gerber, P.J., Henderson, B. and Makkar, 2013) and many world community movements are conducting counseling to reduce the consumption of meat-based foods. Then, researchers will focus on the factors that influence consumers' purchase intention of plant-based food products, where the influencing factors to be tested are health consciousness, environmental concern, social influence, and perceived attributes.

The gap phenomenon used for this research is the "Food Gap" phenomenon. It has been estimated from a study conducted by the World Bank that in 2050 the world will experience a "Food Crisis". The food crisis can occur because the world's population is increasing rapidly every year. In contrast, the world's green land area and capacity for food production will decrease as more land is used for other human activities. In 2050, it is estimated that the world's population will reach 10 billion people so the need for food is estimated to increase by around 70% (Tim Searchinger, 2019). The factor causing the "Food Gap" phenomenon occurs not only because of the significant increase in the world's population every year but also because of changes in consumer eating patterns which are more interested in consuming junk food and fast food. Whereas we know that, in general, these foods tend to come from animals. The development of the need for animal meat consumption will undoubtedly be directly proportional to the development of the livestock industry in the world, which of course will also support the reduction of the world's green land for the cultivation of other essential food ingredients (Mekonnen & Hoekstra, 2012). From this, we can see that the world must take steps to prevent a food crisis from occurring in the future, perhaps in the future, starting a change in consumer food patterns to reduce consumption of animal-based foods and strive to maintain food availability. In this research, the researchers also want to know the public's response to Plant-Based Food products and what factors are influence the consumers to Purchase Intentions toward Plant-Based Food products.

The Covid-19 pandemic still being faced by the world today has unwittingly led to new phenomena or trends in the world community. One of them is the trend of plant-based food consumption, as evidenced by the increasing market size of

plant-based food products globally. In 2020 it was noted that the market size of plant-based food products reached \$42186.43 million and is expected to reach \$81538.73 million in 2028, with a CAGR increase of around 8.71% during the forecast period. These trends emerged to the impact of the Covid-19 pandemic. These trends are also influenced and supported by the other influence factors discussed previously. So for these reasons, this research was conducted to provide complete information regarding influences and factors that may affect plant-based food products purchase intentions during and after the Covid-19 pandemic, especially in Indonesia and Taiwan society.

LITERATURE REVIEW

Plant-Based Food Purchase Intention

Currently, the development of the food industry and food technology has undoubtedly proliferated. These developments are indeed in line with consumer needs for food quality and food safety. In general, plant-based food products are foods made from plants (vegetables, nuts, wheat, legumes, and fruits). In general, these plant-based food products are also more in demand by consumers who follow a vegan and vegetarian diet. However, along with the growth and development of consumer interest in plant-based food products, few world food industries, and world entrepreneurs compete to develop and carry out the latest innovations to satisfy consumer desires (Melina et al., 2016). This is undoubtedly proven because it is easier for consumers to find Plant-Based Food products today. Consumers have found it easier to find plant-based dairy products, processed "imitation" meat products, and other products. This can have a good impact. The more availability of plant-based food products and the more accessible consumers obtain the product. It can also increase the enthusiasm for plant-based food consumption for consumers and increase plant-based food purchase intention (Melina et al., 2016).

Moderating roles of Covid-19 Impact on Plant-Based Food Purchase Intention

As we know, the world is still facing the Covid-19 pandemic and has yet to find its final solution. Since it was determined by the World Health Organization (WHO) in March 2020, under the spread of the SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2) which was designated as a global pandemic, this pandemic is still considered a severe problem for the world's population. This pandemic has unwittingly directly or indirectly changed the behavior of world consumers, especially in terms of purchasing decisions on a product. This is, of course, due to the policies of each country to limit activities and enforce social distancing regulations to prevent the uncontrolled spread of the Covid-19 virus. People's behavior, which is currently known as the "New Normal" behavior, makes the world's people accustomed to doing their activities online,

whether they are buying daily necessities, working, studying, exercising, or other activities. Without us even realizing it, this pandemic has changed the Global Food Systems, caused by consumers who are more aware and care about their health. Today's society is more concerned about the health and hygiene of their bodies and the products they will consume. This is also the reason why the world's people's diets change to healthier diets. So, in the future, it can increase the intention to purchase plant-based food products, and plant-based food products can help consumers maintain their diet and lifestyle (Qi et al., 2020).

