Digital Shift in Real Estate: How Online Marketplaces Reshaped Stakeholder Roles After COVID-19

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

The rise of online real estate marketplaces has significantly transformed stakeholder interactions within the industry, particularly in the period before and after COVID-19. My research explores how platforms like Homes.com and Apartments.com have reshaped the roles and relationships of key actors, including real estate agents, buyers, and sellers, within an evolving digital landscape. As the pandemic accelerated the use of virtual tours, remote communication, and algorithmic recommendations, online marketplaces have moved beyond simply listing homes to actively mediating how transactions unfold.

This transformation has introduced a critical gap in understanding: while the real estate industry has become increasingly platform-driven, we lack clear insight into how these digital systems restructure traditional roles and influence decision-making. This gap matters because these shifts do not affect all stakeholders equally. Buyers may benefit from greater transparency and convenience, but agents must renegotiate their roles in a system that now centers on platform-driven interactions. Sellers must navigate new technological interfaces and changing expectations around visibility and engagement.

These dynamics reveal the emergence of a sociotechnical system in which various actors, such as people, platforms, digital tools, and algorithms, mutually shape one another. By examining Homes.com and Apartments.com as a case study, this research aims to illuminate how digital marketplaces are not passive intermediaries, but active participants in reconfiguring the structure and experience of real estate transactions in the post-COVID era.

Background and Context

Sociotechnical Situation

Online real estate marketplaces now function as key intermediaries between buyers, sellers, and agents by centralizing property listings, streamlining communication, and offering data-driven tools such as market analytics dashboards and pricing history visualizations (Easy Render, n.d.). Before COVID-19, platforms like Homes.com and Apartments.com were primarily used for browsing listings and filtering properties, and the majority of transactions required in-person tours and direct engagement with real estate agents (NAR, 2021). In this pre-pandemic environment, real estate agents were essential to navigating the market, with platforms acting primarily as lead generators.

The onset of COVID-19 disrupted these dynamics. Social distancing and lockdowns rapidly accelerated the adoption of digital tools, transforming online platforms from supplementary resources into comprehensive home-search ecosystems. Virtual tours, 3D walkthroughs, and remote closings became necessary substitutes for in-person interactions. By 2020, 97% of homebuyers were using the internet in their search, and over half viewed homes solely online

(National Association of Realtors, 2024). Agents adapted by adopting digital engagement strategies, including virtual consultations and the use of client collaboration tools. This marked a shift toward a more digitally mediated real estate environment, in which human and non-human actors increasingly operate together.

The pandemic also triggered significant changes in platform infrastructure. In 2021, CoStar Group acquired Homes.com and integrated it with Homesnap, a move designed to improve listing accuracy, user experience, and agent collaboration by utilizing data from Multiple Listing Services (MLS) (CoStar Group, 2022a). Simultaneously, Apartments.com updated its marketing and data strategies to better reflect post-pandemic rental trends, including a rising demand for suburban rentals and properties suited to remote work (CoStar Group, 2022b).

Literature

The COVID-19 pandemic dramatically accelerated the real estate industry's shift toward online platforms and digital tools. With social distancing in effect, homebuyers and sellers increasingly relied on websites and apps to conduct business remotely. Virtual tours, e-signatures, and remote closings became standard. Real estate agents adapted quickly, with 81% adopting electronic signatures and 63% using virtual showing tools (NAR, 2024).

Buyers now interact not only with listings but with recommendation algorithms, virtual walkthroughs, and mobile Customer Relation Management (CRM) tools over consulting agents. For example, 51% of buyers ultimately purchase a home they found online, compared to only 28% who found one via an agent directly (NAR, 2021). However, Homes.com has uniquely positioned itself as an agent-friendly platform in this new ecosystem, allowing buyers to collaborate directly with chosen agents and avoiding lead diversion models (real estate platforms that collect buyer inquiries from listings and then sell or redirect those leads to agents who are not necessarily connected to the listing) used by other platforms (CoStar Group, 2022a).

This digital transition has shifted traditional norms. While platforms offer increased access to data, they have also introduced concerns around equity and technological dependence. For instance, younger, tech-savvy buyers benefit from real-time alerts and price history data, while older generations still prefer agent-led transactions (NAR, 2021). Simultaneously, algorithmic filtering can influence which listings receive the most visibility, shaping market outcomes (Redfin, 2021). For instance, a 2025 study by researchers from Carnegie Mellon University and NYU found that Zillow's Zestimate algorithm altered transaction dynamics, particularly in lower-income neighborhoods, where it improved both buyer and seller outcomes by reducing price uncertainty and influencing final sale prices (Carnegie Mellon University, 2025).

