



OPEN ACCESS

EDITED BY

Sophie Attwood,
Behavior Global, United Kingdom

REVIEWED BY

Guoqun Ma,
Guangxi Normal University, China
Matilde Reitano,
University of Catania, Italy
Maya Irjayanti,
Telkom University, Indonesia

*CORRESPONDENCE

Xuemei Dong
✉ 2890873210@qq.com;
✉ 202300000142@just.edu.cn

RECEIVED 23 December 2024

ACCEPTED 25 August 2025

PUBLISHED 10 September 2025

CITATION

Dong X, Jiang B, Kassoh FS and Chen F (2025)
Platform architecture enhances consumer
decision certainty in food supply chains: the
reference effect and trust transfer
mechanism.
Front. Sustain. Food Syst. 9:1550187.
doi: 10.3389/fsufs.2025.1550187

COPYRIGHT

© 2025 Dong, Jiang, Kassoh and Chen. This
is an open-access article distributed under
the terms of the [Creative Commons
Attribution License \(CC BY\)](#). The use,
distribution or reproduction in other forums is
permitted, provided the original author(s) and
the copyright owner(s) are credited and that
the original publication in this journal is cited,
in accordance with accepted academic
practice. No use, distribution or reproduction
is permitted which does not comply with
these terms.

Platform architecture enhances consumer decision certainty in food supply chains: the reference effect and trust transfer mechanism

Xuemei Dong^{1,2*}, Baichen Jiang², Fallah Samuel Kassoh² and Feiyu Chen¹

¹School of Business, Jiangsu University of Science and Technology, Suzhou, China, ²School of Economics and Management, South China Agricultural University, Guangzhou, China

Introduction: This research aims to explain how regulated digital platforms can foster sustainable food consumption. We develop and test a dual-process model of consumer logic, hypothesizing that in complex markets, consumers first use the platform's architecture as a fast, intuitive heuristic to simplify their decision-making, before engaging in a more deliberate, analytical evaluation of supply chain attributes.

Methods: We tested the model across two complementary studies using survey data from 2,028 consumers. Study 1 employed a choice experiment grounded in prospect theory to assess the platform's influence on choice. Study 2 utilized a structural equation model (SEM) grounded in trust theory to investigate the underlying psychological mechanism.

Results: Study 1 demonstrated that the platform architecture functioned as a powerful reference point, triggering significant loss aversion and enabling reference-dependent variety seeking, thereby amplifying the value of attributes within its trusted boundaries. Study 2's SEM results revealed a chain mediation effect: institutional trust in the platform architecture preceded and facilitated the development of individual trust in its component suppliers. This trust transfer process empowers the platform to function as a credible heuristic.

Discussion: By integrating behavioral economics and trust theory, this research provides a comprehensive model of platform-based consumer logic. Our novel contribution is showing how platform architecture can orchestrate a cognitive shift from heuristic simplification to analytical engagement, thus providing a powerful tool for bridging the motive-behavior gap in sustainable consumption.

KEYWORDS

food system, consumer decision, platform architecture, reference effects, trust

1 Introduction

Trust in an integrated food system is fundamentally a matter of institutional trust. For the average consumer, directly verifying the safety, sustainability, and ethics of a sprawling supply chain is an impossible task. This challenge necessitates a trusted “gatekeeper” responsible for ensuring the integrity of the entire system (Boelsen-Robinson et al., 2021; Klein et al., 2022).

We argue that a well-designed platform architecture serves as a crucial cognitive tool, enabling consumers to first use a heuristic to simplify their evaluation of the entire food system, and then engage in more analytical thinking about its constituent elements (Guo, 2016; Zheng et al., 2019; Sun, 2024). This becomes feasible as platforms communicate a unified platform identity, which can

generate institutional trust more effectively than the fragmented voices of individual suppliers (Cennamo, 2019; Cennamo et al., 2018). Such an architecture provides a new reference point for individuals to make informed and secure purchasing decisions, simplifying complexity by bundling multiple attributes into a single, encompassing choice.

A cornerstone of cognitive psychology, dual-process theory distinguishes between two modes of thought: an intuitive, fast, and heuristic-based mode, and a deliberate, slow, and analytical one. This framework has become crucial for understanding how consumers navigate today's information-rich digital markets (Jiang et al., 2025; Li et al., 2025). We posit that in the face of an overwhelmingly complex food system, the platform architecture itself serves as a powerful heuristic, allowing consumers to make a holistic judgment about the trustworthiness and quality of the entire system. This initial heuristic choice, however, is not the end of the process. Instead, it enables and triggers a shift to a more effortful analysis, where consumers are freed to scrutinize and value the specific supply chain components and attributes offered within the platform's trusted boundaries.

This research explores this dual-process model through two complementary studies. Study 1 investigates the behavioral consequences of this process, examining whether the platform architecture can effectively function as a reference point for consumer choice. Study 2 then delves into the underlying psychological mechanism, which we propose is a process of trust transfer. It explores how system-level institutional trust in the platform architecture interacts with element-level individual trust in the actors within the food system. By integrating these two studies, this paper aims to provide a comprehensive model of platform-based consumer logic (see Figure 1).

2 Study 1

Prospect theory proposes that human choice is fundamentally reference-dependent; individuals evaluate outcomes not in absolute terms, but as gains and losses relative to a central reference point (Van de Kaa, 2010). This cognitive mechanism serves as a powerful heuristic, simplifying complex decisions by anchoring them to a salient benchmark. Theoretically, the concept of platform architecture aligns seamlessly with this two-stage consumer decision process. The initial, crucial stage involves choosing a platform, which establishes the primary reference point and frames the entire decision context. Subsequently, choices among complementary food attributes within this established frame create more freedom for range adaption. Specifically, this paper evaluates the behavioral consequences of digital platform availability on consumer preferences through conjoint studies and a cross-regional experiment.

2.1 Theoretical development and hypotheses

2.1.1 Platform architecture as a reference point

Making choices within modern food systems presents a significant cognitive challenge. Consumers face a bewildering array of attributes, such as origin, production methods, and sustainability credentials, requiring complex trade-offs (De Schutter et al., 2020). In such environments of high uncertainty and information overload, consumers instinctively seek heuristics to simplify their decision-making. A central platform can serve precisely this function (Singh et al., 2024; Younis and Zeebaree, 2025). By connecting disparate suppliers and curating offerings, a platform architecture transforms a fragmented market into a coherent and stable choice environment, thereby providing an anchor for heuristic decision-making.

Crucially, a platform becomes an effective reference point not merely by aggregating options, but by actively shaping a distinct and trustworthy "platform identity" (Cennamo, 2019). Unlike traditional marketplaces where value is often equated with the sheer volume of components, a well-designed platform architecture acts as a curator, selectively filtering suppliers and products to project a unique, coherent, and high-quality image. This curated approach drastically reduces perceived system risk and enhances consumer confidence. Once consumers adopt such a platform as their primary benchmark, their subsequent behavior is powerfully shaped by one of prospect theory's core tenets: loss aversion. The theory postulates that losses loom larger than equivalent gains. When a platform architecture is established as a consumer's initial endowment, the prospect of losing its associated certainty, convenience, and trust is perceived as a significant loss. This feeling of potential loss will be weighted more heavily than the potential gain from switching to an alternative, even one with seemingly attractive features. This psychological resistance to loss fosters behavioral lock-in and reinforces the platform's role as an indispensable reference point (Zauberman, 2003; Sharma et al., 2025). Therefore, we propose:

Hypothesis 1.1: Consumers endowed with the VBP platform as a reference point will exhibit loss aversion, demonstrating a stronger preference to retain it than to acquire a valuable alternative.

2.1.2 Reference-dependent variety seeking

The establishment of a trusted reference point does more than just simplify the initial choice; it fundamentally alters the nature of subsequent decision-making. By anchoring their choice in the platform,

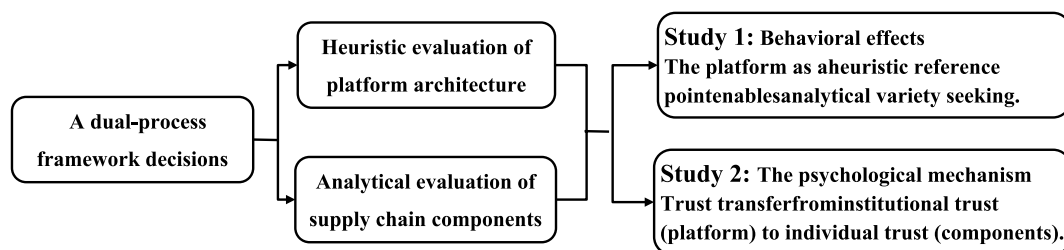


FIGURE 1
The theoretical framework.

consumers effectively outsource the complex task of vetting the entire food system. This cognitive shortcut is essential for overcoming the paralysis that often accompanies high-stakes, information-rich decisions (Busemeyer et al., 2019). Crucially, by resolving the primary system-level risk, the platform frees up significant cognitive resources. This allows the consumer to transition to a more analytical and deliberative mindset when considering the complementary elements within the food system (Lohmann et al., 2024; Tarnanidis et al., 2025). With their baseline need for trust met, consumers are then psychologically empowered to explore and appreciate the rich variety of attributes that the platform offers (Embling et al., 2020; Vakeel et al., 2021; Zhang, 2022). They can now engage in careful trade-offs among specific production methods, e.g., animal welfare, geographical indications, or unique brand stories, which constitute the very fabric of the food supply chain. This behavior is therefore not simple variety seeking; it is a sophisticated reference-dependent variety seeking that is contingent on the initial heuristic choice. The platform architecture does not merely present a larger assortment; it creates the psychological pre-conditions for consumers to confidently and systematically engage with that variety. We therefore hypothesize:

Hypothesis 1.2: Consumers who use the platform architecture as a reference point will exhibit a greater preference for attribute variety compared to consumers without such a reference point.