Influences Factors and Plant-Based Food Purchase Intention

As discussed earlier, there are several influencing factors tested in this research: health consciousness, environmental concern, social influence, and perceived attributes. This research also discusses the role of attitude as a mediating variable of the influence factors on plant-based food purchase intention. As discussed earlier, the first influencing factor, namely health consciousness, will generally affect consumers' purchase intentions for plant-based food products. Whereas we know that the health aspect today is the most critical in consumers' lives, and not a few consumers are willing to spend large amounts of money on maintaining their health. The increasing number of chronic disease cases worldwide caused by an unhealthy diet and lifestyle certainly increases public awareness to take better care of their health. This is also supported by data from research conducted by the World Health Organization, that every year there are around 17.9 million cases of death caused by cardiovascular disease.

Global Warming is undoubtedly one of the main problems facing the world today. The world is competing to reduce waste and pollution to the environment, increasing the number of gas emissions that can trigger the worsening of global warming. So currently, some institutions and communities care about the earth and the environment making every effort and counseling so that the world community is more concerned about environmental conditions. According to Bertradius & Gambier (2014), environmental concern, is a person's behavior and psychological when they begin to realize and be concerned for the surrounding environment, where this concern can increase the awareness and desire of the person to participate in protecting the environment for its sustainability. This desire to protect the surrounding environmental conditions is expected to be a factor to increase consumer intention for plant-based food purchases intention. Because as discussed earlier, that animal husbandry is one of the contributors to gas emissions and triggers global warming. So that if these consumers start to have a sense of environmental concern, they will tend to start reducing their consumption of food sourced from meat and switch to plant-based food products (Gerber, P.J., Henderson, B. and Makkar, 2013).

The following influence factors that will be discussed in this research are social influence and perceived attributes. As we know that humans are social

creatures, and humans can socialize. Nevertheless, without us realizing it, this way of socializing keeps people motivated to "Fit In" to the surrounding social environment. We also know that every human being must have social power even though they have different power levels. As technology and social media develop, we will unknowingly form peer influence or opinion leaders currently being used as a marketing strategy for every company (Solomon, 2016). This consumer behavior can affect a person's lifestyle or lifestyle. A person's diet is easily influenced by the surrounding environment, whereas we know every human being in different parts of the world certainly has a different diet. Because of this, it is expected that a positive influence on plant-based food products with trends in society, can influence and increase plant-based food purchase intention. The next influence factor is perceived attributes. Perceived attributes themselves can be interpreted as advantages or characteristics that consumers expect to be offered from a product. In general, perceived attributes can certainly affect consumer purchase intentions because every consumer will consider the value obtained from a product when the consumer buys a product. (Martinez, Ornelas, 2019; Jang, Ha, Silkes, 2009). So, it is hoped that the perceived attributes offered by plant-based food products (taste, appearance, quality, healthiness, cleanliness, natural aspects) can affect plant-based food product purchase intention (Qi et al., 2020). The Research Framework used in this research will be attached in Figure 1 below:

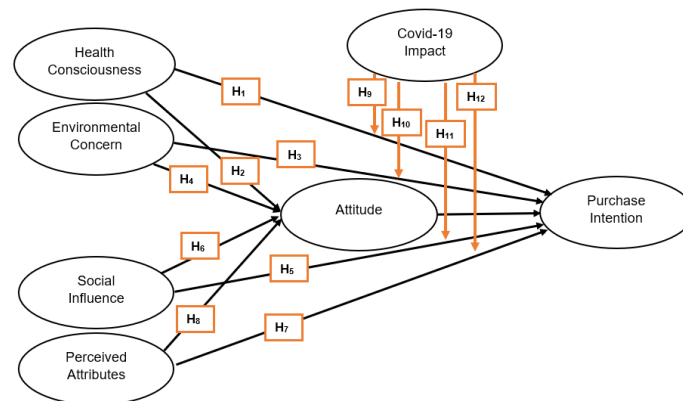


Figure 1. Research Framework
Source: Processed Data by Researchers

The following are hypotheses that were generated in this research:

- H₁: Health Consciousness has a positive effect on Purchase Intention
- H₂: Attitude mediates the effect of Health Consciousness on Purchase Intention
- H₃: Environmental Concern has a positive effect on Purchase Intention
- H₄: Attitude mediates the effect of Environmental Concern on Purchase Intention
- H₅: Social Influence has a positive effect on Purchase Intention
- H₆: Attitude mediates the influence of Social Influence on Purchase Intention
- H₇: Perceived Attributes have a positive effect on Purchase Intention.

