RELEVANCE OF THE REAL ESTATE AGENT IN THE SPANISH RESIDENTIAL MARKET IN THE AGE OF DIGITALISATION

Juan Carlos ASENSIO-SOTO [1], Elena NAVARRO-ASTOR [2*]

[1] Faculty of Social Sciences, Universidad Europea de Valencia, Valencia, Spain
[2] Department of Business Organization, Universitat Politècnica de València, Valencia, Spain

Abstract. Digitalization has reshaped the real estate industry, significantly transforming the role of the agent. In an era of disruptive technologies, real estate agents face both new challenges and opportunities, where adaptability and the integration of digital tools are essential for success. This article examines how digitalization has influenced the agent's role and assesses its importance in the brokerage process from the customer's perspective. Self-administered online surveys have been used for data gathering, obtaining 412 valid responses from people who have participated in the process of buying or selling a property in Spain. Results reveal the need for the agent who still plays a decisive role in the buying and selling process and is considered well prepared, providing confidence for many clients. Digitalization has redefined the agent's profile, requiring a combination of technical and human skills and the importance of empathy and personal contact has become crucial. Those professionals who incorporate technology while focusing on delivering an exceptional customer experience will be the ones who thrive in this new era of digitalized real estate. The manuscript enriches academic literature on the importance of the real estate agent in a country such as Spain where it has been hardly studied.

*Corresponding author. E-mail: *enavarro@omp.upv.es*

1. Introduction

The real estate sector plays a vital and influential role in the Spanish economy, attracting significant capital investment, employing a large workforce, and contributing substantially to the country's GDP (Estrada, 2024; Urrestarazu Capellán et al., 2021; Sánchez Jordan, 2022). The Spanish housing market is economically interesting for various reasons. In the early 2000s it experienced one of the most significant housing bubbles, that when bursting led to a severe economic recession, a banking crisis and long-lasting effects on the housing market (Fernandez-Perez et al., 2025). In addition, Spain has recently witnessed a strong and fast increase in housing prices due to an imbalance between high demand and limited supply that has led Spaniards to consider housing as the country's main problem (Centro de Investigaciones Sociológicas, 2025). In fact, the ratio of house prices to household income increased by 50% between 1996 and 2022, making home ownership unaffordable for many people (Banco de España, 2024). This evolution has also resulted in Spain reducing its rate of home ownership that has gone from nearly 80% in 2012 to 75,1% in 2023 and 73.6% in 2024 (Instituto Nacional de Estadística, 2025). In addition, Spain is among the Euro-

pean countries with the highest number of second homes (Sánchez Jordán, 2022). It is in this context that we study real estate agents.

Like many other industries, real estate is undergoing a major digital transformation, reshaping how companies operate and interact within the market (Baum et al., 2020; Mattaroci & Scimone, 2022), and this is becoming an emerging field of academic interest for researchers (Hanelt et al., 2021). As regards the housing market, brokerage is at a disruptive moment in terms of the use of technology. In Spain, this process has gained momentum since 2017 with the emergence of new more technological companies known as "proptech" and continues with the on-going digitalisation of traditional agencies (Asensio-Soto & Navarro-Astor, 2022; Caballé Fabra, 2021).

The ways of searching for housing have changed and also the methods of visiting properties for sale and rent. Consumers in the housing market mainly refer to online ads and to agencies' websites to look for information about properties (Ipsos-London Economics-Deloitte consortium, 2018). They may use online platforms such as Rightmove and Zoopla in the UK, Domain and Realestate in Australia or Idealista and Fotocasa in Spain, which make

the housing search process cheaper and easier. Goodchild and Ferrari (2021) call these plaforms "enablers" that serve and support rather than transform the housing market, since they advertise standardised information and pass on enquiries to agents. Therefore, in general they do not compete directly with traditional property agents. Consumers can search for available properties in these platforms by location or postcode, and refine their search by adding information about their desired amenities and price range. They can also do 360º virtual tours of home interiors (Jud et al., 2002) as well as use virtual and augmented reality applications that enhance the search process and customer experience in a significant way (Xiong et al., 2024; Thomas & Wiekak-Roy, 2025). Websites may also provide links to other services: mortgage financial institutions, appraisal providers, moving companies and utility providers (Jud et al., 2002).

Hence, the initial search for housing occurs online for the most part (Choi et al., 2019; Saiz, 2020), because users ask for faster and more efficient solutions, and agents have started to use new technological tools to preserve their market position (Mattarocci & Scimone, 2022; Mira, 2019). But it is unlikely that they will replace the agents due to the complexity of the purchasing decision-making process and the "social" nature of the business (Thomas & Wiekak-Roy, 2025). Seiler et al. (2008) show that buyers and sellers do appreciate human contact with the real estate agent, the feeling of trust, responsiveness to their needs, and empathy. In fact, property agents still show homes to consumers and provide advice, "the moment of the physical visit is of crucial importance for the self-realization of the client, to bring clients to envision themselves living in the house" (Benites-Gambirazio, 2020, p. 162).

On the other hand, there are market innovative platforms, known as "hubs", that position themselves as modern alternatives to traditional firms (Goodchild & Ferrari, 2021). One example is Purplebricks in the UK. They are online brokerage agencies that facilitate direct seller to buyer transactions at predetermined prices, offering lower costs to clients and claiming no commissions—though they do charge fees. This high intermediation platforms disrupt the business of established agents because they try to replace human intermediaries, challenging traditional real estate agents, forcing them to confront the disintermediation threat. Disintermediation is the idea that the parties themselves, buyers and sellers, can deal with each other directly (interact, negotiate and contract), without the intervention of intermediaries (Baum et al., 2020; Myers & Crowton, 2004; Caballé Fabra, 2021; Marshall, 2024; Wigand, 2020; Asensio-Soto, 2023).

Despite these challenges and the fact that the internet plays an important role in residential real estate transactions, they are still being carried out via real estate agents and they have not disappeared. The housing market in the USA, for example, remains highly intermediated, with 87% of buyers and 89% of sellers hiring an agent (Gilsbuck & Golds-Smith, 2024) and in England and Wales, although non mandatory, most properties are marketed for sale by

estate agents, and the online sector only represents 5% of the market (St George & Sidoli, 2022). The continued reliance of buyers on intermediaries is partly due to the significance and complexity of the home purchase process (Palm & Bolsen, 2022). However, Roulac (2019) points out that the transformation taking place in the sector requires a paradigm shift where consumers should be empowered. As a consequence, customer services in the intermediation process must be more professional. Correct and satisfactory negotiations with customers bring great value to the agent as they favour a good reputation and help to develop new relationships (Asensio-Soto & Navarro-Astor, 2022).

Given the importance of the real estate agency sector to the public and based on Engstrom et al. (2023) call for further research into its operation and shared experience of international practices, the purpose of this research is to assess the importance of the Spanish real estate agent in the intermediation process according to consumers, in the context of the increasing market digitalization described above. To achieve this, secondary objectives are proposed: to find out customers' perception of the services provided by the agent, to measure their quality and to identify different customer profiles.

The paper proceeds as follows. Section 2 outlines the literature review, which focuses on the role of the real estate agent in general, transaction costs and the Spanish case. Section 3 describes the methodology used, Section 4 presents our data. In Section 5, we discuss the empirical results. Finally, the last section summarises the findings and offers some concluding remarks.

2. Literature review

2.1. The role of the real estate agent

Non-transparency and the lack of asset homogeneity in the real estate market justify the role of agents who assist buyers and sellers, as obtaining accurate information can be both time-consuming and costly (Zietz & Sirmans, 2020). The estate agent is the connecting element between the real estate firm and the market, being a key presence in the buyer-seller negotiation process (Milgrom & Roberts, 1994; Grandori, 1999; Boyd & Chinyio, 2006). It represents a kind of intermediary with a very important role, as it is involved in almost all phases of the real estate transaction (Yavas, 2007; Trio & Iazzi, 2016), although this depends on the property conveyance process that varies between countries (Palm et al., 2022). The role of this actor has been critically reviewed by many scholars (Levitt & Syverson, 2008; Hendel et al., 2009; Bernheim & Meer, 2013; Larceneux et al., 2015; Benefield et al., 2019; Benites-Gambirazio, 2020).

In some international contexts such as Spain, the UK and the USA, the poor image of property agents has been highlighted (García Valdecasas, 1988; Moreu Carbonell, 2023; Brinkmann, 2009; Arnold et al., 2009; Talmatchi, 2020; Ensgtrom et al., 2022) associated with the intangibility of their work, an effort barely visible to customers

(Santore & Bruce, 2002). Engstrom et al. (2023, p. 61) even point out that when it comes to trustworthiness they "tend to rank somewhat higher than car salesmen and paparazzi but below politicians and journalists".

