INFLUENCER MARKETING, CULTURAL SENSITIVITY, AND ARTIFICIAL INTELLIGENCE AS DETERMINANTS OF GREEN AGRI-FOOD PRODUCT PURCHASE: THE MODERATING ROLE OF LEGAL NORM COMPLIANCE

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ARTICLE INFO

Review Article

Received: *24 January 2026*

Accepted: *19 March 2026*

doi:10.59267/ekoPolj2602601Z

UDC 658.8+316.7+004.8]:631.147

Keywords:

influencer marketing, cultural sensitivity, artificial intelligence, legal norms, green agri-food products

***JEL**: A13, M31, Q10*

ABSTRACT

Sustainable consumption and the transition toward green products, particularly in the agri-food sector, represent important challenges for contemporary agricultural economics. This study examines the influence of influencer marketing, cultural sensitivity, and artificial intelligence on consumers' purchase intentions toward green products, with compliance with legal norms as a moderating factor. The research was conducted in the Republic of Serbia using a survey-based methodology on a sample of 418 respondents. The results show that all examined factors have a statistically significant positive effect on green product purchase, while compliance with legal norms strengthens these relationships. The findings indicate that sustainable consumption is driven by the interaction of digital communication, cultural alignment, technological support, and regulatory trust. It is recommended that agricultural producers and food marketers combine digital marketing tools with culturally adapted communication while ensuring adherence to legal standards. The study provides insights for policymakers supporting sustainable agri-food market development.

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Introduction

Global pressures related to environmental protection, climate change, and the sustainable use of natural resources have positioned green products—particularly those originating from the agri-food sector—as a strategic priority in contemporary marketing and agricultural economics (Klabi, 2025). Rising consumer awareness of environmental and health-related issues has increased demand for products that are not only environmentally friendly but also associated with organic production, food safety, and responsible agricultural practices (Sun et al., 2025). In this context, understanding the determinants of consumers' purchase intentions toward green products is of critical importance for researchers, policymakers, and agri-food market participants (Long et al., 2024; Radomirović et al., 2025; Testa et al., 2024).

In recent years, influencer marketing has emerged as a powerful communication tool capable of shaping consumer attitudes and behaviors, particularly in markets characterized by information asymmetry, such as those related to organic food, sustainable agriculture, and green agri-food products. Influencers, as contemporary opinion leaders, can affect consumer trust and perceptions through personalized content, experiential narratives, and perceived authenticity, thereby influencing purchase decisions related to sustainable and healthy products (Cai et al., 2025). Alongside influencer marketing, cultural sensitivity—the ability to recognize, understand, and respect cultural norms, values, and consumption habits—plays a crucial role in tailoring marketing messages to diverse consumer segments, especially in the context of food consumption and traditional dietary practices (Bhardwaj et al., 2023).

The third pillar of this research, artificial intelligence (AI), has gained increasing relevance in both marketing and the agri-food sector. AI-driven tools enable more efficient market segmentation, personalized product recommendations, and predictive analysis of consumer behavior, thereby enhancing the effectiveness of marketing strategies aimed at promoting green and sustainable products (Wang et al., 2025). In the context of agricultural markets, AI contributes to improved transparency, traceability, and communication of product attributes, which are particularly important for green and organic products.

In addition to these market-oriented factors, compliance with legal norms has become an indispensable element of sustainable consumption and agricultural development. Regulatory frameworks governing food safety, organic certification, environmental protection, and consumer rights play a critical role in shaping consumer trust and market dynamics. Legal norm compliance not only ensures transparency and accountability within the agri-food sector but may also moderate the effectiveness of marketing and communication strategies in influencing consumer behavior. Although prior studies acknowledge the importance of legal regulations in sustainable consumption, an integrated analytical approach that simultaneously examines influencer marketing, cultural sensitivity, and artificial intelligence—while explicitly considering the moderating role of legal norms—remains insufficiently explored (Fan & Liu, 2025; Životić et al., 2025; Huang et al., 2025).

This study addresses the identified research gap through an empirical analysis conducted on a sample of consumers in the Republic of Serbia, employing Partial Least Squares Structural Equation Modeling (PLS-SEM) using the SmartPLS 4 software package. The theoretical contribution of this paper lies in the development of an integrative framework that links key contemporary digital marketing determinants with sustainable consumption in the agri-food context, while explicitly incorporating legal norm compliance as a moderating variable. From a practical perspective, the study provides actionable insights for agricultural producers, food marketers, and policymakers by offering guidelines for designing integrated marketing strategies that combine digital communication, cultural adaptation, and regulatory compliance to stimulate the purchase of green products.

