https://doi.org/10.52968/15601606
ISSN: 2805-3346

RESEARCH ARTICLE

Digital Platform Adoption in Ghana's Real Estate Sector: Extent, Opportunities and Challenges

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Received: 7 January 2026

Revised: 4 February 2026

Accepted: 11 April 2026

Published: 5 June 2026

Cite article as: Aziabah, S. A., Agorbortu, B. S., & Agorsor, P. D. (2026). Digital Platform Adoption in Ghana's Real Estate Sector: Extent, Opportunities and Challenges. *African Journal of Housing and Sustainable Development, 7*(2), pp. 20-32.

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ABSTRACT

Despite the evolving adoption of digital platforms in Africa's real estate markets, there has not been extensive research on the extent, opportunities and challenges of online real estate marketing in developing countries such as Ghana. This study addresses this gap by examining digital platform adoption among Ghanaian real estate developers using the Technology Acceptance Model (TAM) as the theoretical framework. Using survey data from 201 registered members of the Ghana Real Estate Developers Association, the analysis was conducted using t-tests and one-way ANOVA. The study found that residential properties dominated online transactions (35%), followed by commercial (21%) and retail (15%) properties. Platform-level analyses revealed that LinkedIn, Loop Ghana, Airbnb, Twitter, Jiji, and Facebook significantly drove completed property transactions, whereas Meqasa, Lamudi, Zillow, and Instagram did not. Key challenges include a lack of trust, an inability to verify transactions and infrastructure barriers. The findings extend TAM by demonstrating that perceived usefulness alone is insufficient to drive transaction success without credible trust and regulatory mechanisms. This study offers actionable insights for policymakers, platform developers and real estate practitioners seeking to optimise digital adoption in emerging African property markets.

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Keywords: Digital platforms, Technology Acceptance Model, Real estate marketing, Ghana, Digital adoption

1.0 Introduction

The global real estate industry has undergone a dramatic transformation over the last twenty years, driven mainly by shifts in consumer demand and technological advancements (Attakora-Amaniampong et al., 2021). One aspect of this transformation is digitalisation, which is crucial in real estate marketing because it enables developers, investors and realtors to complete property transactions, offer virtual tours and connect with clients through digital channels (Naeem et al., 2023). To be sure, high-tech real estate is well developed in the more advanced countries, such as the United States of America, China, and the United Kingdom (Liu et al., 2026). Leading platforms such as Zillow, Rightmove, and Fang have integrated artificial intelligence, big data and virtual reality to enhance the consumer experience by improving listings (Al-Rimawi & Nadler, 2025; Edu, 2021). While the digital transformation trend has significantly impacted the real estate market in developing countries, adoption levels and trends differ significantly among countries. Drone photography, virtual property viewings, interactive advertisements and chat-based client services are

among the marketing tools that have gained relevance in maintaining competitive advantage and increasing market reach (Stankov et al., 2021). Such innovations are moving the consumer decision-making process in the right direction by offering better visualisation of properties, interactive interfaces and timely market insights (Sample et al., 2020).

However, such technologies are more likely to succeed in countries with well-developed digital infrastructures. In Africa, digital real estate marketing is only slowly gaining ground (Lu et al., 2023), with some of the challenges to its adoption including limited or inconsistent Internet connectivity and poor digital literacy (Pankomera & van Greunen, 2019). Despite these challenges, mobile phone penetration has increased significantly, as has urbanisation and access to digital devices. South Africa, Kenya and Nigeria are examples of countries that have achieved significant progress in online property listings and remote property tours, supported by platforms such as BuyRentKenya, Jumia House, and Property24 (Daramola & Etim, 2022).

Indeed, in the residential industry, African real estate markets have rather quickly adopted digital tools (Oyedeji, 2020). Real estate agents use social media platforms such as Facebook, WhatsApp, and Instagram to advertise properties (Ho et al., 2024). Despite the rise in social media use among real estate agents, however, most investors still rely on traditional marketing techniques because of security concerns and a lack of credibility on digital platforms. Many consumers in African markets, including Ghana, remain cautious about making online purchases (Agyemang et al., 2024). Yet, digital platforms continue to enhance transparency and accessibility in the African property market, although many firms operate without technology and adequate security (Odunfa et al., 2025). In many cases, functions such as smart search tools and interactive walk-throughs are unavailable, with blockchain-based verification systems also being unavailable. As a result of these loopholes, consumers are unwilling to use them, especially in markets where false listings and online fraud persist (Joseph et al. 2024).

