

Paying for the Story: Heritage Narrative against Origin Certification in a Discrete Choice Experiment on Central Highlands Forest Salt

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Abstract: *Origin-based certification is an instrument of rural development policy across Southeast Asia, resting on a premise rarely stated as an empirical claim: that provenance commands a price premium transferable to smallholder producers. Where provenance is communicated as a label the premise is supported; where it is communicated as a story the evidence is thinner, more recent and almost entirely attitudinal. Recent work manipulating heritage storytelling against a geographical indication label finds the story outperforming the certification mark on attitude, which establishes that the two cues are separable and leaves open whether the advantage is monetary. This study supplies a design in which the story must trade off against price. Cultural narrative enters a discrete choice experiment as an attribute alongside origin certification, product type and price, with utility specified directly in willingness-to-pay space, and with a middle narrative level that conveys provenance without narrative form so that the story is priced against a condition in which the consumer already knows the origin. The setting inverts the structure of the entomophagy literature: the insect ingredient is traditional in the producing region and unfamiliar only to the urban buyer, so narrative is not required to reassure against novelty. The estimates indicate a narrative premium above the provenance statement, a larger premium for the insect-based variety, and substantial heterogeneity across three latent segments.*

Keywords: Willingness to pay; Discrete choice experiment; Narrative transportation; Geographical indication; Entomophagy; Vietnam

1. Introduction

The deployment of origin-based certification as a rural development strategy in Southeast Asia hinges on a critical, yet rarely quantified, economic premise: that conveying a product's provenance translates into a tangible price premium for smallholder producers. Where provenance is communicated as a label the premise is supported, since consumers pay more for geographically labelled and certified foods across a range of categories (Aprile et al., 2012; Loureiro & McCluskey, 2000; Menapace et al., 2011) and the premium varies with category and with the strictness of the certifying institution (Deselnicu et al., 2013). Where provenance is communicated as a story, the evidence is thinner, more recent, and almost entirely attitudinal.

The distinction has become an empirical question. Barretta et al. (2025), examined in Section 2.2, report that heritage storytelling outperforms a geographical indication label on attitudinal measures, which leaves open the question that matters for the policy premise. An attitudinal advantage does not establish a monetary one, and a producer deciding whether to invest in certification or in narrative production faces costs that differ by an order of magnitude. What is required is a design in which the story must trade off against price.

This study provides that required design. Cultural narrative enters a discrete choice experiment as an attribute alongside origin certification, product type, and price. Furthermore, utility is specified directly in willingness-to-pay space (Train & Weeks, 2005), which avoids the heavy-tailed distributions that arise when willingness to pay is derived as a ratio of preference-space coefficients. The quantity recovered is the marginal willingness to pay for a heritage narrative conditional on the presence of an origin label, an estimate that remains unavailable in the existing literature.

The research setting inverts the conventional structure of the entomophagy literature. Ant salt is a condiment prepared from weaver ants and aromatic forest herbs in the Central Highlands. Its preparation from *Oecophylla smaragdina* has been documented across five Vietnamese provinces (Pham et al., 2024), and it has transitioned within two decades from subsistence use into a gift and specialty market. This inversion fundamentally matters for what the narrative is expected to achieve. The consumer acceptance literature on insects as food rests almost entirely on Western samples and engineered carriers, in which insect protein enters an otherwise familiar product and acceptance is limited by disgust and food neophobia (La Barbera et al., 2018). Cross-cultural work shows that this configuration is not universal: comparisons of Thailand with the Netherlands and of China with Germany find cultural exposure and prior experience to be the principal determinants of acceptance (Hartmann et al., 2015; Tan et al., 2015), while a national survey in Laos records weaver ant eggs among the most commonly consumed species (Barennes et al., 2015). In the Central

Highlands, the insect ingredient is not an innovation; rather, the unfamiliarity resides within the urban consumer. Consequently, narrative is not required to reassure buyers against novelty, shifting the mechanism question to determining which of two routes it travels.

Recent Vietnamese evidence provides a further reason to expect this question to be live. In a choice experiment on an origin-certified dried beef, Hong et al. (2025) find that origin does not enter significantly, concluding that storytelling and geographical indication are required for provenance to be valued. Additionally, Tran et al. (2022) demonstrate that Vietnamese consumers pay for food labelling schemes. This establishes that the label channel operates effectively in this market, whereas the narrative channel has been called for but remains empirically untested.

The paper makes three main contributions. First, it recovers a monetary rather than an attitudinal estimate of the narrative premium conditional on the origin label, converting the finding of Barretta et al. (2025) from a statement about ordering into one concerning magnitude. Second, it examines the narrative-by-insect interaction in a context where the insect is a traditional ingredient, a scenario the entomophagy literature has not addressed and where established mechanisms do not apply. Finally, it supplies an estimate directly relevant to certification policy for indigenous food products in the Central Highlands, a region where no geographical indication for this product currently exists and where the commercial value of indigenous food knowledge is frequently asserted without quantification.

2. Theory and predictions

2.1. Two routes from a story to a price

Narrative transportation theory holds that audiences immersed in a story experience focused attention, mental imagery and emotional engagement, and that this state produces attitude change through mechanisms distinct from argument-based persuasion (Green & Brock, 2000), with meta-analytic evidence confirming that transportation predicts affective and behavioural response. Consumer research adds two developments relevant here: narrative processing builds self-brand connections by letting consumers map product information onto stories already held in memory, and it persuades through transportation and not analytical elaboration (Escalas, 2004). Applied to a food package, this predicts that a heritage narrative raises valuation not by improving information about quality but through immersion and reduced scrutiny, which differs mechanically from certification, a quality signal that reduces information asymmetry.