Yáñez (2013) and Talmatchi (2020) mention the possibility of avoiding the agent's assistance, as it will increase the final cost of the deal. Customers could try to carry out the transaction on their own, although they will encounter difficulties because it is a complex decision-making process (Yáñez, 2013). In fact, Stamsø (2015) found that selling a property in Norway is viewed as an extensive and complicated process. There are high financial risks involved, long time invested (Buxmann & Gebauer, 1998; Abis, 2009; López-Arredondo et al., 2019; Benites-Gambirazio, 2020; Zhang et al., 2021; Palm & Bolsen, 2022) and also the dilemma of choosing the different materials and functional, social and symbolic attributes of housing (Levitt, 1980). Moreover, this process is rarely repeated in the short term and has a high lifetime impact on buyers (Zhang et al., 2021; Palm & Bolsen 2022; Engstrom et al., 2023). In addition, since two dwellings are not exactly the same, experience is required to determine their correct value. Therefore, it requires more procedures and more thinking time and energy on the part of the individuals concerned.

Potential buyers or sellers could obtain information themselves through various means such as free advice, the internet, libraries, or notaries (Yáñez, 2013). Talmatchi (2020) concludes that, by eliminating the agent, sellers and buyers have the potential to minimize the cost, yet they would not benefit from professional advice.

Scholarly literature highlights the advantages and disadvantages of hiring an agent. According to Benefield et al. (2019), the main service provided is the property promotion and sale, so it is the seller who would make the most profit. Open houses, outdoor and online advertisements, or the recommendation of the property to potential buyers and personalized attention are among the services offered. In addition, agents advise and assist sellers in the negotiation process and in the various bureaucratic procedures required (Bernheim & Meer, 2013). This is confirmed by Stamsø (2015), who found that the main reasons why sellers in Norway use an estate agent are to avoid all the work of selling independently, a reluctance to take responsibility for large sums of money, and fear of making errors.

Baryla et al. (2000) have studied the impact of real estate agents who represent the buyer on property transactions, without a sound consensus. They add that buyers have a positive perception of the agent in terms of obtaining better results in house search. For instance, Hendel et al. (2009) and Baryla and Ztanpano (1995) concluded that buyers conducted faster searches and achieved better success results when assisted by an agent. Moreover, buying through an agent increases the variety of properties available and gives buyers evidence of their quality (Hendel et al., 2009). Agents also provide value beyond property search, as they often advise buyers on sources of mortgage finance and property insurance, as well as

assisting with legal documentation (Seiler et al., 2008). In contrast, Zumpano et al. (1996) show that buyers who use agents pay more for housing than those who buy without an agent.

Both Trio and Iazzi (2016) and Caballé Fabra (2021) argue that the real estate agent can be of great importance in facilitating access to housing with greater legal protection. Levitt and Syverson (2008) emphasize the functional value of the agent in relation to the information provided and its effectiveness in matching the client's requirements. The solutions presented by the professional should match the needs of the buyer or seller and offer a more efficient outcome than the one obtained with an online medium (Frew & Jud, 1986; Hendel et al. 2009). In other words, the perceived value for buyer and seller must be aligned on the same idea that they can close a sale or purchase faster through a real estate agent than without one. Therefore, it is also measured by the overall efficiency of the process: saving time and reducing risk. For the seller, the process is efficient when the time to sell is reduced (Yang & Yavas, 1995), while for the buyer, when they have access to a larger number of potential properties (Elder et al., 2003). According to Wilcox and Forsyth (2022, p. 192), the agent should "save the client time and provide reassurance that the optimal transaction terms have been agreed".

It is also important to highlight the emotional value provided by the agent, which is fundamental for customers' psychological safety through support in the management of the transaction (Gardès, 2019). According to McKenzie and Betts (2010) the agent's advice is reassuring for the client as it reduces the mental burden, especially when the situation is perceived as too complex. Moreover, engaging a real estate agent can help mitigate the risk of a challenging or contentious negotiation, a common occurrence in home transactions between parties with opposing interests. In fact, the involvement of an agent representing the interests of both parties should prevent these differences from escalating into conflicts (Gardès, 2019). Their expertise and knowledge of legal matters provide clients with reassurance that the transaction will proceed smoothly. This approach, which combines both the functional and emotional value offered by the real estate agent, is crucial for delivering a positive customer experience and enhancing perceived value.

On the contrary, the charging of commissions or fees is often a key factor behind the poor reputation of agents in many developed countries (Larceneux et al., 2015; Bernheim & Meer, 2013). García Valdecasas (1988) and Talmatchi (2020) suggest that while negative experiences can contribute to this perception, it is primarily driven by the high commissions agents typically charge. According to Yinger (1981), Anglin and Arnott (1999), Moretti and Hsieh (2003), and Talmatchi (2020), fees in the real estate market are excessively high for a competitive environment, and only market forces can properly adjust them. They further argue that despite the large number of players and relatively low barriers to entry, these factors have not led to the expected fee adjustments, as one might anticipate in such

a fragmented industry. But agents' fees are just the tip of the iceberg in terms of costs related to buying a home, since there are other transaction costs involved.

2.2. Transaction costs in the housing market

According to Håkansson and Palm (2022) there is no agreement on the definition of transaction costs, those involved in the buying and selling a good. But they depend on the type of transaction, the parties involved and potential regulations which vary between countries. Compared to other commodities, housing has a high transfer cost, since in addition to the price of the house, many other costs are involved: search time spent finding the property, real estate agents' fees, costs related to mortgages, taxes, legal fees and moving costs (Stamsø, 2015). While some of these costs such as fees and taxes are not hard to identify, others of a more intangible nature are difficult to quantify (Håkansson & Palm, 2022; Devaney et al., 2017).

A comparison of transaction costs and processes for housing conveyances in 27 countries around the world shows that these depend on the underlying legal rules and regulations (Andersson & Palm, 2022). For example, in countries such as Spain under the civil law family, the public notary is an important actor, with mandatory intervention in real estate conveyances (Palm et al., 2022), and transactions costs are rather high, particularly for the buyer. On the other hand, in countries that follow the Nordic law such as Finland, Sweden and Norway, simplicity and pragmatism are common traits, no civil law notaries are required in conveyances, and transactions costs for the buyer and the seller are very low.

There are also differences between countries regarding transaction costs related to time. For instance, during the marketing phase of the transaction, potential buyers may be impacted by how searches are conducted and how information about homes for sale is displayed. In Sweden, for example, all properties for sale are marketed on the same website, the so called "marketplace for homes" (Jingryd & Palm, 2022; Andersson & Palm, 2022). This transparency results in time efficiency for both parties: buyers can explore the entire market supply with one search, and sellers can advertise their home on only one platform to reach the entire market. But in other countries, such as England, there are several property portals advertising properties (Rightmove and Zoopla), making the search longer and the matching process more time-consuming for both parties. This adds up to the transaction costs (Andersson & Palm, 2022; St George & Sidoli, 2022).

The number of institutions involved in the conveyance process also has consequences for the transaction costs. Hence, countries such as Japan, Germany, South Africa and Spain with more actors participating when buying and selling add up more costs. On the other extreme, where real estate agents have mandatory university education related to law fields and they handle the legal aspects of the exchange (Sweden), without notaries involved, transaction costs are lower (Andersson & Palm, 2022).

2.3. The Spanish case

In Spain, the market for real estate brokers has gone through many changes over a long period to increase competition. The real estate agent profession was established in Spain in 1948 by a decree[1] which defined it as a collegiate profession that could only be practised with registration to an official association (Moreu Carbonell, 2023; Caballé Fabra, 2021). Applicants had to demonstrate 'good conduct and recognised integrity', and possess a professional qualification, among other requirements. Yet, throughout the 20th century, successive reforms affected the structure and functioning of the professional association of real estate agents, as well as the requirements for accessing the profession (Moreu Carbonell, 2023).

Restrictions on housing brokerage in Spain were removed in the year 2000 when the Royal Decree-Law on Urgent Measures for the Liberalisation of the Real Estate and Transport Sector[2] was approved (Moreu Carbonell, 2023; Caballé Fabra 2021, 2025; Sánchez Jordan, 2022). This regulatory change eliminated certain entry barriers, such as the requirement for a specific academic qualification to work in the profession and the compulsory membership in a professional body. This implies that anyone can become a real estate agent without needing to prove training and there is no institutional body that controls not only members' qualifications but also that their procedures comply with the law and that there will be consequences in case of misinformation or damages.

The liberalisation and deregulation of the real estate conveyance activity in Spain has led to a significant rise in the number of people working as real estate agents, which has been described as excessive professional intrusion (Moreu Carbonell, 2023; Clotet & Gallardo, 2018). There has also been an increase in the number of complaints relating to unreasonable fees, commissions imposed on both contractual parties, and excessive deposits. This results in a negative image of the Spanish real estate agent, who is perceived as a non-qualified professional interested in obtaining high commissions (Colectivo API, 2020; García Valdecases, 1988). Consequently, consumers, associated real estate agents and academics are calling for the sector to be better regulated (Moreu Carbonell, 2023; Sánchez Jordán, 2022; Caballé Fabra, 2025).

