

AI for Personalized Marketing: Perception and Influence on Purchasing Behavior in Morocco

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Abstract— AI is transforming marketing strategies as part of the digital revolution, particularly through personalized marketing. This development raises an important question:

How do Moroccan consumers perceive these personalization strategies, and what impact do they have on their purchasing behavior? We will explore the effect of AI-based personalization on the purchasing behavior of Moroccan consumers. Based on a qualitative survey of marketing professionals and a sample of consumers, this study examines perceptions, reactions, and expectations regarding these new technologies. The goal is to understand how Moroccan companies are integrating AI into their advertising strategies and to analyze how this personalization affects the way consumers perceive brands, make decisions, and develop loyalty.

Using a theoretical approach to consumer behavior and current developments in AI marketing, this study explores the evolution of personalized marketing in Morocco, which leads to the new strategies and ethical issues related to marketing personalization. However, Moroccan consumers are still exposed to personalization systems integrated into their shopping experience. This raises the need to evaluate not only the perceived benefits but also the real impact of artificial intelligence on their purchasing decisions. How do Moroccan consumers perceive these personalization strategies, and what influence do they have on their purchasing behavior?

The main objective of this study is to address the lack of research on the impact of artificial intelligence applied to marketing personalization in the Moroccan context, given that, after conducting a systematic review, we found that the subject has been largely studied internationally, but there is no in-depth research on its application in Morocco. By targeting communication agencies and experts in the field of digital advertising, we will obtain responses from Moroccan experts and consumers, generating tangible results based on their experiences, expected to provide a more realistic view of the situation on the ground, based on the daily strategies applied by various AI tools.

The purpose of this research is to determine the level of acceptance of these new technological systems by consumers and how they interact with this advanced reality. The goal is to identify a factor that links AI personalization and purchasing decisions.

Keywords—Artificial Intelligence, Personalization, Recommendation system, Consumer behavior, Consumer satisfaction.

I. INTRODUCTION

Marketing, like any other field, is rapidly changing with the integration of new technologies, particularly artificial intelligence and its various tools. This transformation is generating real changes that require new strategies and initiatives to enhance the customer experience, adapt to technological innovations, and gain competitive advantages in the market. AI offers immense potential to improve customer satisfaction and the operational efficiency of Moroccan companies. However, this integration requires a more in-depth approach, combining several tools such as machine learning, deep learning, chatbots, big data, intelligent agents, robotics, and IoT. These technological advances lead to more personalized marketing, adapted to consumer needs.

In the context of marketing personalization, artificial intelligence is crucial to delivering personalized recommendations derived from machine learning (ML) and deep learning (DL), which means diverse and accurate suggestions based on consumer preferences and behaviors. This enhances consumer experience and optimizes purchasing efficiency by uncovering various types of brands and products.

AI-personalized recommendations are not limited to these actions; they also facilitate the prediction of future purchases. They provide a comprehensive understanding of consumer activities, including their emotions, potential needs, feelings, and preferences, which translates into deep consumer insight and consideration of all aspects of the purchasing process.

These personalized recommendations enhance consumers' engagement and encourage them to purchase. This incentive can turn motivation into concern about loss of privacy, but it's still difficult to distinguish between accepting the technology and the perception of insecurity.

In this research we will propose new recommendation strategies that respond to the challenges faced by consumers to optimize the integration of AI into the Moroccan market.

This study has deeper and more current dimensions, offering unique visibility by providing an international study framework that reflects Moroccan perceptions.

II. LITERATURE REVIEW

To clarify the context of our study, we conducted a systematic review to establish a solid and reliable theoretical basis to uncover the gaps. Based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach, which is structured around four steps: identification, selection, relevance, and final inclusion.

It is mainly studied on Scopus, recognized as the most comprehensive database in social sciences and marketing. The publication period was from 2020 to 2025, for updated results on AI and personalization. We selected various keywords focused on the themes of our subject: "Artificial Intelligence" AND "Personalization"; "AI" AND "Recommendation systems"; "AI" AND "Consumer behavior"; "AI" AND "Trust" OR "Satisfaction"; "AI" AND 'Advertising' AND "Personalized marketing."