The Ghanaian real estate market has witnessed numerous real estate companies shifting to online platforms. Smaller-scale listing websites have also become popular, with platforms such as Meqasa and Tonaton being widely used (Adu et al., 2024). These platforms enable users to post properties, search for properties and interact without being physically present (Adu et al., 2024). In addition, there is greater use of social media platforms such as Facebook and WhatsApp, where agents post pictures and prices, as well as offer live video tours. These techniques are useful for maintaining market interest and facilitating property sales in a digital environment. Yet, evidence suggests that adopting digital marketing by real estate marketers in Ghana remains challenging, especially as Internet connectivity remains unevenly distributed across the country (Twum et al., 2024).

Again, digital marketing is not standardised, hence its limited uniformity and scalability across the real estate industry. In addition, most potential buyers are not comfortable using online channels because of the high number of unverified property listings and concerns about scams (Ofori & Appiah, 2025).

Given these challenges, it is important to conduct more research on the extent of adoption and the opportunities and challenges of online real estate marketing in Ghana. This gap is a critical factor affecting the interpretation and maximisation of digital tools in Ghana's real estate sector. Beyond the Ghanaian context, studies on the opportunities for digital platform adoption in Africa are also limited. Furthermore, little research has been conducted on the applications of artificial intelligence, such as virtual tours, in property marketing and management. The pattern of digital technology adoption is important for understanding the strategies that developing economies can use to ensure long-term business growth and competitiveness. This paper addresses this gap by analysing the digital marketing tools used by real estate companies in Ghana. It examines the extent of, as well as the opportunities for and the challenges to, the adoption of digital platforms in Ghana's real estate sector. The findings are useful for policymakers, technology developers and real estate practitioners in the drive to improve the digital experience in Africa's real estate sector.

2.0 Literature Review

2.1 Technological Acceptance Model (TAM) in Real Estate

Scholars have widely used the Technology Acceptance Model (TAM) to explain how individuals adopt and use digital technology across sectors. The TAM, introduced by Davis (1989), assumes that technology adoption depends on perceived usefulness, which is primarily influenced by ease of use. The real estate industry is no exception, as real estate agents, investors and buyers extensively use digital platforms for their convenience. As reported in the literature, real estate professionals are more likely to adopt digital tools because they find them useful (Hsiao et al., 2024). Technologies that have transformed traditional approaches to buying and selling real estate include virtual property tours, blockchain and AI-assisted market forecasting (Ohakawa et al., 2024). Digital training and technological competencies foster positive attitudes toward adopting digital platforms among real estate agents (Ohakawa et al., 2024). However, barriers to technology adoption remain despite the rapid growth in digitalisation of real estate transactions. For instance, many small real estate companies are not technologically inclined (Al-Haimi et al., 2025). And while the extent of trust in digital transactions has not been adequately explored, it is a major concern for users of these platforms. The literature shows that blockchain, similar to AI, can increase transparency and trust. The impact of these tools on user trust and active use in emerging markets is evident in the existing literature (Spiga et al., 2024; Ogundu, 2025).

2.2 Digital Platform Capabilities and Real Estate Marketing

Digital marketing has completely changed how real estate is marketed, opening up new markets, improving customer experiences and increasing operational efficiency. These platforms offer features beyond mere property listings, including virtual reality tours, AI-based recommendation engines, market insights and data analytics (Naeem et al., 2023). Clearly, the features of digital platforms significantly impact marketing outcomes. For instance, high-quality visual displays, interactive user interfaces and real-time communication tools are highly effective in capturing and converting prospects into buyers (Sample et al., 2020). A combination of digital platforms, such as websites, mobile applications and social media, forms a complete marketing ecosystem that can reach a wide range of customer groups (Rockel et al., 2024).

Therefore, in real estate, the success of digital marketing platforms depends on factors such as platform design, usability and the availability of current technology. Platforms that integrate AI and machine learning can offer personalised recommendations and predictive analytics, thereby improving customer satisfaction and decision-making (Ohakawa et al., 2024). Drones and 360-degree virtual tours have also proven useful for providing extensive views of properties that conventional marketing approaches cannot achieve (Stankov et al., 2021). However, the adoption of these capabilities varies across markets, with developed countries generally having higher levels of integration and use than emerging markets (Al-Rimawi & Nadler, 2025).