Even though there is currently no national regulation governing this profession, there are considerable differences between Spanish regions (European Association of Real Estate Professions [CEPI], 2024) that have been criticized for causing confusion among consumers (Caballé Fabra, 2025). In fact, some Autonomous Communities have introduced training requirements and created administrative registers that may be voluntary or compulsory depending on the region (Moreu Carbonell, 2023). According

---

[1] Decree of the Housing Ministry of 17 December on the creation of Real Estate Agents' Official Associations (BOE n. 17, 17 January 1949).
[2] Royal Decree-Law 4/2000, 23 June.

Table 1. Pros and cons of using estate agents in Spain (source: authors' own work)

Aspects	Pros	Cons	Authors
Customer relationship	Builds trust, empathy, and support	Maintaining impartiality between buyers and sellers is difficult	Clotet and Gallardo (2018), Caballé Fabra (2021)
Market knowledge	Provides up-to-date information and local expertise	Low level of professionalisation and lack of formal regulation	Clotet and Gallardo (2018)
Support throughout the process	Provides legal and administrative assistance	Potential conflict of interest and lack of transparency in management	Caballé Fabra (2021)
Accessibility	Physical presence valued by less digitally savvy customers	High cost	García Valdecasas (1988), Clotet and Gallardo (2018)
Customer perception	Highly rated service in complex and unique operations	Image tarnished by intrusion and unqualified agents	López-Arredondo et al. (2019); Asensio-Soto and Navarro-Astor (2020)
Technology and adaptation	Partial integration of technologies (CRM – Customer Relationship Management, virtual visits) by hybrid agencies	Technology gap and resistance to change	Asensio-Soto and Navarro-Astor (2020)
Emotional value	It reduces stress and provides psychological safety	May generate emotional dependence that is not always effective	Asensio-Soto (2023)

to CEPI (2024), a compulsory register exists for real estate agents in Catalonia. In order to work as one, applicants must complete training courses provided by universities and private organizations, followed by an exam. They may also become agents if they finish a bachelor degree in fields such as law, architecture or real estate. Once they have passed the exam, agents are free to join a local association. Another aspect worth mentioning is that, except in Catalonia, there is no legal provision forbidding real estate agents from representing both parties in the same transaction.

Although there is no reliable data available on the number of real estate agents actually operating in Spain, it is estimated that there are around 50.000, of which only about 20% are members of their professional association (Caballé Fabra, 2025). Since Spain belongs to the Latin notary system of conveyance, they are mainly involved in the marketing and pre-contractual phases of the conveyance process, that is the initial negotiations when the parties intend to sell or gain access to housing (Caballé Fabra, 2021, 2025; Sánchez Jordán, 2022). The fee is normally between 3% and 5% of the sales price and is paid by the principal, who is usually the seller.

At present, it is common practice for houses and flats to be advertised on marketplaces such as Idealista and Fotocasa. Most of these properties are offered by agencies, meaning consumers do not have the freedom to choose who will show them the property they want to buy. Around 70% of property sales in Spain involve a real estate agent. However, most potential buyers do not approach an agency directly; instead, they are forced to do so by following the online platform route (Moreu Carbonell, 2023). The success of these "enabler" platforms (Goodchild & Ferrari, 2021) seems to be leading to a generalization of intermediation services. However, consumers do not turn to these services voluntarily; they have no other choice.

Table 1 shows the advantages and disadvantages of using property agents in Spain. Note that the topic has not been much researched.

3. Materials and methods

This research is of exploratory and descriptive nature and uses a quantitative methodology based on an online survey distributed to customers (property buyers and sellers) to assess their real estate agents and the agency.

3.1. Research instrument, population, sample and analysis

The questionnaire used was elaborated based on the Reserv real estate services measurement scale (Nelson & Nelson, 1995), although some modifications were made to reflect the changes experienced in the sector as a result of digitalization (see Appendix). Seiler and Reisenwitz (2010), considered the instrument reliable and valid and suggested that it should be the starting point for future research studies in real estate service quality.

The adaptation of the questionnaire introduces new dimensions and redefines existing indicators. For instance, a specific section has been included to gather information about consumers' perception of online agencies. Section 3, with items 1 to 4 (see Appendix), exclusively evaluates the experience gained with these digital agencies. It enables a comparison of the perception of traditional and digital services, measures specific attributes of the digital environment and establishes whether these new forms of intermediation meet users' expectations in terms of quality. Within this section, items S3_2 and S3_3 address studies

that outline the importance of time saving and digital accessibility (Lim, 2000; Dabholkar & Overby, 2021). Other items measure trust in non-physical environments, a key aspect in digital settings (S3_4 and S3_1).

Furthermore, a specific dimension on the perception of fees has been added (items S1-8 and C5 in survey in the Appendix), reflecting the evolution of the business model of online brokerage agencies with alternative fee structures to traditional ones (Caballé Fabra, 2021).

The questionnaire consists of 35 questions for all participants using the agency's services, and 4 specific questions for those working with online brokerage agencies. It also establishes 9 dimensions addressing various aspects of the service received and measures both overall satisfaction and the likelihood of recommending the real estate agency to others. Survey dimensions considered are the following: trust, usefulness, efficiency, convenience, service quality, payment, time, flexibility and qualification.

Dimension modifications from Reserv measurement scale derive from the literature review and the disruptive changes that the sector is undergoing in its digitalisation process (Shaw, 2018; Barwick & Wong, 2019; Siniak et al., 2020). Accordingly, the remuneration or fees paid by clients has its own dimension (Yinger, 1981; García Valdecasas, 1988; Sirmans & Turnbull, 1997; Anglin & Arnott, 1999; Santore & Bruce, 2002; Bernheim & Meer, 2013; Larceneux et al., 2015; Swanson & Gurke, 2017; Gautier et al., 2017; Talmatchi, 2020; Caballé Fabra, 2021). The time factor is highlighted as a key element valued by customers when assessing the impact of digitalization in real estate brokerage (Lim, 2000; Baryla et al., 2000; López-Arredondo et al., 2019; Dabholkar & Overby, 2021). The same applies to efficiency, which is related to process resolution (Frew & Jud, 1986; Hartline & Ferrell, 1996; Brown et al., 2002; Kilic & Dursun, 2007; Hendel et al., 2009; Brinkmann, 2009; Clotet & Gallardo, 2018).

A 5-point Likert-type scale is used to evaluate each dimension, with 1 meaning strongly disagree and 5 strongly agree. Participants were asked to rate the brokerage service, the professional agent, and the online brokerage agency. A final section is included to collect respondents' sociodemographic data (see the Classification block in the Appendix).

A pre-test was carried out with 20 individuals with different profiles in terms of participation in the process, gender and age. This pilot test was used to verify the correct understanding of the questionnaire, the time needed to answer, as well as to detect possible errors or ambiguities in its wording. Based on the results obtained, minor modifications were made to the initial wording and to the survey design. The population under study is any individual who has participated in a property purchase or sale process in Spain during the 2018–2021 time period, whether or not the process has been completed. The 4-year period chosen is the time interval during which online real estate agencies have coexisted with traditional ones. A combination of non-probability convenience sampling and snowball sampling was carried out.

For its ease of administration and guarantee of anonymity, the survey was designed and distributed using encuesta.com, a widely used online platform for creating and administering questionnaires. To maximize the number of responses, a survey dissemination strategy was developed using the social networks Twitter and LinkedIn, trying to reach different ages and geographic locations. Various housing experts were contacted, and they shared the survey link on their social media profiles.

Following standard ethical guidelines, an introductory letter was included together with the survey online link. This letter described research goals, informed about approximate completion time, the confidential nature of participation and that there were no risks involved. No economic incentives were offered to potential participants.

462 survey responses were collected, of which 412 were validated. There is no consensus on the recommended sample size for this type of non-probabilistic sampling (Argibay, 2006; Cupani, 2012), although one of the most commonly used is based on the number of questionnaire items. Argibay (2006) suggests that the number of participants should not be less than 5 times the number of items, while Kline (2005) recommends between 10 and 20 participants per parameter studied.

The collected data were analyzed using IBM SPSS Statistics 26. For categorical variables, frequencies and percentages are shown. Differences in categorical parameters between groups were assessed with Pearson's non-parametric Chi^2 test and, in the case of 2×2 tables, Fisher's exact test is applied. For continuous variables, descriptive mean, SD, median and interquartile range are shown. Differences in continuos parameters between groups are assessed by Mann-Whitney/Kruskall-Wallis (non-parametric) or T-student/ANOVA (parametric) tests based on the normality of the variables to be assessed by the Shapiro-Wilks test. All multiple comparisons are adjusted by Bonferroni correction.

Cronbach's Alpha has been used to test the reliability of the scale for each dimension. Different customer profiles have been detected by a two-stage cluster analysis. The significance level used in the analyses was 5% (α=0.05).

