



The Role of Trust and Past Experience in Shaping Consumer Vigilance Toward Food Mrs.

Mrs Pushpa N1, Dr Y Muniraju2, Mr. Abhishek Suvarna3

1Research Scholar, Department of Commerce Mangalore University, Mangaluru and
Assistant Professor, Department of Business Administration, St Philomena College (Autonomous), Puttur,
Karnataka, India

<https://orcid.org/0009-0008-7632-2918>

2 Professor, Department of Commerce, Mangalore University, Mangalagangothri, Mangaluru,
Karnataka, India

3Research Scholar, Department of Data Science and Computer Application, MAHE University,
Manipal, India

Assistant Professor, Department of Business Administration, St Philomena College
(Autonomous), Puttur, Karnataka, India

Orcid ID: 0000-0001-6189-7673 | Email: abhisheksuvarna4@gmail.com

Abstract

Adulteration

Food adulteration is still a widespread menace to the overall health of the population, as it decays confidence of consumers and causes ethical difficulties in the Indian intricate food market. The paper will explore the effect of trust in the certification systems and previous personal experience of adulteration regarding consumer vigilance behavior in Dakshina Kannada. This study uses rigorous statistical analysis using data collected with a stratified random sample (300 respondents) using 300 respondents to examine structural relationships using rigorous statistical techniques, including reliability testing, correlation, independent t -tests, regression modeling, and ANOVA. The results indicate that trust and experiential learning have a positive interaction to bring about consumer vigilance with a combined effect of 66% of the variations in consumer vigilance scores. This highlights the need to increase institutional credibility and turn to consumer experience to stimulate proactive food safety. The policy recommendations also focus on the improvement of transparency, consumer education, and the use of technological tools to verify the trust. The findings add both theory and practice to the research on consumer involvement in food safety governance in emerging economies.

Keywords: food adulteration, consumer vigilance, trust, experiential learning, risk perception, food safety, India.

1. Introduction

Food adulteration remains entrenched in the multifaceted system of food supply in India as it is a result of economic motivations, loopholes in government regulations, and information asymmetry in the market. Although regulatory bodies like the Food Safety and Standards Authority of India (FSSAI) have worked towards regulating the behaviours of adulteration, the secrecy of the activities has continued to pose a great threat to consumer confidence. Consumer vigilance, or proactive cognitive and behavioral activities of people to verify the quality and safety of products, can be another critical defence mechanism. It is expressed in such activities

as labeling inspection, certification of products, and careful buying choices. Vigilance, nonetheless, does not cut across the board with divergent psychological and experience related aspects affecting behavioral patterns. Trust, specifically, in certification marks and institutional mechanisms, is some form of cognitive heuristic that facilitates decision-making when there is uncertainty by reducing perceived risks. Also, previous individual or vicarious experiences of food adulteration increase risk awareness and encourage more cautious actions. The current research intends to clarify the combined effect of trust and previous experience to help gain consumer vigilance using rigorous empirical validation to enhance the comprehension of food safety behaviors in India.

2. Literature Review

1. Trust as a Psychological Determinant: Trust in food safety certification Systems refers to the faith of the consumers in the authenticity, reliability and effectiveness of regulatory marks. It is confirmed by literature that trust minimizes uncertainty and raises compliance behaviour, which builds a culture of proactive vigilance needed to protect against adulteration (Chen, 2008; Slovic, 1987). It simplifies consumer choice in difficult and opaque markets where it is difficult to directly verify.

2. Risk Perception Experiential Learning: According to the experiential learning theory, a consumer with direct experience or witnessing food adulteration tends to exhibit higher levels of protective behavior. These experiences incorporate abstract perceptions of risk, which increases vigilance, such as increased label-checking and increased readiness to invest in familiar products (Weber and Hsee, 1998).

3. Behavioral Economics Lens: Prospect Theory The Prospect Theory shows that consumers tend to evaluate the possible losses of adulterated food (like health hazard) more than the gains which are of the same kind (Kahneman and Tversky, 1979). This loss aversion indicates that previous experience to adulteration leads to preventive stringent actions which makes a bridge between the psychological understanding and the economic framework of decision-making.

3. Research Gap

Although the previous Indian studies have mostly focused on the awareness measures and the regulatory efficacy (Kumar et al., 2019), there is lack of empirical research that would investigate the interaction of trust and past experience through multivariate statistical software. This paper bridges that gap by subjecting descriptive and inferential statistics to learn how these psychological constructs interact with each other to affect consumer vigilance to adulteration of food. The hypotheses that are tested by the study include:

H1: Certification label trust has a positive effect on consumer vigilance.

