



Enhancing the Theory of Planned Behavior: The Impact of Supply Chain Visibility on Purchase Intentions for Organic Food

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Abstract

The increasing consumer preference for organic food products reflects a significant shift in purchasing behavior, motivated by aspirations for a healthier, disease-free lifestyle and a commitment to ethical and environmentally sustainable food practices. This study employs Multiple Linear Regression Analysis, rooted in the Extended Theory of Planned Behaviour (ETPB), to investigate the determinants of purchase intention toward organic food products. A sample of 306 respondents from Lucknow, Uttar Pradesh, was surveyed to facilitate this analysis. The regression model evaluated the influence of four independent variables—Attitude, Subjective Norms, Perceived Behavioural Control, and Supply Chain Visibility—on Purchase Intention. The findings indicate that all four variables exert a positive and statistically significant impact on consumers' intention to purchase organic food, underscoring their critical role in shaping purchasing decisions.

Key Words: Supply Chain Visibility, Purchase Intention, Organic Food, Attitude, Subjective Norms, Perceived Behavioral Control, Multiple Linear Regression

Introduction

Today's consumers are increasingly thoughtful about their purchasing choices, particularly when it comes to organic food. Their decisions are shaped by various factors, including their understanding of a product's authenticity and the transparency of the organization's supply chain practices. To explore these behaviors, this study draws on the Theory of Planned Behaviour (TPB), a framework introduced by Ajzen (1991). The TPB posits that a person's intention to buy organic food is influenced by three key factors: their attitude (how they view the act of purchasing organic food), subjective norms (the impact of social expectations), and perceived behavioral control (how easy or challenging they find it to make such purchases).

However, the TPB does not fully account for modern consumers' expectations for transparency in supply chain processes, such as sourcing and transportation. This is where Supply Chain Visibility (SCV) becomes essential. SCV provides consumers with clear insights into a product's journey through the supply chain, which is especially important for organic food, where authenticity is paramount. By offering greater transparency, SCV strengthens consumers' trust and confidence in their decision to purchase organic products.



This study seeks to supplement the TPB model by embracing SCV as an independent construct in addition to the psychological variables. The research includes SCV together with TPB as a vehicle for understanding how consumer trust in transparency and traceability influences purchase decisions, addressing urgent consumer demand for accountability in the organic food sector.

2. Review of Literature

2.1 Theory of Planned Behaviour (TPB) in Consumer Behaviour

This approach has been most notably suggested in consumer studies by Ajzen (1991) who later advocated his model for behavioural intentions. TPB focuses on intention as the primary influencer of actions a person seeks to engage in. In TPB, individuals are assumed to function with the desired behavioural outcome made possible through effective control measures: having favourable attitudes towards the actions in question, being well integrated in desirable social circles and, most importantly, being in favourable situations which enable the pursuit of the activity. The Theory has widespread acceptance in studies that seek to understand consumer buying behaviour, especially in the context of ethical consumption and environmental sustainability (Scalco et al, 2017).

2.2 Attitude Toward Organic Food (ATT)

Attitude has been described by Ajzen (1991) as an individual's positive or negative evaluation of performing a specific behaviour. With respect to organic food consumption, Teng & Lu (2016) posited that consumer attitudes are shaped by their perception of three key benefits of organic food, i.e., their health benefits, ecological benefits as well as ethical benefits. Consumers with favourable perceptions of organic food's health, environmental, and ethical impacts are more likely to buy organic products.

Several previous studies have also demonstrated that having favourable attitudes towards organic food correlates with a higher intention to buy (Honkanen et al, 2006). As an example, consumers who strongly believe in the environmental and health benefits of organic food are significantly more likely to purchase the same (Pino et al, 2012). Additionally, Aertsens et al (2009) stated that attitudes towards organic food are largely determined by the perceived health and safety benefits of the food.

From an Indian perspective, Chaturvedi, Chand and Rahman (2021) reported that as a result of the COVID-19 pandemic, consumers became increasingly concerned about their health, thereby leading to an increased demand for organic food; a trend that is consistent worldwide. Similarly, Chakrabarti (2010) found that besides word of mouth, health concern played a significant role in developing positive attitudes towards organic food among Indian consumers. Other factors that reinforce positive attitudes include the perception that such foods are safer and healthier (Michaelidou & Hassan, 2008; Hughner et al., 2007) and other ethical considerations that include animal welfare (Lea & Worsley, 2005).

