



THE EFFECTS OF SOCIAL MEDIA AND INFLUENCERS ON CONSUMERS' ATTITUDES AND PURCHASING TOWARDS ORGANIC FOODS

ERKAN ARI^{1*} & VEYSEL YILMAZ²

¹ Prof. Dr., Dumlupınar Üniversitesi İİBF Ekonometri Bölümü, erkan.ari@dpu.edu.tr, <https://orcid.org/0000-0001-6012-0619>, & ² Prof. Dr., Eskişehir Osmangazi Üniversitesi Fen Fakültesi İstatistik Bölümü, vyilmaz@ogu.edu.tr, <https://orcid.org/0000-0001-5147-5047>.

Kütahya Dumlupınar Üniversitesi Sosyal ve Beşeri Bilimler Bilimsel Araştırma ve Yayın Etiği Kurulu 26.01.2023 tarih ve 2023/01 sayılı kararı ile alınan izin doğrultusunda gerçekleştirilmiştir.

ABSTRACT

The accelerated growth of digital technologies has led to an intensification of product promotion and advertising through social media and influencers. This development has given rise to the emergence of novel business models in the domain of advertising and product promotion. It has become evident that social media has a significant impact on consumer purchasing attitudes and behaviours. In particular, the influence of influencers, who make recommendations in digital environments, is increasing daily. This effect is particularly pronounced in the context of food product purchasing behaviour. This study examines the impact of social media and influencers on organic food (OF) purchasing behaviour, utilising a proposed model. Partial least squares structural equation modelling (PLS-SEM) was employed to assess the fit of the research model and the structural relationships within it. The data were collected from 453 organic food consumers via a voluntary online survey. The moderating role of food innovativeness on the relationship between purchase intention and purchase behaviour of organic food products is positive and significant. Furthermore, the study demonstrated that consumers who frequently adopt and purchase new foods as a result of being influenced by promotions in digital environments are more likely to purchase organic food products.

Keywords: Digital and social media, Influencer effect, Product promotion, Purchase, Organic food.

Editör / Editor:

Kumru UYAR,
Erciyes Üniversitesi, Türkiye

*Sorumlu Yazar/ Corresponding Author:

Erkan ARI,
erkan.ari@dpu.edu.tr

JEL:

D80, L11, M20

Geliş: 6 Haziran 2024

Received: June 6, 2024

Kabul: 4 Eylül 2024

Accepted: September 4, 2024

Yayın: 30 Aralık 2024

Published: December 30, 2024

Atıf / Cited as (APA):

Ari, E. & Yılmaz V. (2024),
The Effects of Social Media and Influencers on
Consumers' Attitudes and Purchasing Towards
Organic Foods, Erciyes Üniversitesi İktisadi ve
İdari Bilimler Fakültesi Dergisi, 69, 71-77,
doi: 10.18070/erciyesiibd.1496826

SOSYAL MEDYA VE INFLUENCERLARIN TÜKETİCİLERİN ORGANİK GIDALARA YÖNELİK TUTUMLARI VE SATIN ALMA ÜZERİNDEKİ ETKİLERİ

ÖZET

Dijital teknolojilerin hızla büyümesi, sosyal medya ve etkileyiciler aracılığıyla ürün tanıtım ve reklamlarının yoğunlaşmasına yol açtı. Bu gelişme, reklam ve ürün tanıtımı alanında yeni iş modellerinin ortaya çıkmasına neden olmuştur. Sosyal medyanın tüketicilerin satın alma tutum ve davranışları üzerinde önemli bir etkisi olduğu ortaya çıkmıştır. Özellikle dijital ortamlarda önerilerde bulunan influencerların etkisi her geçen gün artıyor. Bu etki özellikle gıda ürünü satın alma davranışı bağlamında belirgindir. Bu çalışma, önerilen bir modeli kullanarak sosyal medyanın ve etkileyicilerin organik gıda (OF) satın alma davranışı üzerindeki etkisini incelemektedir. Araştırma modelinin uyumunu ve içindeki yapısal ilişkileri değerlendirmek için kısmi en küçük kareler yapısal eşitlik modeli (PLS-SEM) kullanıldı. Veriler, gönüllü bir çevrimiçi anket aracılığıyla 453 organik gıda tüketicisinden toplandı. Gıda yenilikçiliğinin, satın alma niyeti ile organik gıda ürünlerini satın alma davranışı arasındaki ilişkide düzenleyici rolü pozitif ve anlamlıdır. Ayrıca çalışma, dijital ortamlardaki promosyonlardan etkilenecek yeni gıdaları sıklıkla benimseyen ve satın alan tüketicilerin organik gıda ürünleri satın alma olasılıklarının daha yüksek olduğunu ortaya koydu.

Anahtar Kelimeler: Dijital ve sosyal medya, Influencer etkisi, Ürün tanıtımı, Satın alma, Organik gıda.

INTRODUCTION

The adaptation of advanced technology applications to agriculture and food enterprises has increased productivity in agricultural production. However, in addition to these increases in productivity, the use of chemical substances such as fertilisers, pesticides, etc. in agriculture has had unexpected negative consequences on the environment and human health (Gür & Erdem, 2023). These negative consequences have also increased environmental sensitivity and environmental reactions in this process. The rapid development of sensitivity to environmental problems in the society has led to changes in purchasing tendencies by reflecting on consumer demand and behaviour (Scalco, 2017; Alam et al., 2023). Recognising this problem, food producers have focused on developing sustainable farming systems that grow OF(OF) without chemicals or additives (Misra & Singh, 2016). Önem (2022) stated that OF “represent a sustainable form of consumption because they are produced using natural processes, taking into account soil protection and animal welfare”. Paul et al. (2016) stated that the use of OF can minimise the negative impacts on human, ecosystem, and environment by supporting sustainable production and consumption.

