MARKET FOR MOBILE APPLICATIONS AIMED AT YOUNG PEOPLE: APARTMENT SEARCH SECTOR IN SPAIN

MERCADO DE APLICACIONES MÓVILES DIRIGIDAS A JÓVENES: SECTOR DE BÚSQUEDA DE PISO EN ESPAÑA

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ABSTRACT

This research aims to examine the market of mobile applications aimed at finding flat and roommate within the youth and student market. The methods used by real estate applications are analyzed, when looking for a flat and roommate. The study starts from an exploratory review of the existing market. As a sample of study, the most downloaded applications in the App Store and Google Play have been selected: Badi, Idealista, Milanuncios, Habitaclia, Pisos.com, Fotocasa, Roomster, Indomio, Airbnb, Spareroom or Erasmusu. Inquiring into the knowledge that the young target audience has about this type of applications, their frequency of use and preferences. The exploratory methodology used is a survey of 10 open and closed questions made to 87 young men and women university students. As the most relevant results, we have been able to observe that the environment that surrounds the housing rental sector is characterized by being a broad and competent but not very standardized market. The responses indicate that young people are looking for specialized applications that meet the needs and lifestyle of this sector of users. More than half admit ignorance or mistrust. This allows us to conclude that there is little penetration in the youth market. It is also pointed out that social networks are a tool widely used by this public therefore,

flat search applications must be integrated into them to integrate these public into their user portfolio.

Keywords: Mobile Application (App), Apartment rental market, young university students, Adobe XD, Adobe Illustrator, Prototype.

RESUMEN

Esta investigación tiene por fin, examinar el mercado de aplicaciones móviles dirigidas a la búsqueda de piso y compañero de piso dentro del mercado de jóvenes y estudiantes. Se analizan los métodos utilizados por las aplicaciones inmobiliarias, a la hora de buscar piso y compañero de piso. El estudio parte una revisión exploratoria de mercado existente. Como muestra de estudio se han seleccionado las aplicaciones más descargadas en App Store y Google Play: Badi, Idealista, Milanuncios, Habitaclia, Pisos.com, Fotocasa, Roomster, Indomio, Airbnb, Spareroom o Erasmusu. Indagando en el conocimiento que tiene el público objetivo joven sobre este tipo de aplicaciones, su frecuencia de uso y preferencias. La metodología exploratoria empleada es una encuesta de 10 preguntas abiertas y cerradas realizadas a 87 jóvenes, hombres y mujeres universitarios. Como resultados más relevantes, hemos podido observar que, el entorno que rodea al sector de alquiler de viviendas se caracteriza por ser un mercado amplio y competente pero poco estandarizado. Las respuestas indican que, los jóvenes buscan aplicaciones especializadas que atiendan a necesidades y estilo de vida de este sector de usuarios. Más de la mitad reconocen desconocimiento o desconfianza. Esto nos permite concluir que existe poca penetración en el mercado joven. También se señala que las redes sociales son una herramienta muy utilizada por este público, por lo tanto, las aplicaciones de búsqueda de piso deben integrarse en ellas para integrar a estos públicos en su cartera de usuarios.

Palabras clave: Aplicación móvil (App), Mercado de alquiler de pisos, Jóvenes universitarios, Adobe XD, Adobe Illustrator, Prototipo.

Mercado das aplicações móveis destinadas aos jovens: o sector da procura de apartamento em Espanha

RESUMO

Esta investigação tem por objetivo examinar o mercado das aplicações móveis destinadas à procura de apartamentos e de companheiros de quarto no mercado dos jovens e dos estudantes. Analisa os métodos utilizados pelas aplicações imobiliárias para procurar apartamentos e companheiros de quarto. O estudo baseia-se numa análise exploratória do mercado existente. Como amostra de estudo, foram seleccionadas as aplicações mais descarregadas na App Store e no Google Play: Badi, Idealista, Milanuncios, Habitaclia, Pisos.com, Fotocasa, Roomster, Indomio, Airbnb, Spareroom e Erasmusu. Inquirir sobre o conhecimento que o público-alvo jovem tem sobre este tipo de aplicações, a sua frequência de utilização e preferências. A metodologia exploratória utilizada é um inquérito com 10 perguntas abertas e fechadas a 87 jovens universitários de ambos os sexos. Como resultados mais relevantes, pudemos observar que o ambiente em torno do sector do arrendamento de habitações se caracteriza por ser um mercado grande e competente, mas pouco normalizado. As

respostas indicam que os jovens procuram aplicações especializadas que respondam às necessidades e aos estilos de vida deste sector de utilizadores. Mais de metade reconhece o desconhecimento ou a desconfiança. Isto leva a concluir que a penetração no mercado dos jovens é reduzida. É também salientado que as redes sociais são uma ferramenta muito utilizada por este público, pelo que as aplicações de pesquisa plana devem ser integradas nas mesmas, a fim de integrar este público na sua base de utilizadores.