2.3 Digital Platform Adoption in Developing Countries' Real Estate Markets

Digitalisation in the real estate markets of developing countries presents both opportunities and challenges. While developed countries have achieved a relatively high level of digital integration in their real estate markets, developing countries face challenges in digital adoption (Al-haimi et al., 2025). The first barrier is infrastructure constraints, such as unstable Internet connections and access to modern technologies (Pankomera & van Greunen, 2019). In addition, limited digital literacy among real estate professionals and potential clients may hinder the effective use of digital resources. Another important factor is financial constraints. Most small and medium-sized real estate companies in developing countries lack the funds to invest in advanced digital marketing tools and platforms (Al-Haimi et al., 2025).

Despite these challenges, some African countries, such as Kenya, Nigeria, and South Africa, have made significant progress in digital real estate marketing. Also, platforms that have gained adoption in this region, enabling online property

transactions and virtual viewing, are well-established (Daramola & Etim, 2022). The extensive use of mobile technology in Africa has led to the development of mobile-first real estate applications that can reach consumers in regions with insufficient fixed-line Internet connectivity. In most African markets, social media networks such as Facebook, WhatsApp, and Instagram have emerged as popular marketing platforms for real estate agents (Ho et al., 2024). These platforms provide affordable alternatives to conventional marketing practices and allow agents to reach a significant number of people at a relatively low cost.

Furthermore, trust and security remain major challenges to the adoption of digital real estate transactions in most developing countries. The widespread occurrence of fraud and misleading real estate postings, along with weak legal frameworks for online transactions, raises concerns among potential customers (Joseph et al., 2024). Accordingly, the number of people relying on face-to-face and traditional financial channels to transact business remains high. The solution to these trust problems lies in improved verification procedures, regulation and consumer education to foster digital adoption in real estate markets in developing countries (Odunfa et al., 2025).

2.4 Digital Transformation and the Ghanaian Real Estate Market

Over the last ten years, Ghana has witnessed tremendous growth in its real estate industry, driven by urbanisation, population growth and foreign investment. There has been a gradual shift towards a digital approach to marketing in the sector, with platforms such as Meqasa and Tonaton having become widely used to display property listings and transactions (Adu et al., 2024). These sites have exposed Ghanaian customers to online property searches and provided real estate agents with new avenues to reach potential customers. Nevertheless, the adoption of digital marketing in Ghana's real estate market has not been uniform. To be sure, there are significant differences between groups, e.g., between urban and rural settings and between large and small firms.

In Ghana, the digital divide is thus a major barrier to the full adoption of digitalisation in the real estate industry. Although Internet connectivity in urban areas is relatively high, especially in Accra and Kumasi, the level of digital literacy is relatively higher than that in rural areas. In rural and peri-urban locations, there is a lack of appropriate infrastructure (Twum et al., 2024). This affects real estate companies' capacity to sell houses online and prospective customers' ability to access and use online media. Moreover, there are no standard practices or regulations for digital real estate transactions, leading to disparities in platform operations and transaction processes (Ofori & Appiah, 2025).

All the same, the use of social media in real estate marketing has been rising, with Facebook, WhatsApp, and Instagram being the preferred platforms for advertising houses, sharing information about prices and offering virtual tours (i.e. live video tours) (Ho et al., 2024). These social media options are inexpensive and allow agents to interact directly with prospective clients. However, social media has drawbacks, including the credibility of offers, the informality of transactions and incomplete property information. The problems and opportunities that emerge with the use of digital platforms are important and need to be addressed as the real estate sector continues to evolve (Agyemang et al., 2024).

3.0 Methodology

3.1 Research Design

A quantitative research design was adopted to assess the extent of, as well as the opportunities for and the challenges of, adopting digital platforms in Ghana's real estate industry. Limited to online marketing platforms, the survey was conducted to determine the extent to which digital platforms are incorporated into real estate marketing and the key factors influencing their adoption and usage.

The study population comprised 201 registered members of the Ghana Real Estate Developers Association (GREDA), which is the umbrella body for the formal, organised segment of Ghana's real estate sector. This sampling strategy aligns with research on organisational digital adoption, where professional associations provide structured access to firms operating within established regulatory frameworks (Venkatesh et al., 2003). GREDA

members, who are noted as registered developers, are more likely to have formal digital marketing operations and documented transaction records than non-registered developers. This makes them appropriate respondents for examining systematic digital platform adoption patterns. Previous studies on technology adoption in developing markets have similarly focused on formal sector organisations where digital integration is more standardised and measurable (Ifinedo, 2011). While independent agents and informal operators represent an important segment of Ghana's real estate market, their operations are known to be less digitised and lack the systematic record-keeping necessary for a reliable comparative analysis of platform effectiveness.