OF markets have emerged due to consumers' preference for organic products (OP). In recent years, these markets have expanded and are now available online. However, the demand for organic food has remained limited due to many reasons such as lack of information on OF and high prices (Konuk, 2018; Demirtaş, 2019).

Consumers' tendency and behaviour to purchase OF differs between developed and developing countries. There are also studies that reveal the effects of health and environmental concerns on consumers' OF purchasing decisions. In the studies, the relationships between the factors affecting the purchase of OF have been revealed in detail (Nguyen et al., 2023; Trivedi et al., 2018).

Scalco (2017) states that attitudes, intentions and purchase behaviours towards organic products are generally examined on the basis of the theory of planned behaviour (TPB). In addition to the basic variables in TPB, other factors such as personal norms, social norms, social media advertisements and the influence of influencers can also affect consumers' perceptions, purchase intentions and behaviours towards organic food products. Studies applying the TPB have generally confirmed the significant and consistent influence of the main core variables (Nguyen et al., 2023; Yadav and Pathak, 2017; Paul et al., 2016).

Nguyen et al. (2023) investigated the factors affecting OF purchasing behaviour in an emerging market by adding additional factors to the TPB model. The study revealed that household norms, household activities, and family influence are significant factors affecting individuals' OF purchasing behaviour. Trivedi et al. (2018) The study presents a comprehensive investigation of the process leading to organic behaviour, taking into account the role of social media in organic purchasing intentions, attitudes towards eco-friendly packaging, ecological concerns, perceived consumer effectiveness, and excluding subjective evaluations unless clearly marked as such.

Scalco et al. (2017) conducted a meta-analysis of studies applying the TPB (Ajzen, 1991) to understand and predict consumers' motivations for purchasing OPs. From the results of the analysis, it was evaluated that the relationships between the variables in the TPB model were strong. The study revealed that individual attitude, subjective norm and perceived behavioural control significantly influence purchase intention. Yavdak and Pathak (2016) conducted a study on young consumers' intentions to purchase OP in India, using the TPB and expanding it to include environmental concern and knowledge as additional variables. The study findings demonstrate the effectiveness of the TPB in predicting the purchasing intentions of young consumers towards OP.

Yener & Taşçıoğlu (2020) investigated the relationship between perceived risk, innovation, and consumer resistance in parents' attitudes towards OF. The analysis revealed a positive relationship between perceived risk and consumer resistance, while no linear relationship was found between innovation and consumer resistance. The study found that women are more innovative than men in OF, while men perceive various risks in this regard. Cinar et al. (2021) investigated

how consumers are influenced by their perceptions when purchasing OF products. The study revealed a direct relationship between the intention to purchase OP and attitudes towards behaviour, subjective norms, perceived behavioural control, moral attitudes, and environmental concerns. Gür & Erdem (2023) investigated the factors that influence consumers' intention and behaviour towards purchasing OF products. The study found that health concerns, perceived food safety, and perceived food price are the factors that affect consumers' attitudes towards OF. Additionally, it was concluded that these attitudes towards OF influence consumers' purchasing behaviour.

Nafees et al. (2021) posited that social media and influencers exert a significant influence on consumers' attitudes towards products. Furthermore, the perceived expertise and credibility of social media influencers serve to enhance this effect.

When examining the literature, it is evident that numerous studies have been conducted in developed countries regarding consumers' intentions to purchase OF and their behaviour towards a variety of green products (Nyugen et al., 2023; Trivedi et al., 2018; Scalco et al., 2017; Yadav & Pathak, 2016).

There are few studies in Turkey that demonstrate consumers' reactions to organic or environmentally friendly products (Gür & Erdem, 2023; Çınar et al., 2021; Yener & Taşçıoğlu, 2020). However, a literature review reveals that none of the studies have been conducted using a model that combines social media advertising, influencers, and food innovation to demonstrate their combined impact on the intention to purchase OF. It has become evident that social media has a significant impact on consumer purchasing attitudes and behaviours. In particular, the influence of influencers, who make recommendations in digital environments, is increasing daily. This study examines the impact of social media and influencers on organic food (OF) purchasing behaviour, utilising a proposed model. Partial least squares structural equation modelling (PLS-SEM) was employed to assess the fit of the research model and the structural relationships within it.

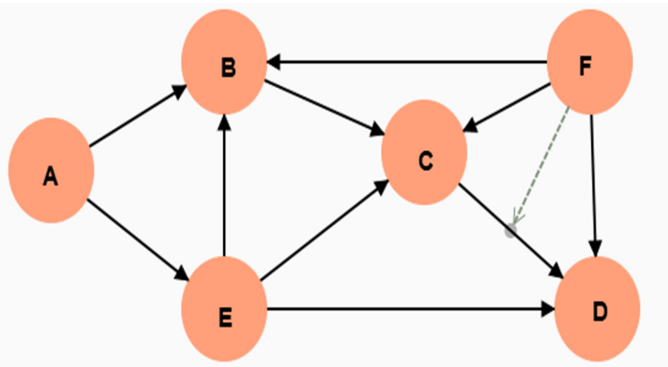
I. METHOD

A. PURPOSE OF THE RESEARCH

The objectives of this study are (1) to investigate the effect of social media and influencers' advertisements and promotions on purchase behaviour with a proposed structural model, (2) to demonstrate the fit, validity and reliability of the proposed model to predict attitude and purchase behaviour towards organic food products, (3) to test the significance of the effects of social media, (4) to evaluate the moderating role of food innovation in the relationship between intention to purchase OF products and purchase behaviour, (5) to determine the role of gender in the effects between variables within the scope of the proposed model, (6) to determine the importance-performance levels of variables that are effective in purchasing organic products.