The remainder of the paper is structured as follows. The next section presents a review of the relevant literature and the development of research hypotheses, followed by a description of the research methodology. The subsequent section reports and discusses the empirical results, while the final section outlines the main conclusions, theoretical contributions, practical implications, and directions for future research.

Literature review

Green Product Purchase

Green product purchase refers to consumers' intentions and behaviors related to selecting products with environmentally beneficial attributes, such as reduced environmental impact, recyclable packaging, and sustainable production practices (Filipović et al., 2024). Within the agri-food sector, green products are closely associated with organic food, environmentally responsible agricultural production, food safety, and healthy nutrition, making purchase decisions particularly sensitive to trust, information transparency, and perceived risk (Nitzko, 2024; Wan et al., 2026).

From the stimulus–organism–response (S-O-R) perspective, environmental messages, eco-labels, and sustainability cues act as stimuli that shape internal consumer states—such as attitudes, trust, and perceived value—which ultimately influence purchasing behavior. Similarly, the Theory of Planned Behavior (TPB) explains green product purchase through the joint effects of attitudes toward green products, subjective norms, and perceived behavioral control. Across these theoretical perspectives, credible information, social influence, cultural congruence, and risk reduction consistently emerge as key drivers of green purchase behavior, especially in markets for agri-food products characterized by credence attributes (Li et al., 2025; Pratama, 2020). These mechanisms directly correspond to the effects generated by influencer marketing, cultural sensitivity, and AI-driven personalization.

2.2. Influencer Marketing and Green Product Purchase

Influencer marketing relies on para-social interactions and perceived source credibility, including expertise, trustworthiness, and attractiveness, to shape consumer attitudes and

behavioral norms. Within the Elaboration Likelihood Model (ELM), influencers may operate through both the central route—by providing diagnostic information, product demonstrations, and comparative arguments—and the peripheral route, by leveraging heuristics such as social proof and perceived authenticity. In the context of green and agri-food products, which often involve complex quality attributes and certification-based claims, trust in the information source becomes particularly salient. Influencers who communicate transparent environmental information, disclose sponsorships, and demonstrate personal engagement with green or organic food products can significantly reduce perceived risk and enhance perceived value, thereby strengthening purchase intentions (Rehman et al., 2025). Empirical evidence suggests that influencer credibility and identification play a decisive role in translating sustainability-related messages into green product purchase behavior (Meet et al., 2024; Zhou & Jiang, 2025).

H1: Influencer marketing has a positive effect on green product purchase.

Cultural Sensitivity and Green Product Purchase

Cultural sensitivity refers to the ability to recognize, understand, and adapt marketing communication to the cultural norms, values, and symbolic meanings of target consumer groups (Liao et al., 2023). In agri-food markets, consumption patterns are deeply embedded in cultural traditions, dietary habits, and social norms, which makes culturally sensitive communication especially important when promoting green and organic food products. Messages that align with local values—such as collective responsibility, environmental stewardship, or health consciousness—enhance message relevance, reduce psychological distance, and foster perceived respect for consumers' cultural identities. Prior research indicates that such alignment positively influences attitudes and behavioral intentions by increasing trust and perceived authenticity (Liang et al., 2024; Dobričanin & Aleksić, 2025; Shuilong et al., 2024). From an S-O-R perspective, cultural sensitivity enhances the diagnosticity and comfort associated with green claims, thereby facilitating approach behavior and green product purchase.

H2: Cultural sensitivity has a positive effect on green product purchase.

Artificial Intelligence and Green Product Purchase

Artificial intelligence (AI) has become an increasingly important tool in marketing and agri-food supply chains, enabling predictive targeting, personalized content delivery, optimized communication timing, and interactive decision support through recommender systems and chatbots. By tailoring green product information to consumers' preferences, dietary needs, and stages of the decision-making process, AI increases perceived relevance while simultaneously reducing search and decision costs. Within the TPB framework, AI-driven personalization strengthens favorable attitudes and perceived behavioral control by enhancing clarity, convenience, and informational accessibility. In addition, algorithmic recommendations may serve as normative cues, reinforcing social approval for sustainable consumption choices (Mijit et al., 2025).

