UNDERSTANDING THE INTENTION TO PURCHASE AND NOT TO PURCHASE ORGANIC FOOD AMONG STUDENTS: STRUCTURAL EQUATION MODELING

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ABSTRACT

Objective: Organic food is purchased by consumers because they believe in the product's excellent quality. Sustainable farming appears to improve health and lower the likelihood of developing chronic diseases. This study attempts to investigate the primary elements that influence students' decision to buy and not buy organic food at King Faisal University (KFU).

Method: This research uses the quantitative research method. A sample size of 182 students were chosen to complete this study. Data was collected through structured questionnaires. The questionnaires were sent through the formal students' emails from May 20th, 2023 to September 6th, 2023. We used SmartPLS 4 to assess the hypotheses of this study.

Results: This study finds some evidence like a positive significant effect of Organic Food Awareness (OFA) on the Purchase of Organic Food (BIB) (H1= β=0.894; p< 0.1), and an insignificant effect of OFA on the Behavioral Intentions to Purchase Organic Food (BIB) (H2= β=0.157; p > 0.01).

Conclusion: Universities should improve the Students' awareness of organic food. This leads to a decrease in their exposure to dangerous chemicals by eating organic food, potentially lowering their risk of health issues such as allergies, hormonal disruptions, and some malignancies. This study has social, economic, and academic implications. In addition, it comes in line with the sustainability initiative. Organic farming practices promote ecological balance and conserve biodiversity.

Keywords: intention, purchase, organic food, students, awareness.
COMPREENDENDO A INTENÇÃO DE COMPRAR E NÃO COMPRAR ALIMENTOS ORGÂNICOS ENTRE OS ESTUDANTES: MODELAGEM DE EQUAÇÃO ESTRUTURAL

RESUMO

Objetivo: Os alimentos orgânicos são comprados pelos consumidores porque eles acreditam na excelente qualidade do produto. A agricultura sustentável parece melhorar a saúde e reduzir a probabilidade de desenvolver doenças crônicas. Este estudo tenta investigar os elementos primários que influenciam a decisão dos alunos de comprar e não comprar alimentos orgânicos na Universidade King Faisal (KFU).

Método: Esta pesquisa utiliza o método de pesquisa quantitativa. Uma amostra de 182 alunos foi escolhida para concluir este estudo. Os dados foram coletados por meio de questionários estruturados. Os questionários foram enviados através de e-mails formais dos estudantes de 20 de maio de 2023 a 6 de setembro de 2023. Utilizamos o SmartPLS 4 para avaliar as hipóteses deste estudo.

Resultados: Este estudo encontra algumas evidências como um efeito positivo significativo da Consciência de Alimentos Orgânicos (OFA) na Compra de Alimentos Orgânicos (BIB) (H1 = β=0.894; p< 0,1), e um efeito insignificante da OFA nas Intenções Comportamentais de Compra de Alimentos Orgânicos (BIB) (H2 = β=0.157; p > 0,01).

Conclusão: As universidades devem melhorar a conscientização dos estudantes sobre os alimentos orgânicos. Isso leva a uma diminuição na sua exposição a produtos químicos perigosos comendo alimentos orgânicos, potencialmente diminuindo o seu risco de problemas de saúde, como alergias, perturbações hormonais e algumas doenças malignas. Este estudo tem implicações sociais, econômicas e acadêmicas. Além disso, está em consonância com a iniciativa de sustentabilidade. As práticas agrícolas orgânicas promovem o equilíbrio ecológico e conservam a biodiversidade.

Palavras-chave: intenção, compra, comida orgânica, estudantes, consciência.

1 INTRODUCTION

Organic food is food that has not been grown or made with synthetic pesticides, chemical fertilizers, GMOs, antibiotics, or hormones or artificial additives. Composting, crop rotation, and biological pest management are examples of organic agricultural practices that promote sustainability and safeguard the environment(Doran, Kirschenmann, & Magdoff, 2007; Khoruzhy, Katkov, Katkova, Romanova, & Dzhikiya, 2023). Nowadays, customers choose to buy high-quality food for their families(Yu & Abler, 2010). Fresh fruits and vegetables are critical to the organic sector since they are the first point of contact for many clients and account for one-third of sales(Pearson, Henryks, & Jones, 2011).

Artificial additions or preservatives, such as artificial colors, flavors, or sweeteners, are not permitted in organic food. Natural additives are utilized instead to enhance flavor or extend shelf life. Organic food is frequently thought to be healthier and
safer than conventionally cultivated food. It has no toxic chemicals, pesticides, hormones, or antibiotics, making it a healthier choice for students (Makatouni, 2002).

