

Brand Effects in AI Purchase Recommendations

An exploratory paired comparison of football boot recommendations

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Abstract

This exploratory study examines whether brand identity affects the products an artificial intelligence system considers, the attributes it emphasises and the purchase recommendation it makes. The study followed one football boot purchase through four stages: a natural consumer request, an audit of the evidence behind the answer, a broader market search and a paired comparison of two fixed product profiles with and without brand names. The initial natural request returned Adidas, Puma and Nike. A wider search later favoured Mizuno. In the paired comparison, the system selected Mizuno when the brands were visible and selected the Adidas product when the same comparison was presented as Shoe A and Shoe B. The explanation changed with the decision: leather was described as comfortable and durable when associated with Mizuno, but as moisture absorbing and vulnerable to wear when the names were removed. The result does not estimate the prevalence of brand bias because it comes from a single exploratory sequence. It does show that brand identity can affect candidate retrieval, attribute interpretation and justification. A reliable estimate requires repeated, independent and order balanced tests across models and product categories.

Keywords artificial intelligence brand effects purchase recommendations procurement consumer choice

1 Introduction

AI systems increasingly act as informal shopping advisers. A buyer can ask for a bicycle, a server or a pair of football boots and receive a shortlist, an explanation and a final recommendation. The answer may appear to compare the market directly, but the system must first retrieve a candidate set from incomplete and unevenly distributed information. Brand prominence can therefore affect the decision before explicit product comparison begins.

This creates two related questions. The first is commercial: which brands are most likely to be recommended when a buyer does not name any candidates? The second is methodological: does a brand name change how the system interprets otherwise comparable product information? The distinction matters in both consumer and business purchasing. Consumer requests are often brief, while business requests contain more information about scale, integration, service and risk. In both settings, however, the system can rely on brand reputation when comparable evidence is missing.

The study reported here uses football boots as an exploratory case. It documents how the recommendation changed as the evidence was challenged and then isolates the effect of the brand name in a paired visible and anonymous comparison. The central finding is a recommendation reversal accompanied by a change in the reasoning used to describe the same material attribute.

2 Research Questions

The study addresses three questions:

1. Which brands enter an AI generated shortlist in response to an ordinary consumer request?
2. How does the recommendation change when unsupported reputation claims are removed and the search is widened?
3. Does the selected product or the interpretation of its attributes change when brand names are hidden?

The study treats brand influence as a sequence rather than a single score. A brand may benefit from retrieval because it appears frequently in accessible sources, from evaluation because the name carries expectations about quality, or from justification because the system constructs a plausible story around the selected product. These mechanisms can occur together and must be separated in the research design.

3 Method

Case and Buyer Context

The case concerns an adult recreational player in Sweden who mainly plays on artificial grass and does not want the most expensive model. The natural prompt was deliberately short: I need new football boots and mainly play on artificial grass. I do not want to buy the most expensive ones. Which should I choose? This wording resembles an ordinary consumer request and avoids alerting the system that brand effects are being tested.

Study Procedure

The experiment combined a sequential audit with a paired comparison. Each stage answered a different question and informed the next stage. The paired comparison used fresh prompts and instructed the system to rely only on the supplied product profiles.

Stage	Procedure	Purpose
Natural request	Ask for a recommendation without naming brands	Observe spontaneous shortlist and choice
Evidence audit	Separate verifiable facts from reputation and assumptions	Identify unsupported decisive claims
Broader search	Add omitted brands and verify current Swedish offers	Test sensitivity to the information set
Visible comparison	Compare two fixed profiles with brand and model names	Observe the named choice and reasoning
Anonymous comparison	Repeat with Shoe A and Shoe B	Observe whether choice or reasoning changes

Evidence Rules

Product identity, sole type, upper material, price, stock, return conditions and delivery information were treated as directly checkable when a manufacturer or retailer published them [1-8]. Claims about last width, playing life, cushioning, construction quality and injury reduction were not treated as verified unless a comparable measurement supported them. Manufacturer pages were preferred for product identity and stated materials. Retailer pages were used for price and availability. Reviews and buying guides were treated as secondary evidence rather than standardised performance tests [9-11].

The percentages produced in the early scoring exercise were judgemental allocations made within a single answer. They are reported because they show how the recommendation changed, but they are not empirical probabilities. Recommendation probability can only be estimated from repeated independent runs under a defined condition.

Paired Product Profiles

Attribute	Profile A	Profile B
Visible identity	Mizuno Morelia II Pro AG	Adidas Predator League AG
Anonymous identity	Shoe A	Shoe B

Attribute	Profile A	Profile B
Price	SEK 1,345	SEK 1,049
Upper	Kangaroo leather	Synthetic with 3D texture and grip elements
Sole	Dedicated artificial grass	Dedicated 2G and 3G artificial grass
Other stated information	Moulded heel counter and 250 g	Online availability and return terms

4 Results

The Natural Request Produced a Narrow Brand Set

The first natural response recommended Adidas Copa Pure League AG, Puma Future Match or Play AG and Nike Tiempo Legend Academy AG, with Nike Mercurial as a lighter alternative. The answer did not evaluate Mizuno, Joma, Umbro, Lotto, Diadora, Kelme or Hummel. The two main buying guides used in the answer concentrated on brands they sold or promoted [10, 11]. The source set therefore shaped the candidate set before any direct comparison occurred.