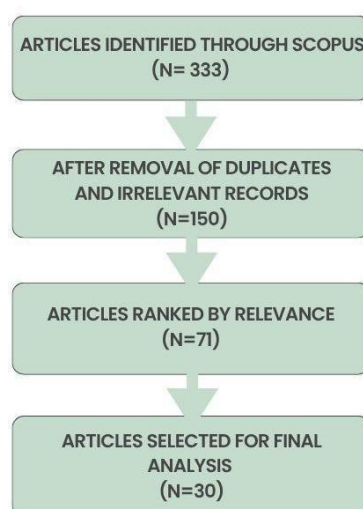


Fig. 1 PRISMA Method

Based on the 30 articles selected, we have organized this literature review around three main themes: the importance of AI and its tools for marketing personalization, personalization and recommendation systems, and consumer perceptions and behaviors towards AI.

A. *AI and its tools in personalized marketing*

AI personalization is of crucial importance. In this regard, how we work, play, shop, and all human practices have been redefined by AI [1]. technologies and AI rely heavily on access to large volumes of data, algorithms, and machine learning to ensure optimal performance [2]. The performance of chatbots depends on the language used, as demonstrated by several studies[3]. Confirmed by authors, a positive effect is apparent when the chatbot's language matches the customer's personality[4]. Due to the evolution of big data systems, marketing personalization has transformed the way consumers can be influenced and anticipate their preferences[5]. Deep learning technology relies on large algorithms, which include convolutional neural networks, recurrent neural networks, generative adversarial networks, and graph neural networks [6].

B. Personalization and Recommendation Systems:

Personalization is considered essential for capturing consumers' attention, creating a sense of value, and strengthening customer relationships [7]. Recommendation systems are the technological foundation of personalization, and artificial intelligence plays a crucial role in this process as it translates behavioral data into personalized suggestions for products that consumers are likely to buy in the future, based on their past purchasing behavior. Prediction is also beneficial for consumers if it is responsive to their needs, which we define as a data-driven recommendation, so this is more accurate and effective than traditional retail [8]. Another type of personalized marketing is the dynamic process of content creation and creative optimization, which can be used reliably to adapt advertising messages to consumer preferences [9].

C. AI, Consumer perceptions and behaviors:

Studies mentioned that the more appropriate recommendations are, the more positive impact they have, resulting in consumer satisfaction, as the author explained, that customers rely not only on brand messages, but also on recommendations, which have a positive impact on their behavior [10]. Data security and protection remain a concern for consumers, as shown by the example of location tracking in the case of Uber. “Uber's strict data processing methods and security measures, which are essential for protecting customer data and ensuring compliance”[11]. While these techniques improve engagement and conversion rates, they also reduce consumer confidence. Indeed, as this research focuses on the international level, it is necessary to deepen the analysis in the Moroccan context, to go into detail about interactions with Moroccan consumers, and to take into account the opinions of digital experts, even if this aspect is present in the field, but remains little studied at the academic level.

II. METHODOLOGY:

This research adopts an exploratory qualitative approach. The qualitative study is particularly useful for capturing complex human behaviors and uncovering insights that cannot be reduced to quantitative data.

The study aimed to collect detailed and tangible responses that reflect the reality experienced by both consumers and experts in the digital field. However, this study is based on semi-structured interviews. The sample consists of 10 participants: 5 experts from a digital communications agency and 5 Moroccan young consumers. The experts were selected based on their direct involvement in AI strategies. These experts have different profiles and are skilled in different tasks (SEM manager, media expert, E-rep manager, digital specialist, and communications manager). Each of these profiles uses a different AI tool, and all have their own experience with AI and their own vision of the development of artificial intelligence in the Moroccan market. The second interview is aimed at young consumers, as they are the most active on social media and in online shopping. They will share with us their experiences and perceptions of personalized recommendations, whether they are satisfied with them or not, and the impact of these recommendations on their behavior and purchasing intentions. The semi-structured interview guide is based on a literature review focusing on the following topics: AI tools, personalization, recommendation systems, consumer satisfaction, and consumer trust in technology.

The interviews were organized in person and online, with an average duration of 30 minutes per participant, and the responses were collected in September 2025. The analysis of this study was carried out using NVivo software to obtain reliable and structured results and to identify repetitions, divergences, and key points within the interviews.