Palavras chave: Aplicação móvel (App), Mercado de aluguer de apartamentos, Estudantes universitários, Adobe XD, Adobe Illustrator, Protótipo.

1. INTRODUCTION

In July 2008, Apple launched the App Store, a service that allowed users to search for and download all sorts of applications. A month later, Google released Android Market, now known as Google Play (Pal Kapoor and Vij, 2020). These are two of the most widely used repositories for installing mobile applications for mobile devices. Since then, an infinite market of possibilities was opened up, as these platforms not only served an organizational or management function (Bowden and Mirzaei, 2021) but gradually became one of the most popular entertainment tools.

As of today, in the real estate rental sector, there exists a wide range of applications aimed at meeting accommodation search needs (Bergan et al., 2021). However, these applications have not focused on targeting as demanding an audience as young people and students (Ilstedt and Sjöman, 2022), by bringing together functionalities that best suit this type of audience.

In the current market, there is a wide variety of applications aimed at accommodation search. We have observed that none of them are as widespread or have gained enough fame to become the leader. Buying and selling apps like Wallapop and Westwing have covered the market, while others like Fotocasa have specialized in the real estate sector (Coll-Rubio and Micó, 2019). However, the market lacks an extensive catalog of applications focused on shared housing searches or finding roommates, especially for young people with limited financial resources. This is why it's common to see advertisements or posts from users on social media offering or seeking shared apartments or roommates, sharing such content on platforms like Instagram or Twitter to connect with like-minded individuals (Rebollo-Bueno, 2019), who likely have similar needs.

1.1. Political-legal factors

University students have preferences when it comes to renting accommodation, either by renting an entire property or by renting a room (Pié-Ninot and Vilanova-Claret, 2019). The choice between these options will impact the establishment of the contract and the inclusion or exclusion of certain rights, whether you are the tenant or the landlord.

Room rental involves a temporary rental of a single room within a dwelling, with the right to shared use of common areas such as the living room, kitchen, bathrooms, etc.

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Contracts for room rentals are typically arranged on a monthly or quarterly basis, and for students, often aligned with the academic year. The rental of rooms is regulated by the Civil Code (Article 1554 and subsequent articles), distinguishing it from the rental of entire properties, which is regulated by the Urban Leases Law (LAU). Consequently, the duration of a room rental contract is determined solely by the terms of the contract, and therefore, the tenant does not have a right to mandatory renewal. Another difference is that, following the Civil Code, if the property is sold, the room rental contract can be terminated, and the tenant does not possess a preferential right to the property. In these respects, the property owner has more control over the property's availability (Duelo, 2021). Usually, this type of rental occurs when the landlord resides in the same property, although this is not always the case. The contract should include, at a minimum, details such as the specific room to be occupied, the start and end dates, the rent amount, and the payment method.

Seasonal rental: In this case, the tenant has more protection than if it were a room rental. This type of rental is governed by the Urban Leases Law as a use distinct from regular housing (Nägele and Yannone, 2021). The tenant uses the property for a temporary or transient housing need, such as for educational purposes, work, etc., and as a result, there is no minimum legal duration, as there would be for a regular residence, which is typically 5 years. This type of rental does not enjoy tax benefits for the landlord in terms of Income Tax. The contract for a seasonal rental must include all relevant rules and clauses and is more comprehensive than that of a room rental.

Another legal and important aspect to consider in the creation and publication of a mobile application is related to the duty of information. The processing of user data entails the obligation to properly inform users about how, which data, and for what purposes their data will be processed (Doménech and Tudela, 2018).

According to the Spanish Data Protection Agency (AEPD), there are specific guidelines regarding the duty of information that must be followed when publishing a mobile application. Some of these guidelines are as follows:

Here is the translation of the provided guidelines:

1. The information provided to users about the processing of their personal data must comply with the requirements established in Articles 13 and 14 of the General Data Protection Regulation (GDPR) and Article 11 of the Organic Law on Data Protection and Digital Rights Guarantee (LOPDGDD).

2. This information, in the form of a privacy policy, should be available both within the application and in the app store, allowing users to access it before installation or during its use.

3. Access to this information should be easily achievable within the application, requiring a limited number of interactions, preferably a maximum of two clicks.