Some educational institutions have begun to include organic options in their cafeterias or food services, making organic food more accessible to students. While organic food can be more expensive than conventional alternatives, many students see the potential long-term health and environmental benefits as worthwhile investments. According to some research findings, the students’ attitude was the most important predictor of their desire to purchase organic goods (Yazdanpanah & Forouzani, 2015). Several studies have discovered a considerable positive association between customer sentiments toward organic products and purchasing behavior (Yadav & Pathak, 2016).

According to the findings of the survey, consumers’ sentiments towards organic goods are most closely tied to health (Yadav & Pathak, 2016). This is because many individuals choose organic products over conventional alternatives because they believe they are healthier. Chemical insecticides, synthetic fertilizers, genetically modified organisms (GMOs), or growth hormones are not used in the cultivation or production of organic goods. This leads customers to feel that these items are more nutritious and safer to consume.

Organic items are perceived by health-conscious consumers as being devoid of potentially dangerous chemicals and pollutants that could cause health hazards. According to research, people link organic products with greater food safety and a lower risk of health problems such as allergies, obesity, and some types of cancer (Nordhagen et al., 2022). Although there have been numerous studies on organic consumers in Europe and other Western countries (Thompson, 1998), little is known about Saudi Arabia consumers’ perceptions of organic foods. This study attempts to fill that gap in the current literature by offering initial insights into students’ understanding of organic goods and the reasons they choose to buy or not buy organic in Saudi Arabian universities.

2 THEORITCAL FRAMEWORK

2.1 ORGANIC FOOD

Since the adoption of the organic farming method, global output and markets for organic products have increased. Despite the higher cost and lower yield of organic agriculture as compared to conventional agriculture, demand for these products is increasing year after year. (Hurtado-Barroso, Tresserra-Rimbau, Vallverdú-Queralt, &
Lamuela-Raventós, 2019). The organic business in the United States is currently thriving, with yearly growth in consumption of 20% each year (Dimitri & Greene, 2002). Organic products benefit both customers and manufacturers(Cachero-Martínez, 2020).

Food business experts believe that the organic food market has enormous potential, and its consumption has become widespread worldwide (Asian, Hafezalkotob, & John, 2019). Organic food is produced or farmed without the use of synthetic chemicals such as pesticides, fertilizers, hormones, or Genetically Modified Organisms (GMOs). It is often farmed utilizing environmentally friendly practices that aim to conserve soil and water, reduce pollution, and increase biodiversity. Organic farming uses natural methods and practices such as crop rotation, composting, and biological pest management to preserve and safeguard the health of the land, crops, animals, and, eventually, the people who consume the food. Organic food refers to agricultural items that are grown utilizing organic farming methods that are environmentally beneficial. Growing crops without the use of synthetic pesticides, fertilizers, genetic engineering, or irradiation is part of it. Organic cattle must be reared in a natural environment, with access to open space and organic feed. Organic farming emphasizes long-term practices that improve soil health, biodiversity, and animal welfare. Organic food is supposed to be more nutritious, have fewer pesticide residues, and have a reduced environmental impact (Dimitri & Dettmann, 2012; Magkos, Arvaniti, & Zampelas, 2003).

2.2 ORGANIC FOOD AWARENESS (OFA)

Organic food awareness is the knowledge and comprehension of the advantages and significance of eating organic food. It includes education and information about organic farming practices, the benefits of organic food over conventionally grown food, and the potential environmental and personal health impacts of organic farming.

Organic food awareness has grown rapidly in recent years as more people become concerned about the potential health risks and environmental consequences of conventional agriculture (Asif, Xuhui, Nasiri, & Ayyub, 2018). Green advertising raises customer knowledge of organic goods, builds consumer trust, and can influence consumer purchasing intent. It part of green management (Khare, Raghuwanshi, Vashisht, Verma, & Chauhan, 2023). The organic food business has a 14.1% growth potential and is expected to reach around USD 190 billion by 2025. There is a close link between the
organic sector's production capability and the achievement of the Sustainable Development Goals (Tsyhankova, Yatsenko, & Zavadska, 2014).

According to the findings, Women consume a greater number of organic foods than men, as do those with a high level of schooling, who are more physically fit, have a lower body mass index (BMI), and follow a vegetarian or vegan lifestyle (Eisinger-Watzl, Wittig, Heuer, & Hoffmann, 2015).