Apart from these, a few other factors, such as how consumers perceive the value of organic food and their willingness to pay, also influence their overall attitude toward organic food products (Aschemann-Witzel and Zielke, 2017).

2.3 Subjective Norms (SN)

With reference to organic food, Subjective Norms were found to strongly impact Purchase Intention, especially among socially sensitive consumer groups (Arvola et al., 2008, Vermeir & Verbeke, 2008).

Tarkiainen & Sundqvist (2005) noted that consumers are more likely to purchase organic food when their family/friends support or encourage their action. In collectivist cultures, social norms have an even greater impact on decision-making (Kim & Chung, 2011).

2.4 Perceived Behavioural Control (PBC)

Perceived Behavioural Control has been described by Ajzen (1991) as the perceived ease or difficulty in performing a certain behaviour, such as buying organic food.

Several research papers, including those by Rizzo et al (2020), have established the link between PBC and Purchase Intention, wherein they postulated that increasing levels of PBC positively impacted Purchase Intention by making it more likely that consumers will follow through on their intentions.

Pearson et al (2011) and Padel and Foster (2005) further established that the increasing availability of organic food, such as at the local stores or online, positively influenced PBC

Likewise, the price of organic food impacts perceived behavioural control (PBC); Hemmerling et al. (2015) confirmed that price generally negatively affects PBC, as price remains a significant barrier to adoption on a large scale. Furthermore, Kriwy & Mecking (2011) postulated that knowledge of organic food has a positive influence on PBC because this enables consumers to be more confident in their ability to make decisions.

2.5 Supply Chain Visibility (SCV) and Consumer Trust

Recently, Supply Chain Visibility (SCV) has emerged as an important tool to understand consumer buying behaviour, in particular, in the case of organic food. Caridi et al (2014) stressed the importance of SCV as a tool that enabled the consumer to take the right decisions based on accurate and timely information about the origin of the product as well as its journey from producer to consumer. SCV, therefore, enhances traceability and transparency, which is even more important with regard to organic food. Reliable information regarding the methods of production also enhances consumer trust, and makes it easy for them to make confident purchase decisions (Van Rijswijk and Frewer, 2012).

In this context, emerging technologies like Blockchain play an increasingly important role in enhancing transparency and traceability within a supply chain (Francisco and Swanson, 2018), a fact further corroborated by Kumar et al (2021), who postulated that technologies like Blockchain facilitate real-time data sharing between the Supply Chain Stakeholders.

2.6 Transparency and Traceability in SCV

According to Mol (2015), transparency refers to the availability of clear and comprehensible information to consumers regarding a product's origin, the production methods employed, and the distribution channels through which it is delivered. Similarly, Trienekens et al. (2012) further contend that transparency can mitigate risks associated with organic fraud, such as false-labelling, and will enhance consumer trust in the authenticity of the product being purchased. Further, Sodhi and Tang (2019) and Swink, Melnyk, Cooper, & Hartley (2024) point out that with reference to organic food, transparency and traceability play an especially important role in enhancing consumer confidence, given the immense amount of trust that consumers place on quality standards and certifications.

According to Zhang et al. (2020), a lot of consumers are concerned about how their food is processed and handled, making traceability and transparency very important. Similarly, Bosona and Gebresenbet (2013) noted that the ability to check the quality of a product would make the consumer more confident in it. Traceability helps to establish trust through verified information about the ethical and environmental standards of organic products (Manos and Manikas, 2010).

2.7 Integrating SCV with TPB: Conceptual Framework and Hypotheses

The inclusion of Supply Chain Visibility (SCV) as an independent variable within the Theory of Planned Behaviour (TPB) framework is essential because of the demand for transparency and traceability in the organic food market. Organic food has specific "credence attributes," which include factors that cannot be verified by the consumer even upon purchase, such as environmental and ethical standards (Sodhi & Tang, 2019). Therefore, transparency in supply chain processes needs to be improved to enhance consumer confidence. SCV represents this type of inclusion since it incorporates supply, manufacturing, and distribution data of the end product (Mol, 2015).

Therefore, we hypothesise that SCV, along with TPB components, will significantly influence consumers' intentions to purchase organic food.

