

The effects of digital nomads on housing affordability for local populations in Ericeira

Julia Glaeser

A thesis submitted for the degree of **M.Sc. Marketing**

Supervisor

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ISCTE-IUL



Marketing, Operations and General Management

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Resumo

Nos últimos anos o aumento de nómadas digitais nos destinos turísticos mais populares levou

a uma enorme competição entre estes e os habitantes locais na procura de imoveis para alugar.

Este estudo investiga o efeito desse crescimento, na compra de imoveis na cidade da Ericeira

em Portugal. Entre os meses de maio e junho de 2022 foram entrevistados 17 indivíduos,

divididos em 3 focus group: nómadas digitais, proprietários e população local. O resultado das

entrevistas realizado com o software Leximancer indicam seis fatores relevantes que

influenciam a compra de imoveis.

O estudo revelou que o aumento de nómadas digitais na Ericeira, fez aumentar o aluguer de

curta duração bem como os preços. A explicação reside no maior rendimento que os nómadas

digitais usufruem bem como a sua predisposição para pagar rendas mais elevadas. Os nomas

digitais afastam os habitantes da cidade, causando um efeito semelhante a massificação clássica

do turismo. Este estudo sugere que sejam criadas soluções que permitam que a população local

tenha acesso a habitação a preços acessíveis.

Palavras chave: nómadas digitais, trabalho remoto, acessibilidade da habitação

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Abstract

The emerging number of digital nomads in recent years led to intense competition for rental

accommodations between local populations and digital nomads in popular tourist destinations.

This study investigates the effects of digital nomads on housing affordability for local

populations in the Portuguese town Ericeira. Therefore, three focus group interviews with 17

participants divided into three interest groups (digital nomads, landlords and locals) were

conducted from May to June 2022. The analysis with Leximancer software showed a semantic

clustering with six important concepts that influenced housing affordability for local

populations in Ericeira. The study identified that digital nomads increase the number of short-

term rentals in Ericeira which makes landlords setting up higher prices benefiting from a digital

nomad's higher budget and their strong willingness to pay. As a result, digital nomads outplace

local populations from the city Ericeira meaning they have a similar effect such as classic

gentrification or touristification. Hence, this study contributes to ideas and concepts how to

secure affordable housing options for local populations.

Keywords: Digital nomad, affordability, remote work, housing

JEL Classification codes:

Z32 Tourism and Development;

R31 Housing Supply and Markets

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1. Introduction

1.1. Problem and relevance

Over the past years, numerous studies conducted the impact of tourists on popular touristic destinations, such as Spain and Portugal. It is well known that tourism development has an influence on a country's economy, environment, society, and culture (Cunha & Lobão, 2020; Mikulíc et al., 2021). However, as remote work is a growing global trend, many employees and freelancers do not have to work from their offices anymore allowing them to move and travel freely around the world while working online. When the COVID-19 pandemic started in 2020, many businesses had to establish new structures that allowed their employees to work remotely from home (Lund et al., 2021). Thus, the pandemic pushed the already growing trend of remote work even more. As a reaction many countries started to develop nomad visas. Furthermore, new products such as co-working and co-living places have been created to react to the needs of incoming digital nomads. The independence and free choice of workplace allows numerous people to move, travel and live in different countries away from their home countries. Over time, well-known tourist destinations have become a popular and attractive place for digital nomads as well. Whereas multiple studies conducted the effects of tourism in numerous countries, few studies have considered digital nomads and none of them analyzed the effect digital nomads have on a country's society and economy. As working remotely is a trend that is growing at a fast pace, there is a need to fill this research gap.

According to Google Trend (2022), Portugal is the most popular country in which people are searching for the term "digital nomads", (date: 07.04.2022). For this dissertation the Portuguese fishing town of Ericeira has been chosen to analyze the effects of digital nomads on the city. Ericeira had been chosen as it is well-known as the European Bali referring to its ideal conditions for remote work. Ericeira has been rated on nomadlist.com as a growing destination for digital nomads until July 2022 ("Ericeira for Digital Nomads", n.d.). In August 2022 Ericeira had been replaced by the Portuguese city Costa da Caparica. However, during the past years, many digital nomads arrived in Ericeira ("Ericeira for Digital Nomads", n.d.). At the same time housing and living costs increased dramatically leading to numerous discussions on social media groups where locals, landlords and digital nomads argue about prices for rooms and houses. Many locals mention they had to leave Ericeira as they could not afford rent prices in the town anymore. Others stated that Ericeira had changed a lot during the past years and that they fear being outplaced by foreigners soon. Following these discussions for more than a year, I decided to study the effects and consequences that digital nomads have on housing

affordability for local populations in Ericeira. I identified three groups of interest: digital nomads, locals, and landlords. I decided to interview people from each group to understand their perspective on the issue of housing affordability.

1.2. Objectives and goals

This study used previous research about the effect of tourism on housing affordability for locals as a foundation. In the past there have been multiple studies showing the positive and negative influence of tourism on a country. Furthermore, specific research about tourism and its effect on housing affordability had been done already. However, as researchers figured out that digital nomads differ from classic tourism, this dissertation aims to add the effects of digital nomads to the already studied effects of tourism to allow a more complete perspective on the issue housing affordability. The main research question of this dissertation is: How do digital nomads affect housing affordability for locals in Ericeira. Within this dissertation, the following three research objectives will be answered:

- 1) Defining the product: "housing" for digital nomads to better understand their demand.
- 2) Understanding how housing is promoted and how digital nomads as well as locals are targeted through different marketing channels.
- 3) Analyzing how prices for rentals are built and how do locals and digital nomads define affordable housing.

As a result, this dissertation aims to find solutions and suggestions regarding how to react to the growing trend of digital nomads that influence and will keep influencing cities around the world. At the end of this dissertation, ideas how to ensure affordable housing for locals, especially for the study case Ericeira, will be presented. The findings can then be adapted and used for different cities and countries that face the same issues. This dissertation provides different perspectives as three interest groups (landlords, digital nomads, and locals) were interviewed. Suggested solutions about how to ensure affordable housing for locals will address the responsibility of government, landlords and digital nomads. Furthermore, this dissertation will function as a stepstone for future research that should be conducted from the data gathered about digital nomads and their effects on housing affordability for local populations.

1.3. Structure of the dissertation

This study starts with a brief literature review about the development of housing prices in Portugal, specifically in Ericeira, as well as explaining the term housing affordability.

Following this, the three focus groups (landlords, locals, and digital nomads) are characterized and classified. After a brief literature review, the methodology will be presented. Housing affordability can be measured objectively or subjectively. For this study qualitative primary data was collected through focus group interviews with the three groups: digital nomads, locals, and landlords. As there is not a lot of information about digital nomads available, focus group interviews were chosen as a tool to gather information about the target. Furthermore, interviews provided insights into the perspectives of each group on the issue of housing affordability in Ericeira allowing a deeper understanding of digital nomads and their influence on housing prices and affordability. After presenting the methodology, this dissertation sums up the main findings and results of the study. This dissertation then continues with the theoretical contribution as well as providing practical solutions how to ensure affordable housing for locals in Ericeira. Lastly, a brief outlook and recommendations for further studies that should be conducted by researchers will be given.

2. Literature Review

2.1. Housing affordability

The concept of housing affordability caught attention by the research of Hulchanski in the 1990s. He suggested six different uses of the housing expenditure-to-income ratio. Hulchanski (1995) defined that a household has a "housing affordability problem [...] when it pays more than a certain percentage of its income to obtain adequate and appropriate housing." (Hulchanski, p. 471, 1995). Over time the percentage of expenditure-to-income has been adapted multiple times. For example, Canada had a 20 percent rule until the 1950s, Maclennan & Williams (1990) suggested a rent-to-income ratio of 20 to 30 percent as acceptable, whereas more recent authors such as Bramley (2011) and Chen *et al.* (2010) recommended a percentage of 30 to 50 for affordable housing.

Even though the income-to-expenditure ratio is the most common method to measure affordability, the variable is difficult to measure and to define as affordability and adequate housing is a subjective topic. Haffner (2014) distinguished affordability into subjective, a household's perception towards how unaffordable housing expenditures seem to be, and objective affordability, which is the ability of a household to finance mortgage and rent payments.

2.1.1. Housing affordability problems

A study conducted in the Netherlands showed that the expenditure-to-income ratio increases the lower a household's income is. Thus, low-income groups struggle more finding affordable housing. Furthermore, the comparison of regulated and deregulated rents showed that affordability problems are higher in the deregulated rental sector (Haffner, 2014).

Maclennan and Williams (1990) mentioned that affordability is also related to a given standard of housing. As every household has different needs for housing, affordability also depends on a household's choice whether to choose a reasonable house according to their income and expenditures or not. Thus, a household overconsumes housing if they live in houses that are objectively too big for them (Haffner, 2014).

Other factors causing affordability problems might be that a person's income is insufficient, which is often the case when it comes to couples with children, self-employed or retired people as well as students (Haffner, 2014). Furthermore, affordability problems can be caused by the level of a household's consumption. If a household spends too much of their income for other goods and services, they will have less money available to pay rent. This phenomenon is especially found among single parents, low-income-groups, or couples with children. Wetzstein (2017) identified three main factors causing unaffordability for low-income households: the urbanization of capital and people which increased the demand for housing; extensive mortgage lending and the growing intra-society inequality. As the private renting sector is growing fastest, the property-poor pays the property rich leading to landlords as winders and tenants as losers (Wetzstein, 2016).

2.1.2. Gentrification

Consequently, residents will be outplaced of the city as they cannot afford housing anymore. This phenomenon is called gentrification and describes a situation in which "disinvested innercity neighborhoods are upgraded by pioneer gentrifiers, and the indigenous residents are displaced" (Lees *et al.*, 2008, p.10). Gentrification classically occurs in four waves. Owners of houses in the city center firstly occupy their own property. Later, they start moving elsewhere and start renting their properties to residents with lower incomes (Amore *et al.*, 2020). Consequently, properties will lose their value in the long run which attracts investors that are looking for cheap property which they can refurbish (Amore *et al.*, 2020). The newly refurbished houses can now be rented to the middle-upper class for higher prices which leads to an outplacement of indigenous residents that cannot keep up with the rising housing costs.

Almeida *et al.* (2021) proved that tourism can also cause gentrification. The outplacing of residents through tourists, thus got defined as touristification which derives from the two words: gentrification, replacing local populations by foreigners, and tourism (Almeida *et al.*, 2021).

2.2. Landlords and their price building strategy

Yates (2008) showed that prices for selling houses mainly depend on the evolution of interest rates and the house prices themselves, whereas in the renting sector high demand mainly drives prices. Whereas in some countries, such as Germany, the price setting for rentals is strongly regulated, Portugal has a more liberal renting market. Prices in Portugal vary according to many factors such as demand for and offer in housing. Haffner (2014) discovered three factors that mainly impact housing prices: rent control, housing allowance and rent setting.

2.2.1. Rent Control

Firstly, it is important that rents stay below market price to remain affordable for locals. Therefore, local governments can create valuation systems in which houses are valued according to their characteristics. For example, in the Netherlands houses have ratings and depending on their score, a maximum rent that can be charged is calculated (Haffner, 2014). Then, a landlord can charge the calculated price and can only increase prices annually to a specific percentage that is regulated by the government (Haffner, 2014). Even though this method might be very effective to set prices objectively, rent control methods might harm a country's economic growth as it can lead to under-investment in the housing sector.

2.2.2. Housing allowance

The second factor housing allowance ensures that low-income tenants should be supported to pay for housing (Haffner, 2014). In Portugal the issue of housing is mainly regulated by each municipality and each city has different initiatives to keep housing affordable. There are only a few housing programs that support young and low-income groups to afford housing such as the Mercado Social de Arrendamento, the PAA (programa da arrendamento acssível) or the Porta 65 Jovem. In 2019 the NAHP approved the Decree Law No. 68/2019 to set up criteria, procedures, and requirements for the private rental sector to guarantee affordable housing (Matos & Campelo, 2021). Thus, landlords have to follow different restrictions such as the duration of contract or a household's maximum monthly income.

2.2.3. Rent Setting

The third factor rent setting is closely related to the rent control factor. Whilst rental control deals with laws, regulations, and control variables, rent setting is more about a landlord's rent setting behavior. Thus, it examines the reasons why landlords could or should set prices lower than calculated by valuation systems or below average market price. Decker (2020) discovered two main factors that influence whether landlords set prices above or below market price: duration and rent stickiness.

When it comes to duration, tenants that recently moved, or short-term tenants, pay more as the landlord will have to invest more time in screening and selecting tenants. Maintenance costs are usually higher as well as every new tenant comes with new risks (Decker, 2020). Wrede (2022) figured out that landlords prefer to rent out their places for short-term if transaction costs to find new tenants are low and they recognize a high willingness to pay for a specific location. Thus, tenants having a comparatively low income are most likely to be replaced. Price-setting also depends on a landlord's expectations to the market and a property's characteristics. Underguessers will try to keep their tenants (long-term) whereas over-guessers will keep looking for new tenants (Decker, 2020). Furthermore, properties that come with undesirable features such as noise are more likely to be rented to short-term tenants (Wrede, 2022).

Rent stickiness is "the owner's decision to hold rents flat over year" even though tenants might change (Decker, 2020). Reasons to keep rents flat can be due to a landlord's personal connection with his or her tenants, ethical and moral reasons, or the degree of how much information landlords have regarding the market situation. Decker (p. 64, 2020) states that "having a small portfolio, having a personal connection to tenants, and being poorly informed about the market will make owners more likely to set rents below market". As market information became easier to access over the years, the number of landlords that set their price below market-price will reduce which will lead to higher numbers in over-priced short-term rentals.

Thus, Low-set-rentals can usually be found when landlords keep rentals for their family's future security and if housing is promoted through word of mouth and "for rent"- signs instead of being promoted through prints and online ads (Decker, 2020). Thus, depending on the place of promotion landlords will select their targets and prices differently.

2.3. The phenomenon of digital nomads

The term digital nomad is a multifaceted phenomenon which describes a tribe of people with various ambitions and interests engaging in different types of work (Aroles *et al.*, 2020). The

term was firstly introduced by Makimoto and Manners (1997) who showed that digital nomadism is a trend that will allow future mankind to work, live and exist while being n the move. Therefore, they predicted an increase of digital nomads due to increasing technological possibilities. In recent years, the term digital nomad experienced increasing awareness. In 2016 Müller was one of the first researchers questioning whether the term should be a new research category or not, defined digital nomads as "a new generation of location independent freelancers, young entrepreneurs, online self-employed persons" (Müller, p.346, 2016). A study conducted by Aroles *et al.* (2020) showed that even among digital nomads the definition and self-awareness for being a digital nomad highly varies.

2.3.1. Characteristics of nomads

Digital nomads have only become a research category in the past few years. Bozzi (2020) stated that a digital nomad is no longer just the opposite to a person that has settled. Furthermore, it can simply be a person working from a café instead sitting in an office. Aroles *et al.* (2020) showed that remote working people classify themselves as digital nomads according to speed, length, and frequency of travel. Thus, remote working people do not always identify themselves as digital nomads, especially when they do not travel often or only live abroad.

According to Lee *et al.* (2019) digital nomads chose places to live and work according to three levels of needs. Thus, places must have a suitable infrastructure for remote work such as speed and accessibility of internet as one of the main characteristics of digital nomads is being technology-enabled mobile (Bozzi, 2020). Secondly, digital nomads are looking for a place inside a community to feel belongingness as well as they want to interact with like-minded people such as other digital nomads to fulfill their psychological needs (Lee *et al.*, 2019). As a third major need, digital nomads seek self-fulfillment. Thus, they need a place that matches their career plans and helps them improve their work (Lee *et al.*, 2019). Therefore, the most valued factors are high speed internet, affordable price (short-term-leasing included) and accessibility (transportation, 24h access).