III. RESULTS:

Current research focuses particularly on personalization and recommendation systems based on AI, as well as their impact on consumer behavior. The members of our sample are divided into two categories: young consumers and experts from a communications agency who have extensive knowledge of the digital sector in Morocco. We were able to have exact answers based on their real experiences. After analyzing these answers using the current version of NVivo 15, we present the following results:

Participants	Age	category	Experience	Buying frequency	Gender
Cas\\C1_Noha	23	Consumer	Non applicable	5 to 7 times/month	Female
Cas\\C2_ROMA	29	Consumer	Non applicable	10 times/month	Female
Cas\\C3_ouma	27	Consumer	Non applicable	2 to 3 times/month	Female
Cas\\C4_Oth	28	Consumer	Non applicable	3 times/month	Male
Cas\\C5_Laila	25	Consumer	Non applicable	1 times/month	Female
Cas\\E1_Media Expert	29	Expert	5 year	Non applicable	Female
Cas\\E2_Communication Specialist	31	Expert	7 year	Non applicable	Female
Cas\\E3_Digital specialist	35	Expert	15 year	Non applicable	Male
Cas\\E4_SEM Manager	29	Expert	7 year	Non applicable	Male
Cas\\E5_E-rep Manager	30	Expert	6 year	Non applicable	Female

Tab.1: Presentation of participants

According to this table, a significant proportion of participants were women. Additionally, the age of respondents ranged from 23 to 35. Furthermore, the experts' experience ranged from 5 to 15 years, which is sufficient to obtain reliable results. It was observed that the frequency of consumer purchases varied between one and ten times per month, which provides a repetitive and interesting buying experience.

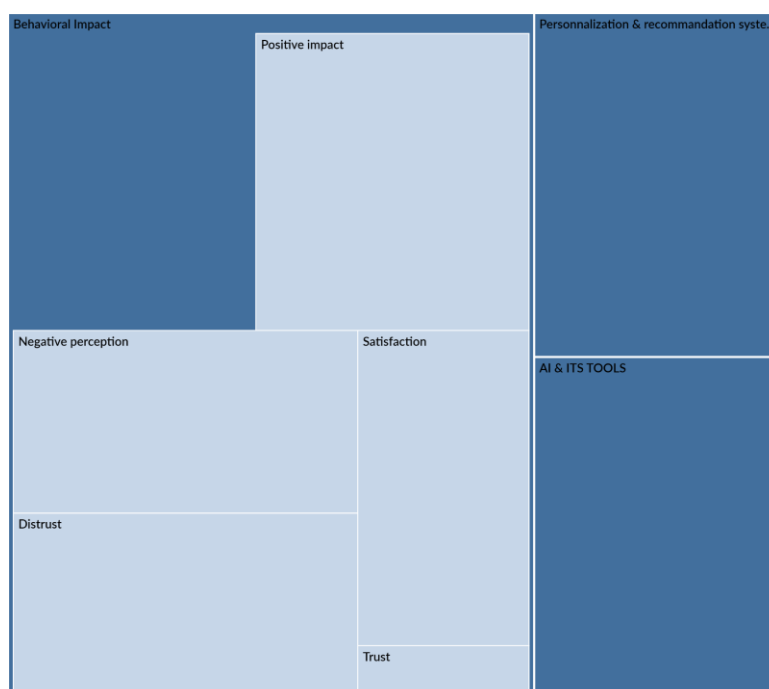


Fig.2: Thematic division

To ensure that the results were collected and processed in a structured manner, we divided our study into three main codes. These themes encompass AI and its tools, personalization and recommendation systems, and the impact on consumer behavior.