3.2. Description of research participants

As Table 2 shows, 56.1% of the respondents were women while 43.5% were men. The average age was 45 years old, with an interquartile range of 37–52, the age range being 22–89 years. Most of them had higher education (85.2%), of which a 49.2% with a bachelor's degree and a 35.9% with a master's degree or doctorate. Employees accounted for 68.9% of the sample, compared to 19.2% who were self-employed. In terms of income level, two groups stand out, those with monthly incomes between €2,001 and €3,000 (29.6%) and those between €1,001 and €2,000 (28.9%). There is a third group that corresponds to incomes above €3,000 representing 18.7% of the sample.

The majority of the sample (63.7%) used an intermediary in the process of buying or selling the property and

Table 2. Sample characteristics (source: authors' own work)

		n	%	Cumulative %
Gender	Male	179	43.45	
	Female	231	56.07	
	Other	2	0.48	
	Total	412	100.00	
Age group	18–34	194	47,1	47.1
	35–65	212	51,5	98.6
	Over 65	6	1.4	100.0
	Total	412	100.00	
Level of education	No formal education	1	0.24	0.24
	Primary education	5	1.21	1.46
	Secondary education	55	13.35	14.81
	University degree	203	49.27	64.08
	Master's or PhD	148	35.92	100.00
	Total	412	100.00	
Occupation	Student	6	1.46	1.46
	Unemployed	13	3.16	4.62
	Retired/Pensioner	30	7.28	11.89
	Employee	284	68.93	80.83
	Self-employed	79	19.17	100.00
	Total	412	100.00	
Monthly income (€)	No response (NS/NC)	80	19.42	19.42
	Less than 600	3	0.73	20.15
	600–1,000	11	2.67	22.82
	1,001–2,000	119	28.88	51.70
	2,001–3,000	122	29.61	81.31
	More than 3,000	77	18.69	100.00
	Total	412	100.00	
Used a real estate agency?	Yes	262	63.59	
	No	150	36.41	
	Total	412	100.00	
Transaction type	Purchase	242	58.74	58.74
	Sale	86	20.87	79.61
	Both (buy & sell)	64	15.53	95.15
	Not finalized	20	4.85	100.00
	Total	412	100.00	

the rest (36.3%) did it on their own without professional assistance. As for the breakdown by agency type, only 4.2% of the sample used online agencies (2.4% if we also consider those who did not use an agency). The distribution of profiles regarding type of situation is: 15.5% of sellers-buyers, 58.7% of buyers, 20.9% of sellers and 4.9% unfinished transactions.

There are significant differences in the age of the different profiles: sellers are older than the rest, with an average age of 53, while buyers are 42 on average. There are no significant differences between the profile of the client (based on gender, studies, employment, income, region) who relied on the real estate agency and the one who did not (*p*-values $Chi^2 > 0.05$ for all the bivariant tests).

Comparing both types of agency, 46% of online customers are women, with no significant differences with traditional agency customers. The average age of the online customer is 43.1 (SD = 4.81) years old, with no significant differences with the traditional agency customer, 45.9 (SD = 11.1) years old.

4. Results

4.1. Perception of the real estate agent

Table 3 shows the ranking of items based on Friedman's test for comparison of distributions and Bonferroni adjusted post-hoc contrasts (Friedman (18) = 677.118, *p*-value 0.000). The highest rated items correspond to quality

(professional and adequate treatment) and agent's qualification. In addition, due to their opposite sense in the question wording, the last 2 items regarding usefulness are also positive and well rated concepts (dispensable agent and prefers agent during property visits). The worst rated item is the perception that the agent has not prioritized the customer's interest over that of the agency.

In general, there are no significant differences in the perception of the agent's characteristics depending on whether the agency is online or traditional (all Mann-Whitney tests between each item and agency tipology with $p > 0.05$).

However, the situation of the transaction process is a differentiating factor in terms of the assessment of all items (all Mann-Whitney tests between each item and agency tipology with $p < 0.05$). In order to clarify the interpretation of results about perception of agent, it is adequate to test the scale's reliability with Cronbach's alpha for each dimension (usefulness, quality, trust, qualification, satisfaction). Hence, we will work at the level of the average dimension of the items that compose it. The data are presented in Table 4.

All dimensions have Alpha values above 0.7 except for Usefulness. If the items that go in the opposite semantic

Table 3. Rating of the professional agent (source: authors' own work (descriptive mean and standard deviation shown for each item))

	Mean	SD
QUALITY: Treatment was adequate	4.06	0.85
QUALITY: Treatment was professional	3.95	0.97
QUALIFICATION: The agent is qualified for the job he/she is doing	3.89	1.06
TRUST: The agent's presence during property visits gives me confidence	3.81	1.00
USEFULNESS: I found agent's presence at property visits helpful	3.81	1.04
USEFULNESS: The agent has helped me to complete the transaction	3,79	1,03
USEFULNESS: Visiting properties with the agent has made it easier for the transaction to be completed	3.78	1.03
QUALIFICATION: The agent shows he/she has the right training for the job	3.76	1.01
USEFULNESS: The agent has helped me with the paperwork and documents	3.74	1.12
USEFULNESS: Visiting properties with the agent has made it easier to make decisions	3.72	0.99
TRUST: Visiting properties accompanied by the agent has helped me to be more relaxed during the transaction	3.71	1.01
QUALITY & QUALIFICATION: The agent has always been able to give me appropriate advic	3.70	1.15
GENERAL SATISFACTION: Overall I am very satisfied with the agent who has advised me throughout the whole process	3.67	1.08
USEFULNESS: I prefer to visit the properties myself to save money	3.00	1.26
QUALITY: The agent has prioritized my interests over those of the agency	2.98	1.21
USEFULNESS: The real estate agent seems dispensable	2.92	1.17

Table 4. Average dimension of the real estate agent's items (source: authors' own work)

Dimension	Items	Cronbach's alpha
Uselfuness	■ I found agent's presence at property visits helpful ■ Visiting properties with the agent has made it easier for the transaction to be completed ■ The agent has helped me to complete the transaction ■ The agent has helped me with the paperwork and documents ■ Visiting properties with the agent has made it easier to make decisions ■ The real estate agent seems dispensable ■ I prefer to visit the properties myself to save money	0.514
Service quality	■ Treatment was adequate ■ The agent is qualified for the job he/she is doing ■ The agent has prioritised my interests over those of the agency ■ The agent has always been able to give me appropriate advice	0.896
Qualification	■ The agent is qualified for the job he/she is doing ■ The agent shows he/she has the right training for the job ■ The agent has always been able to give me appropriate advice	0.915
Trust	■ The agent's presence during property visits gives me confidence ■ Visiting properties accompanied by the agent has helped me to be more relaxed during the transaction	0.846
General satisfaction	■ Overall I am very satisfied with the agent who has advised me throughout the whole process	–

Table 5. Descriptive statistics of the real estate agent (source: authors' own work)
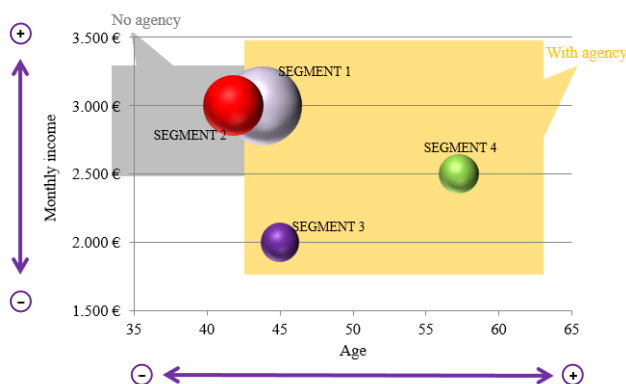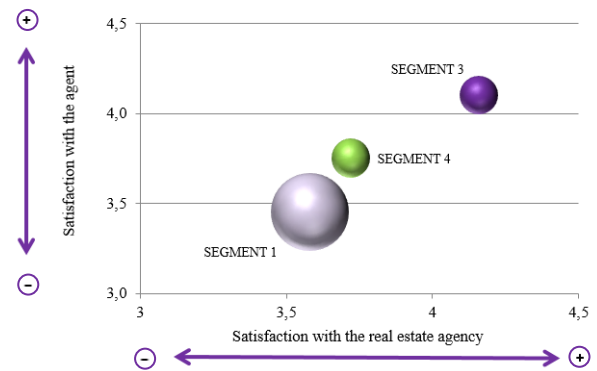
	Mean	SD
QUALIFICATION	3.78	0.99
USEFULNESS	3.77	0.86
TRUST	3.76	0.93
GENERAL SATISFACTION	3.67	1.08
QUALITY	3.67	0.92
I prefer to visit the properties myself to save money	3	1.26
The real estate agent seems dispensable	2.92	1.17

Figure 2. Customer segmentation based on satisfaction with the agency and the agent (source: authors' own work)

direction ("The real estate agent seems dispensable" and "I prefer to visit the properties myself to save money") are deleted (items S2_14 and S2_15), the Alpha amounts to 0.870. Thus, this dimension will be divided into 3 dimensions: items that work well (average) and items that do not work separately.