The following hypotheses are proposed:

- **Primary Hypothesis:**
 - **H₁:** There is a significant relationship between the TPB variables, including Supply Chain Visibility, and Purchase Intention for organic food.
- **Secondary Hypotheses:**
 - **H_{1a}:** Attitude toward organic food significantly influences customer purchase intention.
 - **H_{1b}:** Subjective norms significantly influence customer purchase intention.
 - **H_{1c}:** Perceived behavioral control significantly influences customer purchase intention.
 - **H_{1d}:** Supply Chain Visibility significantly influences customer purchase intention.

3. Research Design

3.1 Descriptive Research

The descriptive research methodology has been used to understand the factors influencing purchase intention for organic food in this study. Descriptive research offers a good examination of specific factors without manipulating them so as to appreciate the relationships existing among them (Neuman, 2014; Creswell & Creswell, 2017).

3.2 Survey Methodology

To collect data from the respondents, a structured questionnaire developed from pre-validated scales obtained from past studies was administered by using online as well as offline methods of data collection.

- **Online Method:** Collection through Google forms to enable proper coverage of large audience, besides allowing respondents to fill in as per their convenience.
- **Offline Method:** Paper surveys were distributed in locations such as retail stores and malls with organic food sections. Further, people who were actively shopping for organic food were requested to fill the survey, allowing for in-person engagement with the respondents.

3.3 Sample Design

3.3.1 Introduction to Sampling

Sampling involves selecting a smaller subset from a larger population to draw conclusions applicable to the entire group. Proper sampling is crucial as it impacts the external validity and generalizability of the study's results (Bryman, 2016).

3.3.2 Target Population

The target population for this study includes adults who are consumers of organic food and are residing in the city of Lucknow.

3.3.3 Type of Sampling

The data required from the target population was collected by implementing a combination of convenience sampling and snowball sampling. Initially, this involved targeting consumers of organic food in retail environments and online platforms where they were encouraged to complete the survey. They were also asked to further recommend individuals who were consumers of organic food, thus targeted to build up a reservoir of respondents.

3.3.4 Sample Size

The survey was initially distributed to 475 respondents of the target audience. A final sample size of 306 respondents, after removing incomplete/incorrect responses, was used to conduct the Multiple Linear Regression Analysis. This aligns with general recommendations for achieving reliable statistical power in quantitative research (Babbie, 2016; Hair et al., 1998).

Table 3.1: Sample Demographics

Variable	Category	Frequency	Percentage
City	Lucknow	306	100%
Gender	Male	160	52.29%
	Female	146	47.71%
	Total	306	100%
Income	Less than Rs. 3 lakh	62	20.26%
	Between Rs. 3-5 lakh	42	13.73%
	Between Rs. 5-10 lakh	87	28.43%
	More than Rs. 10 lakh	115	37.58%
	Total	306	100%

The following is the profile of the sample characteristics:

- **City:** The sample was collected from respondents residing in the city of Lucknow, UP, which is a fast-growing market for organic food.
- **Gender:** Male (52.29 %) and Female (47.71 %) respondents were nearly equally represented in the sample.
- **Income:** A Major share of respondents (37.58 %) were in the income range of above Rs. 10 lakh per annum, followed by those who had income in the range of 5 - 10 lakhs per annum (28.43 %)

3.4 Data Analysis Techniques



Descriptive as well as inferential statistics were used to gather insights into the data; from providing a clear initial summary, to performing Multiple Linear Regression (MLR)

The regression model was specified as follows:

Purchase Intention = $\beta_0 + \beta_1$ (Attitude) + β_2 (Subjective Norms) + β_3 (Perceived Behavioural Control) + β_4 (Supply Chain Visibility) + ϵ

- **Assumptions Testing:** Key assumptions for MLR, including linearity, homoscedasticity, multicollinearity, and normality of residuals, were tested. Variance inflation factors (VIF) were calculated to check for multicollinearity, with values below 10 indicating no significant multicollinearity among predictors (Hair et al., 2014).

3.5 Questionnaire Development

3.5.1 Introduction

The data collection strategy relied on a single questionnaire. All constructs were clearly defined, and each variable was measured using pre-validated scales to ensure the study's contextual relevance and reliability within the scope of the research.