The respondents were grouped into three categories based on their operational level and market presence. The A1 category, or large-scale developers, had 43 firms; the A2 category, that is, medium-sized developers, had 18; and the A3 and A4 categories, comprising small and micro-scale developers, had 140 firms. Marketing managers at real estate companies were given an online survey questionnaire to complete within a month, during which period three reminders were sent. The response rate was 97%, which is a good level of participation and may suggest the collection of high-quality data (see Table 1).

Table 1: Biodata of respondents

Age	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	**Total**
Category A1 (Large-scale Developers)											
Male	0	2	2	3	4	9	6	5	5	3	**39**
Female	0	0	0	1	0	1	1	1	0	0	**4**
Total	0	2	2	4	4	10	7	6	5	3	**43**
Category A2 (Medium-scale Developers)											
Male	0	0	1	0	2	2	3	4	1	1	**14**
Female	0	0	1	0	0	1	0	2	0	0	**4**
Total	0	0	2	0	2	3	3	6	1	1	**18**
Category A3 and A4 (Small to Micro-scale Developers)											
Total	1	5	7	12	18	24	16	27	18	12	**140**

Source: Author's construct, 2025

3.2 Platform identification and assessment

Platforms such as Lamudi, Facebook, Meqasa, Tonaton, Loop Ghana, LinkedIn, Twitter, and Instagram were selected for their predominant use in Ghana's real estate industry. Their effectiveness was rated based on their ability to reach clients, generate engagement and facilitate property transactions. Platform effectiveness was measured through respondent-reported transaction data. This approach is suitable for survey-based studies of digital marketing outcomes, where actual platform analytics are not accessible to researchers (Mason et al., 2021).

Marketing outcomes were also determined by analysing online transactions across property categories, including residential, commercial, industrial, warehouse and retail. Platform capabilities were then measured using a 5-point Likert scale, where 1 indicated 'highly used' and 5 indicated 'limited use'. Similarly, the challenges of using digital platforms were assessed using indicators from the literature. These indicators include user permissions and access controls, customer data unification, online visibility and search engine optimisation, automation of repetitive tasks and scheduling, digital experience management, and multi-channel property display capabilities. These were also measured using a 5-point Likert scale, where 1 = Strongly disagree and 5 = Strongly agree.

3.3 Data Analysis

The study employed t-tests and one-way ANOVA as the primary analytical techniques. These techniques are well-established methods for examining group differences and comparing means across multiple categories. They are suitable for this study's research objectives since the work focuses on identifying which platforms significantly influence real estate transactions and whether usage patterns differ across firm categories. ANOVA has been widely used in digital marketing research to compare the effectiveness of different platforms and channels (Tiago & Veríssimo, 2014; Kumar & Chaudhuri, 2020).

The choice of these parametric tests was validated through preliminary checks of normality and homogeneity of variance assumptions. While more complex multivariate techniques can explore relationships between variables, the current study's focus on platform comparison and effectiveness assessment is best served by the clarity and interpretability of ANOVA results. This approach follows methodological precedents in comparative platform effectiveness studies (Killian & McManus, 2015), where statistical comparisons provide actionable insights for practitioners without the complexity of causal modelling.

The t-tests and ANOVA were used to investigate the magnitude, opportunities and obstacles of digital platforms in online real estate marketing in Ghana. These statistical techniques were useful for determining trends, comparing average values and establishing whether differences in marketing performance across platforms and firm categories were statistically significant. One-way Analysis of Variance (ANOVA) was used to assess the statistical significance of differences in the use of various digital platforms in influencing real estate sales and client engagement in Ghana.

The purpose of this analysis was to determine whether the averages of the differences between digital platforms used by the real estate developers made any significant difference in the transactions of completed properties (sales) and the number of times clients were engaged (views). The social platforms included in the analysis were Meqesa, Lamudi, Zillow, Tonaton, Loop Ghana, Facebook, Jiji, LinkedIn, Twitter, and Instagram.

Comparative studies were conducted to determine differences in the level of digital adoption among the three developer categories (A1, A2, and A3/A4). The statistical analyses were conducted to identify significant differences in platform use, marketing performance and adoption issues across firm size and operational scale. The underlying assumptions were evaluated before using statistical tests, such as the assumption that the data are normally distributed. The analysis framework enabled consideration of whether the identified differences in the effectiveness of digital platforms were systematic or random, yielding strong evidence on the level of digital adoption in Ghana's real estate market.