The global Friedman test and the post-hoc analysis comparing pairs provides a ranking of the dimensions according to their value, so that Qualification, Usefulness and Trust are the most highly valued dimensions (see Table 5). The last two items with scores around 3 represent concepts with a neutral positioning.

4.2. Customer segmentation

Two-stage cluster analysis has been applied to discover the natural groupings (or clusters), obtaining 4 with optimal data quality, covering 99.3% of the data. These 4 clusters identify different customer profiles based on sociodemographic characteristics, type of agency used, educational level and income. This approach is relevant, since it responds to the theoretical need to understand the heterogeneity of consumer behaviour in the real estate context, as proposed by Seiler and Reisenwitz (2010), who emphasize that the degree of satisfaction and service perception are closely linked to personal variables.

The profiles shown in Figure 1 are described below:
- Segment 1: It includes 48.4% of the sample, and it is composed of middle-aged men and women (average age 44 years old), with higher education and medium-high average salary. These customers use the services of real estate agencies, including online agencies.
- Segment 2: It encompasses 28.1% of the surveyed participants, who are similar to segment 1 in terms of age, education and income, but they make the transaction without an agency. They are middle-aged men and women (average 45 years old), with higher education, high average salary who make the transaction without an agency.
- Segment 3: It is made up of 11.5% of respondents, who are also middle-aged men and women (average of 45 years old), workers with secondary education and low-to-average salary who decide to hire an agency.
- Segment 4: It represents 12% of the sample, being older men and women (57 years old average), non-workers with secondary education and average salary who hire an agency.

Figure 2 plots the different customer segments according to their level of satisfaction with the agent and the agency. There is clearly a different positioning in terms of overall real estate satisfaction in each segment (K-W(2) = 11.288, *p*-value 0.004). Segment 1 includes only agency customers and it is the most dissatisfied (with agency: 3.58 (1.08), with agent: 3.45). Segment 3 is composed of surveyed participants with lower purchasing power and average education and it is the most satisfied (with agency: 4.16 (1.11), with agent: 4.10 (1.00)).

5. Discussion

Results show that a significant part of the sample (36.4%) did not look for the assistance of an agent for property exchanges. This quite confirms Moreu Carbonell (2023) who states that around 70% of property sales in Spain involve a real estate agent (Moreu Carbonell, 2023). We did not

Figure 1. Customer segmentation. Income and age (source: authors' own work)

ask survey participants about their reasons for not hiring an agent, therefore we cannot know for sure. But drawing from previous research, Yáñez (2013) and Talmatchi (2020) point out two possible reasons: the increase in the final cost and the use of the Internet or other resources that provide information on how to carry out the transaction. Stamsø (2015, p. 185) also reveals that "the main reason for homeowners selling privately is that it is too expensive to use an agent", but she adds that they believed they could sell the property as well as an agent, and that they had sold to family members. In any case, we should remember that there is no mandatory intervention of a real estate agent in the Spanish conveyance process and that buyers receive qualified legal advice both from the notary public and the land registrar (Sánchez Jordán, 2022). This adds legitimacy and a kind of security, reducing uncertainty and insecurity in the process (Andersson & Palm, 2022). Hence, buyers and sellers can manage the transaction without the agent.

The sample perceives the real estate agent positively, highlighting the service quality received, the qualifications and professional treatment, as well as trustworthiness. These results contradict the negative view of this professional conveyed by numerous authors in the Spanish context (Moreu Carbonell, 2023; García Valdecasas, 1988; Clotet & Gallardo, 2018; Colectivo API, 2020), but also in other countries where they are considered among the least trusted professions. For example, Clotet and Gallardo (2018) point to their lack of qualification, conveying the image of being a simple salesperson, and García Valdecasas (1988) underline their bad reputation.

Items measuring trust and usefulness of the agent's physical presence during property visits were rated positively (3.81 out of 5), which shows that this service is appreciated by the majority of participants. This is consistent with Benites-Gambirazio (2020) who outlines the importance of the physical property visit for the clients to picture themselves living in it. It also accords with Seiler et al. (2008), who highlight that homebuyers and sellers value the personal contact with the agent, as it instils confidence and peace of mind, addresses their concerns and demonstrates a high level of empathy. This is important given that the agent's physical presence, as well as the tangible office, are major differences between traditional and online brokerage agencies.

Buxmann and Gebauer (1998), Abis (2009), López-Arredondo et al. (2019), Zhang et al. (2021), Palm and Bolsen (2022) and Engstrom et al. (2023), among others, argue that the continued reliance of prospective customers on real estate agents is partly explained by the significance and complexity of the home purchase process, the high investment involved, the low level of repetition of the transaction, the difficulty of some of its processes and the long time invested. These motives, from the functional aspect of the service provided by the agent, but also from the emotional one, prevent intermediaries from being easily substitutable as is the case in other markets (Gardès, 2019).

As regards the qualification of the real estate agent, lets recall that depending on the regulations in the market for real estate agencies, in some countries the sector employs personnel lacking adequate preparation, education and training (Filstad & Gottschalk, 2009; Roulac, 2019; Agboola et al., 2021). In Spain, although there is no national regulation governing the profession and anyone can become an agent (Caballé Fabra, 2025; Moreu Carbonell, 2023), our results are positive for this dimension, implying that the agent is perceived by clients as qualified and prepared to perform efficiently. Consequently, it calls into question Filstad and Gottschalk (2009), Clotet and Gallardo (2018) and Roulac (2019) when they state that the client may view the agent with suspicion due to a lack of qualification. Yet their level of qualification has not been measured here, but rather the customer's perception of this aspect, so it is unknown whether the agent is really well qualified or not. Thus, qualification is not only an academic degree, but it may include honesty, knowledge and professionalism of the agent in his actions (Filstad & Gottschalk, 2009).

The findings related to customer segmentation reveal diversity in perceptions of real estate services depending on the client profile. This heterogeneity coincides with results of Seiler and Reisenwitz (2010), who point out that personal variables such as age, educational level, and previous experience influence the evaluation of real estate brokerage. Cluster analysis in this study has made it possible to distinguish four segments with well-defined demographic and attitudinal profiles, reinforcing the idea that a homogeneous customer service or communication strategy would not be effective in the current sector environment.

Of particular significance is the finding that population segments that best value the real estate agent are middle aged people with mid-level education and low-to-medium income and the elderly and economically inactive people (segments 3 and 4 in Figure 2). They emphasize that the agent assists them in visiting properties and in the process in general, since they perceive the usefulness of the service and they trust it. Although they were not asked for reasons to decide to use an agent, they probably needed guidance and support in the conveyance process. Despite their lower purchasing power, these groups are the most satisfied with the service received. This suggests that their expectations are more accurately met, and they have greater appreciation of professional support. As regards older participants in Segment 4, given their lesser familiarity with the digital channels, they value the usefulness and quality of the service positively, which can be interpreted as greater trust in expert knowledge. In sum, these customers value professional support more highly and perceive the service as a tool that facilitates a complex process, both from a technical and emotional point of view. This finding coincides with Gardès (2019) and McKenzie and Betts (2010), who outline the emotional value of the agent as a figure who reduces mental burden and uncertainty in a transaction that is normally subject to high financial risk.

In contrast, segment 1 (see Figure 2), comprising individuals with higher level of education and income, who use traditional and online agencies, shows the lowest levels of satisfaction. This paradox can be interpreted from the theory of expectations: the greater one's knowledge of the market and familiarity with digital tools, the higher the perceived quality requirements (Roulac, 2019). In this sense, digitisation may have introduced a perception of impersonality or lack of personal attention, particularly in online intermediation models, which may have negatively affected the overall customer experience.

The decision not to use agents from segment 2, who are also highly educated and have high incomes, is consistent with the theory of disintermediation (Baum et al., 2020; Wigand, 2020), which posits that technology allows certain users to take on the management of intermediation themselves. This behaviour confirms that digitisation, while not eliminating the need for agents in all cases, does pose a real threat to certain segments where users have sufficient information, resources and confidence to manage the process autonomously.

6. Conclusions

Some authors have argued that technology leads to a process of disintermediation and the progressive disappearance of real estate agents. In fact, to save costs, online agencies try to eliminate them by encouraging direct contact between individuals. In this context, this research has tried to assess the importance of the real estate agent in the Spanish intermediation process according to the customers' point of view. Results reveal the need for the real estate agent, who still plays a decisive role in the entire buying and selling process.

The surveyed customers perceive the real estate agent as well prepared for the job. Thus, it is considered necessary and provides confidence to many clients for whom dealing with the sale and purchase of a property is a thorny path. Real estate agents are not simply intermediaries who move pieces of unrelated information. If this were the case, they would have already disappeared or would be in the process of disappearing. What seems to be happening with the real estate agent is a change of role as they focus more on the process and less on the search, since it is mainly carried out online.