Aroles *et al.* (2020) stated that remote workers and digital nomads are not the same. Even though working remote, workers might be restricted in traveling by specific work or tax law. Thus, digital nomads need to have specific remote jobs that allow them to travel freely. Thus, most digital nomads are either freelancers or self-employed (Aroles *et al.*, 2020). Hannonen (2019) supported the importance of traveling internationally as a core element of digital nomads. Reichenberger (2017) argued that it is more important that digital nomads have the

opportunity to be mobile and free which allows them to theoretically work and travel wherever they want, which concurs to the findings of Bozzi (2020).

Having the freedom of working freely from anywhere, most digital nomads do not have a permanent residence and travel constantly (a full-time digital nomad) or chose to stay in a chosen home base for extended periods, for example three months (a part-time digital nomad) (Reichenberger, 2017).

Digital nomads are most-likely well-educated English speakers, hold strong passports and have better professional options than local populations (Thompson, 2018). According to nomadlist.com, a globally leading platform where digital nomads can register, connect, and find information about remote work in different countries, the average digital nomad is 33 years old, single, male, works in software development, has an annual income of 76,000 euros and stays in each location 71 days ("2022 State of Digital Nomads", n.d.). In 2013, Cohen *et al.* mentioned that digital nomads feel home and belonginess in different places and therefore, have multiple homes. In 2022 most visited countries among users are the US, Thailand, Spain, UK, Germany, Portugal was ranked in the 9th place. Especially among women, Lisbon is a popular destination for digital nomads ("2022 State of Digital Nomads", n.d.).

Furthermore, digital nomads have a strong presence on social media, especially on Instagram. Associated hashtags are #travel, #freelance, #workandtravel or #remotework (Bozzi, 2020). As they are full-time working while traveling, they have less time exploring and thus, set their priorities differently than tourists. Whereas tourists want to have authentic cultural experiences and spend their leisure time to see and experience a destination fully, digital nomads focus on networking digitally and physically, meaning that they want to surround themselves with like-minded people (Hannonen, 2019).

There are multiple reasons why people decide to live and work as a digital nomad. Reichenberger (2017) showed that digital nomads seek a self-tailored and flexible life which allows them to maximize their free time and expose themselves to the new. Thompson (2018) argued that digital nomads travel to find better living standards in different countries which leads to a strong imbalance between digital nomads and the places they travel to. The class awareness of digital nomads on platforms such as nomadlist.com has also been mentioned by Cohen (2013). Often, living costs for digital nomads almost double the costs calculated for residents. Furthermore, digital nomads want to explore their inner self and to escape from corporate world (Aroles *et al.*, 2020). Ferris (2007) showed that digital nomads prefer excitement over happiness, care less about professional fulfillment and focus on freeing time through creating automated income. Furthermore, digital nomads want to balance work and

freedom through self-motivation to maximize their free time and leisure activities while being flexible and independent (Bozzi, 2020).

Nevertheless, being a digital nomad comes also with negative points such as experiencing stress, frustration and feeling often challenged as they do not have much stability and consistency. Thus, they need to recreate a stable environment each time, they change location (Reichenberger, 2017). Even though digital nomads have a strong will to connect with locals, they struggle to find a connection and often create a bubble of expats that separates themselves from residents (Chevtaeva & Denizci-Guillet, 2021). Consequently, many digital nomads face problems such as depression, homesickness, loneliness, and narcissism (Bozzi, 2020).

2.3.2. Influence of Covid-19

Remote work is a trend that has become globally popular during the past years. However, when the COVID-19 pandemic started in the beginning of 2020, many offices had to close, meaning multiple employees had to work from home (Wrede, 2022). Thus, businesses all around the world had to react and adapt their organizational structures to enable their employees to work remotely. More than ever, the ability to make work flexible and agile had become a necessary capability to stay competitive and keep operating (Nurhas *et al.*, 2021).

Even though many businesses decided to bring back their employees to the office as the health risks from the pandemic subsided, COVID-19 had shown many advantages of remote work for employees and employers and thus, opened doors for digital nomads and the number of people working remotely have remained high following the pandemic. According to a study by Lund *et al.* (2021) 20 to 25 percent of employees in advanced economies could work remotely between three to five days a week without losing productivity. Only some jobs that technically could be done remotely, are better done in person. For example, sensitive business decisions, negotiations, brainstorming activities, onboarding sessions, or providing feedback are activities that could be less effective when they are not done in person (Lund *et al.*, 2021).

However, COVID-19 has changed the concept and idea of work. For example, Spotify's employee branding comes with the slogan: "Work isn't somewhere you go, it's something you do. We give our people the freedom to work where they work best, wherever that may be." ("Work From Anywhere", n.d.). It became obvious that time and place are less important in the today's digital world. Businesses nowadays need to be able to collaborate cross-functionally, mobilize resources and adapt quickly. Speed and time had become the new sustainable competitive advantage (Nurhas *et al.*, 2021).

Castrillon (2022) expects 22 percent of the American workforce to work remotely by 2025 as technology will evolve and employees embrace the new way of working location-independently. As many employees, especially those who are having families, want to keep working remotely, businesses have created long-term flexible work models.

Markets worldwide reacted to the presence of digital nomads. During the past years a new geography for remote workers including co-working and co-living spaces has been created (Aroles *et al.*, 2020). Furthermore, many countries started developing special visa arrangements for digital nomads. For example, digital nomads traveling to Brazil can apply for a temporary visa and residence permits when they work for foreign employers but want to live in Brazil (Castrillon, 2022). Being a popular destination for digital nomads, Indonesia recently announced it was developing a five-year visa for digital nomads as well.

2.4. Defining the term local population

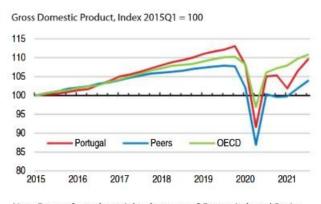
According to Cambridge (2022) a local is "a person who lives in the particular small area that you are talking about". Thus, locals are defined by the place they live in and can also be called residents. Easterling (2005) defined four different categories of locals: born-heres, comes-heres, retired-heres and second home-heres. Whereas second homeowners have the lowest social integration because they have their everyday life in another place, permanent residents show strong social interaction and are more open to change and development (Easterling, 2005). A local's attitude towards tourism mainly depends on how strongly they are involved into tourism. The more they interact with tourists and the more they depend on tourism, the more likely they will have a positive attitude towards tourists (Lundberg, 2015).

2.5. Tourism and the evolution of housing prices in Portugal

Compared to other European countries, Portugal has experienced one of the highest increases in housing prices since the year 2015 (Cunha & Lobão, 2021). Since 2015 housing prices in Portugal grew stronger than the European average (Cunha & Lobão, 2021). When it comes to affordable housing, Portugal is far behind the European average. According to Branco and Alves (2018) 18 percent of Portuguese households spend more than 40 percent of their net income on housing which is 27 percent above the EU-28-average. In seaside tourist areas like the Algarve and in the cities Porto and Lisbon, real estate prices grew the fastest among Portugal (Allegra *et al.*, 2020). For example, in Porto and Lisbon households spend 44 percent and 42 percent of their net income on housing (Branco & Alves, 2018).

2.5.1. The importance of tourism in Portugal

The increasing amount of short-term rental accommodations in Portugal goes back to the growing number of tourists that arrive each year to Portugal. During the last 20 years Portugal experienced a huge growth in tourism. Whereas in 1990 only 4,434,728 tourists arrived in Portugal, the number reached 12,343,982 in 2016 (Regulamento n.º 859-A/2018). Thus, within less than 30 years, tourist activities have grown about almost 300 percent. According to Bailoa & Cravo (2020) the tourism industry accounts for almost 20 percent of total exports and almost 10 percent of Portugal's GDP in 2018. Compared to the OECD average, Portugal experienced a stronger decrease in its GDP when the COVID-19 pandemic started in the beginning of 2020 and tourism activities slowed down (see figure 1). Hence, the Portuguese economy is highly dependent on tourism and foreigners entering the country.



Note: Peers refer to the weighted average of Greece, Italy and Spain. Source: OECD Economic Outlook: Statistics and Projections (database) and updates.

Figure 1: Global GDP development from 2015 to 2021 (OECD, 2022).

Previous studies have already mentioned the positive impact of tourism on a country's economy. For example, Mendes (2021) underlined the importance of Airbnb's for local populations as he showed that the drop of Airbnb's during the pandemic led to a loss of income and thus, had a negative influence on housing affordability for local populations. Thus, Portugal needs short-term rentals as a source of (extra) income. Having higher incomes will have a positive impact on housing affordability as a household now has more money to spend on housing and other expenses. A general positive correlation between tourism and consumption has furthermore been supported by Carrascal and Fernandez (2015). When tourists stay in a country, they consume goods and services and thus, will increase the turnover of businesses within the country. Higher turnovers will then lead to a stronger economy which allows a country to grow. Canh (2020) proved the positive influence of a country's economy through job creation, economic development, investment, environment protection and increased income

equality. However, there are many more reasons why tourism is important for a country. For example, Almeida *et al.* (2021) identified that locals in Lisbon benefit from tourism through increased incomes, the creation of jobs and promotion, renovation as well as the stimulation of urban development.

2.5.2. The negative effects of tourism

However, tourism is also associated with externalities like pollution and higher income inequality (Canh, 2020). Moreover, Kayat *et al.* (2013) mentioned that tourism can cause unhealthy lifestyles, decreased safety, pollution, and increased costs in living. As tourists come to consume goods and services, demand rises and consequently, there will be an inflationary effect on the prices for goods and services. Whereas tourists can still afford to purchase goods and services for higher prices, local populations struggle to keep up with increasing price levels. The focus of this dissertation is therefore set on the increase in housing prices. Carrascal and Fernández (2015) showed that especially employees with medium-skilled wages are especially hit by rising prices in the real estate market.

In the case of Portugal, there had been many reasons why housing prices have increased dramatically in recent years. One main driver of increased living costs was the conversion of residential properties that would otherwise be long-term rentals into short-term rentals, such as through Airbnb. In 2019 the number of Airbnb in Lisbon, the capital of Portugal, was 22,000 (Mendes, 2021). Currently, Lisbon has on average 8,000 tourists per 1,000 habitants and 107 short-term-rental apartments per square kilometer which is two times more than Amsterdam and five times more than Berlin (Mendes, 2021). According to Almeida *et al.* (2021) tourism increased properties' value and thus, reduced the number of long-term rentals as residential housing got converted into tourist accommodations. The Portuguese government introduced law 62/2018 in 2018 that allowed local governments to set up caps on short-term rentals. However, the European Union's Court of Justice stated that Airbnb, as an information society service, cannot be regulated by caps to short-term-rentals. As a result, regulating short-term-rentals remains to be difficult. Further, housing prices kept growing strongly during the following years until today (Mendes, 2021).

The increase in tourist accommodation was not the only factor that worsened the offer of long-term-rental-possibilities for locals. Many house-owners started advertising their houses informally through social media platforms such as Facebook to save taxes and decrease administrative work (Almeida *et al.*, 2021). This type of informal supply had negative effects on housing possibilities for locals as it led to rising rental prices and created an unfair

competition with traditional tourist accommodation options such as hotels and hostels (Almeida *et al.*, 2021).

The worldwide increase of short-term rentals such as those booked through Airbnb has led to different policy developments in each country. Whereas some cities such as Athens and Milan sharpened their legislation for short-term rentals, Lisbon decided to push housing development in certain areas of the city (Amore *et al.*, 2020). However, while many countries still struggle finding effective methods to protect residential areas from tourism, an emerging number of digital nomads have arrived in many countries reducing the number of housing options for locals at the same time.

2.6. Presenting the case study Ericeira

One of Portugal's most famous touristic destinations is Ericeira, a small fishing village 35 kilometers from Portugal's capital Lisbon ("Ericeira, Surfing Reserve", n.d.). Being part of the municipality Mafra at the west coast of Portugal, it is ideal for surf sport and a popular summer destination as it has multiple beaches and many coffee shops and retail stores. Having a beautiful landscape and perfect accessible waves all year around it attracts many surfers from all around the world. Ericeira offers various degrees of difficulty for surfers and comes with excellent conditions all year around. It has hosted many national and international surf competitions such as the championship tour of the World Surf League. In 2011, Ericeira got declared as the first World Surf Reserve in Europe, the second worldwide, which increased tourism even more. Thus, since 2011 the municipality Mafra has been growing at the second strongest rate in Portugal ("Ericeira, Surfing Reserve", n.d.).

Whereas in 2011 only 10,260 habitants where registered living in Ericeira, the population grew to 12,359 habitants in 2021 (INE, 2022). Furthermore, the censes in 2021 showed that Ericeira has 9,476 accommodations currently from which more than 5,000 are registered for habitual residence and slightly less than 4,000 are used as second homes. While in 2011 most houses were used as second homes, in 2021 most accommodations were used as a main residency which shows that Ericeira is no longer just a touristic destination (INE, 2022). Over the past years it had become an attractive place for residents having their life and work in Ericeira.

When it comes to the rent paid per month by each household, the majority of Ericeira's residents (914 households) paid 200 to 649.99 euros in 2021 whereas only 70 households mentioned paying more than 1,000 euros per month (INE, 2022).

2.6.1. Attractiveness for digital nomads

Ericeira is not only a popular place for tourists. It has become a desirable destination for digital nomads during the past years. The website nomadlist.com lists the eleven top destinations for digital nomads within Portugal, ranking Lisbon as the best city whereas Porto, Madeira and Ericeira were highlighted as rising destinations for digital nomads in July 2022. Remote workers in Ericeira value its safety, freedom, fast internet, and leisure activities ("Ericeira for Digital Nomads", n.d.). Furthermore, they mentioned that it is easy to connect to people as English is spoken everywhere. Thus, in recent times, Ericeira has become famous as the "European Bali" as it has perfect conditions for surfers that work remotely. Despite nomadlist.com rating Ericeira as an affordable place, it suggests an ideal income of 1,959 euros per month which is more than double of the minimum Portuguese wage (see figure 2). Thus, it seems clear that there is a perception gap of affordability between local populations and digital nomads arriving in Ericeira.

■ Cost of living for nomad	€1,948 / month	B Cost of living for expat	€1,202 / month
■ Cost of living for family	€1,446 / month	■ Cost of living for local	€413 / month
♠ 1br studio rent in center	€300 / month	Coworking	€180 / month
🚰 Hotel (median price)	€1,332 / month	🛃 Hotel (median price)	€62 / night
♠ Airbnb (48 listings)	€2,830 / month	≙ Airbnb	€93 / night
Dinner	€4.00	Coca-Cola (0.3L)	€0.90
⊌ Beer (0.5L)	€1.50	⊜ Coffee	€1.00
Estimated tax on \$50,000	\$21,514	Estimated tax on \$100,000	\$52,994

Figure 2: Living costs in Ericeira as suggested by nomadlist.com ("Ericeira for Digital Nomads", n.d.).

Each year more and more digital nomads are arriving in Ericeira. In May 2022, 1,600 new digital nomads arrived in Ericeira (see figure 3). Thus, Ericeira continues to experience a massive boom of digital nomads in addition to booming tourism which leads to a double burden.

