

*Review Article*

## **The Effect of Trust in Food Safety, Perception, Product Features and Consumers' Characteristics on Consumers' Purchase Decision for Safe Food: A Systematic Literature Review**

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### **ABSTRACT**

Food safety incidents have generated consumer concerns and impacted their purchasing decisions significantly. However, the precise ways these incidents affect consumers' choices and consequences for the food industry remain unclear. This study employs the PRISMA methodology to systematically review existing empirical and conceptual studies to address this gap. A comprehensive search of databases like Web of Science and Scopus using relevant keywords yields 42 pertinent articles after a thorough screening process. This review identifies four key variables influencing consumer behaviour regarding safe food. These variables encompass product features, perceptions of food safety, trust in food safety, and consumers' characteristics. These variables have collectively shaped consumer preferences for safe food and reflect the complex interplay of internal and external factors, including the role of supply chain actors in managing food safety incidents. The study contributes significantly to current knowledge by comprehensively understanding the

factors guiding consumers toward safe food choices. It also introduces a foundational conceptual framework that can be further examined and validated in future research. Beyond academia, the research equips industry stakeholders with vital insights into consumer behaviour, enabling them to effectively formulate strategies that promote food safety and sustainability.

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Consequently, this study marks a crucial step toward enhancing food safety practices and consumer-centric approaches in the food industry, fostering a safer and more sustainable food environment.

*Keywords:* Consumers' characteristics, food safety, perception, product features, purchase decision, supply chain, trust

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## INTRODUCTION

Food safety issues have emerged as a result of the crisis and have affected consumers' purchase decisions. Ongoing food safety issues in many countries, including the mad cow disease outbreak in the UK in 1996, the milk crisis in China in 2008, the enterohaemorrhagic *Escherichia coli* (EHEC) epidemic in Germany in 2011, and the meat crisis in 2017 in Brazil and other safety hazards, have significantly hampered psychological endurance and consumer confidence in food. Increased food safety incidents can jeopardise the trust of customers and the company's reputation. The emergence of food safety is impacting a country's economic performance as food safety concerns could reduce consumer willingness to buy. After a food safety incident in Taiwan caused by contaminated oil in 2014, the total turnover of the food industry had fallen by 4.8% from the previous month (Chuang et al., 2020).

Consumers began to boycott affiliated companies' products across the country, leading to significant changes such as the tightening of food safety standards by some companies and the announcement of

a new government policy on food safety regulations. Since the impact of a specific safety incident involving dairy products could change consumers' purchasing decisions, soymilk products from another competing brand managed to penetrate the market, selling over a million bottles in the first two weeks, resulting in an 80% increase in sales performance of whole milk products (Hsu et al., 2015). Thus, it shows that changes in customer buying behaviour can easily occur after a food safety incident. Depending on the situation, they will switch to a competing brand at any moment.

The human decision to choose food is a complex function (Chen, 2017). According to Mondelaers et al. (2009), consumers' food choices result from quality expectations and experiences, including search criteria such as colour, price, and quality. On the other hand, product characteristics, experiential factors, and belief aspects mainly focused on production quality. To solve the problems related to food safety, most of the major companies in the food industry have turned to food safety certification to gain consumer's confidence and recoup revenue.

Purchase intention is a behavioural intention that can change attitudes and predict behaviour (Ajzen, 2002). In addition, purchase intention is recognised as an essential causal predictor of consumer behaviour (Morwitz & Schmittlein, 1992). Therefore, consumers with high purchase intent will have actual purchase rates higher than those with low purchase intentions (Brown, 2001).

As food safety issues escalate and consumers become increasingly concerned about the health risks posed by food consumption, understanding consumers' purchase intentions can be considered the best medicine. Despite growing awareness of food safety issues among consumers, a lack of studies has been conducted to systematically examine the factors influencing consumers' purchase decisions for safe food. Existing research, primarily identified through Scopus and Web of Science databases, has empirically examined the factors individually, neglecting their interconnectedness between the identified impact on consumer behaviour. While some studies have emphasised the significance of trust in food safety (Chuang et al., 2020; Wang & Yueh, 2020) or perception of risks (Cembalo et al., 2019; Quevedo-Silva et al., 2020) and benefits (Fleseriu et al., 2020), others have focused on product features like labelling and branding (Legendre & Coderre, 2018), or consumer characteristics such as knowledge (Wekeza & Sibanda, 2019) and socio-demographics (Baiyegunhi et al., 2018). However, there is a notable gap in the literature regarding the comprehensive analysis of how these factors collectively influence consumers' decisions to purchase safe food. By conducting a systematic literature review, this study seeks to address this gap by synthesising existing research and identifying trends and factors that shape consumers' purchase decisions for safe food. The current study leverages the (Preferred Reporting Items for Systematic Reviews and Evaluations and Meta-analysis) PRISMA

methodology, a robust and systematic approach to reviewing existing literature, to undertake this investigation, underlining the methodological rigour that enhances the credibility of its findings.

## LITERATURE REVIEW

Globally, food security is a top priority for governments, civil society, the commercial sector, and multilateral organisations. Changing consumer preferences, changes in production and distribution methods, changes in trade and tourism, changing climatic and environmental conditions, and increasing antibiotic resistance are all factors that increase the likelihood of food hazards and food safety incidents. Food-borne illness poses a serious risk to public health. Restoring consumer confidence in food is now a priority for governments, regulators, law enforcement, large corporations, and multinationals. In addition, food safety and quality management systems, product certification, and standardisation are in their infancy and need immediate attention. Previous research on food safety focused on organic food, green food, sub-optimal food, certified food, safe food, and sustainable food (Rahman & Noor, 2016; Stranieri et al., 2016; Xie & Chen, 2009; Yanarella et al., 2009; Yu et al., 2014) were used interchangeably in this review.

A safe food product is unlikely to cause harm or threat to human health, including safety in production, operation, results, and processes, as well as actual and future. In contrast, 'sustainable food is food that is produced economically, economically'

and is based on the principles of social justice. Farmers produce organic food using renewable resources and preserve ecological assets to improve sustainability and prevent environmental harm. In contrast, green food is all foods produced under a system committed to reducing environmental damage while maintaining high standards for quality and safety attributes. Traceability Fresh food is food that has been tested by a national certification body and has information recorded during the production process, which is considered one of the most effective measures to ensure food safety.

Despite numerous studies on consumer purchase intentions, efforts to thoroughly evaluate these results have not been sufficient. This article seeks to fill the knowledge gap by identifying and describing food safety concepts influencing consumer purchase intentions. Reports on consumer purchase intentions in the peer-reviewed literature are limited to conceptual articles but do not use the PRISMA method (Ashaolu & Ashaolu, 2020; Li et al., 2020) since their keyword search keyword is not provided. This study's significance lies in its pursuit of addressing a critical knowledge gap in understanding the intricate concepts driving consumer purchase intentions related to food safety. While prior research has explored this area through conceptual articles, this study takes an innovative approach by employing the PRISMA methodology, traditionally used for systematic reviews and meta-analyses. This method enhances the study's rigour, enabling the systematic evaluation and synthesis of a wide array of research articles.