B. RESEARCH MODEL AND DEVELOPMENT OF HYPOTHESES

When the literature was examined, it was evaluated that the role of social media advertisements in perceptions towards OFs, influencer effect in OF preference and food innovativeness could be added to the proposed model as exogenous variables within the scope of TPB. In the proposed model, it is assumed that social media advertisements will affect attitudes towards OF and consumers' perceptions towards influencers. Therefore, social media advertisements are defined as an exogenous variable in the model. In particular, the role of food innovation and influencers in developing positive attitudes towards OF and their influence on purchase intention and behaviour were added to the proposed model. Nguyen et al. (2023), Gür & Erdem (2023), Trivedi et al. (2018) and Yavdak & Pathak (2016) were utilised in the creation of the research model. The proposed research model is given in figure 1.

FIGURE 1 | Research Model

A: The role of social media advertisements in the perception of organic foods,
 B: Attitude towards organic foods,
 C: Intention to purchase organic food,
 D: Organic food purchasing behaviour,
 E: Influencer effect on organic food preference,
 F: Food innovation

Social media shape consumers' attitudes towards products and their buying tendencies and behaviours. Consumers could research through social media channels (Facebook, Twitter (X), Instagram, Youtube etc.) before purchasing a product, to examine the features of that product and to evaluate user comments. Therefore, everyone who uses social media and shares their purchasing experience in both the first and the last stage of the purchasing decision process affects the purchasing decision process (Önem, 2022).

Upon reviewing the literature, it has been determined that social media advertisements have an impact on consumers' attitudes towards products and their inclination to make a purchase (Alam et al., 2023; Trivedi et al., 2018). Social media advertisements also encourage individual awareness of a green lifestyle or organic nutrition. Pentina et al. (2013) found that social media will play a role in behavioural attitudes, but intentions may change due to various cultural changes. Similarly, Masuda et al. (2022) revealed that media platforms increase the influence of influencers on consumers. Different studies have shown that social media advertisements affect perceptions towards OF and attitudes towards influencers (Trivedi et al., 2018; Masuda et al., 2022).

H1: Social media advertising positively and significantly affects attitudes toward OFs.

H2: Social media advertising positively and significantly affects the influence of influencers on consumers.

The fact that positive attitude towards a behaviour causes a positive effect on behavioural intention has been revealed in various studies. In these studies, it has been determined that positive attitude towards OF, recycling and energy saving has a significant effect on behavioural intention (Nguyen et al., 2023; Paul et al., 2016; Ari & Yilmaz, 2016). Therefore, the following hypothesis is proposed:

H3: Attitude towards OF positively and significantly affects intention to purchase OF.

While intention is an indicator of one's willingness to perform a certain behaviour, behaviour is a clear, observable response to a specific goal in a specific situation. In studies, intention is the main factor affecting behaviour (Ajzen, 1991).

H4: OF purchase intention has a positive and significant effect on OF purchase behaviour.

A social media influencer is a person who uses video and photo-based social media applications and has a large online audience that can influence followers. With the rapid increase in the use of social media, consumers' attitudes, intentions, and behaviours can be changed by the influence of influencers on the internet before purchasing a new product or service (Önem, 2022).

Influencers can be found on social media platforms such as Facebook, Instagram, Twitter (X) and YouTube. Influencers create spheres of influence by sharing their experiences with their followers on many different specific topics such as OF promotion, fitness, fashion, beauty, holidays, entertainment, etc. (Alam et al., 2023).

H5: Influencers have a positive and significant effect on purchase attitudes towards OF.

H6: Influencers positively and significantly influence OF purchase intention.

H7: Influencers positively and significantly effect OF purchase behaviour.

Govaerts & Olsen (2022) investigated the effect of food innovativeness on sustainable and healthy seaweed consumption and found that food innovativeness positively affects consumption intention. Similarly, Ari and Yilmaz (2023) found that food innovativeness has a positive and significant effect on purchase intention for OF. Based on these findings, the following hypotheses are proposed:

H8: Food innovativeness positively and significantly effects OF purchase attitude.

H9: Food innovativeness positively and significantly effects OF purchase intention.

H10: Food innovativeness positively and significantly effects OF purchase behaviour.

C. DATA COLLECTION TOOL

Nguyen et al. (2023), Alam et al. (2023), Trivedi et al. (2018), Yavdak & Pathak (2016) were used to create the data collection tool. In this study, an online questionnaire created through Google Forms was used as the data collection tool. The data was collected between March and April 2023. Voluntary participation in the survey was received from 45 different cities. The questionnaire is in two parts. The first part contains questions on the demographic characteristics of the participants (gender, marital status, educational level, occupation, number of children, etc.). The second part consists of 22 items on an 11-point Likert scale (0-never, 10-always) that affect the intention and behaviour to buy OF. The internal consistency coefficient of the Likert scale data collection tool was calculated as Cronbach's Alpha (CA)=0.916 and was considered highly reliable. The questionnaire was completed online by 483 volunteer participants who had digital access to the data collection tools shared on social media. Following the analysis of the control questions, 30 questionnaires were found to be unreliable, and these were excluded from the data and analyses were conducted using data from 453 participants.

When analysing the demographic characteristics of the participants in the study, it was found that 57.6% (f=261) were male and 42.4% (f=192) were female. OF the participants, 40.4% (f=183) were single and 59.6% (f=270) were married. The income status of the participants was reported as very poor by 4.2% (f=19), poor by 12.6% (f=57), moderate by 58.9% (f=267), good by 22.5% (f=102) and very good by 1.8% (f=8). While 16.3% (f=74) of the participants stated that they had chronic diseases, 83.7% (f=397) stated that they had no chronic diseases. 56.5% (f=256) of the participants stated that they had no children, 36.6% (f=166) had 1-2 children, 5.5% (f=25) had 3-4 children, 1.3% (f=6) had 4 or more than 4 children. The median age of the participants was 27 years, and the mean age was 37 years.