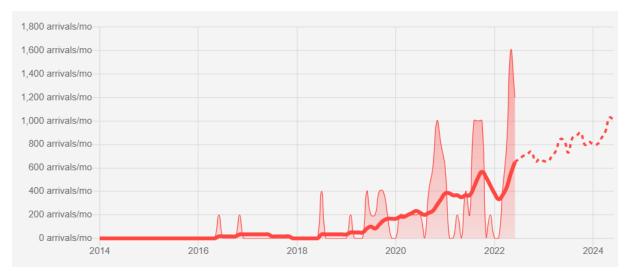


Figure 3: Number of arrivals of digital nomads per month in Ericeira from 2014 to 2024 ("Ericeira for Digital Nomads", n.d.).

2.6.2. Development of housing prices

Even though the censes in 2021 showed that households currently pay 200 to 649.99 euros per month for rental accommodation in Ericeira, when searching online for apartments to rent, rental prices varied from what habitants do currently pay. When searching for a T2 (two-bedroom apartment) in Ericeira on the platform Idealista (August 2022), renting prices vary usually from 1,000 to 1,600 euros.

Since 2016, sale prices in Ericeira have almost doubled from 1,085 euros per square meter to 2,742 euros per square meter in 2022. Thus, the average growth from January 2015 until January 2022 rate is about 13 percent per year (see figure 4).



Figure 4: The evolution of sales prices in Ericeira from 2015 to 2022 ("Price evolution of housing for rent in Ericeira", n.d.).

Rental prices hit an all-time high in February 2022 (11.3 euros per square meter) increasing by 14.4 percent within one year.

Rental prices have fluctuated in recent years varying between 8.1 euro per square meter in April 2019 and 11.3 euros per square meter in February 2022 (see figure 5). Reasons for fluctuation include tourist high and low seasons as well as the influence of the COVID-19 pandemic. Tourism high season in Ericeira is from the start of May to the end of October. It is therefore expected that rental prices should be higher during that period if tourism is the main influencing factor.



Figure 5: The evolution of rental prices in Ericeira from January 2019 to April 2022 ("Price evolution of housing for rent in Ericeira", n.d.).

3. Methodology

3.1. Research problem

Almeida *et al.* 2021 mentioned the term touristification which is a new type of gentrification caused by the conversion of residential housing options into touristic accommodations and short-term-rentals. Previous studies only examined the effect of tourism causing affordability problems for local populations. However, even though digital nomads can be seen as tourists, they differ from standard tourists in various points and thus, should be analyzed as a separate group.

As remote work is a globally growing trend, digital nomads will continue traveling to popular places and hence, be a double burden for already touristic places. There is an urgent need for scientists to start analyzing how digital nomads decide where they travel to, how they choose housing, what are they demanding in housing and how does their presence affect local

communities. Important question will be: How can countries, and especially cities, adapt to the presence of digital nomads and how does their presence affect the lives of local populations.

3.2. Research objectives

Rental prices are mainly influenced through demand (Yates, 2008). Thus, the goal of this dissertation is to understand how digital nomads change the demand for housing in Ericeira. As a first objective, the product "housing" for digital nomads should be defined and characterized. How do digital nomads choose an accommodation, which features are important for them, do they pay more for specific features and what are the differences in demands of housing for locals and digital nomads? Based on the results, suggestions can be given how to react to specific demands in housing to meet the needs of each interest group. Ideally, the market could be separated into two market segments if locals and digital nomads show different needs in housing which could help to secure affordable housing for locals while providing suitable housing options for digital nomads at the same time.

As a second objective, this dissertation aims to understand how housing in Ericeira is promoted and which target groups can be effectively reached through different marketing channels. Which platforms are used by landlords and digital nomads and how effective have they been when searching for rental accommodation? Do landlords use different pricing strategies for each platform? Which platforms do landlords preferably use and why? It is important to understand who has access to affordable rentals and what are the reasons why some people find affordable rentals while others cannot. Therefore, this dissertation analyzes which interest group in mainly targeted by landlords and how.

Closely related to targeting and promotion is the factor price. According to Haffner (2014) the price set by locals for housing is, as mentioned above, mainly influenced by the market situation and the average price, the rent stickiness and duration of stay. As a third objective of this dissertation, this study aims to understand how landlords set prices for rentals. How do landlords, digital nomads and locals define and rate affordability. What means "reasonably prized" for each group of interests and which are the main factors influencing the prices for rentals that are set by landlords in Ericeira.

Identifying how rental prices are set by landlords will help to understand the effects of digital nomads on housing prices, and thus on housing affordability for locals.

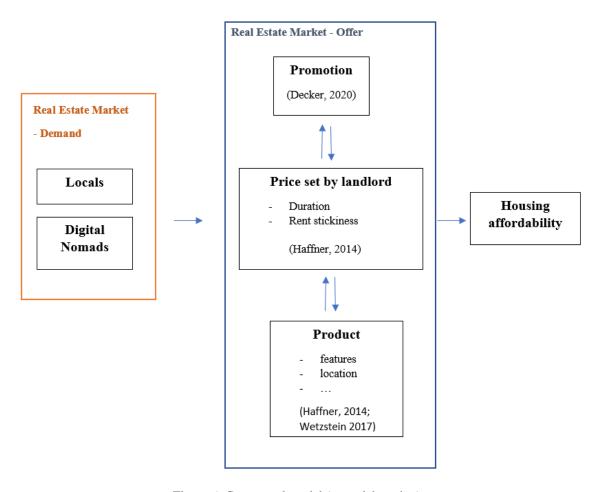


Figure 6: Conceptual model (own elaboration)

Answering all the three research objectives, study will show how digital nomads influence housing prices in Ericeira and thus, effect housing affordability for local populations. provide solutions how to secure affordable housing for locals in Ericeira. Based on the results, the main research goal is to provide solutions how to deal with the rising numbers of digital nomads and how to protect affordable rental accommodation for locals in Ericeira. The result then, can be tested and adapted for different tourism destinations that are influenced by a growing number of digital nomads as well.

3.3. Data collection

This dissertation uses focus group interviews as they are a great method to collect high-quality data to understand a certain problem from the different perspectives of each group (Khan & Manderson, 1992). As there is not so much data available about the research issue, focus groups will allow to get "a rich and detailed set of data about perceptions, thoughts, feelings and impressions of people in their own words" (Stewart & Shamdasani, 1990, p.140).

Qualitative data was collected through focus group interviews dividing participants into the groups:

- 1) Digital nomads
- 2) Locals
- 3) Landlords

The interviews were structured into the following three divisions:

Group I – Screening question

Group II – Focus group interviews

II.I. Price

- Perception
- Duration of stay
- Rent stickiness

II.II. Promotion

- Platforms of advertisement / distribution channel
- Chances and problems

II.III. Product

- Features
- Location
- Programs (Social Housing, Co-living)

Group III – Demographics

Firstly, an online survey was distributed on social media platforms (Facebook Groups of Ericeira and Instagram) including screening questions to find suitable participants for each group. For the group digital nomads, participants were required to agree that they work remotely for a non-Portuguese business, travel internationally, live in Ericeira in a rented accommodation for a limited time and that they are not registered as citizens or hold a NIF (Portuguese tax number), (Reichenberger, 2017; Hannonen, 2019).

To screen participants for the group of locals, participants had to agree that they have their residency officially registered in Ericeira, they work for a Portuguese business or in the Portuguese public sector and they pay taxes in Portugal (Easterling, 2005). However, they did not have to be Portuguese or have to be born and raised in Ericeira. For the third group of landlords, the only requirement was to rent houses, rooms, or any type of accommodations privately in Ericeira for primarily non-tourism purposes. In the end, 30 possible participants were found from which 17 participants were able to take part in the focus group interviews (six digital nomads, six locals and five landlords). As Stewart and Shamdasani (2014) suggested an

ideal group size is five to eight participants per group. The number of participants should be higher, the less experience participants have with regarding the discussed topic. However, the group size for this study were appropriate having regard to the nature of the topic.

Each of the three groups was asked ten similar questions that were slightly adapted to each focus group. The questions were divided into three categories similar to the 4 Ps of marketing: price, promotion and product that also equals the three hypotheses of this dissertation (see appendix). Questions during the interview addressed the participants' opinions, their knowledge, their experience, their ideals, and included one provocative statement which they had to comment.

The first interview with the group of digital nomads was done on 17 May 2022 in person in Ericeira. The interviews with locals and landlords were both conducted over Zoom on 4 June 2022 (locals) and 26 June 2022 (landlords) as most of the participants were not available at the same time or had been staying out of Ericeira during that time. As suggested by Stewart & Shamdasani (2014) all three interviews were in between the time range of one to two hours.

3.4. Data analysis

All three interviews were recorded and transcribed afterwards. Following, the Leximancer text analytics software was used to analyze the data. Leximancer is a tool that uses analytical procedures to find patterns and concepts within the text that is studied. It displays the retrieved information visually through a conceptual map to create a brief overview of the main concepts showing how they relate to each other (Leximancer Pty Ltd, 2021).

A concept is defined as the "collection of words that generally travel together throughout the text" (Leximancer Pty Ltd, 2021, p. 9) and are shown as colored circles in the map. Leximancer uses a machine learning software that creates a thesaurus of terms for every concept adding highly relevant words to the final conceptual map (Leximancer Pty Ltd, 2021). Therefore, relevant words can be positively as well as negatively related. Tags were used to allow comparisons between the three groups of digital nomads, locals, and landlords. Following, the interviews were analyzed manually based on the identified concepts to better understand the participants' perspective, thoughts, and experience with certain concepts.

4. Results

The analysis with Leximancer showed six main concepts: "time", "prices", "work", "months", "pay" and "people". The strongest concept is "time" that connects the landlords, digital nomads

and locals and thus has a central positioned in the concept map. "Time" is the strongest concept among the six total concepts and thus, has an important influence on housing affordability according to the perspectives of locals, landlords and digital nomads in Ericeira.

The second largest concept is "months" which is strongly related to the concept of time as the graphic shows an overlap of both concepts. "Months" and "time" are both connected to the word "digital nomads" which shows that the duration of stay and the months staying in Ericeira are important for digital nomads but less important for locals and landlords. The concept model shows "work" and "prices" as equally important concepts that are issued by locals only. Thus, it is obvious that locals evaluate housing affordability according to their work (and salary) and the price charged for housing. Interestingly, the two concepts are not related to digital nomads

Therefore, the concept "price" overlaps the concept of "time" which shows that prices are influenced by the factor time of renting. The concepts "pay" and "people" are important for landlords meaning that they are seeking for good tenants with the ability to pay their rent.

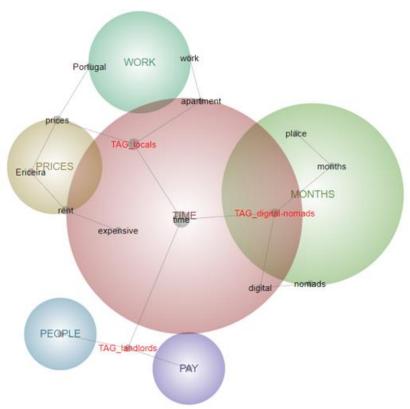


Figure 7: Concept map - results found by Leximancer

5. Discussion

5.1. Time – duration of stay in Ericeira

As Decker (2020) already figured out, the duration of stay has a big impact on the price a landlord sets for their accommodation. When tenants stay a short time, they will most likely set the price above market average price. The longer tenants stay the more likely prices will be below market average. The concept map proved that the factor "time" is the strongest concept associated among all three groups.

Only one of the five interviewed landlords said that the duration of stay does not change the price he charges from tenants. Everyone else mentioned that they have higher prices for short-term-tenants. Decker (2020) figured out that short-term rentals are higher priced as cleaning and maintenance costs as well as costs for fixing potential damages are higher when tenants change often. Thus, Landlords in Ericeira admitted that they also spent more time on screening and selecting participants and thus, they prefer to have long-term rental as it means less work and less stress for them.

Wrede (2022) stated that landlords are more likely renting their properties for short term when it is easy to find new tenants. The interview with the landlord showed that landlords in Ericeira believe it easier to find tenants for shorter terms than finding long-term-tenants as there is a lot of demand for short-term accommodation in Ericeira. Thus, digital nomads are an ideal target for landlords as they stay in average 71 days in a specific place only ("2022 State of Digital Nomads", n.d.).

All three groups showed a strong awareness of the impact digital nomads are having on the decision-making process of landlords in Ericeira.

"Yeah, also a digital nomad (even Portuguese) is not looking for a long-term house renting contract which makes the landlords act in two ways: First, they don't have a steady income for a whole year, so they try to make up for the few months they can get people in. Second, there has to be a trust between landlord and tenant, if a lodger somehow violates the landlord rules (or makes damages) and will be out in the next month, the landlord will have more and more distrust in "speedy rentals" and will ultimately add "precaution" in the price." (Lo3)

Thus, digital nomads impact housing prices as they increase the demand in short-term rentals, meaning that landlords will prefer renting their accommodation for a short period above average price as it is easy to find new tenants and maintenance costs are higher.

5.2. Months – period in which people search for housing

The second largest concept "months" that is strongly connected to the concept of "time" was mainly mentioned by digital nomads. During the interviews they admitted that the month in which they start looking for a new accommodation in Ericeira had a big impact on housing offer and prices. Especially during the months of June to August they struggled finding affordable housing for themselves. The importance of having a good timing to find affordable housing was also mentioned by one local who described her helplessness during summer

Furthermore, digital nomads mentioned the uncertainty and danger of being kicked out during these months as many landlords prefer to use housing for tourism and short-term-rentals during summertime. "Something even worse here is that they are kicking out people here during summer because they know there are people coming over the summer and it is something I just realized here and had never seen before. Before I came, I had a stay until June and July is actually the time where it gets heated, and it is so hard to find a place during the summertime." (DN6)

Thus, housing affordability in Ericeira varies during the year, especially for digital nomads. Reasons might be that digital nomads have less time for searching for accommodation whereas locals might be more flexible with their moving dates (Lee *et al.*, 2019). Furthermore, tourist high season in Ericeira in the beginning of May. As already shown by Almeida *et al.* (2021) and Mendes (2021), tourists have a gentrification effect meaning that they will replace local populations in city centers. This study showed that also digital nomads experience a negative effect of tourists on their personal housing affordability.

5.3. Work and income

Hulchanski (1995) defined housing affordability as the expenditure-income-ratio. Consequently, the work and income of a person will have a main influence on their personal housing affordability. Interestingly, work is the third biggest concept mainly discussed by locals. Whereas digital nomads care and worry less about housing prices and define affordability mainly over their ability to pay for hobbies, locals define affordability through the ratio of income and housing prices. "I associate affordable housing to a place with living conditions but that doesn't cost more than half of my salary." (Lo5)

As previously mentioned by Reichenberger (2017), Hannonen (2019) and Bozzi (2020), digital nomads want to maximize their free time meaning that they travel to places that are affordable compared to their income. As digital nomads have the freedom of working from anywhere, they can move away if housing gets too expensive compared to their income.

