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Accelerating adoption process in the biased context: The significance of diffused information and consumer knowledge

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Abstract: This paper explores the dynamics of the personal adoption process, specifically focusing on how diffused information and consumer knowledge can accelerate the acceptance of experienced products. The study employs an experimental approach to investigate the multifaceted impacts of brand information on consumer behavior, using newly launched Japanese beef in the Vietnamese market as a case study. Through a direct survey of 480 consumers and a rigorous two-stage analysis, the study evaluates the interplay between individual knowledge and diffused information in shaping adoption behaviors. The findings indicate that enhancing brand information during the introduction phase significantly boosts consumer adoption. Moreover, the influence of information wanes over time, emphasizing the necessity for ongoing marketing efforts. These insights underscore the importance of customizing information strategies to bridge knowledge gaps and mitigate biases, ultimately facilitating the successful market entry and adoption of new products.

Keywords: *Brand introduction, Consumer adoption, Consumer knowledge, Experiment, Information diffusion.*

1. Introduction

Innovation is crucial for companies to remain adaptable and perform well in competitive and dynamic markets. Tidd and Bessant [1] noted that companies can reduce competitive pressure by providing unique products or services that meet customer needs. Being successful in volatile markets requires each company to respond quickly and have relevant innovation strategies [2]. The survival and prosperity of any firm in the changing world depend highly on the success of innovation.

The Diffusion of Innovation model developed by Bass [3] establishes a theoretical framework for analyzing new products over time. The market was categorized into two groups: innovators, intrinsically motivated to adopt new products, and imitators, who follow the former group through social interactions and behavioral norms. Rogers [4] and Rogers [5] introduced a structured approach to understanding how the market accepts a new product, service, or technology. A company can accelerate its adoption process by targeting early adopters and leveraging their influence. Rogers' diffusion model also expressed the importance of identifying major market segments and tailoring communication strategies to stress the outstanding features of an innovation [6].

When a new product is launched to markets, the communication between a firm and consumers is initiated via the presence of an innovation. However, the uncertainties related to the newness require the businesses to establish an efficient diffusion process for a new product. Rogers [5] expressed the importance of information concerning the uncertainties of the innovation. Knowledge construction is crucial in the initial stage of the adoption process, as it influences subsequent stages and ultimately impacts the likelihood of adoption [7]. Therefore, effective marketing strategies should promote awareness of new products through relevant communication programs.

Learning about a product is considered in consumer buying models as the multistage processing of information input, both from external and internal sources, with influences on the buying decisions of

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consumers [8-12]. Even though the importance of information in consumer behavior models has been expressed, empirical research to clarify these proposals seems scarce. Most studies on consumer buying behavior focus on how consumers' knowledge influences their purchases, overlooking the effect of combining new information with existing knowledge on their behavior toward new products. Thus, a call exists for further study to investigate the interaction between users' knowledge and firms' diffused information at the introduction stage of a new product.

Constructing a compelling advertising message in a diffusion process is challenging for any company due to the knowledge gap between companies and potential adopters at the introduction stage. One approach to generate advertising for a new entrant brand is using the existing brands since the successful performance of a new entrant brand in a particular market is contingent upon considering competition [13, 14]. Positioning a new entrant brand within the perception of potential adopters could be done through comparative and non-comparative advertising. However, the efficiency of each type of advertising depends on the perceptual advantages of the new entrant brand compared to the existing brands. Another critical factor is the initial knowledge of the market about the new product. Subjective norms can significantly impact consumers' behavior [15]. Therefore, biased information about the new product can hinder the adoption of innovative consumers, leading to the slow adoption of the new product [16-18].

The current context with the explosion of the Internet and digital touching points makes the innovation adoption process more challenging for any business. While a powerful tool for accelerating innovation, the Internet can hinder the process if the quality of information disseminated is incorrect or misleading. Misinformation, such as exaggerated claims or hidden drawbacks, can lead to unmet consumer expectations, dissatisfaction, and a loss of trust in the innovation and its promoters [5]. Negative feedback, even if unrepresentative, can quickly spread online and disproportionately influence potential adopters, deterring adoption [19]. The vast amount of information on the Internet can overwhelm consumers, making it challenging to discern credible sources and increasing perceived complexity and risk. This information overload can delay decision-making or reject innovation [20].