H₈: Attitude mediates the effect of Perceived Attributed on Purchase Intention

H₉: Covid-19 Impact moderates the effect of Health Consciousness on Purchase Intention

H₁₀: Covid-19 Impact moderates the effect of Environmental Concern on Purchase Intention

H₁₁: Covid-19 Impact moderates the influence of Social Influence on Purchase Intention

H₁₂: Covid-19 Impact moderates the effect of Perceived Attributes on Purchase Intention.

RESEARCH METHODOLOGY

The method used in this research is descriptive quantitative. This research was conducted by collecting data through an online system from April 2021 to July 2021. This is due to the current condition, which is still facing the Covid-19 pandemic, so it is impossible to collect data directly (meet with people or respondents). This research used seven variables, which consist of four exogenous variables (Health Consciousness, Environmental Concern, Social Influence, and Perceived Value), endogenous variables (Purchase Intention), mediating variables (Attitude), and moderating variables (Covid-19 Impact). These variables are used based on previous research conducted by Qi, Yu (2020) and Lee (2015). The sampling technique used in this research is the non-probability sampling method and the snowball sampling method. According to Ayhan, non-probability sampling method is generally used in experimental research and is not representative of the target population. Non-probability sampling uses subjective judgments and uses easy unit selection from the population (Ayhan, 2011). Meanwhile, according to Mahin Naderifar et.al, snowball sampling method is an easy sampling method. This method is applied when it is difficult to access subjects with target characteristics. In this method, existing research subjects recruit future subjects among their acquaintances. Sampling continues until data saturation (Naderifar et al., 2017). This technique is used to determine the respondents to be used in this research. This technique is generally often used in marketing studies that aim to collect data from various customers and their opinions. Online data collection was carried out by distributing a questionnaire survey to respondents using the Google Form application. The respondents used were Indonesian people and Taiwanese people over 17 years old and already familiar with Plant-Based Food products.

The survey questionnaire will also be distributed using social media and online communication applications, such as WhatsApp, Instagram, Facebook, and Line. The questionnaire survey in this research uses a Likert Scale (6-point Likert Scale), where the Likert Scale is used because it will be easier for respondents to understand. The 6-point Likert Scale is used to reduce the possibility of

respondents choosing an answer with a neutral or middle point choice. The survey questionnaire used also consists of several sections, each of which consists of questions. The initial part consists of several screening questions to determine the identity of the respondents and to do the screening to get respondents who match the desired criteria. The following sections will contain questions related to the variables tested in this research. Wherefrom the screening results, the number of samples or the number of respondents collected in this research is 338 respondents (283 Indonesian respondents and 55 Taiwanese respondents).

After collecting data, data analysis was carried out. Where the first data analysis is a pre-test using the SPSS 25.0 instrument. In this pre-test, validity and reliability tests were carried out by looking at the coefficient value result and Cronbach's alpha (CA) value. The following data analysis is a Partial Least Square (PLS) analysis using SmartPLS 3.2.8 statistical software application. This data analysis is used because PLS analysis can be used to test the mediating variables and moderating variables. This data analysis will be divided into two parts, namely the outer model stage (validity and reliability test) and the inner stage (coefficient of determination and t-value test) (Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, 2014).

RESULT AND DISCUSSION

From the results of this research, 338 respondents participated, which included 283 Indonesian respondents and 55 Taiwanese respondents. From several screening questions contained in the survey questionnaire, such as questions regarding gender, age, highest education level, nationality, and whether respondents have bought or consumed Plant-Based Food, it was found that the respondents who participated in this questionnaire survey consisted of 73.67% women and 26.33% men. In terms of age, the most significant number of respondents is in the vulnerable group aged 17 to 27 years (91.42%). The highest number of respondents is with Graduate Degree (85.50%). Respondents who participated in this research were generally either workers or students. Attached below is a complete description of the personal information of the respondents who participated in this research.