By adopting PRISMA, this research ensures that only the most relevant and high-quality sources are included, ultimately contributing to a more credible and comprehensive understanding of the underlying concepts shaping consumer decisions in safe food purchases. This innovative methodology identifies patterns, trends, and gaps in the literature, offering valuable insights for academics and industry practitioners, making this study a pioneering and rigorous contribution to the field. Although focused on identifying factors that influence purchase intention, the existing systematic review by Steinhäuser and Hamm (2018) has focused on other factors, especially nutrition, health, and risk reduction claims that influence purchasing behaviour.

Several internal and external factors, including food safety, influenced customers' purchasing decisions (Suhaimi et al., 2021). Product qualities have a substantial influence on customer purchasing intentions, particularly in the field of food safety (Suhaimi et al., 2022). Packaging, labelling, and nutritional information are important in creating customer perceptions. For example, Grunert et al. (2009) underline that clear and informative labelling, including information on ingredients, allergies, and expiration dates, can increase customer trust in the safety of food items. These characteristics influence how customers perceive product quality and significantly impact their purchasing decisions. In addition, trust in supply chain actors and trust in food safety are critical components in understanding customer purchasing intentions.

According to Verbeke and Ward's (2006) research, customers are more likely to acquire food goods when they have faith in the safety procedures put in place by food producers and merchants. Brand reputation, certification, and supply chain transparency contribute to developing and maintaining trust, substantially impacting purchase intentions. Cultivating and sustaining this trust is critical for firms in the food sector to guarantee that their goods meet consumers' safety standards and preferences. It emphasises the importance of food industries in prioritising food safety measures and successfully communicating them to their target audience. Furthermore, consumers frequently rely on many sources of information to determine the safety of food products, which affects their purchasing intentions. In this regard, peer recommendations, internet reviews, and word-of-mouth play significant roles in influencing customer's impressions of food safety.

The distinct advantage of the PRISMA methodology (Moher et al., 2014) lies in its systematic approach, which provides a clear characterisation of the research questions, the identification of inclusion and exclusion criteria, and the effort of document retrieval from the database in a specified time. WoS is a large database of over 33,000 publications in more than 256 subject areas, including environmental research, interdisciplinary social sciences, social concerns, development, and planning. It includes over 100 years of historical citation and file data generated by Clarivate

Analytics and categorises it under three distinct metrics: citations, articles, and citations per publication. The second database considered in the review is Scopus. It has more than 22,800 reviews from 5,000 publishers worldwide, making it one of the largest peer-reviewed literature abstracts and citation databases. Scopus covers many fields, including environmental science, agriculture, biological sciences, and social science.

This study is crucial as only a few studies provide a comprehensive basis for the antecedent of consumer purchase intention about food safety. Prior to this study, publication reviews on consumer intention were lacking in that they did not disclose details of the review process used (such as review database, articles papers were excluded, and search terms were used), making it impossible for future researchers to replicate the study, verify interpretation, or assess completeness (Greenhalgh & Peacock, 2005). In addition, this study is important because consumer's purchase intention is expected to increase the likelihood of a consumer's purchase decision (Fleseriu et al., 2020) and raise concerns about food safety issues, requiring the industry to take immediate action to address security issues to increase purchase intention. Accordingly, the events the peer-reviewed literature has focused on to date help determine where the focus is and should be. The present article is motivated by the main research question: How do food safety issues affect consumer purchase intention? Therefore, the main focus of the study is

safety-related works guided by theoretical evidence from the fields of economics and behavioural sciences. The present study extracted the components of intrinsic and extrinsic factors and established a framework for how the various components affect consumers' purchasing decisions. Therefore, the present study could guide future research on safe food purchase decisions and ensure policymakers receive the necessary support.

## RESEARCH METHODOLOGY

PRISMA methodology was utilised to select relevant literature reviews on food safety related to supply chain quality management activities. The "Web of Science" (WoS) and Scopus are two main databases, according to Moher et al. (2014). Table 1 summarises the keywords used to search for terms related to food safety research for the food industry and consumers. Comprehensive and diverse keywords with more than three main roots were used to ensure retrieval of relevant articles. In addition, to get all articles containing keywords starting with this root, the wildcard asterisk (\*) was assigned to most of the root. Previous research and thesaurus used terms related to food safety, purchase intent, and consumer. Two redundant elements were removed at this stage after careful sorting. On the Web of Science, there are 573 results, while on Scopus, there are 594 results.

After reading the title and/or abstract, it is determined whether a study is appropriate based on the inclusion and exclusion

criteria. The article screenings begin with qualifying and exclusion, with only article journals containing empirical data chosen as literature types, excluding review articles, book series, books, chapters in books, and conference proceedings. Second, to minimise misunderstanding and difficulties in translation, the search attempts eliminated non-English publications and concentrated solely on articles published in English. Third, in terms of chronology, a period of five years (between 2016 and 2020) is chosen as a suitable amount of time to observe the progress of research and associated publications. Since the evaluation process focuses on consumer purchasing intentions for food safety problems, papers indexed in social science-based indexes are chosen. In contrast, publications published in a hard-scientific index (Science Citation Indexed Expanded) are omitted.

During the screening phase, most of the studies were rejected due to the year of publication, the format of the document (not a full-text publication), and the fact that they were outside the research area (business, management, and social sciences). During the eligibility period, it was discovered that most reported studies focused on the hospitality, food service industry, and management as well as fundamental aspects of food science and technology, with little attention to the end consumer, who plays a major role in the food industry, determining purchasing decisions throughout the food supply chain as shown in Figure 1.