4. The privacy policy should provide the user with all the information about the processing of personal data that the application intends to carry out: which data and

treatments are necessary for the basic functioning of the application, which is optional, and all relevant information about data processing. The policy should also indicate the permissions that the application may request: it must inform whether the application will process data only when actively used by the user in the foreground or if it needs access even when running in the background. Lastly, information about how the user can manage the permissions granted to the application should be provided, enabling them to decide at any time whether to grant or revoke such permissions and under what conditions they grant them.

5. When obtaining consent for the processing of personal data, such consent must be requested selectively and independently for different treatments and purposes.

6. Information about users' rights regarding data protection, along with mechanisms and procedures to effectively exercise these rights, must be provided.

7. If applicable, specific and detailed information about the existence of international data transfers must be provided.

If data controllers who commission the development, production, and/or operation of applications to third parties with access to personal data must ensure compliance with the requirements established in the GDPR for each of the parties. The following requirements are noteworthy:

8. The processing must be governed by a contract or legal relationship that establishes the purpose, duration, nature, purpose of processing, type of personal data, categories of data subjects, and the responsibilities and rights of the data controller.

9. Avoid the dissemination of personal data to analytics and advertising services from the moment the application starts, without the user having been able to use or adjust anything themselves.

10. Prevent the sharing of personal data with unspecified or undisclosed-recipients in the privacy policy, especially if they have the role of data controllers or joint data controllers.

11. Avoid international data transfers that are not disclosed in the privacy policy.

12. Using advanced methods for encrypting communications provides an additional guarantee for user privacy, which should be considered depending on the characteristics of the data processing.

Directive (EU) 2016/2102 of the European Parliament and of the Council, dated October 26, 2016 (European Parliament and Council, 2016), on the accessibility of websites and mobile applications of public sector bodies aims, to enhance the functioning of the internal market, to harmonize the legal, regulatory, and administrative provisions of the Member States regarding accessibility requirements. Accessibility is understood as a set of principles and techniques that must be adhered to when designing, building, maintaining, and updating websites and mobile applications.

1.2. Economic factors

The rate of young people's emancipation between the ages of 16 and 34 stands at around 47% (Echaves and Martínez, 2021). However, we see that being employed is a decisive factor in this increase, as it raises the possibility of emancipation by 30 points. Renting an apartment for students nowadays has become a profitable option for various reasons: firstly, rents are not excessively high, and it is a way to ensure full occupancy of the property. Additionally, the tenant profile, often lacking income or having limited income, is typically backed by their parents, offering security and payment guarantees. This allows the landlord the possibility of securing a safe rental arrangement (Fenoll and Ballesteros, 2017).

In this type of rental arrangement, there is usually a significant turnover because, in most cases, the tenant stays in a property for at least the duration of the academic year. However, if communication between universities and word-of-mouth among tenants is promoted well due to their satisfaction, it could lead to regular rentals.

The trend of the last three decades shows a gradual increase in the share of residential rentals in Spanish households, from 19.4% in 2005 to 23.9% in 2018. The increase in the proportion of households living in rental housing intensified after 2013, focusing on the market-priced rental segment, which was 14.8% in 2018, compared to 9.5% in 2005 (López-Rodríguez and Matea-Rosa, 2019). Owners who decide to rent their properties to students must choose whether they want to rent them by individual rooms or the entire property.

1.3. Sociocultural factors

According to data and figures from the Spanish University System (Ministry of Education and Vocational Training, 2022), during the 2021-2022 academic year, the total number of enrolled students in Spanish universities was 1,679,581. Of these, 80% were pursuing bachelor's degrees, 15% were enrolled in master's programs, and the remaining 5% were in doctoral programs. The net enrollment rate in Higher Education, which measures the percentage of the population between 18 and 24 years old enrolled in bachelor's or master's programs, stands at 32.0%. In other words, approximately one out of every three individuals aged 18 to 24 is enrolled in a university degree program.

Regarding Erasmus-related data, Spain hosts around 60,000 Erasmus students every year, with the most preferred destinations being Barcelona, Madrid, Valencia, and Seville (Docampo et al., 2021). This indicates a demand for at least 30,000 temporary housing rentals for nearly a year. This choice is mainly influenced by the climate, way of life, and affordable cost, especially for students from northern countries with higher living expenses. Spain is accessible in terms of accommodation, food, transportation, and service costs. As for students departing on Erasmus exchanges to other countries, in 2021, there were 40,622 mobility opportunities. Italy was the preferred destination with 9,331 participants, as reported by Alfonso Gentil Álvarez-Ossorio, Director of the Spanish Service for the Internationalization of Education (SEPIE) at the Ministry of Universities (EUROPA PRESS, 2021).