This study provides a rigorous empirical examination of how companies can accelerate personal adoption of a new brand by strategically leveraging relevant information to enhance consumer knowledge. The examination centers on introducing Japanese Wagyu beef to the Vietnamese market, offering valuable insights with real business contextual implications. This research contributes to the extant literature on consumer adoption behavior with three main points. First, it provides a dynamic view of information efficacy by analyzing the behavior of repeated consumers and those newly exposed to the new product. The long-term impact of advertising information is differentiated from the short-term one. Second, the study covers how diverse consumers respond to various advertising strategies by conducting a field experiment employing three different information types. Last, the study considers price as an informative stimulus in the consumers' adoption process for a new brand and examines how price interacts with other information sources to shape consumer perceptions and drive the adoption of a new beef brand.

This paper consists of six parts. After the introduction, the conceptual framework for this study is presented. Next, a detailed explanation of the experiments follows. The results and discussion follow. Last, the paper proposes managerial implications for foreign marketers when introducing a new brand to the Vietnamese market.

2. Literature Review and Hypothesis Development

The theoretical models of innovation diffusion, particularly those developed by Rogers [21] and Bass [3] have significantly contributed to understanding how innovations spread across societies. Rogers' and Bass's models are significant for businesses and policymakers as they offer insights into the factors that drive or hinder innovation diffusion, guiding strategies for accelerating adoption and

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understanding market dynamics [22]. The Bass diffusion model is instrumental in forecasting the life cycle of durable goods and has been extended to various sectors, including non-durable goods and services. The model is based on the premise that adopting a new product is influenced by two types of adopters: innovators and imitators. Innovators are those who adopt the product independently of others, while the adoption decisions of others influence imitators. The model uses parameters to represent these influences and predicts the adoption curve over time. The application of the Bass model in practice requires the incorporation of strategic price and advertising. [23] examines the dissemination mode of product information on online social platforms, focusing on user benefits' attenuation effect and product information quality. Abundant information from many digital platforms can overwhelm consumers, so identifying trustworthy brands and making informed purchasing decisions becomes challenging. Thus, businesses must pay high attention to information release if they want to enhance their customer engagement.

Rogers' Diffusion of Innovation theory Rogers [5] and Rogers [21] is a foundational framework for understanding the spread of new ideas, technologies, and practices within a social system. The model emphasizes the communication process through which innovations are adopted over time and comprises three primary components: the innovation-decision process, perceived attributes of innovations, and adopter categories. The innovation-decision process outlines five stages—knowledge, persuasion, decision, implementation, and confirmation—through which individuals progress when adopting an innovation [24, 25]. Among these stages, the persuasion phase is critical, as attributes such as relative advantage, compatibility, complexity, trialability, and observability significantly influence adoption [24]. These attributes assess the perceived benefits of the innovation, its alignment with user values, its usability, and the ability to experiment with or observe its results. The persuasion stage determines the adoption rate of innovators and the dissemination rate in early adopters. Hence, businesses should tailor their communication strategies and product innovations to reduce consumer biases from the initial stages.

Consumers often face challenges in adopting new values or technologies due to inherent biases that affect their decision-making processes. These biases can lead to a preference for familiar options or a heightened perception of risk associated with new products. Cognitive biases often result in irrational behavior that hampers the adoption of new products or technologies [26, 27]. Negative perceptions disproportionately impact consumer trust and increase perceived risk [28]. The Consumer Contextual Decision-Making Model (CCDMM) highlights how prior beliefs and experiences shape decision-making, which can create an intention-action gap where consumers fail to act on their decisions Suomala [29]. Wangsa [30] highlights the importance of consumer learning capability in adapting to new values that arise from product innovativeness and changing market conditions, emphasizing how consumers contextualize these new values into their own experiences. Hence, the availability of accurate, clear, and relevant information is paramount. Providing high-quality information helps correct misconceptions and reduces the influence of cognitive biases, enabling consumers to make more informed choices. Consumers often rely on past experiences to guide decisions in familiar versus novel contexts, emphasizing the need for businesses to provide consistent and trustworthy information [41]. Therefore, by addressing cognitive biases through information transparency and education, companies can foster consumer learning and enhance the adoption of innovations, empowering consumers to make more rational decisions and improving the overall diffusion process.

To address the research question of whether companies can enhance consumer adoption of a new brand by providing correct information, this paper presents two sub-studies centered around the hypothesis that increasing consumers' knowledge about a new brand positively influences their adoption process. Using Japanese Wagyu beef in the Vietnamese market as a case study, the first sub-study investigates how information about JPW affects consumer purchasing behavior. It posits that prior knowledge plays a crucial role in shaping consumer preferences for JPW. While prior knowledge can be

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categorized into subjective knowledge, objective knowledge, and usage experience [31] my paper focuses specifically on subjective knowledge and usage experience, given that beef is an experienced good.