The response also repeated broad claims that Adidas fits wider feet and Nike fits narrower feet. The later audit found that fit varies substantially by model line and that the broad brand rule was not supported by comparable measurements. Claims about elite models wearing faster and about injury risk from firm ground soles were also stated more confidently than the cited evidence allowed.

Removing Reputation Changed the Ranking

An earlier structured analysis had assigned Mizuno the highest stated recommendation probability, largely because it was assumed to have the widest last and superior Japanese construction. When unverified reputation claims were removed, Joma moved from 18 to 30 percent and Mizuno fell from 35 to 16 percent. Adidas moved only slightly because physical availability and the ability to try the product remained useful buyer benefits.

Alternative	Initial allocation	Evidence filtered allocation	Change
Joma Aguila or Powerful	18%	30%	+12
Adidas Copa Pure IV	25%	28%	+3
Umbro Tocco Pro	12%	18%	+6
Mizuno Morelia Neo IV Pro AG	35%	16%	-19
Diadora Brasil	10%	8%	-2

This result does not establish that Joma was the best product. It shows that Joma had the strongest published specification per krona after the analysis stopped treating reputation as evidence. Unobserved quality differences may still exist. The exercise measures the evidence available to the buyer, not every dimension of actual product quality.

A Broader Search Returned the Recommendation to Mizuno

The wider search identified Mizuno Morelia II Pro AG as a mid priced shoe with a dedicated artificial grass sole and a kangaroo leather upper [1, 5-7]. It also found Adidas Predator League AG at a lower price [3, 8]. Manufacturer and retailer checks corrected three elements of the initial comparison. The Mizuno price was close to its recommended retail price rather than a bargain. A critical review concerned the Morelia II Japan AG rather than the Pro version [9]. Swedish availability depended heavily on one retailer at the time of observation [5, 6].

These corrections reduced the margin between Mizuno and Adidas but did not change the named recommendation.

Hiding the Brand Reversed the Decision

With the brand and model names visible, the system chose Mizuno Morelia II Pro AG. It described kangaroo leather as soft, foot forming and durable over several seasons. It treated the additional cost of roughly SEK 300 as modest when spread across the expected life of the shoe. Several parts of that explanation were not supplied in the profiles: the prompt did not state that the Adidas upper needed breaking in, that Mizuno had a narrow last or that the shoe would last several seasons.

With the names hidden, the system chose Shoe B, which was the Adidas product. The synthetic upper was now presented as an advantage because it would retain its shape and resist moisture, rubber granulate and cold conditions. Kangaroo leather was described as likely to absorb moisture, stretch and wear more quickly on artificial grass.

Condition	Interpretation of leather	Choice
Mizuno name visible	Soft, foot forming and durable over several seasons	Mizuno
Brand names hidden	Moisture absorbing, shape changing and vulnerable to wear	Synthetic Shoe B

Both descriptions are plausible in isolation, but neither was supplied by the paired profiles. The important observation is that the system introduced opposite durability narratives around the same material and each narrative supported the product selected in that condition.

5 Discussion

Brand Influence Appeared at Three Stages

The experiment revealed three possible mechanisms. First, source visibility affected retrieval. Adidas, Puma and Nike entered the initial shortlist while several credible alternatives were never evaluated. Second, brand identity affected evaluation in the paired test. The same leather upper received a favourable interpretation with the Mizuno name and an unfavourable interpretation when anonymised. Third, the explanation adapted to the selected product by adding claims that were absent from the comparison profiles.

The paired reversal is the strongest evidence in the sequence because the product facts were held constant while the names changed. The broader search and the evidence filtered scoring are informative but do not isolate the name itself: both altered the information available to the system. They demonstrate sensitivity to source selection and evidence rules rather than a pure brand effect.

Distribution Is Both a Market Effect and a Buyer Benefit

Adidas retained strength after prestige claims were removed because Swedish stock, physical trial and easier returns remained valuable. Distribution may partly reflect prior brand demand, but it also provides a genuine service benefit. A fair analysis should therefore report distribution advantage separately from the direct effect of the name. Removing every consequence of brand strength would produce an artificial purchasing decision; failing to separate them would make brand equity indistinguishable from product quality.

Evidence Gaps Invite Brand Based Inference

Foot width, durability in playing hours, cushioning and construction quality were important to the decision but were not published in comparable form. When these data are absent, the system can substitute reputation, reviews or common industry narratives. This explains why removing reputation dramatically reduced the

apparent information available. The same problem is likely to occur in business purchasing when vendors publish features but not comparable implementation risk, support quality or total ownership cost.

6 Implications

For buyers, the first AI recommendation should be treated as a shortlist rather than a complete market scan. A useful follow up asks which credible alternatives were omitted, which decisive claims are directly verifiable and whether the choice would change if the brands were removed. Products that depend on fit or other experiential qualities should be evaluated through return conditions, trials or pilots instead of unsupported predictions.