1.4. Technological factors

Currently, mobile devices combine resources and tools that allow users not only to make phone calls but also to manage their time, information, movement, and interact continuously with their environment through sensors such as the camera, video transmission, touch screens, and motion sensors. All of these features make them powerful and versatile tools that can be used to assist in various educational activities (Gómez-Nieto, 2016).

Thanks to the technological revolution, 67.9% of Spanish households have internet access, of which 98.23% have broadband connections. These figures confirm a positive evaluation of this variable (Camblor-Jameson, 2019).

According to a study on the general landscape of mobile app usage (We Are Social and Hootsuite, 2021), we can learn specific data about the Spanish market and the most downloaded apps. Between January and December 2021, a total of 1.37 billion applications were downloaded in Spain, a 6% decrease compared to the previous year. Regarding annual spending on transactions in mobile apps, it amounted to 784 million dollars, a 12% year-on-year increase.

Figure 1
Most downloaded app in Spain.

Source: We are Social and Hootsuite. General overview of mobile app usage in Spain (2021).

2. OBJECTIVES

The purpose of this research is to examine the market of mobile applications targeted at the search for housing and roommates for young people and students. It also aims to analyze whether these applications cater to young audiences and their specific needs: customizing the design and providing predictable navigation for comfortable and efficient use of the application.

Among the more specific and main objectives are:

- Identify the methods used when searching for housing and roommates.

- Understand the level of awareness regarding applications designed for this activity, their frequency of use, and preferences.

- Analyze the degree of importance of certain aspects when searching for housing and

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roommates.

3. METHODOLOGY

3.1. Work process and techniques used

Initially, before conducting the survey, the process begins with the search for secondary information, including data about competitors and the environment, through an exploratory review of the existing market.

The methodology employed is a quantitative survey technique, characterized by a set of 10 open and closed questions.

The target population consists of university students, both males and females. The final sample size is 87 individuals.

The design of the exploratory research was carried out through an electronic and semi-closed questionnaire, created and distributed using the Google Forms tool.

The questionnaire was administered electronically using Google Forms from May 18 to May 23, 2022. It consists of 8 opinion and factual questions, including 2 semi-closed questions, 1 open-ended question, and 5 completely closed questions. Additionally, two statistical questions about the respondents' gender and age were included to detect differences in their responses regarding housing or roommate search.

An effort was made to create a concise questionnaire, primarily composed of closed questions for easy quantification.

The response scales include dichotomous, single, and multiple responses, as well as five and six-point scales for questions about balanced and imbalanced information and drivers, respectively.

Table 1. *Types of questions asked in the survey.*

Question	Type	Information	Answer
1	Intention	Search method.	Semi-closed multiple-choice question Multiple-choice response
2	Fact	Use of the App	Dichotomous based on variable V1.
3	Open	App used and reasons for use and non-use.	Single-choice multiple-response question Forced choice
4	Intention	Type of app	Single-choice multiple-response question.
5	Fact	Advertisement recall.	Single-choice multiple-response question.
6	Opinion	Driver´s importance	Balanced 5-point scale.

7	Assisted awareness.	App awareness.	Semi-closed multiple-choice.
8	Opinion	Information importance	Balanced forced 6-point scale.
9	Fact	Age	Forced-choice single-response multiple-choice question.
10	Fact	Gender	Forced-choice single-response multiple-choice question.

Source: Author's own work.

3.2. Description of the chosen sample

The research, focused on the application, aims to connect individuals searching for housing, roommates, rooms, or studios with those offering these properties or advertising as roommates. Therefore, there are two main target audiences for the application: those who provide and those who demand:

On one hand, the primary target audience consists of young people and students aged 18 to 30 with similar academic or work situations, but above all, a similar lifestyle. Some examples of profiles include:

- Young individuals starting higher education, professional training, or undergraduate degrees in other cities (even in the same city) and needing to share accommodation.

- Young individuals who have recently completed higher education or undergraduate degrees and are in search of employment or already working.

- Students planning to participate in an ERASMUS exchange (European Community Action Scheme for the Mobility of University Students) or SICUE exchange (Exchange System between Spanish University Centers).

4. RESULTS

Next, a highlighted market analysis in the rental and real estate sector will be presented. They will be compared based on their characteristics and offerings, an evaluation of their design, the target audience for the business, the platforms they are available on, and the number of downloads they have.

4.1. Competition analysis

Badi is characterized by helping you search for an apartment or room. It allows you to customize this search with numerous filter options: location, moving date, length of stay, type of accommodation, etc. It has a modern, youthful design and a predictable and comfortable interface. It presents cool colors: dark blue, light blue, and green. Its target audience is centered on individuals aged 20 to 40 with a low to medium budget.