The role of agents is evolving accordingly. They must now provide data interpretation, negotiation expertise, and human insight rather than merely access to listings - the profession is

not being displaced but redefined. Platforms like Homes.com exemplify this redefinition by emphasizing agent-buyer collaboration and direct engagement (CoStar Group, 2022a).

Homes.com's rise emphasizes the varied responses to platform design. While Zillow has faced criticism over listing policies and lead-selling models, Homes.com has gained popularity by promising to preserve the agent's role through its "Your Listing, Your Lead" model (Catarevas, 2025). The company's rapid growth to over 100 million monthly users further illustrates how platform choices influence stakeholder behavior and industry norms (Gallagher, 2025).

Beyond marketing and search tools, online platforms have also reshaped property management and investment practices. AI-driven data aggregation has enabled individual and institutional investors to make more informed decisions, while streamlining operational tasks like maintenance and rent collection (W. Chongdarakul et al., 2022). These features have increased efficiency and reduced reliance on traditional manual processes.

Furthermore, Breuer and Steininger (2020) explain that the demand for flexible housing in the post-COVID era has shaped platform functionality and consumer expectations (Breuer & Steininger, 2020). Platforms have increasingly emphasized features that support remote work, such as advanced search filters for home office space, integration with virtual staging technologies, and highlighting listings with multi-use rooms or upgraded connectivity infrastructure. These adaptations respond to a consumer base prioritizing flexibility, mobility, and lifestyle compatibility in the wake of widespread shifts to hybrid or remote work arrangements.

While digital tools have expanded accessibility and reduced transaction time, scholars such as Muhanna and Wolf (2002) emphasize that they do not fully replace human judgment (Waleed & Wolf, 2002). Agents continue to serve a critical role in interpreting data, offering local expertise, and managing the emotional and legal complexities of real estate decisions. This dynamic reinforces the need for integrated human-technology collaboration within the industry.

Theoretical Framework

This paper adopts Actor-Network Theory (ANT) to analyze the mutual shaping of stakeholders and technology in the digital real estate ecosystem. ANT treats both human actors (buyers, sellers, agents) and non-human actors (platforms) as integral components of an interconnected network. Instead of seeing online marketplaces as a backdrop or tool, ANT positions it as an active participant in shaping social practices.

A key concept from ANT, instauration, is particularly relevant. Instauration describes the process through which a new system stabilizes, requiring cooperation among actors, institutional changes, and sustained use. In the context of real estate, this involves agents learning to use

digital tools, buyers and sellers trusting online platforms, and platforms like Homes.com adapting based on user behavior and industry feedback. By focusing on these interactions, this research illustrates how Homes.com is not merely a passive marketplace, but a dynamic actor that reshapes stakeholder relationships in response to societal shifts, particularly in the wake of the COVID-19 pandemic.

This framework will guide the paper's analysis of how Homes.com reflects and contributes to broader shifts in real estate practices, highlighting the co-evolution of users and technologies in a rapidly digitizing industry.

Methods

To address the research question of how online marketplaces have reshaped real estate transactions and impacted stakeholders, this study employed a qualitative case study approach. Grounded in ANT, and specifically drawing on the concept of instauration, the analysis treats both human and non-human actors as co-constructors of the digital real estate ecosystem. The goal was to trace how platform design, digital tools, and shifting user behaviors contribute to evolving stakeholder roles and market dynamics in the post-COVID era.

Evidence Collection

The core information required for this research included (1) the technological innovations introduced by Homes.com and Apartments.com, (2) the evolving roles of key stakeholders such as buyers, sellers, and agents, and (3) the influence of these platforms on transaction processes, transparency, and stakeholder relationships. The study focused on understanding how these technologies and behaviors instantiated a new sociotechnical configuration within the real estate market.

The evidence was collected through secondary sources including academic literature, industry reports, platform-specific press releases, and news coverage. Special attention was paid to developments following the COVID-19 pandemic.

Sources were selected based on relevance to the co platforms, their technological development, and their interactions with stakeholder groups. Search terms included combinations of keywords such as "Homes.com innovation," "digital real estate tools," "platform agent collaboration," "post-COVID real estate trends," and "algorithmic filtering real estate."