Given the credence nature of many green agri-food products, AI systems can also provide timely access to certifications, labels, and traceability information, thereby reducing perceived risk and supporting green purchase decisions (Xu, 2025).

H3: Artificial intelligence has a positive effect on green product purchase.

Compliance with Legal Norms as a Moderator

Compliance with legal norms (hereafter: legal compliance) reflects firms' adherence to relevant laws, standards, and disclosure requirements, including truthful environmental claims, transparent advertising, data protection, and consumer rights. In the context of agri-food markets, legal compliance is closely linked to food safety regulations, organic certification schemes, and environmental standards. From institutional and legitimacy perspectives, visible legal compliance signals accountability and procedural fairness, thereby enhancing consumer trust and perceived credibility. Moreover, compliance reduces perceived legal and ethical risks related to greenwashing, misleading claims, or misuse of consumer data—risks that may otherwise weaken the effectiveness of marketing communication (Fan & Liu, 2025; Huang et al., 2025; Orset, 2024). Legal compliance can strengthen the impact of influencer marketing by ensuring transparent sponsorship disclosure and truthful environmental messaging, which increases influencer credibility and reduces consumer skepticism (Orset, 2024; Rojas & Yasin, 2025).

H4a: Legal compliance positively moderates the relationship between influencer marketing and green product purchase.

Similarly, culturally adapted marketing messages that comply with local advertising and consumer-protection regulations avoid misrepresentation and ethical pitfalls. Such compliance ensures that culturally resonant claims remain accurate and trustworthy, thereby amplifying their persuasive effect (Dlamini & Mahowa, 2024; Najafabadiha et al., 2025; Zhang et al., 2025).

H4b: Legal compliance positively moderates the relationship between cultural sensitivity and green product purchase.

Finally, the effectiveness of AI-driven marketing may be undermined by concerns related to privacy, data misuse, and algorithmic opacity. Compliance with data-protection regulations and AI transparency requirements—such as informed consent and explainability—reduces these concerns and increases consumers' willingness to rely on AI-generated recommendations for green products (Srisathan et al., 2024; Wei et al., 2024).

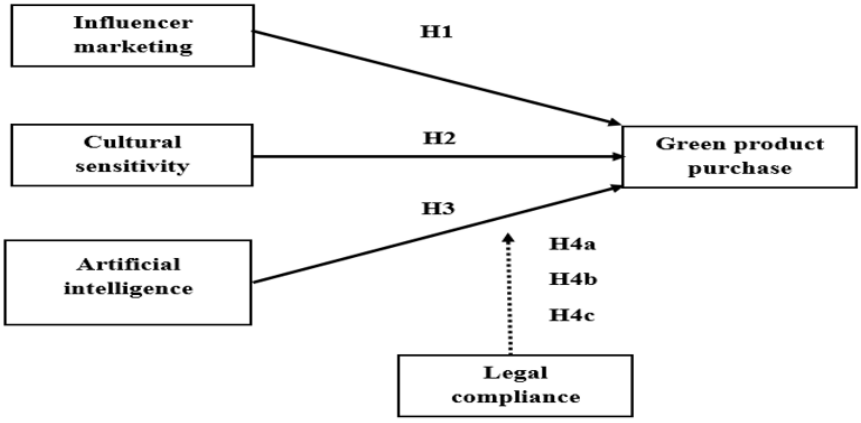
H4c: Legal compliance positively moderates the relationship between artificial intelligence and green product purchase.

Conceptual Model

The conceptual model (Figure 1) specifies three direct effects on green product purchase—namely influencer marketing, cultural sensitivity, and artificial intelligence—as well

as three interaction effects, with legal norm compliance moderating each relationship. The model is grounded in the stimulus–organism–response (S-O-R) and Theory of Planned Behavior (TPB) frameworks, whereby persuasive and relevance-enhancing stimuli—such as influencer communication, cultural congruence, and AI-driven personalization—shape consumers' internal evaluations and behavioral intentions. Within the context of green and agri-food products, legal norm compliance functions as a contextual mechanism that reduces perceived risk and enhances credibility by ensuring transparency, regulatory alignment, and trustworthiness of marketing messages. As a result, legal compliance strengthens the effectiveness of marketing-related stimuli in translating positive attitudes and perceptions into green product purchase behavior.