3.5.2 Definition of Constructs and Variables

The study focuses on constructs central to the Theory of Planned Behavior (TPB) and the added construct of *Supply Chain Visibility* (SCV). These include:

- **Attitude:** Beliefs about the benefits of organic food.
- **Subjective Norms:** Perceived social influence on purchasing organic food.
- **Perceived Behavioral Control:** Confidence in ability and accessibility to purchase organic food.
- **Supply Chain Visibility (SCV):** Perceptions of transparency and traceability within the supply chain.
- **Purchase Intention:** Likelihood of purchasing organic food in the near future.

3.5.3 Adaptation of Prevalidated Scales

The questionnaire for this study was developed using items from pre-validated questionnaires. The scale items for Attitude Toward Organic Food, Subjective Norms, Perceived Behaviour Control and Purchase Intention were taken from Varah et al. (2021), while for Supply Chain Visibility, items were adopted from the scales presented by Caridi et al. (2014).

3.5.4 Consideration of Scale Format

The survey employed a 5-point Likert scale to measure respondents' agreement with every item, from "Strongly Disagree" (1) to "Strongly Agree" (5).

3.5.5 Pilot Testing

A pilot test with 54 respondents was used to fine-tune the questionnaire and check for clarity. Responses suggested that subtle changes were required to make wording and flow easier. The questionnaire was then rewritten to make it more readable without compromising on the constructs to be measured.

3.5.6 Scale Reliability

Cronbach's alpha for every construct was computed to validate internal consistency, and all constructs met alpha levels of 0.70 and above. This step of validation established that the scales were consistent for measuring data on the intended variables.

4. Data Analysis and Results:
4.1 Analysis of Participant's Responses

Table 4.1: Distribution of Responses Across Key Variables

Construct	Item	1	2	3	4	5	Total
Subjective Norms	SN ₁	3.8	11.9	25.9	42	16.4	100
	SN ₂	3.2	10.9	23.4	44.3	18.2	100
	SN ₃	2.2	6.9	24.4	49.3	17.2	100
Attitude Towards Organic Food	ATT ₁	0.7	3.7	18.2	50	27.4	100
	ATT ₂	1.2	11.4	23.1	45.4	18.9	100
	ATT ₃	1.7	7.2	18.4	48.8	23.9	100
	ATT ₄	4.7	13.4	24.6	40.6	16.7	100
Perceived Behavioral Control	PBC ₁	4	14.2	32.8	34.8	14.2	100
	PBC ₂	2	7.5	24.3	44.8	21.4	100
	PBC ₃	5.5	16.4	32.6	33.1	12.4	100
	PBC ₄	3	11.2	28.1	38.3	19.4	100
Supply Chain Visibility	SCV ₁	2	11.7	27.4	46	12.9	100
	SCV ₂	1.5	10.4	24.6	47.3	16.2	100
	SCV ₃	2.7	12.2	30.1	42.8	12.2	100
	SCV ₄	3.7	11.9	33.8	40.1	10.5	100
Purchase Intention	PI ₁	2.7	6	21.9	47	22.4	100
	PI ₂	1.7	4.7	18.2	50.5	24.9	100
	PI ₃	1	2.7	17.7	51.5	27.1	100
	PI ₄	1	1.5	17.7	49	30.8	100

Summary of Response Distribution by Construct

Subjective Norms

The majority of respondents tended to agree with the items related to Subjective Norms. Approximately 42%-49% chose "Agree" (4), while 16%-18% selected "Strongly Agree" (5) across items SN₁, SN₂, and SN₃. Lower agreement levels (1 or 2) were chosen by a smaller portion of participants, around 2%-11%.

Attitude

Responses for attitude items (ATT₁-ATT₄) showed higher levels of agreement, with a majority selecting "Agree" or "Strongly Agree." About 40%-50% of respondents chose "Agree" (4), and 16%-27% chose "Strongly Agree" (5). Disagreement (1 or 2) was minimal across items, around 0.7%-13%.

Perceived Behavioral Control

For perceived behavioral control, responses were mixed but generally leaned toward agreement. "Agree" (4) responses ranged from 33%-45%, and "Strongly Agree" (5) had lower frequencies, between 12%-21%. Some items showed notable portions in the lower agreement levels (1 or 2), particularly PBC₁ and PBC₃, with 4%-16% selecting these options.