Table 1. Respondents Profile

Characteristics	Number of Respondents	Percentage (%)
Gender		
Male	73	26.33%
Female	249	73.67%
Age		
17-27	309	91.42%
28-38	18	5.32%
39-49	8	2.37%
50-60	2	0.59%
>61	1	0.30%
Highest Education Level		
High School	17	5.03%
Diploma	9	2.66%
Graduate Degree	252	85.50%
Post Graduate Degree	22	6.51%
Doctoral Degree	-	-
Other	1	0.30%
Nationality		
Indonesia	283	83.73%
Taiwan	55	16.27%
Have you ever bought or consumed Plant-Based Food products		
YES	292	86.39%
NO	46	13.61%

Source: Processed Data by Researchers

Furthermore, in this research, empirical data analysis was carried out. Before the Structural Equation Modeling (SEM) analysis is carried out, several tests must be carried out first. Validity and Reliability of Measures (Outer Model) tests are used to ensure that all data used in this research are valid and reliable. A measurement model is generally divided into three parts: convergent validity test, discriminant validity, and reliability test.

Where the results of the three tests will be attached in the following table

Table 2. Convergent & Discriminant Validity Result

Variable	Code	Outer Loading	Average Variance Extracted (AVE)	Cross Loadings	Fornell-Larcker Criterion	Information
Health Consciousness (HC)	HC1	0.812	0.551	0.812	0.742	Valid
	HC2	0.710		0.710		Valid
	HC3	0.809		0.809		Valid
	HC4	0.769		0.769		Valid
	HC5	0.585*		0.585*		Valid*
Environmental Concern (EC)	EC1	0.848	0.574	0.842	0.758	Valid
	EC2	0.824		0.822		Valid
	EC3	0.719		0.712		Valid
	EC4	0.750		0.735		Valid
	EC6	0.627*		0.621*		Valid*
Covid-19 Impact (CI)	CI1	0.870	0.612	0.870	0.783	Valid
	CI2	0.876		0.876		Valid
	CI3	0.715		0.715		Valid
	CI4	0.644*		0.644*		Valid*
Social Influence (SI)	SI1	0.766	0.676	0.766	0.822	Valid
	SI2	0.798		0.798		Valid
	SI3	0.850		0.850		Valid
	SI4	0.877		0.877		Valid
	SI5	0.813		0.813		Valid
Perceived Attributes (PA)	PA1	0.856	0.597	0.856	0.772	Valid
	PA2	0.877		0.877		Valid
	PA3	0.527*		0.527*		Valid*
	PA4	0.836		0.836		Valid
	PA5	0.710		0.710		Valid
Attitudes (AT)	AT1	0.802	0.730	0.802	0.854	Valid
	AT2	0.862		0.862		Valid
	AT3	0.836		0.836		Valid
	AT4	0.892		0.892		Valid
	AT5	0.878		0.878		Valid
Purchase Intention (PI)	PI1	0.880	0.758	0.880	0.870	Valid
	PI2	0.811		0.811		Valid
	PI3	0.900		0.900		Valid
	PI4	0.909		0.909		Valid
	PI5	0.849		0.849		Valid

Source: Processed Data by Researchers

The validity test results in this research will be seen from the convergent validity test and discriminant validity test. The results of the convergent validity test can be seen from the results of the outer loading values and average variance extracted (AVE) values. The results of the discriminant validity test can be seen from the value of cross-loadings and the value of the Fornell-Larcker Criterion.

From the results of the outer loading and AVE values from the table above, every piece of data used in this research is acceptable and valid. In theory, in the SmartPLS system, an indicator variable can be valid if the outer loading value obtained is > 0.70 (considered highly satisfactory). Nevertheless, according to Hair et al. (1998), the value of outer loading > 0.50 is still acceptable and considered valid. So, from the results of this research, each indicator variable is acceptable and valid, except for the EC5 variable, where the outer loading value obtained is < 0.50 (0.319), so the EC5 variable is not used in the next test. From the results of the AVE value obtained, it can be concluded that all indicator variables are also valid because an indicator can be said to be valid if it has an AVE value > 0.50 . From the table above, we can also find out the results of the discriminant validity test. It can be seen from the results of the Fornell-Larcker Criterion (AVE value of the extracted average variance is greater than the correlation involving the latent variable) (Kock and Lynn, 2012). So, when viewed from the Fornell-Larcker Criterion value obtained, then each indicator variable used is valid.