Figure 1. Conceptual model



Soruce: Authors

Research methodology

This study was conducted in the Republic of Serbia to empirically examine the effects of influencer marketing, cultural sensitivity, and artificial intelligence on green product purchase, with compliance with legal norms serving as a moderating variable. Given the relevance of green products—particularly green and agri-food products—in the context of sustainable consumption and agricultural markets, a survey-based research design was adopted to capture consumers' perceptions and attitudes. The sample comprised 418 respondents (Table 1), selected using a convenience sampling approach, which enabled efficient data collection within the defined research framework. The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) implemented in the SmartPLS 4 software package. This method is particularly suitable for examining complex relationships among latent constructs, including moderation effects, and is widely applied in studies related to marketing, sustainability, and consumer behavior in agri-food markets. All research variables were measured

using previously validated measurement scales adapted from the existing literature (Li et al., 2025; Meet et al., 2024; Orset, 2024; Wei et al., 2024; Xu, 2025) and assessed on a seven-point Likert scale, where 1 represents "strongly disagree" and 7 represents "strongly agree" (Table 2).

Table 1. Demographic structure of respondents

		Number of respondents	% respondents
Gender	Female	211	50.1%
	Male	207	49.9%
	Total	**418**	**100%**
Age	Up to 20 years	11	2.6%
	21-30 years	114	27.3%
	31-40 years	106	25.4%
	41-50 years	88	21.0%
	51-60 years	55	13.2%
	61 years and over	44	10.5%
	Total	**418**	**100%**
Education	Primary school	6	1.4%
	High school	219	52.4%
	Faculty	193	46.2%
	Total	**418**	**100%**

Source: Authors

Table 1 summarizes the demographic characteristics of the 418 respondents. The gender structure is well balanced, with 50.1% female and 49.9% male participants. In terms of age, the largest share of respondents belongs to the 21–40 age group (52.7%), a cohort typically characterized by high exposure to digital communication channels and growing awareness of sustainable and healthy consumption. Respondents aged up to 20 years account for 2.6% of the sample, while those aged 51 years and above represent 23.7%. With respect to educational attainment, the majority of respondents have completed secondary education (52.4%), followed by those holding a university degree (46.2%), whereas respondents with primary education constitute only a marginal proportion of the sample (1.4%).

Table 2. Measurement items, Cronbach's alpha, and Composite reliability

Variables	Statements	Cronbach's alpha	Composite Reliability
Influencer marketing	**IM1:** Influencers I follow provide useful and reliable information about green products, particularly those related to sustainable and healthy consumption. **IM2:** Influencers I trust influence my decision to purchase green products. **IM3:** Influencer messages are perceived as authentic and relevant to my choice of green products. **IM4:** Recommendations provided by influencers increase my willingness to purchase green products.	**0.895**	**0.889**
Cultural sensitivity	**CS1:** Marketing messages for green products reflect local cultural values and consumption traditions. **CS2:** Marketing communication is adapted to the language and symbols that are familiar and meaningful to me. **CS3:** Communication about green products demonstrates respect for diverse cultural perspectives. **CS4:** Culturally adapted content increases my motivation to purchase green products.	**0.847**	**0.866**
Artificial intelligence	**AI1:** AI-based tools (e.g., recommender systems and chatbots) help me easily identify green products. **AI2:** AI-driven personalization increases the relevance of information about green products. **AI3:** AI facilitates my decision-making process when purchasing green products. **AI4:** Recommendations provided by AI increase my willingness to purchase green products.	**0.915**	**0.896**
Legal compliance	**LC1:** Companies offering green products comply with applicable laws, regulations, and standards. **LC2:** The transparency and truthfulness of information about green products positively influence my trust. **LC3:** Compliance with legal norms increases my willingness to purchase green products. **LC4:** Adherence to legal and regulatory requirements strengthens the effects of influencer marketing, cultural sensitivity, and artificial intelligence on my purchase decisions.	**0.887**	**0.896**
Green product purchase	**GP1:** I frequently choose green or eco-friendly products, particularly food and agri-food products produced in an environmentally responsible manner. **GP2:** My purchase decisions, especially regarding food and agricultural products, depend on their environmental attributes. **GP3:** I am willing to pay a higher price for green products, particularly agri-food products, due to their ecological and health-related value. **GP4:** Purchasing green and sustainably produced agri-food products is an integral part of my everyday consumer decisions.	**0.929**	**0.918**