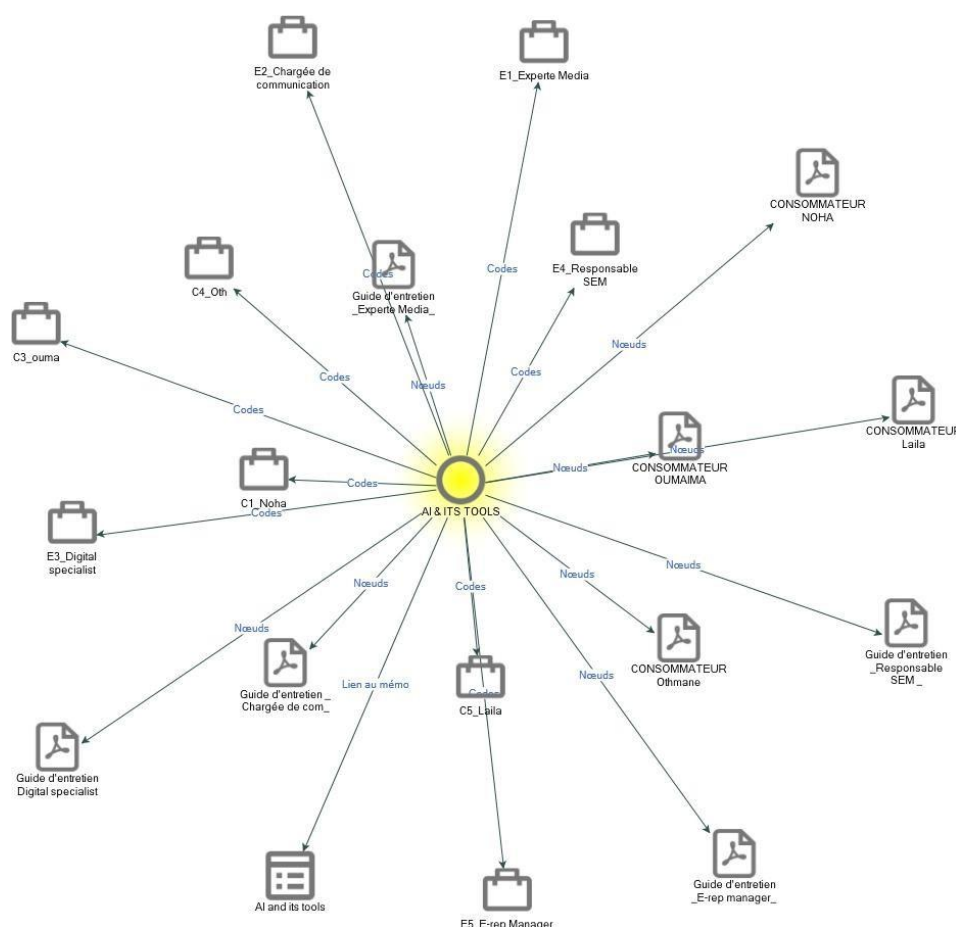


Fig.3: AI & its tools

Compared to the results of the code “AI & its tools,” we have analyzed that all participants shared their unique experiences with AI



Fig.4: Personalization and recommendations

Our participants' responses about recommendation systems and personalization: similar, complementary, time-saving, engagement, relevant, and useful...

THEME	REFERENCES		PERCENTAGE	
	Consumers	Experts	Consumers	Experts
IA & its tools	4	20	7,09%	78,64%
Behavioral impact	14	9	59,99%	35,43%
Trust	-	1	-	2,79%
Distrust	10	4	19,19%	23,78%
Satisfaction	14	4	28,97%	7,61%
Positive impact	11	19	22,90%	67,89%
Negative perception	10	5	18,29%	18,73%
Personalization & Recommendations systems	11	9	55,30%	40,78%

Tab 2: Code classification by frequency and percentage

Frequencies and percentages were used to analyze the topics of our study among consumers and experts. Based on the following results, we note that experts named AI tools very often (78.64%), while consumers mentioned them only (7.09%). In addition, the behavioral impact was indicated by consumers (59.99%) as well as experts (35.43%), Trust was only granted to experts, with a low percentage of 2.79%, compared to mistrust among both consumers (19.19%) and experts (23.78%), satisfaction is dominant among consumers (28.97%) and less frequent among experts (7.61%). The positive impact is described by experts with 67.89% and by consumers as 22.90%. The negative perception is almost balanced among experts (18.29%) and consumers (18.73%). Finally, we note that personalization and recommendation systems are benefits to both categories, but slightly more to consumers (55.30%) than experts (40.78%).