Analysis

The analysis was conducted using ANT's principles to examine how technological and social actors mutually shape the real estate transaction process. Emphasis was placed on the instauration of new networked relationships, identifying the conditions necessary for sustained

platform use and stakeholder adaptation. Data was organized to show how digital infrastructure, algorithmic mediation, and platform design influenced the distribution of agency across different actors.

This ANT-based case study method enabled a holistic examination of Homes.com and Apartments.com as active participants in shaping market norms, stakeholder roles, and technological expectations. The resulting insights inform our understanding of the ongoing sociotechnical transformation of the real estate industry.

Results and Discussion

This case study of Homes.com and Apartments.com compares other online marketplaces with CoStar's and reveals key shifts in platform design, stakeholder interaction, and digital tool adoption, reflecting broader transformations in the real estate industry post-COVID.

AI-Driven Pricing and Platform Power

Although Homes.com and Apartments.com have not been involved in pricing controversies themselves, examining the broader digital real estate ecosystem offers important context for understanding the implications of platform design on stakeholder relationships. RealPage's YieldStar (an ex-subsidiary of CoStar) rent-setting software is currently under a Department of Justice antitrust investigation for allegedly facilitating rental price coordination among landlords through algorithmic recommendations (U.S. Department of Justice, 2024). Similarly, Zillow's now-defunct iBuyer program and its Zestimate tool illustrate how overreliance on algorithmic pricing can lead to market distortion. Zillow's automated pricing models led to inflated purchases and contributed to a loss of over $500 million before the company exited the iBuyer business (ZillowGroup, 2023). Agents were sidelined in the valuation process, buyers and sellers lost trust in transaction fairness, and the platform's authority as a market mediator was destabilized. This breakdown in network alignment illustrates how improper instauration, where the necessary trust, expertise, and balance among actors is lacking, can compromise the stability of the broader sociotechnical system.

By contrast, Homes.com has consciously avoided implementing algorithm-driven pricing mechanisms. According to public statements from CoStar Group, Homes.com emphasizes agent-led pricing, reinforcing the centrality of human expertise and professional judgment (Han, 2023). This design choice avoids algorithmic opacity and enhances trust among buyers and sellers. From an ANT perspective, this reflects a network prioritizing agents as essential intermediaries who translate digital platform tools into market-relevant pricing strategies. In doing so, Homes.com supports a more stable and stakeholder-aligned marketplace. While Homes.com's monthly traffic remains slightly below Zillow's, its exponential growth, surpassing 149 million

users in early 2024, demonstrates the effectiveness of its human-centered approach (Gallagher, 2025).

This stakeholder alignment also extends to Homes.com's lead management strategy, exemplified by its "Your Listing, Your Lead" policy. Unlike Zillow and Realtor.com, which have been criticized for lead diversion, routing buyer inquiries to paying agents regardless of listing representation, Homes.com ensures that leads go directly to the listing agent (McGuire, 2024). This enhances transparency, preserves seller-agent trust, and reduces platform interference in existing professional relationships. Homes.com also maintains continuity through features like "Your Buyer, Your Business," which acknowledges and preserves buyer-agent affiliations.

Together, these choices reveal a deliberate platform design that emphasizes stakeholder empowerment and clarity. It serves as a model for other online marketplaces to follow as the industry continues to progress towards more digital integration. In the ANT framework, both pricing discretion and lead ownership serve as mediators that help shape the relationships among platforms, agents, and clients. Homes.com's design helps maintain balance in a sociotechnical system where digital tools may threaten to displace human judgment. As a result, the platform has built a rapidly growing network grounded in trust, transparency, and shared agency.

Digital Tools: AI-Powered Search, Filtering, and 3D Tours

Both Homes.com and Apartments.com utilize machine learning to enhance the user experience through personalized search and recommendation tools. These include AI-powered filters based on lifestyle factors, such as proximity to parks or work, and natural language processing that interprets user queries more intuitively (ZillowGroup, 2024). Additionally, platforms have introduced capabilities such as interactive chat assistants, customizable search profiles, and context-aware suggestions that respond to previous user behavior. 3D virtual tours and dynamic floor plans have become standard features on many listings, offering users immersive browsing experiences that reduce the need for in-person visits.

Advanced filtering tools allow users to refine searches with granular preferences -- ranging from commute times and school ratings to pet-friendliness and in-home amenities -- expanding the usability of the platform while personalizing the discovery journey. These technologies shape not only what listings are seen, but also how consumers define their housing priorities.