Research on authenticity supplies the intervening construct. Authenticity in commercial settings is partly constructed, since firms graft authenticity claims onto products through narratives of origin, craft and continuity (Beverland, 2005), and in traditional food specialties perceived authenticity influences purchase intention through two routes, object-based authenticity resting on verifiable attributes and subjective authenticity on the consumer's identification with the product (Sidali & Hemmerling, 2014). A heritage narrative should therefore operate primarily on the subjective dimension and a geographical indication on the objective one, which makes them complements and their interaction a substantive question.

The origin-label literature establishes the comparison. Protected designation labels attract positive valuations (Loureiro & McCluskey, 2000), as do geographical indication and organic labels, with magnitudes varying by category and segment (Aprile et al., 2012), and origin is not a single undifferentiated signal, since country-of-origin and geographical indication cues are valued differently for the same product (Menapace et al., 2011). Product-country image effects generate considerable heterogeneity (Scarpa et al., 2005), and meta-analysis finds the largest percentage premiums where supply chains are short and certification regimes strict (Deselnicu et al., 2013). Two features bear on the present study: origin is operationalised as a label or a mark and not as an elaborated cultural account, so the narrative content origin is presumed to carry is assumed and not measured; and the evidence concentrates in markets with established certification infrastructure, while settings in which origin claims are informal and commercially constructed remain thinly studied.

2.2. What Barretta et al. (2025) settles and what it leaves open

One prior design comes close to the present one in method while differing in the quantity recovered. Balogh et al. (2016) estimate willingness to pay for a traditional Hungarian salami in willingness-to-pay space with correlated random parameters and identify consumer segments, and report a substantial premium for the traditional product that is contingent on effective quality certification. What they price is traditional status carrying a certification; what is priced here is narrative form conditional on the consumer already knowing the origin, which is the contrast their design does not contain. Barretta et al. (2025) is the study this paper must be read against. Manipulating storytelling and a geographical indication label in a factorial design on a traditional Brazilian cheese, they find storytelling outperforming the certification mark across cognitive, affective and conative components of attitude. That finding is not disputed here. What it establishes is that the two cues are separable and that the narrative is not merely a delivery mechanism for the label.

Three limits define what remains. The design is between-subjects on attitudinal outcomes, so it recovers an ordering and not a magnitude; no price attribute is present, so respondents trade the story against nothing; and the product carries no consumption barrier, so the question of whether narrative can offset one does not arise. A choice experiment in which price is an attribute, on a product carrying a documented barrier for the target market, addresses each.

2.3. Predictions, and a correction to how the mechanisms have been framed

Three predictions are stated in advance. Two concern main effects and are expected rather than novel. Positive marginal willingness to pay for origin certification is expected, consistent with the label literature, and the insect-based variety is expected to attract a discount relative to the herbal variety among urban consumers unfamiliar with the product, consistent with the entomophagy literature. Neither would be a contribution and both are scaffolding.

The third concerns the interaction between narrative and insect content, and here a point of logic must be corrected rather than inherited. Two mechanism accounts are available. Under a reassurance account, imported from the Western entomophagy literature, narrative overcomes resistance, so its value is greater for the insect-based variety and the interaction is positive. Under an authentication account, appropriate where the insect is traditional, the insect ingredient is what makes the heritage claim credible, so the story is worth more attached to the variety it is actually about and a narrative on a herbal condiment is decorative; that account also predicts a positive interaction. The two accounts therefore do not predict opposite signs. They are competing explanations of the same predicted sign, and an earlier framing of this study which treated them as competing directional hypotheses was mistaken. What separates them is not the sign of the interaction but the route through which it operates: reassurance should work by reducing disgust, authentication by raising subjective authenticity. Section 3.2 sets out how the two constructs enter the model so that the routes can be distinguished, and Section 3.3 states what that distinction can and cannot establish.

A third possibility is that both accounts fail and the interaction is negative, which would indicate that narrative attention directs scrutiny toward the ingredient instead of away from it. The estimate is reported as obtained.

3. Method

3.1. Design, hypothetical bias and sampling

The choice experiment presents jars of Central Highlands forest salt described by four attributes. Narrative takes three levels: no cultural information, a short provenance statement naming the province and ethnic group, and an elaborated heritage narrative presented as package copy. Origin certification takes two levels, absent and present, the latter described as a prospective registered geographical indication. Product type takes two levels, weaver-ant based and herbal. Price takes five levels spanning the observed retail range, at 90, 130, 170, 210 and 250 thousand VND, fixed after a pilot. The levels are equally spaced at forty thousand VND, so the narrative premium estimated below is well inside a single price step and is recovered by interpolation rather than by extrapolation beyond the design.

Separating the second narrative level from the third is essential, since a comparison of no information against an elaborated story would conflate the value of knowing the origin with the value of being told a story about it, which is the confound the paper exists to remove. The middle level supplies provenance without narrative form, so the marginal willingness to pay for narrative is identified against a condition in which the consumer already knows where the product comes from. The design is D-efficient with pilot priors (Rose & Bliemer, 2009), blocked into versions, each respondent facing twelve choice sets of two labelled alternatives and an opt-out. The opt-out is retained and not forced, since forcing a choice inflates estimated willingness to pay and non-purchase is realistic for an unfamiliar condiment.