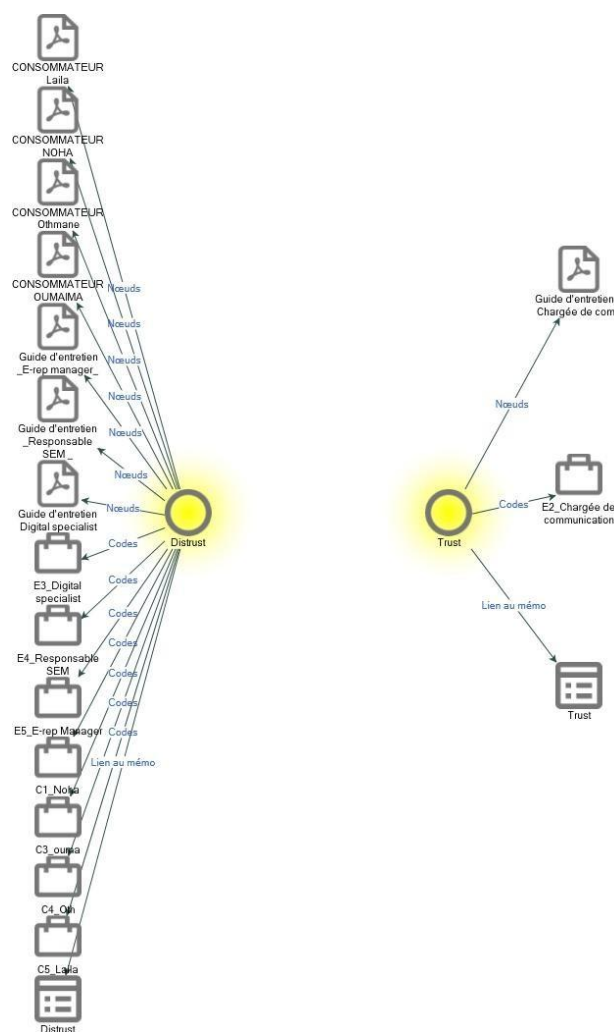


Fig 5: Trust & Distrust

Trust and distrust are two key variables that reflect consumers' perceptions of personalization and recommendation systems..

III. DISCUSSION:

The main objective of this study was to identify the role of artificial intelligence in marketing personalization and to analyze consumer perceptions of new technologies, particularly recommendation systems, to evaluate the level of satisfaction of Moroccan consumers. During our interview, we answered all the questions in our study, starting with the frequency with which consumers and experts use AI. Since experts work in a field that requires the daily use of new technologies, they shared with us some of the tools they often use for content writing, scripts, and even video creation, such as Midjourney, Deepseek, and ChatGPT. To survey online alerts on websites, they mentioned Talkwalker as an essential tool for competitive intelligence and benchmarking. In terms of Expertise, Media mentioned its experience with Google recommendations, whether for keywords or even for identifying targets. On the other hand, AI tools have proved useful for search engine optimization (SEO) projects by identifying the best prospects among similar audiences and suggesting titles and images that match each user. Other questions were asked to young consumers, who often buy products online, to assess their knowledge of AI-personalized recommendations.

Their responses showed that they were fully conscious about suggestions for similar or complementary products on shopping platforms and even on social media. Consumers mentioned several advantages of recommendations, such as saving time and the effectiveness of suggestions that match their choices and tastes. Based on consumer responses, we can conclude that they are satisfied with recommendation systems. Obviously, this brings up questions about privacy and the use of their personal data, which increases the risk of surveillance of their private lives. These feelings have an impact on their purchasing behavior. When recommendations are relevant, consumers are more inclined to buy, but if the opposite is true, a feeling of distrust sets in, and they may cancel their purchase. On the other hand, to assess consumer perceptions on the expert side, we asked the following question: "What advantages do you see in terms of message personalization and consumer engagement?" The answer that is always mentioned by experts is that personalized posts generate more reactions, shares, and comments, and help build a strong relationship with their customers.

After analyzing the responses via NVivo, we have assembled concrete results that will illustrate the insights from our research. To organize our research effectively, we have divided the study into three main codes: "AI and its tools" to get an idea of the artificial intelligence tools used by our interviewees, then "personalization and recommendation systems," which was the second main code reflecting participants' experiences with personalized recommendations, and finally, the third code, "behavioral impact," which reflects participants' global perception, and to obtain detailed results, we included sub-codes such as satisfaction, trust, distrust, positive impact, and negative perception.

Table 2 summarizes the main themes identified from the analysis of the interviews. For each category, we have presented the frequency, percentage from consumers and experts for each theme. Starting with the topic most frequently mentioned by participants, "personalization and recommendation systems," which represent added value for consumers, who indicated that recommendations would save them time when they perfectly matched their needs: "Yes, I find personalized recommendations useful because they save me time and allow me to discover products that really match my needs and tastes." "On the other hand, personalization plays a key role in Moroccan businesses, allowing them to better target and generate sales. "We use several types of data, such as consumer search history, pages viewed, products viewed, abandoned shopping carts, and frequency of visits. For example, we mainly target users who visit multiple product categories, as they are in a high purchase intent phase." (SEM Manager). Under the second theme, "Behavioral Impact," which mainly reflects the impact of personalization on consumer purchasing decisions, "Yes, of course, it has influenced my purchasing decisions; I can buy the product," and the same idea is shared by the experts: "Personalized AI can clearly strengthen engagement when it offers a product that perfectly matches consumer needs (digital specialist)."