4.0 Results

4.1 Types of Real Estate Transactions through Digital Platforms

The analysis of property types reveals important patterns in digital platform adoption across different real estate categories. The analysis reveals that residential properties make up the largest share of online transactions (35%), followed by commercial properties (21%), retail (15%), warehousing (14%) and industrial (10%), with consultancy services representing 5% of digital engagements (see Table 2).

This distribution reflects the relative accessibility and standardisation of residential properties for online marketing, as well as the increasing commercial real estate activity in urban areas in Ghana. The number of transactions in warehousing and industrial properties on digital platforms indicates increasing complexity in Ghana's logistics and manufacturing sectors, where investors are using these platforms to identify and evaluate suitable properties for their operations. The relatively lower percentage for consultancy services may suggest that professional real estate advisory services are still predominantly delivered through traditional channels. However, digital platforms are beginning to facilitate initial client engagement and information dissemination.

Table 2: Types of online real estate transactions

Type of Online Transaction	Frequency	Percentage (%)
Residential	71	35
Commercial	42	21
Retail	30	15
Warehousing	28	14
Industrial	20	10
Consultancy	10	5

Source: Author's construct, 2025

4.2 Digital Platform Effectiveness in Real Estate Sales and Client Engagement

The analysis of digital platform effectiveness reveals important variations in how different platforms contribute to real estate sales and client engagement in Ghana. The analysis involved one-way analysis of variance (ANOVA). The study identified which platforms contributed significantly to real estate transactions and sales performance. Several platforms showed statistically significant impacts on sales performance. Specifically, LinkedIn, Loop Ghana, Airbnb, Twitter, Facebook, and Jiji each recorded p-values under 0.05 (see Table 3), indicating that listings on these platforms were significantly more likely to result in completed transactions than listings on other platforms.

LinkedIn has the highest sum of squares (57.654), followed by Loop Ghana (57.642) and Airbnb (44.909). Additionally, Facebook and Jiji, both social media platforms and online marketplaces, contributed significantly, with p-values of 0.029 and 0.002 respectively, confirming that social media is significant in the real estate marketing and transactions.

Conversely, Meqasa, Lamudi, Zillow, and Instagram showed no meaningful impact on real estate sales, recording p-values greater than 0.05. This shows that while these platforms may attract visitors, they do not effectively convert interest into sales. This finding suggests that practitioners who wish to improve their results should prioritise platforms with visible transactional impact over those that offer only visibility. The distinction between platforms that generate views and those that facilitate transactions is vital to understanding the digital marketing landscape in Ghana's real estate sector.

Table 3: Online platforms contributing to the sale of real estate

Online Platform	Sum of Squares	df	Mean Square	F	Sig.
MEQASA	6.805	4	1.701	1.444	0.236
Lamudi	4.48	4	1.12	0.678	0.611
Zillow	1.671	4	0.418	0.339	0.850
Airbnb	44.909	4	11.227	9.567	0.000
Tonaton	14.515	4	3.629	2.288	0.061
Loop Ghana	57.642	4	14.411	7.817	0.000
Facebook	9.188	4	2.297	2.741	0.029
Jiji	21.28	4	5.32	4.524	0.002
LinkedIn	57.654	4	14.413	9.902	0.000
Twitter	23.47	4	5.868	5.723	0.000
Instagram	0.94	4	0.235	0.342	0.849

Source: Author's construct, 2025

4.3 Challenges in Digital Platform Adoption in Real Estate Marketing in Ghana

The study conducted a descriptive analysis of six identified challenges in using digital tools in Ghana's real estate sector. The results reveal clear distinctions in how respondents perceived the impact of each obstacle on online client engagement and sales. User permissions, shared links and download limitations were the most significant challenges, with a mean score of 4.7 and a low standard deviation of 0.3, indicating strong consensus among respondents (see Table 4). This issue, with a minimum score of 4 and a maximum of 5, was seen by almost all the respondents as a critical barrier to effective online engagement. Respondents likely struggled to manage access controls, securely share property links and allow clients to download materials, all of which are important for digital property marketing. Customer data unification followed immediately, with a mean of 4.6 (SD = 0.6), indicating widespread difficulty. Integrating client information from multiple sources, such as emails, WhatsApp and spreadsheets, posed significant challenges for respondents. This fragmented data environment reduced the ability to track leads, personalise communication and respond efficiently to client inquiries. Such a situation may impede client retention and marketing efforts.