Hypothetical bias is the central limitation of stated preference, since hypothetical valuations systematically exceed actual payments (List & Gallet, 2001). Four mitigations are applied: a cheap talk script (Cummings & Taylor, 1999) with a repeated opt-out reminder before each set, which reduces bias beyond cheap talk alone (Ladenburg & Olsen, 2014); a budget-constraint reminder; an incentive-compatible task on a subsample in which one choice set is drawn at random and executed with real product and real money; and the design itself, since the quantity of interest is a difference across narrative levels and bias affecting all levels equally leaves that difference informative.

Respondents are recruited through an online panel provider with screening and attention checks, with quotas set against population margins for age, sex, city and household income and the achieved margins reported. Recruitment through personal networks or open links is not used. The target population is urban buyers of specialty or gift foods in Hanoi, Ho Chi Minh City and Da Nang. Sample size follows from the precision sought on the narrative-by-product-type interaction (de Bekker-Grob et al., 2015), since that parameter carries the contribution and is estimated with less precision than main effects.

3.2. Measures, and how they enter the model

Food neophobia is measured with the scale of Pliner and Hobden (1992); because its factor structure is documented as unstable across cultural contexts, a confirmatory factor analysis is run on the Vietnamese sample before use and treat the validation as a secondary contribution. Perceived authenticity is measured on the object-based and subjective dimensions of Sidali and Hemmerling (2014), and disgust toward entomophagy separately from general neophobia (La Barbera et al., 2018).

How these constructs enter utility requires a precise statement, because the obvious specification is not identified. Authenticity, disgust and neophobia are measured at respondent level and do not vary across alternatives within a choice set, so they cancel from conditional utility differences and cannot enter as un-interacted constants. They enter only as interactions: authenticity and disgust with the narrative levels and the product-type indicator, neophobia with the product-type indicator and the opt-out constant. Every coefficient reported for them is a coefficient on an interaction, and no main effect is estimable.

3.3. Estimation, and the limits of the mechanism test

Utility is specified in willingness-to-pay space (Train & Weeks, 2005), which avoids the heavy-tailed distributions arising when the price coefficient is random and willingness to pay is a ratio. Comparisons of the two parameterisations report that the willingness-

to-pay-space specification yields more plausible distributions even where it fits marginally less well, which is the trade-off accepted here (Hole & Kolstad, 2012; Sonnier et al., 2007). Models are estimated by mixed logit with correlated random parameters (Train, 2009), narrative and certification coefficients random to capture the heterogeneity documented for origin cues (Scarpa et al., 2005). Latent class analysis follows, since a mean premium may conceal a market in which one segment pays substantially for narrative and another does not, and that bears directly on whether narrative production is viable for a smallholder. In the latent class model, membership coefficients are identified only relative to a reference class, and the third class is reported as reference throughout; free membership coefficients for all classes would not be identified.

The mechanism examination requires the sharpest statement, because its natural reading is unavailable. The narrative-by-product interaction is estimated with and without the authenticity and disgust interactions and compare its magnitude across those specifications. What it does not deliver is causal mediation. The mediators are post-treatment and plausibly endogenous to the preferences that generate choice, and in a nonlinear choice model a coefficient change across nested specifications reflects rescaling as well as any change in the underlying effect, since the scale parameter is not fixed. A difference in attenuation is therefore evidence about which construct covaries more strongly with the interaction, and no more; establishing a causal mechanism would require randomising the mediator or a joint structural model, identified in Section 6 as the successor design.

A pilot establishes the price range, generates priors and tests comprehension of the narrative stimulus, developed from Ede oral tradition and reviewed by speakers from the source community. Ethical approval and informed consent are obtained and the reference recorded, and findings relevant to producer pricing are returned to producer groups in the study provinces; a study whose premise is that indigenous heritage carries commercial value should be explicit about who receives that value. Two points of fact are handled conservatively: no geographical indication for this product exists, so the certification attribute is described as prospective, and commercial claims about certification status under the national one-commune-one-product scheme could not be verified against an administrative decision and are not used.

4. Results

Appendix Table A1 reports the achieved sample. Of 770 eligible starts, 50 were excluded at attention checks, leaving 720 analysed respondents against the 672 the power calculation requires, with every quota met within 0.6 percentage points. Because each respondent completes twelve tasks with three alternatives, the dataset contains 8,640 choice situations and 25,920 alternative-level rows, and both counts are reported instead of one ambiguous figure. Appendix Table A2 reports the neophobia factor analysis: the original one-factor structure fits poorly (CFI = .886, RMSEA = .080) and a two-factor structure separating approach from avoidance items fits acceptably (CFI = .969, RMSEA = .043). The modified structure is used where neophobia enters, and its average variance extracted of .47 on the second factor remains marginal. The structure was reached through modification indices, so it is cross-validated by random split-half. In both halves of 360 respondents the one-factor solution fits poorly and the two-factor solution fits well, the loading matrices from the two halves correlate at .99, and every item retains its primary loading on the same factor with no cross-loading above .07. The two-factor structure is therefore treated as established in this sample rather than as exploratory, while the marginal average variance extracted on the avoidance factor is retained as a limitation.