2.2 Method

2.2.1 Background

Informed food decisions are particularly urgent in China, where a pronounced gap exists between consumers' motives for sustainable diets and a lack of trustworthy reference points to guide their implementation. This challenge highlights the need for interventions that can effectively nudge consumers toward sustainable food

consumption, for which China's recent initiatives provide a telling example.

The government has launched a digital platform embedded in the Guangdong-Hong Kong-Macao Greater Bay Area Vegetable Basket Project (the VBP). It is a collaborative regulated digital system that enables the joint action of firms, government supervisors, and quality inspectors (see Figure 2). This framework integrates advanced digital technologies to ensure robust monitoring and transparency throughout the supply chain. The adoption of technologies such as blockchain is particularly potent, as it serves as the architectural backbone for building consumer trust. Recent research consistently demonstrates that by providing transparent, immutable data, blockchain directly enhances consumer perceptions of trust and their intention to adopt new food products (Reitano et al., 2024). This is especially effective for reshaping trust dynamics in fragmented supply chains where confidence has been eroded (Fani et al., 2025), as technology-supported transparency enhances consumer trust not just in a single firm but across the entire network of stakeholders (Centobelli et al., 2022; Duan and Zhu, 2025). Acting as a value-neutral reference benchmark, the platform leverages this blockchain-engendered trust to ensure safety, authenticity, and sustainability (Tan and Saraniemi, 2022). By establishing this robust foundation of trust, the platform then empowers consumers to confidently explore the variety of complementary product attributes offered within its boundaries.

In recent years, the VBP platform architecture has been in trial operation. Guangdong province, renowned as the window of China's reform and opening up, consistently serves as the ideal testing ground for translating policy design into practical market measures. Due to successful marketing efforts, consumers in Guangdong have embraced the VBP platform, incorporating it into their daily purchasing habits. In stark contrast, consumers outside Guangdong remain largely unaware of the platform and its offerings. This discrepancy creates comparative scenarios where the reference point provided by the VBP



FIGURE 2
The VBP platform architecture.

platform is either included in a multi-attribute choice set or not. Such a setup enables researchers to compare the significance of the reference point's availability both within the experiment and against various food attributes in the food chain through conjoint studies.

2.2.2 Experimental design

The study focused on chicken as the food product of interest. To illustrate, let us assume a consumer is offered a chicken choice set comprising two typical attributes: geographical indication and digital production. Figure 3 displays that the consumer needs to evaluate these attributes depending on the reference point: either the status quo (option B, C, D) or the VBP platform architecture (option A). Conflict or preference uncertainty arises in a choice among options B, C, and D, wherein the consumer often avoids the asymmetric set and selects the compromise option (C). A possible consequence is inclined to weaken the preference for reference-based variety and narrow it down near option C. However, in the similar choice setting (options A and B), consumers are more or less equally attracted to the two options if ignoring the additional reference point. However, the elimination of option B most likely takes place when the consumer has a strong preference for the VBP platform architecture. Changes in reference points lead to preference reversal.

The relative attractiveness of the VBP platform architecture used as a reference point will increase, generating loss aversion. The subjective utility associated with the gains and losses of the VBP platform being evaluated is likely to be asymmetric, such that loss is weighted more heavily than the corresponding improvement. To prove the loss-aversion principle and the reference point availability, a potential loss must be weighed against a comparable gain. We operationalize this by introducing a compelling alternative: the *food system entered Hong Kong*, a system historically recognized by Chinese consumers for its high quality. The prospect of losing the certainty and trust of the VBP platform is framed as the “loss,” while the opportunity to access the Hong Kong system represents the corresponding “gain.” According to the loss-aversion principle, the negative utility associated with abandoning the endowed reference point (the VBP platform architecture) will be psychologically exaggerated relative to the positive utility of acquiring the valuable alternative.

In conclusion, the paper used a 3 (Brand type) × 3 (Production method) × 2 (Traceability) choice setting tested against the 2 reference

TABLE 1 Attributes and attribute levels.

Attribute	Attribute level
Brand	Geographical indication, manufacturer, retailer
Production method	Animal welfare, digital production, none
Traceability	Traceability, non-traceability
Reference point	VBP platform architecture, food system entered Hong Kong
Price	7.5 yuan/kg, 10 yuan/kg, 22.5 yuan/kg, 35 yuan/kg

points. Table 1 describes the final set of attributes and attribute levels. The study designed a choice experiment that enables participants flexibility in trade-offs among a broad set of attributes. The product profiles were created by conducting an orthogonal fractional design, obtaining 36 choice sets by minimizing the D-error of the covariance matrix. These choice sets were evenly grouped into 6 versions of the questionnaire to balance respondents' fatigue and the degree of freedom.

2.2.3 Model

Endowing decision makers with a particular attribute, such as the VBP platform architecture, and making that attribute a reference point, increases the overall choice probability of that option, potentially generating preference reversals. Follow-up studies based on the prospect theory consider that the carriers of attribute value are determined by their difference from a reference point rather than by the absolute levels. As a result, the value function can be expressed as Equation 1:

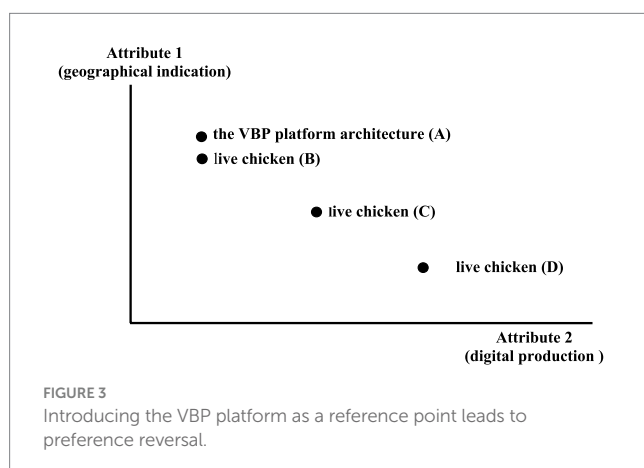
$$V_{njt} = \delta_n^* ASC + \gamma_n^* (-Price) + I(VBP \geq r_{cert}) \alpha_n^{G*} (VBP - r_{cert}) + I(VBP < r_{cert}) \alpha_n^{L*} (VBP - r_{cert}) + \beta_n X_{njt} \quad (1)$$

Assuming V_{njt} consists of the Alternative Specific Constant (ASC) for status quo, the price attribute (*Price*) for chicken products, the *VBP platform architecture*, and a vector of other food chain-related attributes ($X = [Geographical\ indication, Manufacturer\ brand, Digital\ production, Animal\ welfare, Traceability]$). Where r_{cert} is the platform architecture that is set to the reference point. α_n^G is the coefficient of gain and α_n^L is the coefficient of loss, and between the gain and the loss domain, the loss domain has a steeper curve than the gain domain.

Thus it is reasonable to predict that consumers respond more to the loss of the *VBP platform architecture* than the gain entrance to the *Food system entered Hong Kong* due to loss aversion. If successful, it is recognized that consumer food decision has stepped into a new stage wherein digitization is an efficient reference criterion to alleviate and deal with uncertainty. The loss aversion factor λ is defined as the ratio of the estimated coefficient of the parameter of the loss domain divided by the gain domain. The function can be expressed as Equation 2:

$$\lambda = \left| \frac{\alpha_n^L}{\alpha_n^G} \right| \quad (2)$$

If the loss aversion parameter λ typically exceeds 1, it can be considered as having an asymmetry preference of attribute.



Therefore, the final utility equation in the second step that reflects reference dependence with a different preference direction can dependence described as Equation 3:

$$U_{njt} = \delta_n^* ASC + \gamma_n^* (-Price) + I(VBP \geq r_{cert}) \alpha_n^{G*} (VBP - r_{cert}) + I(VBP < r_{cert}) \alpha_n^{L*} (VBP - r_{cert}) + \beta_n X_{njt} + \varepsilon_{njt} \quad (3)$$

Further, the paper aims to propose that the VBP platform, when it is salient and important, not only plays a reference role but also can trigger a reference-dependent complementarity. Using the extended logit model, this study aims to examine the complementary and substitution effects. It is proposed that consumers with an available reference point provided by a platform architecture often prefer a variety of attributes, which represents the complementary effects. In contrast, consumers without an available reference point are more likely to simplify their decision-making process. A common editing measure is the elimination of redundant attributes, which represents substitution effects. In conclusion, the random utility model with interaction terms can be expressed as Equation 4:

$$U_{njt} = \delta_n^* ASC + \gamma_n^* (-Price) + \eta_n (VBP^* X_{njt}) + \varepsilon_{njt} \quad (4)$$

The η_n represents the interaction effects. The signs of the interaction terms denote the complement and substitution effects. Relevant attributes are complements if $\eta_n > 0$ and substitutes if $\eta_n < 0$. When the platform is available for being a salient reference point, consumers use it as a benchmark for evaluating the complemented much more attributes, which leads to stronger preferences for the chosen option and variety resilience.