The great competition in the sector, with the access of proptech companies and new players, and the emergence of new technologies, implies that agents need more training than previously. Agents unable to provide good quality service are likely to leave the profession due to its greater complexity and the existence of more qualified and prepared competition. Likewise, the intrusion of people who access the market sporadically in search of high commissions and the entry of new, unprepared intermediaries could be reduced. Therefore, buyers and sellers would have greater security when carrying out a transaction through a real estate agent since they would obtain better service and professional advice.

Given the significant sums of money involved and the fact that most people rarely buy or sell property, decisions made in the housing market are among the most important in people's lives. Hiring a real estate agent can help to reduce the risk involved in this transaction. Housing is about people and it has long been recognized as a people business; agents play a key role in bringing objectivity to what can be a very emotional experience. Perhaps that is why we tend to gravitate to intermediaries. The Spanish agent will probably continue to play a relevant role in residential intermediation and technology will evolve and gain prominence, but it will not replace human interaction. Therefore, coexistence between the two is envisaged.

This study has several theoretical and practical implications. Firstly it makes a significant contribution that enriches existing academic literature on the importance of the real estate agent in a country such as Spain where it has been hardly studied. Secondly, a new model has been designed to measure the quality of real estate services, which is in-tended to be in line with the current situation of more digital and technological intermediation. It could be replicated in different contexts. Thirdly, in the business environment it can help to understand how customers assess the real estate agent, enabling companies to improve their levels of quality service.

Participation in this research was achieved without offering financial incentives, resulting in a sample of individuals who took part out of personal interest. We value their time and effort and we outline the importance of their contribution to advancing knowledge in this field.

This study has some limitations related to the sampling process. Since the survey was disseminated online and through social networks, older people who are not familiar with these applications may have found it more difficult to access them, so there could be a bias in the results in the age range. Similarly, snowball sampling may have led to a certain concentration of responses in the province of Valencia where the authors reside. It is recommended that more generalized results be obtained at the national level. Also, for future work, it would be of great value to go deeper into the customer who deals with online agencies by increasing the number of these participants.

Author contributions

J. C. A.-S: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Resources, Visualization, Writing – original draft preparation. E. N.-A: Conceptual-

ization, Investigation, Methodology, Project administration, Resources, Supervision, Writing – review & editing & translating.

Disclosure statement

The authors declare no conflicts of interest and there have been no funders.

References

Abis, M. (2009). La casa degli Italiani in tempi di crisi [The house of Italians in times of crisis]. *Micro & Macro Marketing*, *2*, 303–308.

Agboola, A. O., Jasper, O. R., & Zakari, A. L. (2021). Is the real estate profession under threat? Assessing the effect of the involvement of non-professionals in Nigeria real estate agency service provision. *Property Management*, *39*(4), 509–526. https://doi.org/10.1108/PM-02-2020-0013

Andersson, M., & Palm, P. (2022). Reflections and conclusions. In M. Andersson, P. Palm, H. Bohman, B. Balivet, & O. Akinsomi, (Eds.), *The Routledge companion to international housing markets* (pp. 263–68). Routledge. https://doi.org/10.1201/9781003130383-37

Anglin, P., & Arnott, R. (1999). Are brokers commission rates on home sales too high? A conceptual analysis. *Real Estate Economics*, *27*(4), 719–749. https://doi.org/10.1111/1540-6229.00790

Argibay, J. C. (2006). Técnicas psicométricas. Cuestiones de validez y confiabilidad [Psychometric techniques. Validity and reliability issues]. *Subjetividad y Procesos Cognitivos*, (8), 15–33. https://www.redalyc.org/articulo.oa?id=339630247002

Arnold, T. J., Palmatier, R. W., & Grewal, D. (2009). Understanding retail managers role in the sales of products and services. *Journal of Retailing*, *85*(2), 129–144. https://doi.org/10.1016/j.jretai.2008.09.006

Asensio-Soto, J. C. (2023). *Proptech: La digitalización de la intermediación inmobiliaria en España. Estudio comparativo entre el modelo online y el tradicional* [Proptech: The digitisation of real estate brokerage in Spain. Comparative study between the online and traditional models] [Doctoral dissertation, Universitat Politècnica de València]. https://riunet.upv.es/server/api/core/bitstreams/1122b06b-f434-493e-ab4f-5d373fec0705/content

Asensio-Soto, J. C., & Navarro Astor, E. (2022). Proptech: A qualitative analysis of online real estate brokerage agencies in Spain. *Intangible Capital*, *18*(3), 489–505. https://doi.org/10.3926/ic.2090

Banco de España. (2024). El mercado de la vivienda en España: Evolución reciente, riesgos y problemas de accesibilidad [The housing market in Spain: Recent developments, risks and accessibility issues]. *Informe Anual 2023*. https://doi.org/10.53479/36512

Barwick, P. J., & Wong, M. (2019). Competition in the real estate brokerage industry: A critical review. *Economic Studies at Brookings*, 1–34.

Baryla, E., & Ztanpano, L. (1995). Buyer search duration in the residential real estate market: The role of the real estate agent. *Journal of Real Estate Research*, *10*(1), 1–13. https://doi.org/10.1080/10835547.1995.12090769

Baryla, E., Zumpano, L., & Elder, H. (2000). An Investigation of buyer search in the residential real estate market under different market conditions. *Journal of Real Estate Research*, *20*(1–2), 75–92. https://doi.org/10.1080/10835547.2000.12091036

Baum, A., Saull, A., & Braesemann, F. (2020). *PropTech 2020: The future of real estate*. Saïd Business School, University of Oxford.

Benefield, J. D., Sirmans, C. S., & Sirmans, G. S. (2019). Observable agent effort and limits to innovation in residential real estate. *Journal of Real Estate Research*, *41*(1), 1–36. https://doi.org/10.1080/10835547.2019.12091517

Benites-Gambirazio, E. (2020). Working as a real estate agent. Bringing the clients in line with the market. *Journal of Cultural Economy*, *13*(2), 153–168. https://doi.org/10.1080/17530350.2019.1697954

Bernheim, B. D., & Meer, J. (2013). Do real estate brokers add value when listing services are unbundled? *Economic Inquiry*, *51*(2), 1166–1182. https://doi.org/10.1111/j.1465-7295.2012.00473.x

Boyd, D., & Chinyio, E. (2006). *Understanding the construction client*. Blackwell Publishing. https://doi.org/10.1002/9780470759561

Brinkmann, J. (2009). Putting ethics on the agenda for real estate agents. *Journal of Business Ethics*, *88*, 65–82. https://doi.org/10.1007/s10551-009-0099-8

Buxmann, P., & Gebauer, J. (1998). *Internet-based intermediaries – the case of the real estate market* [Conference presentation]. 6th European Conference on Information Systems (ECIS'98), Aix-en-Provence.

Caballé Fabra, G. (2021). *La intermediación inmobiliaria ante los nuevos retos de la vivienda. Derecho de la vivienda* [Real estate brokerage and the new housing challenges. Housing law]. Tirant lo Blanch.

Caballé Fabra, G. (2025). Housing professionals in Europe. Special attention to the Spanish case. *Journal of Property, Planning and Environmental Law*, *17*(2–3), 191–209. https://doi.org/10.1108/JPPEL-11-2024-0053

Choi, J., Kaul, K., & Goodman, L. (2019). *FinTech innovation in the home purchase and financing market*. Urban Institute, Housing Finance Policy Center. https://www.urban.org/research/publication/fintech-innovation-home-purchase-and-financing-market

Centro de Investigaciones Sociológicas. (2025). *Barómetro de julio 2025* (Estudio N. 3517) [July barometer 2025 (Study No. 3517)]. https://www.cis.es/en/surveys/barometro-de-julio-2025?cuestionario=17972&muestra=26300&pregunta=655366&variable=1083637&chartType=bar

Clotet, J., & Gallardo, H. (2018). *Personal shopper inmobiliario. El método Nexitum* (26). Securat.

Colectivo API. (2020). Entrevistando a Natalia Bueno Comas Presidenta del COAPI de Baleares [Interview with Natalia Bueno Comas, President of the Official Association of Real Estate Agents of the Balearic Islands]. *Revista trimestral del Consejo General de Colegios Oficiales de Agentes de la Propiedad Inmobiliaria de España*, *3*, 14–15.