Next is the reliability test, wherein the test result will be seen from the Cronbach alpha value and composite reliability value. A variable can be accepted in the reliability test if it has a Cronbach alpha value > 0.70 and a composite reliability value > 0.70 . In general, the composite reliability value will be higher than the Cronbach alpha value because the composite reliability value is used to determine the consistency of the variables on the latent variables.

Table 3. Reliability Test Result

Variable	Code	Cronbach Alpha	Composite Reliability	Average Variance Extracted (AVE)
Health Consciousness (HC)	HC1	0.793	0.858	
	HC2			
	HC3			0.551
	HC4			
	HC5			
Environmental Concern (EC)	EC1	0.818	0.870	
	EC2			0.574
	EC3			
	EC4			
	EC6			
Covid-19 Impact (CI)	CI1	0.792	0.861	
	CI2			0.612
	CI3			
	CI4			
Social Influence (SI)	SI1	0.880	0.912	
	SI2			0.676
	SI3			
	SI4			

	SI5			
Perceived Attributes (PA)	PA1	0.824	0.878	
	PA2			0.597
	PA3			
	PA4			
	PA5			
Attitudes (AT)	AT1	0.907	0.931	
	AT2			0.730
	AT3			
	AT4			
	AT5			
Purchase Intention (PI)	PI1	0.920	0.940	
	PI2			0.758
	PI3			
	PI4			
	PI5			

Source: Processed Data by Researchers

In the table above, each indicator variable has a Cronbach alpha value and composite reliability > 0.70 , so each indicator variable used is acceptable. Furthermore, from the results of the Cronbach alpha value, we can know that the indicator variable Health Consciousness (HC) and Covid-19 Impact (CI) have a Cronbach alpha value above 0.70 (acceptable consistency), indicator variable Environmental Concern (EC), Social Influence (SI), Perceived Attributes (PA) has a Cronbach alpha value above 0.80 (good consistency), and the indicator variable Attitudes (AT), Purchase Intention (PI), has a Cronbach alpha value above 0.90 (truly consistent).

In this research, a Model Fit test will be carried out to ensure the research model used in this research already fit before proceeding to the structural model test. The fit model can be seen from the value of the Standardized Root Mean Square Residual (SRMR) and the value of the Normal Fit Index (NFI). A research model can be fit if the SRMR value is < 0.10 or < 0.08 , while the NFI value must be between 0 to 1. If the NFI value is getting closer to 1, the research model used is getting better. From table 6, we can see the results of the Model Fit test, where the SRMR value obtained is 0.066 and the NFI value obtained is 0.786. So, it can be concluded that the research model in this research is fit.

Table 4. Model Fit Test Result

	Saturated Model	Estimated Model
SRMR	0.066	0.066
d_ULS	2.599	2.605
d_G	0.849	0.849
Chi-Square	1647.196	1644.072
NFI	0.786	0.786

Source: Processed Data by Researchers

Table 5. Coefficient of Determination (R^2) Result

	R Square	R Square Adjusted
Attitude	0.674	0.670
Purchase Intention	0.662	0.651

Source: Processed Data by Researchers

From table 7, we can see the results of R^2 from the value of R square, which is 0.674 for the Attitude variable indicator and 0.662 for the Purchase Intention variable indicator. It can be interpreted that the indicator variable Attitude is influenced by 67.4% of the variables in this research, and the indicator variable Purchase Intention is influenced by 66.2%. So there are still other variables outside this research that can still affect the indicators of the Attitude and Purchase Intention variables. Table 8 will attach the results of the t-value test, which can be seen from the t-statistics and p-value, to conclude the results of each hypothesis tested in this research.