2.3 Results

2.3.1 Descriptive statistics

The survey was conducted using a combination of face-to-face interviews and web-based questionnaires, employing quota sampling to reflect regional and population distributions. Given the platform architecture is available or not, the survey consists of two parts. It encompasses nearly all of the 21 prefecture-level cities in Guangdong Province and extends beyond Guangdong to regions containing central China, north China, east China, and others, accounting for 14, 11, 18, and 15% of the sample. Respondents from residents, grocery stores, and supermarkets were recruited to participate in the choice experiments. To improve data accuracy, we adopt different survey strategies for the offline and online investigations.

During the field household survey and mall-intercept survey, a cheap talk would be carried to ensure that interviewees entered the hypothetical scenarios and were motivated to make actual choices based on their potential preferences. Afterwards, investigators were required to address the academic purpose of the project; present interviewees with a detailed explanation of the attribute and levels used for choice tasks; and ask them to fill out the questionnaires. Our investigations conducted interviews in different districts at various times of the day to support a broad representation (Dong et al., 2022; Nuttavuthisit and Thøgersen, 2017). Furthermore, online questionnaires leveraged the advantage of accurately targeting

participants. To enhance data reliability in the online setting, two strategies were implemented. First, the questionnaire introduced product attributes and levels using illustrative visual aids to help respondents understand the key information before answering. Second, each of the six choices was presented sequentially on separate webpages in ascending order, with a controlled time interval managed by a WeChat mini-program to prevent heuristic responding. This operational control aimed to reduce biased estimates.

This six-month investigation yielded 2,028 valid questionnaires, with 835 from the Guangdong market and 1,193 from other regions. Table 2 describes the demographic characteristics of the respondents. Compared to the generally balanced proportions of age, gender, and marital status in regions outside Guangdong Province, the pilot area of the platform shows a disproportionate number of young (54.5%), unmarried (66.3%) females (60.3%). This disparity may be attributed to Guangdong Province's appeal to young talent due to its open and innovative environment. In fact, it ranks first for young inflow population according to the national census. Additionally, the income structure and education levels are similar in both regions.

2.3.2 Salience and loss-aversion for platform architecture

As predicted by prospect theory, which posits that the value function is steeper for losses than for gains, our results confirm the powerful role of the platform architecture as a reference point. Table 3 provides clear evidence of an asymmetric preference. Our main Mixed Logit model reveals a loss aversion parameter (λ) for the VBP platform at a substantial 1.858, confirming Hypothesis 1.1. This finding is further strengthened by a Latent Class Model (LCM) analysis, which demonstrates the robustness of this effect across different consumer segments. All three identified segments exhibit strong loss aversion ($\lambda > 2$), indicating that this is not a niche phenomenon but a widespread psychological response. This reveals a profound insight: for the average consumer, the perceived pain of losing the certainty and trust provided by the platform is at least twice as powerful as the pleasure of gaining an equivalent alternative. By establishing a trusted benchmark, the platform resolves systemic uncertainty, fundamentally simplifying the consumer's choice process.

The practical implications of this finding are significant. It suggests that consumers' choices are not merely influenced but are fundamentally anchored by the platform architecture, which becomes the most salient and highly-valued attribute in their decision-making. Rather than engaging in complex, multi-attribute trade-offs, consumers appear to adopt a "platform-first" heuristic. This has a powerful effect on real-world purchasing behavior. For instance, a product without the platform's endorsement, even if it has superior individual attributes (e.g., a lower price or a prestigious brand), faces a significant psychological barrier. Conversely, a product with the platform's endorsement gains a halo effect, making its other attributes seem more valuable and trustworthy. The platform does not just add an attribute; it amplifies the perceived value of other attributes associated with it. It indicates that in an information-rich digital environment, the structural guarantee of a well-regulated system is becoming more valuable than the traditional reputation of a product's origin, marking a pivotal change in how value is perceived and acted upon in the food market.

TABLE 2 Demographic characteristics of survey respondents.

Category	Platform available (Guangdong)		Platform unavailable (Beyond Guangdong)	
	N	%	N	%
Gender				
Male	5,958	39.6%	10,638	49.5%
Female	9,072	60.3%	10,836	50.4%
Marital status				
Married	5,058	33.6%	12,366	57.5%
Unmarried	9,972	66.3%	9,108	42.4%
Age				
16–25	8,190	54.5%	6,354	29.5%
26–65	6,768	44.9%	14,526	67.6%
≥66	72	0.4%	594	2.7%
Education				
High school or lower	2,646	17.5%	5,544	25.7%
College or university	9,216	61.2%	12,276	57.1%
Master or higher	3,168	21.0%	3,654	17.0%
Household monthly income				
RMB 4,000 or below	2,340	15.5%	3,942	18.3%
RMB 4,001–8,000	5,040	33.5%	8,784	40.9%
RMB 8,001–12,000	3,366	22.3%	5,130	23.8%
RMB 12,000 or above	4,284	28.5%	3,618	16.8%
Household size				
≤2	1,422	9.4%	4,626	22.7%
3–4	7,254	48.2%	13,068	60.8%
≥5	6,354	42.2%	3,510	16.3%
Household with special care groups				
With the older	5,418	36.0%	6,696	31.1%
With the pregnant	432	2.8%	2,646	12.3%
With the infant	2,592	17.2%	3,870	18.0%
With the junior	4,806	31.9%	7,398	34.4%
None of the above	5,868	39.0%	6,516	30.3%

2.3.3 Comparison between reference-dependent and -independent consumers

Building on the finding that the platform acts as a reference point, we next examine how its availability influences consumers' engagement with other product attributes. The results in Table 4, which test for reference-dependent variety seeking, are particularly revealing and provide strong confirmation of Hypothesis 1.2. For the consumer group with the platform available, the interaction terms between the VBP and key attributes are significantly positive. This indicates a powerful complementary relationship: the presence of the platform enhances the value consumers place on these additional attributes. In practical terms, this means that once consumers trust the platform as a whole, they are not only willing but eager to delve into the details. They actively seek out and value the rich variety of information presented within the platform's trusted ecosystem. In

stark contrast, for the group without the platform, the interaction effects are either negative or insignificant. This suggests a substitution effect, where consumers, lacking a trusted anchor, are overwhelmed by the complexity. Instead of valuing more information, they perceive it as noise and seek to simplify their decision by ignoring attributes or focusing on just one, like price. They remain stuck in a preliminary screening mode, unable to confidently engage with attribute variety.

The practical significance of this finding is profound for platform strategy and product marketing. It demonstrates that the platform's primary value is not just in providing choice, but in creating the psychological safety net that makes choice meaningful. For firms operating on the platform, this implies that highlighting detailed attributes (like animal welfare or digital production methods) is a highly effective strategy, as the platform's endorsement makes consumers receptive to these messages. For those operating outside

TABLE 3 Saliency and preference asymmetry test of VBP platform architecture.

Model	Direction	Coefficient	Std. Err.	95% Confidence interval	Loss aversion parameter (λ)	Preference
The VBP within ML	Gain	1.264***	0.070	[0.917, 1.196]	1.858	Asymmetry
	Loss	−2.348***	0.128	[−2.549, −2.044]		
The VBP within LCM						
Segment 1	Gain	0.508***	0.107	[0.297, 0.718]	2.631	Asymmetry
	Loss	−1.337***	0.196	[−1.722, −0.952]		
Segment 2	Gain	1.933***	0.321	[1.304, 2.562]	2.064	Asymmetry
	Loss	−3.990***	0.622	[−5.211, −2.770]		
Segment 3	Gain	1.344***	0.239	[0.875, 1.814]	2.063	Asymmetry
	Loss	−2.773	0.416	[−3.589, −1.957]		

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

TABLE 4 Consumer preferences for the attribute variety.

Interaction terms	The platform available		The platform unavailable	
	Coefficient	Std. Err.	Coefficient	Std. Err.
VBP × Geographical indication	-0.129***	0.084	0.097	0.071
VBP × Manufacturer brand	0.342***	0.104	-0.365***	0.090
VBP × Digital production	0.716***	0.085	-0.159*	0.085
VBP × Animal welfare	0.402***	0.079	0.102*	0.061
VBP × Traceability	0.301***	0.083	0.188**	0.075
Number of observations	15,030		21,474	
Log likelihood	-4485.993		-7002.236	

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

the platform, however, the same strategy could backfire, leading to consumer confusion and disengagement. Ultimately, the platform transforms a complex web of attributes from a cognitive burden into a valued assortment, fundamentally changing how consumers perceive and interact with product variety.

2.4 Conclusion and discussion

The research confirms that consumers attach disproportionately high weight to the platform architecture, which can generate a form of heuristic simplification. Conversely, consumers lacking reference points face challenging trade-offs among food attributes. This research loops the theoretical implications by introducing a cognitive process of holistic evaluation relative to the platform as a reference point. Prior research lacks the theoretical conjunction and is vague in answering which abstract factor is bound to change for consumer decisions, instead focusing on (a) carving closer detail at the institutional reconfiguration while ignoring customer adaptation; or (b) consumers' engagement in value co-creation within a digital decision-making environment (Wu et al., 2022) while stopping at pursuing questions about the changes of initial entitlement.