Cupani, M. (2012). Análisis de ecuaciones estructurales: Conceptos, etapas de desarrollo y un ejemplo de aplicación [Structural equation modelling: Concepts, development stages and application example]. *Revista Tesis*, *2*, 186–199. https://rdu.unc.edu.ar/handle/11086/22039

Dabholkar, P. A., & Overby, J. W. (2021). Linking process and outcome to service quality and customer satisfaction evaluations: An investigation of real estate agent service. *International Journal of Service Industry Management*, *16*(1), 10–27. https://doi.org/10.1108/09564230510587131

Devaney, S., Livingstone, N., McAllister, P., & Nanda, A. (2017). Institutional convergence in real estate markets: A comparative study of brokerage models and transaction costs. *Journal of Real Estate Literature*, *25*(1), 169–188. https://doi.org/10.1080/10835547.2017.12090446

Elder, H., Zumpano, L., & Baryla, E. (2003). Buyer brokers: Do they make a difference? Their influence on selling price and search duration. *Real Estate Economics*, *8*, 337–362. https://doi.org/10.1111/1540-6229.00804

Engstrom, R., Hurst, N., & Berggren, B. (2023). Professionalization of the real estate agent occupation – a comparative study of Australia and Sweden. *Property Management*, *41*(1), 60–83. https://doi.org/10.1108/PM-11-2021-0102

Estrada, A (2024). *Situación actual del sector inmobiliario en España desde la perspectiva de la estabilidad financiera* [The current situation of the real estate sector in Spain from a financial stability perspective]. Real estate financing fórum, Dirección general de estabilidad financiera, regulación y resolución, Banco de España. https://www.bde.es/f/webbe/GAP/Secciones/SalaPrensa/IntervencionesPublicas/DirectoresGenerales/regula/ficheros/IIPP-2024-03-21-estrada-es-or.pdf

European Association of Real Estate Professions. (2024). *The regulatory situation of real estate professions across Europe.* https://cepi.eu/en/news

Fernandez-Perez, A., Gómez-Puig, M., & Sosvilla Rivero, S. J. (2025). *El clasico of housing*: Bubbles in Madrid and Barcelona's real estate markets (Working Paper No. 0325). Instituto Complutense de Análisis Económico. https://doi.org/10.2139/ssrn.5239332

Frew, J. R., & Jud, G. D. (1986). The value of a real estate franchise. *Real Estate Economics*, *14*(2), 374–383. https://doi.org/10.1111/1540-6229.00392

García Valdecasas, F. J. (1988). *La mediación inmobiliaria* [Real estate brokerage]. Aranzadi.

Gardès, N. (2019). Digitalisation du secteur immobilier: La proposition de valeur phygitale au cœur de la performance. *La Revue des Sciences de Gestion*, (299–300), 133–146. https://doi.org/10.3917/rsg.299.0133

Goodchild, B., & Ferrari, E. (2021). Intermediaries and mediators: An actor-network understanding of online property platforms. *Housing Studies*, *39*(1), 102–123. https://doi.org/10.1080/02673037.2021.2015297

Grandori, A. (1999). *Organizzazione e comportamento economico* [Organisation and economic behaviour]. Il Mulino.

Håkansson, P. G., & Palm, P. (2022). A theoretical framework for housing conveyances on national markets. In M. Andersson, P. Palm, H. Bohman, B. Balivet, & O. Akinsomi (Eds.), *The Routledge companion to international housing markets* (pp. 7–13). Routledge. https://doi.org/10.1201/9781003130383-3

Hanelt, A., Bohnsack, R., Marz, D., & Antunes Marante, C. (2021). A systematic review of the literature on digital transformation: Insights and implications for strategy and organizational change. *Journal of Management Studies*, *58*(5), 1159–1197. https://doi.org/10.1111/joms.12639

Hendel, I., Nevo, A., & Ortalo-Magné, F. (2009). The relative performance of real estate marketing platforms: MLS versus FSBOMadison.com. *American Economic Review*, *99*(5), 1878–1898. https://doi.org/10.1257/aer.99.5.1878

Instituto Nacional de Estadística. (2025). *Living conditions survey 2024*. https://www.ine.es/dyngs/Prensa/en/ECV2024.htm

IPSOS-London Economics-Deloitte consortium. (2018, October). *Consumer market study on the functioning of the real estate services for consumers in the European Union.*

Jingryd, O., & Palm, P. (2022). Sweden. In M. Andersson, P. Palm, H. Bohman, B. Balivet, & O. Akinsomi (Eds.), *The Routledge companion to international housing markets* (pp. 151–159). Routledge. https://doi.org/10.1201/9781003130383-23

Jud, G. D., Winkler, D. T., & Sirmans, S. G. (2002). The impact of information technology on real estate licensee income. *Journal of Real Estate Practice and Education*, *5*(1), 1–16. https://doi.org/10.1080/10835547.2002.12091580

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). Guilford.

Larceneux, F., Lefebvre, T., & Simon, A., (2015). What added value do estate agents offer compared to FSBO transactions? Explanation from a perceived advantages model. *Journal of Housing Economics*, *29*, 72–82. https://doi.org/10.1016/j.jhe.2015.06.002

Levitt, S., & Syverson, C. (2008). Market distortions when agents are better informed: The value of information in real estate transactions. *The Review of Economics and Statistics*, *90*(4), 599–611. https://doi.org/10.1162/rest.90.4.599

Levitt, T. (1980). Marketing success through differentiation – of anything. *Harvard Business Review*.

Lim, J. (2000). An experimental investigation of the impact of NSS and proximity on negotiation outcomes. *Behavior and Information Technology*, *19*(5), 329–338. https://doi.org/10.1080/014492900750000036

López-Arredondo, L. P., Perez, C. B., Castro, L. A., & Rodriguez, L. F. (2019). Estudio sobre la percepción de los factores involucrados en la estimación de precios de viviendas: El caso de Cajeme [Study on the perception of factors involved in housing price estimation: The case of Cajeme]. *Información Tecnológica*, *30*(2), 11–24. https://doi.org/10.4067/S0718-07642019000200011

Marshall, J. G. (2024). *Strategies for real estate brokers to compete in an increasingly technology-driven market*: Exploring the value of information search and transaction management [MSc Thesis, University of Cape Town]. https://open.uct.ac.za/items/6d660506-309f-40c3-a542-d670341b8897

Mattarocci, G., & Scimone, X. (2022). *The new era of real estate*: An analysis of business models in the Proptech industry. Palgrave Macmillan. https://doi.org/10.1007/978-3-031-16731-7

McKenzie, D., & Betts, R. M. (2010). *Essentials of real estate economics* (5th ed.). Thompson Higher Education.

Milgrom, P., & Roberts, J. (1994). *Economia, organizzazione e management* [Economics, organisation and management]. Il Mulino.

Mira, S. (2019). *Digitalización y tendencias del sector inmobiliario* [Real estate digitalisation and trends] [Tesis de doctorado, Universidad Politécnica de Catalunya]. https://upcommons.upc.edu/server/api/core/bitstreams/dcdaef17-cc03-4620-b5dc-10f520da23c9/content

Moretti, E., & Hsieh, C. (2003). Can free entry be inefficient? Fixed commissions and social waste in the real estate industry. *Journal of Political Economy*, *111*(5), 1076–1122. https://doi.org/10.1086/376953

Moreu Carbonell, E. (2023). El limbo de la intermediación inmobiliaria en la legislación sobre vivienda [The real estate brokerage limbo in housing legislation]. *Revista De Derecho Urbanístico Y Medio Ambiente*, *57*(365–366), 175–218. https://revista.proeditio.com/rdu/article/view/6572

Myers, M. D., & Crowston, K. (2004). Will real estate agents survive? *University of Auckland Business Review*, *6*, 1–13.

Nelson, S., & Nelson, T. (1995). RESERV: An instrument for measuring real estate brokerage service quality. *Journal of Real Estate Research*, *10*(1), 99–113. https://doi.org/10.1080/10835547.1995.12090768

Palm, P., Balivet, B., Jingryd, O., & Sidoli, J. (2022). A conceptual model of conveyances on the housing market. In M. Andersson, P. Palm, H. Bohman, B. Balivet, & O. Akinsomi (Eds.), *The Routledge companion to international housing markets* (pp. 14–21). Routledge. https://doi.org/10.1201/9781003130383-4

Palm, R., & Bolsen, T. (2022). The role of the real estate agent. In *Coastal Research Library*: Vol. 37. *Housing market response to sea-level rise in Florida* (pp. 53–65). Springer. https://doi.org/10.1007/978-3-030-88435-2_5

Roulac, S. (2019). The industrial revolution remembers. *Journal of Property Investment & Finance*, *37*(4), 380–397. https://doi.org/10.1108/JPIF-02-2019-0023

Saiz, A. (2020). Bricks, mortar, and Proptech: The economics of IT in brokerage, space utilization and commercial real estate finance. *Journal of Property Investment and Finance*, *38*(4), 327–347. https://doi.org/10.1108/JPIF-10-2019-0139

Sánchez Jordán, E. (2022). Spain. In M. Andersson, P. Palm, H. Bohman, B. Balivet, & O. Akinsomi (Eds.), *The Routledge companion to international housing markets* (pp. 80–87). Routledge. https://doi.org/10.1201/9781003130383-14

Santore, R., & Bruce, D. (2002). *Downward commission rate rigidity in the real estate services industry* (Working Paper). University of Tennessee.