Whereas one group of nomads are willing to pay higher prices, other mention that even though they could pay and afford high prices, they prefer moving to another place as their priority is spending money on their lifestyle. "For me it was the same, if I didn't find anything within my budget I would move, because I want to spend my budget on different stuff, surfing, or gym, and not wasting it all on accommodation." (DN2)

In contrast local populations in Ericeira have to find affordable housing within a very tight budget. Thus, one participant suggested a ratio of 30% as affordable while admitting it is impossible to find in Ericeira. "I searched for a very long time until I could find something that suit the range of prices, I was looking for taking into account that wages in Portugal aren't that high and the prices of accommodations here in Ericeira are very high compared to the wages." (Lo1)

When being asked if digital nomads are a threat to housing affordability for locals, all three groups mentioned that, even though digital nomads change the market and worsen housing prices in Ericeira, Portuguese salaries not being adapted to the rising price levels are the main problem in Ericeira. "I mean, currently the average wage in Portugal is around 1042ϵ . In Ericeira, the average wages will for sure be way less than this like $4-5\epsilon$. So, our buying power is way less than the average around Europe. Just recently a studied concluded that Lisbon is the third most expensive city to live in the World, when you compare the general incomes with housing prices and cost of living." (Lo4)

5.4. Prices – rental prices in Ericeira

The concept of prices is strongly associated with the concept of "time". As already mentioned before, short-term rentals are most-likely more expensive than long-term rentals according to the participants of the focus group interviews (Decker, 2020; Haffner, 2014).

When comparing the emotions that locals and digital nomads have towards renting prices in Ericeira it is obvious that digital nomads have a mixed, unclear attitude whereas locals have a strong and clear perspective on prices. Feelings mentioned mostly by digital nomads were: "surprising", "do not care", "angry", "difficult", "overpriced", "reasonable". One participant even mentions that prices in Ericeira are more expensive than in her home country in Austria which was "surprising" for her. Two of six participants furthermore admitted that their current accommodation is not reasonably priced. In comparison locals showed a more negative and angrier attitude towards prices in Ericeira as they described prices as "expensive", "insane" and "over the top". However, all locals agreed that their current accommodation is reasonably priced.

The problematic of housing affordability being a subjective term that is difficult to measure (Haffner, 2014) had been proven by this study as well. Whereas locals and digital nomads mostly had a negative, angry, or passive attitude towards prices, landlords described prices for their accommodations as "reasonable" and "fair". One landlord mentioned that sales prices for houses in Ericeira are high and thus, he needs to set up higher prices to pay off his credit. "Well, for me it is not a real business. I don't really care about the market price, but I don't want to make a profit from this apartment. I just want to pay off the loan and insurance. So, I ask for the amount that pays off these two things. So, it is fair." (La3)

Landlords considered the housing to be reasonably priced as Ericeira is an attractive area for tourism, houses are close to the ocean and their prices would be similar to other housing options in the market. Furthermore, they mentioned the expenses they have to compensate when renting houses. "We also have to think the taxes, state of the house and maintenance and other factors. Can be expensive sure, as we have low salaries, but we think on the other side, on the side of the owner, it is not that expensive. Renting is a business." (La5)

5.5. People – the personal connection between tenant and landlord

Another important concept tagged by landlords was the concept of "people". As previously mentioned by Haffner (2014) landlords will more likely set prices lower if they have a good connection to their tenants, they. The focus group interviews proved these results. Digital nomads mostly admitted that they have a great connection to their landlords: "super decent, super personal, very lovely." (DN6)

Furthermore, they felt like trust would be an important factor in the relationship between tenants and landlords in Ericeira. One digital nomad mentioned she thinks the landlord dropped the price because they had a good connection, another one said they kept the bills out and offered cleaning for free as they liked her. Even though digital nomads slightly described a stronger and more trusted relationship to their landlords, locals also experience a positive connection to their landlords. The importance of trust was also mentioned by landlords. Thus, they said they seek for tenants that are honest and careful. Furthermore, it is important that they trust in their ability to pay rent. "I find it hard to know if they have conditions to pay the rent all the contract period. I tried to analyze they professional conditions but is not always easy." (La3)

During the selection process, landlords also check for similar values, a tenant's purpose of being in Ericeira, their behavior and age. Some landlords mentioned that they have had bad experiences with previous tenants and thus, are selecting people more strictly. Furthermore,

they prefer long-term-tenants as they prefer to stick to tenants, they have had a positive experience with. Even though Chevtaeva & Denizci-Guillet (2021) mentioned that digital nomads usually create a bubble separating themselves form local populations, local landlords showed an overall positive attitude towards digital nomads in Ericeira. "I have a great relationship with them, actually, really inspiring sometimes! And of course, some of my clients are digital nomads!" (La4); "I think that this concept come to increase our culture and is a great opportunity for us to learn." (La3)

5.6. Pay - Willingness and ability to pay certain prices for housing

The last concept that was tagged mainly by landlords is "pay". Thus, according to this study landlords in Ericeira seek tenants that are able and willing to pay rent. Whereas digital nomads are more likely to accept unreasonably priced accommodations, locals are more aware of the consequences of agreeing on higher prices and prefer to reject unreasonably priced accommodation. Landlords then, make profits from the presence of digital nomads as the demand in short-term housing is bigger and the behavior of digital nomads accepting higher prices makes it easy for landlords to find tenants for accommodation priced above market-average (Decker, 2020).

"If I see a price that is not reasonable, I just don't move forward with the rental. That's why I decided to wait and search a bit longer before renting a place. Because I don't want to be part of this." (Lo1)

This study found three main reasons why digital nomads accept higher prices for the same accommodation than locals do. Firstly, digital nomads in Ericeira showed limited knowledge about Portuguese salaries. Thus, they simply do not know what a reasonable price might be to pay. Secondly, digital nomads want to maximize their free time and want to have as little stress as possible when choosing accommodation as they only stay short time in one place (Reichenberger, 2017; "2022 State of Digital Nomads", n.d.). For example, one digital nomad mentioned that she recently figured out that her flat mate pays less for the same room. When being asked if she will say something about it, she answered: "No, is my last two weeks here. So, no." (DN1)

Thirdly, this study also showed a strong imbalance between the origin countries of digital nomads and the places they are traveling to as already mentioned by Thompson (2018), Cohen *et al.* (2013) and Bozzi (2020). This study showed that digital nomads can be divided into two groups regarding their attitude and willingness to pay: some participants showed a strong

willingness to pay as they had a strong wish to stay and live in Ericeira whereas others mentioned, they will leave and move out if prices will not match their expectations.

For example, one digital nomad mentions that she is ready to pay the same rent that she would pay in Berlin as she is used to the prices back home and can get a better lifestyle in Ericeira for the equal amount of money she would pay back home. This statement proves that there is a strong willingness to pay prices beyond the Portuguese average housing prices and shows an "I want, I can, I will"-attitude. "I think the problem is that people have the same price range as they have in their own country when coming here. And people are willing to pay these prices and of course people here are rising the prices because they see that people will pay for it — so I get it. They are making money from it." (DN4)

Other digital nomads strongly agree to that 'care-free-attitude' and admitted that they were checking prices more carefully in the beginning of their remote career. As Ericeira is a more affordable price than their home country they do not need to care too much about planning their budget. "In the beginning I checked more, but for now I do not really plan my budget. Of course, if I moved to New York, things would be different – but living here, it is all good." (DN3)

Even though this group of digital nomads does not like getting overcharged, they have experienced paying more multiple times before, want to avoid stress and do not want to be bothered with long discussions about price. They can pay and thus, they will pay: "The contract that I signed had a problem and you could still see the actual price that it was rented for before and yeah, I paid much more. But I wanted this room because otherwise someone else would take it." (DN3)

6. Conclusion

6.1. Answering the research objectives and the research question

Regarding the first objective, defining the product housing for locals and digital nomads, this study showed that, both groups in Ericeira demand similar features in housing. Interestingly, landlords participating in the focus group interviews mentioned that they believe that digital nomads and locals have different requirements and expectations in houses. "I have houses for digital nomads and others to long term. It is not comparable. They have different needs and interests." (La5)

Digital nomads as well as locals listed wi-fi, no mold, light, and furniture as important factors for their choice of housing. Moreover, digital nomads value a washing machine as a plus whereas locals care about a nice view, having a backyard and parking options as well as they mentioned the importance of having a nice neighborhood. When it comes to the location of

housing, digital nomads and locals showed no clear preferences. Some mentioned they prefer living in the city center and are willing to pay more for a central location, whereas others prefer to stay outside the city. Surprisingly, even though previous studies mentioned that digital nomads choose their places to stay regarding the speed of internet as well as wi-fi options, participants of this interview mentioned that wi-fi is less important for them as portable wi-fi routers are cheap and easy to get around the world. The concept model did not show any importance of different housing features. Consequently, locals and digital nomads compete for the same housing options in the market as they demand the same features in housing.

When it comes to the second objective, the concept model did not show any importance of promotion when it comes to housing affordability in Ericeira. However, the concept map showed that landlords focus on selecting the right tenants (people) and care about their ability to pay (pay). Even though, landlords did not directly mention their preference of targeting digital nomads, the manual analysis showed that landlords have an overall positive connection to digital nomads and tend to trust more in their abilities to pay rent. The group interview with digital nomads showed that five of six participants found their apartment on Facebook groups, only one found her apartment through friends (word of mouth), whereas none of the locals were using Facebook groups to find housing. Locals found affordable housing mainly through friends (word of mouth), only one used the platform Idealista. Thus, digital nomads in Ericeira are targeted through Facebook whereas there is no useful platform available for locals searching for affordable housing. Landlords showed a tendency of mainly targeting digital nomads as they believe in their abilities to pay rent and be careful and trusted tenants.

When it comes to the third objective, understanding the price building of housing in Ericeira, this study identified that factors such as short-term duration of stay, months of arrival, rent stickiness as well as expenses for landlords mainly drive rent prices in Ericeira. As digital nomads stay short-term and landlords assume they have higher incomes (rent stickiness), they will set up higher prices. As mentioned above, there were two types of digital nomads: One type that moves away if rents are unreasonable and the ones that have the "I want, I can, I will"-attitude and will accept unreasonably priced housing options.

In summary, the conceptual model needs to be updated: ratio of income and work needs to be added, "product" removed, "promotion" and "price set" stays, price set by landlord must be added by months of search, expenses of landlord and location of housing. Therefore, the new factor of work-to-income-ratio is highly important as most locals and landlords mentioned the problem of Portuguese salaries not being adapted to the rising price level of housing.

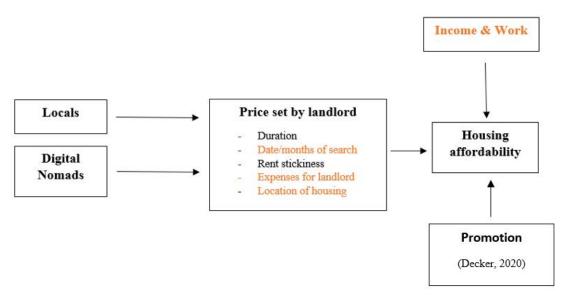


Figure 8: Updated conceptual model (own elaboration)

To answer the main research question: How do digital nomads effect housing affordability for local populations in Ericeira, this study concludes that digital nomads and locals look for the same type of housing and thus, do not change the offer in housing. However, they increase the demand in housing. Most apartments and rooms are listed and promoted through Facebook groups which were only effectively used by digital nomads. This study found that there is no useful platform available where locals can search and find affordable housing. Only, word of mouth (friends, personal connections, etc.) helped locals in Ericeira to find houses. Furthermore, there is a strong willingness and ability to pay and accept higher prices among the digital nomads whereas locals refuse or are incapable of paying unreasonable prices. Landlords set their prices according to similar housing options and thus, the acceptance of higher prices leads to heavily increasing renting prices in Ericeira.

Consequently, digital nomads decrease housing affordability for local populations as they take away residential houses, are able and willing to pay unreasonably high prices and are attractive tenants for landlords who tend to rent housing preferably to digital nomads instead of locals.

6.2. Practical contribution

As previously shown digital nomads and locals compete for the same product "housing" in Ericeira. To solve the problem of having a highly increasing demand for the same type of accommodation, the Portuguese government should support building programs to increase renting options in the housing market. At the same time, social housing programs in Ericeira need to be improved to match the demands of local populations. Furthermore, this study showed

that co-living spaces in Ericeira do not match the demands of digital nomads. It might help to create affordable co-living spaces that allows digital nomads to connect with local communities to not feel like they are "living in a bubble". If there were multiple co-living spaces that meet the criteria of digital nomads, the competition for housing would be less challenging for local populations. However, as this study shows that digital nomads and locals look for the same standards in housing, further market research needs to be conducted to understand how to create attractive co-living spaces and how to promote them to successfully target digital nomads and thus, to create a new market segment.

To solve the problem of landlords preferably targeting digital nomads in Ericeira, a possible idea could be creating a platform run by local governments in which houses are rated according to their features, location, etc. like it is currently done in the Netherlands (Haffner, 2014). Based on the score a maximum rent price is set that can only be increased by a certain percentage per year. When tenants apply for renting houses, local government should prioritize locals and thus, can secure affordable housing options for locals.

Thirdly, this dissertation found a strong willingness and ability to pay as well as to accept higher unreasonable prices among digital nomads. Digital nomads must be more aware about their responsibilities and the consequences of their behavior. For employed digital nomads, businesses should establish trainings in which remote worker learn the importance about being well-informed about a country's market situation and the consequences of accepting higher prices, posting their budgets on social media, or paying much upfront to find housing.

As many digital nomads are self-employed, it is important to generally increase awareness of the issue digital nomads and their influence on local populations. All participants had overall positive feedback for the group interviews. Digital nomads admitted that it helped them to be more aware of the problems in Ericeira and said they will be more careful accepting unreasonable prices from now on. Locals were grateful they had been giving a platform to talk about their struggles and had hope that this dissertation will spread awareness for their plight. Thus, it is important to conduct further studies about the influence of digital nomads on local populations.

As locals showed their fears of being displaced from their hometown Ericeira, all participants demanded better regulations and the adaption of Portuguese salary to the increasing price level. However, the effectiveness of regulations in the real estate market is questionable. For example, in the German city Berlin, the rent price break, which is a regulation setting an upper limit for rents, only worsened the market situation and led to shortage in housing (Wrede, 2022). Also, Landis and Reina (2021) figured out that restrictions in land use led to more

expensive homes everywhere. Moreover, Allegra *et al.* (2020) showed that the Portuguese government is negatively influenced by EU-Portugal regulations. Thus, another research question could be does the EU need a European housing policy?

However, Ericeira needs more control as the market situation and the offers on Facebook got out of hand and there seem to be multiple informal rent agreements and scams on the market as mentioned by digital nomads and locals. Wrede (2022) mentions that Germany protects its tenants as contracts always need to be unlimited and can only be legally terminated in certain instances. As the conceptual map showed the high importance of "month" (period in which tenants are looking for houses), it could be helpful if the Portuguese government follows the example of Germany and bans limited contracts to ensure that residents can stay in their houses all years around.

6.3. Theoretical contribution

The findings underpin research carried in the field of tourism and its effect on housing affordability for residents. For example, Canh (2020) and Almeida *et al.* (2021) proved that tourism has a positive influence on a country's economy through job creation and consumption. This dissertation shows that digital nomads have similar effects. In the case of Ericeira, the city benefits from digital nomads during tourist off-season as they keep tourist activities alive during winter times. Furthermore, landlords mentioned that they get inspired by digital nomads and like to learn from the new input they bring into the city.

When it comes to the downsides of digital nomads, the findings concur with previous studies such as Wrede (2022) who mentioned that residents fear competition and overcrowding effects of tourism and demand political counteraction. This study shows that the presence of digital nomads creates the same feelings and thoughts. Furthermore, they fear that Ericeira will lose its initial identity as digital nomads are changing the city's character. Kayat *et al.* (2013) showed that tourism leads to income inequality and increased prices in goods and services. The findings of this dissertation proved that digital nomads in Ericeira have the same effect. Participants of this study believe that digital nomad are responsible for increased prices in Ericeira. Whereas previous studies showed that tourism has a negative effect on housing affordability as residential housing is converted into tourist accommodation, this study shows that digital nomads effect housing affordability negatively as they compete for the same housing options while having the competitive advantage of having higher budgets. This dissertation shows that digital nomads affect housing prices with their behavior and their presence in Ericeira. Yates (2008) mentioned that high demand is the main driver for rental prices.