Firstly, with value shifting from standalone products to platform systems, a platform-based identity replaces product-market segments and delineates choice architecture spanning across an integrated product system (Cennamo, 2019). A set of meta-rules is used to regulate the platform identity, delimiting what is acquired and what is

given up in the architecture frame. The critical step of validating a platform identity entails quality symbols conferred by an earlier established reputation mechanism, no matter which is derived from the platform itself via long-term accumulations or regulatory agencies. In the case of the digital platform in China, the quality club is mandated by a regulatory coalition. For consumers, relying on a club saves their time acquiring and comparing all the relevant information on the website. For platforms, the incumbency advantages are magnified due to exaggerated consumer preferences for initial endowments, leading to a lower probability of switching.

Secondly, the research identifies a hierarchical decision process. A perspective with an ever-increasing number of food attributes challenges consumer decisions because many shoppers are rarely willing to spend time interpreting the comprehensive information about what to buy. It requires consumers engage in a form of heuristic simplification, anchored on the platform as a reference point. The choices about specific platforms in the initial stage play a dominant role in how the constructive chosen option is mentally represented, while later attribute choices serve to enrich and extend the chosen option varied by individual preferences.

Furthermore, the research shows that consumers react positively to environment-friendly dietary shifts, but whether to take action is moderated by reference point availability and decision context design. Consumers without a reference point will be blocked in the preliminary screening stage and shrink back when faced with the assortment variety, representing general depression of sensitivity in specific informational elements such as the sustainability-related attributes

along the food chain. In parallel, when the platform architecture is readily available for the coordination of resources inside and for the acceptance of users outside, it will act as a stable base allowing consumers to seek variety and create a freedom range of choice.

3 Study 2

While Study 1 demonstrated that the platform architecture functions as a behavioral reference point, Study 2 investigates why it can command this level of consumer confidence. We propose that the underlying psychological mechanism is a process of trust transfer. Traditionally, consumers established trust by evaluating individual food chain actors or by undertaking a painstaking examination of the entire supply chain (Dong et al., 2022; Macready et al., 2020). However, this process is fraught with information asymmetry and high cognitive costs. We argue that certain platform architectures, particularly those we term regulated digital systems, offer a viable solution to this problem.

A regulated digital system is distinct from a purely commercial platform. While a commercial platform builds trust primarily through endogenous, user-generated signals (e.g., reviews), a regulated system establishes trust through its very design, namely an architecture built to enforce verifiable standards, ensure data integrity, and provide systemic oversight, often underwritten by a public authority. In this context, the locus of institutional trust is neither the government per se, nor the platform as a standalone entity. Rather, we posit that while a government mandate acts as a catalyst, consumer trust is ultimately placed in the architecture of the system itself. The VBP platform, from the consumer perspective, becomes an instantiation of this trustworthy archetype.

This structural trust in the system provides the foundation for a trust transfer to the individual actors operating within it (Emeakaroha et al., 2017; Wang et al., 2021). The consumer's decision process is thus transformed: they first prioritize the platform interface based on institutional trust in the regulated system, and subsequently proceed to evaluate detailed supply chain information, thereby building individual trust in specific enterprises.

3.1 Theoretical development and hypotheses

3.1.1 Impact of institutional trust and individual trust on consumer behavior

In the context of complex food systems, consumer trust is fundamentally multidimensional. Literature traditionally distinguishes between two levels: macro-level institutional trust, which pertains to confidence in governing rules and standards, and micro-level individual trust, which is the expectation placed on specific actors (Anushree et al., 2021; Spadaro et al., 2020; Lubbers, 2025).

In this study, we adapt and refine these concepts for the digital age. We conceptualize institutional trust in the systemic properties of a regulated digital system. This trust is placed in the platform architecture through verifiable rules, transparent monitoring, and enforced standards (Nuttavuthisit and Thøgersen, 2017; Lu et al., 2021; Sun et al., 2025). This system-level trust acts as the primary, heuristic foundation for consumer confidence. In contrast, individual trust is directed at the specific supply chain components, or the enterprises operating within the system (Pearson et al., 2023). It is built upon

judgments of an individual firm's reliability, capability, and transparency (Macready et al., 2020).

The central premise of our model is that these two forms of trust are linked through a process of trust transfer (Shao and Yin, 2019). A consumer's confidence in the integrity of the overarching regulated system reduces the perceived risk of engaging with any single actor within it. Therefore, robust institutional trust is a prerequisite that facilitates the development of individual trust.

3.1.2 Impact of demand motives on consumer behavior

A well-functioning trust mechanism does more than mitigate risk; it empowers consumers to act on their diverse demand motives and preferences. By resolving system-level uncertainty, the trust mechanism bridges the critical gap between motivation and behavior. We posit that both institutional and individual trust serve as crucial mediating variables in this process.

Consumer motives are often categorized as functional, experiential, and symbolic (Candi et al., 2017; Singh et al., 2023). Functional demand centers on basic, essential attributes like safety and quality. Experiential demand relates to the process and journey, such as the experience of interacting with a sustainable production system (Gupta et al., 2019; Mancuso et al., 2023). Symbolic demand reflects higher-order needs like self-identity, social recognition, and environmental values (Costa et al., 2014). Without a trusted system, consumers are preoccupied with fulfilling basic functional needs (i.e., safety). However, once institutional trust is established via the platform architecture, consumers are freed from this cognitive burden. The behavioral manifestation of consumers are able to pursue their more nuanced experiential and symbolic motives. The platform, through features like remote monitoring and green community labels, provides the very attributes that satisfy these deeper demands (Han and Kim, 2020; Konuk and Otterbring, 2024). Thus, understanding consumer motives is fundamental to revealing the heterogeneity of behavior that a trusted platform architecture unlocks.

Figure 4 shows our model concept and Table 5 summarize the research hypotheses.

3.2 Method

The data for Study 2 were collected immediately after respondents completed the choice experiment from Study 1. This sequential design was chosen specifically to capture the psychological factors, such as trust and motives, that were salient at the moment of decision-making. We recognize that this approach introduces a potential for respondent fatigue and cognitive overload, and we employed several strategies to proactively mitigate these risks. First, the choice experiment in Study 1 was limited to six choice sets per respondent, a number well within standard practice to prevent decision fatigue. Second, to reduce the cognitive effort required to process complex information, the questionnaire introduced all attributes and levels using clear illustrative visual aids at the outset. This ensured that respondents had a strong mental model of the task before they began, rather than having to learn and evaluate simultaneously. Third, the survey was administered through a WeChat mini-program that presented each task sequentially on separate pages. Crucially, a controlled time interval was implemented

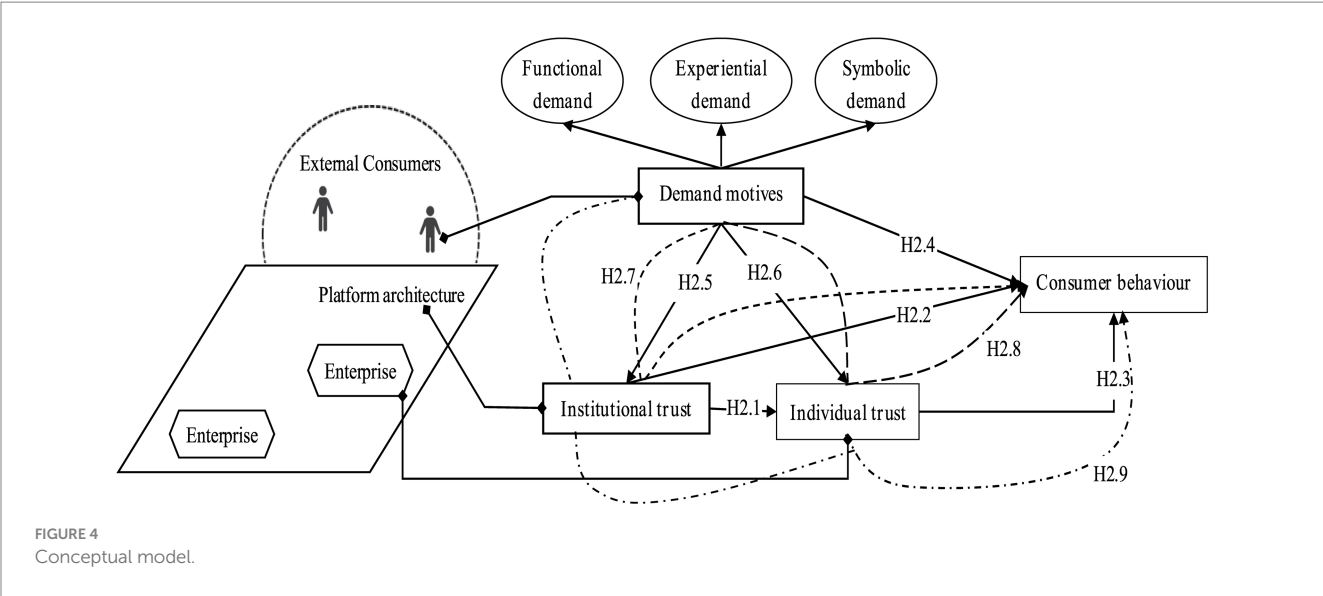


TABLE 5 Research hypothesis.

