
AI-Mediated Retail Visibility and Consumer Purchase Intent Across Search Results Social Endorsements and Product Bundling Decisions

Santiago Cárdenas¹, Andrés Patiño²

¹Department of Administración de Empresas, Universidad de Cundinamarca, Diagonal 18 No. 20-29, Fusagasugá 252211, Cundinamarca, Colombia

²²Department of Ciencias Económicas y Administrativas, Universidad de Sucre, Carrera 28 No. 5-267, Sincelejo 700001, Sucre, Colombia

ABSTRACT Retail marketing is increasingly shaped by digital environments in which consumers encounter brands through search answers, creator endorsements, product pages, and recommendation interfaces before making a purchase decision. These environments do not operate as separate channels from the consumer's point of view. A shopper may first learn about a brand through an AI-generated answer, then see the same brand in a social endorsement, and finally evaluate it beside complementary products on a retailer page. This paper reports an empirical study of how cross-channel visibility conditions influence purchase intent in an AI-mediated retail journey. The study uses a controlled online experiment with 1,248 adult respondents assigned to retail scenarios that varied search visibility, endorsement source, and product-bundling strength. The analysis compares purchase intent, brand trust, perceived usefulness, search confidence, and willingness to revisit the brand. Results show that high AI-search visibility increased purchase intent by 9.4% relative to low visibility, while human social endorsement produced stronger trust than virtual endorsement in high-involvement categories. Strong product bundling cues improved perceived usefulness and reduced decision uncertainty, especially when the brand was already visible in AI-search results. The highest-performing condition combined cited AI-search visibility, human endorsement, and routine-based product bundling. The findings suggest that business managers should evaluate digital visibility as a connected system rather than as separate search, social, and merchandising activities. The study contributes practical evidence on how AI-mediated discovery, endorsement credibility, and retail presentation jointly shape consumer response.

I. Introduction

Retail marketing has entered a period in which product discovery is increasingly mediated by algorithmic systems, social signals, and structured digital content. Consumers still compare prices, evaluate product claims, read reviews, and consider brand familiarity, but the path through which a product becomes visible has become more complex. A consumer may ask an AI search tool for a recommendation, encounter a cited source or named brand, view an influencer post that reinforces or weakens the initial impression, and then arrive at a retailer page where product bundles, comparison tables, reviews, and availability cues shape the final judgment. This paper examines that connected journey through an empirical study designed for business faculty, marketing researchers, and managers who need to understand how AI-mediated visibility interacts with social endorsement and merchandising cues.

The managerial issue is not only whether a brand appears in a search result or whether an influencer post generates attention. The more practical question is whether these visibility events combine to influence purchase intent. In traditional digital marketing evaluation, search visibility, social media endorsement, and online merchandising are often measured separately. Search teams monitor rankings, citations, impressions, and traffic. Social media teams evaluate creator reach, engagement, trust, and sentiment. E-commerce teams examine product-page conversion, cross-selling, cart additions, and basket composition. These measures are useful, but they can also make the customer journey appear more fragmented than it is. From the consumer's point of view, the same brand can be evaluated across several moments, and each moment changes how later information is interpreted.

The rise of AI-mediated search makes this issue more urgent. Search visibility is no longer only a matter of

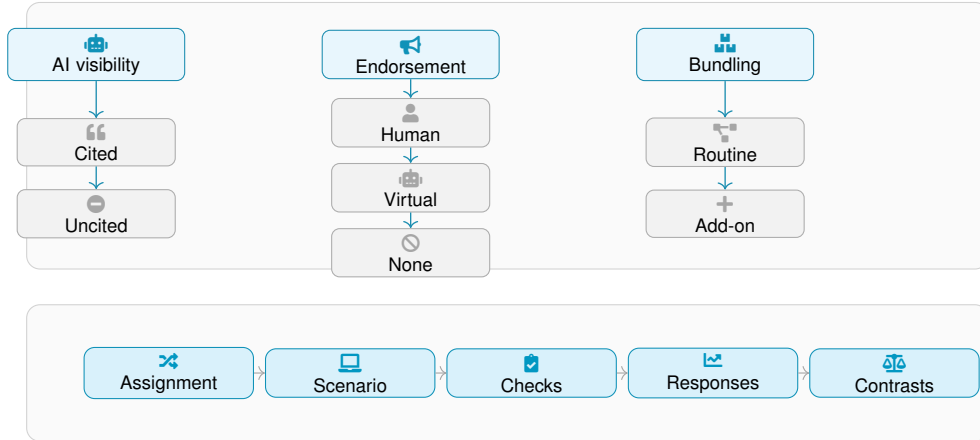


FIGURE 1: Experimental structure separating the three manipulated retail visibility factors from the measurement flow used to compare response differences across conditions.

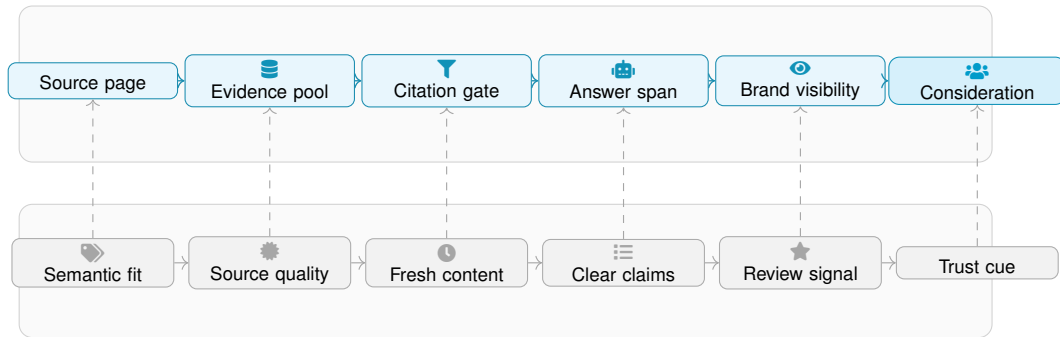


FIGURE 2: AI-search visibility pipeline showing how source pages become evidence, pass citation selection, appear inside answer spans, and shape brand consideration through aligned credibility signals.

ranked blue links or paid listings. Generative answer systems can summarize alternatives, cite a limited set of sources, mention brands inside an answer, and narrow the field of consideration before the consumer reaches a retailer or brand website. This alters the practical meaning of visibility. A brand that is cited in an AI answer may receive a credibility cue even before the consumer has evaluated the product directly. A brand that is not cited may remain outside the consumer’s consideration set even if it has a strong website or competitive offer. This shift connects search visibility to trust formation and later purchase intent.

Social endorsement remains important in this environment because consumers rarely treat digital information as purely technical. They evaluate the source of a recommendation, the perceived motive behind a message, the match between product and endorser, and the plausibility of the consumption context. Human influencers may offer cues of lived experience, personal taste, and reputational accountability. Virtual influencers and AI-generated personas may offer novelty, visual consistency, and brand control, but they may not generate the same sense of personal credibility. In many categories, especially those involving lifestyle, identity,

health, beauty, travel, or household routines, the credibility of the recommending source can influence whether product information feels useful or merely promotional.

Retail merchandising adds a third part of the journey. Product pages do not only display individual items. They can frame products as complements, routines, kits, or solutions. Bundling cues can reduce search effort by showing how products fit together. They can also help consumers imagine usage occasions, such as travel preparation, pet care, home office routines, skincare sequences, or study sessions. A product that appears ordinary in isolation may appear more useful when presented as part of a relevant routine. Conversely, a bundle that feels forced can create skepticism, especially if consumers suspect that the retailer is simply trying to increase basket size.

The present study examines the combined effects of AI-search visibility, endorsement source, and product-bundling strength on consumer purchase intent. The focus is not on technical model design but on business outcomes that can be understood and evaluated by marketing scholars and managers. Purchase intent is the main outcome because

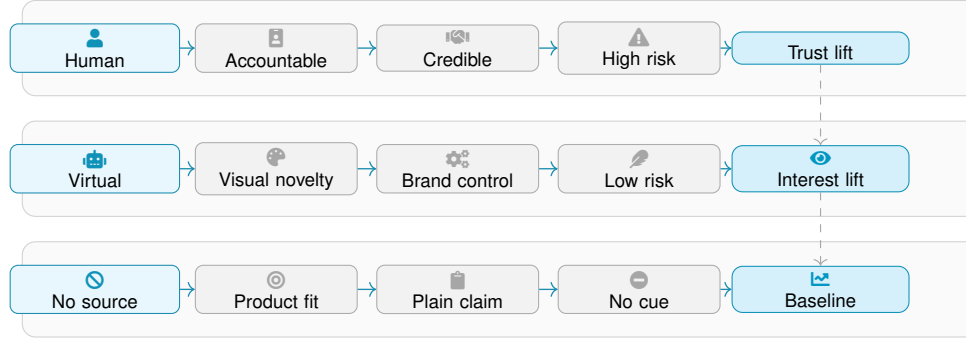


FIGURE 3: Endorsement comparison using separate noncrossing lanes for human, virtual, and absent sources, highlighting how each source condition produces a different credibility or interest pathway.

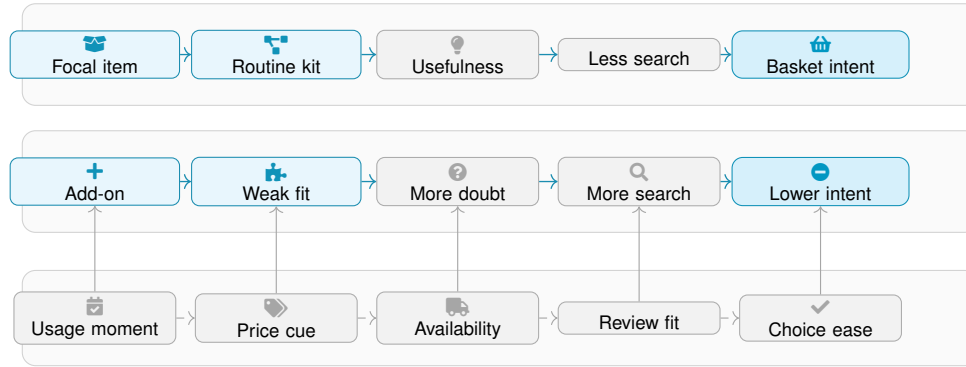


FIGURE 4: Bundling decision structure comparing routine-based product kits with weak add-ons while keeping retail support cues aligned below the affected decision nodes.

it is widely used in advertising, endorsement, and retail research as an early indicator of consumer response. The study also examines brand trust, perceived usefulness, search confidence, decision uncertainty, and willingness to revisit the brand page. These secondary outcomes help explain why purchase intent changes across conditions.