When it comes to factors that influence the prices landlords set up for rentals, the results of this study correspond to previous findings. Landlords showed a strong tendency to set up prices according to how similar houses are priced. Thus, the findings concur with Decker (2020) who figured out that firstly, the market average price of housing is an important factor when landlords decide how to set rental prices. Then, landlords can decide whether they suggest prices above or below the average market price. Focusing on the latest research carried by Decker (2020) this study shows that duration of stay and landlord's personal connection to tenants have an impact on renting prices. This study adds that landlords tend to prefer digital nomads as tenants as they trust in their abilities to pay and see digital nomads as inspiring. Regarding the length of stay, this study showed that digital nomads vary in their length of stay. Whereas some said they prefer to stay only few weeks, some wanted to stay in Ericeira for longer and thus, seek for unlimited contracts. The findings contribute to the research of Wrede (2022) who said landlords are more likely to rent short-term if it is easy to find new tenants. In the case of Ericeira, the study shows a high demand in housing means that landlords can easily find new tenants which increases competitiveness and negatively effects on housing affordability for locals. Whereas Decker (2020) showed that place of promotion has an influence on prices for rentals, this study shows that locals and digital nomads use different platforms for finding housing. In the case of Ericeira, Facebook groups were the most popular platform.

When it comes to defining the term digital nomads, this study identified similar characteristics as already contributed by multiple studies such as Reichenberger (2017), Hannonen (2019) or Bozzi (2020). This study, furthermore, identified two types of digital nomads regarding their behavior when searching for accommodation. The ones that move away if a place is not as affordable as expected as they want to maximize their lifestyle and the ones that really want to stay in Ericeira and thus, are willing to pay and accept high prices: They want, they can, they will.

Furthermore, the findings add to previous research done by Thompson (2018) who identified a strong imbalance between a digital nomad's hometown and the places they travel to. This study showed that this imbalance can be seen in the way digital nomads and locals in Ericeira define the term housing affordability. Whereas housing is affordable for locals when it has a specific percentage of their income, allowing them to pay the bills, digital nomads rate affordability depending on how much money they will have left for leisure activities. As already mentioned by Bozzi (2020), the findings proved that there is a strong class awareness of digital nomads who knows that they have better salaries and thus, can have better lifestyles.

When deciding for housing, Lee *et al.* (2019) identified three important factors: access to the internet, feeling of belonginess and being surrounded by like-minded people. This dissertation proved that belonginess is an important factor as nomads want to have a normal life and not living in a bubble of expats. However, internet was not important to them as it is easy to buy potable Wi-Fi nowadays. In contrast to the findings of Lee *et al.* (2019) digital nomads in Ericeira did not seek to be surrounded by like-minded people. Nomads do not want to live in a bubble of foreigners, a problem that had been identified by Chevtaeva and Denizci-Guillet (2021). On the contrary, this study figured out they want to be part of the Portuguese culture and value connections to local people.

To summarize, digital nomads tend to have similar effects on housing affordability for locals as tourists. However, the processes of how digital nomads influence housing unaffordability are different. Whereas residential housing options are turned into tourist accommodation for tourists (affecting supply), digital nomads demand the same type of housing and thus, make the market more competitive for locals that cannot keep up with the higher salaries of digital nomads. The study identified that digital nomads spend less time researching an apartment as they move a lot and know they can go beyond their actual budget whereas locals are more limited and spend more time on searching. Thus, digital nomads have the competitive advantage of being more flexibility and having higher budgets for housing.

It is obvious that for tourist destinations like Ericeira, digital nomads can be very harmful as they cause a double burden. Tourists will take away residential areas as the amount of tourist accommodation rises, at the same time digital nomads will compete against locals for the already smaller number of residential houses.

This study grants first insights into price building mechanisms for housing in Ericeira and how digital nomads affect housing affordability for locals. This study started to fill a research gap as digital nomads and their effects on housing affordability for locals had never been studied before. Even though everyone is aware of the new category of digital nomads nobody pays enough attention to them yet. Whereas gentrification and touristification are highly discussed topics in literature, a possible new nomadification should be further considered and studied to create policies and regulations ensuring affordable housing for locals.

6.4. Limitations

Housing affordability can be measured subjectively and objectively (Haffner, 2014). This study mainly focused on the subjective perception of housing affordability from the perspectives of

landlords, locals, and digital nomads and Ericeira and thus, lacks an objective perspective on the issue. Even though the analysis with Leximancer resulted a concept map, the analysis was not as strong as expected. The analysis would have been stronger if there was more text available that could be analyzed. Thus, the interviews should have been longer, more detailed and participants could have engaged more. A possible reason for the lack of length could be that there were not many participants to chose from. When searching for participants for the interviews, many locals and digital nomads showed initial interest in participating, but not a lot of people were showing up in the end. Especially among landlords it was difficult to find participants and the ones taking part in the interviews showed a reserved attitude towards some of the questions. Furthermore, digital nomads showed no uniform attitude towards some questions making it difficult to analyze the results. Thus, the analysis with Leximancer resulted into a weak concept map with only few words associated to the six concepts making it difficult to identify clear results. Consequently, the focus group interviews had to be manually analyzed using the six found concepts as an orientation.

Another main problem of this study is the lack of attention on tourism influencing housing affordability for locals. Ericeira experienced a massive boom in the number of digital nomads and tourists at the same time. However, this study does not allow to clearly distinguish between the effects of regular tourists and the effect of digital nomads on housing affordability for local populations in Ericeira.

6.5. Future Research

Generally, there is a huge demand in research about digital nomads as there is only few data available and the number of digital nomads is expected to increase even more during the next years. Also, the study showed that increasing awareness and spreading information about the sensitive issue of digital nomads and their effects on local populations, can be helpful to ensure affordable housing options for residents.

Even though the results of this study can be used for different cities that are popular for digital nomads as well, future research should conduct similar interviews in different cities around the world analyzing how different places handle the increasing number of digital nomads. At the same time, researchers need to better define the term digital nomads. As this study proved that there is no such thing as a standard digital nomad, different categories or types of digital nomads must be classified to allow better research.

Furthermore, new studies should collect quantitative data to prove the findings of this study allowing a more objective perspective. Therefore, especially sensitive data should be gathered

through anonymous questionnaires instead of using focus group interviews to allow bigger data sets. Collecting qualitative and quantitative data over a longer period will lead to better outcomes as well.

Nevertheless, future studies must conduct overlapping effects of tourists and digital nomads on housing affordability for local populations to allow a clear distinction between tourism and digital nomads. Gentrification is an issue that had already been highly researched in the past. Touristification as further mentioned by Almeida *et al.* (2021) has caught the attention of researchers in recent years. This study showed that "nomadification" might be a new global trend, meaning that digital nomads increase price levels in destinations they travel to and thus, affect housing affordability for local populations negatively. Consequently, locals, that cannot keep up with the rising prices, will have to move away from home and will be replaced by digital nomads. However, this study shows that digital nomads are also highly appreciated as they keep touristic activities up during low season and bring new ideas, inspiration, and businesses into the city. Thus, further research needs to be conducted to find possible solutions that secure affordable housing for residents and that allow digital nomads to find housing at the same time: *Is more like a chicken and egg problem. Because with nomads, infrastructure and economy can grow, but then, prices go up."* (DN1)

Sources:

DECREE LAW No. 68/2019 in Diário da República n.º 98/2019 (2019).

DECREE LAW No. 62/2018 in Diário da República n.º 150/2018 (2018).

Diário da República, Regulamento n.º 859-A/2018 (2018).

Bibliographical references

- 2022 State of Digital Nomads. Retrieved 7 September 2022, from https://nomadlist.com/digital-nomad-statistics
- Allegra, M., Tulumello, S., Colombo, A., & Ferrão, J. (2020). The (hidden) role of the EU in housing policy: the Portuguese case in multi-scalar perspective. *European Planning Studies*, 28(12), 2307-2329. https://doi.org/10.1080/09654313.2020.1719474
- Almeida, S. (2018). *Na Ericeira, a onda do surf está a expulsar os residentes*. PÚBLICO. Retrieved 25 October 2021, from https://www.publico.pt/2018/11/12/local/reportagem/alojamento-ericeira-provisorio-1850520.
- Amore, A., de Bernardi, C., & Arvanitis, P. (2020). The impacts of Airbnb in Athens, Lisbon and Milan: a rent gap theory perspective. *Current Issues In Tourism*, 1-14. doi: 10.1080/13683500.2020.1742674
- Aroles, J., Granter, E., & Vaujany, F. (2020). 'Becoming mainstream': the professionalisation and corporatisation of digital nomadism. *New Technology, Work And Employment*, *35*(1), 114-129. https://doi.org/10.1111/ntwe.12158
- Bailoa, S., & Cravo, P. (2020). Strategictourism planning in Portugal. *Zbornik Veleučilišta U Rijeci*, 8(1), 353-374. https://doi.org/10.31784/zvr.8.1.23
- Bozzi, N. (2020). #digitalnomads, #solotravellers, #remoteworkers: A Cultural Critique of the Traveling Entrepreneur on Instagram. *Social Media* + *Society*, *6*(2), 205630512092664. https://doi.org/10.1177/2056305120926644
- Bramley, G. (2011). Affordability, poverty and housing need: triangulating measures and standards. *Journal Of Housing And The Built Environment*, 27(2), 133-151. https://doi.org/10.1007/s10901-011-9255-4
- Branco, R., & Alves, S. (2018). Urban rehabilitation, governance, and housing affordability: lessons from Portugal. *Urban Research & Amp; Practice*, 13(2), 157-179. https://doi.org/10.1080/17535069.2018.1510540
- Canh, N., & Thanh, S. (2020). Domestic tourism spending and economic vulnerability. *Annals Of Tourism Research*, 85, 103063. https://doi.org/10.1016/j.annals.2020.103063
- Carrascal Incera, A., & Fernández, M. (2015). Tourism and income distribution: Evidence from a developed regional economy. *Tourism Management*, 48, 11-20. https://doi.org/10.1016/j.tourman.2014.10.016
- Castrillon, C. (2022). Why The Digital Nomad Lifestyle Is On The Rise. Forbes. Retrieved 19 August 2022, from https://www.forbes.com/sites/carolinecastrillon/2022/07/17/why-the-digital-nomad-lifestyle-is-on-the-rise/?sh=19802cef4934.
- Chen, J., Hao, Q., & Stephens, M. (2010). Assessing Housing Affordability in Post-reform China: A Case Study of Shanghai. *Housing Studies*, 25(6), 877-901. https://doi.org/10.1080/02673037.2010.511153
- Chevtaeva, E., & Denizci-Guillet, B. (2021). Digital nomads' lifestyles and coworkation. *Journal Of Destination Marketing & Management*, 21, 100633. https://doi.org/10.1016/j.jdmm.2021.100633

- Cohen, S., Duncan, T., & Thulemark, M. (2013). Lifestyle Mobilities: The Crossroads of Travel, Leisure and Migration. *Mobilities*, 10(1), 155-172. https://doi.org/10.1080/17450101.2013.826481
- Cunha, A., & Lobão, J. (2021). The effects of tourism on housing prices: applying a difference-indifferences methodology to the Portuguese market. *International Journal Of Housing Markets And Analysis*. Retrieved 27 October 2021 from https://doi.org/10.1108/IJHMA-04-2021-0047
- dictionary.cambridge. (2022). Retrieved 21 July 2022, from https://dictionary.cambridge.org/dictionary/english/local.
- Decker, N. (2020). Affordable Housing Without Public Subsidies. *Journal Of The American Planning Association*, 87(1), 62-72. https://doi.org/10.1080/01944363.2020.1798806
- Easterling, D. (2005). Residents and Tourism. *Journal Of Travel &Amp; Tourism Marketing*, 18(4), 49-64. https://doi.org/10.1300/j073v18n04_04
- Ericeira for Digital Nomads. Retrieved 7 September 2022, from https://nomadlist.com/ericeira Ericeira, Surfing Reserve. Retrieved 7 September 2022, from https://www.visitportugal.com/en/node/73781
- Ferriss, T. (2007). *The Four-Hour Work Week: Escape the 9-5, Live Anywhere and Join the New Rich*. Random House.
- Haffner, M., & Boumeester, H. (2014). Is renting unaffordable in the Netherlands? *International Journal Of Housing Policy*, 14(2), 117-140. https://doi.org/10.1080/14616718.2014.908570
- Hannonen, O. (2020). In search of a digital nomad: defining the phenomenon. *Information Technology &Amp; Tourism*, 22(3), 335-353. https://doi.org/10.1007/s40558-020-00177-z
- Hulchanski, J. (1995). The concept of housing affordability: Six contemporary uses of the housing expenditure-to-income ratio. *Housing Studies*, 10(4), 471-491. https://doi.org/10.1080/02673039508720833
- INE. (2022). *Censos* 2021. Censos.ine.pt. Retrieved 6 September 2022, from https://censos.ine.pt/xportal/xmain?xpgid=censos21_main&xpid=CENSOS21&xlang=pt.
- Kayat, K., Sharif, N., & Karnchanan, P. (2013). Individual and Collective Impacts and Residents' Perceptions of Tourism. *Tourism Geographies*, *15*(4), 640-653. https://doi.org/10.1080/14616688.2012.762690
- Khan, M., & Manderson, L. (1992). Focus groups in tropical diseases research. *Health Policy And Planning*, 7(1), 56-66. https://doi.org/10.1093/heapol/7.1.56
- Landis, J., & Reina, V. (2021). Do Restrictive Land Use Regulations Make Housing More Expensive Everywhere? *Economic Development Quarterly*, 35(4), 305-324. https://doi.org/10.1177/08912424211043500
- Lees, L., Slater, T., & Wyly, E. (2008). Gentrification. Routledge.
- Lee, A., Toombs, A., Erickson, I., Nemer, D., Ho, Y., Jo, E., & Guo, Z. (2019). The Social Infrastructure of Co-spaces. *Proceedings Of The ACM On Human-Computer Interaction*, 3(CSCW), 1-23. doi: 10.1145/3359244
- Leximancer Pty Ltd. (2021). Leximancer user guide. Release 4.5 (pp. 1–137). Leximancer.
- Lund, S., Madgavkar, A., Manyiku, J., Smit, S., Ellingrud, K., Meaney, M. & Robinson, O. (2021): https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-after-covid-19
- Lundberg, E. (2015). The Level of Tourism Development and Resident Attitudes: A Comparative Case Study of Coastal Destinations. *Scandinavian Journal Of Hospitality And Tourism*, 15(3), 266-294. https://doi.org/10.1080/15022250.2015.1005335
- Maclennan, D. (Ed.), & Williams, R. U. (1990). *Affordable Housing in Britain and the United States*. Joseph Rowntree Foundation.
- Makimoto, T., & Manners, D. (1997). Digital nomad. Wiley.