Hypothesis	Description
Direct effect	
Hypothesis 2.1	Institutional trust has a positive effect on individual trust
Hypothesis 2.2	Institutional trust has a positive effect on consumer behavior
Hypothesis 2.3	Individual trust has a positive effect on consumer behavior
Hypothesis 2.4	(Functional, experiential, symbolic) demands have a positive effect on consumer behavior
Hypothesis 2.5	(Functional, experiential, symbolic) demands have a positive effect on institutional trust
Hypothesis 2.6	(Functional, experiential, symbolic) demands have a positive effect on individual trust
Mediation effect	
Hypothesis 2.7	(Functional, experiential, symbolic) demands have a positive effect on consumption behavior through the mediation effect of institutional trust
Hypothesis 2.8	(Functional, experiential, symbolic) demands have a positive effect on consumer behavior through the mediation effect of individual trust
Hypothesis 2.9	(Functional, experiential, symbolic) demand have a positive effect on consumption behavior through the chain mediation of institutional and individual trust

between pages, which served a dual purpose: it prevented reflexive, heuristic responding while also providing a structured micro-pause, allowing respondents a moment to cognitively reset before proceeding. By breaking the survey into discrete, manageable steps, this design aimed to sustain engagement and reduce cumulative fatigue.

Table 6 shows the measurement indicators. Consumer motivation primarily utilizes the Perceived Value Scale developed by Sweeney and Soutar (2001). It combines the functional value of food characteristics, the experiential value of the key links in the supply chain, and the symbolic value of the co-existence of self-interested and altruistic motives in food consumption to develop a measurement scale suitable for this study. In addition, market trust needs to encompass key links and major players throughout the supply chain, covering origin breeding, slaughtering, processing, distribution, and sales. Consumer confidence is derived from placing trust in key enterprises of the supply chain.

3.3 Results

3.3.1 Reliability and validity

To test the hypotheses in our conceptual model, we employed Structural Equation Modeling (SEM). Broadly, there are two distinct approaches to SEM: covariance-based SEM (CB-SEM), often implemented with software like AMOS or LISREL, which is primarily used for confirming established theories, and Partial Least Squares SEM (PLS-SEM), implemented with software like SmartPLS, which is optimized for prediction and handling complex models. We chose PLS-SEM utilizing SmartPLS 3.0. There are two primary reasons that align with our research objectives. First, our research goal is largely prediction-oriented, as we aim to identify the key drivers that best explain the variance in consumer purchase intention, a core strength of the PLS-SEM algorithm. Second, our proposed conceptual model is relatively complex, featuring multiple constructs in a chain mediation pathway. PLS-SEM is well-suited to handle such complex

TABLE 6 Measurement indicators.

Latent variables	Observable variables	Value
Demand motives F1	Functional demands F1.1	
	Quality conformance	Strongly disagree = 1, ..., Strongly agree = 5
	Medication safety	Strongly disagree = 1, ..., Strongly agree = 5
	Clean and hygienic	Strongly disagree = 1, ..., Strongly agree = 5
	Experiential demands F1.2	
	Green production	Strongly disagree = 1, ..., Strongly agree = 5
	Hygienic slaughtering process	Strongly disagree = 1, ..., Strongly agree = 5
	Comfortable sales	Strongly disagree = 1, ..., Strongly agree = 5
	Symbolic demands F1.3	
	Taste in life	Strongly disagree = 1, ..., Strongly agree = 5
	Environmental protection	Strongly disagree = 1, ..., Strongly agree = 5
	Animal welfare	Strongly disagree = 1, ..., Strongly agree = 5
Institutional trust F2	Confidence in the regulatory system F2.1	Strongly disagree = 1, ..., Strongly agree = 5
	Confidence in quality standards F2.2	Strongly disagree = 1, ..., Strongly agree = 5
	Confidence in the platform F2.3	Strongly disagree = 1, ..., Strongly agree = 5
Individual trust F3	Confidence in the production base F3.1	Strongly disagree = 1, ..., Strongly agree = 5
	Confidence in the processing company F3.2	Strongly disagree = 1, ..., Strongly agree = 5
	Confidence in the selling companies F3.3	Strongly disagree = 1, ..., Strongly agree = 5
Purchase intention F4	First choice F4.1	Strongly disagree = 1, ..., Strongly agree = 5
	New product trial F4.2	Strongly disagree = 1, ..., Strongly agree = 5
	Premium payments F4.3	Strongly disagree = 1, ..., Strongly agree = 5
	Repeat purchases F4.4	Strongly disagree = 1, ..., Strongly agree = 5

models without the stringent distributional assumptions or potential convergence issues often encountered with CB-SEM (Hair et al., 2018).

The reliability of the scales was assessed using Cronbach's α and composite reliability (CR) values. For validity assessment, we considered two aspects: content validity and construct validity. The content validity was ensured through literature analysis, expert opinions, and pre-surveys. The construct validity was further categorized into convergent validity and discriminant validity. This categorization was based on the evaluation of the mean extracted variance, Average Variance Extracted (AVE), and ensuring that the square root of AVE was greater than the respective correlation coefficients. Table 7 presents the factor loadings of the observed variables, ranging from 0.797 to 0.893, while the AVE ranges from 0.708 to 0.880. The combined reliability (CR) ranges from 0.880 to 0.923, and Cronbach's α values range from 0.833 to 0.875. Additionally, Table 8 shows that the square root of the AVE values on the diagonal is greater than the respective correlation coefficients. In summary, the reliability and validity tests conducted on the scales in this study passed, allowing for further model fitting.

3.3.2 Path coefficients of structural model

First, each dimension of market demand—functional demand (F1.1), experiential demand (F1.2), and symbolic demand (F1.3)—was incorporated into the structural model for path analysis, yielding Models 1, 2, and 3, respectively. All three decomposition models demonstrated satisfactory fit indices: Model 1 (SRMR = 0.051, d_{ULS} = 0.238, d_G = 0.182), Model 2 (SRMR = 0.056, d_{ULS} = 0.281,

d_G = 0.187), and Model 3 (SRMR = 0.053, d_{ULS} = 0.256, d_G = 0.183). The path analysis results are presented in Table 9.

The direct effect hypotheses (H2.1 to H2.6) remained valid and consistent across all demand motivation dimensions. Several effects were particularly pronounced, including the positive impact of demand motives on institutional trust (0.668***, 0.656***, 0.709***), the positive effect of institutional trust on individual trust (0.613***, 0.580***, 0.540***), and the positive effect of individual trust on purchase intention (0.579***, 0.528***, 0.542***). Compared to alternative consumer decision-making frameworks, our findings reveal a distinct transmission pathway: demand motive $\rightarrow$ institutional trust $\rightarrow$ individual trust $\rightarrow$ purchase intention.

Then, a second-order model (Model T) was tested, incorporating the three demand motives into a single construct (F1). The overall fit of this model was superior (SRME = 0.051, d_{ULS} = 0.493, d_G = 0.280), aligning with recommended standards. This aggregated model provides a valuable high-level overview, confirming the general hypothesis that consumer motives are a significant driver of the trust-building process and eventual purchase. However, comparing the results of the disaggregated models (Models 1–3) with this aggregated model reveals important nuances. Specifically, the direct positive effect of the aggregated demand motive on purchase intention (F1 $\rightarrow$ F4) in Model T (Table 10) is considerably larger than any of the individual motive effects, while the direct positive effect of institutional trust on purchase intention (F2 $\rightarrow$ F4) is smaller and loses statistical significance.

This discrepancy does not invalidate the aggregated model, but rather highlights the practical and theoretical importance of

TABLE 7 Results of reliability and validity tests.

Model	Variable	Factor loading	Weight	AVE	CR	Cronbach's α
F1	F1.1					
	<i>F1.1.1</i>	0.891	37.8%	0.800	0.923	0.875
	<i>F1.1.2</i>	0.898	37.1%			
	<i>F1.1.3</i>	0.895	37.0%			
	F1.2					
	<i>F1.2.1</i>	0.866	41.5%	0.710	0.880	0.795
	<i>F1.2.2</i>	0.863	38.4%			
	<i>F1.2.3</i>	0.797	38.8%			
	F1.3					
	<i>F1.3.1</i>	0.854	38.3%	0.750	0.900	0.833
	<i>F1.3.2</i>	0.861	38.3%			
	<i>F1.3.2</i>	0.883	38.8%			
F2	<i>F2.1</i>	0.876	36.9%	0.770	0.910	0.851
	<i>F2.2</i>	0.889	38.2%			
	<i>F2.3</i>	0.868	38.8%			
F3	<i>F3.1</i>	0.893	38.2%	0.760	0.905	0.842
	<i>F3.2</i>	0.877	38.8%			
	<i>F3.3</i>	0.844	37.7%			
F4	<i>F4.1</i>	0.849	30.7%	0.708	0.907	0.863
	<i>F4.2</i>	0.821	29.9%			
	<i>F4.3</i>	0.827	28.4%			
	<i>F4.4</i>	0.868	29.9%			

TABLE 8 Discriminant validity.