Supply Chain Visibility

SCV items (SCV1-SCV4) revealed a relatively balanced spread across agreement levels. Around 36%-47% selected "Agree" (4), and 10%-16% chose "Strongly Agree" (5). Lower agreement levels (1 or 2) were observed in 1%-14% of responses, with SCV4 showing slightly higher disagreement.

Purchase Intention

Responses for purchase intention were notably positive, with 47%-51% choosing "Agree" (4) and 22%-31% selecting "Strongly Agree" (5). Very few respondents disagreed (1 or 2), with less than 5% selecting these lower agreement levels for all items in this construct.

Overall Summary

The responses across constructs predominantly fell on the higher end of the scale, indicating a favorable perception of organic food in terms of subjective norms, attitude, perceived behavioral control, supply chain visibility, and purchase intention. "Agree" and "Strongly Agree" were the most common responses, particularly for purchase intention and attitude, reflecting strong interest and positive sentiment toward purchasing organic food.

4.2: Descriptive Statistics for Key Variables in the Study

Table 4.2: Descriptive Statistics Summary

Construct	N	Mean	Std. Deviation	Skewness	Kurtosis
Subjective Norms	306	3.72	0.89	-0.21	-0.15
Attitude	306	4.05	0.95	-0.33	-0.23
Perceived Behavioral Control	306	3.58	1.02	0.15	0.25
Supply Chain Visibility	306	3.9	0.91	-0.27	-0.18
Purchase Intention	306	4.12	0.88	-0.1	-0.12

The table presents descriptive statistics for the primary constructs in the study:

- **Subjective Norms** has a mean score of 3.72 (SD = 0.89), suggesting moderate agreement among respondents that social influences impact their purchase intentions for organic food.
- **Attitude** holds a higher mean of 4.05 (SD = 0.95), indicating a generally favorable attitude toward organic food among participants.
- **Perceived Behavioral Control** has a mean score of 3.58 (SD = 1.02), showing moderate levels of perceived ease or difficulty in purchasing organic food, with more variability in responses.
- **Supply Chain Visibility** records a mean of 3.90 (SD = 0.91), highlighting that respondents feel moderately positive about the transparency and traceability of organic food products.
- **Purchase Intention** has the highest mean of 4.12 (SD = 0.88), indicating a strong intention among respondents to purchase organic food.

The skewness values are close to zero across constructs, indicating symmetrical distributions. Kurtosis values are also near zero, suggesting a relatively normal distribution in responses. This spread in scores reflects generally positive attitudes and intentions toward organic food, with *Attitude* and *Purchase Intention* showing the highest levels of agreement.

4.3: Exploratory Factor Analysis

An Exploratory Factor Analysis (EFA) was conducted to examine the underlying factor structure of the constructs in this study. The analysis aimed to validate whether the items

accurately represented their respective constructs. A sample of 73 respondents was analyzed using Principal Component Analysis (PCA) as the extraction method. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.901, indicating that the data were suitable for factor analysis, while Bartlett’s Test of Sphericity was significant ($\chi^2 = 2456.32, p < .001$).

Five factors were retained based on eigenvalues greater than 1 and a visual inspection of the Scree Plot. A Varimax rotation was applied, ensuring that each item loaded distinctly onto its intended construct. The factor structure was robust, with *Attitude* explaining 14% of the variance, *Subjective Norms* contributing 13.1%, *Perceived Behavioral Control* accounting for 11.6%, *Supply Chain Visibility* explaining 10.9%, and *Purchase Intention* contributing 11.4%. Together, these factors accounted for a total of 61% of the variance, indicating a well-defined structure, thereby validating the use of the five constructs as reliable measures of factors that influence organic food purchase intention.

4.4: Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA), encompassing a total of 19 items, was conducted to test the fit of the measurement model and validate the constructs used in the study.

Model Fit Indices

The CFA model fit indices demonstrate that the model achieves an acceptable fit to the data, meeting or surpassing the recommended thresholds.

Model Fit Indices Summary:

The model yielded a Chi-Square value of 485 with 152 degrees of freedom (df), which, although statistically significant ($p < .001$), is expected due to the sample size. The Chi-Square/df ratio is 3.19, slightly above the threshold of 3, suggesting a marginally complex model but within an acceptable range (Hu & Bentler, 1999).