- Matos, F., & Campelo, M. (2021). *Affordable housing in Portugal: A new trend for medium-term investors*. ITR. Retrieved 7 July 2022, from https://www.internationaltaxreview.com/article/2a6a92avgpjm30o0xvy80/affordable-housing-in-portugal-a-new-trend-for-medium-term-investors.
- Mendes, L. (2021). Transnational gentrification and the housing market during pandemic times, Lisbon style. *Urban Geography*, 42(7), 1003-1010. https://doi.org/10.1080/02723638.2021.1949832
- Mikulić, J., Vizek, M., Stojčić, N., Payne, J., Čeh Časni, A., & Barbić, T. (2021). The effect of tourism activity on housing affordability. *Annals Of Tourism Research*, 90, 103264. doi: 10.1016/j.annals.2021.103264
- Müller, A. (2016). The digital nomad: Buzzword or research category?. *Transnational Social Review*, *6*(3), 344-348. https://doi.org/10.1080/21931674.2016.1229930
- Nurhas, I., Aditya, B., Jacob, D., & Pawlowski, J. (2021). Understanding the challenges of rapid digital transformation: the case of COVID-19 pandemic in higher education. *Behaviour &Amp; Information Technology*, 1-17. https://doi.org/10.1080/0144929x.2021.1962977
- OECD. (2022). *Portugal Economic Snapshot OECD*. Oecd.org. Retrieved 6 September 2022, from https://www.oecd.org/economy/portugal-economic-snapshot/.
- Price evolution of housing for rent in Ericeira. Retrieved 7 September 2022, from https://www.idealista.pt/en/press-room/property-price-reports/rent/lisboa/mafra/ericeira/
- Reichenberger, I. (2017). Digital nomads a quest for holistic freedom in work and leisure. *Annals Of Leisure Research*, 21(3), 364-380. https://doi.org/10.1080/11745398.2017.1358098
- Stewart, D.W. & Shamdasani, P. N. (1990). Focus groups: Theory and practices. Newbury Park: Sage.
- Stewart, D., & Shamdasani, P. (2014). Focus groups (3rd ed.). Sage.
- Thompson, B. (2018). The Digital Nomad Lifestyle: (Remote) Work/Leisure Balance, Privilege, and Constructed Community. *International Journal Of The Sociology Of Leisure*, 2(1-2), 27-42. https://doi.org/10.1007/s41978-018-00030-y
- trends.google. 2022. *Google Trend*. [online] Available at: ">https://trends.google.com/trends/explore?date=today%205-y&q=digital%20nomads>"[Accessed 7 April 2022].">April 2022].
- Wetzstein, S. (2016). The global urban housing crisis and private rental in the Anglophone world: future-proofing a critical sector and tenure. *Housing Finance International*, 31-34.
- Wetzstein, S. (2017). The global urban housing affordability crisis. *Urban Studies*, 54(14), 3159-3177. https://doi.org/10.1177/0042098017711649
- Work From Anywhere. Retrieved 7 September 2022, from https://www.lifeatspotify.com/being-here/work-from-anywhere
- Wrede, M. (2022). How Short-Term Rentals are Changing the Neighborhood. *International Regional Science Review*, 45(4), 417-443. https://doi.org/10.1177/01600176211059981
- Yates, J. (2008). Australia's Housing Affordability Crisis. *Australian Economic Review*, 41(2), 200-214. https://doi.org/10.1111/j.1467-8462.2008.00502.x

Annexes

A. Participants of the focus group interviews (demographics)

Group digital nomads

	DN1	DN2	DN3	DN4	DN5	DN6
Age	27	34	40	22	25	31
Gender	female	female	Female	female	female	female
Nationality	Canadian	German	Danish	Austrian	Finnish	German
Highest Level	Bachelor's	Bachelor's	Master's	High School	Bachelor's	Bachelor's
of Education						
Job	Business	Marketing	Freelance	Webdesign	Work	Project
	Assistant –	Manager	Copywriter		Student	Manager
	(20 hours,					
	part-time)					
Net salary per	1300 euros	1900 euros	average 2000	2000	No answer	2300
month			euros			
Motivation of	Simple life,	Surf,	Recommendation	Small town,	Surf	Surf, stayed
stay in Ericeira	small	similar	of a friend, closer	international		in Lisbon
	village, surf	place to	to home country	people,		before,
		Bali, close		vibes		prefers the
		to home				nature /
		country				countryside
Length of stay	1 month	4 months	1 year	3 months	Endless	2 months
in Ericeira						
Platform used	FB Expats	FB Group	FB Group	FB Group	Through	Facebook
to find	Ericeira	Ericeira			Friends	Groups
accommodation		Rooms				

Group Locals in Ericeira

•	Lo1	Lo2	Lo3	Lo4	Lo5	Lo6
Age	30	32	26	26	31	34
Gender	Male	Male	Male	Male	Female	Female
Nationality	Argentinian	Portuguese	Portuguese	Portuguese	Portuguese	Spanish
Highest level of	Bachelor's	Bachelor's	Bachelor's	Bachelor's	Master's	Master's
Education						
Job	Chef	Surf Coach	Operations Manager	Employee for a Camper Van Rental	Teacher	Clinical Manager in a Pharmaceutical company
Net salary per month	1400 euros	750 euros	1400 euros	840 euros	1100 euros	3750 euros
Motivation of stay in Ericeira	Town, beach, weather	Hometown	Good quality of life, social events throughout the year, good restaurant, seaside town and everything on walking distance	Opportunity of new environment, diversity of people, close to nature, good energy	I like it	Waves as I am a surfer; close to my family (5h by car)

Living in	April 2021	1989	June 2021,	April 2020	I was born	October 2021
Ericeira since?			but lived		but always	
			here before		moved in	
					and out	
Platform used	Idealista	None	None	Olx,	None	OLX
to find				idealista,		
accommodation				sapo ccasas,		
				casa das		
				casas		

Group landlords that rent properties in Ericeira

	La1	La2	La3	La4	La5
Age	48	40	48	32	32
Gender	Male	Male	Male	Female	Female
Nationality	Portuguese	Portuguese	Brazilian	Portuguese	Portuguese
Highest level of	High School	Master's or	Bachelor's	Bachelor's	Master
education		Higher			
In which city do	Lisbon	Ericeira	Ericeira	Ericeira	Ribamar
you live					
Platforms used	Airbnb	FB Group	FB group	FB group,	Social media,
to promote				Idealista,	website,
accommodation				OLX	Airbnb,
					Booking.com,
					others

B Structure of the group interviews

Questions for locals and digital nomads

Dimension	Sub- Category	Type of Question	Question	Author
Demographics			Age, gender, nationality, highest level of education, job, net salary per month, motivation of stay, length of stay / living in Ericeira since, platforms used to find accommodation	
Price	Perception	Opinion	Tell me reasons why you think your current/previous accommodation is (not) reasonably priced? If you say it is not reasonable priced, why did you accept the price?	Haffner (2014)
	Duration of Stay	Opinion	What do you associate with affordable housing?	Decker (2020), Haffner (2014), Wetzstein (2017)
	Rent Stickiness	Knowledge	What do you know about your landlord, how is your personal connection to them?	Wetzstein (2017), Haffner (2014)
		Provocative	Do you think Digital Nomads are a threat to affordable housing? Explain!	Bozzi (2020), Almeida <i>et al.</i> (2021), Chevtaeva and Denizci- Guillet (2021)
		Knowledge	What do you know about renting prices in Ericeira? Did you know that the average renting price in Ericeira reached a peak in	Decker (2020), Idealista (2022),

			February 2022 with 11.3 euros per square meter? For example, in Berlin the number was 10.49 euros in 2021.	Reichenberger (2017)
Promotion		Experience	Tell me about how you found your current accommodation? Did you experience any differences when using different platforms? Which challenges did you face when searching for accommodation?	Decker (2020), Allegra <i>et al.</i> (2020), Lobão and Cunha (2021). Decker (2020), Allegra <i>et al.</i> (2020), Lobão and Cunha (2021)
Product	Features	Opinion	Which features are important for you when renting a place, such as furniture, internet?	Lee et al. (2019), Haffner (2014)
	Programs		Digital Nomad: Ericeira also has some co-living spaces for digital nomads. What were the reasons why you decided to not stay in a co-living? Local: What do you know about social housing programs in Portugal and did you / would you consider this as helpful for finding an affordable place?	Haffner (2014), Decker (2020), Wetzstein (2017), Chevtaeva and Denizci-Guillet, (2021)
	Place	Ideal	In which area of Ericeira do you see yourself ideally living in and would you be willing to pay more for a specific location?	Lee et al. (2019), Wrede (2022)

Questions for landlords

Dimension	Sub- Category	Type of Question	Question	Author
Demographics			Age, gender, nationality, highest level of education, in which city do you live, platforms used to promote accommodation	
Price	Market average price	Opinion	Tell me reasons why you think your current/previous accommodation is (not) reasonably priced?	Haffner (2014)
	Duration of Stay	Opinion	Tell me, how does the rental length (as stated in the contract) impacts the price you charge for your room/ apartment/ etc.?	Haffner (2014), Decker (2020)
	Rent Stickiness	Knowledge	What do you know about your tenants? Do you have a personal connection and if so, are you willing to drop prices for people you know?	Wetzstein (2017), Haffner (2014)
		Provocative	Do you think Digital Nomads are a threat to affordable housing? Explain!	Bozzi (2020), Almeida <i>et al</i> . (2021), Chevtaeva and Denizci- Guillet (2021),
		Knowledge	What do you know about renting prices in Ericeira? Did you know that the average renting price in Ericeira reached a peak in February 2022 with 11.3 euros per square	Decker (2020), Idealista (2022), Reichenberger (2017)

		meter? For example, in Berlin the number	
		was 10.49 euros in 2021.	
Promotion	Experience	Tell me about where and how do/ did you	Decker (2020),
		find tenants for your current	Allegra et al
		accommodation?	(2020), Lobão and
			Cunha (2021),
			Almeida (2021)
		What were the biggest problems for you	Decker (2020),
		finding tenants and how do you select	Allegra <i>et al</i> .
		them?	(2020), Lobão and
			Cunha (2021),
			Wrede (2022)
Product	Opinion	Does your accommodation have any	Haffner (2014)
		special features such as garage; balcony;	
		high-speed-internet, furniture? For which	
		additional features would you decide to	
		increase/decrease renting prices?	
		What do you know about social housing	Haffner (2014),
		programs in Portugal? Have you ever	Wetzstein (2017),
		decided to participate in one of these? Tell	Chevtaeva (2021)
		my why yes or no.	
	Ideal	In which area of Ericeira do you have	Wrede (2022)
		apartments and how does the location	
		affect the prices you charge?	

C Transcript of the group interviews

Interview 1 – digital nomads, 17 May 2022 (in person, in Ericeira)

1. What do you associate with affordable housing? And how does the factor affordability impact the length of stay when you traveling to a specific country?

(DN6): I come from Berlin. So, the prices for rent are quite high. I actually could not find any places to rent in Berlin. Same struggle as here, so for me I don't care – it doesn't matter if I pay as much as there. Better Lifestyle for the same money.

(DN4): I am from Austria. So, renting prices are high there, actually renting here is more expensive which was quite surprising for me. Anyway, it is just my beginning of working remotely.

(DN3): Same for me. I just started working remotely here and before, I always had to check budget and stuff. In the beginning I checked more, but for now I do not really plan my budget. Of course, if I moved to New York, things would be different – but living here, it is all good.

(DN1): I pay 700 Canadian dollars back home which is around 500 euros here. So, I wanted to stick to the same budget here of course. My goal was set to 500 but now, to find a room, I went way above my budget, 400 actually.

(DN2): For me it was the same, if I didn't find anything within my budget I would move, because I want to spend my budget on different stuff, surfing, or gym, and not wasting it all on accommodation.

2. What do you know about renting prices in Ericeira? Did you know that the average renting price in Ericeira reached a peak in February 2022 with 11.3 euros per square meter? For example, in Berlin the number was 10.49 euros in 2021.

(DN5): I am living with locals right now and I pay 250 for a room and I know that this is the real price. We know more about the price range for our group, like nomads and expats instead of knowing what locals pay.

(DN2): In Peniche they have a house, and they pay 400 per month. So that's how much you should pay. But it is the same as in Indonesia. They are trying to make money from people that have a foreign income. It makes me angry. It made me angry already in Indonesia, where I knew I had to pay more because I am white and get ripped off. And here I get ripped off because I am German.

(DN6): Something even worse here is that they are kicking out people here during summer because they know there are people coming over the summer and it is something I just realized here and had never seen before. Before I came, I had a stay until June and July is actually the time where it gets heated, and it is so hard to find a place during the summertime.

(DN4): I think the problem is that people have the same price range as they have in their own country when coming here. And people are willing to pay these prices and of course people here are rising the prices because they see that people will pay for it - so I get it. They are making money from it.

(DN2): Yeah, especially they post on Facebook: Hey I got 1000 as a budget what can I get. There are lots of posts like this.

(DN3): I think the problem isn't that they do not know. It is more that they can, and they will want to pay more to get specific rooms. Because I think most of us know that we get ripped off. The contract that I signed had a problem and you could still see the actual price that it was rented for before and yeah, I paid much more. But I wanted this room because otherwise someone else would take it. From what I have heard I think what I paid is still fair.

(DN5): There is a saying like the person that act is not stupid, is the person who take. If someone posts 1500 and someone takes it. It is actually pretty smart to post it – to try their luck.

(DN6): I also see posts where people say: please put your price so that it is not like a game of bargaining.

(DN2): I spoke with some locals about this topic here in Ericeira and in Peniche and they get so angry and upset because they said they do not know what to do anymore. They don't find housing at the coastline, but they are having jobs here, so they need to move inland and travel far.

3. Tell me about how you found your current accommodation? Did you experience any differences when using different platforms?

(DN1): Expat Group and Idealista.

(DN3): Yes, same. But there is one more. The room group on Facebook where you can find most of the offers.

(DN2): I tried OLX but didn't work was more for buying, so in the end I ended up using the FB groups.

(DN5): through friends. This is also why it is so cheap.

4. Which challenges did you face when searching for accommodation?

(DN4): Difficult

(DN1): Not a lot of offers and many people wanting rooms. I was thinking to buy a house because I really need a place to stay – only found one and then I lost it. But my budget was too small so I thought maybe I can just buy a storage closet. So pretty difficult as there is nothing on the market.

(DN6): April, May and June were actually quite easy. But when I started to look for August and July, I realized this is gonna be really difficult. I was also thinking to leave But I found this place through friends and a lot of scams. People messaging you I have this and this. I have found a camper for 700 without a bathroom – quite interesting.

(DN2): Also got some messages from old men like hey my son just moved out, you can move in and live with me.

(DN4): I was also lucky finding it because I lived other side of this street actually before, then I moved to a hostel, and I will leave in June – so I don't have this problem during summer actually. But for me it was actually just a German girl reaching out to me that she is looking for a flat mate and she checked.

(DN6): I actually found my place super easily. The landlady reached out to me and showed me pictures and I was like: this can't be real. So, I asked her for the price and it was quite decent, so I asked – is this your final prize and she said yes and even went down for 50 euros as I am coming alone. She decreased the price a little bit and I think it is a super fair price, a little bit out of the center. She didn't ask for deposit or anything. I was a bit scared. She was super nice, also hugging me.

(DN1): I was also surprised that they didn't ask for contracts or anything. They just gave me the keys and that's it. Take the key from the plant and that's it. A little strange

(DN3): I kind of find it easy but I also paid 6 months upfront. I know that there is another person that was interested but they didn't like him. So, it helped paying much more upfront. But I also had a very good conversation with this older couple and the vibe was nice.

(DN2): It was super difficult to find something in the beginning for my own. But then I met two other girls and it was super easy to find something for the three of us- within a few days we had it. And in the new place. I did not put so much effort into this, I just posted it in the group on FB that I am looking for a new room and I got some really weird messages. I checked one place which was horrible but then one guy messaged me, and I took a look, and I liked it. I know it is way overpriced but yeah it was kind of easy.