Discriminant validity	F1.1	F1.2	F1.3	F2	F3	F4
F1.1	0.894					
F1.2	0.708	0.843				
F1.3	0.634	0.722	0.866			
F2	0.668	0.656	0.709	0.878		
F3	0.648	0.674	0.710	0.772	0.872	
F4	0.609	0.669	0.672	0.673	0.773	0.842

disaggregation. The estimation bias, which we attribute to the aggregation bias, arises because the single construct averages out the distinct pathways through which each motive operates. The large F1 → F4 path in Model T accurately reflects the powerful overall influence of motivation, but it does so by absorbing some of the indirect effects that are more precisely channeled through the trust mediators in the disaggregated models. The key implication is that while the aggregated model offers a parsimonious view, the disaggregated models provide a more granular and realistic interpretation of consumer behavior. They reveal that the mechanism through which motives influence purchase is powerfully mediated by trust, a critical insight that is partially obscured in the aggregated view. This confirms that to fully understand how to activate consumer demand, it is essential to recognize that consumers make decisions based on dominant, specific value needs (functional, experiential, or

symbolic). The results thus strongly support our research hypothesis and further indicate that as food consumption upgrades, market demand becomes more differentiated and personalized, necessitating a more nuanced analytical approach.

3.3.3 Chain mediation effects

The Bootstrap method was employed for mediation effect tests, encompassing the Total Mediation Effect (TME) test and the Specific Mediation Effect (SPE) test. The mediation effect was deemed significant if the bias-corrected confidence interval did not include zero; otherwise, it was considered non-significant.

Table 11 displays the outputs of the mediation effect sub-models (Model 1, Model 2, and Model 3). The average proportion of total mediation effect to the total effect was 69.2% ((75.5% + 63.5% + 68.3%)/3), indicating that consumer demand motivation had a 69.2% mediated effect on purchasing behavior. This implies that 69.2% of the influence of consumers' demand motivation on purchase intention was mediated by both institutional trust and individual trust variables, with the mediation effect being significantly larger than the direct effect. The stimulation of market demand potential requires the transmission process of a trust mechanism. If the food industry continues to grapple with the lack of a robust market trust mechanism, it will likely impede market demand, making it challenging to fully unleash the driving force of the domestic market for economic development.

In the specific mediation effect test, all paths demonstrated highly significant mediation effects. There was a discernible mediation effect of both institutional trust and individual trust. Additionally, a mediation

TABLE 9 Structural model path coefficients and significance test.

Model 1		Model 2		Model 3		Judgment
Hypotheses	Coefficient	Hypotheses	Coefficient	Hypotheses	Coefficient	
H2.1a: F1.1 → F4	0.150***	H2.1b: F1.2 → F4	0.244***	H2.1c: F1.3 → F4	0.214***	Support
H2.2a: F1.1 → F2	0.668***	H2.2b: F1.2 → F2	0.656***	H2.2c: F1.3 → F2	0.709***	Support
H2.3a: F1.1 → F3	0.239***	H2.3b: F1.2 → F3	0.293***	H2.3c: F1.3 → F3	0.328***	Support
H2.4: F2 → F3	0.613***	H2.4: F2 → F3	0.580***	H2.4: F2 → F3	0.540***	Support
H2.5: F2 → F4	0.126***	H.5: F2 → F4	0.106***	H2.5: F2 → F4	0.104***	Support
H2.6: F3 → F4	0.579***	H2.6: F3 → F4	0.528***	H2.6: F3 → F4	0.542***	Support

***Indicates a significance level test of $p < 0.001$, and "support" indicates that the hypothesis is valid.

TABLE 10 Model T structural model path coefficients.

Hypotheses	Coefficient	Standard deviation	p	2.5% Confidence interval	97.5% Confidence interval
H2.1: F1 → F4	0.493	0.026	***	0.266	0.358
H2.2: F1 → F2	0.763	0.012	***	0.738	0.784
H2.3: F1 → F3	0.412	0.024	***	0.368	0.459
H2.4: F2 → F3	0.458	0.026	***	0.410	0.508
H2.5: F2 → F4	0.051	0.027	0.058	−0.007	0.098
H2.6: F3 → F4	0.493	0.026	***	0.446	0.551

***Denotes significance level test $p < 0.001$.

TABLE 11 Model 1 ~ 3 mediation effect test results.

Model 1		Model 2		Model 3		Judgment
Hypotheses	Estimate/Proportion	Hypotheses	Estimate/Proportion	Hypotheses	Estimate/Proportion	
TME 1	0.460/75.5%	TME 2	0.425/63.5%	TME 3	0.459/68.3%	–
H2.9a: SPE1a	0.237/38.9%	H2.9b: SPE1b	0.201/30.1%	H2.9c: SPE1c	0.208/31.0%	Support
H2.8a: SPE2a	0.138/22.6%	H2.8b: SPE2b	0.155/23.2%	H2.8c: SPE2c	0.178/26.5%	Support
H2.7a: SPE3a	0.084/12.2%	H2.7b: SPE3b	0.069/10.3%	H2.7c: SPE3c	0.073/10.9%	Support

SPE1a, SPE1b, SPE1c are F1.1 → F2 → F3 → F4, F1.2 → F2 → F3 → F4, F1.3 → F2 → F3 → F4, respectively; SPE2a, SPE2b, SPE2c are F1.1 → F3 → F4, F1.2 → F3 → F4, F1.3 → F3 → F4, respectively; SPE3a, SPE3b, SPE3c are F1.1 → F2 → F4, F1.2 → F2 → F4, F1.3 → F2 → F4, respectively; "Support" indicates the validity of the hypothesis.

chain was formed between institutional trust and individual trust. The proportions of these effects were as follows: chain mediation effect (33.3%) > isolated effect of individual trust (24.1%) > isolated effect of institutional trust (11.1%). Therefore, hypotheses H2.7 to H2.9 were all supported. In establishing a dual-trust mechanism, leveraging the advantages of institutional trust in market-oriented operations is crucial. However, caution is necessary, as institutional trust alone may not suffice; the influence of the individual trust mechanism in market economic activities remains greater than that of the institutional trust mechanism.

Table 12 presents the output of the mediation effect test for Model T. The total (0.731, $p = 0.000$), direct (0.316, $p = 0.000$), and total mediation (0.415, $p = 0.000$) effects of demand motivation (F1) on purchase intention (F4) were all highly significant. When comparing the mediation effect test results across Models 1 to 3, it became evident that the total mediation effect, institutional trust mediation effect, and chain mediation effects of Model T were all underestimated, further underscoring the importance of considering differentiated consumer demand in both theoretical analyses and market business activities.

3.4 Conclusion and discussion

This paper examines the nexus between consumer motives, institutional trust, individual trust, and purchase intention in the platform architecture. The conclusions obtained are as follows: (1) A chain mediation effect of trust plays a crucial role in consumer decisions. Institutional trust for the platform architecture triggers a grouping of options, facilitating subsequent trust establishment for individual firms. Only when both institutional trust and individual trust are in effect can consumer motivation be largely transformed into purchasing behavior (chain mediation effect 33.3% > mediation effect of individual trust 24.1% > mediation effect of institutional trust 11.1%). (2) For isolated mediating effect, the individual trust mechanism exhibits a more pronounced impact even for the economists with a high level of institutional trust. (3) The sustainability-related gap between motive and behavior is evolving toward diversification; the functional motive for food safety diminishes while the experiential and symbolic motives that originate

TABLE 12 Mediation effect test results.

Paths	Point estimate/ Proportion of total effect	2.5% Confidence interval	97.5% Confidence interval
Total mediation effect (TME)	0.416/57.0%	0.371	0.454
Specific mediation effect (SPE)			
SPE1: F1 → F2 → F3 → F4	0.172/23.6%	0.147	0.200
SPE2: F1 → F3 → F4	0.204/27.9%	0.175	0.234
SPE3: F1 → F2 → F4	0.040/5.5%	−0.005	0.075

from the entire food systems are on the rise. There are several policy implications based on the findings of this paper.

First, the tension between rigorous regulation and firm development can be balanced by governments. While consumers may hold a high degree of abstract trust in government authority, this trust is often too diffuse to directly influence purchasing behavior. To be effective, this authority must be embedded within a tangible and coherent mechanism, namely the platform's architecture and identity. Government regulation, therefore, serves a dual purpose. On the one hand, it provides the platform with the institutional backing needed to become a trusted entity. On the other hand, it endows the platform with the necessary integrating power to overcome the extreme fragmentation of the food supply chain. Without this regulatory impetus, it would be substantially challenging for any single platform to consolidate data from myriad independent actors or incentivize small-scale participants, such as individual farmers, to adopt complex technologies such as blockchain. Through the platform's architectural features, including data-verified digital certifications and immutable traceability, the government's abstract authority is transformed into concrete, actionable trust signals that consumers can rely on.

Second, in contrast to developed countries, the diversification of consumer motives has been overlooked, resulting in the potential of green consumption may be underestimated in developing nations. When an effective regulatory system establishes a fundamental food safety baseline, deeper consumer motives, such as experiential and symbolic ones, necessitate a more diverse range of products from firms to meet and satisfy consumers' heterogeneous needs.

Third, governance coherence is more likely to be achieved when digital connectivity is available. As digital technologies such as blockchain and big data mature, they enable the overcoming of challenges like regional complexity, lengthy food supply chains, and inefficient safety risk detection, all at a low digital cost and with high efficacy.

4 General discussion

4.1 The architecture of trust: integrating institutional and individual logic

Our research provides robust empirical evidence for a chain mediation model of trust within a regulated digital system. The findings demonstrate that system-level institutional trust in the platform architecture is a crucial prerequisite, which in turn facilitates the development of individual trust in the enterprises operating within it. This extends prior work on the duality of trust in the digital era (e.g., Liu et al., 2018), by showing that these two trust forms are not merely concurrent but causally linked in a hierarchical relationship. While

others have examined how platforms manage conflicts of interest (e.g., Ryan et al., 2012; Wichmann et al., 2021), our study highlights the unique role of a state-backed "regulated digital system." It suggests that a government mandate provides the integrating power necessary to overcome supply chain fragmentation and build a baseline of institutional trust that purely commercial platforms may struggle to achieve. This finding offers a powerful insight: formal monitoring frameworks are most effective when their authority is embedded directly into the platform's architecture, creating a trustworthy community for consumers.