Source: Authors

Table 2 presents the measurement items, Cronbach's alpha, and Composite Reliability (CR) for all latent constructs used in this study. The results indicate strong internal consistency across all variables. Specifically, Cronbach's alpha values range from 0.847 (Cultural Sensitivity) to 0.929 (Green Product Purchase), exceeding the commonly accepted threshold of 0.70, which confirms the reliability of the scales. Similarly, Composite Reliability values are all above 0.85, further supporting the internal consistency and robustness of the measurement model. The high reliability coefficients for Influencer Marketing ($\alpha = 0.895$; CR = 0.889), Cultural Sensitivity ($\alpha = 0.847$; CR = 0.866), Artificial Intelligence ($\alpha = 0.915$; CR = 0.896), Legal Compliance ($\alpha = 0.887$; CR = 0.896), and Green Product Purchase ($\alpha = 0.929$; CR = 0.918) indicate that the items consistently capture their respective latent constructs (Hair et al., 2006; Nunnally, 1978). Results provide confidence that the subsequent PLS-SEM analysis is based on valid and reliable measures.

Research results

Table 3 presents the Average Variance Extracted (AVE) for all research variables, which indicates the proportion of variance captured by each construct relative to the variance due to measurement error.

Table 3. Average variance extracted (AVE) for research variables

Research variables	Average Variance Extracted (AVE)
Influencer marketing	0.763
Cultural sensitivity	0.712
Artificial intelligence	0.698
Legal compliance	0.681
Green product purchase	0.769

Source: Authors

These results confirm adequate convergent validity of the measurement model, demonstrating that the indicators of each latent construct effectively represent the underlying theoretical concept. The high AVE values for Influencer Marketing (0.763), Cultural Sensitivity (0.712), Artificial Intelligence (0.698), Legal Compliance (0.681), and Green Product Purchase (0.769) provide strong evidence that the constructs reliably capture the intended dimensions of the model, all exceeding the recommended threshold of 0.50 (Fornell and Larcker, 1981).

To assess the overall fit of the proposed model, key model fit indicators are presented in Table 4.

Table 4. Model fit indicators for the green product research model

Indicators of model validity	Research model – Green product	Recommended value
$\chi 2$/df	1.892	<3
GFI	0.914	>0.9
IFI	0.933	>0.9
TLI	0.911	>0.9
CFI	0.957	>0.9
RMSEA	0.030	<0.08

Source: Authors

The reported values demonstrate an excellent fit between the proposed model and the observed data. Specifically, the χ^2/df ratio is 1.892, which is below the recommended threshold of 3, indicating a good fit (Bagozzi and Yi, 1988). Other fit indices further confirm the adequacy of the model: the Goodness-of-Fit Index (GFI = 0.914), Incremental Fit Index (IFI = 0.933), Tucker-Lewis Index (TLI = 0.911), and Comparative Fit Index (CFI = 0.957) all exceed the recommended value of 0.9 (Byrne, 1998). Additionally, the Root Mean Square Error of Approximation (RMSEA = 0.030) is well below the threshold of 0.08, suggesting minimal approximation error (Hair et al., 2006). Overall, these results indicate that the proposed PLS-SEM model provides a robust and reliable representation of the relationships among influencer marketing, cultural sensitivity, artificial intelligence, legal compliance, and green product purchase.

To examine the direct effects of the independent variables on green product purchase, the PLS-SEM path coefficients are presented in Table 5.

Table 5. PLS-SEM results – Impact of independent variables on the Green product purchase

Independent variables	Path coefficient	Standard deviation	T statistics	P values
Influencer marketing	0.359	0.066	5.897	0.000**
Cultural sensitivity	0.338	0.053	5.336	0.000**
Artificial intelligence	0.412	0.081	6.478	0.000**

Notes: Level of statistical significance: **0.01
Source: Authors

Table 5 reports the PLS-SEM results for the impact of influencer marketing, cultural sensitivity, and artificial intelligence on green product purchase. All three independent variables exhibit significant positive effects. Specifically, influencer marketing shows a path coefficient of 0.359 ($t = 5.897$, $p < 0.01$), cultural sensitivity has a coefficient of 0.338 ($t = 5.336$, $p < 0.01$), and artificial intelligence demonstrates the strongest effect with a coefficient of 0.412 ($t = 6.478$, $p < 0.01$). These results ***confirm that all hypothesized direct relationships (H1, H2, H3) are statistically significant***, indicating that higher levels of influencer marketing, culturally sensitive messaging, and AI-supported personalization are associated with increased green product purchase among consumers.