Online visibility also had a mean rating of 4.3 (SD = 0.6), consistently identified as a challenge. Respondents indicated that many agencies lacked optimised websites and consistent digital branding, which reduced their reach in terms of online visibility. Automating and rescheduling repetitive tasks were rated moderately challenging, with a mean of 3.8 (SD = 0.8), suggesting varied experiences. Some firms benefited from automation tools while others struggled with manual follow-ups, missed appointments and inefficient communication. Conventional experience management scored 3.3 (SD = 0.8), indicating difficulty maintaining professional digital interactions. The multi-channel property display showed the lowest mean score (2.6) and the highest variability (SD = 0.9), indicating it was perceived as the least critical challenge.

Table 4: Challenges of digital platform adoption

Challenge Factor	Mean	SD	Min	Max
User permissions, shared links and downloads	4.7	0.3	4	5
Customer data unification	4.6	0.6	4	5
Online visibility	4.3	0.6	3	5
Repetitive task and rescheduling	3.8	0.8	2	5
Conventional experience management	3.3	0.8	2	5
Multiple channel property display	2.6	0.9	1	4

Source: Author's construct, 2025

4.4 Discussion

This study examines the contributions and challenges of digital platforms in online real estate marketing in Ghana. A comparison of this study's findings with the existing literature reveals strong alignment with the Technology Acceptance Model (TAM). It highlights deviations from global trends in digital success in real estate marketing. Perceived usefulness and ease of use significantly impact technology adoption, as noted in the Technological Acceptance Model designed by Davis (1989). Real estate professionals in Ghana are increasingly adopting digital platforms such as Meqasa, Tonaton, Facebook, and WhatsApp because of their ease of use. This adoption pattern reflects TAM's construct of Perceived Ease of Use. This indicates that platforms requiring minimal technical skill increase the adoption threshold, especially in markets with limited digital literacy. The statistical significance of Facebook and LinkedIn in driving completed transactions further confirms TAM's Perceived Usefulness construct, suggesting that when professionals perceive a platform as instrumental to achieving tangible outcomes like property sales, they sustain its use. Together, Perceived Ease of Use and Perceived Usefulness in this context suggest

that adoption in Ghana is not driven by platform sophistication but by accessibility and demonstrable transactional value.

This finding also aligns with Hsiao et al. (2024) and Ohakawa et al. (2024), who noted that agents and firms are more likely to engage clients through intuitive and effective platforms. Facebook and LinkedIn were among the few platforms with statistically significant impacts on both engagement and sales, supporting theories about the marketing effectiveness of content-driven platforms. This position aligns with Sample et al. (2020) and Stankov et al. (2021), who noted that social media marketing demonstrates how visually rich, interactive content fosters greater engagement in digital marketing environments.

This study also reveals some important contrasts with the existing literature. While previous studies suggest that high online visibility directly increases conversions (Edu, 2021; Naeem et al., 2023), this study shows that not all visibility translates into completed transactions. Client interest may remain high, yet conversion rates can be limited by factors such as trust deficit, verification concerns and infrastructure limitations. Additionally, while developed markets have integrated AI, blockchain and engaging virtual tours (Al-Rimawi & Nadler, 2025), these features were unavailable on most Ghanaian platforms. Property listings relied mainly on static images and basic contact information, lacking the interactive and trust-building features seen in more digitally inclined markets. From a TAM perspective, this divergence is theoretically significant.

In developed markets, advanced features such as AI recommendations and virtual tours improve Perceived Usefulness by adding informational richness and reducing uncertainty among buyers. In Ghana, these features are unavailable, which means perceived usefulness is assessed on a narrower set of criteria, which are primarily reach and visibility. Yet even on this limited basis, the findings show that visibility alone does not translate into completed transactions. This suggests that TAM's original two-construct model is insufficient to explain adoption outcomes in this context. A third mediating factor, digital trust, appears to moderate the relationship between perceived usefulness and actual behavioural use.

The study emphasises that distrust in online property transactions remains high due to fraud, inadequate platform regulation and a lack of listing verification. This finding challenges TAM's foundational assumption that Perceived Usefulness and Ease of Use are enough to determine technology adoption. In the Ghanaian context, even platforms perceived as useful and easy to use, e.g., Facebook and WhatsApp, failed to convert engagement into completed property transactions, as trust operates as a boundary condition not captured in Davis' (1989) original model. This extends the TAM by demonstrating that in emerging markets characterised by weak institutional regulation and high fraud risk, digital trust must be integrated as an independent construct that mediates between perceived usefulness and actual system use. Without trust, the behavioural intention to transact, TAM's key outcome, is challenged regardless of perceived use. The use of digital platforms for marketing in Ghana is still growing, with no proactive measures yet to be taken to regulate this space. The absence of regulation and consumer protection mechanisms in Ghana appears to discourage the use of these platforms.