5. Which features are important for you when renting a place, such as furniture, internet?

(DN1): No molt. The first hotel I paid for the whole ceiling was black. And it wasn't cheap, and I was like why nobody takes care of that.

(DN6): Reliable Wi-Fi and a proper desk. Just a place where I can work

(DN3): oh yeah Wi-Fi is important

(DN4): And some windows are great. In my previous apartment there was no light coming in and it was horrible

(DN2): For me it was more like having a comfortable atmosphere, like wooden floor and no white ceramic tiles, molt I don't like it and everything else, Wi-Fi- is possible to get potable Wi-Fi from Vodafone. I just need basics

(DN1): Cleaning. And the washing machine.

(DN3): More atmosphere instead of internet actually.

(DN2): I know that my friend is having this unlimited potable data box and she pays 40 euros per month, and you can just take it and go wherever and is cheaper than co-working

6. I would like to come back to the thing you said. You said you had a nice talk with your landlord. So, what do you know about your landlord, how is your personal connection to them?

(DN2): Our landlords live in Lisbon, and I think they are quite rich. They also have a winter house in the Algarve, and they live directly in the city and driving big cars and have this holiday apartment here in Ericeira. We were talking about this when we picked up the key.

(DN6): From me it was also very personal from the beginning. She introduced me to herself; she is an architect and actually has 4 buildings in this street. She lives in the very first one, so we are neighbors. We talked about her kids and her husband. And I also introduced myself and gave her some details so she can see I am a real person. When I picked up the keys, there was bread and fruit, and they were so nice. Super decent, super personal, very lovely.

Do you think they dropped the price because she liked you?

(DN6): I don't know, she also didn't ask for deposit. Maybe it is because I am from Germany, and they trust us more. I don't know. Because it is quite unusual that they are so easy going, but yeah, I guess they dropped it because we had a good connection.

(DN3): I know a lot about them. I know where they live, what they do, and they lowered the price after I got to know them.

(DN1): In my previous apartment they said they pretty much like me, so they offered to keep the bills out and do free cleaning service. Was still too expensive, was around 1000 euros – so. (DN5): I think people here trust a lot actually.

7. Tell me reasons why you think your current/previous accommodation is (not) reasonably priced? If you say it is not reasonable priced, why did you accept the price?

(DN1): Now I feel like mine is overpriced. Especially because I pay 150 euros more than my flat mate who moved in 8 months before me already. But I didn't know until she told me.

(DN3): You going to say something about this?

(DN1): No, is my last two weeks here. So, no. I knew they were going to do that for summer.

(DN6): For me, definitely reasonable. Everyone who is coming to my place, says: What a place – I am super happy with the place I have. I got two balconies, one in the front and one in the back, proper bathroom, huge bed and I can lay like a starfish. It is for sure reasonable. But I also know that she will charge 900 for the place during summer and then I am out. Now, I am paying 750 euros for a T1 bills included. We also talked for October, and she might increase prices because of the war.

(DN4): Mine is fine, super clean, nice kitchen, balcony and everything is renovated. They charge 600 right now for a room, but I think they will go up during summer.

(DN3): Mine is reasonably priced now that I know what other people pay.

(DN5): Yeah, I know mine is too cheap. But I live with a friend, and he is kinda like renting the whole place and want to live with nice people

(DN2): Right now, I think it is overpriced even though it has a perfect view and location. But also, they haven't rented it out before. Usually, it is empty during winter, and we are the first renting it. I don't know the whole price for my next apartment as I am only renting the room, but I think the girls (flat mates) are making money with me because I have the smallest room and I pay a lot. I think they pay less than me because I pay 650 euros. The apartment is quite big 120 square meters, central heating, newly renovated but even if they pay same like me the price would never be 1900 for an apartment. I guess it is 1400 or 1500. No furniture, no bills. I am ware and I am just biting in the sour apple. Until September and then see. I accepted the

price because I have to. I don't want to live in a small room that has no window and black molt or going back to Germany or paying a flight to Indonesia.

(DN1): For me, it was because I am only here for a month, and I was desperate because else I would be homeless.

(DN5): Here is changing so much, is a lot of adaptions. People just see prices going crazy.

(DN4): Also, the Airbnb prices are crazy. The other apartment they charged me 600 euros per week.

(DN2): I had the same. One week 400 euros for a shared room. And the girls I am moving in they have the same. They are moving out because they rent it for 2000 euro for two weeks and there is nothing special about it.

(DN3): I talked with an Uber driver who lives in Mafra and he said even in Mafra prices in summer are similar to Ericeira prices and is so difficult to rent something. Also, with the deposit. Usually it is 1 month, now is up to 6 months plus guarantor.

8. Ericeira also has some co-living spaces for digital nomads. What were the reasons why you decided to not stay in a co-living?

(DN4): They are super super expensive. They take like 1500 per months during summer.

(DN2): If I want to live somewhere I want my normal life, privacy and I don't want to live in a bubble. Maybe it is just in my head.

(DN6): No, you are alright. I was checking some co-livings and they were so expensive but simple room and not even the first floor, one below, no desk and almost 700 per month with strict rules. For what am I paying? For the bad? For sure not an option, especially when you want to stay longer.

(DN1): I think they are good for people that just come for a couple of days and don't want to invest much time deciding where to stay. But for few months, get another place that it is cheaper.

So not an option for anyone?

All: No

What about Co-working-spaces?

(DN1): I didn't even go to co-working spaces because they are so expensive – 20 euros a day (DN2): I will try to go to coworking spaces because I feel like I am trapped at home if I am 8 hours working in my room and it makes me mentally insane. So, I was thinking to go once or twice per day to change scenery and I think I am more productive. At home I cook, go to the fridge, stare out of the window

(DN1): Or you just drink coffee the whole day. I started inviting friends to my place so we can work together from my home which feels more like a co-working and you are way more productive. Is nice actually.

(DN2): the problem is in town, you can't even go to a café anymore with your laptop because the will not allow you to sit and work there anymore.

(DN1): And no plug-ins at all.

(DN6): 3 years ago, it was no deal actually.

9. In which area of Ericeira do you see yourself ideally living in and would you be willing to pay more for a specific location?

(DN1): I would not go past 30 minutes walking distance from the center as I don't have a car here. I would pay 150 euros more if it is center to the city.

(DN2): I got a car, so I was also looking in Ribamar and Sao Juliao. But walking distance is a plus if you want to go out.

(DN4): Yeah, and there are no busses, and it is hard to get a uber at night time. Else, you are stuck or have to pay for hotels in Ericeira overnight.

(DN6): I prefer living out of here, because I don't see myself living here because there are so many tourists in town. But I also got a car.

(DN3): I would pay more for top floor, ocean view and no neighbors.

10. Do you think Digital Nomads are a threat to affordable housing? Explain!

(DN1): Yeah

(DN2): Maybe a bit but I also think the owners who at the end just charge way too much. It is both sides. It is the owners and the landlords who know that they can charge this money and the digital nomads who just have better salaries.

(DN3): And I also think Portugal needs better regulations

(DN2): Yeah the government has a huge impact as well and they literally do nothing about it. They are not raising the minimum salary, wages

(DN4): It is more individual people who are out there and saying hey I am willing to pay and in the end, it backlashes to them.

(DN1): But especially during summer, prices do not just increase because of the digital nomads. It is more about tourists that come from Lisbon, Berlin or wherever.

(DN2): Also, you have to see that digital nomads are staying during the winter here, so they bring money to the surf schools, restaurants and whatever so they help businesses to get through winter times. Actually, the locals can benefit from digital nomads.

(DN6): I spent some time in Fuerteventura and there it is quite the same. In the south there is mass tourism. And digital nomads are in the north where the waves are. There is no real peak season because the weather is stable during the year. And there, people told me that digital nomads are a threat as locals can't really afford housing anymore where they actually work (close to the coast) and they have to move inlands and then there are people like us, coming willing to pay. Obviously, if you want to get money, you charge double.

(DN1): Is more like a chicken and egg problem. Because with nomads, infrastructure and economy can grow but then prices go up. I don't know what the solution is, maybe regulations such as you cannot get a license to build another guesthouse or co-living, like a cap.

(DN4): They did that already, didn't they?

(DN1): Yes, they started.

(DN6): I was checking from Algarve to Peniche on AirBnB and it was the same – everywhere. 1300 euros for a T2 in Peniche! So, this problem is not just a problem in Ericeira.

Interview 2 – locals, 4 June 2022 (online)

1. What do you associate with affordable housing?

(Lo2): For me, the price of the accommodations is a crucial factor because I can't afford most of them.

(Lo5): It's obviously a very important factor. I associate affordable housing to a place with living conditions but that doesn't cost more than half of my salary.

(Lo4): Half of your salary? For me, it means that the monthly rent plus expenses of the house are not more than 30% of the total income.

(Lo2): But that is impossible to find here.

(Lo6): When I think about affordable housing I think about shared places because then it is easier to pay a shared apartment. But even this is difficult to find here.

(Lo3): Affordable, for me, is a very low price. I don't have any children or other big expenses, but I'm still in a student phase of my life, I haven't started any career of any kind, the jobs I take are usually seasonal or with short term contracts. So affordable needs obviously to have money for other bills and food, life basics. So, an affordable rent could not ever go over 350€ if we want to maintain a healthy and prosperous life.

(Lo4): True, affordable should mean that a person can live comfortably after paying all the house expenses and still have enough for leisure, food, and other extra expenses like you said.

(Lo6): The factor affordability is for me really really important, but here in Ericeira I think that it is not easy to find an apartment. So sometimes you have to pay more, especially when you

want to live closer to the city center. So, I think it is important but sometimes you are not able to decide where you want to live or how much you want to pay.

(Lo1): Also, for me, it was very very important the factor affordability when choosing my accommodation. Is search for a very long time until I could find something that suit the range of prices, I was looking for taking into account that wages in Portugal aren't that high and the prices of accommodations here in Ericeira are very high compared to the wages. Like you said, I also need money for groceries, nights out, clothes, whatever I need. So, it was very important to rent something with a low price so I could save some money as well.

(Lo6): It also depends on when you want to move. I arrived here in October, and it was fine, but during the summer prices here are getting crazy so you can't move and have to take what you get.

2. What do you know about renting prices in Ericeira?

(Lo3): Hm, almost nothing, for my only months of experience, I would say is over the top. My top. I didn't know.

(Lo4): I've also never searched the data or numbers so intensively for Ericeira, but I can surely state that it's becoming as expensive as Lisbon or Cascais.

(Lo2): I just know it's getting expensive every year in a super-fast rhythm. Prices for accommodations in Ericeira are not adjust for the salaries of people who work in Ericeira. To be able to afford an accommodation in Ericeira you need to have a job outside of Ericeira.

(Lo6): Same, I just knew that prices increased rapidly during the last years because of the tourism. Most of the accommodations here are AL which means they are only used for renting during high season and these prices are insane and there are only few places available for normal residents.

(Lo4): You can also see that Ericeira is pretty expensive by the prices defined in restaurants or supermarkets. In some cases, it is more expensive than in the capital.

Did you know that the average renting price in Ericeira reached a peak in February 2022 with 11.3 euros per square meter? For example, in Berlin the number was 10.49 euros in 2021.

(Lo1): I know that prices of renting in Ericeira are super high, and it is getting higher with time. I think if I am not mistaken it is even higher than some posh areas of Lisbon. So yeah, I am aware of renting prices in Ericeira. I didn't know it was that price per square meter, but I knew it was more than in some places in the capital for Portugal.

(Lo5): Same, I didn't know that. I just know the rents are really high, but I also know how to move myself and find good deals. I also worked on the rental market for a while, so I guess I know how to do business and how to get a good deal.

(Lo6): Yeah, I didn't know neither. I moved here only in 2021 and unfortunately, I will have to deal with that problem as well.

3. Tell me about how you found your current accommodation? Did you experience differences when using different platforms?

(Lo2): I never use a platform. I asked people I know but decided to stay in my mom's place.

(Lo5): Me too.

(Lo4): Same here, our accommodation was not published on any online platform. We had friends that knew the landlord, so we were lucky enough to find a great deal, compared with all the listings that were online.

(Lo5): I didn't find my current place through any platform but by contact with friends

(Lo3): I am also still on the good graces of my friends. I share a room and split the rent. There is no other way right now for me. I did find different options, but it was the same on every platform - none of them ideal.

(Lo1): I found my accommodation through the platform Idealista. Yes, it was weird, I experienced different situations using different platforms. It was weird because this place, is a temporary rental, it had only one picture, but I sent a message and was super straight forward and that I wanted to see it and have a chat, while other visits to other places were asking for a lot of months for pre-rent or different conditions that re quite difficult that are not Portuguese. It is super different if you use platforms like Idealista or Facebook group. There are different factors and people you deal with.

(Lo6): Well, for my first accommodation I used OLX, but it was only possible to rent this place during low season. So, then I had to move to another apartment that has the same price, but it has a different location. I found it because I was talking with my previous landlord, and she knew a place for me to stay.

4. Which challenges did you face when searching for accommodation?

(Lo2): I never searched actively to be honest.

(Lo1): Portuguese people that want to rent their homes either ask for a lot of money to rent it or a lot of conditions. Like I said before they ask for guarantor, so someone that signs that will pay for your rent if you can't pay your rent which is for foreign residents like me, I have no one

who can do it, even closest friends, gets really difficult to move forwards with good places to rent.

(Lo6): True, the lack of options is definitely a problem. So, you are not able to choose between different apartments. Or they are only short-term-possibilities so you cannot stay the full year.

(Lo4): True, what I found weird is that I looked for the same apartment on several online platforms and sometimes the prices were not the same. It was a big challenge to be honest and we lost some of the deals because eventually, it would appear a foreigner putting more money on the table.

(Lo6): Yeah, the platforms are weird. On Idealista there aren't so many options. They prefer Facebook and so many options are published there. But even when I said: I want a long-term accommodation the people texted me saying they have hostels or things I was not really looking for.

(Lo3): The rent is the biggest challenge for me but, even so, "good" quality rooms/apartments/houses are getting harder to find. Not "Top" quality. It is easier to find "low" quality, and still unaffordable.

(Lo1): Exactly, as said before the prices are super high, if you don't have a wage from abroad or a really good price it is really difficult to rent a nice place to live in.

(Lo5): Yeah, you kind of have to pass through the jungle of high prices in Ericeira. I was living in a small house paying €250/month by the beach which is not much and then I was doing house sitting for several months not paying anything, so my situation is not the typical one, I guess. When I decided to move away from my old house, I knew I had to trust the process, but I could still find something I consider affordable through friends' contacts, a bit outside of the center, which is actually where I prefer to live, so I'm pretty satisfied with my situation.

(Lo6): Another thing that was super difficult to me is that many places didn't want to give me a contract and I need it for my work, taxes, and everything.

5. Which features are important for you when renting a place, such as furniture, internet?

(Lo2): Building conditions, light, humidity, backyard, view, parking lot, neighborhood

(Lo5): I guess it really depends on what phase of my life I'm into. Currently it's important for me to have a lot of space (inside and outside) and a nice view like you said already

(Lo1): Internet is also important and that the prices of gas, water and electricity are included.