The second sub-study examines how the provision of information can expedite the personal adoption process. Hypothetically, providing more information significantly alters JPW's consumer preferences. From the first sub-study, the sample is categorized into two groups: those with existing knowledge of JPW (the reminded group) and those without prior information (the purely newly informed group). The paper theorizes that the impact of additional information differs between these groups due to their varying levels of prior knowledge.

The reminded group, possessing pre-existing knowledge about JPW, can be seen as innovators in the adoption process. For them, increased information can stimulate cognitive engagement and foster adoption. Conversely, the information integration theory suggests that prior knowledge may create barriers that hinder the adoption of new information [25, 32, 33] such as cognitive dissonance, anchoring bias, and overconfidence.

In contrast, for the group without prior knowledge, the influence of new information is likely linear, as it represents a crucial phase in the adoption process, aiding in attitude formation through persuasive messaging [5]. This group tends to derive significant benefits from new information, thanks to their capacity for effective information integration and the absence of established information management strategies in their decision-making processes [34-36].

Besides the interaction between marketing enforcement and consumers' knowledge, the study considered the content of information in the diffusion process and the role of a new brand's price. The paper conducted field experiments by randomly combining three kinds of information with three price levels for JPW. Since the success of a new product's performance is a function of pricing and competition [37, 38] it could be essential to consider these factors in the diffusion process from consumers' perspectives. The information is grouped into three categories. The first is the brand distinction, which merely focuses on the attributes of the late-entrant brand (JPW). The second is information regarding brand differentiation, which emphasizes the difference between JPW and one existing competitive brand (Australian Wagyu beef). The last is brand similarity, which indicates the similarity between JPW and one existing competitive brand (Kobe beef). Since the first-entrant brands could achieve asymmetric consumer perception advantages [39, 40] differentiation from existing competitive brands seemed relevant to the late-arrival brand. The study hypothesized that the content of the information varied the impact of information on consumer adoption for JPW. Moreover, brand distinction and differentiation information seemed more substantial than brand similarity information in adjusting consumer adoption toward JPW.

Price in the consumer buying process could be considered an external source of information. The theory of consumer utility investigated price under budget constraints and found the inverse relation between price and consumer preference for a particular product. The theory of advertising considered price a determinant of product quality [41-43] while the theory of diffusion of innovation [5] examined price as a switch cost—a means of competition between innovation and existing products. This study hypothesized the dual roles of price in two groups: informed and uninformed consumers. Price served as a negative factor in consumer preference for the new brand. However, this effect could decline when consumers' knowledge about the new brand increases. It highlights the importance of delivering clear and compelling brand messages and fostering a community around the product that encourages dialogue and shared experiences.

In summary, the hypotheses in this study are as follows:

$H_{1:}$ Prior knowledge of JPW positively affects Vietnamese consumer preference for JPW.

$H_{2a:}$ The impacts of increasing information about JPW on the individual adoption process for JPW vary by the previous knowledge of JPW and the content of the provided information.

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H_{2b}: The distinction and differentiation information is more helpful in adjusting Vietnamese consumer preference for Japanese Wagyu beef than the similarity information.

H_{3}: Providing consumers with more information on JPW reduces the negative impact of price on consumers' preference for JPW.

3. Data and Methodology

3.1. Contex and Information Selection

After the official approval of importing by the Vietnamese government on 1st April 2014, Japanese Wagyu beef became the last entrant beef brand in the niche market for high-grade beef products. Preceding Japanese Wagyu beef is Australian and Kobe beef- Japan's most well-known beef brand. The pilot study in May 2015 indicated the perceptual asymmetry of consumers for three brands. Vietnamese consumers insisted that Wagyu beef originated in Australia, while Japan was the original country that produced Wagyu beef. Moreover, consumers considered Kobe beef Japanese and defined other Japanese beef as inauthentic.

Another burden for Japanese beef exporters to the Vietnamese market is the misleading information about Japanese beef brands. The scandal of fake Kobe beef with high prices went viral on the Internet, leading to a negative attitude of Vietnamese consumers toward Japanese beef. Furthermore, the imported beef market in Vietnam faces several challenges, including insufficient oversight regarding the country of origin, quality control issues, and a lack of consumer protection. As a result, consumers must rely on their knowledge and experience to select quality beef. This reliance is often influenced by misconceptions that have become ingrained in their perception, creating a cognitive bias during the adoption process. Consequently, JPW is well-suited for the research objectives.