To investigate the moderating role of legal compliance on the relationships between the independent variables and green product purchase, the PLS-SEM moderation results are presented in Table 6.

Table 6. Moderation of Legal compliance in the PLS-SEM model (dependent variable: Green product)

Relatinos	Path coefficient	Standard deviation	T statistics	P values
Influencer marketing X Legal compliance	0.224	0.055	4.398	0.003**
Cultural sensitivity X Legal compliance	0.298	0.071	5.277	0.001**
Artificial intelligence X Legal compliance	0.368	0.088	5.917	0.000**

Notes: Level of statistical significance: **0.01

Source: Authors

Table 6 presents the results of the moderation analysis, examining the influence of legal compliance on the relationships between influencer marketing, cultural sensitivity, artificial intelligence, and green product purchase. The interaction effects of legal compliance are all positive and statistically significant. Specifically, the interaction between influencer marketing and legal compliance has a path coefficient of 0.224 ($t = 4.398$, $p < 0.01$), cultural sensitivity × legal compliance shows 0.298 ($t = 5.277$, $p < 0.01$), and artificial intelligence × legal compliance demonstrates the strongest moderation effect with 0.368 ($t = 5.917$, $p < 0.01$). These findings indicate that legal compliance strengthens the impact of influencer marketing, cultural sensitivity, and AI on green product purchase. In other words, the effectiveness of these independent variables is enhanced when companies demonstrate high adherence to laws and regulations, ***confirming the hypothesized moderating roles (H4a, H4b, H4c).***

Discussion of Results

The findings of this study are largely consistent with prior research examining green product purchase, influencer marketing, cultural sensitivity, and AI-enabled personalization (Liang et al., 2024; Meet et al., 2024; Shuilong et al., 2024; Zhou & Jiang, 2025; Xu, 2025). The confirmation of all hypothesized direct and moderating effects indicates that these factors play a significant role in shaping consumers' intentions to purchase green products. From a broader perspective, the results reinforce the view that sustainable consumption is not driven by a single determinant but emerges from the interaction of marketing communication, cultural alignment, technological facilitation, and regulatory trust. In the context of the agri-food sector and agricultural economics, these findings are particularly relevant. Green products—especially organic and sustainably produced food—are typically characterized by credence attributes, meaning that consumers cannot easily verify their quality, environmental impact, or production methods prior to purchase. As a result, trust, information transparency, and perceived credibility become central to purchase decisions. The positive impact of influencer marketing observed in this study suggests that influencers function as important informational intermediaries who reduce information asymmetry between

producers and consumers in agri-food markets. By communicating production practices, ecological benefits, and personal consumption experiences, influencers help consumers form favorable attitudes toward green and organic products, thereby supporting demand for sustainably produced agricultural goods.

Similarly, the confirmed effect of cultural sensitivity highlights the importance of aligning marketing messages with local consumption habits, food traditions, and culturally embedded perceptions of healthy and sustainable diets. In agricultural markets, food choices are deeply rooted in cultural norms and everyday practices, which explains why culturally adapted communication enhances the effectiveness of green product promotion. These results suggest that green marketing strategies in the agri-food sector should not rely solely on universal environmental arguments but should also incorporate culturally meaningful narratives related to local food heritage, traditional agricultural practices, and region-specific dietary values. The significant positive influence of artificial intelligence further underscores the growing role of digital technologies in modern agri-food markets. AI-driven personalization enhances consumers' decision-making by delivering relevant, timely, and tailored information about green products, including certifications, origin, and environmental attributes. From an economic perspective, AI reduces search and transaction costs, increases market efficiency, and facilitates better matching between consumer preferences and green product offerings. This is particularly important for organic and sustainable food markets, where consumers often face complex information environments and higher perceived risks.

A key contribution of this study lies in demonstrating the moderating role of legal norm compliance across all examined relationships. In the context of agricultural economics, regulatory frameworks related to food safety, organic certification, environmental standards, and consumer protection are fundamental for building market trust. The findings indicate that legal compliance amplifies the effectiveness of influencer marketing, cultural sensitivity, and AI-based communication by signaling transparency, accountability, and institutional reliability. This suggests that marketing and technological efforts to promote green agri-food products are most effective when embedded within a strong and visible regulatory environment.