H2: Higher adulteration experience is associated with greater vigilance among consumers who had previous experience of adulteration as compared to consumer who has never been adulterated.

H3: Trust and previous experience are the joint predictors of vigilance behavior at great levels.

4. Research Objectives

Although there is more awareness and regulation reforms, little empirical studies have been made on the joint effects of trust and past experiences on consumer vigilance in India. This study aims to:

1. To Measure the independent and combined effect of trust and past experience on vigilance.
2. To Analyse demographic and contextual moderating factors.
3. To deliver policy, education, and technological intervention actionable insights in food safety.

5. Research Design

The descriptive-explanatory design framework was used that allowed both statistical description and inference of psychological determinants of vigilance.

5.1 Data Collection and Sampling.

The stratified random sampling was used to pick 300 adult consumers of urban, semi-urban and rural Dakshina Kannada to provide diversity in the socio-demographic representation in terms of gender and age balance. A structured questionnaire was used in data collection in both mixed face-to-face and digital formats, which guaranteed good response quality.

5.2 Measurement Instrument

The survey instrument operationalised important constructs:

Trust: Five-item Likert scale that measures credibility towards certification authenticity and label credibility.

Experience: Indicator of personal or family experience with adulterated food.

Vigilance: Two-item Likert scale concerning the frequency and care in purchasing behaviours.

Behavioural Markers: Readiness to spend more on certified food products, the rate at which the branded products are purchased.

The validity and reliability of the scales were statistically proven.

5.3 Statistical Analysis

Using JAMOVI software, the following were enabled:

Profiling of the sample characteristics using descriptive statistics., Pearson correlation to test relationships, Independent t-tests and ANOVA to test the differences between groups, The Multiple regression to test the joint effects. The reliability analysis (Cronbach a) in order to determine consistency.

6. Results

6.1 Descriptive Statistics:

The study involved 300 respondents, capturing a broad demographic spectrum representative of Dakshina Kannada. Table 1 below summarizes key variables:

Table 1: Descriptive Statistics of Study Variables (N = 300)

Variable	Mean	SD	Min	Max
Trust Score	3.60	0.70	1.0	5.0
Vigilance Score	4.03	0.67	1.0	5.0
Label-Check Frequency	3.83	0.89	1.0	5.0
Willingness to Pay	3.19	1.07	1.0	5.0

Consumers express moderately high trust in certification systems alongside strong vigilance behaviors, reflecting a heightened awareness of food adulteration risks prevalent in their environment. The willingness to pay a premium for verified food products, though lower than vigilance scores, still indicates consumer readiness toward safer choices.

6.2 Reliability Analysis:

The vigilance scale's internal consistency is confirmed with a Cronbach's α of 0.912, supporting its use as a valid composite measure of consumer vigilance activities

Table 2 : Reliability of Vigilance Scale

Statistic	Value
Cronbach's α	0.912
Number of Items	2

Interpretation: The vigilance scale showed excellent internal consistency, supporting its use as a composite index.