Seiler, V. L., & Reisenwitz, T. H. (2010). A review of service quality research in real estate. *Journal of Real Estate Literature*, *18*(2), 225–238. https://doi.org/10.1080/10835547.2010.12090274

Seiler, V. L., Seiler, M., Winkler, D., Newell, G., & Webb, J. (2008). Service quality dimensions in residential real estate brokerage. *Journal of Housing Research*, *17*(2), 101–117. https://doi.org/10.1080/10835547.2008.12091995

Shaw, J. (2018). Platform real estate: Theory and practice of new urban real estate markets. *Urban Geography*, *41*(8), 1037–1064. https://doi.org/10.1080/02723638.2018.1524653

Siniak, N., Kauko, T., Shavrov, S., & Marina, N. (2020). The impact of proptech on real estate industry growth. *IOP Conference Series: Materials Science and Engineering*, *869*(6), Article 062041. https://doi.org/10.1088/1757-899X/869/6/062041

Sirmans, C. F., & Turnbull, G. K. (1997). Brokerage pricing under competition. *Journal of Urban Economics*, *41*(1), 102–117. https://doi.org/10.1006/juec.1996.1095

St George, J., & Sidoli, J. (2022). The English and Welsh housing market. In M. Andersson, P. Palm, H. Bohman, B. Balivet, & O. Akinsomi (Eds.), *The Routledge companion to international housing markets* (pp. 180–188). Routledge. https://doi.org/10.1201/9781003130383-27

Stamsø, M. A. (2015). Selling a house and the decision to use a real estate broker in Norway. *Property Management*, *33*(2), 173–186. https://doi.org/10.1108/PM-01-2014-0006

Swanson, C., & Gurke, D. (2017). *Buyer broker real estate rebate system* (U.S. Patent Application No. 15/085, 635).

Talmatchi, M. (2020). *The implications of Proptech on the real estate brokerage. The case study of Dubai, United Arab Emirates*. MSc Real Estate Investment and Finance from Heriot-Watt University.

Thomas, P., & Wiejak-Roy, G. A. (2025). Agents' perceptions of the potential use of virtual reality in sales of residential real estate. In *Applications of immersive technology in architecture,*

engineering and construction (pp. 227–236). Routledge. https://doi.org/10.1201/9781032662909-22

Trio, O., & Iazzi, A. (2016). Trust and distrust in the relationships between construction firms and real estate agents: Empirical evidence from Italy. *International Journal of Technology Marketing*, *11*(4), 37–47. https://doi.org/10.5539/ijbm.v11n4p37

Urrestarazu Capellán, R., Sánchez Ollero, J. L., & García Pozo, A. (2021). The influence of the real estate investment trust in the real estate sector on the Costa del Sol. *European Research on Management and Business Economics*, *27*(1), Article 100133. https://doi.org/10.1016/j.iedeen.2020.10.003

Wigand, R. T. (2020). Whatever happened to disintermediation. *Electronic Markets*, *30*(1), 39–47. https://doi.org/10.1007/S12525-019-00389-0

Wilcox, J., & Forsyth, J. (2022). *Real estate: The basics*. Routledge. https://doi.org/10.1201/9781003155256

Xiong, C., Cheung, K. S., Levy, D. S., & Allen, M. (2022). The effect of virtual reality on the marketing of residential property. *Housing Studies*, *39*(3), 671–694. https://doi.org/10.1080/02673037.2022.2074971

Yáñez, R. (2013). La intermediación inmobiliaria [Real estate brokerage]. *Revista Crítica de Derecho Inmobiliario*, *737*, 1583–1623. https://www.revistacritica.es/rcdi/article/view/1817

Yang, S., & Yavas, A. (1995). Bigger is not better. Brokerage and time on the market. *Journal of Real Estate Research*, *10*(1), 23–33, https://doi.org/10.1080/10835547.1995.12090770

Yavas, A. (2007). Introduction: Real estate brokerage. *The Journal of Real Estate Finance and Economics,* *35*(1), 1–5. https://doi.org/10.1007/s11146-007-9030-1

Yinger, J. (1981). A search model of real estate broker behavior. *The American Economic Review*, *71*(4), 591–605. https://www.jstor.org/stable/1806183

Zhang, X., Lin, Z., Zhang, Y., Zheng, Y., & Zhang, J. (2021). Online property brokerage platform and prices of second-hand houses: Evidence from Lianjia's entry. *Electronic Commerce Research and Applications*, *50*, Article 101104. https://doi.org/10.1016/j.elerap.2021.101104

Zietz, E., & Sirmans, S. (2020). Review articles: Real estate brokerage research in the new millennium. *Journal of Real Estate Literature*, *19*(1), 3–40. https://doi.org/10.1080/10835547.2011.12090284

Zumpano, L. V., Elder, H. W., & Baryla, E. A. (1996). Buying a house and the decision to use a real estate broker. *The Journal of Real Estate Finance and Economics*, *13*(2),169–181. https://doi.org/10.1007/BF00154054

Appendix

Real estate brokerage survey questionnaire.

Initial filter

Item	Question	Response options
F1	Have you been involved in buying or selling a property in the last 4 years, even if the process was not completed?	1. Yes 2. No (*end of survey*)
F2	Which of the following situations applies to you?	1. Currently buying 2. Currently selling 3. Have sold 4. Have bought 5. Attempted to buy, not finalized 6. Attempted to sell, not finalized

Item	Question	Response options
F3	Have you used or are you using the services of a real estate agency?	1. Yes 2. No (*go to classification block*)
F4	Do you know any real estate agencies that operate entirely online?	1. Yes 2. No
F5	Which of these agencies do you know? (*multiple selection*)	1. Housfy 2. Housell 3. Deplace 4. Prontopiso 5. Melibero 6. Propertista 7. Cliventa 8. None
F6	What type of agency have you worked with?	1. Traditional (Sections 1 and 2) 2. Online (Sections 1, 2, and 3)

Section 1: Perception of real estate brokerage
(*Likert scale*: 1 = *Strongly disagree*; 5 = *Strongly agree*)

Item	Statement
S1_1	Working with the agency has been very helpful in carrying out the transaction
S1_2	The agency's work has been effective
S1_3	It was convenient to work with the agency
S1_4	Dealing with agency staff has been satisfactory
S1_5	The information I received was truthful
S1_6	The information provided was clear
S1_7	The information was useful
S1_8	The agency's fee was fair considering the service provided
S1_9	I always knew how much the transaction would cost
S1_10	The agreed payment method inspired confidence
S1_11	Working with this agency gave me peace of mind
S1_12	The agency handled everything, so I didn't have to worry
S1_13	I dedicated little time to the transaction
S1_14	The agency took care of everything
S1_15	The relationship with the agency was very smooth
S1_16	The agency adapted to my needs
S1_17	It gives me confidence that the agency has physical offices
S1_18	Overall, I am very satisfied with the agency
S1_19	My general evaluation of the agency is very positive
S1_20	Would you recommend the agency to a friend? (*Scale*: 0 = *Definitely not*; 10 = *Definitely yes*)

Section 2: Evaluation of the real estate agent
(*Likert scale*: 1 = *Strongly disagree*; 5 = *Strongly agree*)

Item	Statement
S2_1	The agent's treatment was appropriate
S2_2	The agent acted professionally
S2_3	The agent was qualified for the job
S2_4	The agent gave me appropriate advice throughout
S2_5	The agent prioritized my interests over the agency's
S2_6	The agent's presence during property visits was helpful
S2_7	The agent's presence gave me confidence
S2_8	Property visits with the agent helped the transaction go through
S2_9	Visiting with the agent made me feel more at ease during the process
S2_10	Property visits with the agent made decision-making easier
S2_11	The agent demonstrated proper training for the job
S2_12	The agent helped me complete the transaction
S2_13	The agent helped me with paperwork and documentation
S2_14	The real estate agent seems dispensable
S2_15	I prefer to visit the properties myself to save money
S2_16	Overall, I am very satisfied with the agent who supported me during the whole process

Section 3: Perception of online agencies
(*Likert scale*: 1 = *Strongly disagree*; 5 = *Strongly agree*)

Item	Statement
S3_1	The online agency gives me confidence
S3_2	The online agency saves me time on meetings, travel, and visits
S3_3	Accessing services via a device is more convenient than visiting an office
S3_4	Managing and negotiating documents online is faster than doing so in person

Open question

Item	Question
OQ_1	Would you add anything about the agency or agent that wasn't covered in the previous points?

Classification block

Item	Variable	Options
C1	Age	Open response
C2	Gender	1. Female 2. Male 3. Other
C3	Educational level	1. No formal education 2. Primary 3. Secondary 4. Undergraduate 5. Master/PhD
C4	Occupation	1. Student 2. Self-employed 3. Employee 4. Unemployed 5. Retired/Pensioner
C5	Commission paid to agency	1. I didn't pay the agency 2. Less than 1% 3. 1% to 2% 4. 2.1% to 3% 5. More than 3% 6. Fixed amount
C6	Province	Open response
C7	City	Open response
C8	Monthly income (optional)	1. Less than €600 2. €600–1000 3. €1001–2000 4. €2001–3000 5. More than €3000