Idealista allows the search for properties for sale or rent: apartments or houses, and also the search for shared apartments or tenants. The design is less polished but professional. Colors include cool and warm tones: light green and purple. It is directed

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at a broad audience with all kinds of budgets, from shared apartments to property purchases.

Milanuncios is characterized by allowing the posting of ads for all types of sales, rentals, etc. It's one of the oldest in the sector. Clean, professional, and predictable design. Colors are cool: green. It is aimed at all types of audiences due to its numerous functions and options.

Habitaclia allows the search for properties for sale or rent: apartment or house. Modern, clean, and professional design. Warm colors of orange. It is directed at audiences with greater economic independence, with purchasing power for property acquisition.

Erasmusu allows users to post ads about what they are looking for and find apartments or rooms in numerous countries. The design is simple and not very polished. Colors are cool: light blue. It is aimed at students going on Erasmus.

Pisos.com focuses on renting or selling apartments, houses, and flats. Modern, clean, and professional design. Colors are cool: dark blue and light blue. It is aimed at audiences with greater economic independence, with purchasing power for property acquisition.

Fotocasa allows the search for all types of properties for sale or rent: apartments, houses, flats, rooms, offices, garages, storage rooms, and plots. Additionally, users can make video calls between interested parties and landlords to conduct guided tours. Modern, clean, and professional design. Colors are cool: dark blue and turquoise. It is directed at audiences with greater economic independence, with purchasing power for property acquisition.

Roomster stands out for its wide operating range as it is available in 192 countries and 18 different languages. It allows the search for roommates, rooms, entire housing, and tenants. It also allows obtaining an account identification. Its design is simple, youthful, and clean. Colors are cool: dark green. It is targeted at individuals aged 20 to 40 with medium to low purchasing power.

Indomio allows the search for properties for sale or rent: apartment or house. Clean and professional. Colors are cool: blue. It is directed at audiences with greater economic independence, prepared for property purchases.

Airbnb stands out for its wide operating range, also being available in various countries worldwide. It focuses more on the search for temporary housing geared towards leisure and vacation experiences. The interface is simple, youthful, professional, and clean, with warm colors. It is directed at all types of audiences due to its numerous functions, options, and economic dependence.

Spareroom is only available in the United Kingdom. It allows the search for housing, apartments, private rooms, and roommates. Clean and professional. Colors are cool: light and dark blue. It is targeted at audiences aged 20 to 40.

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Table 2. *Analysis of the apartment search app market.*

Nombre	Icono app	Ver-sión web	Valoración Media IOS (1)	Nº de reseñas IOS	Valoción Media Android	Nº de votos Android (2)	Descgas Android (2)
Badi		Logo-tipo	Si	4,6	13.304	4,6	21.362	+2
Idealista		Logo-tipo	Si	4,6	169.164	4,8	289.238	+10
Milanuncios		Logo-tipo	Si	4,6	228.853	4,7	189.849	+10
Habitaclia		Isolo-go	Si	3,7	1.533	3,9	11.032	+1
Pisos.com		Logo-tipo	Si	4,6	21.326	4,4	23.529	+1
Fotocasa		Logo-tipo	Si	4,5	103.150	4,6	131.624	+5
Roomster		Isotipo	Si	3,9	3.969	4,2	34.189	+1
Indomio		Isotipo	Si	4,5	1.028	4,8	129.152	+5
Airbnb		Isotipo	Si	4,7	41.011	4,5	1.325.496	+100
Spareroom		Isotipo	Si	4,6	1.090	4,5	16.977	+1
Erasmusu		Logo-tipo	Si	Solo disponible en versión web.				

¹ Valoración Media sobre 5 puntos en IOS (App Store) y Android (Google Play)
² Total de descargas Android (Google Play) expresadas en millones.

Source: Author's own work based on data extracted in July 2022 from Play.google.com and apps.apple.com.

It can be said that there are a few applications with the specific function of searching for roommates: Roomster, Idealista, Erasmusu (which is only available in web version), and finally, Spareroom, which operates exclusively in the UK. Regarding an approach towards the young audience and offering multiple search options, Badi and Idealista stand out, as they allow searching for rooms, shared apartments, or tenants. On the contrary, there is a large number of applications dedicated to posting rental or property sale ads that target a more adult audience.

4.2. Substitute channels

Three secondary channels used to locate roommates can be identified. Traditionally, Real Estate agencies, companies, or societies that are dedicated to managing, leasing, and selling properties. In other words, they encompass all types of agencies that cater to the needs of those seeking housing. The vast majority of them also operate through

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the web. There are also websites and businesses dedicated to apartment searching, but they are focused and specialized in the use of web services.