The paper constructed three kinds of information (assigned 1,2 and 3) with three distinct insights to examine the importance of information at the introduction stage of JPW as follows:

Table 1.
Three kinds of information in the study.

Information 1	Content	"Wagyu beef ("WA" means Japan and "GYU" means cow) is original Japanese beef. *(Source: Ministry of Agricultural, Fishery, and Forestry, Japan)*
	Insight	Brand Distinction
Information 2	Content	Due to the salient features of Japanese Wagyu beef, in mid-1990, Australia first imported full-blooded Wagyu bulls from Japan and Black Angus cows from the United States to begin *their Wagyu crossbreeding program.* Hence, *only Japan* can provide markets with *Wagyu beef of full-blooded Wagyu.* *(Source: Australian Wagyu Association)*
	Insight	Brand differentiation
Information 3	Content	Kobe beef is a kind of Wagyu beef produced from cattle raised in Hyogo Prefecture, Japan. *(Source: Ministry of Agricultural, Fishery, and Forestry, Japan)*
	Insight	Brand similarity

3.2. Experiments and Tasks

Since JPW is consumed at high-grade beef stores or restaurants, the study collected data from direct interviews with customers at beef restaurants at intermediate levels in the Vietnamese market. Ho Chi Minh City is the study area since this city was the leading metropolis in Vietnam, with a significant increase in imported high-grade beef products. Our sample included 480 respondents with basic knowledge about eating imported beef at restaurants. The consumer survey was conducted over two months, from August 2015 to October 2015, using a self-administered questionnaire with the serious operation and oversight of interviewers.

The behavior of each respondent was observed in two phases. First, a complete set of beef was on the menu. Customers were given brand names and price information since excessive information could

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lead to overload problems. The complete set of beef items consisted of Australian beef at 250,000 VND, American beef at 300,000 VND, Australian Wagyu beef at 450,000 VND, and Kobe beef at 1,000,000 VND. For JPW, we used three price levels instead of the fixed price for other beef brands[1]: 500,000 VND, 650,000 VND, and 800,000 VND. Respondents were asked to rank each alternative on a five-point Likert scale, with 1 representing exceptionally not preferable to 5 for highly preferable. This first task took 15 minutes.

In the second phase, respondents were randomly assigned to receive one of three types of insight information, as shown in Table 1. This approach divided the sample into three distinct sub-groups based on which type of information the respondent was exposed to. The study assessed the respondents' prior knowledge of the exposure information for each sub-group by a Yes/No question. After reviewing the information, participants were asked to indicate their preferred beef alternatives. Finally, the participants were informed about the other two types of information not initially provided. They were asked to report any previous exposure or familiarity with those additional information types. This structured procedure ensured a comprehensive understanding of how different types of information and prior knowledge influenced consumer preferences.

Regarding price, this study used the actual purchasing price instead of rating the perceived price or revealed price from aggregate data (e.g., supermarket scanned data) for the following two reasons. First, price is an external cue for information processing; thus, personally reserved prices can provide more situation-specific information to consumers in evaluative tasks. Second, the individual price seems relevant to investigate the short-term influence of information on product judgment.

3.3. Analytic Model

Regarding the hypothesis in the second sub-study, the impact of a particular kind of information can be seen as combining two elements: the marketing effort and the respondents' prior knowledge about that information. Let us call the variable for the characteristic of the information "Effort" and the variable for consumers' prior knowledge about that kind of information "Know."

$$\text{Effort}_k = \begin{cases} 1, & \text{if the information k was provided by the marketing agency} \\ 0, & \text{otherwise} \end{cases}$$

$$\text{Know}_k = \begin{cases} 1, & \text{if respondent knew the information k} \\ 0, & \text{otherwise} \end{cases}$$

Where k =1,2,3

Let us denote:

y_i is the consumer preference of an individual i for JPW ($i = 1,2,3 \dots n$)

x_p is the predictor p with $p = 1,2,3 \dots, P$

ε_{iEK-k} is the disturbance concerning Effort (E) and Know (K) for information k

Following the natural experimental approach, the study allows for differences in prior knowledge and the characteristics of the information. Hence, the consumer preference for Japanese Wagyu beef can be expressed as the equation:

$$y_i = \alpha_0 + \alpha_{1k}\text{Effort}_{ki} + \beta_{1k}\text{Know}_{ki} + \alpha_{2k}(\text{Effort}_{ki} * \text{Know}_{ki}) + \sum_{p=1}^{P} \alpha_{3kpi}(\text{Effort}_{ki} * x_{pi}) + \sum_{p=1}^{P} \beta_{2kpi}(\text{Know}_{ki} * x_{pi}) + \sum_{p=1}^{P} \beta_{3kpi}(\text{Know}_{ki} * \text{Effort}_{ki} * x_{pi}) + \sum_{p=1}^{P} \beta_{4pi}x_{pi} + \varepsilon_{iEK-k}$$

1Price per 100 gram tenderloin

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Table 2.
The impact of information on the change in consumer preference for JPW.