III. RESULTS

The data was analysed using PLS-SEM. In PLS-SEM, variables can be normative or reflective. However, in social science studies, variables are mostly reflective. If there is no information about the structure of latent variables, it is assumed that the variables are reflective. Additionally, to verify whether the measurement model has a reflective structure, confirmatory tetrad analysis can be performed (Yilmaz et al., 2024). As the latent variables in this study are reflective, SmartPLS 4 software was used for the analyses. The measurement model was analysed using the Consistent PLS algorithm, while the structural model and hypothesis tests were analysed using Consistent PLS bootstrapping. PLS-SEM involves two stages: measurement model evaluation and structural model evaluation (Hair et al., 2017).

D. MEASUREMENT MODEL

In order to avoid the problem of common method bias (CMB), first of all, questions belonging to the same factor in the data collection tool were blended non-consecutively. Additionally, a control question was added to the survey to detect inconsistent answers. As a result of the control question analysis, 30 surveys were not included in the analysis due to inconsistencies

in the answers. Additionally, both Harman’s one-factor test was applied to control for CMB. In the single factor approach, a single factor should not emerge in the exploratory factor analysis (without factor rotation) and the explanation rate of the total variance of a factor should be less than 50% (Podsakoff, et al., 2003). In this study, more than one factor was obtained because of exploratory factor analysis, and it was determined that the first factor explained 36% of the total variance. Our findings indicate no CMB threat in this study. Additionally, in this study, VIF (Variance Inflation Factors) values for CMB were also checked. According to Kock (2015), a VIF greater than 3.3 indicates collinearity and the potential for common method bias to contaminate the model. Therefore, if all VIFs obtained from the PLS-SEM analysis are less than 3.3, the model can be free of CMB. In the study, it was evaluated that there was no CMB problem since the VIF values were less than 2.409.

During the evaluation of the measurement model, the first step is to investigate convergent and discriminant validity. Convergent validity is assessed by examining the factor loadings, AVE (Average Variance Extracted), and CR (Composite Reliability) of the statements (items) in the data collection tool. It is required that factor loadings be greater than 0.70 and statistically significant. However, factor loadings ranging from 0.40 to 0.70 are also acceptable, if CR>0.70 and AVE>0.50 are satisfactory for the measurement model (Hair et al., 2014, 2017). In this study, factor loadings were found to be between 0.706-0.967. Additionally, as shown in Table 1, both CR and AVE exceed the acceptable thresholds of 0.70 and 0.50, respectively. Therefore, it can be concluded that the convergent validity of the constructs is satisfactory (Fornell & Larcker, 1981). Measurement model PLS-SEM results are given in figure 2.

FIGURE 2 | Measurement Model

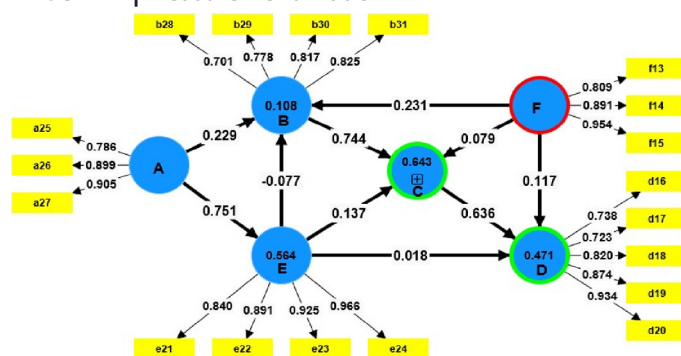


TABLE 1 | Construct Reliability and Validity

Construct	Items	Loadings	Cronbach's Alpha (CA)	Composite reliability (CR)	Average variance extracted (AVE)
A: Social media	a25	0.786	0.896	0.899	0.749
	a26	0.899			
	a27	0.905			
B: Attitude	b28	0.706	0.862	0.862	0.612
	b29	0.781			
	b30	0.831			
	b31	0.807			
	c32	0.925			
C: Intention	c33	0.852	0.916	0.915	0.730
	c34	0.825			
	c35	0.813			
	d16	0.698			
	d17	0.734			
D: Behavior	d18	0.843	0.910	0.912	0.675
	d19	0.890			
	d20	0.924			
	e21	0.840			
	e22	0.891			
E: Influencer Effect	e23	0.926	0.948	0.948	0.822
	e24	0.967			
	f13	0.809			
	f14	0.892			
F: Food innovation	f15	0.966	0.916	0.917	0.786

Confirming the statistical uniqueness and differentiation of each construct from others is crucial, and this is achieved through the assessment of discriminant validity (Hair et al., 2019). The measurement model’s discriminant validity is evaluated using both the Fornell-Larcker and Heterotrait Monotrait Ratio (HTMT) criteria. However, Henseler et al. (2015) have argued that the Fornell-Larcker criterion is inadequate for revealing discriminant validity and have recommended the use of the HTMT criterion. In Table 2, the square root of AVE is greater than the correlation coefficients between all constructs, ensuring discriminant validity (Fornell & Larcker, 1981).

TABLE 2 | Fornell-Larcker Criterion

Construct	Items	Loadings	Cronbach's Alpha (CA)	Composite reliability (CR)	Average variance extracted (AVE)
A: Social media	a25	0.786	0.896	0.899	0.749
	a26	0.899			
	a27	0.905			
B: Attitude	b28	0.706	0.862	0.862	0.612
	b29	0.781			
	b30	0.831			
	b31	0.807			
	c32	0.925			
C: Intention	c33	0.852	0.916	0.915	0.730
	c34	0.825			
	c35	0.813			
	d16	0.698			
	d17	0.734			
D: Behavior	d18	0.843	0.910	0.912	0.675
	d19	0.890			
	d20	0.924			
	e21	0.840			
	e22	0.891			
E: Influencer Effect	e23	0.926	0.948	0.948	0.822
	e24	0.967			
	f13	0.809			
	f14	0.892			
F: Food innovation	f15	0.966	0.916	0.917	0.786

The study utilised the HTMT to check discriminant validity, as proposed by Henseler et al. (2015). The authors argue that an HTMT value greater than 0.85 indicates a serious discriminant validity problem. Table 3 shows that all values are below 0.85, confirming the discriminant validity of the constructs analysed in this study.