4.2 From heuristic safety to analytical sustainability: closing the motive-behavior gap

This research also contributes to understanding the gap between consumers' sustainability motives and their purchasing behavior by revealing the moderating role of a trusted reference point. The VBP platform architecture enables the fulfillment of consumers' multiple demand motives: functional motives for food safety, experiential motives related to supply chain transparency, and symbolic motives at the spiritual level. Furthermore, our framework offers a novel perspective on the academic controversy surrounding the "dark side" of green consumption, where symbolic motives can be driven by status-seeking linked to dark triad traits (Konuk and Otterbring, 2024; Iaia et al., 2022; Zhang et al., 2025). We argue that the VBP platform architecture addresses this duality. On one hand, its curated identity and association with a prestigious regional brand can cater to consumers' symbolic desire for status, representing a form of accessible prestige in the food domain. On the other hand, and critically, its very architecture—built on immutable traceability and data-verified standards—provides a rational check against hollow virtue signaling. The platform thus channels the motive for social status through a verifiable and trustworthy system. By anchoring the symbolic value of sustainable food to concrete, auditable evidence, our model demonstrates how a well-designed architecture can mitigate the negative aspects of pure social posturing and constructively align consumer motives with genuine, impactful behavior.

4.3 Integrating behavioral economics and platform theory: a dual-process contribution

Overall, this paper's primary theoretical contribution lies in synthesizing prospect theory, trust theory, and platform theory through a unified dual-process lens. We move beyond describing platform-based choice architecture (e.g., Cennamo, 2019) to unpack both its behavioral consequences and its psychological underpinnings.

Our findings extend multistage decision models (e.g., [Schrift et al., 2018](#)) by demonstrating that in a high-stakes digital environment, the initial stage is not merely a screening process but a powerful, trust-based heuristic choice that frames all subsequent decisions ([Hellemans et al., 2022](#)). By establishing the platform as a reference point and then demonstrating that this status is enabled by a trust transfer mechanism, we provide a comprehensive, integrated model of platform-based consumer logic. This research shows that platforms do not merely alter consumer cognition; they succeed by orchestrating a cognitive shift from holistic, heuristic trust to detailed, analytical evaluation, thereby creating a stable foundation for confident choice in an uncertain world.

5 Limitations and future research

While this research offers valuable insights into platform-based consumer logic, its limitations provide important directions for future inquiry. First, our findings are situated within the unique context of China, where a government-mandated regulated digital system can generate strong institutional trust. The generalizability of our trust transfer model to western market contexts where platforms are typically private and government intervention may be viewed with skepticism remains an open and critical question. Future research could fruitfully compare the trust-building mechanisms of state-backed versus purely commercial platforms, exploring how the source of institutional authority shapes consumer perception and behavior. Furthermore, our platform available sample showed a demographic skew toward young, unmarried women. As this demographic may be more digitally native and potentially more attuned to sustainability motives, the magnitude of the observed effects could be sample-specific, constraining the generalizability of our results. More advanced studies could also investigate how demographic variables such as age and digital literacy moderate the relationships between institutional trust, reference point adoption, and variety-seeking behavior. Addressing these contextual and demographic boundaries will be crucial for developing a more universally applicable theory of how digital platforms reshape consumer choice.

Data availability statement

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found in the article/[Supplementary material](#).

Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Given that this study employed anonymous questionnaires, collected no personal identifying information, and participation was entirely voluntary, written informed consent was not required in accordance with research ethics guidelines.

Author contributions

XD: Writing – original draft, Writing – review & editing. BJ: Formal analysis, Funding acquisition, Writing – review & editing. FK: Methodology, Writing – review & editing. FC: Software, Writing – original draft.

Funding

The author(s) declare that no financial support was received for the research and/or publication of this article.

Acknowledgments

I am grateful for the data collection from seminar participants including Zhou Wenting, Zuo Zao, Zeng Hui, Wang Yan, and Huang Xiaoqian at the College of Economics & Management, South China Agricultural University.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The authors declare that no Gen AI was used in the creation of this manuscript.

Any alternative text (alt text) provided alongside figures in this article has been generated by Frontiers with the support of artificial intelligence and reasonable efforts have been made to ensure accuracy, including review by the authors wherever possible. If you identify any issues, please contact us.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

Supplementary material

The Supplementary material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fsufs.2025.1550187/full#supplementary-material>