Information	**Prior Knowledge of the particular information**	
	Already Known ($Know_k$ =1)	**Do not know ($Know_k$=0)**
Informed ($Effort_k = 1$)	$\alpha_0 + \alpha_{1k} + \beta_{1k} + \alpha_{2k} + \sum_{p=1}^{P}(\alpha_{3kpi} * x_{pi}) + \sum_{p=1}^{P}(\beta_{2kpi} * x_{pi}) + \sum_{p=1}^{P}(\beta_{3kpi} * x_{pi}) + \sum_{p=1}^{P}\beta_{4pi}x_{pi} + \varepsilon_{i11k}$	$\alpha_0 + \alpha_{1k} + \sum_{p=1}^{P}(\alpha_{3kpi} * x_{pi}) + \sum_{p=1}^{P}\beta_{4pi}x_{pi} + \varepsilon_{i10k}$
Not be informed ($Effort_k = 0$)	$\alpha_0 + \beta_{1k} + \sum_{p=1}^{P}(\beta_{2kpi} * x_{pi}) + \sum_{p=1}^{P}\beta_{4pi}x_{pi} + \varepsilon_{i01k}$	$\alpha_0 + \sum_{p=1}^{P}\beta_{4pi}x_{pi} + \varepsilon_{i00k}$
Difference	$\alpha_{1k} + \alpha_{2k} + \sum_{p=1}^{P}(\alpha_{3kpi} * x_{pi}) + \sum_{p=1}^{P}(\beta_{3kpi} * x_{pi}) + (\varepsilon_{11k} - \varepsilon_{01k})$	$\alpha_{1k} + \sum_{p=1}^{P}(\alpha_{3kpi} * x_{pi}) + (\varepsilon_{10k} - \varepsilon_{00k})$

The total impact of a particular kind of information on the difference in preference can be expressed as the following equation:

$\Delta y_i = [\alpha_{1k} + \alpha_{2k} + \sum_{p=1}^{P}(\alpha_{3kpi} * x_{pi}) + \sum_{p=1}^{P}(\beta_{3kpi} * x_{pi}) + (\varepsilon_{11k} - \varepsilon_{01k})] + [\alpha_{1k} + \sum_{p=1}^{P}(\alpha_{3kpi} * x_{pi}) + (\varepsilon_{10k} - \varepsilon_{00k})]$ **(1)**

Let denote:

$$\gamma_{1k} = [\alpha_{1k} + \alpha_{2k} + \sum_{p=1}^{P}(\alpha_{3kpi} * x_{pi}) + \sum_{p=1}^{P}(\beta_{3kpi} * x_{pi}) + (\varepsilon_{11k} - \varepsilon_{01k})$$

$$\gamma_{2k} = \alpha_{1k} + \sum_{p=1}^{P}(\alpha_{3kpi} * x_{pi}) + (\varepsilon_{10k} - \varepsilon_{00k})$$

Equation **(1)** becomes:

$$\Delta y_i = \gamma_{1k} + \gamma_{2k}$$

Through the combination of prior knowledge and the marketing effort, the sample was divided into three groups: the newly informed group, the reminded group, and the unaware group.

$\boldsymbol{I_{11}} = \begin{cases} 1, & Being\ informed\ information\ 1\ and\ know\ (Reminded\ 1) \\ 0, & otherwise \end{cases}$

$\boldsymbol{I_{12}} = \begin{cases} 1, & Being\ informed\ information\ 2\ and\ know\ (Reminded\ 2) \\ 0, & otherwise \end{cases}$

$\boldsymbol{I_{13}} = \begin{cases} 1, & Being\ informed\ information\ 3\ and\ know\ (Reminded\ 3) \\ 0, & otherwise \end{cases}$

$\boldsymbol{I_{21}} = \begin{cases} 1, & Newly\ informed\ information\ 1\ and\ do\ not\ know\ (Purely\ new\ 1) \\ 0, & otherwise \end{cases}$

$\boldsymbol{I_{22}} = \begin{cases} 1, & Newly\ informed\ information\ 2\ and\ do\ not\ know\ (Purely\ new\ 2) \\ 0, & otherwise \end{cases}$