The Comparative Fit Index (CFI) is 0.909, meeting the recommended value of 0.90, which indicates that the model provides a reasonably good fit compared to a baseline model. The Tucker-Lewis Index (TLI) is 0.912, also surpassing the threshold of 0.90, reflecting an adequate fit after accounting for model complexity. The Standardized Root Mean Square Residual (SRMR) is 0.059, within the acceptable limit of 0.08, suggesting minimal residuals between observed and predicted correlations. The Root Mean Square Error of Approximation (RMSEA) is 0.052, comfortably within the recommended maximum of 0.06, indicating minimal approximation error (Hu & Bentler, 1999).

Interpretation: The model fit indices collectively suggest that the CFA model provides a good fit to the data. The Chi-Square/df ratio is within acceptable limits, while the CFI and TLI values are above 0.90, indicating that the model fits well relative to a baseline model. The SRMR and RMSEA values fall within acceptable ranges, further confirming that the model fits the data with minimal residuals and approximation error.

Table 4.3: Measurement Scale Results

Factor	Indicator	Estimate	Cronbach Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)

Attitude (ATT)	ATT1	0.631	0.851	0.891	0.671
	ATT2	0.691			
	ATT3	0.762			
	ATT4	0.829			
Subjective Norms (SN)	SN1	0.762	0.798	0.823	0.541
	SN2	0.669			
	SN3	0.712			
Perceived Behavioral Control (PBC)	PBC1	0.677	0.811	0.827	0.562
	PBC2	0.622			
	PBC3	0.849			
	PBC4	0.753			
Supply Chain Visibility (SCV)	SCV1	0.712	0.841	0.812	0.569
	SCV2	0.684			
	SCV3	0.674			
	SCV4	0.794			
Purchase Intention (PI)	PI1	0.705	0.881	0.798	0.683
	PI2	0.742			
	PI3	0.681			
	PI4	0.662			

Explanation:

- **Factor Loadings:** The adjusted values represent the strength of an item's relationship to its construct, indicating that all items load adequately onto their respective factors.
- **Cronbach's Alpha:** This measures internal consistency; all values are above 0.7 for all constructs, ensuring reliability.
- **Composite Reliability (CR):** All CR values exceed 0.7, indicating adequate reliability across the constructs.
- **Average Variance Extracted (AVE):** AVE values exceed 0.5, demonstrating that each construct explains an adequate proportion of variance in its items, thereby confirming convergent validity.

4.5 Multiple Regression Analysis

A Multiple Linear Regression Analysis was conducted to investigate the impact of the four independent variables under study, on the Purchase Intention towards organic food. The goal was to determine the extent to which these factors collectively and individually predict consumers' intentions to purchase organic food.

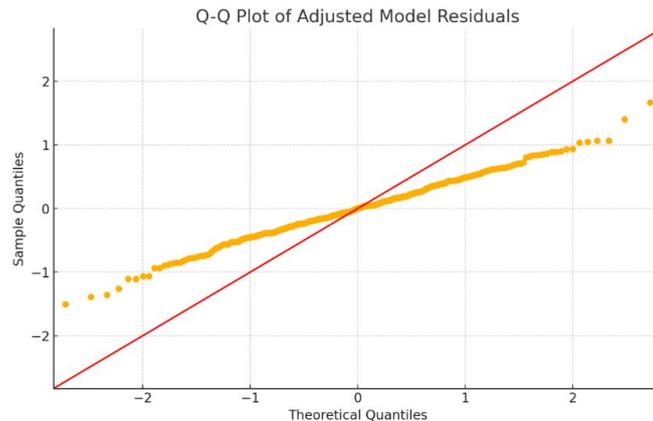
4.5.1 Hypotheses

Assumptions of Multiple Linear Regression

To validate the regression model and ensure robust findings, several assumptions were assessed:

1. **Normality of Residuals:** With the help of a Q-Q plot, the residuals distribution was examined; in which the points closely followed the reference line, indicating an approximate normal distribution.

Figure 4.1: Q-Q Plot of Residuals



2. **Autocorrelation:** Durbin-Watson statistic was found to be 1.78, very close to the desirable value of 2, reflecting negligible autocorrelation of residuals. An indication of a limited amount of autocorrelation is revealed (p value=0.033) , but is not strong enough to invalidate the model.