Educating students males and females about organic farming processes and labeling can help them make informed food-purchasing decisions (Roitner-Schobesberger, Darnhofer, Somsook, & Vogl, 2008). Food safety accidents that are widely publicized among students can cause long-term changes in food purchasing behavior (Frenzen, Buzby, & Rasco, 2001). The findings of some studies show that education has a significant impact on the likelihood of purchasing organic items and that the effects of marital status, wealth, and availability of organic products are consistent among models (Makatouni, 2002). The findings also suggest that more research into the relationships between ethnicity and organic food consumption is required (Dimitri & Dettmann, 2012; Ham, Pap, & Stanic, 2018).

2.3 REASONS FOR BUYING AND NOT BUYING ORGANIC FOOD

Studies show that people tend to consume organic food for many different reasons. People choose organic food for a variety of reasons, incorporating health and environmental issues, toxin-free food, and flavour (Baudry et al., 2017). Subjective attitudes and conventions influence intentions to purchase organic products (Carrión Bósquez, Arias-Bolzmann, & Martínez Quiroz, 2023). The intention of customers to purchase organic produce (0.282) is positively related to purchasing behaviors (Kashif et al., 2023).

Organic food is distinguished by its superior taste and quality. Encourage students to explore organic products so they can taste and feel the difference, potentially leading to a greater appreciation for fresh, natural meals. Raising students' knowledge of organic food can help them develop healthy eating habits, encourage sustainable food production, and cultivate a deeper understanding of the relationship between food, health, and the environment (Diagourtas, Kounetas, & Simaki, 2023; Shafique & Almeida, 2009). Organic foods are more nutrient-dense than conventional foods.
Organic fruits and vegetables offer higher quantities of vitamin C, iron, magnesium, and antioxidants, all of which are vital for maintaining good health and promoting normal cognitive function in students, according to research.

**The main hypothesis:**

H1: Organic food awareness (OFA) is a significant predictor of behavioral intentions to purchase organic food (BIB).

H2: Organic food awareness (OFA) is a significant predictor of behavioral intentions not to purchase organic food (BINB)

H3: Male and female have significant variations regarding organic food awareness (OFA) and behavioral intentions to purchase organic food (BIB).

H4: Male and female have significant variations regarding organic food awareness (OFA) and behavioral intentions not to purchase organic food (BINB).

3 METHODOLOGY

3.1 RESEARCH DESIGN

This research aims to study the intention to purchase or not purchase organic food among students at King Faisal University. This research uses the quantitative research method. Data was collected through structured questionnaires. The questionnaires were sent through the formal students' emails.
3.2 PARTICIPANTS

182 students from both male and female branches participated in this study. The sample used in this study was selected randomly. About 106 males (58.6%), and 75 females (41.4%) responded to this survey.

3.3 INSTRUMENT

This study adopted the research model used in previous studies like Schifferstein and Oude Ophuis, 1998 (Schifferstein & Ophuis, 1998); and Hui-Shung Chang, and Lydia Zepe da, 2005 (Chang & Zepe da, 2005). These models are designed to assess the customer's intention to buy organic food as well as understand the reason why customers buy and not buy organic food. The survey was constructed into three main measurements. The student’s behavioral intentions to purchase organic food (7 statements), Behavioral intentions not to purchase organic food (4 statements), and Organic food awareness (6 statements).

4 RESULTS AND DISCUSSION

4.1 DEMOGRAPHY

In total, 181 respondents took part in the survey. The demographic information respondents underline a majority of males (58.6% or n=106) than females (41.4% or n=75) who contributed to the study. Likewise, the nationality construct shows 97.2% (n=176) were Saudi respondents against non-Saudi (2.8% or n=5). Regarding marital status, most respondents (91.2% or n=165) were unmarried, whereas only 8.8% (n=16) were married [Table 1].

<table>
<thead>
<tr>
<th>Table 1. Sample profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constructs</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Nationality</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td>Marital status</td>
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<td></td>
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</tbody>
</table>