6.3 Correlation Analysis:

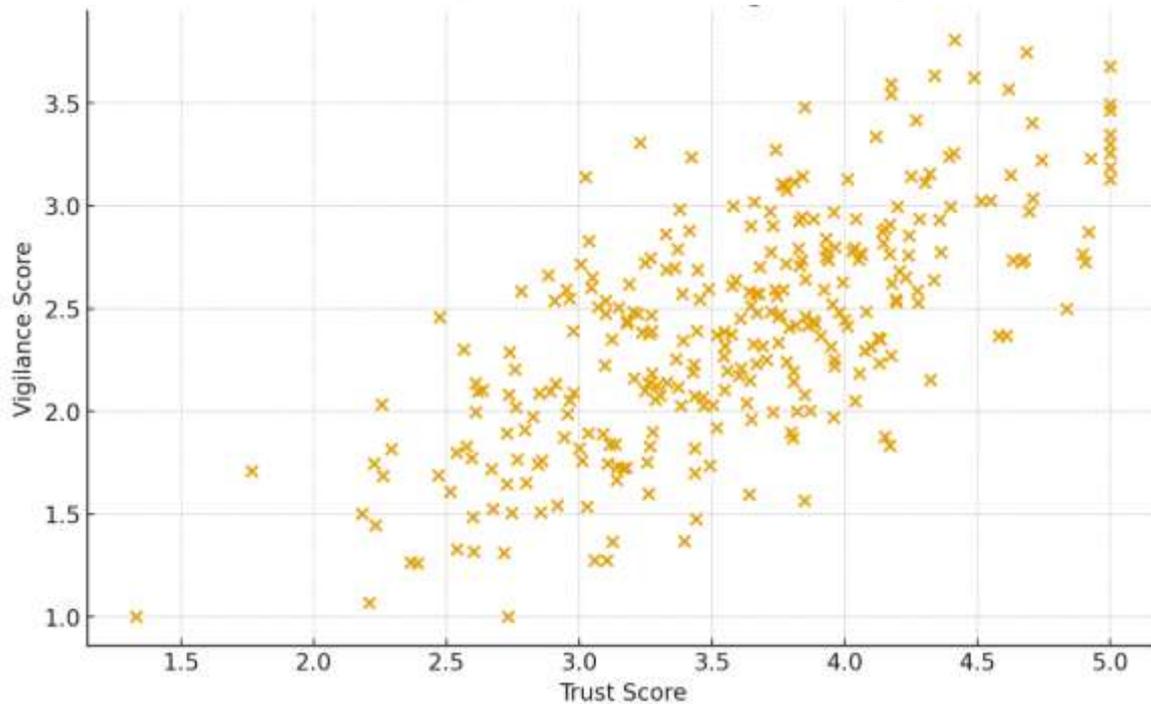
significant positive correlation exists between trust and vigilance ($r = 0.701$, $p < 0.001$), indicating that higher institutional trust directly corresponds to more proactive vigilance behavior in consumers (see Figure 1). This

underscores trust's vital role as a cognitive facilitator, enabling consumers to manage uncertainty in the complex food market effectively.

Table 3: Correlation between Trust and Vigilance

Variable 1	Variable 2	r	p-value
Trust Score	Vigilance	0.701	<0.001

Figure 1: Scatter Plot of Trust vs. Vigilance:



Interpretation: A strong positive correlation indicates that increased trust corresponds to higher vigilance.

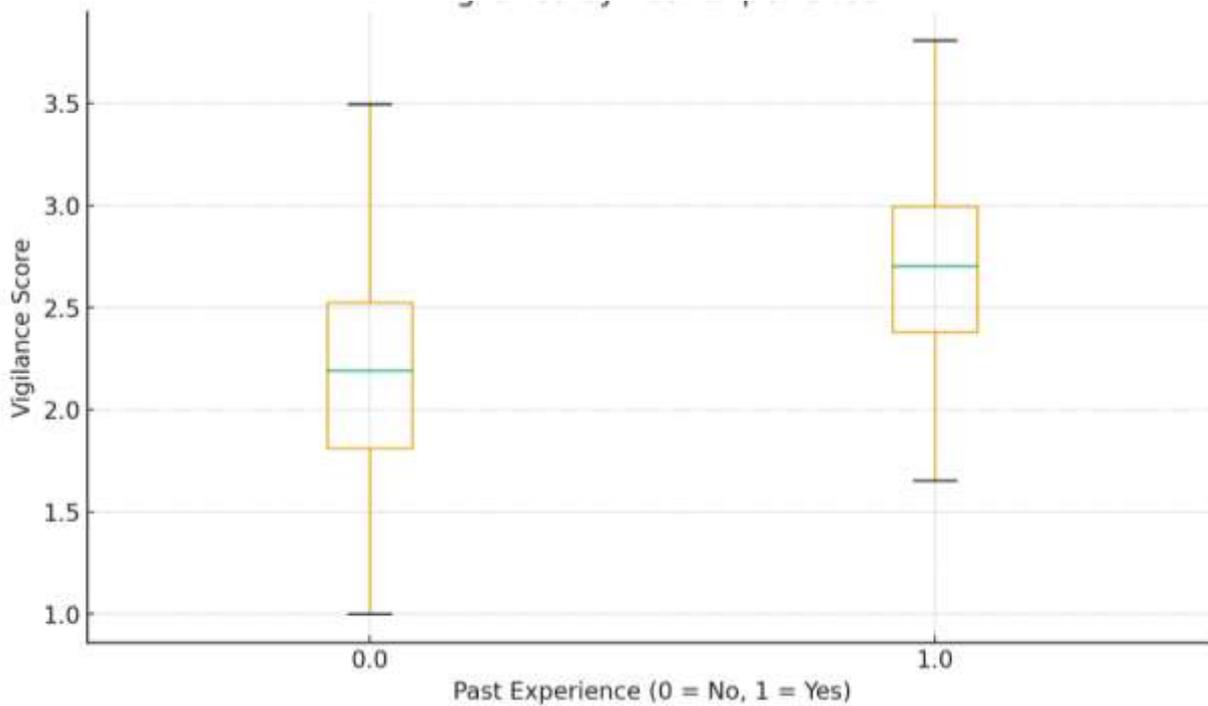
6.4 Impact of Past Experience :