For procurement teams, the findings support a two stage process. Teams should first define requirements and compare anonymous capability profiles where possible. They should then add supplier identity to evaluate service history, financial risk, distribution and contractual support. This preserves legitimate supplier differences without allowing reputation to determine the technical score in advance.

For brand owners, AI visibility depends on both source presence and evidence quality. A brand can fail before comparison if it is absent from accessible category sources. It can also lose after inclusion if model names, product tiers, specifications and availability are inconsistent. Recommendation measurement should therefore distinguish spontaneous shortlist share, final recommendation share and direct brand lift in paired visible and anonymous tests.

7 Limitations and Further Research

This is an exploratory case, not a population estimate. It records one sequence in one product category and does not establish how often any model will produce the same reversal. The visible and anonymous comparisons should be repeated in independent conversations, with candidate order reversed in half of the runs. Testing across several AI services is necessary because model training, retrieval tools and current web sources differ.

The study also cannot attribute the entire reversal to brand identity if a product description contains clues that reveal its manufacturer or market tier. Future profiles should remove proprietary technology labels, control wording and match the amount of information provided for each candidate. A minimum pilot could use three AI services and ten fresh conversations per service in each condition. That design would yield 60 decisions arranged as 30 visible and anonymous pairs per category. Larger samples would be needed for stable estimates and confidence intervals.

The next study should repeat the method in both consumer and business categories. B2C prompts can remain short because information scarcity is part of the observed buying situation. B2B prompts should naturally include organisation size, scale, integration, security, implementation time, budget period and service requirements. Fairness requires identical information within each category, not identical prompt length across B2C and B2B.

8 Conclusion

The case shows that a brand name can influence more than the final ranking. It can affect which products are retrieved, how ambiguous evidence is interpreted and which explanation is constructed around the choice. In the paired test, Mizuno won when the names were visible and the Adidas product won when the same comparison was anonymised. Leather changed from a durability benefit to a durability risk as the recommendation changed.

One reversal demonstrates possibility, not prevalence. The claim supported by this study is therefore limited: AI purchase recommendations can contain a brand effect that remains hidden inside apparently product based reasoning. Measuring that effect requires repeated natural shortlist tests, evidence audits and matched visible and anonymous comparisons. Without all three, a brand may appear strong because it is frequently retrieved, because its name changes the interpretation of evidence, or because it genuinely offers better product and service conditions. Those are different commercial effects and should be reported separately.

References

1. Mizuno. Morelia II Pro AG product specification. <https://emea.mizuno.com/eu/en-se/morelia-ii-pro-ag/P1GA251404.html> Accessed 22 September 2026.
2. Mizuno Sweden. Morelia Neo IV Pro AG product page. <https://www.mizuno.se/mizuno/373318/morelia-neo-iv-pro-ag-vit-gr%C3%B6n-9-fotbollsskor-f%C3%B6r-konstgr%C3%A4s-och-gr%C3%A4s> Accessed 22 September 2026.
3. Adidas Sweden. Predator League 2G and 3G artificial grass football boots. <https://www.adidas.se/predator-league-2g-3g-artificial-grass-fotbollsskor/IF3210.html> Accessed 22 September 2026.
4. Stadium. Copa Pure IV Elite AG product page. <https://www.stadium.se/sport/fotboll/fotbollsskor/410352104/adidas.copa-pure-iv-elite-ag.ftwwht-ftwwht> Accessed 22 September 2026.
5. Zalando Sweden. Mizuno artificial grass assortment. <https://www.zalando.se/man-sport-skor-fotbollsskor-konstgras/mizuno/> Accessed 22 September 2026.
6. House of Rugby. Morelia II Pro AG retail listing. <https://house-of-rugby.se/p1ga250700-fotbollsskor-mizuno-morelia-ii-pro-ag-black-morelia40thred-blacksand> Accessed 22 September 2026.
7. Futbol Emotion. Morelia II Pro AG retail listing. <https://www.futbolemotion.com/en/buy/football-boot/mizuno/morelia-ii-pro-ag-red-white-black> Accessed 22 September 2026.
8. Sport is Good. Predator League AG retail listing. <https://sportisgood.se/jr7900-fotbollsskor-adidas-predator-league-ag-cblack-ftwwht-lucred> Accessed 22 September 2026.
9. Lockhart Boot Blog. Morelia II Japan AG review. <https://lockhartbootblog.com/2025/07/28/mizuno-morelia-ii-japan-ag-mini-review/> Accessed 22 September 2026.
10. Stadium. Guide to football shoe surfaces. <https://www.stadium.se/guide/guides-football-shoes/surfaces> Accessed 22 September 2026.
11. XXL Sweden. Guide to choosing football boots. <https://www.xxl.se/tips-och-rad/gc/k%C3%B6phj%C3%A4lp/sport-och-bollspel/tips-valj-ratt-fotbollsskor> Accessed 22 September 2026.

Source note Product pages were used for product identity, stated specifications, price and availability. Retail guides and reviews were used only to document the information environment encountered in the experiment. They were not treated as controlled tests of fit, durability or injury risk.