All these perceptions reflect satisfaction, trust, mistrust, and positive impact to obtain concrete results that reflect the reality experienced by the respondent. We evaluated the subcode most frequently mentioned by them.

This was a positive impact, most often mentioned by both experts, who said that recommendation systems enabled them to achieve interesting results: "In Google Ads, the recommendations we receive to optimize the campaign in terms of keywords, for example, always work, and I can see the difference in the results " (media expert). And by consumers, for whom personalization can influence their purchasing intentions: "These feelings influence my behavior. When the recommendations are relevant, they usually encourage me to click." Although the positive impact is always confirmed, distrust remains very high, even higher than the trust and satisfaction expressed by participants (refer to Fig. 5).

This explains concerns about the data they collect and use. Here are some responses from consumers: “I sometimes feel a little worried about my privacy because I realize that my data is being tracked and analyzed,” “Yes, feelings of insecurity about confidentiality can deter me from making a purchase.” The experts share the same reasoning: “It can sometimes generate distrust if consumers feel they are being overly surveilled and that their personal data is being used without their permission (digital specialist).”

We can conclude that distrust arises when the perceived intrusion exceeds the comfort provided. Although participants admit to a certain satisfaction related to the time saved and the relevance of their choices, distrust still outweighs trust. “When I receive personalized recommendations from AI, I initially feel a certain satisfaction because I feel that my tastes and needs are understood, but at the same time, I worry a little about my privacy because I realize that my data is being tracked and analyzed.”

Our results complement existing conclusions from the literature review by highlighting the Moroccan context. The authors confirmed that perceived personalization provides customers with a better shopping experience. They also noted that accurate and tailored product recommendations lead to increased satisfaction and positive outcomes [12]. This approach is also confirmed by our participants, both consumers and experts. Although personalized recommendations are effective in influencing consumer purchasing decisions, despite this recognized satisfaction, we are facing a significant decline in consumer interest, marked by privacy concerns. This result confirms the analysis of “H. Nam & Kan-nan and Tueanrat”[13], which highlights that consumers are concerned about new technologies that record their data to provide them with personalized recommendations.

However, adopting best practices in personalization can bring beneficial results for Moroccan companies, helping them rank among the best in terms of brand development, consumer trust, and loyalty, provided they adopt algorithmic transparency.

In summary, AI brings efficiency and speed, but it also raises questions related to consumer perception and the credibility of personalization.

In Morocco, consumers mainly make their purchases on online platforms (Jumia, Marjane online, Hmizate, etc.), but a high level of mistrust persists due to intrusive personalization and fear of scams when shopping. Trust remains a key factor in accessing all platforms safely. This perception is consistent with international literature and applies to the case of Morocco. To remedy this problem, it is first necessary to improve the customer experience by giving them the ability to control their preferences, choose to accept or reject certain types of cookies, and inform them with small reminders that their data is protected and remains confidential, which promotes acceptance. It is also important to consider human support to maintain hybrid conversations that ensure credibility. Finally, it is necessary to emphasize the benefits of marketing personalization and improve consumer understanding to effectively build trust, acceptance, and ensure technological innovation.

By considering the necessary dimensions of trust, integrating both human performance and privacy factors, the proposed framework offers a robust approach to understanding and promoting acceptance and trust in the recommendation systems.

V. CONCLUSIONS

Our study aimed to assess the influence of AI-based marketing personalization on consumer behavior in the Moroccan context. The results show that consumers are generally satisfied with recommendation systems and other aspects of personalization. These tools improve the efficiency of Moroccan businesses while influencing consumer purchasing behavior. However, mistrust remains an obstacle, affecting both younger generations and older consumers. The study was limited by a small sample of 10 participants. Although the results are reliable and relevant, future research, particularly quantitative research, could broaden the analysis to assess the impact of personalization and AI systems on consumer behavior in other sectors.

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