Table 6. Output Result

Hypothesis	Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Value	Results
H ₁	HC → PI	0.097	0.098	0.041	2.365	0.018	Accepted
H ₂	HC → AT → PI	0.027	0.028	0.016	1.675	0.095	Rejected
H ₃	EC → PI	0.021	0.020	0.037	0.574	0.566	Rejected
H ₄	EC → AT → PI	0.014	0.014	0.013	1.049	0.295	Rejected
H ₅	SI → PI	0.152	0.159	0.042	3.654	0.000	Accepted
H ₆	SI → AT → PI	0.286	0.282	0.051	5.552	0.000	Accepted
H ₇	PA → PI	0.182	0.188	0.079	2.302	0.022	Accepted
H ₈	PA → AT → PI	0.286	0.282	0.051	5.552	0.000	Accepted
H ₉	HC → CI → PI	0.011	0.016	0.043	0.250	0.802	Rejected
H ₁₀	EC → CI	0.001	-0.002	0.050	0.017	0.987	Rejected

	→ PI						
H ₁₁	SI → CI → PI	-0.112	-0.108	0.044	2.567	0.011	Accepted
H ₁₂	PA → CI → PI	0.193	0.183	0.049	3.983	0.000	Accepted

Source: Processed Data by Researchers

In the table, it can be seen the results of hypothesis testing using SmartPLS analysis software. The t-table of the results obtained from the t-statistical table is 1.96. So that each hypothesis that has a t-statistics value > 1.96 with a p-value < 0.05 is an accepted hypothesis (positively affected). From the table above, we can see that H₁, H₅, H₆, H₇, H₈, H₁₁, and H₁₂ are accepted hypotheses (positively affected). In H₁, the p-value obtained is 0.018, and the t-statistics value is 2.365. So that H₁ which is the hypothesis of the effect of the Health Consciousness variable on Plant-Based Food Purchase Intention can be accepted (positive result). Following the research of Abdulsahib, Eneizan, Alabboodi (2019) and Qi, Yu (2020), the Health Consciousness variable positively influences Purchase Intention. So that to increase the Purchase Intention of Plant-Based Food products, of course, the Health Consciousness variable factors need to be considered by marketers, such as increasing consumer awareness of health aspects or increasing the health value of Plant-Based Food products. Hypothesis H₂ in this research is rejected because the p-value is 0.095 and the t-statistics value is 1.675. So, hypothesis H₂ (effect of the Health Consciousness variable on Plant-Based Food Purchase Intention mediated by the Attitude) is rejected (no direct impact). In previous studies, namely by Tarkiainen & Sundqvist (2005) and Michaelidou & Hassan (2008), the same results were obtained, where the Attitude variable did not mediate the Health Consciousness variable on Purchase Intention. They found that Health Consciousness is the least essential motive and not a predictor of Attitude toward organic foods.

In this research, hypotheses H₃ and H₄ were rejected because the p-value of H₃ is 0.566, with t-statistics being 0.574. The p-value of H₄ is 0.295, with H₄ t-statistics being 1.049. So, the hypothesis test results are rejected and mean that the Environmental Concern variable does not directly affect Plant-Based Food Purchase Intention and is not mediated by Attitude. However, this result is different from the results of Qi, Yu (2020) that the Environmental Consciousness variable can have a direct effect on Purchase Intention as well as in the research of Troudi & Bouyoucef (2020) conducted that Attitude mediates the effect of environmental concern on Attitude. This may be due to differences in respondents and disparities in education on Environmental Consciousness. Lee's research (2015) also found that environmental involvement, which is an environmental protection-based motivation variable, positively influences purchase intention.

However, the research conducted environmental education and ecological art exhibitions before conducting the research.

In hypothesis H₅, it is found that the Social Influence variable has a positive effect on Plant-Based Food Purchase Intention. Where the p-value obtained is 0.000 with a t-statistics value of 3,654. So in this research, hypothesis H₅ is accepted. This result also follows previous research from Persaud & Schillo (2017) and Qi, Yu, (2020) that the Social Influence variable significantly influences Purchase Intention. It will be easier to increase consumer purchase intentions for a product through the influences that exist in the surrounding environment. Hypothesis H₆, which examines the role of the Attitude variable as a mediating variable for Social Influence on Purchase Intention, is also acceptable because it has a p-value of 0.000 and a t-statistics of 5.552. This proves that Social Influence unconsciously can affect consumer attitudes in determining Purchase Intention.