Social networks allow for quick advertisement posting where a problem is presented and directed to a nearby audience with a similar age range, lifestyle, and related needs. External Situation Diagnosis

An analysis of this market shows us that there is growing competition: more and more businesses are targeting this sector due to the high demand within society. There are increasingly more applications: it's difficult not to find an app dedicated to a specific function, hence, the few remaining needs are being met with new applications.

On the other hand, there is high demand: growth in the search for shared apartments to reduce housing and maintenance expenses. A trend towards specialization is observed; customers reward businesses for good customer service and personalized service offerings.

Dissemination is achieved through local maps featuring locations related to communal themes or through the convenience provided by mobile devices, such as instant messaging services or WhatsApp.

4.3. Survey Results

The questionnaire results regarding age indicate a clear majority with 94% between 18 and 30 years old, and the remaining 6% above 30 years old. These data are highly valuable as the predominant age range aligns with the research's target audience. According to the Reina Sofía Center on Adolescence and Youth, the young population is considered to be between 15 and 29 years old.

As for gender, there is a similar percentage of both sexes, with 51% identifying as male and 49% as female. Once again, these data are very useful due to the nearly perfect representation of both genders.

Below, you can find the results obtained based on the remaining 8 questions of the questionnaire:

Figure 2
Methods of searching for a flat/roommate (n=87).

|	
Utilizaría una App dedicada a ello	23,9%
Preguntaría en el centro donde voy a estudiar…	8,9%
Publicaría un anuncio en RR.SS. que uso…	25,6%
Preguntaría a conocidos (familia, amigos)	29,4%
Consultaría en inmobiliarias (presencialmente/online)	12,2%

Source: Author's own work.

The most prominent method would be asking acquaintances with 29.4%, followed closely by posting an ad on social media with 25.6% and using a dedicated App with

23.9%. Following in descending order of response rates, consulting real estate agencies would be at 12.2%, and as the last option, asking at the place of study would be at 8.9%. These results stand out for preferring options involving relationships with close people such as family and friends, and for utilizing a fast and targeted method like using an App.

Regarding the response related to the use of an App, the following results were obtained:

Figure 3
If yes, which App have you used? (n=39).
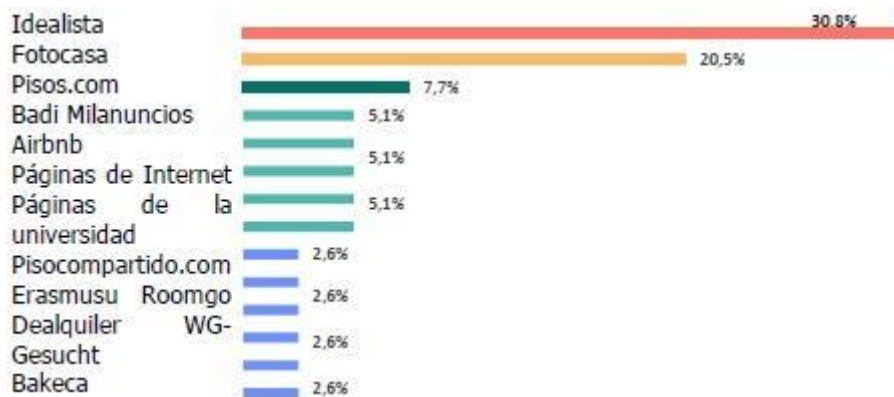
Source: Author's own work.

The most used applications have been Idealista and Fotocasa, followed by Pisos.com. The rest of the apps have hardly been used, so it is clear who the leaders in the sector are, as previously described.

On the other hand, it can be observed that a significant majority of 68% have never used an app directed towards this type of activity, compared to the 32% who have. Concerning this question, they are asked the following open-ended question: if they have said yes to using an app, they must write down which one; if they have said no, they must explain the reason for it. In the latter case, the reasons have mainly been due to a lack of awareness and a preference for using social networks.

Regarding the question "If you were to use an application to search for a place or roommate, would you prefer..." (n=87), the following data is obtained:

Figure 4
Preferences regarding the creation of a new mobile application.

Source: Author's own work.

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It should be noted that there is a clear preference for applications that target an audience of a similar age to the user, with 40.2% or those that specialize in a similar lifestyle, such as students, with 35.6%. 16.1% opt for a generalist approach, and the remaining 8% are completely indifferent.

These results reinforce the decision made regarding a specialized or niche differentiation strategy as discussed in the section, and they also allow for an estimation of the potential market range for the project of creating a possible app, between 76% and 84% of the total.

Figure 5
*Advertisements published on Instagram and Twitter.*

Source: Author's own work.