TABLE 3 | HTMT Criterion

	A	B	C	D	E	F
A	0.865					
B	0.236	0.782				
C	0.303	0.785	0.855			
D	0.226	0.448	0.677	0.822		
E	0.751	0.138	0.254	0.201	0.907	
F	0.283	0.281	0.314	0.320	0.188	0.887

If an item loads more on another construct than its own, there is a problem with discriminant validity. To ensure discriminant validity, a specific item should have higher loadings in its own construct compared to other constructs, as indicated by cross-loadings. The cross-loadings table is provided in Table 4 of the study, which shows that discriminant validity has been achieved.

TABLE 4 | Cross Loadings

	A	B	C	D	E	F
a25	0.786	0.216	0.247	0.185	0.582	0.249
a26	0.899	0.209	0.253	0.180	0.676	0.234
a27	0.905	0.189	0.287	0.220	0.687	0.253
b28	0.183	0.701	0.539	0.365	0.071	0.226
b29	0.167	0.778	0.618	0.337	0.101	0.212
b30	0.160	0.817	0.655	0.368	0.064	0.241
b31	0.227	0.825	0.635	0.334	0.189	0.201
c32	0.286	0.645	0.917	0.606	0.256	0.262
c33	0.253	0.734	0.854	0.515	0.206	0.263
c34	0.254	0.662	0.833	0.535	0.211	0.305
c35	0.242	0.646	0.811	0.548	0.192	0.245
d16	0.196	0.274	0.455	0.738	0.220	0.283
d17	0.191	0.329	0.507	0.723	0.172	0.178
d18	0.145	0.424	0.575	0.820	0.112	0.254
d19	0.183	0.404	0.605	0.874	0.139	0.273
d20	0.214	0.398	0.623	0.934	0.191	0.315
e21	0.634	0.084	0.178	0.222	0.840	0.160
e22	0.665	0.121	0.231	0.191	0.891	0.171
e23	0.702	0.133	0.237	0.153	0.925	0.168
e24	0.720	0.156	0.270	0.169	0.966	0.182
f13	0.233	0.226	0.256	0.258	0.135	0.809
f14	0.238	0.273	0.274	0.272	0.161	0.891
f15	0.280	0.248	0.303	0.318	0.200	0.954

Table 1 shows that convergent validity is achieved, and Tables 2-4 demonstrate discriminant validity. The analysis and evaluation of the structural model will now be conducted.

E. STRUCTURAL MODEL

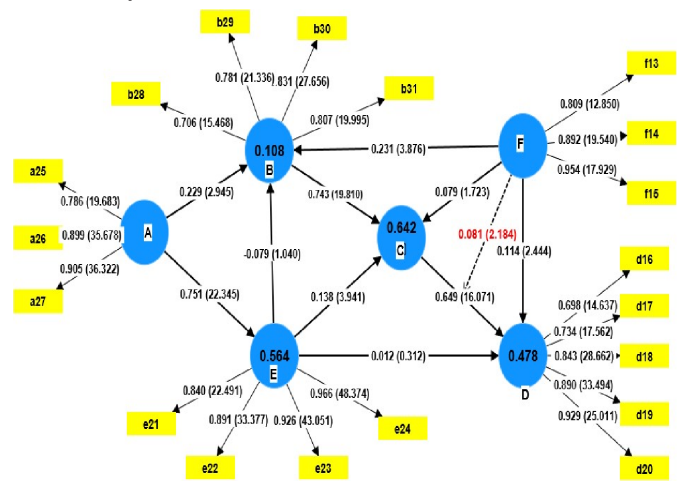
During the structural model stage, path analysis and hypothesis testing are conducted. Additionally, the presence of multicollinearity is checked by examining the VIF values of the inner model. Model evaluation is typically performed using the coefficient of determination R2, effect size f2, and goodness of fit index (GoF). To assess model fit, the Standardized Root SRMR, Chi-Square, and NFI criteria can be used. A VIF value less than 3 indicates the absence of multicollinearity (Hair et al., 2014, 2017).

Structural parameters and R2 values (values inside the ellipses) are presented in figure 3. These values range from 0.108 to 0.642. Upon examining the inner model VIF values, it is evident that they range from 1.000 to 2.409, indicating that there is no multicollinearity problem.

According to Cohen (1992), “the effect size f2 reflects a large (0.35), medium (0.15), or small (0.02) effect”. When examining the f2 values in Table 4, it was calculated that B→C: 1.416 and C→D: 0.658. It was determined that attitudes towards OP have a significant impact on purchase intention and subsequently on purchasing behaviour.

The GoF index is calculated by taking the square root of the product of the average of AVE and R2 values. The degrees of fit for the GoF index are as follows: “GoF = 0.10 (low), GoF = 0.25 (medium), GoF = 0.36 (very good)” (Wetzels et al., 2009). In this study, GoF was calculated as 0.57. Finally, the model fit values were calculated as SRMR=0.044 and NFI=0.887. Upon examining the criteria used for the structural model, it was determined that the model is well fitting and therefore acceptable.

FIGURE 3 | Structural Model



F. HYPOTHESIS TEST

When the hypothesis test results were examined, it was understood that only two hypotheses were not supported. Especially the size of the effect coefficients of A→E: 0.751, B→C: 0.743 and C→D: 0.638 is remarkable. From these results, it can be said that people develop positive attitudes towards OP with the influence of social media advertisements and influencers, and these positive attitudes are supported by strong purchasing intentions and increase their purchasing behaviour. It was determined that a one-unit increase in positive attitudes towards OF products increased purchasing intentions by 0.743 units. In addition, it was revealed that a one-unit increase in purchasing intentions increased the purchasing behaviour of OF products by 0.638 units. Nguyen et al. (2023) found that a one-unit increase in consumers' OF purchasing attitudes increases their purchasing intentions by 0.514 units; It has been revealed that a one unit increase in purchasing intentions increases purchasing behaviour by 0.235 units. Consistent with the study results, Gür and Erdem (2023) and Paul et al. (2016) revealed that attitude towards OF has the strongest effect in predicting purchasing intention and behaviour.