Table 1  
The search string utilised for the systematic review procedure

Database	Keyword
WoS Topic search	((“food safety” OR “food quality” OR “food contaminat*” OR “foodborne diseas*” OR “foodborne illnes*” OR “food scandal” OR “food hazard*”) AND (“purchase-decisio*” OR “purchase-behav*” OR “willingness-to-pay” OR “willingness-to-purchase” OR “buying-decisio*” OR “buying-behav*” OR “willingness-to-buy” OR “purchase-intention” OR “buying-intention”)) AND (“consumer*” OR “customer*”)
Scopus	(TITLE-ABS-KEY (“food safety” OR “food quality” OR “food contamination” OR “foodborne diseas*” OR “foodborne illnes*” OR “food scandal” OR “food hazar*”) AND (“purchase decisio*” OR “purchase behav*” OR “willingness to pay” OR “willingness to purchase” OR “buying decisio*” OR “buying behav*” OR “willingness to buy” OR “purchase intention” OR “buying intention”)) AND (“consumer*” OR “customer*”)

Source: Authors' work

**Prisma Diagram**

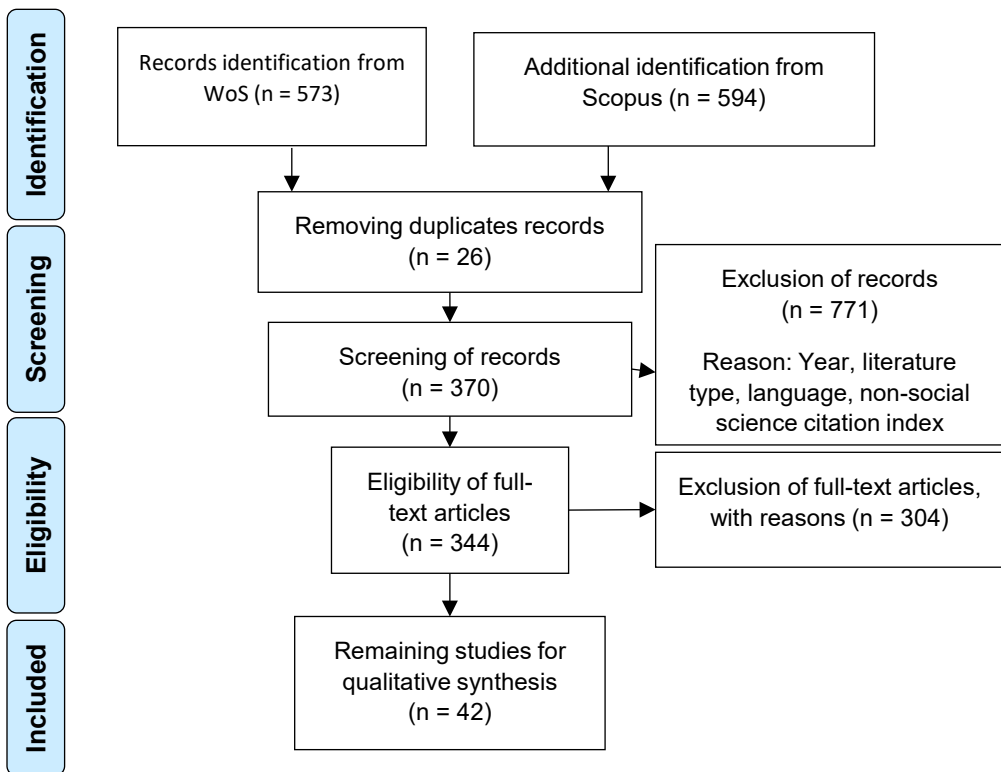


Figure 1. Flow chart of research methodology based on PRISMA

Source: Moher et al. (2014)

## RESULTS AND DISCUSSION

Producing safe food involves the interdependence of many factors that shape consumers' purchase intentions. The characteristics of consumers and assessment of food supply chain activities (such as farming, manufacturing processes, retailers, and markets) could influence their purchasing behaviour and views on food safety. The evolution of consumer purchasing decisions has been identified from previous research as the impact of food safety due to changes in production and distribution techniques, trade and tourism, changing climatic and environmental conditions, and increasing antibiotic resistance, food risks, and food safety events.

### **The Conceptual Framework of Determinants of Safe Food Purchase Decision**

The reviewed literature of five years, particularly from 2017-2020, according to the keywords provided in Table 1, comprises four key determinants that influence consumers' purchase intention. The determinants were established from the literature review covering different aspects of internal and external factors related to food production and food production as well as other supply chain activities. The internal aspect mainly refers to the consumer being the final actor in the supply chain but having the most important role in making the purchase decision. In contrast, the external aspect refers to the opinion about the role of other actors in the food supply chain, including governments and manufacturers, retailers and merchants.

These two fundamental factors must be prioritised and linked to benefit consumers and society in achieving food safety goals. Therefore, the purchase intention matrix for food security determinants is developed based on these two factors.

The determinants explored in various studies, as summarised in Table 2, offer valuable insights into consumer behaviour and purchasing decisions. Firstly, trust in food safety is consumers' confidence in the safety and reliability of the food they purchase and consume. It is influenced by factors like credible information sources, brand reputation, transparency, personal experiences, and peer recommendations, which significantly shape food-related decisions. Overall, trust in food safety is a complex interplay of individual beliefs, external information sources, and personal experiences. It significantly influences consumers' purchase decisions, as individuals are more likely to choose and continue buying products they trust to be safe and of high quality. Eleven studies have examined product features, including pricing, branding, labelling, and eco-friendliness, recognising their multifaceted influence on consumer decisions. In addition, perceived value, explored in six studies, incorporates diverse factors like health benefits and quality, demonstrating their intricate associations with purchase intentions.

On the contrary, perceived risk is particularly significant in the context of crises and social media's impact on risk perception. Lastly, seven investigations



employ the Theory of Planned Behaviour constructs, including Attitudes, Subjective Norms, and Perceived Behavioural Control, revealing their pivotal roles in shaping consumers' intentions, with some studies introducing novel sub-items to refine the

TPB model. These findings collectively contribute to a comprehensive understanding of how these constructs impact consumers' purchase intentions across diverse product categories and contexts.

Table 2

*Five years summary of factors affecting consumers' purchase intention for safe food products*

Number	Keywords	Associated Terms	Frequency
1	Trust	Trust in Food Safety	5
2	Perception	Perceived Risk	6
		Perceived Value	6
		Food Safety Perception	4
3	Product Features	Label, Brand, Price, certification, eco-friendliness	11
4	Consumers' Characteristics	Knowledge	2
		Socio-demographic (Income, Gender)	2
		Awareness	1
		Attitude	7

*Source:* Authors' work

### Trust in Food Safety

The relationship between trust and consumers' purchase decisions is pivotal in the context of safe food products. Trust influences perceptions of product safety, reliability, and overall quality. Confidence in a brand or product's integrity is fostered by factors such as brand reputation, transparency in information disclosure, and past consumer experiences. Trust refers to a favourable factor when uncertainty and opportunism exist (McKnight & Chervany, 2002). As a fundamental determinant of consumer

behaviour, trust is a determinant that positively influences consumers' intention to purchase green products (Schlosser et al., 2006). Gregg and Walzak (2008) supported this by claiming that consumer distrust can be one reason consumers hesitate to purchase green products.

Trust is crucial in mitigating the inherent uncertainty and risk associated with food purchases, as consumers rely on it to navigate the complexities of the food supply chain effectively. Trust in regulatory bodies and food manufacturers signals to

consumers that safety and quality standards are upheld, providing reassurance amidst potential risks. According to Verbeke (2005) and Hansen et al. (2003), trust is crucial in the food supply chain's relationship between consumers and producers. Food safety regulators include food safety departments, consumer associations, professionals, manufacturers, and retailers (Wachinger et al., 2013). Therefore, consumers' beliefs have been identified in food safety as an antecedent of psychological processes in the context of safe food purchasing decisions.