In another open-ended question, the aspect that is highly valued and considered essential by over half of the respondents (62.1%) is the inclusion of monthly price and whether it includes expenses. Knowing the total number of rooms, the type of room in terms of furniture and dimensions, the type of roommate, the maximum period of stay, house rules, and the amenities and services included in the housing are considered very important aspects. Finally, respondents consider the need for a security deposit to be quite important.

In the following Graph 4, the importance of criteria for finding a roommate is examined, taking gender into account.

The determination of the criteria established in the questionnaire questions was based on consulting other survey samples found on the internet and through spontaneous consultations with several students at the European University Miguel de Cervantes in Valladolid. Since there were numerous contacts with students aged 18 to 25 from various programs at this institution, the consultation was conducted through several university professors at the center.

Figure 6
Most important criteria for apartment search.
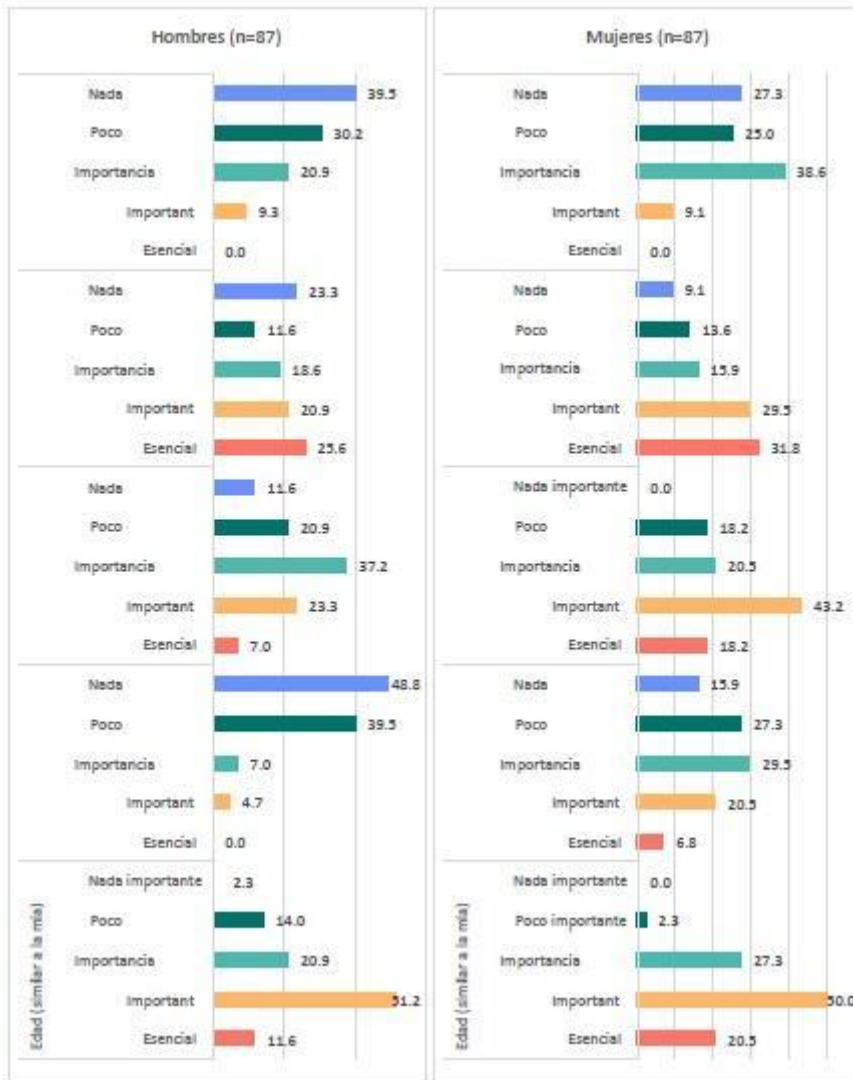
Source: Author's own work.

As noteworthy data, it can be mentioned that when it comes to similar lifestyles and hobbies, women attach considerably more importance, considering it as important with 43.2%. This is in contrast to the surveyed men, where only 23.3% find it important. Regarding the same gender, nearly half of the men (48.8%) do not find it important, while only 15.9% of women share the same sentiment. Among women, 20.5% consider it important, compared to just 4.7% of men.

The following table shows the sum of the "essential" and "important" indices to identify the contrast in results based on the respondents' gender:

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Table 3. *Contrast of essential and important indices regarding roommates when considering.*

Aspect	% total	Men	Women	Difference
Social Class	18,4%	9,3%	9,1%	0,2%
Non-smokers.	107,8%	46,5%	61,3%	14,8%
Lifestyle and hobbies.	91,7%	30,3%	61,4%	31,1%
Gender	32%	4,7%	27,3%	22,6%
Age	133,3%	62,8%	70,5%	7,7%

Source: Author's own work.