Table 1 reports marginal willingness to pay. The provenance statement attracts 14.2 thousand VND per jar and the elaborated narrative 31.6, so the contrast identifying the narrative premium, which holds provenance information constant, is 17.4 (SE 2.4, 95% CI [12.7, 22.1]), approximately 10.2 per cent of a mean shelf price of 170. Origin certification attracts 24.8, so the narrative premium is smaller by 7.4, and the insect-based variety attracts a discount of 20.9. The coefficient on the insect-based variety differs between Tables 1 and 2 because Table 2 includes the narrative interaction, so the coefficient there is conditional on the reference narrative level rather than averaged across levels. Random-parameter standard deviations are large relative to means throughout, at 24.1 on the narrative and 29.7 on the insect indicator, which indicates that mean estimates conceal substantial heterogeneity and motivates the latent class model below.

Table 1. Marginal willingness to pay, mixed logit in willingness-to-pay space

Attribute	Mean MWTP (SE)	Random SD (SE)	95% CI
Provenance statement	14.2*** (2.1)	12.8 (1.8)	[10.1, 18.3]
Elaborated heritage narrative	31.6*** (3.0)	24.1 (2.5)	[25.7, 37.5]
Elaborated minus provenance	17.4*** (2.4)	—	[12.7, 22.1]
Origin certification	24.8*** (2.7)	18.6 (2.2)	[19.5, 30.1]
Insect-based variety	-20.9*** (3.1)	29.7 (2.7)	[-27.0, -14.8]
Opt-out constant	-52.3*** (5.8)	—	[-63.7, -40.9]
Choice situations (respondent × task)	8,640		
Alternative-level rows	25,920		
Respondents	720		
Log-likelihood	-7,812.6		

Notes. values in thousand VND per jar. Reference levels are no cultural information and the herbal variety. The third row is the contrast identifying the narrative premium, since it holds provenance information constant, and it is 10.2 per cent of a mean shelf

price of 170 thousand VND. Both the choice-situation and alternative-level counts are reported, since either alone is ambiguous. *** $p < .001$.

Table 2 reports the interaction and the mechanism comparison. The narrative premium is 11.1 thousand VND for the herbal variety and 23.7 for the insect-based variety, with the interaction at 12.6 (SE 4.1). The sign is positive, which both accounts of Section 2.3 predict, so the interaction alone does not discriminate between them. The comparison across columns is more informative: the authenticity interactions cut the narrative-by-insect coefficient by 45.2 per cent, to 6.9, and the disgust interactions by 14.3 per cent, to 10.8, with both together leaving 5.6, no longer distinguishable from zero.

Table 2. Narrative by product type, and covariation with the two candidate routes

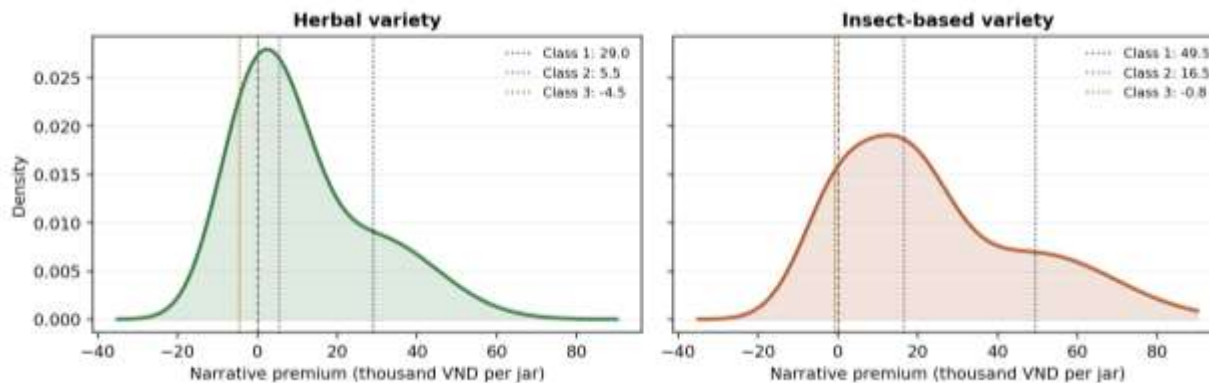
Parameter	(1) Base	(2) + authenticity	(3) + disgust	(4) + both
Narrative premium, herbal	11.1*** (2.8)	12.3*** (2.7)	11.3*** (2.8)	12.4*** (2.7)
Insect-based variety	-27.2*** (3.7)	-24.9*** (3.6)	-25.8*** (3.7)	-23.8*** (3.6)
Narrative × insect	12.6** (4.1)	6.9† (4.0)	10.8** (4.1)	5.6 (4.0)
Attenuation vs column 1 (%)	—	45.2	14.3	55.6
Narrative premium, insect	23.7*** (3.2)	19.2*** (3.1)	22.1*** (3.2)	18.0*** (3.1)
Log-likelihood	-7,795.4	-7,742.8	-7,776.1	-7,728.6

Notes. values in thousand VND. † $p < .10$; ** $p < .01$; *** $p < .001$. Authenticity and disgust are respondent-level constructs and cancel from conditional utility differences, so they enter only as interactions with the narrative levels and the product-type indicator, as Section 3.2 sets out; no main effect for either is estimable. The attenuation row is a comparison of covariation and not a mediation estimate: the constructs are post-treatment and plausibly endogenous, and coefficients in a nonlinear choice model are not on a fixed scale across nested specifications.