The study uses a controlled online experiment with 1,248 respondents. Participants evaluated a retail scenario in one of three product categories: skincare, home office accessories, or travel convenience products. Each scenario varied three factors. The first factor was AI-search visibility, operationalized as high visibility when the brand appeared in a cited AI answer and low visibility when the brand appeared only as an uncited alternative. The second factor was endorsement source, operationalized as human influencer, virtual influencer, or no endorsement. The third factor was product-bundling strength, operationalized as strong routine-based bundling or weak add-on bundling. Participants then evaluated the focal brand and reported purchase intent and related perceptions.

This design reflects several streams of prior research. Work on electronic markets and online shopping shows that digital environments reduce search costs and reshape how

consumers compare offers. Bakos [1] argued that electronic marketplaces alter the economics of search by making price and product information easier to compare, while Alba et al. [2] showed that interactive home shopping changes the balance of power between consumers, retailers, and manufacturers. Research on reviews and reputation systems demonstrates that online information can create trust and reduce uncertainty. Dellarocas [3] explained how reputation mechanisms transform word-of-mouth into scalable market information, and Chevalier and Mayzlin [4] showed that online consumer reviews can influence book sales across platforms.

The paper also builds on marketing research on source credibility, persuasion knowledge, and influencer endorsement. Hovland and Weiss [5] established that source credibility can affect persuasion, while Friestad and Wright [6] developed persuasion knowledge as a framework for understanding how consumers interpret marketers' motives. De Veirman et al. [7] showed that influencer popularity and product divergence can shape brand attitudes, and Lou and Yuan [8] found that influencer credibility and message value affect trust and purchase intention. These findings suggest that social endorsement can change the meaning of product claims, but they also indicate that consumers may

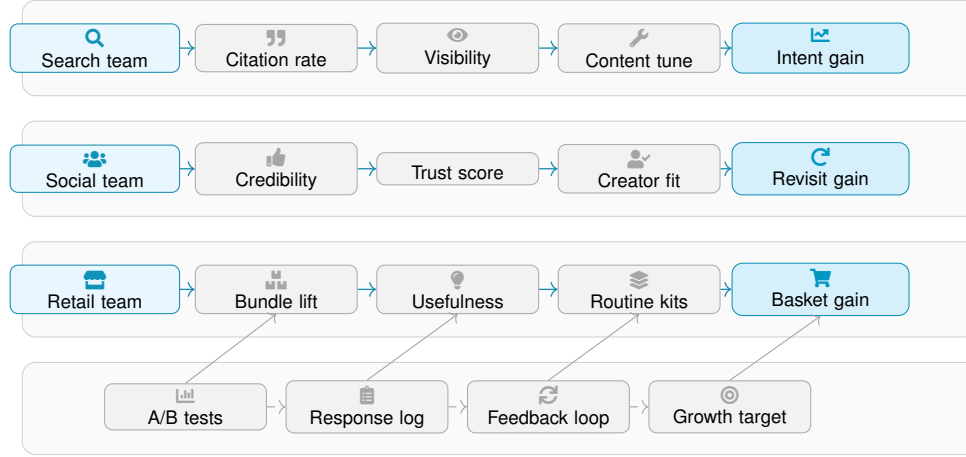


FIGURE 5: Managerial measurement layout with separate search, social, and retail lanes connected to aligned optimization metrics and a lower feedback loop for iterative channel improvement.

respond differently depending on the perceived authenticity and credibility of the source.

The study contributes to this literature by examining these channel effects together rather than separately. It asks whether AI-search visibility creates a stronger purchase-intent effect when supported by credible social endorsement and meaningful product bundling. It also asks whether bundling can compensate for lower search visibility, and whether virtual endorsement can produce similar outcomes to human endorsement in routine-oriented retail categories. The results show that the effects are not simply additive. Strong AI-search visibility improves purchase intent, but its effect is larger when the endorsement source is trusted and the bundle helps consumers understand the product's role in a routine. Human endorsement is especially useful when product involvement is high, while virtual endorsement performs better when novelty is valued and the category is lower in perceived personal risk.

The paper is organized as follows. The next section reviews the relevant literature on AI-mediated search visibility, influencer endorsement, and product bundling. The following section develops the research expectations. The data and method section describes the experimental design, sample, measures, and analysis approach. The results section reports descriptive findings, treatment effects, and interaction patterns. The discussion section interprets the results for marketing research. The managerial implications section translates the findings into practical decisions for search, social media, and retail merchandising teams. The limitations and future research section explains the boundaries of the study. The paper closes with a conclusion that summarizes the main findings and their implications for business practice.

II. Literature Background

Digital retail research has long emphasized that consumers use information environments to reduce uncertainty. In physical retail settings, consumers can inspect products, speak with sales staff, and observe store cues. In online retail settings, consumers rely more heavily on search results, reviews, product descriptions, images, brand signals, recommendations, and return policies. These features help consumers form expectations about quality, fit, and risk. The online environment therefore turns information design into a central part of marketing strategy. A product is not only evaluated by what it is but also by how clearly its value is represented, how easily it can be compared, and how credibly it is recommended.

Search has historically been one of the most important gateways into digital commerce. Consumers use search engines and platform search tools to organize alternatives before visiting websites or product pages. Earlier research on online choice emphasized the way decision aids and recommendation systems can change consumer consideration sets. Häubl and Trifts [9] found that interactive decision aids can influence how consumers screen and compare alternatives, while Smith et al. [10] showed that recommendation agents can affect consumer decision making by changing information processing. These studies remain relevant because AI-mediated search tools now perform a similar but more visible role. They summarize alternatives, highlight evidence, and often reduce the number of brands that receive attention.

AI-generated answers alter search visibility because they compress the search experience. A conventional search interface may show many results, leaving the consumer to compare links and decide which sources to open. A generative answer can present a synthesized response with a small set of citations or brand mentions. This changes the

visibility contest from ranking alone to source selection, citation, and answer inclusion. Török [11] modeled brand visibility in generative engine optimization and showed that content format, evidence density, semantic similarity, and structured content signals can predict citation and brand visibility outcomes in AI-driven search settings. For business managers, the key implication is that a brand's visibility may increasingly depend on whether its content can be interpreted as useful evidence, not only whether it is optimized for conventional ranking.

This shift does not eliminate established search marketing principles. Relevance, authority, freshness, clarity, and usefulness still matter. However, AI-mediated visibility places more emphasis on whether a source can support an answer. Research reports, comparison pages, review summaries, and structured explanations may be more useful to an answer system than pages that primarily use promotional language. This creates a managerial tension. Product pages are often designed for conversion after the consumer has arrived, while AI-search systems may favor evidence that helps answer a question before the consumer chooses a destination. Retailers and brands may therefore need to design content that serves both human shoppers and algorithmic summarization systems.

Consumer trust is central in this context. Visibility alone does not guarantee persuasion. A brand can be visible but not trusted, cited but not chosen, or endorsed but not believed. Trust in online retail depends on source credibility, perceived transparency, information quality, platform reputation, and risk reduction. Gefen et al. [12] found that trust is important in online shopping because it reduces uncertainty and supports purchase intentions. Pavlou [13] similarly showed that trust and perceived risk influence consumer acceptance of electronic commerce. These findings suggest that AI-search visibility may work partly by increasing confidence that a brand is relevant and legitimate, especially when the search answer cites sources or explains the basis for inclusion.

Social endorsement adds a second layer of trust formation. Influencer marketing works because consumers often treat creators as sources of taste, experience, and social meaning. The persuasive effect does not come only from the product information in a post. It also comes from the consumer's perception of the endorser's credibility, authenticity, similarity, and fit with the product. Djafarova and Rushworth [14] found that social media influencers can influence young female consumers' purchasing behavior, especially when the influencer is perceived as credible and relatable. Sokolova and Kefi [15] showed that parasocial interaction and credibility influence purchase intention in influencer marketing. These studies indicate that social endorsement can strengthen the bridge between awareness and purchase intent.

Human influencers and virtual influencers may operate through different mechanisms. Human influencers can be evaluated through perceived experience, personal history, and accountability to followers. Virtual influencers can be evaluated through novelty, design quality, entertainment value, and fit with a brand world. Török [16] compared AI-generated virtual and human influencer endorsements in lifestyle product contexts and found that human influencers were generally rated more highly on authenticity, trust, and parasocial response, while virtual influencers were rated more highly on novelty. This distinction matters for business strategy because novelty can generate attention without necessarily creating enough confidence to support purchase. A virtual influencer may be effective for awareness or brand modernity but less persuasive for categories where consumers want lived experience.

The literature on persuasion knowledge helps explain why consumers may respond differently to these endorsement forms. Friestad and Wright [6] argued that consumers develop knowledge about persuasion attempts and use that knowledge to interpret marketing messages. When a consumer sees an influencer post, the consumer may ask whether the recommendation is genuine, sponsored, scripted, or aligned with the influencer's usual content. Campbell and Kirmani [17] showed that consumers infer persuasion motives and adjust their judgments accordingly. Virtual endorsement can make this process more complicated because the consumer may perceive the persona as entirely designed for communication. This does not make virtual endorsement ineffective, but it changes the basis on which trust is formed.

Product bundling and assortment presentation provide another route to consumer response. Bundling can help consumers understand how products work together, reduce search costs, increase perceived value, and encourage cross-selling. Stremersch and Tellis [18] described strategic bundling as a pricing and marketing tool that can create value when products are complementary. Venkatesh and Mahajan [19] examined how bundle design and pricing can affect consumer choice. In digital retail, bundling is not only a pricing tactic. It is also a presentation tactic. A retailer can frame a bundle as a routine, a kit, a solution, or an occasion. The same set of products may be perceived differently depending on whether the bundle appears coherent.