$\boldsymbol{I_{23}} = \begin{cases} 1, & Newly\ informed\ information\ 3\ and\ do\ not\ know\ (Purely\ new\ 3) \\ 0, & otherwise \end{cases}$

We constructed the entire model for three kinds of information as the following equation:

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$$\Delta Prefer_i = I_{11}\gamma_{11} + I_{21}\gamma_{21} + I_{12}\gamma_{12} + I_{22}\gamma_{22} + I_{13}\gamma_{13} + I_{23}\gamma_{23} + \epsilon_i \quad (2)$$

Through Equation 2, the underlying assumption is that information about a new brand is efficient in the adoption process if and only if it is active. Hence, the linear regression model for the impacts of information on personal adoption for JPW is run without intercept. Alternatively, the effect of information is zero for (i) the group with knowledge but no marketing effort and (ii) the group without knowledge and information.

Table 3.
The summary of variables in the second sub-study.

Variable	**Description**	**Measurement**		
Outcome				
$\Delta Prefer_i$	The change in preference of JPW	$\Delta Prefer_i$ =Preference after information − Preference before information		
		Mean= 0.23; Max=2; Min=−2		
Predictors				
Variable name		**Value**	**Number (N=480)**	**%**
I_{11}	Remind information 1	1	21	4.4%
1= informed and already know information 1; 0=otherwise		0	459	95.6%
I_{21}	Purely new information 1	1	129	26.9%
1=informed and do not know information 1; 0=otherwise		0	351	73.1%
I_{12}	Remind information 2	1	15	3.1%
1= informed and already know information 2; 0=otherwise		0	465	96.9%
I_{22}	Purely new information 2	1	148	30.8%
1=informed and do not know information 2; 0=otherwise		0	332	69.2%
I_{13}	Remind information 3	1	42	8.8%
1= informed and already know information 3; 0=otherwise		0	351	73.1%
I_{23}	Purely new information 3	1	125	26%
1=informed and do not know information 3; 0=otherwise		0	355	74%

The marginal effect of a particular kind of information on the change in preference for JPW was divided into three categories. The first is the spontaneous effect.[2], which is calculated for the group of newly informed customers. The second is the added effect.[3], measured in the group of reminded customers. The last item is the declined effect, which measures the declining effect of information on the preference for JPW when consumers' exposure is increased. This item is measured as the difference between the spontaneous and added effects of a particular kind of information.

2 Since this brand is at the early stage of diffusion process, this effect could be considered as the initial effect of information in the market when being exaggerated

3 This study ignores the interaction between three kinds of knowledge; hence, the study used the added effect term

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Table 4.
The classification of information affects on the change in preference for JPW.

Category	Information 1	Information 2	Information 3
The added effect	γ_{11} $\beta_{01} + \beta_{111}Price + \beta_{112}Exper$	γ_{12} $\beta_{03} + \beta_{131}Price + \beta_{132}Exper$	γ_{13} $\beta_{05} + \beta_{151}Price + \beta_{152}Exper$
The spontaneous effect	γ_{21} $\beta_{02} + \beta_{121}Price + \beta_{122}Exper$	γ_{22} $\beta_{04} + \beta_{141}Price + \beta_{142}Exper$	γ_{23} $\beta_{06} + \beta_{161}Price + \beta_{162}Exper$
The declined effect	$\gamma_{21} - \gamma_{11}$ $(\beta_{02} - \beta_{01}) + (\beta_{121} - \beta_{111})Price + (\beta_{122} - \beta_{112})Exper$	$\gamma_{22} - \gamma_{12}$ $(\beta_{04} - \beta_{03}) + (\beta_{141} - \beta_{131})Price + (\beta_{142} - \beta_{132})Exper$	$\gamma_{23} - \gamma_{13}$ $(\beta_{06} - \beta_{05}) + (\beta_{161} - \beta_{151})Price + (\beta_{162} - \beta_{152})Exper$

4. Results

The result of the first-sub study affirms the significance of prior knowledge in consumer preferences towards JPW. Eating experience, as one of the information sources for consumer decision-making, indicated a positive impact [44].

Table 5.
The summary of the hypothesis testing in the second sub-study.