By integrating marketing, cultural, technological, and legal dimensions into a single analytical framework, this study extends existing research that has predominantly examined these factors in isolation. The holistic approach adopted here offers a more comprehensive understanding of consumer behavior in green and agri-food markets and reflects the complex reality of sustainable consumption in contemporary agricultural economies. In doing so, the study moves beyond narrow, single-factor explanations and provides empirical evidence that sustainable consumption is shaped by the interplay of multiple, mutually reinforcing forces.

Overall, the results emphasize that the promotion of green products in the agri-food sector requires coordinated strategies that simultaneously address consumer

trust, cultural relevance, technological innovation, and regulatory compliance. This integrative perspective not only enriches the theoretical literature on green marketing and sustainable consumption but also provides valuable insights for agricultural producers, food marketers, and policymakers seeking to stimulate demand for environmentally responsible and sustainably produced agricultural goods.

Conclusions

This study provides a comprehensive examination of the determinants of green product purchase in the Republic of Serbia, with particular relevance to green and agri-food products within the broader context of agricultural economics and sustainable food markets. By empirically confirming the statistically significant effects of influencer marketing, cultural sensitivity, and artificial intelligence—alongside the moderating role of legal norm compliance—the findings demonstrate that sustainable consumer behavior emerges from the interaction of marketing communication, cultural alignment, technological support, and institutional trust. The results indicate that these factors jointly shape consumers' willingness to engage in environmentally responsible consumption, especially in markets characterized by information asymmetry and credence attributes, such as organic and sustainably produced food.

The originality of this research lies in the development and empirical validation of a holistic conceptual model that integrates marketing, cultural, technological, and legal determinants of green product purchase within a single analytical framework. Unlike prior studies that have predominantly examined these factors in isolation, this study captures the complexity of consumer decision-making in sustainable and agri-food markets by explicitly modeling their joint and interactive effects. By incorporating legal norm compliance as a moderating variable, the research introduces an institutional dimension that is particularly relevant for agricultural economics, where regulatory frameworks related to food safety, organic certification, and environmental standards play a decisive role in shaping market outcomes.

From a theoretical perspective, the study advances the literature on green marketing and sustainable consumption by adopting an integrative approach that bridges marketing theory, cultural perspectives, technological innovation, and institutional frameworks. The findings extend existing models of green consumption by demonstrating that consumer responses to sustainability-oriented stimuli are significantly strengthened when embedded in a legally compliant environment. This contributes to a more nuanced understanding of how multiple stimuli interact to influence purchase behavior, particularly in agri-food markets where trust, credibility, and regulatory assurance are central. In this way, the study addresses an important gap in the literature and provides a more comprehensive explanation of green product consumption from an economic and institutional standpoint.

The results offer several important ***practical implications*** for agricultural producers, food marketers, and policymakers. Firms seeking to promote green and organic

products should adopt a multidimensional strategy that simultaneously leverages credible influencer marketing, culturally adapted communication, and AI-supported personalization, while ensuring strict compliance with legal and regulatory requirements. Such an approach enhances consumer trust, reduces perceived risk, and increases purchase intention, thereby supporting demand for sustainably produced agricultural goods. For policymakers, the findings highlight the importance of transparent and well-enforced regulatory frameworks, as legal compliance amplifies the effectiveness of marketing and technological tools aimed at promoting sustainable consumption. These insights are particularly relevant for strengthening green agri-food markets and supporting sustainable agricultural development.

Despite its contributions, this study has ***certain limitations***. The use of a cross-sectional survey design and convenience sampling in Serbia limits the generalizability of the findings to other national and cultural contexts. ***Future research*** could address these limitations by employing longitudinal designs to capture changes in consumer behavior over time and by extending the proposed model to other countries and agri-food markets. Additionally, incorporating further explanatory or moderating variables—such as environmental awareness, social norms, trust in food institutions, or rural–urban differences—could provide an even deeper understanding of sustainable consumption patterns. Such extensions would further enhance the relevance of this research for the field of agricultural economics and the development of resilient and sustainable food systems.

Conflict of interests

The authors declare no conflict of interest.

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