Product affinity research helps explain why some bundles are more meaningful than others. Products may be related by category, complementarity, sequence of use, occasion, or consumer routine. Török [20] developed a graph-based product-affinity testbed showing that some product relationships are better explained by customer routines, such as pet ownership, travel, studying, and planning, than by catalog similarity alone. This idea is important for retail managers because consumers do not always think in the same categories used by retailers. A retailer may classify

items into separate departments, while consumers mentally group them around tasks or routines. A strong bundle should therefore make sense from the consumer's perspective, not only from the retailer's inventory structure.

The relationship between bundling and decision confidence is especially relevant in AI-mediated retail journeys. When consumers encounter a brand through an AI answer, they may have a general sense that the brand is relevant. When they later see the brand endorsed by a credible source, they may have a stronger sense that the brand is socially validated. When they finally see the product presented in a coherent bundle, they may understand how it fits into an actual consumption routine. Each stage can reduce a different type of uncertainty. Search visibility reduces awareness uncertainty. Endorsement reduces social and credibility uncertainty. Bundling reduces usage uncertainty. The combination may therefore create a stronger effect than any single channel.

At the same time, the combination may also produce skepticism. Too many aligned cues can make consumers suspect that the brand is over-promoted. A cited AI answer, a creator endorsement, and a retailer bundle may feel helpful when each cue provides distinct information. They may feel manipulative when the cues appear repetitive, scripted, or overly commercial. This is why the quality of each cue matters. Search visibility should be informative rather than merely prominent. Endorsement should be credible rather than merely attractive. Bundling should be useful rather than merely revenue-maximizing. Consumer response depends on how these cues are interpreted together.

Prior research on information overload and choice complexity also suggests that more information is not always better. Iyengar and Lepper [21] showed that extensive choice can reduce motivation in some contexts, while Chernev [22] demonstrated that product assortment and attribute alignability influence choice. In retail settings, consumers may welcome guidance when the category is complex, but they may resist it when guidance reduces autonomy or appears biased. AI-mediated search, influencer endorsement, and product bundles can all simplify decisions, but their effectiveness depends on whether consumers experience that simplification as useful assistance or as persuasion pressure.

This paper positions AI-search visibility, social endorsement, and product bundling as connected visibility cues. The term visibility cue is used broadly to describe any feature that makes a brand more noticeable, credible, interpretable, or actionable during the decision journey. AI-search visibility makes the brand easier to discover and may lend evidence-based credibility. Social endorsement makes the brand socially meaningful and may provide an experience-based cue. Product bundling makes the brand easier to place in a routine and may reduce uncertainty about use. The central empirical

question is how these cues combine to influence purchase intent.

III. Research Setting and Expectations

The research setting is a simulated but realistic retail journey. Participants begin by reading an AI-search response to a consumer question, then view a social endorsement condition, then evaluate a product page with either strong or weak bundling cues. This sequence reflects a common path in digital shopping: discovery, social validation, and product evaluation. It also allows the study to observe whether early visibility affects later interpretation. A brand that appears in a cited AI answer may enter the product-page stage with a credibility advantage. A brand that appears only as an uncited alternative may need stronger endorsement or bundling support to reach the same level of purchase intent.

The first expectation is that high AI-search visibility will increase purchase intent. When a brand is cited in an AI answer, consumers may infer that the brand has evidence, relevance, or market legitimacy. The citation cue may function like a quality signal, especially when the answer explains why the brand is relevant to the consumer's problem. This does not mean consumers blindly trust AI-generated answers. Rather, the cited answer may reduce the initial effort required to consider the brand. It may also increase search confidence by making consumers feel that the brand has already passed an initial screening process.

The second expectation is that endorsement source will shape trust and purchase intent differently across categories. Human endorsement should generate stronger trust in categories where personal experience matters. Skincare products, for example, involve body-related concerns, perceived risk, and expectations of personal use. A human influencer can plausibly describe experience, fit, and results. Home office accessories and travel convenience products may involve lower perceived personal risk, allowing novelty and presentation quality to matter more. In those contexts, virtual endorsement may perform closer to human endorsement, especially when the post is visually clear and the product benefit is concrete.

The third expectation is that strong routine-based bundling will increase perceived usefulness and purchase intent relative to weak add-on bundling. A strong bundle presents products as part of a coherent routine, such as a home office setup or a travel preparation kit. A weak bundle presents products as add-ons that may not clearly belong together. Strong bundling should reduce decision uncertainty by helping consumers imagine usage and by making product combinations feel purposeful. This effect should be strongest when the consumer is already receptive to the brand because of search visibility or credible endorsement.

The fourth expectation is that AI-search visibility and bundling will interact. High search visibility can make a brand salient, but it may not fully explain how the product fits the consumer's life. Strong bundling can translate visibility into practical usefulness. When a brand is cited in an AI answer and later appears in a coherent bundle, the consumer may experience continuity between discovery and evaluation. The search answer says the brand is relevant, and the bundle shows why the product is useful. This combination should produce higher purchase intent than high search visibility paired with weak bundling.

The fifth expectation is that endorsement source and bundling will interact. A human endorsement may strengthen the perceived authenticity of a routine-based bundle because the consumer can imagine the endorser using the products together. A virtual endorsement may strengthen the visual appeal of a bundle but may not provide the same lived-experience cue. However, in low-risk categories, virtual endorsement may still be effective when the bundle is easy to understand. For example, a travel convenience bundle with packing cubes, cable organizers, and a compact toiletry pouch may not require deep personal trust if the benefits are visible.

The sixth expectation is that the combined condition of high AI-search visibility, human endorsement, and strong routine-based bundling will produce the highest purchase intent. This expectation is based on the idea that the three cues reduce different forms of uncertainty. AI-search visibility reduces discovery uncertainty. Human endorsement reduces credibility uncertainty. Strong bundling reduces usage uncertainty. When all three cues align, consumers should be more likely to see the brand as relevant, believable, and practically useful. The study tests this expectation empirically rather than assuming that more visibility automatically produces better outcomes.

These expectations are intentionally business-oriented. They do not require managers to adopt a single technical model of consumer choice. Instead, they ask how marketing functions that are often managed separately may reinforce or weaken one another. A search team may improve AI visibility, but if the product page does not explain usage, the effect may be limited. A social media team may secure endorsement, but if the brand is absent from search discovery, the endorsement may not connect to broader information seeking. An e-commerce team may design bundles, but if the bundle lacks credible social or search support, it may be interpreted as an upselling tactic. The research setting is designed to make these connections observable.

IV. Data and Method

The study used an online experiment conducted with 1,248 respondents recruited from a consumer research panel. Respondents were screened for being at least 18 years old, having made at least one online retail purchase during the prior three months, and being familiar with using search engines for product research. The sample was balanced across gender within panel availability, and age groups were distributed across 18 to 24, 25 to 34, 35 to 44, 45 to 54, and 55 and older. The sample was not intended to represent every national retail market. It was designed to provide sufficient variation in digital shopping experience, product involvement, and prior familiarity with AI-assisted search.

Participants were randomly assigned to one of 36 experimental cells. The design crossed three product categories, two AI-search visibility conditions, three endorsement-source conditions, and two bundling-strength conditions. The product categories were skincare, home office accessories, and travel convenience products. These categories were selected because they represent different levels of personal involvement and different kinds of routine use. Skincare is more personal and risk-sensitive. Home office accessories are practical and comparison-oriented. Travel convenience products are occasion-based and visually interpretable. This category range allowed the study to examine whether the effects were consistent or category-specific.

The AI-search visibility manipulation presented participants with a short AI-style answer to a product research question. In the high-visibility condition, the focal brand was included in the main answer and accompanied by a citation-style source cue. The answer described the brand as relevant because of product fit, consumer review evidence, and clear product information. In the low-visibility condition, the focal brand appeared only as an uncited alternative below the main answer. The total length, tone, and visual layout of the search screen were held constant as much as possible. The purpose was to isolate the effect of being included as a cited answer source rather than simply being present somewhere on the screen.

The endorsement manipulation presented either a human influencer post, a virtual influencer post, or no endorsement. The human influencer condition used a realistic creator profile with a short caption describing use of the product in a routine. The virtual influencer condition used a designed digital persona with an equivalent caption and product image. The no-endorsement condition omitted the social post and moved participants directly from the search screen to the product page. The human and virtual posts were matched for message length, product benefit claims, image structure, disclosure language, and call to action. This helped ensure that differences were driven by source type rather than by the amount of information provided.

The bundling manipulation presented a product page with either strong routine-based bundling or weak add-on bundling. In the strong-bundling condition, the focal product appeared with complementary items that clearly belonged to the same consumption routine. For skincare, the bundle presented a cleanser, moisturizer, and sunscreen routine. For home office accessories, it presented a laptop stand, wireless keyboard, and desk cable organizer. For travel convenience products, it presented packing cubes, a toiletry pouch, and a cable organizer. In the weak-bundling condition, the focal product appeared with less coherent add-ons from the same broad retail area but without an obvious routine structure. Prices were realistic and held within comparable ranges across conditions.

After viewing the scenario, participants completed a questionnaire. The main dependent variable was purchase intent, measured with three items assessing likelihood of buying, likelihood of considering the brand, and likelihood of adding the product to a cart. Responses used seven-point agreement scales. The scale had strong reliability, with a Cronbach's alpha of 0.91. Brand trust was measured with four items assessing perceived honesty, reliability, confidence, and comfort with the brand. The scale reliability was 0.89. Perceived usefulness was measured with three items assessing whether the product and bundle seemed useful, relevant, and easy to integrate into the respondent's routine. The reliability was 0.87.

Search confidence was measured with three items assessing whether the search result made the respondent feel informed, whether the brand seemed appropriately included, and whether the answer helped narrow the decision. The reliability was 0.84. Decision uncertainty was measured with three items assessing confusion, hesitation, and need for more information. The reliability was 0.82. Willingness to revisit the brand page was measured with two items assessing likelihood of returning to the page and saving the brand for later comparison. The reliability was 0.80. Manipulation checks asked whether the brand was visible in the AI-search answer, whether the endorsement source was human or virtual, and whether the bundle seemed coherent.