Hypothesis H₇, which is the hypothesis of the effect of the Perceived Attributes variable on Plant-Based Food Purchase Intention, also gives acceptable results, where the Perceived Attributes variable has a significant impact on Purchase Intention with a p-value of 0.022 and t-statistics 2.302. The results of this hypothesis are also supported by research from Qi, Yu, (2020) that Perceived Attributes affect Green Food Purchase Intention. This proves that the Perceived Attributes or perceived values offered by a product are essential for consumers. The better the deal offered, the more likely it will increase consumer purchase intentions for a product. In hypothesis H₈, with a p-value of 0.000 and t-statistics 5.552, it can also be concluded that hypothesis H₈ is accepted, where Attitude can mediate the Perceived Attributes variable on Purchase Intention. Hypotheses H₇ and H₈ also follow the results of Woo & Kim's (2019) research that the perceived values or attributes of a product can affect purchase intentions either directly or indirectly, mediated by Attitude.

The following hypotheses (H₉, H₁₀, H₁₁, H₁₂) test the effect of the Covid-19 Impact variable as a moderator in the factor influences on Plant-Based Food Purchase Intention. Hypothesis H₉ and H₁₀ are rejected because the p-value of H₉ was 0.802 (higher than 0.05) with a t-statistics value of 0.250. Hypothesis H₁₀ also has a p-value of 0.987 and a t-statistics value of 0.017. So, from these results, it can be concluded that the Covid-19 Impact variable does not moderate the Health Consciousness and Environmental Concern variables on Plant-Based Food Purchase Intentions. However, unlike the H₉ and H₁₀ hypotheses, the H₁₁ and H₁₂ showed positive results (the hypothesis was accepted). Where the p-values of H₁₁ are 0.011 and the t-statistics value is 2.567. And for hypothesis H₁₂, the p-values are 0.000, and the t-statistics are 3.983. With this, we can conclude that the Covid-19 Impact variable can moderate the influence of the Social Influences and Perceived Attributes variables on Plant-Based Food Purchase Intentions. Marketers can use this as a strategy to increase Purchase Intention.

CONCLUSION

From the results of this research, we can conclude that several Influences Factors can directly affect Plant-Based Food Purchase Intentions, namely Health Consciousness, Social Influences, and Perceived Attributes. In addition, several Influences Factors can be mediated by the Attitude variable and moderated by the Covid-19 Impact variable, namely Social Influences and Perceived Attributes. However, in this research, there were different results from previous studies. In this research, Influences Factors Environmental Concern has no direct or indirect effect (mediated by Attitude and moderated by Covid-19 Impact) on Plant-Based Food Purchase Intentions. The results of this research are different from previous studies, perhaps due to the lack of education regarding the relationship between Environmental Concerns and Plant-Based Food Consumption. So that in the future, it can be carried out or given education in advance about the relationship between Environmental Concerns and Plant-Based Food Consumption for the maximum results. In addition, education regarding Environmental Concerns can be increased to increase Plant-Based Food Purchase Intentions in the future.

For marketers, things that can increase Plant-Based Food Purchase Intention are paying close attention and considering the Perceived Attributes offered by their products to consumers. At the same time, marketers must provide value from Plant-Based Food products that can attract consumer interest. Of course, marketers must also promote aggressively through social media (social influence), using Key Opinion Leaders (KOL), and other things that can directly or indirectly affect the wider community. Marketers can also use issues or trends in the community, such as the trend of healthy living, losing weight with Plant-Based Food products, or other things. Marketers can also insert education regarding the relationship of environmental concerns to Plant-Based Food consumption to increase consumer interest and be motivated to buy Plant-Based Food products.

Future research hopes future researchers can provide education to consumers in advance about Plant-Based Food products and their relationship to each variable that will be tested in the future so that participating respondents can better understand. In further research, it is also expected that researchers can find variables that can affect the Purchase Intention of Plant-Based Food products to complete the shortcomings of this research. In addition, researchers can also use probability sampling techniques so that research results can be more accurate. The development of studies, of course, is not only for Plant-Based Food products but can also be carried out on healthy products and other environmentally friendly products.