Moreover, external factors like media coverage and public perception of food safety incidents shape consumers' levels of trust, alongside internal factors such as personal experiences and beliefs. The influence of trust extends beyond individual purchase decisions to broader consumer behaviour patterns, including brand loyalty and preferences for online shopping services. Stakeholders in the food industry must understand and cultivate trust through transparent communication, adherence to safety standards, and consistent product quality to foster consumer confidence and promote the purchase of safe food products. Consumers may not have enough knowledge to deal with all the dangers and threats as society, economy, and technology evolve. In product damage crises, consumers must rely on the trust of society and governments, manufacturers, and experts to make response decisions (Slovic, 1993). This is especially true in food safety, where several technologies such as genetically modified foods, food additives, and functional foods

have been deployed (Hunter & Rööös, 2016), which affect consumers' trust in the safety of food products.

### **Perception of Food Safety**

Consumers' decisions to buy safe food can also be motivated by food safety awareness and perception of the value and risk of a food product. Perception of food safety, including its beneficial impact on health, concerns about food safety, or other environmental factors, can influence consumers' intention and willingness to pay for a food product. Wang and Tsai (2019) conducted a study on Taiwanese consumers' perception of traceable fresh food safety. Zhang et al. (2018) measured the relationship between consumers' perceived safety and intention to purchase safe vegetables. Bolat et al. (2020) measure both the direct and indirect relationship between the perception of food security and the intention to purchase organic chicken in Turkey, where the indirect relationship between food security perception works through the mediating effect of perceived benefit and price perception on purchase intention. The commitment of supply chain actors throughout food production, including manufacturers and retailers, is crucial in maintaining food safety and affects consumers' perceptions and purchase intentions. Consumer's perception of food safety can be improved by showing good audit performance of organic certification associations, providing the market with clearer information on the control of organic products and how their organic certification

and audit efforts can lead to safer food. Similarly, Wee et al. (2014) identified food safety as the perception that strongly impacts the intention to buy organic food. Another study by Wekeza and Sibanda (2019) examines the indirect relationship between the perception of food security and purchase intention through motivation, knowledge, and attitude.

Perceived risk encapsulates consumers' subjective evaluations of potential negative outcomes linked with a purchase, including worries about product safety, health implications, or financial loss. Consumers are often concerned about food safety regarding contamination, health risks, or fraudulent labelling, especially when influenced by media reports of foodborne illnesses or recalls. Consequently, such apprehensions may dissuade consumers from purchasing certain products, hindering adoption rates or leading to hesitation in decision-making. Empirical research shows that perceived risk (Zhao et al., 2017) and perceived value (Hussain et al., 2016; Lee & Hwang, 2016; Lin et al., 2020) affect consumer buying trends for safe food products. Since food safety scandals frighten consumers and lead to risk avoidance, restoring consumer awareness is one of the ways to restore demand.

Conversely, perceived value serves as a counterbalance to perceived risk, motivating consumer behaviour by weighing the benefits of a product against its associated risks. In safe food products, perceived value encompasses nutritional content, taste, convenience, and brand

reputation. Consumers could be willing to pay a premium for organic or locally sourced foods, perceiving the food to offer superior quality, health benefits, or environmental sustainability. Similarly, products with clear labelling, transparent sourcing practices, or third-party certifications may be perceived as offering greater value by mitigating perceived risks related to food safety and authenticity. Unlike perceived risk, perceived value is a positive aspect of consumer perception that influences purchasing decisions. Furthermore, external factors such as family and friends affect consumers' perceptions, which affect their willingness to purchase safe food products. Similarly, Kim and Song's (2020) study has highlighted that negative perceptions of food security reduce food purchase intention. Therefore, the perception of food safety directly affects consumers' intention to buy safe food.

### **Product Features**

The product features, including nutrition, labelling, logos, and certifications, influenced consumers' purchase decisions. Consumers' purchasing decisions can be driven by product features that can influence customer purchase intentions, such as price (Lee & Hwang, 2016; Zhang et al., 2016), brands (Legendre & Coderre, 2018; Roy et al., 2017), labels (Hussain et al., 2016; Lee & Hwang, 2016; Wang et al., 2018; Wong & Tzeng, 2019), logo (Hussain et al., 2016) and other product characteristics such as environmental friendliness (Farías, 2020; Lin et al., 2020) and certification (Prentice

et al., 2019). Only one of these studies measured the direct influence of one of the product characteristics, price, on purchase intention (Zhang et al., 2018). Logos and certifications are potent symbols of quality, safety, and authenticity, instilling confidence and trust in consumers' purchase decisions. Products adorned with recognisable logos or certifications are perceived as more dependable and trustworthy, having undergone scrutiny by reputable third-party organisations or compliance with established standards. Consumers gravitate towards products bearing certifications that mirror their values and priorities, such as environmental sustainability, animal welfare, or social responsibility.

Product labelling serves a crucial function by furnishing consumers with vital details regarding product ingredients, allergens, and nutritional content. Transparent, clarity, and conciseness in labelling have aided consumers in making informed decisions and choices regarding products perceived as healthier or more nutritious. According to Wellisch (1972), product information helps reduce customers' uncertainty when making judgments (Chuang et al., 2020). Nutrition information is critical, guiding consumers toward products aligned with their dietary needs, health objectives, and nutritional preferences. Clear labelling, including details about ingredients, allergens, and nutritional content, empowers consumers to make informed choices, particularly those with specific dietary requirements or restrictions.

Moreover, logos and certifications, such as organic, non-genetically Modified Organisms (GMO), or fair-trade labels, act as indicators of quality, sustainability, and ethical production practices, fostering consumer trust and confidence. In addition, a study by Aungatichart et al. (2020) found an association between ecological concerns and intention to purchase organic food through consumer identification. Wekeza and Sibanda (2019) used knowledge, motivation, and mediated attitudes to study the indirect association between the concept of eco-friendliness and consumer behavioural intentions. While Hsu et al. (2019) study the direct and indirect association between environmental concerns and purchase intention, purchase intention is also influenced by attitude. Hwang (2016) explores the direct and indirect relationship between environmental concerns and the intention to buy organic food using the social desire to buy organic food as a moderating factor. Environmental consciousness (Wang et al., 2020), eco-friendliness towards the characteristics of organic food (Lin et al., 2020), and ecological motivation on consumption motivation Organic foods (Teng & Lu, 2016) are additional studies related to environmental aspects with purchase intention. As a result, product features can directly influence purchase intention.