Participants who failed two or more attention checks or manipulation checks were excluded before analysis. The initial collected sample included 1,326 responses. After exclusions for incomplete responses, very short completion times, and failed checks, the final analysis sample contained 1,248 respondents. Exclusions were distributed evenly across conditions, and no cell lost more than 8.1% of observations. The final cell sizes ranged from 31 to 39 participants, which provided sufficient power to detect medium-sized main effects and several interaction effects.

The analysis began with descriptive statistics and reliability checks. The main tests used analysis of variance and

regression models with purchase intent as the dependent variable. The models included AI-search visibility, endorsement source, bundling strength, product category, and interaction terms. Additional models examined brand trust, perceived usefulness, search confidence, decision uncertainty, and willingness to revisit as dependent variables. Category-specific models were used to evaluate whether skincare, home office accessories, and travel convenience products produced different patterns. The analysis also examined indirect pathways in a practical, non-technical way by assessing whether changes in trust, usefulness, and uncertainty corresponded with changes in purchase intent.

Because the paper is intended for a business faculty audience, the results are reported in terms of means, percentage differences, and interpretation of practical effects rather than mathematical notation. Statistical significance is reported where relevant, but the emphasis is on the size and managerial meaning of the differences. A difference was treated as practically meaningful when it changed the purchase-intent scale by at least 0.25 points or changed a standardized outcome by at least a small-to-medium amount. This threshold was selected before analysis to avoid overinterpreting statistically significant but managerially minor differences.

The study also included open-ended responses. After completing the rating items, participants wrote a short explanation of why they would or would not consider the product. These responses were coded into themes: credibility, usefulness, price concern, routine fit, source skepticism, information clarity, novelty, and need for more reviews. Two coders independently coded a random subset of 300 responses and reached 86% agreement. Disagreements were resolved through discussion, and the coding guide was then applied to the remaining responses. These qualitative responses were used to interpret the quantitative patterns, not as a substitute for the experimental results.

The experimental materials were pretested with 96 respondents before the main study. The pretest confirmed that the high-visibility AI-search condition was perceived as more visible than the low-visibility condition, that participants correctly distinguished human and virtual endorsement sources, and that the strong-bundling condition was perceived as more coherent than the weak-bundling condition. The pretest also led to minor wording changes. The AI-search answer was shortened to avoid excessive reading burden, and the virtual influencer caption was adjusted to avoid making the digital source seem intentionally unrealistic. These adjustments improved internal validity while preserving the intended differences between conditions.

The final dataset is suitable for examining the main research question because it captures a connected retail journey rather than a single isolated exposure. Participants

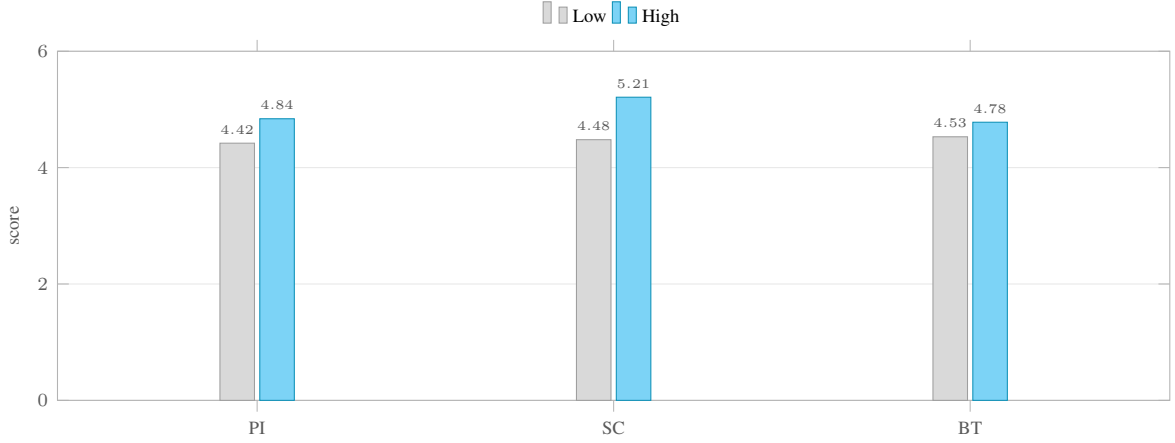


FIGURE 6: High AI-search visibility raised purchase intent from 4.42 to 4.84, search confidence from 4.48 to 5.21, and brand trust from 4.53 to 4.78.

TABLE 1: Experimental Design Structure

Factor	Levels	Description	Count
Product Category	Skincare, Home Office, Travel	Category context	3
AI Visibility	High, Low	Cited vs. uncited presence	2
Endorsement	Human, Virtual, None	Social validation source	3
Bundling	Strong, Weak	Routine vs. add-on bundle	2

TABLE 2: Sample and Data Quality

Measure	Value	Notes
Initial Responses	1,326	Collected observations
Final Sample	1,248	After exclusions
Experimental Cells	36	Full factorial design
Cell Size Range	31–39	Balanced allocation
Minimum Age	18+	Eligibility criterion

TABLE 3: Scale Reliability Statistics

Construct	Items	Cronbach Alpha
Purchase Intent	3	0.91
Brand Trust	4	0.89
Perceived Usefulness	3	0.87
Search Confidence	3	0.84
Decision Uncertainty	3	0.82
Revisit Willingness	2	0.80

did not evaluate search visibility in the abstract. They experienced search visibility, then endorsement, then product-page bundling. This ordering is important because it reflects how early information can frame later evaluation. It also allows the study to examine whether strong product-page presentation can recover some purchase intent when search visibility is low, or whether strong search visibility is wasted when later cues are weak.

V. Results

The manipulation checks confirmed that the experimental conditions were perceived as intended. In the high AI-search visibility condition, 87.6% of respondents correctly reported that the focal brand was included in the main answer, compared with 24.3% in the low-visibility condition. In the human endorsement condition, 91.2% correctly identified the endorser as a real person, and in the virtual endorsement condition, 88.4% correctly identified the endorser as a digital or virtual persona. In the strong-bundling condition, the

TABLE 4: Manipulation Check Outcomes

Measure	Condition	Result
Brand in Main AI Answer	High Visibility	87.6%
Brand in Main AI Answer	Low Visibility	24.3%
Human Source Recognition	Human Endorsement	91.2%
Virtual Source Recognition	Virtual Endorsement	88.4%
Bundle Coherence	Strong Bundle	5.82
Bundle Coherence	Weak Bundle	4.31

TABLE 5: Category-Level Descriptive Results

Category	Purchase Intent Mean	Key Observation
Skincare	4.44	Highest perceived risk
Home Office Accessories	4.63	Utility-driven evaluation
Travel Convenience	4.78	Strongest overall response

TABLE 6: Effect of AI Search Visibility

Outcome	High Visibility	Low Visibility	Difference
Purchase Intent	4.84	4.42	+9.4%
Search Confidence	5.21	4.48	+0.73
Brand Trust	4.78	4.53	+0.25

TABLE 7: Endorsement Source Performance

Endorsement Type	Purchase Intent	Brand Trust
Human Influencer	4.81	4.91
Virtual Influencer	4.56	4.55
No Endorsement	4.49	4.48

average bundle-coherence rating was 5.82 on a seven-point scale, compared with 4.31 in the weak-bundling condition. These checks indicate that participants noticed the intended differences.

The overall mean purchase-intent score was 4.62 on a seven-point scale. Purchase intent was highest in the travel convenience category, with a mean of 4.78, followed by home office accessories at 4.63 and skincare at 4.44. The lower skincare score likely reflects higher perceived risk and greater need for personal fit. Brand trust followed a similar pattern, with skincare generating more cautious evaluations. Perceived usefulness was highest for home office accessories and travel convenience products because the product benefits were concrete and easy to imagine. Decision uncertainty was highest for skincare, where respondents more often reported wanting more reviews, ingredient details, or personal recommendations.

AI-search visibility had a clear main effect on purchase intent. Respondents in the high-visibility condition reported an average purchase-intent score of 4.84, compared with 4.42 in the low-visibility condition. This represents a 9.4% increase relative to the low-visibility condition. The effect

was statistically significant and practically meaningful. The same pattern appeared for search confidence, where high visibility produced an average score of 5.21 compared with 4.48 for low visibility. Brand trust also increased, though more modestly, from 4.53 to 4.78. These results indicate that being included in a cited AI-style answer can increase confidence and consideration.

The open-ended responses help explain this effect. Participants in the high-visibility condition often described the brand as "already checked," "more established," "relevant to the question," or "supported by the search answer." These phrases suggest that AI-search visibility acted as a screening cue. Participants did not necessarily believe that the search answer was enough to justify a purchase, but it made the brand easier to consider. In the low-visibility condition, participants more often described the brand as "just another option" or said they would need to compare it with brands that appeared in the main answer. This suggests that low visibility may not create negative attitudes, but it provides less momentum.