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REFERENCES

- Abdulsahib, J.S., Eneizan, B., Alabboodi, A. . (2019). Environmental concern, health consciousness and purchase intention of green products: an application of extended theory of planned behavior. *The Journal of Social Sciences Research*, 5(4), 868–880.
- Ayhan, H. Ö. (2011). Non-probability Sampling Survey Methods. In *International Encyclopedia of Statistical Science* (pp. 979–982). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-04898-2_41
- Bertrandias, L., & Elgaaied-Gambier, L. (2014). Others' environmental concern as a social determinant of green buying. *Journal of Consumer Marketing*, 31(6/7), 417–429. <https://doi.org/10.1108/JCM-05-2014-0966>
- Di Crosta, A., Ceccato, I., Marchetti, D., La Malva, P., Maiella, R., Cannito, L., Cipi, M., Mammarella, N., Palumbo, R., Verrocchio, M. C., Palumbo, R., & Di Domenico, A. (2021). Psychological factors and consumer behavior during the COVID-19 pandemic. *PLOS ONE*, 16(8), e0256095. <https://doi.org/10.1371/journal.pone.0256095>
- Gerber, P.J., Henderson, B. and Makkar, H. . (2013). Mitigation of Greenhouse Gas Emissions in Livestock Production: A Review of Technical Options for Non-CO2 Emissions. *Food and Agriculture Organization of the United Nations (FAO)*.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM) (An emerging tool in business research). *European Business Review*, 26, 106–121.
- Lee, H.J., Yun, Z. . (2015). Consumers' perceptions of organic food attributes and cognitive and affective attitudes as determinants of their purchase intentions toward organic food. *Food Quality and Preference*, 39, 259–267.
- Mekonnen, M. M., & Hoekstra, A. Y. (2012). A Global Assessment of the Water Footprint of Farm Animal Products. *Ecosystems*, 15(3), 401–415. <https://doi.org/10.1007/s10021-011-9517-8>
- Melina, V., Craig, W., & Levin, S. (2016). Position of the Academy of Nutrition and Dietetics: Vegetarian Diets. *Journal of the Academy of Nutrition and Dietetics*, 116(12), 1970–1980. <https://doi.org/10.1016/j.jand.2016.09.025>
- Naderifar, M., Goli, H., & Ghaljaie, F. (2017). Snowball Sampling: A Purposeful Method of Sampling in Qualitative Research. *Strides in Development of*

Medical Education, 14(3). <https://doi.org/10.5812/sdme.67670>

Persaud, A., & Schillo, S. R. (2017). Purchasing organic products: role of social context and consumer innovativeness. *Marketing Intelligence & Planning*, 35(1), 130–146. <https://doi.org/10.1108/MIP-01-2016-0011>

Qi, X., Yu, H., & Ploeger, A. (2020). Exploring Influential Factors Including COVID-19 on Green Food Purchase Intentions and the Intention–Behaviour Gap: A Qualitative Study among Consumers in a Chinese Context. *International Journal of Environmental Research and Public Health*, 17(19), 7106. <https://doi.org/10.3390/ijerph17197106>

Solomon, M. R. (2016). *Consumer Behavior: Buying, Having, Being* (12th editi). Pearson.

Tim Searchinger. (2019). *Creating a Sustainable Food Future*. <https://www.wri.org/research/creating-sustainable-food-future>

Troudi, H., & Bouyoucef, D. (2020). Predicting purchasing behavior of green food in Algerian context. *EuroMed Journal of Business*, 15(1), 1–21. <https://doi.org/10.1108/EMJB-03-2019-0046>

Turner-McGrievy, G. M., Davidson, C. R., & Wilcox, S. (2014). Does the type of weight loss diet affect who participates in a behavioral weight loss intervention? A comparison of participants for a plant-based diet versus a standard diet trial. *Appetite*, 73, 156–162. <https://doi.org/10.1016/j.appet.2013.11.008>

Woo, E., & Kim, Y. G. (2019). Consumer attitudes and buying behavior for green food products. *British Food Journal*, 121(2), 320–332. <https://doi.org/10.1108/BFJ-01-2018-0027>

Yousfi, N., Bragazzi, N. L., Briki, W., Zmijewski, P., & Chamari, K. (2020). The COVID-19 pandemic: how to maintain a healthy immune system during the lockdown – a multidisciplinary approach with special focus on athletes. *Biology of Sport*, 37(3), 211–216. <https://doi.org/10.5114/biolSport.2020.95125>