References

- Anushree, T., Fauzia, J., Shalini, T., Mototaka, S., and Amandeep, D. (2021). Facilitators and inhibitors of organic food buying behavior. *Food Qual. Prefer.* 88:104077. doi: 10.1016/j.foodqual.2020.104077
- Boelsen-Robinson, T., Blake, M. R., Brown, A. D., Huse, O., Palermo, C., George, N. A., et al. (2021). Mapping factors associated with a successful shift towards healthier food retail in community-based organisations: a systems approach. *Food Policy* 101:2032. doi: 10.1016/j.foodpol.2021.102032
- Bussemeyer, J. R., Gluth, S., Rieskamp, J., and Turner, B. M. (2019). Cognitive and neural bases of multi-attribute, multi-alternative, value-based decisions. *Trends Cogn. Sci.* 23, 251–263. doi: 10.1016/j.tics.2018.12.003
- Candi, M., Jae, H., Makarem, S., and Mohan, M. (2017). Consumer responses to functional, aesthetic and symbolic product design in online reviews. *J. Bus. Res.* 81, 31–39. doi: 10.1016/j.jbusres.2017.08.006
- Cennamo, C. (2019). Competing in digital markets: a platform-based perspective. *Acad. Manage. Perspect.* 35, 265–291. doi: 10.5465/amp.2016.0048
- Cennamo, C., Ozalp, H., and Kretschmer, T. (2018). Platform architecture and quality trade-offs of multihoming complements. *Inf. Syst. Res.* 29, 461–478. doi: 10.1287/isre.2018.0779
- Centobelli, P., Cerchione, R., Vecchio, P. D., Oropallo, E., and Secundo, G. (2022). Blockchain technology for bridging trust, traceability and transparency in circular supply chain. *Inf. Manag.* 59:103508. doi: 10.1016/j.im.2021.103508
- Costa, S., Zepeda, L., and Sirieix, L. (2014). Exploring the social value of organic food: a qualitative study in France. *Int. J. Consum. Stud.* 38, 228–237. doi: 10.1111/ijcs.12100
- De Schutter, O., Jacobs, N., and Clément, C. (2020). A 'Common Food Policy' for Europe: how governance reforms can spark a shift to healthy diets and sustainable food systems. *Food Policy* 96:101849. doi: 10.1016/j.foodpol.2020.101849
- Dong, X., Jiang, B., Zeng, H., and Kassoh, F. S. (2022). Impact of trust and knowledge in the food chain on motivation-behavior gap in green consumption. *J. Retail. Consum. Serv.* 66:102955. doi: 10.1016/j.jretconser.2022.102955
- Duan, Y. J., and Zhu, Q. Y. (2025). Blockchain empowerment: enhancing consumer trust and outreach through supply chain transparency. *Int. J. Prod. Res.* 63, 5358–5382. doi: 10.1080/00207543.2024.2434951
- Embling, R., Pink, A. E., Lee, M. D., Price, M., and Wilkinson, L. L. (2020). Consumer perception of food variety in the UK: an exploratory mixed-methods analysis. *BMC Public Health* 20:1449. doi: 10.1186/s12889-020-09548-x
- Emekaroha, V. C., Fatema, K., Van der Werff, L., Healy, P., Lynn, T., and Morrison, J. P. (2017). A trust label system for communicating trust in cloud services. *IEEE Trans. Serv. Comput.* 10, 689–700. doi: 10.1109/TSC.2016.2553036
- Fani, V., Ciccullo, F., Bandinelli, R., and Pero, M. (2025). Cultivating trust: an empirical exploration of blockchain's adoption within the Italian wine supply chain. *Electron. Mark.* 35:35. doi: 10.1007/s12525-025-00782-y
- Guo, L. (2016). Contextual deliberation and preference construction. *Manag. Sci.* 62, 2977–2993. doi: 10.1287/mnsc.2015.2290
- Gupta, A., Dash, S., and Mishra, A. (2019). Self/other oriented green experiential values: measurement and impact on hotel-consumer relationship. *Int. J. Hosp. Manag.* 83, 159–168. doi: 10.1016/j.ijhm.2019.05.010
- Hair, J., Risher, J., Sarstedt, M., and Ringle, C. (2018). When to use and how to report the results of PLS-SEM. *Eur. Bus. Rev.* 31:203. doi: 10.1108/EBR-11-2018-0203
- Han, S., and Kim, K. (2020). Role of consumption values in the luxury brand experience: moderating effects of category and the generation gap. *J. Retail. Consum. Serv.* 57:102249. doi: 10.1016/j.jretconser.2020.102249
- Hellemans, I., Porter, A. J., and Diriker, D. (2022). Harnessing digitalization for sustainable development: understanding how interactions on sustainability-oriented digital platforms manage tensions and paradoxes. *Bus. Strat. Environ.* 31, 668–683. doi: 10.1002/bse.2943
- Iaia, L., Leonelli, S., Masciarelli, F., Christofi, M., and Cooper, S. C. (2022). The malevolent side of masstige consumers' behavior: the role of dark triad and technology propensity. *J. Bus. Res.* 149, 954–966. doi: 10.1016/j.jbusres.2022.05.057
- Jiang, Z. Y., Thomas, S. A., and Chu, J. H. (2025). Are brand preferences inherent, constructed, or a mixture of both? A memory-based dual-process model. *Rev. Manag. Sci.* 19, 595–621. doi: 10.1007/s11846-024-00765-x
- Klein, O., Nier, S., and Tamásy, C. (2022). Re-configuring rural economies-the interplay of institutions in three agri-food production systems. *J. Rural. Stud.* 92, 132–142. doi: 10.1016/j.jrurstud.2022.03.026
- Konuk, F. A., and Otterbring, T. (2024). The dark side of going green: dark triad traits predict organic consumption through virtue signaling, status signaling, and praise from others. *J. Retail. Consum. Serv.* 76:3531. doi: 10.1016/j.jretconser.2023.103531
- Li, Y., Xu, Z. S., and Teo, T. (2025). Harnessing dual process theory for online product evaluation based on user-generated content. *Ind. Manag. Data Syst.* 125, 2129–2154. doi: 10.1108/IMDS-07-2024-0722
- Liu, L., Lee, M. K. O., Liu, R., and Chen, J. (2018). Trust transfer in social media brand communities: the role of consumer engagement. *Int. J. Inf. Manag.* 41, 1–13. doi: 10.1016/j.ijinfomgt.2018.02.006
- Lohmann, P. M., Gsottbauer, E., Farrington, J., Human, S., and Reisch, L. A. (2024). Choice architecture promotes sustainable choices in online food-delivery apps. *Pnas Nexus* 3:pgae422. doi: 10.1093/pnasnexus/pgae422
- Lu, B. Z., Wang, Z., and Zhang, S. (2021). Platform-based mechanisms, institutional trust, and continuous use intention: the moderating role of perceived effectiveness of sharing economy institutional mechanisms. *Inf. Manag.* 58:3504. doi: 10.1016/j.im.2021.103504
- Lubbers, M. J. (2025). The role of social networks in institutional trust during economic downturns. *Eur. Sociol. Rev.* 1–16. doi: 10.1093/esr/jcaf011
- Macready, A. L., Hieke, S., Klimczuk-Kochańska, S. M., Szumiańska, S., Vranken, L., and Grunert, K. G. (2020). Consumer trust in the food value chain and its impact on consumer confidence: a model for assessing consumer trust and evidence from a 5-country study in Europe. *Food Policy* 92:101880. doi: 10.1016/j.foodpol.2020.101880
- Mancuso, I., Petruzzelli, A. M., and Panniello, U. (2023). Innovating agri-food business models after the Covid-19 pandemic: the impact of digital technologies on the value creation and value capture mechanisms. *Technol. Forecast. Soc. Change* 190:2404. doi: 10.1016/j.techfore.2023.122404
- Nuttavuthisit, K., and Thøgersen, J. (2017). The importance of consumer trust for the emergence of a market for green products: the case of organic food. *J. Bus. Ethics* 140, 323–337. doi: 10.1007/s10551-015-2690-5
- Pearson, S., Brewer, S., Manning, L., Bidaut, L., Onoufriou, G., Durrant, A., et al. (2023). Decarbonising our food systems: contextualising digitalisation for net zero. *Front. Sustain. Food Syst.* 7:4299. doi: 10.3389/fsufs.2023.1094299
- Reitano, M., Pappalardo, G., Selvaggi, R., Zarbà, C., and Chinnici, G. (2024). Factors influencing consumer perceptions of food tracked with blockchain technology. A systematic literature review. *Appl. Food Res.* 4:100455. doi: 10.1016/j.afres.2024.100455
- Ryan, J. K., Sun, D., and Zhao, X. (2012). Competition and coordination in online marketplaces. *Prod. Oper. Manag.* 21, 997–1014. doi: 10.1111/j.1937-5956.2012.01332.x
- Schrift, R. Y., Parker, J. R., Zauberman, G., and Srna, S. (2018). Multistage decision processes: the impact of attribute order on how consumers mentally represent their choice. *J. Consum. Res.* 44, 1307–1324. doi: 10.1093/jcr/ucx099
- Shao, Z., and Yin, H. (2019). Building customers' trust in the ridesharing platform with institutional mechanisms. *Internet Res.* 29, 1040–1063. doi: 10.1108/INTR-02-2018-0086
- Sharma, A., Shin, S., Nicolau, J. L., and Park, S. (2025). The review sentiment garden: Blossoming loss aversion and diminishing sensitivity across time and crisis. *Int. J. Hosp. Manag.* 129:104170. doi: 10.1016/j.ijhm.2025.104170
- Singh, N., Misra, R., Quan, W., Radic, A., Lee, S., and Han, H. (2024). An analysis of consumer's trusting beliefs towards the use of e-commerce platforms. *Humanit. Soc. Sci. Commun.* 11:899. doi: 10.1057/s41599-024-03395-6
- Singh, N., Yu, J., Ariza-Montes, A., and Han, H. (2023). Exploring the impact of functional, symbolic, and experiential image on approach behaviors among state-park tourists from India, Korea, and the USA. *Humanit. Soc. Sci. Commun.* 10:36. doi: 10.1057/s41599-023-01527-y
- Spadaro, G., Gangl, K., Van Prooijen, J. W., Van Lange, P., and Mosso, C. O. (2020). Enhancing feelings of security: how institutional trust promotes interpersonal trust. *PLoS One* 15:7934. doi: 10.1371/journal.pone.0237934
- Sun, K. (2024). Strategic responses to the aggregator platform: pricing and information sharing. *J. Retail. Consum. Serv.* 79:3874. doi: 10.1016/j.jretconser.2024.103874
- Sun, Y. L., Wang, Z. H., Lyu, H., and Qu, Q. X. (2025). C2C e-commerce platform trust from the seller's perspective based on institutional trust theory and cultural dimension theory. *Systems* 13:309. doi: 10.3390/systems13050309
- Sweeney, J. C., and Soutar, G. N. (2001). Consumer perceived value: the development of a multiple item scale. *J. Retail.* 77, 203–220. doi: 10.1016/S0022-4359(01)00041-0
- Tan, T. M., and Saraniemi, S. (2022). Trust in blockchain-enabled exchanges: future directions in blockchain marketing. *J. Acad. Mark. Sci.* 51, 914–939. doi: 10.1007/s11747-022-00889-0
- Tarnanidis, T., Owusu-Frimpong, N., Sousa, B. B., Manda, V. K., and Vlachopoulou, M. (2025). Purchasing decisions with reference points and prospect theory in the metaverse. *Adm. Sci.* 15:287. doi: 10.3390/admsci15080287
- Vakeel, K. A., Fuduric, M., and Malthouse, E. C. (2021). Extending variety seeking to multi-sided platforms: impact of new retailer listing. *J. Retail. Consum. Serv.* 59:2382. doi: 10.1016/j.jretconser.2020.102382
- Van de Kaa, E. J. (2010). Prospect theory and choice behaviour strategies: review and synthesis of concepts from social and transport sciences. *Eur. J. Transp. Infrastruct. Res.* 10:2897. doi: 10.18757/ejtr.2010.10.4.2897
- Wang, X., Wang, Y., Lin, X., and Abdullat, A. (2021). The dual concept of consumer value in social media brand community: a trust transfer perspective. *Int. J. Inf. Manag.* 59:102319. doi: 10.1016/j.ijinfomgt.2021.102319
- Wichmann, J. R. K., Wiegand, N., and Reinartz, W. J. (2021). The platformization of brands. *J. Mark.* 86, 109–131. doi: 10.1177/00222429211054073

- Wu, Y., Nambisan, S., Xiao, J., and Xie, K. (2022). Consumer resource integration and service innovation in social commerce: the role of social media influencers. *J. Acad. Mark. Sci.* 50, 429–459. doi: 10.1007/s11747-022-00837-y
- Younis, K., and Zeebaree, S. (2025). The evolution of consumer trust in e-commerce: exploring digital strategies for enhanced loyalty. *Asian J. Res. Comput. Sci.* 18, 295–313. doi: 10.9734/ajrcos/2025/v18i3594
- Zauberman, G. (2003). The intertemporal dynamics of consumer lock-in. *J. Consum. Res.* 30, 405–419. doi: 10.1086/378617
- Zhang, Y. (2022). Variety-seeking behavior in consumption: a literature review and future research directions. *Front. Psychol.* 13:4444. doi: 10.3389/fpsyg.2022.874444
- Zhang, H., Liu, H., Zhang, Y., and He, H. (2025). How will I evaluate others? The influence of “Versailles Literature” language style on social media on consumer attitudes towards evaluating green consumption behavior. *Behav. Sci.* 15:968. doi: 10.3390/bs15070968
- Zheng, Q., Pan, X. A., and Carrillo, J. E. (2019). Probabilistic selling for vertically differentiated products with salient thinkers. *Mark. Sci.* 38, 442–460. doi: 10.1287/mksc.2018.1145