Endorsement source also affected purchase intent, but the effect varied by category. Across all categories, the human

TABLE 8: Impact of Bundling Strength

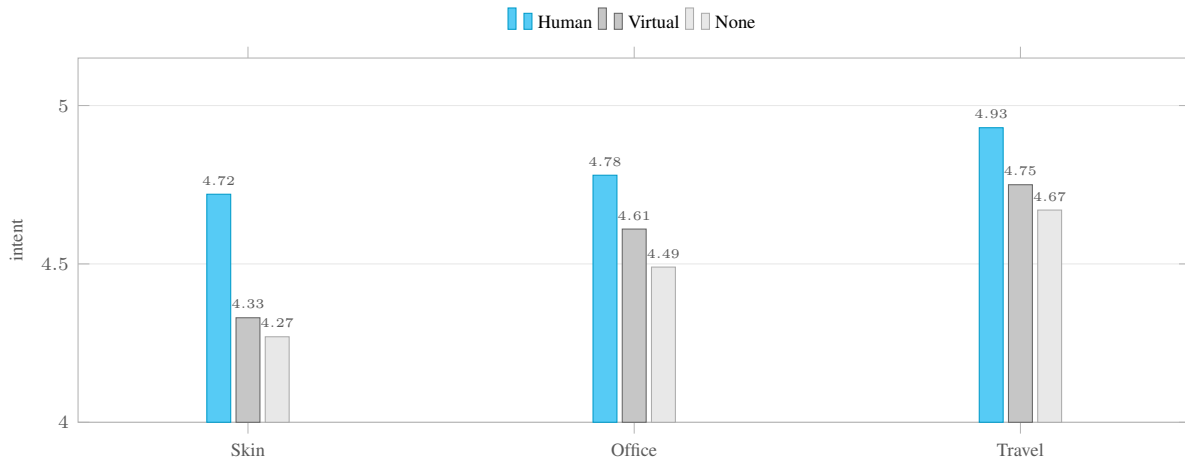
Outcome	Strong Bundle	Weak Bundle	Effect
Purchase Intent	4.89	4.36	Positive
Perceived Usefulness	5.28	4.58	Positive
Decision Uncertainty	3.36	3.91	Reduced

TABLE 9: Interaction of AI Visibility and Bundling

Condition	Purchase Intent	Relative Outcome
Low Visibility + Weak Bundle	4.13	Lowest among combinations
High Visibility + Weak Bundle	4.59	Visibility gain
Low Visibility + Strong Bundle	4.70	Bundle compensation
High Visibility + Strong Bundle	5.08	Best two-factor outcome

TABLE 10: Highest and Lowest Three-Way Conditions

Condition	Purchase Intent	Rank
High Visibility + Human + Strong Bundle	5.39	Highest
High Visibility + Virtual + Strong Bundle	5.04	Second Tier
High Visibility + Human + Weak Bundle	4.73	Moderate
Low Visibility + None + Weak Bundle	3.98	Lowest

**FIGURE 7:** Human endorsement produced the highest purchase intent in all categories, with the widest separation in skincare and the narrowest separation in travel products.

endorsement condition produced an average purchase-intent score of 4.81, the virtual endorsement condition produced 4.56, and the no-endorsement condition produced 4.49. Human endorsement increased brand trust more strongly than virtual endorsement. The trust score was 4.91 in the human condition, 4.55 in the virtual condition, and 4.48 in the no-endorsement condition. The difference between human and virtual endorsement was especially visible in skincare, where respondents seemed to value personal credibility and lived experience.

In skincare, human endorsement produced a purchase-intent mean of 4.72, compared with 4.33 for virtual endorsement and 4.27 for no endorsement. In home office accessories, human endorsement produced 4.78, virtual endorsement produced 4.61, and no endorsement produced 4.49. In travel convenience products, the gap was smaller: human endorsement produced 4.93, virtual endorsement produced 4.75, and no endorsement produced 4.67. These results suggest that virtual endorsement may be less disadvantaged in categories where the product benefit is visible, practical, and low-risk. The virtual endorsement condition also generated

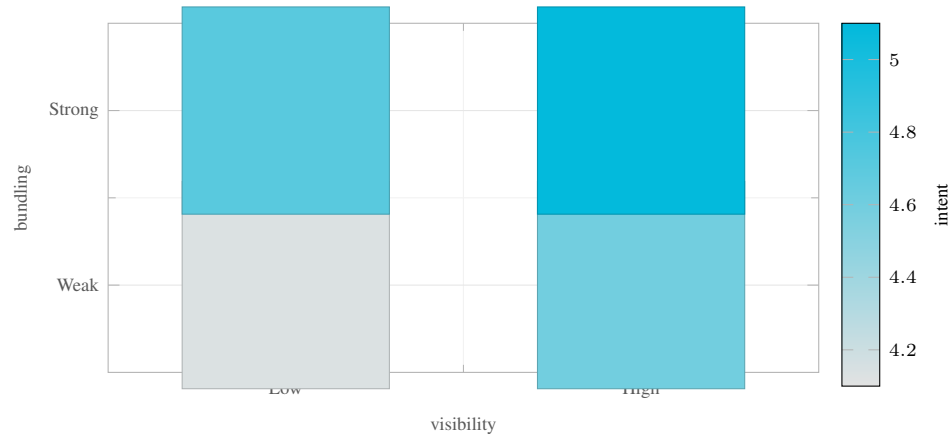


FIGURE 8: Purchase intent increased from 4.13 under low visibility and weak bundling to 5.08 when cited search visibility and routine-based bundling were jointly present.

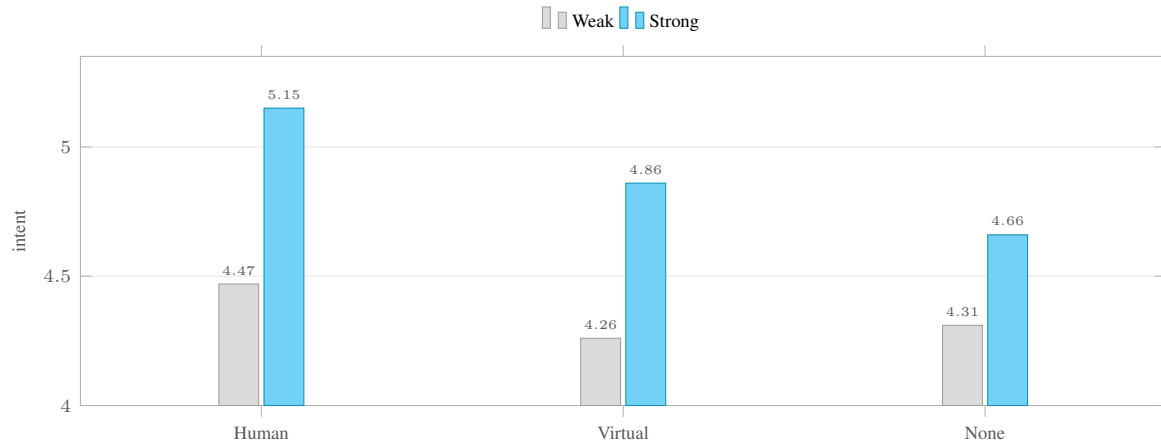


FIGURE 9: Strong bundling improved every endorsement condition, with the largest mean occurring when human endorsement was paired with coherent routine-based product presentation.

higher novelty ratings than the human condition, especially among respondents aged 18 to 34.

Strong routine-based bundling had a substantial effect on perceived usefulness and purchase intent. The strong-bundling condition produced an average purchase-intent score of 4.89, compared with 4.36 for weak bundling. Perceived usefulness increased from 4.58 to 5.28, and decision uncertainty decreased from 3.91 to 3.36. These effects were observed across all three categories, but the meaning differed by category. In skincare, strong bundling helped respondents understand the sequence of use. In home office accessories, it helped respondents imagine a complete workstation improvement. In travel convenience products, it helped respondents imagine packing and organization benefits.

The interaction between AI-search visibility and bundling was one of the most important findings. When AI-search visibility was low and bundling was weak, the average

purchase-intent score was 4.13. When AI-search visibility was high but bundling was weak, the score rose to 4.59. When AI-search visibility was low but bundling was strong, the score rose to 4.70. When both AI-search visibility and bundling were strong, the score reached 5.08. This pattern shows that bundling can partly compensate for lower search visibility, but the highest purchase intent occurs when search visibility and product-page usefulness reinforce each other.

This interaction has a practical interpretation. AI-search visibility creates attention and legitimacy, but strong bundling gives consumers a concrete reason to act. A cited AI answer may make the consumer think the brand belongs in the consideration set. A strong bundle then shows how the product fits into a practical routine. If the product page is weak, the search cue may not fully translate into purchase intent. If search visibility is weak, a strong bundle can still help, but it begins from a lower level of consumer

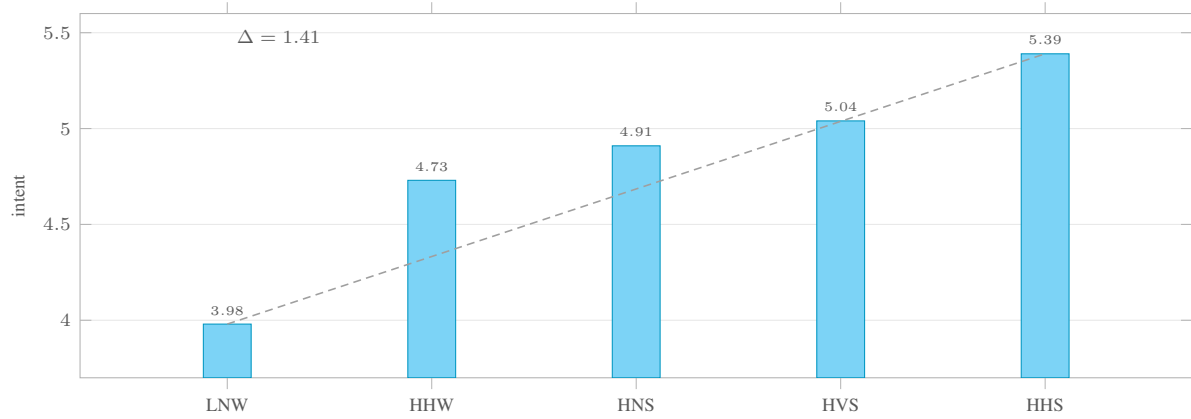


FIGURE 10: Reported three-cue conditions show a 1.41-point purchase-intent gap between the lowest low-visibility no-endorsement weak-bundling cell and the highest high-visibility human-endorsement strong-bundling cell.