That favours the authentication route, and Section 5 sets out how far it can be taken. What it is not is a mediation estimate: the mediators are post-treatment, the coefficients are not on a fixed scale across nested specifications, and the log-likelihood improves in both directions, so the columns establish only that the interaction covaries more strongly with authenticity than with disgust.

Figure 1 plots the distribution of narrative willingness to pay by product type, with the class-specific premiums of the latent class model marked. Both panels share one horizontal and one vertical scale, and zero is retained so that negative valuation stays visible. The insect panel sits to the right of the herbal panel and both are wide, which is the graphical expression of the random-parameter standard deviations in Table 1.

Figure 1. Distribution of willingness to pay for the elaborated narrative, by product type



Notes. Both panels share one horizontal and one vertical scale, and zero is retained so that negative valuation remains visible. Dotted lines mark the class-specific product-level premiums reported in the following table. A figure drawn from realised data should use posterior individual-level draws with their uncertainty and not a kernel density of point predictions.

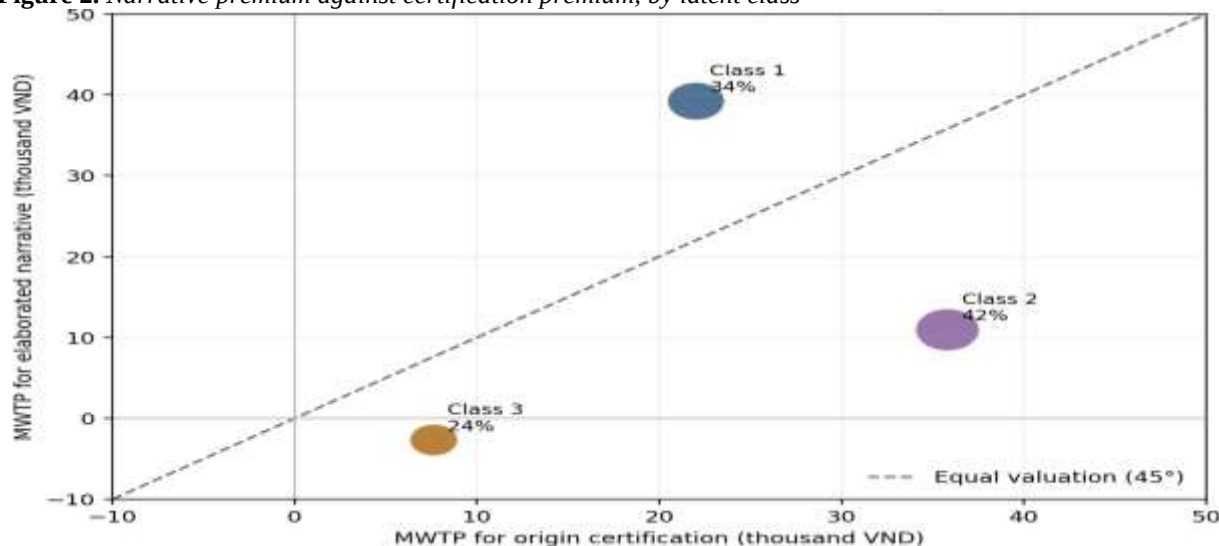
Table 3 reports the three-class model. Class 1, at 34 per cent, pays 29.0 thousand VND for the narrative on the herbal variety and 49.5 on the insect-based variety, with no discount on the insect ingredient. Class 2, at 42 per cent, pays little for narrative and 35.8 for certification. Class 3, at 24 per cent, pays nothing for narrative, discounts the insect variety by 42.1, and is the reference class. Membership is predicted by food neophobia, negatively for Class 1 and positively for Class 2, and by prior familiarity, positively for Class 1. Selection is not unanimous: the Bayesian criterion selects three classes while the Akaike criterion improves at four, The smallest class holds 24 per cent of the sample, 179 respondents, so minimum class size is not a constraint on the three-class solution; entropy and class stability across random starts remain to be reported before it is adopted, and a replication of the class model on the choice data returns an entropy near 0.50, which is below the level conventionally taken to indicate clear separation and implies that the segments overlap more than the class-specific estimates suggest.

Table 3. Three-class model of narrative and certification premiums

Parameter	Class 1	Class 2	Class 3
Class label	Heritage seekers	Certification-oriented	Sceptical / neophobic
Class share (%)	34.0	42.0	24.0
Narrative premium, herbal	29.0*** (4.8)	5.5* (2.6)	-4.5 (3.1)
Narrative × insect	20.5** (6.5)	11.0** (4.1)	3.7 (4.6)
Narrative premium, insect	49.5*** (5.6)	16.5*** (3.3)	-0.8 (3.5)
Average narrative premium	39.3	11.0	-2.7
Origin certification	22.0*** (4.0)	35.8*** (4.4)	7.6* (3.6)
Insect-based variety	4.8 (5.1)	-29.4*** (4.8)	-42.1*** (5.7)
Membership: age	-0.15 (0.09)	0.22* (0.10)	Reference
Membership: income above median	0.48** (0.17)	0.19 (0.16)	Reference
Membership: food neophobia	-0.62*** (0.14)	0.44** (0.15)	Reference
Membership: prior familiarity	0.73*** (0.20)	-0.18 (0.19)	Reference
BIC (2 / 3 / 4 classes)	16,280	16,120	16,175
AIC (2 / 3 / 4 classes)	15,998	15,742	15,701

Notes. values in thousand VND. Class 3 is the reference for the membership model; membership coefficients are identified only relative to a reference class, so free coefficients for all three would be unidentified. Product-specific narrative premiums are reported so that Figure 1 can be checked against the table. Selection is not unanimous: the Bayesian criterion selects three classes while the Akaike criterion continues to improve at four, The smallest class holds 24 per cent of the sample, 179 respondents, so minimum class size does not constrain the solution; entropy and class stability across random starts remain to be reported.