TABLE 5 | Hypothesis Test Results

	Original sample	t statistics	P values	f2	Decision
H1: A→B	0.229***	2.945	P<0.01	0.024	Supported
H2: A→E	0.751***	22.345	P<0.01	1.294	Supported
H3: B→C	0.743***	19.810	P<0.01	1.416	Supported
H4: C→D	0.638***	15.233	P<0.01	0.658	Supported
H5: E→B	-0.079*	1.040	0.298	0.003	Not Supported
H6: E→C	0.138***	3.941	P<0.01	0.050	Supported
H7: E→D	0.012 ^{ns}	0.404	0.686	0.001	Not Supported
H8: F→B	0.231***	3.876	P<0.01	0.055	Supported
H9: F→C	0.079*	1.723	P<0.10	0.016	Supported
H10: F→D	0.115**	2.472	P<0.05	0.024	Supported

*p<0.10; **p<0.05; ***p<0.01; ns: non-significant

In the study, it was determined that social media advertisements had a positive effect on OF purchasing attitudes and influencers. Like the study results, Alam et al. (2023) revealed that social media positively affects Saudi consumers' intentions to purchase OF. This result also coincides with the results of other studies in the literature (Masuda et al. 2022). Masuda et al. (2022) revealed that media advertisements increase the influence of influencers on consumers. Zahid et al (2018) stated that social media plays an important role in highlighting environmental problems, and Trivedi et al. (2018) evaluated that social media positively affects environmental concern.

In the study, it was determined that while influencer effects did not have a significant effect on OF purchasing attitudes and behaviour, they positively affected the intention to purchase OF. Önem (2022), in his study investigating how influencers affect consumers' purchasing intention and behaviour, determined that influencer effects positively affect consumers' purchasing intention and behaviour. Consumers who frequently use social media attach importance to the opinions of influencers in their product purchasing intentions and behaviours, making them individuals who are both affected and influence other people who are likely to use the same product.

In the study, it was determined that food innovation positively affected attitudes, intentions and purchasing behaviour towards OF. Similarly, Ari & Yılmaz (2023) revealed that food innovation positively affects the OF purchasing attitude. People's desire to try new and different foods can positively affect their attitude, intention, and behaviour in purchasing OF.

G. INVESTIGATING MEDIATION EFFECT

One of the methods used to calculate whether there is a mediation effect between latent variables is the Variance Account For (VAF) criterion. To calculate this value, the direct impact and indirect impact values must be calculated, and the total impact value must be calculated by adding these two values. VAF value is calculated from the indirect effect/total effect formula. A VAF value of 0.80 and above indicates a full mediating effect, a value between 0.20 and 0.80 indicates a partial mediating effect, and a value below 0.20 indicates that it does not create a mediating effect (Hair et al. 2014).

When Figure 3 is examined, it is seen that the direct effect between E: Influencer effect and OP purchasing behaviour is not significant ($E \rightarrow D$: 0.012, $p > 0.05$). In this case, the mediating effect of intention between the Influencer effect and OP purchasing behaviour can be investigated. Since $VAF > 0.80$ was calculated in the mediating effect of intention, it can be said that intention to purchase OP has a full mediating role between the Influencer effect and OP purchasing behaviour. It has been revealed that there can only be significant increases in purchasing behaviour when people create a strong tendency to purchase OP with the influence of Influencer. In addition, mediating roles between Influencer influence and OP purchasing behaviour through attitude and food innovation were also found to be significant. It has been determined that purchasing behaviour is higher in consumers who have a positive attitude towards OP and have a high food innovation score level. It was revealed that the Influencer effect \rightarrow organic product purchasing behaviour relationship, whose direct effect was not found to be significant, became significant only with the full mediation effect of B and F variables.

H. MODERATION TESTING

When the moderating role of food innovation in the relationship between the intention to purchase OF products and purchasing behaviour was investigated, the result was $F \times C \rightarrow D$: 0.081 ($t=2.184$; $p < 0.05$) (Figure 3). According to this result, the regulatory effect of food innovation was found to be significant. The positive coefficient reveals that food innovation has an increasing effect on OP purchasing behaviour. It has been evaluated that individuals with a high level of adopting new foods and consuming these products will be more likely to purchase OP.

I. MULTI GROUP ANALYSIS (MGA)

MGA was performed for gender. When the results were examined, it was revealed that men developed a higher positive attitude towards OP with the influence of social media advertisements than women (man: 0.248; $t=2.406$, $p=0.008$ and woman: 0.197; $t=2.667$, $p=0.048$). Additionally, as an important result, the effect of food innovation on purchasing behaviour was not found to be significant in men but was found to be positively significant in women (man: 0.021; $t=0.344$, $p=0.367$ and woman: 0.223; $t=3.223$, $p=0.001$). This finding indicates that women, on the contrary of men, are influenced by social media and shape their OP purchasing behaviour. This result is also evident from the Welch-Satterthwait results, which are the significance test of

gender effect differences. Path Coefficients-diff (man-women): -0.203; $t=2.199$, $p=0.014$). Other effects were similar for both genders.