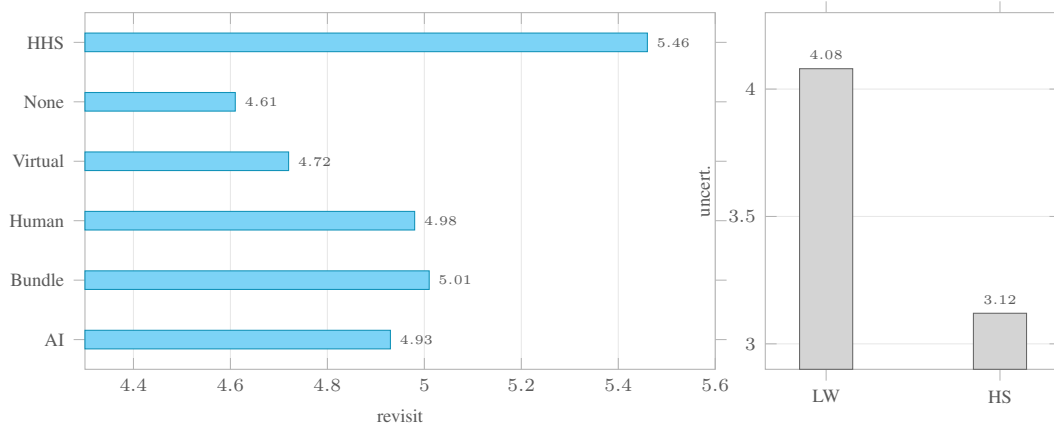


FIGURE 11: Revisit willingness peaked at 5.46 in the aligned high-visibility human-endorsement strong-bundling condition, while decision uncertainty dropped from 4.08 to 3.12 between weak and aligned visibility-bundling cells.

confidence. The journey is therefore cumulative, but not automatic.

The interaction between endorsement source and bundling also produced meaningful differences. In the human endorsement and strong-bundling condition, purchase intent averaged 5.15. In the human endorsement and weak-bundling condition, it averaged 4.47. In the virtual endorsement and strong-bundling condition, it averaged 4.86, compared with 4.26 for virtual endorsement and weak bundling. In the no-endorsement and strong-bundling condition, it averaged 4.66, compared with 4.31 for no endorsement and weak bundling. These results show that strong bundling improves all endorsement conditions, but it works best when paired with a trusted source.

The three-way pattern involving AI-search visibility, endorsement source, and bundling showed the strongest purchase intent in the high-visibility, human-endorsement, strong-bundling condition. This condition produced an aver-

age score of 5.39. The lowest score appeared in the low-visibility, no-endorsement, weak-bundling condition, with an average of 3.98. The gap of 1.41 points on a seven-point scale is large enough to matter managerially. The high-visibility, virtual-endorsement, strong-bundling condition produced a score of 5.04, which was higher than the high-visibility, human-endorsement, weak-bundling condition at 4.73. This indicates that bundling quality can be as important as endorsement source in some conditions.

Brand trust explained much of the human endorsement advantage. Respondents in the human endorsement condition more often said the endorser seemed to have actually used the product. They also used words such as "real," "personal," "relatable," and "believable." Respondents in the virtual endorsement condition more often used words such as "interesting," "modern," "stylish," and "different." These responses confirm that human and virtual endorsement can create different types of value. Human endorsement primarily supports trust. Virtual endorsement primarily supports

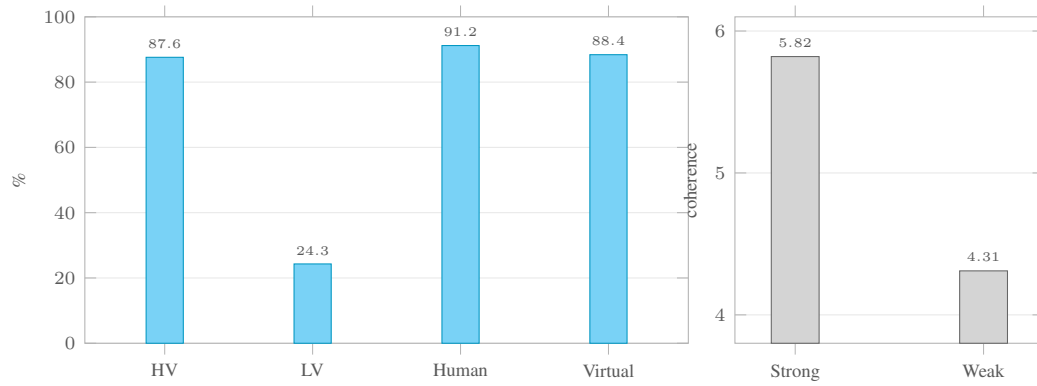


FIGURE 12: Manipulation checks showed clear respondent recognition of visibility and endorsement conditions, and the strong-bundling treatment produced a higher bundle-coherence score than the weak-bundling treatment.

novelty and attention. Purchase intent depends on whether the category rewards trust, novelty, or both.

Search confidence explained much of the AI-visibility effect. Respondents in the high-visibility condition reported that the search answer made the brand easier to evaluate. They were more likely to say that they would click through to the product page and less likely to say that they needed to begin the search again. This does not mean that search visibility eliminated the need for product-page information. In fact, many high-visibility respondents still said they wanted reviews, pricing, or additional product details. The search cue moved the brand into consideration, but the product page still needed to support the decision.

Perceived usefulness explained much of the bundling effect. Respondents in the strong-bundling condition were more likely to say that the products “made sense together” and that the page “showed how I would use it.” Weak bundles often triggered comments such as “random add-ons” or “trying to sell more.” This difference is important because it shows that bundling is not automatically beneficial. Consumers can distinguish between helpful solution framing and forced cross-selling. Strong routine-based bundling increases purchase intent because it reduces usage uncertainty, not merely because it shows more products.

The category-specific results provide additional insight. In skincare, the most important drivers were human endorsement and decision uncertainty. High AI-search visibility helped, but respondents still wanted evidence of personal fit, ingredients, and reviews. Strong bundling improved perceived usefulness when the routine was clear, but some respondents worried that the full routine might be too expensive or unsuitable for their skin type. In this category, trust and risk reduction mattered more than novelty.

In home office accessories, strong bundling and AI-search visibility were the strongest drivers. Respondents valued

seeing how the products formed a complete setup. Human endorsement helped, but virtual endorsement was also reasonably effective because the product benefits were visible and practical. Participants often mentioned ergonomics, organization, and workspace improvement. Price sensitivity was present but did not dominate the results. A coherent bundle made respondents more willing to consider a higher total basket value.

In travel convenience products, the effects were the most evenly distributed. AI-search visibility helped because respondents treated the cited answer as a useful shortcut for planning. Human endorsement helped by showing the product in use, but virtual endorsement also performed well because visual demonstration was enough for many respondents. Strong bundling had a clear effect because travel products are naturally occasion-based. Respondents could imagine using the bundle during packing, airport movement, or hotel organization. This category showed the strongest willingness to revisit the brand page.

The no-endorsement condition is also informative. In low AI-search visibility and weak bundling, no endorsement performed poorly. However, when AI-search visibility was high and bundling was strong, no endorsement still produced a purchase-intent score of 4.91. This suggests that social endorsement is not always necessary when search visibility and product-page usefulness are strong. For managers, this means that creator spending should be evaluated against the strength of other journey cues. Influencer endorsement may add the most value when the brand needs trust, when the category is personal, or when the product is not self-explanatory.

The study also examined willingness to revisit the brand page. High AI-search visibility increased revisit willingness from 4.51 to 4.93. Strong bundling increased it from 4.44 to 5.01. Human endorsement increased it to 4.98, compared with 4.72 for virtual endorsement and 4.61 for no endorse-

ment. The highest revisit willingness appeared in the high-visibility, human-endorsement, strong-bundling condition at 5.46. This matters because not all retail decisions occur immediately. In many categories, consumers save pages, compare alternatives, or return later. Revisit willingness may therefore be an important intermediate outcome.

Decision uncertainty declined most when strong bundling was paired with high AI-search visibility. The average uncertainty score was 4.08 in the low-visibility, weak-bundling condition and 3.12 in the high-visibility, strong-bundling condition. Human endorsement further reduced uncertainty in skincare, while virtual endorsement had a smaller effect. The open-ended responses suggest that uncertainty declined when consumers understood why the brand was visible, who was recommending it, and how the product would be used. The strongest conditions gave consumers a coherent story across the journey.

The results did not show evidence that more cues always improved response. In a small subset of respondents, especially those with high persuasion skepticism, the combined high-visibility and endorsement conditions produced comments about the brand seeming "pushed" or "too promoted." This response was more common when bundling was weak. In other words, visibility and endorsement can create pressure if the product page does not justify the promotion. Strong bundling reduced this skepticism by making the recommendation feel useful. This finding supports the idea that marketing cues should be aligned by substance, not only by repetition.

Overall, the results support the central view of the paper. AI-search visibility, social endorsement, and product bundling each influence purchase intent, but their effects are connected. High AI-search visibility increases consideration and confidence. Human endorsement increases trust, especially in high-involvement categories. Virtual endorsement increases novelty and performs better when the product benefit is visually clear and low-risk. Strong routine-based bundling increases usefulness and reduces uncertainty. The strongest purchase intent appears when the three cues are aligned around relevance, credibility, and practical use.

VI. Discussion

The findings suggest that business researchers and managers should think of digital visibility as a system of connected cues rather than as a collection of separate channel metrics. In many organizations, search visibility, influencer marketing, and e-commerce merchandising are planned by different teams. Each team may optimize its own performance indicators. The search team may pursue inclusion in AI answers or organic visibility. The social team may pursue engagement, reach, and creator fit. The retail team may pur-

sue conversion rate, average order value, and product-page completion. These goals are reasonable, but the consumer experiences them as one journey. A search answer can frame the endorsement, the endorsement can shape trust in the product page, and the product page can confirm or undermine the earlier cues.

The AI-search visibility result is important because it shows that cited visibility can influence purchase intent even before the consumer reaches the retailer's full product information. The effect is not overwhelming, but it is meaningful. Being cited in an AI-style answer increased purchase intent, search confidence, and brand trust. This suggests that AI-mediated search can serve as an early consideration filter. Brands that are included in cited answers may benefit from a credibility cue that reduces the consumer's need to search from scratch. Brands that are excluded may still compete later, but they begin with less momentum.

However, the results also caution against treating AI-search visibility as a complete marketing outcome. Search visibility performed best when paired with strong product-page bundling. This means that discovery must be supported by downstream usefulness. A brand that appears in an AI answer but provides a weak product page may lose much of the advantage. Consumers need to understand what the product does, why it fits the situation, and how it compares with alternatives. AI visibility can create entry into the consideration set, but it does not replace the work of retail presentation.