Figure 2 plots the narrative premium against the certification premium by class, marker area proportional to class share, with the 45-degree line marking equal consumer valuation. No cost-ratio line is drawn: a discrete choice experiment estimates consumer valuations and not producer costs, and drawing one would require annualised and comparable certification and narrative production costs with an explicit time horizon, none of which this design supplies.

Figure 2. Narrative premium against certification premium, by latent class

Notes. marker area is proportional to class share and the 45-degree line denotes equal consumer valuation of the two cues. No cost-ratio line is drawn, because a discrete choice experiment estimates consumer valuations and not producer costs; such a line would require separately collected, annualised and comparable certification and narrative production costs together with an explicit time horizon.

Table 4 reports validation and robustness. In the incentive-compatible subsample the mean real payment is 0.82 of the mean hypothetical payment on the matched task, and the narrative premium under real payment is 14.9 against 17.4, a ratio of 0.86. The premium survives incentive compatibility at roughly six sevenths of its hypothetical magnitude, and shrinking less than the price level is what Section 3.1 anticipated, since bias on the level cancels in a difference across narrative levels. Across specification changes the premium ranges from 16.5 to 19.6; the highest comes from excluding chosen opt-outs, which conditions on an endogenous outcome and is a sensitivity exercise and not a preferred specification.

Table 4. Incentive-compatible validation and robustness of the narrative premium

Specification / quantity	Estimate	SE	Ratio to baseline	n
Panel A. Real-money validation				

Specification / quantity	Estimate	SE	Ratio to baseline	n
Mean hypothetical payment, matched task	167.8	6.9	—	144
Mean real payment	137.4	6.2	0.82	144
Narrative premium, hypothetical	17.4	4.1	—	144
Narrative premium, real payment	14.9	4.5	0.86	144
Panel B. Narrative-premium robustness				
Baseline willingness-to-pay-space model	17.4	2.4	1.00	720
Preference-space model, delta-method MWTP	17.0	2.8	0.98	720
Chosen opt-outs excluded	19.6	2.7	1.13	682
Stricter dual attention-check rule	16.8	2.6	0.97	674
Unfamiliar respondents only	18.2	2.9	1.05	578
Alternative price coding	16.5	2.5	0.95	720

Notes. values in thousand VND. The premium shrinks less than the price level under real payment, at 0.86 against 0.82, which is what a design targeting a difference across narrative levels would predict. Excluding chosen opt-outs conditions on an endogenous outcome and is a sensitivity exercise and not a preferred specification. No cheap-talk subsample row appears, because the protocol applies cheap talk to every respondent and no such subsample exists.

5. Discussion

5.1. A monetary premium, and what it changes about the storytelling claim

The narrative premium is positive, identified against a condition in which the consumer already knows the origin, and it survives incentive compatibility at 0.86 of its hypothetical magnitude. That converts the attitudinal ordering of Barretta et al. (2025) into a magnitude, and the magnitude carries a qualification their design could not deliver: the story is worth less than the mark, at 17.4 against 24.8 thousand VND. On attitude, storytelling outperformed certification; on price, here, it does not.

The two findings are not in conflict, and reconciling them locates what a price attribute adds. An attitudinal measure records how favourably a consumer regards a cue; a choice experiment records what they will surrender to obtain it. A cue can dominate on the first and lose on the second whenever it is pleasant but weakly diagnostic of quality, which is what a story attached to an uncertifiable claim is: certification has an enforcement apparatus behind it and a story does not. If this holds on realised data, the policy implication reverses the one the storytelling literature has been read to support: narrative complements certification and does not substitute for it, and a producer who invests in the story while forgoing the mark trades a larger premium for a smaller one.

5.2. Which route the story travels, and how far the evidence goes

The interaction is positive: narrative is worth roughly twice as much on the insect-based variety as on the herbal one. Section 2.3 sets out why that sign does not discriminate between the two accounts, since both predict it. What discriminates is the route, and Table 2 points to authentication over reassurance, since the interaction attenuates by 45.2 per cent against authenticity and 14.3 per cent against disgust.

The weight that comparison bears is stated deliberately. It is not causal mediation, for the reasons in Section 3.3, and the difference between 45.2 and 14.3 per cent carries no standard error in a form supporting a test of equality. It supports a statement about covariation: the interaction moves with authenticity and little with disgust. Read against the cross-cultural entomophagy evidence (Hartmann et al., 2015; Tan et al., 2015), that is what one would expect where the insect is traditional in the producing region. The Western literature assigns narrative the job of overcoming disgust; here disgust does comparatively little of the work and the story appears to be pricing credibility instead.