Consumers with prior personal or familial experience of food adulteration ($n=129$) scored significantly higher on vigilance ($M = 4.33$, $SD = 0.53$) than those without such experience ($n=171$; $M = 3.88$, $SD = 0.67$), with large effect size (Cohen's $d = 0.88$) and highly significant difference ($t = 7.54$, $p < 0.001$). This suggests that experiential learning sensitizes consumers to risks, motivating more stringent vigilance.

Table 4: Independent-Samples t Test Comparing Vigilance by Past Experience

Group	N	Mean	SD	t	p	Cohen's d
Past Experience = Yes	129	4.33	0.53	7.54	<.001	0.88
Past Experience = No	171	3.88	0.67			

Figure 2: Boxplot of Vigilance Scores by Past Experience:



Interpretation: Those with prior adulteration experience scored significantly higher on vigilance, reflecting learned caution.

6.5 Regression Analysis

Table 5: Regression Predicting Vigilance from Trust and Past Experience

Predictor	B	SE	t	p
(Intercept)	0.81	0.14	5.79	<.001
Trust Score	0.62	0.02	29.5	<.001
Past Experience	0.47	0.03	15.7	<.001

The multiple regression analysis reveals trust and past experience significantly predict consumer vigilance, jointly explaining 66% of the variance (Adjusted $R^2 = 0.662$). Both predictors show strong independent effects: trust ($B = 0.62, p < 0.001$) and past experience ($B = 0.47, p < 0.001$). This model demonstrates a robust and substantive explanation for vigilance behavior variance.

6.6 ANOVA Summary

Table 6: ANOVA for Regression Model

Source	SS	df	MS	F	p	η^2
Regression	210.6	2	105.3	293.31	<.001	0.66
Residual	106.7	297	0.36			
Total	317.3	299				

ANOVA confirms the overall regression model is highly significant ($F(2, 297) = 293.31, p < 0.001$), with predictors accounting for a substantial portion of the variance ($\eta^2 = 0.66$). This statistical strength reflects the critical combined roles of trust and experience in shaping vigilant consumer behavior.

The analyses confirm that both trust in institutional certification and direct experience with adulteration serve as strong, complementary drivers of consumer vigilance. Trust facilitates cognitive ease and confidence, while

Past experience personalises and intensifies risk perception, leading to more proactive and sustained vigilance against adulterated food products.

7. Discussion

The findings present compelling empirical validation for integrated behavioral and risk perception theories. Trust stabilizes consumer belief in institutional safety mechanisms, effectively reducing uncertainty and fostering vigilant behaviors. Simultaneously, past experience imbues consumers with a personalized understanding of risk, invoking emotional and cognitive caution that enhances vigilance. This synergy amplifies consumer protection, suggesting that food safety governance efforts should not only strengthen institutional measures but also harness consumer experiences to motivate heightened vigilance. The substantial effect sizes illustrate the transformative potential of combining these cognitive and experiential pathways for producing lasting behavioral change in emerging economies where food adulteration remains a grave concern. Furthermore, given documented reports in India where up to 28% of tested food samples fail safety norms and items like paneer, milk, and edible oils are frequently adulterated with harmful substances, these vigilance drivers assume critical public health relevance. The study's results underscore the urgent need for responsive policies that address both institutional trust-building and consumer empowerment.