3. **Multicollinearity:** To check for multicollinearity, the Variance Inflation Factor (VIF) and Tolerance values for each predictor were investigated. All VIF values were below 10, and Tolerance values were above 0.1, suggesting that multicollinearity is not a significant issue. This ensures that the independent variables are distinct enough to be included together without inflating the standard errors.

Model Summary

The model summary offers insights into the regression model's fit and performance.

Table 4.4: Model Summary

Model Summary	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.632	0.4	0.392	0.52439

- R of 0.632 denotes a moderate positive correlation between the observed and predicted values of Purchase Intention, indicating that the model's predictions are reasonably aligned with actual data.
- R Square of 0.40 indicates that 40% of the variance in Purchase Intention is explained by the independent variables in the model, reflecting a substantial level of explanatory power.
- Adjusted R Square of 0.392 Adjusts the R Square value based on the number of predictors relative to the sample size, affirming the model's stability and reliability by accounting for potential overfitting.
- Standard Error of the Estimate of 0.52439 represents the average distance between the observed values and the values predicted by the model, suggesting that the model fits the data with an acceptable level of accuracy.

4.5.2 ANOVA Results

The ANOVA results assess the overall significance of the regression model.

Table 4.5: ANOVA Results for Regression Modeling

Model	Sum of Squares	df	Mean Square	F	Sig. (p-value)
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Regression	92.03	4.00	23.01	49.86	0.00
Residual	138.90	301.00	0.46	62.20	
Total	230.93	305.00			

The ANOVA results confirm that the regression model is statistically significant, with an F-value of 49.86 and a p-value of 0.000, indicating that the predictors collectively have a meaningful impact on *Purchase Intention*. The **Regression Sum of Squares** (92.031) reflects the variance explained by the four predictors (*Attitude*, *Subjective Norms*, *Perceived Behavioral Control*, and *Supply Chain Visibility*), while the **Residual Sum of Squares** (138.898) represents the variance that remains unexplained. Additionally, the **Mean Square** values—23.008 for Regression and 0.461 for Residual—contribute to the high F-value, reinforcing the model's validity and supporting the significance of the predictors in explaining *Purchase Intention*. Hence H₁ is accepted.

Table 4.6: Table of Coefficients

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t-value	Sig. (p-value)
(Constant)	0.674	0.168	-	4.012	0
Attitude	0.315	0.062	0.342	5.081	0
Subjective Norms	0.245	0.058	0.262	4.224	0
Perceived Behavioral Control	0.183	0.063	0.192	2.905	0.004
Supply Chain Visibility	0.198	0.065	0.211	3.046	0.002

Interpretation of Coefficients

- **Attitude (B = 0.315, p < 0.001):** Attitude is a significant positive predictor of *Purchase Intention*, with a Beta coefficient of 0.342, indicating a strong influence on purchase intention. This means that a favorable attitude toward organic food significantly increases the likelihood of purchasing it, supporting H_{1a}.
- **Subjective Norms (B = 0.245, p < 0.001):** Subjective norms also positively influence *Purchase Intention*, as reflected by a Beta coefficient of 0.262. This suggests that social expectations or pressures to purchase organic food play an important role in shaping purchase intentions, supporting H_{1b}.
- **Perceived Behavioral Control (B = 0.183, p = 0.004):** This variable is positively associated with *Purchase Intention*, indicating that greater perceived ease or control over purchasing organic food enhances the likelihood of buying it. This supports H_{1c}.
- **Supply Chain Visibility (B = 0.198, p = 0.002):** Supply Chain Visibility has a positive impact on *Purchase Intention*, with a Beta coefficient of 0.211, showing that higher transparency in the supply chain—such as clear information on sourcing and production—significantly boosts purchase intentions. This supports H_{1d}.



Together, these predictors explain **40% of the variance in Purchase Intention**, emphasizing the model's predictive power in understanding factors influencing consumer intentions to purchase organic food.