### **Consumer Characteristics**

Consumers' characteristics impact purchasing decisions, purchasing behaviour,

and consumer intentions. Knowledge about nutrition, food safety, and production practices empowers consumers to discern between products based on health benefits, safety assurances, and ethical considerations. High-income households may prioritise premium or organic products, while lower-income families may seek affordability. Age and household composition also influence purchase behaviours; families prioritise convenience and nutrition, while younger demographics may prioritise novelty or ethical considerations. Their characteristics, including household size and income, significantly impact the affordability of buying healthy food regardless of price. In addition, couples living with a family, such as those with more than three children and elderly parents, are more concerned with food security than one person. According to Baiyegunhi et al. (2018), socio-demographic characteristics such as gender, education level, number of children in the household, high income, and race are statistically significant in explaining consumers' willingness-to-pay (WTP) for organic food.

Additionally, attitudes toward products and brands, formed by past experiences and marketing influences, significantly impact purchase decisions, as positive attitudes often drive product loyalty. Awareness of food safety and environmental concerns shapes attitudes and behaviours, with environmentally conscious consumers preferring sustainable or eco-friendly products. According to Zhang et al. (2018),

family income, familiarity, differentiated perception, safety perception, nutritional health, packaging, brand trust, and online shopping experience, all positively influenced people's willingness to pay higher prices for safe vegetables, while household food expenditure price level, price volatility, and safety status all have a negative impact.

In addition, perceived behavioural control, reflecting consumers' confidence in navigating product attributes and labelling information, also guides decision-making. For example, health-conscious individuals with nutritional knowledge may prioritise products with health claims, while environmentally aware consumers may seek eco-friendly packaging. In addition, Rahman and Noor (2016) selected the determinants of purchase intention based on the theory of planned behaviour, including attitude, Perceived Behavioural Control (PBC), and subjective norm. Wong et al. (2018) can argue a similar argument, where three constructs link attitudes, subjective norms and perceived intentions, and behavioural control. Another study by Wong and Aini (2017) assessed the anxiety level and purchase intention of organic food consumers and found that cognitive behavioural control was the strongest predictor of purchase intention of organic food consumers. The identified factors that influence consumers' purchase decisions are summarised in Figure 2.

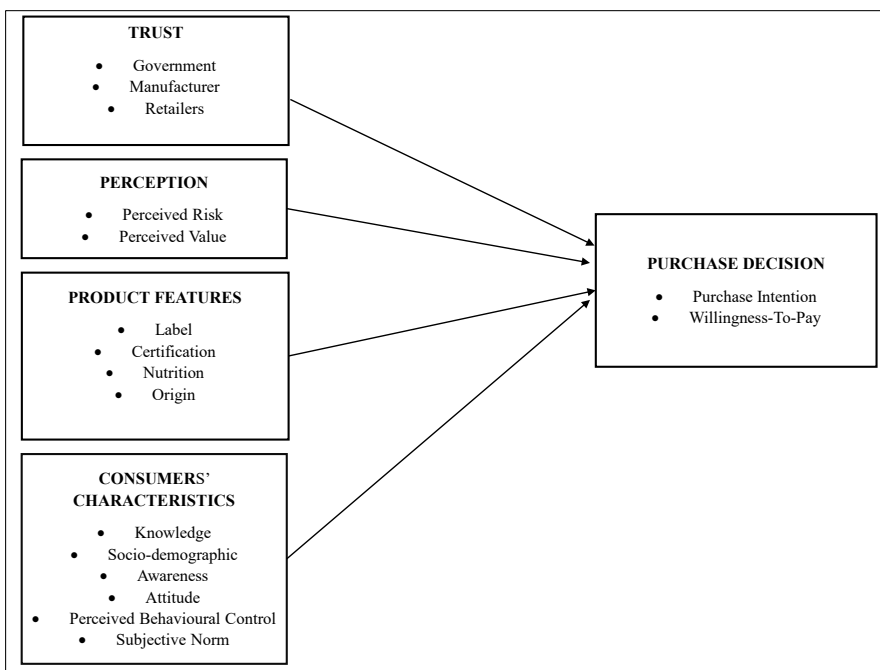


Figure 2. The conceptual framework of factors affecting safe food purchase decision  
 Source: Authors' work

## CONCLUSION

Factors affecting the decision to buy safe food due to food safety concerns can be seen in four aspects: trust, perceptions, product characteristics, and consumers' characteristics. Firstly, trust in the food supply chain is crucial, underlining the significance of consistent adherence to safety standards. Although trust influences safe food purchase decisions, the ongoing efforts require strategies, transparency, and education to gain consumer trust despite unprecedented challenges.

Secondly, consumers' perception of food safety involves several processes. Perception, driven by risk, value, and awareness, reflects the psychological processes guiding decision-making,

highlighting the need for targeted strategy during food crises. While intrinsic motivations and external factors play crucial roles, a critical examination is necessary to identify key influences in consumers' decision-making, including media influence, the alignment of perceived value with actual safety, and the effectiveness of traceability and certification in ensuring food safety.

Thirdly, product features, including logos, certification, and labels, directly influence purchase intentions. The influence of product features, from pricing to eco-friendliness, urges industry players to align with consumer preferences while critically evaluating marketing claims. This aspect requires further exploration into the authenticity of the information



provided to consumers, the alignment of consumer values with industry practices, and the relationship between attitudes and social influences in shaping purchasing decisions. A deeper understanding of product features needs to be examined to determine consumer preferences and sustainable consumption. Lastly, consumer characteristics require the exploration of the societal influences shaping purchasing choices and preferences from external influences and societal perceptions related to economic considerations, as well as societal factors, to enhance the understanding of consumer decision-making processes.

### **Implication for Theory and Practice**

The theoretical implications provide insights that contribute to food security and consumer welfare. Identifying internal and external factors influencing consumer purchase intentions highlights the complexity of consumer perception, behaviour, and emotional beliefs. Understanding these factors provides a foundation for addressing difficulties in consumer perception, contributing to the development of effective strategies in the face of food safety issues. Identifying the interdependence of internal and external factors in the formation of consumer purchase intention can clarify the various difficulties affecting consumer perception, thereby affecting consumer behaviour and emotional beliefs, as well as their perception of risk in the face of food safety issues. The internal factors are related to individual customers, such as consumer perceptions and beliefs. In addition, food

purchasing behaviour can be modified based on customer knowledge, culture, characteristics, motivation, and other influencing variables. On the other hand, extrinsic variables are related to production activities and other players in the agri-food industry. Therefore, many internal and external factors must be considered when assessing the factors affecting purchase intention.