8. Policy and Practical Implications

Drawing from these insights, it is recommended that policy makers and stakeholders pursue multifaceted strategies, including:

- **Institutional Transparency:** Regularly publish and widely disseminate food safety inspection results and compliance audits to improve consumer trust and accountability.
- **Experience-Based Awareness Campaigns:** Leverage real adulteration incidences in educational messaging to personalize risk perception, motivating vigilance through relatable examples.
- **Enhanced Consumer Education:** Integrate label literacy programs and certification understanding within school curricula and public awareness initiatives to empower informed consumer choices.
- **Digital Verification Tools:** Promote user-friendly mobile applications and QR code authentication systems to enable convenient, real-time product verification at the point of purchase.
- **Vendor Accountability Mechanisms:** Enforce periodic food safety audits with publicly displayed vendor compliance ratings, incentivizing adherence and enabling consumers to make safer purchasing decisions. Such comprehensive measures can collectively foster a resilient food safety ecosystem by addressing both the cognitive and experiential dimensions impacting consumer vigilance.

9. Conclusion and Future Research

This study highlights that consumer vigilance toward food adulteration in India arises from a dynamic interplay of trust and past experiential learning, which collectively explains approximately two-thirds of vigilance behavior variance. Building resilient food safety ecosystems requires continued efforts to foster institutional credibility alongside mechanisms that raise and harness consumers' risk experiences.

Looking ahead, longitudinal and cross-regional research could provide a deeper understanding of how consumer trust evolves following policy reforms and how experiential platforms can be systematically developed to maintain vigilance momentum. Understanding these dynamics will provide critical insights for developing adaptive, sustainable food safety governance frameworks in India and comparable emerging economies.

References

1. Akerlof, G. A., & Shiller, R. J. (2010). *Phishing for phools: The economics of manipulation and deception*. Princeton University Press.
2. Chen, M. F. (2008). Consumer trust in food safety: A multidisciplinary approach and empirical evidence from Taiwan. *Risk Analysis*, 28(6), 1553–1569.

3. Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263–292.
4. Kumar, V., Rani, R., & Srivastava, P. (2019). Awareness and perception of consumers towards food adulteration in India. *International Journal of Food Safety*, 15(1), 23–29.
5. Mishra, S., & Singh, R. (2015). Impact of food labeling on consumer buying behavior in India. *Journal of Retail and Consumer Studies*, 9(3), 45–52.
6. Weber, E. U., & Hsee, C. K. (1998). Cross-cultural differences in risk perception, but cross-cultural similarities in attitudes toward perceived risk. *Management Science*, 44(9), 1205–1217.
7. World Health Organization. (2020). Food safety: A public health priority. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/food-safety>
8. FSSAI. (2022). Annual report on food safety and adulteration control in India. Retrieved from <https://www.fssai.gov.in>
9. Biswal, R. (2024). Tainted taste: A comprehensive review of the hidden perils of food adulteration. *ShodhVarta*, 3(06), 1–14.
10. Fischer, C., & Frewer, L. J. (2021). Consumer trust in food and the food system: A critical review. *Foods*, 10(10), 2490. <https://doi.org/10.3390/foods10102490>
11. Gupta, P., & Bisht, A. (2025). Buying habits and awareness level regarding food adulteration among urban homemakers. *International Journal of Home Science*, 11(1), 530–532.
12. Hossain, M., Rahman, M., Binte Hafiz, N., & Hasan, M. (2022). Exploring customers' perceptions of food adulteration at bazaars and supermarkets in Dhaka, Bangladesh. *BMC Public Health*, 22, 14933. <https://doi.org/10.1186/s12889-022-14933-9>
13. Kishore Kumar, Y. (2021). Consumer awareness towards food adulteration in India. *International Journal of Modern Agriculture*, 10(2), 656–664.
14. Li, J., & Huang, C. (2020). Effect of institutional trust on consumers' health and safety perceptions and repurchase intention for traceable fresh food. *Foods*, 10(12), 2898. <https://doi.org/10.3390/foods10122898>
15. Mishra, S., & Singh, R. (2015). Impact of food labeling on consumer buying behavior in India. *Journal of Retail and Consumer Studies*, 9(3), 45–52.
16. Slovic, P. (1987). Perception of risk. *Science*, 236(4799), 280–285. <https://doi.org/10.1126/science.3563507>
17. Weber, E. U., & Hsee, C. K. (1998). Cross-cultural differences in risk perception, but cross-cultural similarities in attitudes toward perceived risk. *Management Science*, 44(9), 1205–1217. <https://doi.org/10.1287/mnsc.44.9.1205>
18. EAS Publisher Study. (2023). Consumer awareness on food adulteration practices on the market and its challenges. *EAS Journal of Humanities and Cultural Studies*, 5(4), 164–170. <https://doi.org/10.36349/easjhcs.2023.v05i04.007>