In another of the questions, several aspects were evaluated as "essential," "very important," and "moderately important." The aspects to be evaluated included the location of the apartment, cleanliness rules, housing services, type of roommate (gender, age, preferences), security deposit, monthly payment, room type, and conditions. In general, women attach more importance to all the aspects presented compared to men, who show greater indifference. Some notable aspects include the location, where women consider it much more important, with half considering it essential and 40% as very important, compared to 34.9% of men considering it essential and 25.6% very important. Another relevant finding is regarding the type of roommate, which women also consider much more important. It is essential for 38.6% and very important for 36.4% of women, compared to 14% and 25.6% respectively for men. Lastly, over half of the women (63.6%) consider knowing the room type as essential, compared to 46.5% of men.

Once again, a comparative table is created by summing up the "essential" and "very important" indices to identify the contrast in results based on the gender of the respondents:

Table 4. *Aspects regarding accommodation when searching for housing.*

Aspect	% total	Men	Women	Difference
Maximum length of stay.	117,1%	48,9%	68,2%	19,3%
House rules	114,8%	48,9%	65,9%	17%
Type of roommate	114,6%	39,6%	75%	35,4%
Location	151,4%	60,5%	90,9%	30,4%
Included services	91,6%	27,9%	63,7%	35,8%
Amenities	103,3%	41,9%	61,4%	19,5%
Type of room (dimensions...)	98,5%	32,6%	65,9%	33,3%
Total number of rooms	100,8%	32,6%	68,2%	35,6%
Type of room (individual)	165,3%	74,4%	90,9%	16,5%

Need for security deposit	84,9%	34,9%	50%	15,1%
Monthly rent and expenses	165,3%	81,4%	83,9%	2,5%

Source: Author's own work.

4.4. Limitations and Future Research Directions of the Study

On the other hand, the majority of respondents, when faced with a significant lack of knowledge regarding real estate search applications, tend to rely mainly on word of mouth and recommendations from acquaintances. This approach is seen as both cost-effective and efficient in expediting the process of finding a place to live. However, the suggestion of this application introduces novelty from the perspective that no other application with this profile currently exists. Consequently, young individuals, both men and women, may be drawn to the functionality of this new application, which aligns well with the common preferences of the target age group.

As with all nascent applications, as it becomes operational, there will likely be changes in its design based on user engagement and their subsequent suggestions for improvement. Given that this is a prototype, the intention is to launch it in the market to assess its initial and innovative functionality.

5. CONCLUSIONS

The preferences extracted from the respondents indicate that young individuals seek a specialized application that addresses their needs and lifestyles. The data regarding app knowledge reveal that more than half, 68%, have never used any type of app. One of the most common reasons for this lack of usage is unfamiliarity or distrust, underscoring the need for a robust communication plan.

The widespread use of social media among this demographic should also be taken into account. Therefore, housing search applications should be adapted to enable easy sharing of ads on popular platforms, primarily Instagram and Twitter. This strategy will facilitate the viral spread of these ads, aligning with the traditional methods of housing and roommate searches.

Furthermore, the significance attributed to various aspects when searching for housing should guide the presentation of information. Details such as age, lifestyle, and hobbies should be prominently displayed for quick readability. Similarly, when considering accommodation options, information about monthly costs, expenses, room type, and location should take precedence. Additionally, a customizable filter with multiple options will aid users in finding the most suitable listings.

The exploratory study has highlighted the housing rental sector's environment as extensive and competitive yet lacking in standardization. The market boasts numerous applications for ad posting, but very few focus on connecting people with similar needs or matching roommates based on age, interests, and preferences. Survey results underscore a general lack of awareness among young individuals regarding these types

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of applications, with no common consensus toward a specific app.

Preferences concerning roommate selection and accommodation are crucial. Attributes like nonsmoking status, age compatibility, and shared lifestyle and interests hold substantial importance. In contrast, factors like social class and gender similarity hold minimal significance.

When discussing aspects related to accommodation search, it can be concluded that all additional information that provides value is highly relevant to all audiences. However, when considering gender and its differences, it's notable that women attach more importance to knowing these details compared to men, who tend to be more indifferent to such aspects.

Furthermore, making the application visually appealing is of great importance. This approach tailors the application to a young audience, incorporating functionalities aligned with their lifestyle and digital experience. An interface that is simple, clean, predictable, and easy to use is crucial.

A common factor among these applications is the chosen corporate color. A significant majority leans towards cooler tones, such as greens and blues.

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