Source: Authors’ questionnaire results
4.2 MEASUREMENT MODEL

To gauge the assumption of the measurement model, the researchers applied factors to ensure the association of items with their respective factors. The ranges of the factor loading scores for all the items appeared above 0.70, which is acceptable (Hair, Risher, Sarstedt, & Ringle, 2019) as shown in (Table 2 and Figure 1). We applied a variance inflation factor (VIF), which measures the amount of multicollinearity in regression analysis. Multicollinearity exists when there is a correlation between multiple independent variables in a multiple regression model. This can adversely affect the regression results. As a result, its values are less than 0.50, ensuring the nonexistence of multicollinearity (Hair et al., 2019). Besides, we confirmed average variance extracted (AVE) and composite reliability (CR) are the best measures that provide a strong base of convergent validity (Hair et al., 2019). The AVE’s values for all the variables are greater than 0.5, showing half of the variance to their apparent measurement items on average (Hair et al., 2019). Concerning the scores of CR, the researchers set out the cut-off of 0.70 as its scores for all variables seen above suggested values (Sarstedt, Hair, Ringle, Thiele, & Gudergan, 2016). We observe the Cronbach alpha for all variables within acceptable ranges (> 0.70) as shown in (Table 2) (Hair et al., 2019).

In addition, discriminant validity (DV) was analyzed with the support of a heterotrait-monotrait (HTMT) ratio of correlations as suggested by Henseler et al, where values of DV did not exceed either the HTMT value of 0.85 (Kline, 2015). As a result, these values within limits up to 0.85 ensured the good established me DV (Gold, Malhotra, & Segars, 2001) as shown in (Table 3).

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Loadings</th>
<th>VIF</th>
<th>AVE</th>
<th>CR</th>
<th>Alpha (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral intentions to purchase</td>
<td>BIB1</td>
<td>0.953</td>
<td>4.154</td>
<td>0.857</td>
<td>0.977</td>
<td>0.972</td>
</tr>
<tr>
<td>organic food [BIB]</td>
<td>BIB2</td>
<td>0.949</td>
<td>4.617</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BIB3</td>
<td>0.839</td>
<td>2.743</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BIB4</td>
<td>0.943</td>
<td>7.303</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BIB5</td>
<td>0.926</td>
<td>4.068</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BIB6</td>
<td>0.938</td>
<td>4.905</td>
<td>0.757</td>
<td>0.926</td>
<td>0.895</td>
</tr>
<tr>
<td></td>
<td>BIB7</td>
<td>0.929</td>
<td>4.825</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioral intentions not to purchase</td>
<td>BNB1</td>
<td>0.879</td>
<td>2.894</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>organic food [BINB]</td>
<td>BNB2</td>
<td>0.890</td>
<td>2.684</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BNB3</td>
<td>0.829</td>
<td>2.513</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BNB4</td>
<td>0.882</td>
<td>2.589</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organic food awareness [OFA]</td>
<td>OFA1</td>
<td>0.85</td>
<td>2.948</td>
<td>0.724</td>
<td>0.940</td>
<td>0.923</td>
</tr>
<tr>
<td></td>
<td>OFA2</td>
<td>0.871</td>
<td>3.974</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OFA3</td>
<td>0.880</td>
<td>4.699</td>
<td>0.724</td>
<td>0.940</td>
<td>0.923</td>
</tr>
</tbody>
</table>
We applied SmartPLS 4 to assess the hypotheses. The results show a positive significant effect of OFA on BIB (H1 = β = 0.894; p < 0.1), which accepted the H1. Likewise, OFA’s effect on BINB is insignificant (H2 = β = 0.157; p > 0.01). As a result, H2 is rejected (Table 4 and figure 2).

### Table 4. SEM estimations [direct paths]

<table>
<thead>
<tr>
<th>H.No.</th>
<th>Proposed relationships</th>
<th>Std. (β)</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>t-value</th>
<th>p-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>OFA → BIB</td>
<td>0.894</td>
<td>0.895</td>
<td>0.022</td>
<td>40.066</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>OFA → BINB</td>
<td>0.157</td>
<td>0.167</td>
<td>0.082</td>
<td>1.917</td>
<td>0.055</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Note(s): *p < .05. **p < .01. ***p < .001.

Note(s): OFA=Organic food awareness; BIB=Behavioral intentions to purchase organic food; BINB=Behavioral intentions not to purchase organic food
4.4 MULTI-GROUP ANALYSIS

We applied the multigroup analysis, allowing us to test if pre-defined data groups significantly differ in their group-specific parameter estimates (Sarstedt, Henseler, & Ringle, 2011). In this regard, SmartPLS provides outcomes of three different approaches based on bootstrapping results from every group (Hair et al., 2019). We compared the two groups (male and female) to observe the difference in beta (β) and p values. We also indicate the complete set to know the range of the differences (Table 5).