Hypotheses	Coefficient	Expected sign	Unstandardized Coefficients	Standardized Coefficients	Conclusion
H2-a.The impacts of increasing information on the individual adoption process varied with the prior knowledge and the content of the information					
Remind 1	β_{01}	+/-	−0.410	−0.091	No support
Remind 2	β_{03}	+/-	−0.020	−0.004	No support
Remind 3	β_{05}	+/-	−0.103	−0.032	No support
Purely New 1	β_{02}	+/-	0.842***	0.463***	Support
Purely New 2	β_{04}	+/-	0.421***	0.248***	Support
Purely New 3	β_{06}	+/-	−0.148**	−0.08**	Support
H3. Providing consumers with more information on JPW reduces the negative impact of price on consumers' preference for JPW.					
Remind 1*Price	β_{111}	+	0.123	0.009	No support
Remind 2*Price	β_{131}	+	−0.129	−0.017	No support
Remind 3*Price	β_{151}	+	0.124	−0.014	No support
Purely new 1*Price	β_{121}	+	0.172***	0.033***	Support
Purely new 2*Price	β_{141}	+	0.171***	0.035***	Support
Purely new 3*Price	β_{161}	+	−0.020	−0.004	No support
Increasing information about JPW concerning the eating experience of consumers					
Remind 1*Exper	β_{112}	+/-	0.059		0.012
Remind 2*Exper	β_{132}	+/-	-0.051		-0.062
Remind 3*Exper	β_{152}	+/-	-0.114		-0.024
Purely new 1*Exper	β_{122}	+/-	0.193		0.032
Purely new 2*Exper	β_{142}	+/-	-0.815***		-0.183***
Purely new 3*Exper	β_{162}	+/-	-0.35*		-0.07*

Note: ***p<0 .01; **p<0.05; *p<0.1; R^2=0.353; Adjusted-R^2=0.327; F(18,462)=13.985 at p-value<0.01.

Table 5 indicates the results of hypothesis testing for the role of information in adjusting the personal adoption of Japanese Wagyu beef. Hypothesis 2-a was kept in the newly informed groups while being rejected in the reminded groups. Three kinds of information showed the efficiency in the short-

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term period since all of the explanatory variables significantly impacted the change in consumer preference for Japanese Wagyu beef.

In the short-term period, brand distinction (information 1) and brand differentiation (information 2) positively affected the difference in consumer preference for JPW. At the same time, the negative impact could be seen for the brand similarity (information 3). Customers who were informed about brand distinction information for the first time increased their preference for JPW by 0.842 points of preference. Similarly, customers increased their preference for JPW at 0.421 points when newly informed about brand differentiation. In contrast, being similar to Kobe beef caused a decrease of 0.148 points in consumer preference for JPW. The brand distinction seemed to be the most effective information since the variable "purely new 1" obtained the highest standardized coefficient in the regression. Hypothesis 2-b was partially kept in the group of newly informed customers and was rejected in the group of reminded customers since three kinds of information made non-significant impacts on the change in preference for JPW.

Table 6.
The classification of information impacts on the change in preference for JPW.

	Information 1	**Information 2**	**Information 3**
The added effect (Remind group)	γ_{11}	γ_{12}	γ_{13}
	H0: $\gamma_{11} = 0$, *p-value = .5883* H0: $\gamma_{11} \geq 0$, *p-value = .2940* H0: $\gamma_{11} \leq 0$; *p-value = .7060*	H0: $\gamma_{12} = 0$, *p-value = .0910* H0: $\gamma_{12} \geq 0$, *p-value = .0450* H0: $\gamma_{12} \leq 0$; *p-value = .7060*	H0: $\gamma_{13} = 0$, *p-value = .6276* H0: $\gamma_{13} \geq 0$, *p-value = .3200* H0: $\gamma_{13} \leq 0$; *p-value = .7800*
The spontaneous effect (Purely new group)	γ_{21}	γ_{22}	γ_{23}
	H0: $\gamma_{21} = 0$, *p-value =.0019* H0: $\gamma_{22} \geq 0$, *p-value =.999* H0: $\gamma_{23} \leq 0$; *p-value = .0000*	H0: $\gamma_{22} = 0$, *p-value = .2160* H0: $\gamma_{22} \geq 0$, *p-value =.8920* H0: $\gamma_{22} \leq 0$; *p-value = .1080*	H0: $\gamma_{23} = 0$, *p-value = .0684* H0: $\gamma_{23} \geq 0$, *p-value = .0342* H0: $\gamma_{23} \leq 0$; *p-value = .9658*
The declined effect (The difference)	$\Delta\gamma_1$	$\Delta\gamma_2$	$\Delta\gamma_3$
	H0: $\Delta\gamma_1 = 0$, *p-value = .0053* H0: $\Delta\gamma_1 \geq 0$, *p-value = .9730* H0: $\Delta\gamma_1 \leq 0$; *p-value = .0027*	H0: $\Delta\gamma_2 = 0$, *p-value = .3086* H0: $\Delta\gamma_2 \geq 0$,*p-value = .1543* H0: $\Delta\gamma_2 \leq 0$;*p-value = .8557*	H0: $\Delta\gamma_3 = 0$, *p-value = .4574* H0: $\Delta\gamma_3 \geq 0$, p-*value = .2287* H0: $\Delta\gamma_3 \leq 0$; *p-value = .7713*