The endorsement findings show that the human-versus-virtual distinction should not be reduced to a simple rule. Human endorsement produced stronger trust and purchase intent overall, especially in skincare. This fits the idea that consumers value lived experience and accountability when personal risk is higher. Yet virtual endorsement was not ineffective. It performed reasonably well in home office and travel categories, especially when bundling was strong. This suggests that virtual endorsement may be useful for visually demonstrable products, lower-risk categories, novelty campaigns, or brand-positioning efforts. It may be less effective when consumers need assurance based on real personal use.

These findings also clarify the role of novelty. Novelty can attract attention, but attention alone does not necessarily become purchase intent. The virtual endorsement condition generated higher novelty ratings, but lower trust ratings than human endorsement. Purchase intent improved when novelty was supported by strong bundling because the product benefit became concrete. In other words, novelty needs a practical anchor. A visually interesting digital persona can make consumers look, but the product page must help them understand why looking should become buying.

The bundling results are among the most managerially relevant. Strong routine-based bundling had a large effect on usefulness, uncertainty, and purchase intent. This finding supports the view that consumers often evaluate products in relation to tasks and occasions, not only in relation to categories. A routine-based bundle gives the consumer a mental model of use. It answers the question, "How would this fit into my life?" Weak add-on bundling does not answer that question and may instead raise suspicion that the retailer is trying to increase the order value without providing real benefit.

The results also suggest that product bundling can partly compensate for lower visibility. In the low AI-search visibility condition, strong bundling still improved purchase intent substantially. This is encouraging for smaller brands that may not consistently appear in AI-generated answers. A brand with lower search visibility can still improve consumer response by making the product page more coherent, useful, and routine-oriented. However, bundling did not fully replace search visibility. The highest results came from the combination of high visibility and strong bundling. This means that product-page excellence and search visibility should be treated as complements.

The study contributes to marketing theory by showing that different types of uncertainty are reduced by different cues. AI-search visibility reduces information-search uncertainty by making a brand appear relevant and supported. Human endorsement reduces source and experience uncertainty by providing a credible social signal. Routine-based bundling reduces usage uncertainty by helping consumers understand how products fit together. Purchase intent increases most when these uncertainties are reduced in sequence. This provides a useful framework for future research on AI-mediated commerce.

The findings also connect to the broader literature on online trust. Trust in digital retail is not created by a single source. It is assembled from repeated cues: search answers, reviews, endorsements, product information, return policies, and brand familiarity. The present study shows that trust can be strengthened or weakened across a journey. A credible search answer can make a brand seem legitimate, but a weak bundle can make the product page seem opportunistic. A human endorsement can make a product feel more believable, but if the search answer does not support the brand, the consumer may still want more evidence. Trust is therefore cumulative but fragile.

Another theoretical implication concerns the relationship between human and algorithmic recommendation. AI-search visibility and influencer endorsement are both recommendation-like cues, but they operate differently. AI-search visibility is perceived as more informational and evidence-oriented. Influencer endorsement is perceived as

more experiential and social. Consumers may value both, but for different reasons. This distinction matters because brands may be tempted to replace one with the other. The evidence suggests that the two cues are not perfect substitutes. Search visibility helps consumers decide whether a brand belongs in the consideration set. Endorsement helps consumers decide whether the brand feels believable and socially meaningful.

The category differences also matter. Skincare, home office accessories, and travel convenience products did not respond identically. Skincare required more trust and generated more decision uncertainty. Home office accessories benefited strongly from coherent bundling and practical usefulness. Travel convenience products benefited from all three cues because the category is naturally routine-based and visually demonstrable. This means that managers should avoid applying the same AI-search, endorsement, and bundling strategy across every category. The right mix depends on perceived risk, visibility of benefits, routine structure, and the importance of personal experience.

The open-ended responses reinforce the quantitative findings. Consumers did not speak only about price or product features. They discussed whether the brand seemed checked, whether the recommendation felt real, whether the bundle made sense, and whether the page helped them imagine use. These responses show that purchase intent is shaped by interpretation. The same objective cue can be helpful or suspicious depending on how it fits the rest of the journey. A cited AI answer can feel useful if the product page supports it. A bundle can feel helpful if the products fit a routine. An endorsement can feel credible if the source seems appropriate.

The study therefore supports a practical but nuanced conclusion. AI-mediated retail marketing should not be treated as a race for maximum exposure. More exposure can help, but only when the exposure is credible, useful, and connected to the consumer's decision process. Brands should seek visibility that can be justified by evidence, endorsements that fit the category, and bundles that reflect real usage patterns. The goal is not simply to appear everywhere but to create a coherent path from discovery to evaluation.

VII. Managerial Implications

The first managerial implication is that firms should audit the continuity of their retail journey. Many organizations can report search visibility, influencer reach, and product-page performance, but fewer can explain how these touchpoints work together. Managers should review whether the brand story that appears in AI-search answers is reinforced by social endorsement and product-page presentation. If an AI answer highlights product reliability, the endorsement should not focus only on style, and the product page should

provide evidence that supports reliability. If an influencer demonstrates a routine, the product page should make that routine easy to purchase and understand. Continuity makes each cue more persuasive.

The second implication is that AI-search visibility should be managed as a credibility and consideration objective, not only as a traffic objective. Generative answer systems may influence consumers even when they do not immediately click through. A cited brand mention can create memory, legitimacy, and search confidence. Managers should therefore evaluate whether their brand content is clear, evidence-based, and useful for comparison questions. Content that only promotes the brand may be less useful than content that explains product differences, use cases, evidence, and limitations. In AI-mediated search environments, being useful as an answer source may be a form of brand visibility.

The third implication is that influencer selection should depend on category risk and decision type. Human influencers appear especially valuable when consumers need personal experience, trust, and reassurance. This is likely to apply to skincare, wellness, parenting, household safety, financial services, and other categories where consumers perceive personal risk or require credibility. Virtual influencers may be more useful for novelty, brand modernity, visual storytelling, and lower-risk categories where the product benefit can be shown clearly. Managers should not ask whether virtual influencers are generally better or worse. They should ask whether the category requires lived experience or whether visual novelty can credibly support the product message.

The fourth implication is that bundling should be designed around routines rather than inventory convenience. A bundle should answer a consumer problem. A skincare routine should have a clear sequence. A home office bundle should solve a workspace issue. A travel bundle should help with packing, movement, or organization. Bundles that merely add related products without a clear routine may increase skepticism. Managers should test whether consumers can explain why the products belong together. If they cannot, the bundle may not support purchase intent even if it increases the number of displayed items.

The fifth implication is that strong product-page design can help brands with weaker AI-search visibility. The study shows that strong bundling partly compensates for low visibility. This matters for emerging brands and small retailers that may not yet be frequently cited in AI answers. They can still improve consumer response by making product pages more useful, coherent, and easy to evaluate. Clear routines, comparison information, reviews, return policies, and product-use explanations can reduce uncertainty after the consumer arrives. Search visibility is valuable, but it is not the only lever.

The sixth implication is that managers should treat skepticism as a signal rather than as a nuisance. Some consumers react negatively when they perceive too many aligned promotional cues. A brand that appears in search, endorsement, and bundling can seem credible, but it can also seem over-promoted if the evidence is weak. Managers should therefore ensure that each cue adds distinct value. The AI answer should provide informational relevance. The endorsement should provide experience or demonstration. The bundle should provide practical usefulness. Repetition without substance can reduce trust.

The seventh implication is that cross-functional coordination is necessary. AI visibility may be handled by search or content teams. Influencer partnerships may be handled by social media or brand teams. Bundling may be handled by e-commerce or merchandising teams. The consumer does not separate these functions. A high-performing retail journey requires shared planning across teams. Campaign briefs should specify what the search answer, endorsement, and product page are each supposed to contribute. Measurement dashboards should include journey-level outcomes such as purchase intent, revisit willingness, uncertainty reduction, and perceived usefulness.

The eighth implication concerns measurement. Managers should not rely only on click-through rate, engagement rate, or average order value. These metrics are useful, but they do not fully explain why consumers respond. The present study suggests that search confidence, brand trust, perceived usefulness, and decision uncertainty are valuable diagnostic measures. A campaign may generate attention but fail to reduce uncertainty. A bundle may increase page views but fail to feel useful. An endorsement may generate engagement but fail to increase trust. Measuring intermediate perceptions can help managers identify where the journey breaks down.

The ninth implication is that category strategy should guide channel investment. In high-trust categories, investment in human endorsement and evidence-rich content may produce stronger returns. In visually demonstrable categories, strong bundling and virtual presentation may be effective. In routine-based categories, product-page architecture may be central. In search-heavy categories, AI-answer visibility may be especially important. A single playbook is unlikely to fit every category. Managers should begin with the consumer's decision problem and then select visibility cues that reduce the most important uncertainty.

The tenth implication is that brands should prepare for AI-mediated discovery without abandoning human-centered marketing. AI-search visibility may become more important, but consumers still care about credibility, lived experience, usefulness, and fit. A brand that is technically visible but emotionally or practically unconvincing may fail to convert. Conversely, a brand with strong human credibility and useful

merchandising can still perform even when AI-search visibility is not dominant. The future of retail marketing is likely to reward brands that combine machine-readable clarity with human-relevant meaning.

VIII. Limitations and Future Research

This study has several limitations. First, it uses a controlled experimental setting rather than observing actual purchases in a live retail environment. Controlled experiments are useful because they isolate causal effects, but they cannot fully reproduce the complexity of real shopping. In real markets, consumers compare many brands, encounter repeated ads, face budget constraints, read reviews in greater depth, and may abandon the journey for reasons unrelated to the focal brand. Future research should test similar conditions using field experiments, retailer data, or longitudinal consumer panels.

Second, the study examines purchase intent rather than completed purchase. Purchase intent is a useful early indicator, but it is not the same as conversion. Consumers may express interest and later choose a different product because of price, timing, shipping, reviews, or competing offers. Future research should connect AI-search visibility, endorsement exposure, and bundling cues to behavioral outcomes such as click-through, cart addition, checkout completion, repeat visit, and return rate. Such work would help determine whether the observed intent effects translate into commercial performance.