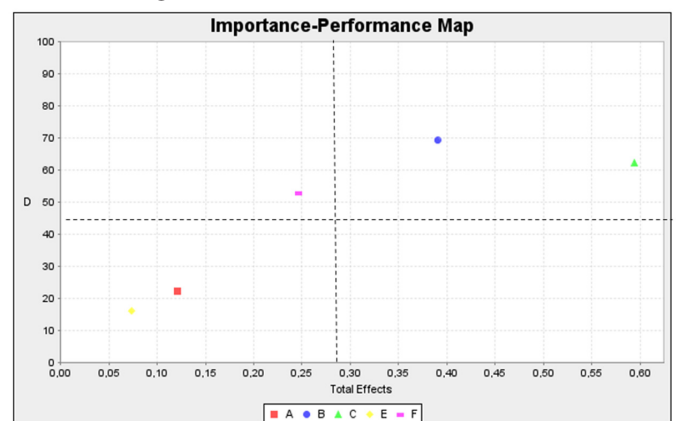
İ. INDIRECT EFFECTS

The indirect effects of social media on positive attitudes towards OF products and purchasing behaviour through Influencer effect were found to be significant ($A \rightarrow B \rightarrow C$: 0.17; $t=3.245$, $p < 0.01$ and $F \rightarrow B \rightarrow C$: 0.172; $t=3.734$, $p < 0.01$). Considering the influencer effect as a part of the social media effect, it can be evaluated that consumers develop their purchasing intentions and behaviours towards OP by being influenced by both social media in general and the influencer's comments. It was also determined that the influencer effect increased purchasing behaviour through the indirect effect of attitude and intention toward organic product ($F \rightarrow B \rightarrow C \rightarrow D$: 0.109; $t=3.574$, $p < 0.01$).

J. IMPORTANCE – PERFORMANCE MAP ANALYSIS (IPMA)

In structural models, estimating the endogenous variable according to the importance and performance of the exogenous variable is an important issue. The study used importance-IPMA for this prediction (Ringle & Sarstedt. 2016). Figure 4. shows the IPMA results reflecting the importance and performance representation of all extrinsic constructs (A, B, C, E, and F) affecting OF products purchasing behaviour. Attitude towards OP (69%), purchase intention (62%) and food innovativeness (52%) show a higher level of performance than other variables. However, it has been determined that the importance level of food innovation is lower than attitude and intention. Figure 4 shows that both the importance and performance of influencer effect and social media ads are below average. From these findings, it can be evaluated that the IPMA results support the structural model results.

FIGURE 4 | Importance-Performance Map Analysis (IPMA) for Purchasing Behaviour.



IV. CONCLUSIONS AND LIMITATIONS

This research can contribute to the literature in terms of proposing a new model to predict the attitudes and purchase behaviours of social media recommendations towards products by extending the TPB through the inclusion of social media and influencer influence variables.

Firstly, the results confirmed the usefulness of TPB in studying consumer behaviour by showing that the inclusion of social media advertising, food innovation and influencer influence can further improve the predictive ability of the model.

Secondly, when this study investigated the moderating role of food innovation in the relationship between purchase intention and purchase behaviour of OF products, the moderating effect of food innovation was significant. This shows the importance of food innovation in practice.

Thirdly, influencer influence was found to increase purchase behaviour through the indirect effect of attitude and intention towards OP, therefore, decision makers and managers can give more space to influencers in OF advertisements and promotions on social media applications.

K. CONCLUSIONS

This research can contribute to the theory in several ways. First, this study is important in terms of being research that reveals how food innovation and influencers effect OF purchase attitudes, intentions, and behaviours. When the literature is examined, there are very few studies that examine OF purchase behaviour by considering food innovation and influencer effect together.

Secondly, social media advertisements positively affect both purchase behaviour and organic influence of influencers. Here, decision makers can strengthen individuals OF purchase tendencies and behaviours by increasing OF promotion on local media channels and social media platforms. From the results of the study, it is concluded that in order to encourage OF consumption, managers should create rules and culture regarding OF consumption in digital media and social media platforms. The importance of food innovation and digital media advertising to increase the propensity of customers to buy OF has emerged. OF producers and retailers can take these results into consideration and develop new OF production and promotion processes by designing new business models, especially through digital media.

L. LIMITATIONS AND FUTURE DIRECTIONS

Although interesting results were obtained in the study, this study has some limitations that can be addressed in future research. Firstly, in this study, in addition to the TPB framework, factors such as social media advertisements, influencer effect, food innovativeness were added to the model and the relationships between them were revealed. In future studies, the models can be expanded by adding different variables such as trust in organic food producers and perceived risk towards organic products. In addition, more comprehensive evaluations can be made by conducting qualitative interviews with consumers. The research model, which reveals the effect of social media and influencers on organic food purchasing behaviours and is compatible with the results of the analysis, can also be applied to research in other areas such as energy saving, recycling, and green product purchasing.