Practically, results of the study hold significant benefits for Malaysia's Food Safety and Quality Sub-Group, aligning with the National Food Security Policy Action Plan 2021–2025 for planning, implementing, monitoring, and evaluating food safety and quality activities. The aim is to protect the public against health risks and frauds in the storage, preparation, processing, packaging, transportation, sale, and consumption of food and facilitating food trade. The emphasis on Availability, Accessibility, Use, Stability, and Sustainability reflects global concepts recommended by the Food and Agriculture Organization of the United Nations (FAO). These key components comply with the latest concepts recommended by the Food and Agriculture Organization of the United Nations (FAO): (1) To work towards a food safety and safety plan, the government should focus more on promoting safe food purchasing decisions, (2) To support the establishment of food safety and quality management systems, governments need to provide an integrated regulatory framework and foundation, and (3) To realise the full potential of the agriculture and food industry,

strong legislative initiatives on food quality and safety are needed that emphasise a comprehensive farm-to-fork strategy as an effective means of reducing potential food hazards. Recommendations for promoting safe food purchasing decisions, establishing food safety and quality management systems, and emphasising a comprehensive strategy align with the government's goals. Strengthening areas such as tax incentives, talent development, education programs, and stakeholder awareness campaigns can elevate food security and quality in Malaysia.

Food chain stakeholders can leverage these insights to refine communication strategies, enhance transparency, and tailor marketing approaches. Building trust requires continuous efforts, especially during crises and technological advancements. The influence of product features suggests an opportunity for industry players to align with consumer preferences for certified and eco-friendly products and critical evaluation of marketing claims.

### **Limitations and Recommendations for Future Studies**

This article examines the literature on safe food purchase intentions and the need to establish a framework for safe food purchase intentions. However, current studies have several limitations. The scope of the review, focusing on the years 2017–2020, may not encompass emerging trends and recent developments. The reliance on existing literature introduces potential bias and omission of recent studies, impacting the

generalizability of our findings. Future research should address these limitations, encompassing a broader timeframe, diverse research methodologies, and a more comprehensive representation of global contexts.

The conceptual framework developed in this paper and the future empirical findings could contribute to food security and consumer welfare. Moreover, this study is important in conveying a message to the food industry, especially manufacturers, in developing safe food production and processing, minimising uncertainties and risks in the future. By exploring the factors that influence consumer purchase intentions, especially the benefits of choosing a particular food safety certification, the economic benefits of maximising productivity or minimising costs and industry revenues could be estimated, which contribute to the decisions of manufacturers and retailers to encourage safer food production in the future. The development of the conceptual framework in this study can be further tested and validated. The proven model could then promote the development of a safer food industry, especially in emerging markets in Malaysia.

Future research should focus on underexplored studies of consumer behaviour and theoretical perspectives related to safe food purchases, such as the influence of trust in the context of food incidents. The empirical evaluation of the influence of socio-demographic characteristics and cultural influences could shed light on consumer behaviour

across diverse populations. Future studies should also consider longitudinal designs to capture temporal shifts and explore the impact of external factors on the stability of trust and perception. Moreover, the identified interdependence of internal and external factors calls for future research to dissect the impact on consumer choices. As sustainability becomes an important consideration, understanding the authenticity and effectiveness of these claims is crucial.

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## REFERENCES

- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology, 32*(4), 665–683. <https://doi.org/10.1111/j.1559-1816.2002.tb00236.x>
- Ashaolu, T. J., & Ashaolu, J. O. (2020). Perspectives on the trends, challenges and benefits of green, smart and organic (GSO) foods. *International Journal of Gastronomy and Food Science, Article 100273*. <https://doi.org/10.1016/j.ijgfs.2020.100273>
- Aungatichart, N., Fukushige, A., & Aryupong, M. (2020). Mediating role of consumer identity between factors influencing purchase intention and actual behavior in organic food consumption in Thailand. *Pakistan Journal of Commerce and Social Science, 14*(2), 429–449.
- Baiyegunhi, L. J. S., Mashabane, S. E., & Sambo, N. C. (2018). Influence of socio-psychological factors on consumer willingness to pay (WTP) for organic food products. *Journal of Economics and Behavioral Studies, 10*(5(J)), 208–219. [https://doi.org/10.22610/jebvs.v10i5\(j\).2510](https://doi.org/10.22610/jebvs.v10i5(j).2510)
- Bolat, B. A., Kaygisiz, F., & Bulut, D. (2020). How consumers' consciousness and perception levels affect purchase intention of organic chicken meat in Turkey. *Turkish Journal of Veterinary and Animal Sciences, 44*(6), 1306–1315. <https://doi.org/10.3906/vet-2005-53>
- Brown, A. (2001). Counting farmers markets. *Geographical Review, 91*(4), 655–674. <https://doi.org/10.1111/j.1931-0846.2001.tb00246.x>
- Cembalo, L., Caso, D., Carfora, V., Caracciolo, F., Lombardi, A., & Cicia, G. (2019). The “land of fires” toxic waste scandal and its effect on consumer food choices. *International Journal of Environmental Research and Public Health, 16*(165), 1–14. <https://doi.org/10.3390/ijerph16010165>
- Chen, P. Y. (2017). Fresh snack food channel evaluation model for integrating customers' perception of transaction costs in Taiwan. *Journal of Food Quality, Article 7264576*. <https://doi.org/10.1155/2017/7264576>
- Chuang, H. H., Tsai, H. T., & Cheng, W. L. (2020). The influence of information disclosure of social networking site on consumers' food safety perception in tourism factories. *Revista de Cercetare Si Interventie Sociala, 71*, 264–284. <https://doi.org/10.33788/rcis.71.17>
- Cui, L., Jiang, H., Deng, H., & Zhang, T. (2019). The influence of the diffusion of food safety information through social media on consumers' purchase intentions: An empirical study in China. *Data Technologies and Applications, 53*(2), 230–248. <https://doi.org/10.1108/DTA-05-2018-0046>
- Fariás, P. (2020). Promoting the absence of pesticides through product labels: The role of showing a specific description of the harmful effects, environmental attitude, and familiarity with pesticides. *Sustainability, 12*(21), Article 8912. <https://doi.org/10.3390/su12218912>
- Feng, T., Keller, L.R., Wu, P., & Xu, Y. (2014). An empirical study of the toxic capsule crisis in China: Risk perceptions and behavioral