Third, the study uses three product categories. Skincare, home office accessories, and travel convenience products provide useful variation, but they do not represent every retail context. The findings may differ in groceries, fashion, electronics, financial products, subscription services, luxury goods, or health-related categories. Product risk, price level, involvement, regulation, and brand loyalty may all change the effect of AI-search visibility and endorsement. Future studies should examine more categories and compare low-cost impulse purchases with high-cost planned purchases.

Fourth, the AI-search visibility manipulation used an AI-style answer in an experimental interface. This improves control, but real AI-search systems vary in design, trust, citation practices, and user familiarity. Some consumers may trust one system more than another. Some may ignore citations, while others may rely heavily on them. Future research should compare different AI-answer formats, including answers with citations, answers without citations, comparison tables, shopping recommendations, conversational follow-ups, and answer summaries that mention competing brands.

Fifth, the endorsement materials used matched human and virtual posts. This helps isolate source type, but real

influencer campaigns vary widely in quality, audience fit, disclosure, creator history, and content style. A highly trusted virtual persona with a long-running audience relationship may outperform a poorly matched human influencer. Similarly, a highly credible expert creator may outperform a general lifestyle creator. Future research should examine influencer expertise, disclosure clarity, audience relationship strength, and creator-brand fit alongside source type.

Sixth, the bundling manipulation focused on routine coherence rather than price discounting. This was appropriate for the research question, but in real retail settings, bundles often include price promotions, limited-time offers, subscription options, or free-shipping thresholds. These economic incentives can interact with routine-based usefulness. A bundle may be attractive because it makes sense, because it saves money, or because it reduces effort. Future research should separate coherence, discount, convenience, and scarcity effects.

Seventh, the study measured several psychological outcomes but did not fully model long-term brand equity. AI-search visibility, endorsement, and bundling may affect memory, brand associations, trust durability, and willingness to recommend. Some effects may appear only after repeated exposure. A virtual influencer may build familiarity over time, while a human influencer may lose credibility if overused. Future research should examine repeated journeys and delayed outcomes.

Eighth, the sample was drawn from an online panel. Although the sample included consumers with recent online shopping experience, panel respondents may differ from the broader population in digital familiarity and survey-taking behavior. Future work should replicate the study across different countries, age groups, income levels, and levels of AI-search adoption. Cross-cultural research may be especially useful because trust in AI systems, influencer credibility, and bundling preferences may vary across markets.

Ninth, the study does not claim that AI-mediated visibility is always beneficial. In some contexts, consumers may distrust AI-generated answers, especially if they suspect sponsored influence or lack of transparency. The present study used a neutral cited-answer format. Future research should examine how disclosure, sponsorship, perceived neutrality, and source transparency affect AI-search credibility. This is important because consumer trust in AI-mediated retail may depend on whether answer systems clearly separate organic evidence, paid placement, and platform recommendation.

Tenth, future research should examine organizational capability. Even if managers understand that search, social, and merchandising should be integrated, firms may struggle to coordinate teams, data systems, and incentives. A brand may have evidence-rich content but weak product pages, strong

influencers but poor AI visibility, or coherent bundles that are not reflected in social content. Research on marketing organization, capability development, and cross-functional governance would help explain why some firms can build coherent AI-mediated retail journeys while others cannot.

IX. Conclusion

This study examined how AI-search visibility, social endorsement, and product bundling jointly shape consumer purchase intent in a simulated retail journey. The findings show that each cue matters, but not in isolation. High AI-search visibility increased search confidence and purchase intent. Human endorsement strengthened brand trust, especially in the more personal skincare category. Virtual endorsement generated novelty and performed reasonably well in lower-risk, visually demonstrable categories. Strong routine-based bundling increased perceived usefulness and reduced decision uncertainty across all categories.

The highest purchase intent appeared when the brand was visible in a cited AI-search answer, supported by a human endorsement, and presented in a coherent routine-based bundle. This pattern suggests that consumers respond positively when discovery, credibility, and usage cues reinforce one another. The lowest purchase intent appeared when the brand had low search visibility, no endorsement, and weak bundling. The gap between these conditions shows that connected retail cues can meaningfully change consumer response.

A central conclusion is that AI-mediated retail visibility should not be understood only as a technical search problem. Search visibility creates opportunity, but later cues determine whether the opportunity becomes meaningful. A brand can gain attention through AI-search inclusion, but the product page must still explain value. A social endorsement can generate trust, but it must fit the category and the consumer's decision needs. A bundle can increase usefulness, but only when it reflects a real routine rather than a loose collection of add-ons.

The study also shows that managers should avoid simple assumptions about human and virtual endorsement. Human endorsement remains valuable when credibility and lived experience matter. Virtual endorsement can contribute novelty and visual appeal, especially when product benefits are easy to understand. The right endorsement strategy depends on category risk, product involvement, routine clarity, and the role the endorsement is expected to play in the journey.

For business researchers, the paper provides an empirical framework for studying connected visibility cues in AI-mediated commerce. For managers, it suggests that search, social, and merchandising teams should coordinate around

the consumer's decision process rather than optimizing separate channel metrics in isolation. The practical objective is not merely to make a brand visible, but to make it visible in a way that feels credible, useful, and easy to act upon.

REFERENCES

- [1] Y. Bakos, "Reducing buyer search costs: Implications for electronic marketplaces," *Management Science*, vol. 43, no. 12, pp. 1676–1692, 1997.
- [2] J. Alba, J. Lynch, B. Weitz, C. Janiszewski, R. Lutz, A. Sawyer, and S. Wood, "Interactive home shopping: Consumer, retailer, and manufacturer incentives to participate in electronic marketplaces," *Journal of Marketing*, vol. 61, no. 3, pp. 38–53, 1997.
- [3] C. Dellarocas, "The digitization of word of mouth: Promise and challenges of online feedback mechanisms," *Management Science*, vol. 49, no. 10, pp. 1407–1424, 2003.
- [4] J. A. Chevalier and D. Mayzlin, "The effect of word of mouth on sales: Online book reviews," *Journal of Marketing Research*, vol. 43, no. 3, pp. 345–354, 2006.
- [5] C. I. Hovland and W. Weiss, "The influence of source credibility on communication effectiveness," *Public Opinion Quarterly*, vol. 15, no. 4, pp. 635–650, 1951.
- [6] M. Friestad and P. Wright, "The persuasion knowledge model: How people cope with persuasion attempts," *Journal of Consumer Research*, vol. 21, no. 1, pp. 1–31, 1994.
- [7] M. De Veirman, V. Cauberghe, and L. Hudders, "Marketing through instagram influencers: The impact of number of followers and product divergence on brand attitude," *International Journal of Advertising*, vol. 36, no. 5, pp. 798–828, 2017.
- [8] C. Lou and S. Yuan, "Influencer marketing: How message value and credibility affect consumer trust of branded content on social media," *Journal of Interactive Advertising*, vol. 19, no. 1, pp. 58–73, 2019.
- [9] G. Häubl and V. Trifts, "Consumer decision making in online shopping environments: The effects of interactive decision aids," *Marketing Science*, vol. 19, no. 1, pp. 4–21, 2000.
- [10] D. Smith, S. Menon, and K. Sivakumar, "Online peer and editorial recommendations, trust, and choice in virtual markets," *Journal of Interactive Marketing*, vol. 19, no. 3, pp. 15–37, 2005.
- [11] B. F. Török, "Modeling brand visibility in generative engine optimization (geo) using structured content signals in ai driven search environments," *International Review of Machine Learning, Artificial Intelligence, and Applied Data Science*, vol. 16, no. 2, 2026.
- [12] D. Gefen, E. Karahanna, and D. W. Straub, "Trust and tam in online shopping: An integrated model," *MIS Quarterly*, vol. 27, no. 1, pp. 51–90, 2003.

- [13] P. A. Pavlou, “Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model,” *International Journal of Electronic Commerce*, vol. 7, no. 3, pp. 101–134, 2003.
- [14] E. Djafarova and C. Rushworth, “Exploring the credibility of online celebrities’ instagram profiles in influencing the purchase decisions of young female users,” *Computers in Human Behavior*, vol. 68, pp. 1–7, 2017.
- [15] K. Sokolova and H. Kefi, “Instagram and youtube bloggers promote it, why should i buy? how credibility and parasocial interaction influence purchase intentions,” *Journal of Retailing and Consumer Services*, vol. 53, p. 101742, 2020.
- [16] B. F. Török, “Comparative effects of virtual and human influencer endorsements on purchase intent among digital consumer audiences in lifestyle marketing,” *Northern Reviews on Algorithmic Research, Theoretical Computation, and Complexity*, vol. 10, no. 11, pp. 1–20, 2025.
- [17] M. C. Campbell and A. Kirmani, “Consumers’ use of persuasion knowledge: The effects of accessibility and cognitive capacity on perceptions of an influence agent,” *Journal of Consumer Research*, vol. 27, no. 1, pp. 69–83, 2000.
- [18] S. Stremersch and G. J. Tellis, “Strategic bundling of products and prices: A new synthesis for marketing,” *Journal of Marketing*, vol. 66, no. 1, pp. 55–72, 2002.
- [19] R. Venkatesh and V. Mahajan, “The design and pricing of bundles: A review of normative guidelines and practical approaches,” in *Handbook of Pricing Research in Marketing* (Ö. Özer and R. Phillips, eds.), pp. 232–257, Cheltenham: Edward Elgar Publishing, 2009.
- [20] B. F. Török, “A validated synthetic testbed for graph-based product affinity research in e-commerce,” *Transactions on Artificial Intelligence, Machine Learning, and Cognitive Systems*, vol. 9, no. 8, pp. 1–25, 2024.
- [21] S. S. Iyengar and M. R. Lepper, “When choice is demotivating: Can one desire too much of a good thing?,” *Journal of Personality and Social Psychology*, vol. 79, no. 6, pp. 995–1006, 2000.
- [22] A. Chernev, “Product assortment and individual decision processes,” *Journal of Personality and Social Psychology*, vol. 85, no. 1, pp. 151–162, 2003.