Table 5. Overall comparison of the two groups

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Males</th>
<th>Females</th>
<th>Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Std. (β)</td>
<td>t-value</td>
<td>p-value</td>
</tr>
<tr>
<td>OFA → BIB</td>
<td>0.947</td>
<td>31.282</td>
<td>0.000</td>
</tr>
<tr>
<td>OFA → BINB</td>
<td>0.214</td>
<td>0.765</td>
<td>0.444</td>
</tr>
</tbody>
</table>

Moreover, the MGA outcomes based on males and females suggest differences between males and females in path coefficients. A significant difference can be observed between OFA and BIB at Henseler’s p-value of 0.008 (H3 accepted). On the other hand, the path paths did not exhibit any significant differences in terms of OFA and BINB (H4 rejected) (Table 6). The overall summary of hypotheses is given in Table 7.
Table 6. Path coefficient Bootstrap MGA

<table>
<thead>
<tr>
<th>H.No.</th>
<th>Construct</th>
<th>Difference (male-female)</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H3</td>
<td>OFA → BIB</td>
<td>0.008*</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4</td>
<td>OFA → BINB</td>
<td>0.104</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Note: * the differences are significant in the relationship between the male and female (p<0.05).

Table 7. Summarily of hypotheses confirmation

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Hypotheses description</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Organic food awareness (OFA) is a significant predictor of behavioral intentions to purchase organic food (BIB).</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>Organic food awareness (OFA) is a significant predictor of behavioral intentions not to purchase organic food (BINB)</td>
<td>Rejected</td>
</tr>
<tr>
<td>H3</td>
<td>Male and female have significant variations regarding organic food awareness (OFA) and behavioral intentions to purchase organic food (BIB).</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4</td>
<td>Male and female have significant variations regarding organic food awareness (OFA) and behavioral intentions not to purchase organic food (BINB).</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

5 CONCLUSION

This study tries to understand the main factors that affect students' decision to buy and not buy organic food at King Faisal University (KFU). The study finds that Organic food awareness (OFA) is a significant predictor of behavioral intentions to purchase organic food (BIB). This finding comes to support previous findings (Mason, Starman, Lineberger, & Behe, 2008; Parashar, Singh, & Sood, 2023; Waqas & Hong, 2019). Thus, to buy organic food, awareness helps to make the right decision. This implies that people who are more aware of organic food are more likely to want to buy it.

Many factors shape the awareness towards organic food like the health consciousness, environmental concern, and subjective norms all play a role in determining behavioral intentions towards organic food. It has been discovered that attitude and health consciousness are better predictors of organic food purchase intention. Consumer awareness influences their inclination to buy organic food in a good way (Asif et al., 2018).

Individuals who are more health conscious, concerned about the environment, and experience social pressure from others to buy organic food are more likely to intend to do so. Furthermore, Individuals who perceive more benefits from organic food, such as better health and taste, are more likely to buy it (Lee, Shimizu, Kniffin, & Wansink, 2013).

People who perceive greater restrictions, such as higher pricing and less availability, are less likely to want to buy organic food. Overall, the findings indicate that improving organic food awareness and addressing issues such as health consciousness, environmental concern, subjective norms, perceived benefits, and barriers can help encourage behavioral intentions to purchase organic food. Studies found that Green
purchase intention (GPI) was significantly and directly driven by attitude toward green products (AGP) and environmental concern (EC) (Jaiswal & Kant, 2018).

This study also finds a significant difference between male and female students regarding organic food awareness (OFA) and behavioral intentions to purchase organic food (BIB). This result means that female students tend to buy more organic food compared with male students. This finding supports different research which found that women have a more favorable attitude towards the purchase and consumption of organic food than men, although men are more willing to pay a higher price for organic food than women. Men, on average, are more willing to pay a bigger price increase than women (Davies, Titterington, & Cochrane, 1995; Ureña, Bernabéu, & Olmeda, 2008). The current study reveals different facts about organic food consumption among students.

Organic food awareness has grown for a variety of causes in recent years. Many consumers prefer organic foods because they believe they are healthier and more nutritious. Organic food is farmed without the use of synthetic pesticides, GMOs, antibiotics, or growth hormones. It is also said to have more of some nutrients, such as antioxidants. Organic farming practices are often more environmentally friendly and sustainable than conventional farming. Synthetic pesticides and fertilizers, which can damage soil, water, and air, are not used on organic farms. There are many academic implications as a result of this study. Academic decision-makers should encourage students to consume green food and organic products. The university media can improve students' awareness through the adoption of social media facilities and other academic channels. An academic program should be designed to reflect the importance of environmentally friendly products.

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