While this personalization benefits buyers by streamlining their search and increasing satisfaction, it also introduces new complexities for sellers and agents. Listings that do not align with algorithmic models may be deprioritized, requiring agents to optimize content (e.g., high-resolution imagery, descriptive metadata) to remain visible. For example, platforms like Zillow and Realtor.com have been shown to rank listings higher when they include professional photography, lifestyle-oriented descriptions, and rich metadata, such as school ratings or

neighborhood features (Esposito, 2025). Agents who fail to meet these standards may find their listings buried in search results. Moreover, with AI personalization now matching properties to user behavior, agents must tailor listings to resonate with these algorithmic priorities. From an ANT perspective, this reinforces the role of digital tools as non-human actors that mediate visibility, reshaping how agents interact with both platforms and potential clients. From an Actor-Network Theory perspective, these digital tools serve as active mediators in the stakeholder network. They help configure the flow of visibility and interaction, shifting agency toward algorithmic systems while simultaneously reshaping stakeholder expectations. In doing so, they reflect a form of instauration—where the effective deployment and use of these tools depends not only on their technical design but also on user trust, agent adaptability, and the broader regulatory and ethical norms governing their application.

Post-2023 Adoption and Industry Shifts

Homes.com's strategic relaunch in 2023 was backed by over $1 billion in marketing investment and resulted in rapid adoption, with over 100 million monthly users by early 2024 (Gallagher, 2025). This surge in user engagement marks a significant shift in the competitive landscape, challenging Zillow's long-held dominance. Apartments.com, a longstanding leader in the rental market, continues to benefit from increased visibility and shared branding within the Homes.com ecosystem.

The heightened visibility and differentiated features of these platforms have reshaped user expectations in several ways. Surveys indicate that consumers now prioritize direct agent communication and transparent lead handling, with 74% reporting that they are more likely to trust listings where they can contact the actual listing agent (Inman, n.d.). Additionally, user engagement data from CoStar suggests that platforms offering AI-powered tools, such as customizable filtering, smart chatbots, and 3D virtual tours, see longer user session durations and higher inquiry rates (CoStar Group, 2024). In response to these shifting expectations, industry professionals are actively encouraging agents to claim and manage listings on Homes.com. From an ANT perspective, these features serve as sociotechnical mediators that actively shape stakeholder behaviors. The instauration of Homes.com's user-agent-platform relationship, facilitated by intentional design choices, has thus helped reconfigure professional norms around lead handling and visibility in ways that realign the real estate network around transparency and trust.

Broader Implications and Network Effects

Although Homes.com and Apartments.com have avoided direct legal scrutiny, the RealPage case illustrates how algorithmic pricing systems, when unchecked, can trigger regulatory intervention and reshape market behavior. This has led to growing calls for algorithmic transparency and greater accountability among platform providers.

These developments illustrate a key point from ANT: platforms are not neutral intermediaries but active participants in shaping real estate norms and stakeholder relationships. The structure of lead routing, the use of AI in pricing and search, and the business model adopted by each platform contribute to how value and influence circulate in the market.

Homes.com and Apartments.com illustrate how deliberate platform design can stabilize and support stakeholder networks. By aligning technological tools with human needs, rather than replacing human roles, these platforms help maintain trust and adaptability in a rapidly evolving digital environment.

Conclusion

This case study of Homes.com and Apartments.com demonstrates how digital platform design profoundly shapes stakeholder relationships in the real estate ecosystem. By consciously prioritizing agent-led pricing, transparent lead handling, and intuitive AI-powered tools, these platforms illustrate an alternative model to more opaque, algorithm-driven competitors. Through the lens of Actor-Network Theory, the research reveals that non-human actors like search algorithms and lead routing systems can play defining roles in network dynamics, empowering or disempowering human stakeholders depending on how they are configured.

Homes.com's rise—while not unseating Zillow—shows that stakeholder-centered design, when paired with strategic platform choices, can produce tangible shifts in industry behavior, user expectations, and professional norms. These findings point to a broader trend in which technological instauration must be carefully managed to ensure that platforms foster rather than erode trust, autonomy, and value across the real estate network.

Future research could extend this work by studying how user trust evolves with increasing platform personalization, or by comparing stakeholder responses across international markets where data privacy, platform regulation, and agent practices differ. As digital tools continue to mediate more of our economic interactions, understanding the mutual shaping of technology and society in high-stakes markets like real estate remains both timely and essential.

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