5. Discussion

Attitude: As anticipated, attitude emerged as the strongest predictor of purchase intention, underscoring that consumers with favorable perceptions of organic food are significantly more likely to make a purchase. This finding aligns with numerous studies indicating a strong relationship between positive attitudes and sustainable consumer behaviours (Smith & Paladino, 2010; Honkanen et al., 2006). From an Indian perspective, and especially for urban consumers, Chakrabarti (2010) posited that word-of-mouth recommendations and health concerns play a major role in influencing positive attitudes towards organic food products. In the same vein, Chaturvedi, Chand, and Rahman (2021) showed that as a result of heightened health awareness during COVID-19, positive attitudes towards organic food were amplified, given their perception of being safer and more nutritious to consume.

The positive perception of health, environmental and ethical considerations in developing attitudes has been reinforced internationally (Magnusson et al., 2001; Lea & Worsley, 2005). Taken together, these results suggest that attitudes are an important factor in influencing buying decisions, especially in developing markets like India, among others, and will continue to be so in the future.

Subjective Norms: Subjective norms were found to have significant influence on purchase intention, thus indicating the impact of social influences on consumer behaviour; particularly in a collectivist society like India where social influence greatly drives organic food purchases (Kim & Chung, 2011). Tarkiainen and Sundqvist (2005) found that consumers are more willing to purchase organic food when they perceive that their social circle endorses such behaviour. In the case of India, Selvaraj et al. (2024) found that social norms have a significant impact on consumers' organic food purchase intentions in India.

Perceived Behavioural Control: PBC significantly influences consumers' intentions to purchase organic food. Research indicates that individuals who feel they have sufficient access—such as adequate purchasing power or availability of organic products—are more likely to develop an intention to buy organic food (Ajzen, 2002; Pearson et al., 2011). In developing economies like India, accessibility plays a critical role in shaping PBC, as organic food is often limited to select urban markets, such as premium retail stores (Chakrabarti, 2010).

Financial considerations are equally important, as organic food tends to be more expensive than conventional alternatives, which can diminish the sense of control among middle-income consumers (Hemmerling et al., 2015). However, recent increases in awareness and improved online access have begun to address these challenges in urban areas, enhancing PBC and, consequently, strengthening consumers' intentions to purchase organic food.

Supply Chain Visibility: Supply Chain Visibility (SCV) plays a vital role in encouraging consumers to choose organic food. Studies show that today's buyers increasingly value transparency, wanting clear evidence that the organic products they purchase are genuine and ethically produced (Mol, 2015; Sodhi & Tang, 2019). This trust is critical—when consumers can trace a product's journey from farm to table, they feel more confident in their choices. For

instance, Caridi et al. (2014) point out that SCV helps ease doubts by ensuring organic supply chains meet strict standards, reducing the risk of misrepresentation.

In India, where trust in organic claims can be a concern, tools like blockchain and traceability systems are making a real difference. Kumar et al. (2021) highlight how these technologies provide clear, reliable information about how organic food is sourced and processed, which resonates strongly with Indian consumers. Similarly, Dangi et al. (2020) emphasize that practices like detailed labeling, trusted certifications, and open sourcing information build confidence and sway purchasing decisions.

More than just addressing fears of fraud or unclear labeling, SCV connects with a broader global push toward ethical and sustainable living. For organic food buyers, knowing the story behind their food—where it comes from and how it's made—matters deeply and drives their commitment to making responsible choices.

6. Conclusion

The research reveals that attitude is the key driver behind consumers' intentions to purchase organic food, with subjective norms, perceived behavioral control, and supply chain visibility (SCV) further reinforcing this decision. These findings align with global studies and have been reaffirmed through research in India. By incorporating SCV into the Theory of Planned Behaviour (TPB), we gain a richer understanding of what motivates consumers, particularly in emerging markets where trust and transparency are increasingly vital. This broader perspective equips businesses and policymakers to craft targeted strategies that address the unique challenges and opportunities in promoting organic food products.

7. Limitations of the Study

7.1 Limitations

While this study offers valuable insights into the factors influencing *Purchase Intention* for organic food, it is not without limitations:

1. **Sample Representation:** The study focused on consumers from a specific region, which may not reflect the preferences of people in other areas.
2. **Cross-Sectional Design:** The study utilized a cross-sectional design, capturing consumer attitudes and intentions at a single point in time. This limits the ability to study any changes in preferences over a period of time.
3. **Limited Insight into Behavioral Outcomes:** This study measured *Purchase Intention*, not actual purchasing behavior. Although intention is a strong predictor of behavior, other factors may also impact the actual behaviour. These include factors like product availability, costs etc.

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