Table 6 presents the hypothesis testing for the effects of each kind of information post-estimation. The hypothesis was that the spontaneous effect of information one on the preference change was positive at p-value < 0.01, and the declined effect existed at *p-value <0.05*. There was no evidence to conclude about the non-zero value of the cumulative effect of the information 1.

The added effect of information 2 was negative at *p-value < 0.05*, and there was no evidence to conclude the non-zero value for the net effect and the depreciated effect of information 2. For information 3, the spontaneous effect of this information was less than zero at p-value < 0.05, and no statistical evidence supported the hypothesis of the non-zero added effect and the existence of the depreciated effect.

Regarding the role of price information in consumer adoption for JPW, from Table 5, hypothesis 3 was kept in the groups of purely new 1 and purely new 2 at *p-value < 0.01*. The result of the price coefficient in the first sub-study indicated that price served as the cost cue in the first phase with the coefficient at minus 0.586 with *p-value < 0.01*. After providing more information to customers, in the groups of newly informed information 1 and information 2, the role of price as a quality signal cue could be observed in the short-term period.

5. Discussion

The empirical findings highlight the opportunity for Japanese beef exporters to boost consumer adoption in Vietnam by enhancing knowledge about Japanese Wagyu (JPW). Pre-existing information

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is crucial, as illustrated by the first sub-study, which shows that prior knowledge significantly influences consumer preferences for JPW, varying according to the specific information consumers have.

The second sub-study examined how information content affects consumer adoption of a new brand, revealing that this varies with advertising claims and consumers' prior knowledge. It categorized the impact of information into two temporal frameworks: the short-term effects observed in a group of consumers encountering JPW for the first time (the purely new group) and the long-term effects seen in those previously exposed to JPW (the reminded group). The findings indicate that novice consumers and those with prior expertise can benefit from advertising campaigns that enhance information about a new brand. This influx of information not only serves to facilitate the diffusion of the product in both the short and long term but also reinforces the notion that advertising functions as a crucial conduit for information transfer from firms to consumers, encompassing not just product quality but also intangible assets such as brand goodwill [45]. Furthermore, a wealth of information regarding a new brand can catalyze new learning processes, stimulate a consumer's exploratory drive for novel products, and ultimately expedite individual adoption [46].

Interestingly, the influence of information on consumer adoption within the purely new group is markedly more vigorous than within the repetition group. This indicates that while advertising innovations can drive short-term adoption, the impact tends to diminish over time. As consumer familiarity with a brand increases, so does the accumulation of knowledge in their memory, which can lead to a framing effect that diminishes the perceived importance of repeated information. Historical research by Krugman [47] and Tellis [48] supports the notion that optimal exposure to advertising should be limited, ideally ranging from two to three instances.

Brand differentiation is key for long-term consumer engagement, while brand distinction drives short-term adoption of new products. New entrants in the Vietnamese market must communicate core attributes effectively, as consumers are goal-oriented problem solvers. Providing meaningful information that supports consumer learning is essential to retaining adopters [27, 40]. Cognitive biases might hinder new product adoption in the era of information explosion and digital technology. Therefore, businesses must design accurate brand messages to educate and communicate with consumers online platforms [26].

6. Conclusion

This study investigated whether firms can enhance private adoption of a new brand by increasing information provision, moving beyond the traditional producer-focused view of industrial innovation. Field experiments were conducted on 480 customers at high-grade beef restaurants in Ho Chi Minh City, focusing on JPW, the last entrant in the Vietnamese beef market. The impact of prior knowledge on consumer preference for JPW varied depending on the information type: brand distinction, differentiation, and similarity. Brand distinction information significantly influenced preference, particularly for novices. For potential adopters, firms should prioritize distinction information. For experts, firms should provide information with diagnostic value to enhance learning. Despite its contributions, the study has limitations. The highly selective sample and experimental evaluation of information's impact on preference for Japanese Wagyu beef call for cautious generalization of findings. Future research should explore more precise and practical alternatives.

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Institutional Review Board Statement:

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Transparency:

The author confirms that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Competing Interests:

The authors declare that they have no competing interests.

Authors' Contributions:

All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

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