The implication for the entomophagy literature is that its mechanism may be a property of the market rather than of the ingredient. The present evidence concerns one product in one market, and it establishes only that authenticity covaries more strongly with the interaction than disgust does here; the mirrored prediction for markets in which the insect is novel is a conjecture the design cannot test. Where the insect is novel, narrative should attenuate disgust; where it is traditional, it should raise authenticity. Both produce a positive interaction, which is why studies observing only the sign have reported agreement across settings whose mechanisms differ, and separating them requires the mediating constructs to be measured.

5.3. Heterogeneity, and why the mean is the wrong statistic for the policy question

The three-class structure matters more for policy than the mean. A third of the sample pays 39.3 thousand VND on average for the narrative and does not discount the insect ingredient; two fifths pay little for narrative and substantially for certification; a quarter pays nothing for narrative and discounts the insect variety heavily. A mean premium of 17.4 describes none of them.

The distinction bears directly on whether narrative production is commercially viable for a smallholder. It carries a fixed cost and near-zero marginal cost, so viability turns on the size of the segment that will pay and not on the average premium. Here that segment is 34 per cent of an urban specialty-food population and is identifiable ex ante, since membership rises with prior familiarity and falls with food neophobia, both observable in a customer list or marketing panel, and a producer targeting it faces a premium of 49.5 thousand VND on the insect variety, nearly three times the sample mean. The warning is that the certification-oriented class is larger, so a producer who can afford one investment and cannot target faces a different calculation from one who can.

5.4. Limitations and boundary conditions

Five limitations bear on these conclusions. The mechanism evidence is associational and the attenuation comparison is not a mediation estimate. The latent class solution is not unanimously selected and requires entropy and stability diagnostics before adoption. The neophobia factor structure was modified on the sample on which it is reported, which is exploratory until cross-validated. The incentive-compatible validation rests on a subsample of 144 and one matched task. And the certification attribute is prospective, so its valuation may differ from that of an established mark, plausibly downward, since respondents cannot draw on experience of enforcement.

Two boundary conditions frame the result. The premium is estimated on urban specialty and gift buyers, the population certification policy addresses but not the one that consumes the product traditionally, so nothing here speaks to valuation within the producing region. And the authentication route requires the ingredient to be genuinely traditional in a verifiable sense; where a heritage claim is constructed for a product without that history the mechanism predicts nothing, and the reassurance route would be the appropriate expectation.

6. Conclusion

Using a discrete choice experiment, this study estimates the marginal willingness to pay (WTP) for a heritage narrative regarding a Central Highlands insect-based condiment. The estimated narrative premium is 17.4 thousand VND per jar, lower than the 24.8 thousand VND certification premium, yet twice as large for the insect variety and concentrated in one-third of the sample. This research contributes by converting attitudinal orderings into price premiums and demonstrating that separating parallel theoretical mechanisms requires measuring mediating constructs rather than simply testing interactions. Three extensions are proposed: (1) establishing causality by randomizing or jointly modeling mediating constructs; (2) extending incentive compatibility to the full sample to evaluate hypothetical bias across consumer segments; and (3) incorporating producer-side costs for certification and narrative production to enable the cost-benefit comparisons necessary for evidence-based policymaking.

References

1. Aprile, M. C., Caputo, V., & Nayga, R. M., Jr. (2012). Consumers' valuation of food quality labels: The case of the European geographic indication and organic farming labels. *International Journal of Consumer Studies*, 36(2), 158–165. <https://doi.org/10.1111/j.1470-6431.2011.01092.x>
2. Barennes, H., Phimmasane, M., & Rajaonarivo, C. (2015). Insect consumption to address undernutrition, a national survey on the prevalence of insect consumption among adults and vendors in Laos. *PLOS ONE*, 10(8), Article e0136458. <https://doi.org/10.1371/journal.pone.0136458>
3. Balogh, P., Békési, D., Gorton, M., Popp, J., & Lengyel, P. (2016). Consumer willingness to pay for traditional food products. *Food Policy*, 61, 176–184. <https://doi.org/10.1016/j.foodpol.2016.03.005>
4. Barretta, L., Salomão David, M. L., & Lourenção, M. (2025). Tales or labels? The impact of storytelling and geographical indication label on consumers' attitudes towards Brazilian Canastra cheese. *Food Quality and Preference*, 134, Article 105683. <https://doi.org/10.1016/j.foodqual.2025.105683>
5. Beverland, M. B. (2005). Crafting brand authenticity: The case of luxury wines. *Journal of Management Studies*, 42(5), 1003–1029. <https://doi.org/10.1111/j.1467-6486.2005.00530.x>
6. Cummings, R. G., & Taylor, L. O. (1999). Unbiased value estimates for environmental goods: A cheap talk design for the contingent valuation method. *The American Economic Review*, 89(3), 649–665. <https://doi.org/10.1257/aer.89.3.649>
7. de Bekker-Grob, E. W., Donkers, B., Jonker, M. F., & Stolk, E. A. (2015). Sample size requirements for discrete-choice experiments in healthcare: A practical guide. *The Patient — Patient-Centered Outcomes Research*, 8(5), 373–384. <https://doi.org/10.1007/s40271-015-0118-z>
8. Deselnicu, O. C., Costanigro, M., Souza-Monteiro, D. M., & Thilmany McFadden, D. (2013). A meta-analysis of geographical indication food valuation studies: What drives the premium for origin-based labels? *Journal of Agricultural and Resource Economics*, 38(2), 204–219. <https://doi.org/10.22004/ag.econ.158285>
9. Escalas, J. E. (2004). Narrative processing: Building consumer connections to brands. *Journal of Consumer Psychology*, 14(1–2), 168–180. https://doi.org/10.1207/s15327663jcp1401&2_19
10. Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology*, 79(5), 701–721. <https://doi.org/10.1037/0022-3514.79.5.701>
11. Hartmann, C., Shi, J., Giusto, A., & Siegrist, M. (2015). The psychology of eating insects: A cross-cultural comparison between Germany and China. *Food Quality and Preference*, 44, 148–156. <https://doi.org/10.1016/j.foodqual.2015.04.013>
12. Hong, N. B., Tuyet, T. T., & Linh, D. T. T. (2025). Consumers' preferences for Vietnamese OCOP jerky beef: A market driving force for sustainable livestock development and poverty alleviation in the mountainous regions. *Discover Sustainability*, 6(1), Article 299. <https://doi.org/10.1007/s43621-025-01147-3>
13. Hole, A. R., & Kolstad, J. R. (2012). Mixed logit estimation of willingness to pay distributions: A comparison of models in preference and WTP space using data from a health-related choice experiment. *Empirical Economics*, 42(2), 445–461. <https://doi.org/10.1007/s00181-011-0500-1>