- responses. *Risk Analysis*, 34(4), 698–710. <https://doi.org/10.1111/risa.12099>
- Fleseriu, C., Cosma, S. A., & Bocănet, V. (2020). Values and planned behaviour of the Romanian organic food consumer. *Sustainability (Switzerland)*, 12(5), 1–21. <https://doi.org/10.3390/su12051722>
- Greenhalgh, T., & Peacock, R. (2005). Effectiveness and efficiency of search methods in systematic reviews of complex evidence: Audit of primary sources. *British Medical Journal*, 331(7524), 1064–1065. <https://doi.org/10.1136/bmj.38636.593461.68>
- Gregg, D. G., & Walczak, S. (2008). Dressing your online auction business for success: An experiment comparing two e-Bay businesses. *MIS Quarterly*, 32(3), 653–670. <https://doi.org/10.2307/25148860>
- Grunert, K. G., Lähteenmäki, L., Boztug, Y., Martinsdóttir, E., Ueland, Ø, Åström, A., Lampila, A. (2009). Perception of health claims among Nordic consumers. *Journal of Consumer Policy*, 32, 269–287. <https://doi.org/10.1007/s10603-009-9110-0>
- Han, G., & Jan, S. (2019). Does food safety risk perception affect the public's trust in their government? an empirical study on a national survey in China. *International Journal of Environmental Research and Public Health*, 16(11), Article 1874. <https://doi.org/10.3390/ijerph16111874>
- Hansen, J., Holm, L., Frewer, L., Robinson, P., & Sandøe, P. (2003). Beyond the knowledge deficit: Recent research into lay and expert attitudes to food risks. *Appetite*, 41(2), 111–121. [https://doi.org/10.1016/S0195-6663\(03\)00079-5](https://doi.org/10.1016/S0195-6663(03)00079-5)
- Hsu, H. H., Lee, C. H., & Huang, C. H. (2015). Cover story of I-Mei. *Business Today*, 953, 78–101.
- Hsu, S. Y., Chang, C.-C., & Lin, T. T. (2019). Triple bottom line model and food safety in organic food and conventional food in affecting perceived value and purchase intentions. *British Food Journal*, 121(2), 333–346. <https://doi.org/10.1108/BFJ-07-2017-0403>
- Hunter, E., & Rös, E. (2016). Fear of climate change consequences and predictors of intentions to alter meat consumption. *Food Policy*, 62, 151–160. <https://doi.org/10.1016/j.foodpol.2016.06.004>
- Hussain, I., ur Rahman, S., Zaheer, A., & Saleem, S. (2016). Integrating factors influencing consumers' halal products purchase: Application of theory of reasoned action. *Journal of International Food & Agribusiness Marketing*, 28(1), 35–58. <https://doi.org/10.1080/08974438.2015.1006973>
- Hwang, J. (2016). Organic food as self-presentation: The role of psychological motivation in older consumers' purchase intention of organic food. *Journal of Retailing and Consumer Services*, 28, 281–287. <https://doi.org/10.1016/j.jretconser.2015.01.007>
- Kim, J.-H., & Song, H. (2020). The influence of perceived credibility on purchase intention via competence and authenticity. *International Journal of Hospitality Management*, 90, Article 102617. <https://doi.org/https://doi.org/10.1016/j.ijhm.2020.102617>
- Le-Anh, T., & Nguyen-To, T. (2020). Consumer purchasing behaviour of organic food in an emerging market. *International Journal of Consumer Studies*, 44(6), 563–573. <https://doi.org/10.1111/ijcs.12588>
- Lee, H. J., & Hwang, J. (2016). The driving role of consumers' perceived credence attributes in organic food purchase decisions: A comparison of two groups of consumers. *Food Quality and Preference*, 54, 141–151. <https://doi.org/10.1016/j.foodqual.2016.07.011>
- Legendre, S., & Coderre, F. (2018). The impact of altruistic attribution and brand equity in food label campaigns. *Journal of Product & Brand Management*, 27(1), 634–646. <https://doi.org/10.1108/JPB-12-2016-1381>
- Li, R., Lee, C., Lin, Y., & Liu, C. (2020). Chinese consumers' willingness to pay for organic foods: A conceptual review. *International Food and Agribusiness Management Review*, 23(2), 173–187. <https://doi.org/10.22434/IFAMR2019.0037>

- Liao, C., Luo, Y., & Zhu, W. (2020). Food safety trust, risk perception, and consumers' response to company trust repair actions in food recall crises. *International Journal of Environmental Research and Public Health*, *17*(4), Article 1270. <https://doi.org/10.3390/ijerph17041270>
- Lin, J., Guo, J., Turel, O., & Liu, S. (2020). Purchasing organic food with social commerce: An integrated food-technology consumption values perspective. *International Journal of Information Management*, *51*, Article 102033. <https://doi.org/10.1016/j.ijinfomgt.2019.11.001>
- McKnight, D. H., & Chervany, N. L. (2002). What trust means in e-commerce customer relationships: an interdisciplinary conceptual typology. *International Journal of Electronic Commerce*, *6*(2), 35–53. <https://doi.org/10.1080/10864415.2001.11044235>
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., Antes, G., Atkins, D., Barbour, V., Barrowman, N., Berlin, J. A., Clark, J., Clarke, M., Cook, D., D'Amico, R., Deeks, J. J., Devereaux, P. J., Dickersin, K., Egger, M., Ernst, E., Gøtzsche, P. C., ... Tugwell, P. (2014). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA Statement. *Revista Espanola de Nutricion Humana y Dietetica*, *18*(3), 172–181. <https://doi.org/10.14306/renhyd.18.3.114>
- Mondelaers, K., Verbeke, W., & Van Huylenbroeck, G. (2009). Importance of health and environment as quality traits in the buying decision of the organic products. *British Food Journal*, *111*(10), 1120–1139. <https://doi.org/10.1108/00070700910992952>
- Morwitz, V. G., & Schmittlein, D. (1992). Using segmentation to improve sales forecasts based on purchase intent: Which “intenders” actually buy? *Journal of Marketing Research*, *29*, 391–405. <https://doi.org/10.2307/3172706>
- Pham, T. H., Nguyen, T. N., Thu, T., Phan, H., & Thanh, N. (2018). Evaluating the purchase behaviour of organic food by young consumers in an emerging market economy. *Journal of Strategic Marketing*, *27*(6), 540–556. <https://doi.org/10.1080/0965254X.2018.1447984>
- Prentice, C., Chen, J., & Wang, X. (2019). The influence of product and personal attributes on organic food marketing. *Journal of Retailing and Consumer Services*, *46*, 70–78. <https://doi.org/10.1016/j.jretconser.2017.10.020>
- Quevedo-Silva, F., Freire, O., & Spanhol-Finocchio, C. P. (2020). “Carne fraca”: Crisis in Brazilian beef processing and the effect of the media on consumers' purchase behaviour. *British Food Journal*, *122*(2), 722–735. <https://doi.org/10.1108/BFJ-07-2019-0491>
- Rahman, K. M., & Noor, N. A. M. (2016). Exploring organic food purchase intention in Bangladesh: An evaluation by using the theory of planned behavior. *International Business Management*, *10*(18), 4292–4300.
- Roy, V., Tata, S. V., & Parsad, C. (2017). Consumer response to brand involved in food safety scandal: An exploratory study based on a recent scandal in India. *Journal of Consumer Behaviour*, *17*(1), 25–33. <https://doi.org/10.1002/cb.1666>
- Stranieri, S., Cavaliere, A., & Banterle, A. (2016). Voluntary traceability standards and the role of economic incentives. *British Food Journal*, *118*(5). <https://doi.org/10.1108/BFJ-04-2015-0151>
- Schlosser, A. E., White, T. B., & Lloyd, S. M. (2006). Converting website visitors into buyers: How web site investment increases consumer trusting beliefs and online purchase intentions. *Journal of Marketing*, *70*(2), 133–48. <https://doi.org/10.1509/jmkg.70.2.133>
- Slovic, P. (1993). Perceived risk, trust, and democracy. *Risk Analysis*, *13*(6), 675–682. <https://doi.org/10.1111/j.1539-6924.1993.tb01329.x>
- Steinhauser, J., & Hamm, U. (2018). Consumer and product-specific characteristics influencing the effect of nutrition, health and risk reduction claims on preferences and purchase behaviour-A systematic review. *Appetite*, *127*, 303–323. <https://doi.org/10.1016/j.appet.2018.05.012>
- Suhaimi, A., Othman, A. A., & Sundram, V. P. K. (2022). Visualizing food safety influence on