Another important finding is the relative ineffectiveness of major global platforms such as Zillow, Lamudi, and Instagram in the Ghanaian context. Despite being widely cited as highly influential in developed markets, the impact of these platforms was not found to be statistically significant in Ghana. More effective were locally adapted platforms, such as Loop Ghana, and socially embedded platforms, such as Twitter and Facebook. This suggests that digital strategy must be grounded in cultural and contextual realities rather than following standardised global approaches. This finding has direct implications for how TAM is applied cross-culturally.

TAM was developed and validated largely in high-income, high-trust digital environments. The underperformance of globally acclaimed platforms such as Zillow and Lamudi in Ghana suggests that Perceived Usefulness is context-dependent: a platform that is highly useful in one market may not be perceived as useful in another if it lacks local

language support, locally relevant listings or culturally familiar transaction processes. Loop Ghana's relative success, by comparison, indicates that perceived ease of use and perceived usefulness are socially embedded constructs, shaped not just by interface design but by familiarity, local trust networks and cultural fit. This calls for a contextualised adaptation of TAM when applied to real estate markets in developing economies.

The findings indicate that several trends may shape the future of digital platform adoption in Ghana's real estate marketing. Digital technology adoption will likely increase, though unevenly. Larger firms with technical expertise will likely increase their use of digital marketing channels, while smaller firms may fall behind without capacity support. Furthermore, trust issues may continue to limit the success of digital platforms in facilitating real estate transactions unless addressed through enhanced verification systems, customer reviews and agent accreditation. Trust may also be addressed through legislation and enforcement of standards that protect users of digital platforms from transacting business. Platforms that function dually, engaging customers while facilitating sales, are likely to dominate. Social media platforms such as Facebook and LinkedIn, which support two-way communication and professional networking, may become integral to real estate outreach strategies. There will be a need to enhance the security of using these platforms. Growth in the professionalisation of digital marketing among real estate agents is expected, with firms seeking training in digital branding, multimedia content creation and lead conversion. Mobile-first strategies will become increasingly central as smartphone penetration rises, with a platform like WhatsApp, which is optimised for mobile use, becoming essential for property marketing.

Thus, the study indicates the need for regulatory frameworks to guide digital real estate transactions in Ghana and similar markets. Currently, the absence of clear regulations for digital property listings, online transactions and dispute resolution creates uncertainty and undermines trust. Kenya's implementation of the Land Value Index and digital land registry systems offers a potential model Ghana can copy. However, such regulations must balance consumer protection with innovation, avoiding overly restrictive measures that could slow down the emerging digital real estate ecosystem.

The findings have significant implications for the development of Property Technology (PropTech) across Africa. PropTech solutions must prioritise trust-building features such as verified listings, secure payment escrow systems and transparent agent credentials. Without these fundamental trust mechanisms, even advanced technologies like AI-powered recommendations or virtual reality tours may fail to drive transaction completion. Again, the success of social media platforms and mobile-first solutions suggests that African PropTech should capitalise on existing digital behaviours rather than attempting to change them. Integration with WhatsApp, Facebook and other widely-used platforms may provide more traction than standalone applications. Furthermore, PropTech development should account for the digital divide, ensuring that solutions work effectively even on basic smartphones with limited Internet connectivity, so that they can also serve peri-urban and rural markets.

4.5 Theoretical and Practical Contributions

The study confirms the Technological Acceptance Model (TAM), which posits that perceived usefulness and ease of use drive the adoption of digital technologies. TAM assumes the adoption of the technology, which appears practical and accessible to users, and platforms such as WhatsApp, Facebook, and Meqasa have become increasingly popular for marketing real estate in Ghana. However, the model does not explain the gap between platform adoption and transaction completion. While TAM also focuses on intention to use, it does not consider the importance of trust in using digital platforms, the quality and availability of infrastructure to support their adoption or the likelihood of fraud that can limit reliance on them, particularly in new markets. This research builds on TAM by incorporating trust as a moderating factor and examining technology use in high-value transactions, such as real estate. High perceived usefulness alone is not a sufficient condition for adoption; transaction security and platform credibility are also required. The development of TAM to incorporate contextual obstacles such as regulatory loopholes and

infrastructure constraints offers a more comprehensive model of the digital adoption process in developing markets.