REFERENCES

- Alam, M.N., Ogiemwonyi, O., Alshareef, R., Alsolamy, M., Mat, N., & Azizan, N.A. (2023). Do social media influence altruistic and egoistic motivation and green purchase intention towards green products? An experimental investigation. *Cleaner Engineering and Technology*, 15, 100669. <https://doi.org/10.1016/j.clet.2023.100669>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211. [http://dx.doi.org/10.1016/0749-5978\(91\)90020-T](http://dx.doi.org/10.1016/0749-5978(91)90020-T)
- Ari, E., & Yılmaz, V. (2023). The effect of social media on organic food purchasing intention: A structural model proposal. *ICSHSR 4th International Conference on Health, Engineering and Applied Sciences*, 106-114, April 14- 16, Dubai.
- Ari, E., & Yılmaz, V. (2016). A proposed structural model for housewives' recycling behavior: A case study from Turkey. *Ecological Economics*, 129,132-142. <https://doi.org/10.1016/j.ecolecon.2016.06.002>
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155-159. <https://doi.org/10.1037/0033-2909.112.1.155>
- Çınar, N., Engindeniz, S., & Çınar, G. (2021). Consumers Intention to Purchase Organic Food: Aydın Province Example. *Aydın Adnan Menderes University Journal of Institute of Social Sciences*, 8(1), 15-26. <https://doi.org/10.30803/adusobed.831579>
- Demirtas, B. (2019). Assessment of the impacts of the consumers' awareness of organic food on consumption behavior. *Food Science and Technology*, 39(4), 881-888. <https://doi.org/10.1590/fst.10518>
- Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- Govaerts, F., & Olsen, S. O. (2022). Exploration of seaweed consumption in Norway using the norm activation . The moderator role of food innovativeness. *Food Quality and Preference*, 99. <https://doi.org/10.1016/j.foodqual.2021.104511>
- Hair, J., Hult, T., Ringle, C., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Thousand Oaks, CA: Sage Publications, Inc.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017). Mirror mirror on the wall: a comparative evaluation of compositebased structural equation modeling methods. *Journal of the Academy of Marketing Science*, 45(5), 616-632. <https://doi.org/10.1007/s11747-017-0517-x>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Gao, L., Wang, S., Li, J. & Li, H. (2017). Application of the extended theory of planned behavior to understand individual's energy saving behavior in workplaces. *Resources, Conservation and Recycling*, 127, 107-113. <https://doi.org/10.1016/j.resconrec.2017.08.030>
- Gür, D., & Şakir, E. (2023). Factors affecting consumers'purchase intention and purchasing behavior of organic food products: a research in İstanbul. *Journal of Research in Business*, 8 (1), 114-152. <https://doi.org/10.54452/jrb.1178949>
- Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1-10. <https://doi.org/10.4018/ijec.2015100101>
- Konuk, F.A. (2018). Price fairness, satisfaction, and trust as antecedents of purchase intentions towards organic food. *Journal of Consumer Behaviour*, 17(2), 141-148. <https://doi.org/10.1002/cb.1697>
- Masuda, H., Han, S.H., & Lee, J., (2022). Impacts of influencer attributes on purchase intentions in social media influencer marketing: mediating roles of characterizations. *Technol. Forecast. Soc. Change*, 174, 121246. <https://doi.org/10.1016/j.techfore.2021.121246>
- Mendleson, N., & Polonsky, M.J., 1995. Using strategic alliances to develop credible green marketing. *Journal of Consumer Marketing*, 12 (2), 4-18. <https://doi.org/10.1108/07363769510084867>
- Misra, R., & Singh, D. (2016). An analysis of factors affecting growth of organic food: perception of consumers in Delhi-ncr (India). *British Food Journal*, 118, 2308-2325. <https://doi.org/10.1108/BFJ- 02-2016-0080>
- Nafees, L., Cook, C.M. Nikolov, A.N., James E., & Stoddard, J.E. (2021). Can social media influencer (SMI) power influence consumer brand attitudes? The mediating role of perceived SMI credibility. *Digital Business*, 1(2), 100008. <https://doi.org/10.1016/j.digbus.2021.100008>
- Nguyen, To-T., Dang, H-Q., & Anh-L, T. (2023). Impacts of household norms and trust on organic food purchase behavior under adapted theory of planned behavior. *Journal of Agribusiness in Developing and Emerging Economies*, 2044-0839 <https://doi.org/10.1108/JADEE-10-2022-0218>
- Önem, Ş. (2022). The Impact of Social Media Influencers on the Consumers' Purchase Intention and Decision. PhD Thesis, Tekirdağ Namık Kemal University, Institute of Social Sciences, Department of Business Administration.
- Park, J., & Ha, S. (2014). Understanding consumer recycling behavior: combining the theory of planned behavior and the norm activation model. *Family and Consumer Sciences Research Journal*, 42(3), 278-291, <https://doi.org/10.1111/fcsr.12061>
- Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services*, 29, 123-134, doi: 10.1016/j.jretconser.2015.11.006
- Pentina, I., Zhang, L., & Basmanova, O. (2013). Antecedents and consequences of trust in a social media brand: a cross-cultural study of Twitter. *Computers in Human Behavior*, 29 (4), 1546-1555. <https://doi.org/10.1016/j.chb.2013.01.045>
- Trivedi, R.H., Patel, J.D., & Acharya, N. (2018). Causality analysis of media influence on environmental attitude, intention and behaviors leading to green purchasing. *Journal of Cleaner Production*, 196, 11-22. <https://doi.org/10.1016/j.jclepro.2018.06.024>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Ringle, C. M., & Sarstedt, M. (2016). Gain more insight from your PLS-SEM results the importance-performance map analysis. *Industrial Management and Data Systems*, 116(9), 1865-1886. <https://doi.org/10.1108/IMDS-10-2015-0449>
- Scalco, A., Noventa, S., Sartori, R., & Ceschi, A. (2017). Predicting organic food consumption: A meta-analytic structural equation model based on the theory of planned behavior. *Appetite* 112, 235-248. <http://dx.doi.org/10.1016/j.appet.2017.02.007>
- Wetzels, M., Odekerken-Schroder, G. & Van Oppen. C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS Quarterly*, 3(1), 177-196. <https://doi.org/10.2307/20650284>
- Yener, T., & Taşçıoğlu, M. (2020). The effects of perceived risk and innovativeness on consumer resistance : attitudes of parents towards organic foods. *Int. Journal of Management Economics and Business*, 16(2), 429-441. <http://dx.doi.org/10.17130/ijmeb.756949>
- Yadav, R., & Pathak, G. S. (2016). Intention to purchase organic food among young consumers: Evidence from a developing nation. *Appetite*, 96, 122-128. <http://dx.doi.org/10.1016/j.appet.2015.09.017>
- Yadav, R., & Pathak, G.S. (2017). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, 135, 732-739. <http://dx.doi.org/10.1016/j.jclepro.2016.06.120>
- Yılmaz, V., Kınaş, Y., & Olgaç, S. (2024). SmartPLS 4 ile yapısal eşitlik modellemesi, (Structural equation modelling with SmartPLS 4), Detay Publishing, Ankara, Turkey, ISBN: 9786052548714.
- Zahid, M.M., Ali, B., Ahmad, M.S., Thurasamy, R., Amin, N., (2018). Factors affecting purchase intention and social media publicity of green products: the mediating role of concern for consequences. *Corporate Social Responsibility and Environmental Management*, 25 (3), 225-236. <https://doi.org/10.1002/csr.1450>