- consumers' purchase intention: A bibliometric analysis. *Malaysian Journal of Consumer and Family Economics*, 28, 315-334.
- Suhaimi, A., Othman, A. A., Sundram, V. P. K., & Ghazali, A. F. (2021). Consumers' purchase decision based on intrinsic and extrinsic factors related to food safety issues: A review. *IOP Conference Series: Earth and Environmental Science*, 756(1), Article 012010. <https://doi.org/10.1088/1755-1315/756/1/012010>
- Teng, C. C., & Lu, C. H. (2016). Organic food consumption in Taiwan: Motives, involvement, and purchase intention under the moderating role of uncertainty. *Appetite*, 105, 95–105. <https://doi.org/10.1016/j.appet.2016.05.006>
- Trumbo, C. W., & McComas, K. A. (2003). The function of credibility in information processing for risk perception. *Risk Analysis*, 23(2), 343–353. <https://doi.org/10.1111/1539-6924.00313>
- Verbeke, W., & Ward, R. (2006). Consumer interest in information cues denoting quality, traceability and origin: An application of ordered probit models to beef labels. *Food Quality and Preference*, 17(6), 453-467. <https://doi.org/10.1016/j.foodqual.2005.05.010>.
- Verbeke, W. (2005). Agriculture and the food industry in the information age. *European Review of Agricultural Economics*, 32(3), 347–368. <https://doi.org/10.1093/eurrag/jbi017>
- Wachinger, G., Renn, O., Begg, C., & Kuhlicke, C. (2013). The risk perception paradox—Implications for governance and communication of natural hazards. *Risk Analysis*, 33(6), 1049–1065. <https://doi.org/10.1111/j.1539-6924.2012.01942.x>
- Wang, E. S. T., & Tsai, M. C. (2019). Effects of the perception of traceable fresh food safety and nutrition on perceived health benefits, affective commitment, and repurchase intention. *Food Quality and Preference*, 78, Article 103723. <https://doi.org/10.1016/j.foodqual.2019.103723>
- Wang, G.-Y., & Yueh, H.-P. (2020). Optimistic bias, food safety cognition, and consumer behavior of college students in Taiwan and Mainland China. *Foods*, 9(11), Article 1588. <https://doi.org/10.3390/foods9111588>
- Wang, J., Gao, Z., & Shen, M. (2018). Recognition of consumers' characteristics of purchasing farm produce with safety certificates and their influencing factors. *International Journal of Environmental Research and Public Health*, 15(12), Article 2879. <https://doi.org/10.3390/ijerph15122879>
- Wang, J., Pham, T. L., & Dang, V. T. (2020). Environmental consciousness and organic food purchase intention: A moderated mediation model of perceived food quality and price sensitivity. *International Journal of Environmental Research and Public Health*, 17(3), Article 850. <https://doi.org/10.3390/ijerph17030850>
- Wee, C., Ariff, M., Zakuan, N., Tajudin, M., Ismail, K., & Ishak, N. (2014). Consumers perception, purchase intention and actual purchase behavior of organic food products. *Review of Integrative Business and Economics Research*, 3(2), 378-397.
- Wekeza, S. V., & Sibanda, M. (2019). Factors influencing consumer purchase intentions of organically grown products in Shelly Centre. *International Journal of Environmental Research and Public Health*, 16(959), 2–26. <https://doi.org/10.3390/ijerph16060956>
- Wellisch, H. (1972). From information science to informatics: A terminological investigation. *Journal of Librarianship*, 4(3), 157–187. <https://doi.org/10.1177/096100067200400302>
- Wen, X., Sun, S., Li, L., He, Q., & Tsai, F.-S. (2019). Avian influenza -Factors affecting consumers' purchase intentions toward poultry products. *International Journal of Environmental Research and Public Health*, 16(4139), 1–13. <https://doi.org/10.3390/ijerph16214139>
- Wong, S. L., Hsu, C. C., & Chen, H. S. (2018). To buy or not to buy? Consumer attitudes and purchase intentions for suboptimal food. *International Journal of Environmental Research and Public Health*, 15(7), 1–13. <https://doi.org/10.3390/ijerph15071431>



- Wong, S. S., & Aini, M. S. (2017). Factors influencing purchase intention of organic meat among consumers in Klang Valley, Malaysia. *International Food Research Journal*, 24(2), 767–778.
- Wong, W. M., & Tzeng, S. (2019). Consumers' psychographics and green consumption intention: Community supported agriculture business model in China. *International Journal of Business and Society*, 20(1), 229–246.
- Yogananda, A. P. Y., & Nair, P. B. (2019). Green food product purchase intention: Factors influencing Malaysian consumers. *Pertanika Journal of Social Sciences and Humanities*, 27(2), 1131–1144.
- Yu, X., Gao, Z., & Zeng, Y. (2014). Willingness to pay for the “Green Food” in China. *Food Policy*, 45, 80–87. <http://dx.doi.org/10.1016/j.foodpol.2014.01.003>.
- Zhang, B., Fu, Z., Huang, J., Wang, J., Xu, S., & Zhang, L. (2018). Consumers' perceptions, purchase intention, and willingness to pay a premium price for safe vegetables: A case study of Beijing, China conventional vegetable. *Journal of Cleaner Production*, 197(1), 1498–1507. <https://doi.org/10.1016/j.jclepro.2018.06.273>
- Zhao, X., Deng, S., & Zhou, Y. (2017). The impact of reference effects on online purchase intention of agricultural products food safety consciousness. *Internet Research*, 27(2), 233–255. <https://doi.org/10.1108/IntR-03-2016-0082>