These findings raise several implications for practice. First, real estate websites need to incorporate fraud-detection tools, such as listing verification, agent identity checks and user reviews. This will deal with the lack of connection between high digital interaction and low transaction conversion. This will boost buyer confidence and reduce resistance to using these platforms to complete transactions. Second, real estate firms should consider expanding training to improve agents' digital literacy. Using tools such as Facebook Live, WhatsApp Business and LinkedIn, agents can effectively apply the right skills to conduct targeted, engaging marketing for the property and, in turn, increase engagement and lead conversion.

Furthermore, online marketing must consider users' behaviour patterns and their knowledge of how to use these platforms. Companies should focus on customised, evidence-based content on LinkedIn and Twitter, which have been more successful at advertising and gaining recognition than spending the same amount across all outlets. In addition, digital marketing must be mobile-optimised. Interface programmers should make these platforms on smartphones user-friendly by incorporating real-time chat, video preview and map listing systems to ensure users are taken to where they need to be.

Finally, stakeholder institutions such as the Ghana Real Estate Developers Association, the Real Estate Agency Council and professional associations should cooperate to develop procedures and uniform technological guidelines, while also encouraging members to adopt digital platforms for real estate marketing. Policies that require digital platforms to comply with transparency standards can enhance consumer trust and accelerate the digitalisation of the Ghanaian real estate market, enabling it to benefit fully from the emerging global digital transformation.

5.0 Conclusion

This paper presents timely contextual insight into the role of digital platforms in marketing real estate in Ghana. The results are consistent with the study's adopted theoretical framework, the Technological Acceptance Model (TAM). This study also highlights a disconnect between digital and transactional performance, demonstrating the inability of current models to apply in different contexts in their existing forms. Online applications such as Facebook, LinkedIn and WhatsApp have gained prominence in developing countries like Ghana due to their ease of use and high penetration among the population. Nonetheless, translation of the high use of these platforms into actual property sales has been low due to concerns about trust, fraud risks and infrastructure barriers.

Moreover, the transferability of these findings with respect to other African markets depends on several contextual factors. Markets with similar characteristics, including limited digital infrastructure, low regulatory enforcement and high informal sector participation, are likely to experience comparable challenges. The finding that locally-adapted platforms (like Loop Ghana) outperform global platforms (like Zillow) suggests that successful digital real estate platforms in Africa must be designed with local market conditions, user behaviour and trust-building mechanisms in mind. These factors appear more critical than just replicating successful models from developed markets.

Thus, this research contributes significantly to both theory and practice. Theoretically, it suggests extending TAM by incorporating digital trust and verification systems, given that particular obstacles in emerging economies significantly influence user behaviour. In practice, this suggests that platform-specific strategies, enhanced digital literacy and mobile optimisation are needed to address changing consumer expectations. As the real estate industry adopts digital transformation, this paper argues that engagement alone is not enough. To successfully market digital real estate it would be necessary to create the right digital content strategies while securing the cyber infrastructure and mechanisms for building trust.

Finally, the study emphasises the need for collaboration between government agencies, e.g., the Real Estate Agency Council, and the private sector to formulate regulations and establish

standards for digital platform adoption, as well as to ensure that online property ecosystems are transparent and free from fraud. Real estate firms need to translate the widespread use of digital platforms in Ghana into actual sales. In this regard, addressing concerns about trust, verification, and infrastructure will be essential to realising the full potential of digital marketing in Ghana.

Notwithstanding the contributions of this study, it has several limitations that should be considered when interpreting the findings. First, the sample is drawn exclusively from registered members of GREDA, which may not fully represent the broader landscape of real estate practitioners in Ghana, which also includes informal agents and smaller unregistered firms who are increasingly active in digital marketing. Also, the study adopts a cross-sectional design, capturing platform adoption and transaction outcomes at a single point in time. Given the rapidly evolving nature of digital technology, longitudinal data would provide a more accurate picture of how adoption patterns and platform effectiveness change over time. Furthermore, the study focuses on the supply side of the market, that is, developers and agents, without capturing the perspectives of property buyers and investors, whose perceptions of platform trust and usefulness are equally critical to understanding transaction outcomes. While this study proposes extending TAM to incorporate digital trust as a mediating construct, this extension has not been formally tested through structural equation modelling or confirmatory factor analysis, thus limiting the theoretical claim to a conceptual proposition rather than an empirically validated framework. Future research should address these limitations by employing mixed-methods and longitudinal designs, incorporating buyer perspectives and formally validating the proposed TAM extension across multiple African real estate markets.

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