14. La Barbera, F., Verneau, F., Amato, M., & Grunert, K. (2018). Understanding Westerners' disgust for the eating of insects: The role of food neophobia and implicit associations. *Food Quality and Preference*, 64, 120–125. <https://doi.org/10.1016/j.foodqual.2017.10.002>
15. Ladenburg, J., & Olsen, S. B. (2014). Augmenting short cheap talk scripts with a repeated opt-out reminder in choice experiment surveys. *Resource and Energy Economics*, 37, 39–63. <https://doi.org/10.1016/j.reseneeco.2014.05.002>
16. List, J. A., & Gallet, C. A. (2001). What experimental protocol influence disparities between actual and hypothetical stated values? *Environmental and Resource Economics*, 20(3), 241–254. <https://doi.org/10.1023/A:1012791822804>
17. Loureiro, M. L., & McCluskey, J. J. (2000). Assessing consumer response to protected geographical identification labeling. *Agribusiness*, 16(3), 309–320. [https://doi.org/10.1002/1520-6297\(200022\)16:3<309::AID-AGR4>3.0.CO;2-G](https://doi.org/10.1002/1520-6297(200022)16:3<309::AID-AGR4>3.0.CO;2-G)
18. Menapace, L., Colson, G., Grebitus, C., & Facendola, M. (2011). Consumers' preferences for geographical origin labels: Evidence from the Canadian olive oil market. *European Review of Agricultural Economics*, 38(2), 193–212. <https://doi.org/10.1093/erae/jbq051>
19. Pham, D. L., Bao, H. Q., Nguyen, D. D., Trong, L. V., Tra, T. T. L., Phuc, K. T., Thu, N. T. M., & Chi, N. M. (2024). Edible ants in Vietnam: Identification and indigenous knowledge. *Ecologica Montenegrina*, 73, 208–220. <https://doi.org/10.37828/em.2024.73.19>
20. Pliner, P., & Hobden, K. (1992). Development of a scale to measure the trait of food neophobia in humans. *Appetite*, 19(2), 105–120. [https://doi.org/10.1016/0195-6663\(92\)90014-W](https://doi.org/10.1016/0195-6663(92)90014-W)
21. Rose, J. M., & Bliemer, M. C. J. (2009). Constructing efficient stated choice experimental designs. *Transport Reviews*, 29(5), 587–617. <https://doi.org/10.1080/01441640902827623>
22. Scarpa, R., Philippidis, G., & Spalatro, F. (2005). Product-country images and preference heterogeneity for Mediterranean food products: A discrete choice framework. *Agribusiness*, 21(3), 329–349. <https://doi.org/10.1002/agr.20051>
23. Tan, H. S. G., Fischer, A. R. H., Tinch, P., Stieger, M., Steenbekkers, L. P. A., & van Trijp, H. C. M. (2015). Insects as food: Exploring cultural exposure and individual experience as determinants of acceptance. *Food Quality and Preference*, 42, 78–89. <https://doi.org/10.1016/j.foodqual.2015.01.013>
24. Sidali, K. L., & Hemmerling, S. (2014). Developing an authenticity model of traditional food specialties: Does the self-concept of consumers matter? *British Food Journal*, 116(11), 1692–1709. <https://doi.org/10.1108/BFJ-02-2014-0056>
25. Sonnier, G., Ainslie, A., & Otter, T. (2007). Heterogeneity distributions of willingness-to-pay in choice models. *Quantitative Marketing and Economics*, 5(3), 313–331.
26. Train, K. E. (2009). *Discrete choice methods with simulation* (2nd ed.). Cambridge University Press. <https://doi.org/10.1017/CBO9780511805271>
27. Train, K., & Weeks, M. (2005). Discrete choice models in preference space and willingness-to-pay space. In R. Scarpa & A. Alberini (Eds.), *Applications of simulation methods in environmental and resource economics* (pp. 1–16). Springer. https://doi.org/10.1007/1-4020-3684-1_1
28. Tran, D., Broeckhoven, I., Hung, Y., Diem My, N. H., De Steur, H., & Verbeke, W. (2022). Willingness to pay for food labelling schemes in Vietnam: A choice experiment on water spinach. *Foods*, 11(5), Article 722. <https://doi.org/10.3390/foods11050722>