- (Lo6): Wi-Fi, yes! And the location. I am a surfer and I want to surf early morning because I start working at 9, so I need to live close to the ocean. And like you said, it is easier if gas, water, and electricity are included. But not a must-have.
- (Lo5): Yes, I mean Wi-Fi nowadays is also really important, but that's an easy thing to take care of, even if it doesn't come included in the house rent.
- (Lo3): Furniture of course and basic kitchen equipment.
- (Lo1): Agree, furniture is also very important, since I am moving around lately quite a lot. It is something important that I learnt from my past experienced. Otherwise, you buy stuff and then you cannot sell it when you leave.
- (Lo6): For me, I don't need furniture. It helps a lot, but it is not something I am looking for and it is not a priority. I only need basic things.
- (Lo4): I would say: proximity to supermarket, sea, furniture, quality of the isolation and good internet connection.

6. What do you know about your landlord, how is your personal connection to them?

- (Lo6): Well, now my landlord is living close to her- So I know her because she is my neighbor She is living with his husband, and we don't have a very close relationship, but I see her almost every day and this is very good actually.
- (Lo5): I don't know much, but I have her contact and she seem to be a nice person.
- (Lo3): I don't have met them yet, but he seems open to it. It will come with time, I guess.
- (Lo1): I don't know much about my landlords. They are self-renting their apartment. Only met her and her son. We had nice chat a couple of times. They seem nice but I don't know much about their lives. UI know they left the apartment for this period of time because they are in Lisbon for a work project.
- (Lo2): Well, I have a very good connection. My mom is my landlord. She is super cool because instead of making money renting my apartment, she just let me live here for little money.
- (Lo4): I also do have a good connection with them. We have almost a weekly-based relationship with our landlord since he still uses the garage to himself. It's a pretty friendly connection.
- 7. Tell me reasons why you think your current/previous accommodation is (not) reasonably priced? If you say it is not reasonable priced, why did you accept the price? (Lo2): Well, I would say, mine is more than reasonable as I stay for almost free. But I know I am very lucky.

(Lo4): As previously mentioned, we were lucky enough to get a pretty good deal, so when comparing the price per square meter of the house with what's listed online, we pay a very reasonable price.

(Lo5): I think mine is reasonably priced too compared to what I see and hear.

(Lo3): My previous accommodation was reasonable, at the very least, mainly because I shared it with my girlfriend, 350€ with bills included. This was reasonable because this room was a suite (private Bathroom) and we shared the rest of the house with 8 people and 3 dogs. Many people wouldn't be comfortable sharing a house with so many people, the kitchen and living room areas were impossible to maintain cleaned. For some people who accepted this kind of accommodations have no other way.

(Lo1): I think my current and previous accommodations are/were reasonable priced because they are within the range, I am able to pay but I know that there are not a lot prices that are reasonable priced. And that's why I don't rent them. If I see a price that is not reasonable, I just don't move forward with the rental. That's why I decided to wait and search a bit longer before renting a place. Because I don't want to be part of this.

(Lo3): Yes, the situation here is getting crazy. Even buying a tent and staying at place is getting rough, which I have done previously. To accept a high rent (with no other possible way) is to deprive yourself of quality living. A healthy living, one that could make you grow, learn and work to secure a future is not compatible with unreasonable rents.

(Lo6): I think mine isn't reasonably priced to be honest because if you compare the Portuguese salaries and the accommodations available then I would say: All the places here are for tourists and people that have salaries from other countries. My salary is quite good if you compare it to other Portuguese salaries. The thing is that, for me the accommodation is not so important. I prefer to save more money to live and travel and if I could, I would like to pay less for an apartment or share just to save money.

8. What do you know about social housing programs in Portugal and did you / would you consider this as helpful for finding an affordable place?

(Lo3): I've always shared a house, for the past 8 years (in the Algarve). The first two years were in a university social service program where we shared a small room (two beds) and the apartment had a total of 14 people. It is definitely a good way to get an affordable place, but again, not good for personal growth. I don't know much about social housing programs in Portugal.

- (Lo2): For me is the same, I basically know nothing about it.
- (Lo1): Same here, I have no clue what you are talking about.
- (Lo6): Yeah, nothing
- (Lo4): I've never searched for it as deep but heard that there are a few options.
- (Lo5): I also don't know much about it now; I think in times I read a couple of articles about it but I never really felt the need to apply.

9. In which area of Ericeira do you see yourself ideally living in and would you be willing to pay more for a specific location?

- (Lo2): Outside the center with the ocean front would be amazing, but I don't have money for that.
- (Lo5): I think I currently live where I want, by the countryside, so outside the center like you said. I already lived in many different locations in Ericeira and out of Portugal, so I was lucky enough to experience many different locations, right by the ocean and so on. So, I'm pretty satisfied now with this experience
- (Lo3): I have no ideal area requirements. Maybe I'm willing to pay more if it is closer to the center compared to further from the center if we would compare with the same exact room conditions.
- (Lo5): I wouldn't pay more than what I pay now for a big room which is €360/month.
- (Lo1): I would also say, closer to the city would be ideal. Near the city of the vila, as further as Sao Sebastiao or Praia do Matadouro and Praia do Sul to the south, everything else is too long as I don't want to drive and move that much in such a small place.
- (Lo4): I currently live in front of Matadouro beach, and I consider it to be one of the best places to live. If someday I plan to buy a property, I would say near Praia do Sul or right in the center too.
- (Lo6): That's also where I live. I think I am very very lucky. I live close to Sao Sebastiao which is a beach that I usually go to surf and is also super close to other beaches. The location is perfect for me.

10. Do you think Digital Nomads are a threat to affordable housing? Explain!

(Lo4): I don't consider Digital Nomads only, but foreigners in general. From what I've been concluding from what I see around is that Portugal seems to be very attractive to foreign investors, since it's cheap, when compared with most of the European countries. Also,

considering the times that we're facing with covid and the war, usually the wealthy or people with good incomes tend to choose ways of protecting their money by investing in places that can leverage their profits in some years, given this, I think not only the digital nomads are a threat, but also the fact that our economy in Portugal is weak and attractive to the majority of the foreigners

(Lo1): Yes, definitely they are. I experienced changes since last year. I see that with the time there are less and less possibilities of renting and it is getting more and more difficult and what is available is more expensive and not as good as it was before.

(Lo5): Of course, this is a game changer because people with higher salaries coming to live here tend to change the market and this is what we have been seeing in recent years.

(Lo3): I do. The main reason would be the landlords, actually. From my experience, they seem to feel less and less inclined to have an affordable rent after tasting a bit of tourism renting. Once they feel they can get a higher income, it's very difficult to drop the price again. It is sometimes seasonable with foreign people coming for tourism. But what are not seasonable are the digital nomads. It is true that most of them are foreign because it is quite new to Portugal, and obviously the income from foreign companies is higher. Which brings us to this.

(Lo2): I agree. They have a big impact. Is easy to understand. The average salary in Portugal is much smaller than most of the countries where digital nomads are from and Portugal is cheaper than their home country. When they come to Ericeira, they are making money from foreign company and they can make more money than Portuguese, even working less hours. If they have more money, they can buy more things and afford more expensive things. Because of that, prices are going crazy high and its impossible for Portuguese to compete with that.

(Lo3): Yeah, also a digital nomad (even Portuguese) is not looking for a long-term house renting contract which makes the landlords act in two ways: First, they don't have a steady income for a whole year, so they try to make up for the few months they can get people in. Second, there has to be a trust between landlord and tenant, if a lodger somehow violates the landlord rules (or makes damages) and will be out in the next month, the landlord will have more and more distrust in "speedy rentals" and will ultimately add "precaution" in the price.

(Lo1): Yes, like you said, especially when they search for short periods and especially when they post their budget when they search for something. I think this is not so smart – not for them and also not for others because owners of properties realize they can rent it more expensive as people are willing to pay more.

(Lo2): Exactly, if there are more people with more money the demand is higher. Because the demand is higher the prices are higher too. An us Portuguese cannot keep these with prices. In the end Portuguese have to move out form Ericeira because, even if they work their ass off, they cannot make as much money as a foreign and because of that they cannot afford to live in Ericeira, which makes me incredibly sad and upset.

(Lo4): True. I mean, currently the average wage in Portugal is around 1042€. In Ericeira, the average wages will for sure be way less than this like 4-5€. So, our buying power is way less than the average around Europe. Just recently a studied concluded that Lisbon is the third most expensive city to live in the World, when you compare the general incomes with housing prices and cost of living.

(Lo6): Well, I don't think the Digital nomads are a threat. The main problem is the uncontrolled tourism and Portuguese salaries. They are much lower than the European average and landlords know it. So, for sure they will charge more from tourists and prefer to rent their houses only during the high season and not the whole year because they will obtain the same amount of money. So, there are multiple factors that have an impact on housing affordability in Ericeira and Portugal.

(Lo5): Well, we need to see the bright side of it, too. Welcoming the new paradigm and adapting to it. I do think it should be regulated and the process should be sustainable for locals and have them in consideration. But this is not happening. Eventually this place loses its cultural identity and so it loses one of the main points why it was so attractive in the beginning. For me, this is a big mistake. Of course, things change, and we have to adapt but we also can apply measures to it. Complain and not do anything about it is not the solution. I think generally the solution is to go with the flow and take the opportunity of it to develop places locally (without losing its identity by having Portuguese people conditions like salary and so on in consideration) which will help the natives that rely so much on tourism as well.

(Lo6): Yeah, and also some of the digital nomads I know, they do not have such high salaries as well and they also need to move during the high season because they are not able to pay the amount of money that is required to have an apartment during summer or maybe they do not want to pay such an amount of money because there are other cities in the world where you have the ocean and pay less for housing. So, like I said, uncontrolled tourism and the government need to stop giving licenses for local accommodations. I know they stopped giving so many licenses, but they gave so many during the last years and now we have the issue that there is no housing for residents.

(Lo1): The thing is, even without having licenses, landlords will rent places without contract, and this is the worst, because the money will not even be declared.

Interview 3 – landlords, 26 June 2022 (online)

1. Tell me reasons why you think that your current accommodation is reasonably priced?

- (La1): Well, I would say mine is definitely reasonably priced when you compare it to the prices online. Because it is similar to other apartments that have the same quality.
- (La2): I totally agree. Mine is also reasonably priced for a short-term accommodation when you check the prices that are in the market these days.
- (La5): It really depends on the house, commodities, accessibility, etc. For example, Mafra has one of the biggest IMI of the country and also the water is very expensive. That reflects One the price of the house.
- (La4): Yes, I totally agree. Commodities and location have a big influence on prices.
- (La5): We also have to think the taxes, state of the house and maintenance and other factors. Can be expensive sure, as we have low salaries, but we think on the other side, on the side of the owner, it is not that expensive. Renting is a business.
- (La3): Well, for me it is not a real business. I don't really care about the market price, but I don't want to make a profit from this apartment. I just want to pay off the loan and insurance. So, I ask for the amount that pays off these two things. So, it is fair.

2. Tell me, how does the rental length (as stated in the contract) impacts the price you charge for your room/ apartment/ etc.?

- (La3): I maintained the same price independently of the length
- (La1): Oh really? For 30 days I have a small price. Short term rentals are good so I can still use the apartment with my family
- (La2): It has an impact. Short term rentals always come with higher costs. That's why I prefer long term.
- (La5): Yes. The length of the contract impacts and gets lower when is more time, of course. In my case I do cleanings and maintenances at the houses to control potential damages. But we still need to pay the utilities, water, gas, electricity and others. But yes, potentially gets lower with time.
- (La4): Of course, long-term means cheaper price and I also prefer long-term-tenants. Even if you get less money, it is less work and stress.
- 3. What do you know about your tenants? Do you have a personal connection and if so, are you willing to drop prices for people you know?

- (La5): Yes, I drop prices when I know people and they stayed with me more than once. I am always in touch with them. Checking what they need or might need.
- (La4): I try to know them to understand if they will be a good tenant such as values, purpose of being in Ericeira, behavior, age.
- (La5): I had guests that cut the vegetables and left them rotten on the drawer. So, you have to start to do a selection.
- (La4): This sounds horrible. But, yeah, totally agree. And to answer your other question yes, I'm willing to drop prices for people that I trust.
- (La1): Same, I also do small prices for people that I know.
- (La3): I prefer to maintain the cordial relationship. but if I have a friend that need help, I can share the expenses.
- (La2): Well, I would not say I really have a personal connection. Of course, I know them little, but we are not very close.

4. Do you believe that digital nomads are a threat to affordable housing? Describe your relationship to them?

- (La2): Yes, I think they are. I don't really have a big connection. They are treated as clients.
- (La4): I have a great relationship with them actually, really inspiring sometimes! And of course, some of my clients are digital nomads!
- (La1): I don't think so actually! I think that this concept come to increase our culture and is a great opportunity for us to learn.
- (La5): They changed the market for sure. But they are not a threat. I have houses for digital nomads and others to long term. It is not comparable. They have different needs and interests. Until the moment, I never had problems with digital nomads, they are here to be calm and have a good experience. But of course, good and bad guests are everywhere, not exclusive of one category.
- (La4): Exactly, I don't think they are a threat I think that's a problem of the Portuguese government. They have to increase Portuguese salaries, cut taxes on the companies, create affordable accommodation or develop the surroundings of Ericeira. That is more important.

5. What do you know about renting prices in Ericeira? Did you know that the average renting price in Ericeira reached a peak in February 2022 according to Idealista (11.3 euros per m2)?

- (La4): I knew the prices are going up.
- (La2): I would say it's even higher than what you just said.
- (La4): I actually think they are fair when you think about the quality of life and the popularity.

- (La3): Hard to say if that is fair. I didn't know about the peak. I knew that lot of foreigner's people move to Ericeira because the waves.
- (La5): The prices are Higher and Higher, and that's scary for a Ericeira native. I see most of my friends having to leave Ericeira because they can't afford. My biggest fear is the descharacterization of the place. But this is more a consequence of covid, people of Lisboa mainly are looking for other places, outside of the city. Not a consequence of tourism. It is all about supply and demand.
- (La3): Exactly, Ericeira has bigger prices, because it' a nice place for tourists and attracts people that are looking for a second home out of the Lisbon.

6. Tell me about where and how do/ did you find tenants for your current accommodation?

- (La3): By Facebook
- (La2): Facebook, too.
- (La4): Also, Facebook groups and most of them through personal connections.
- (La5): I use a lot of Social Media Marketing, WOM and specialized platforms.

7. What were the biggest problems for you finding tenants and how do you select them?

- (La2): No problems.
- (La4): I select them accordingly their age, occupation and common interests (surfing, yoga,...).
- (La5): I would say, it is not a selection, it is a natural conversation that comes, and we see if matches and if we have the same interests as tenant as landlord. So, our expectations should adjust. Some people think that we are hotels or have other irreal expectations. We have houses inserted on the community and our goal is for them to contribute for the villa and to be part of it, if just for a week.
- (La1): Yeah, it can be tricky to find honest and careful people.
- (La3): I find it hard to know if they have conditions to pay the rent all the contract period. I tried to analyze they professional conditions but is not always easy.
- (La4): For me its really easy to find tenants for short term and not so easy for long term, because most of the people prefer to book a short period of time before settling in and then decide. When they decide I'm already full for the next months, so they have to leave.
- 8. Does your accommodation have any special features such as garage; balcony; high-speed-internet, furniture? For which additional features would you decide to increase/decrease renting prices?
- (La3): I didn't change the price. I would like to rent for enough money to pay the bank loan. But the view of my apartment can increase the price.
- (La2): I would say: garden and pool.

(La1): High speed internet, ocean view and great pool.

(La5): It really depends of the house, but usually good internet is mandatory and furniture, of course.

(La4): High speed internet like you said. But also furniture; access to kitchen; it is only 1 min from the beach; walking distance to bars/restaurants/shops.

(La5): To increase, swimming pool and garden and other major features. To decrease, location and the house itself, if modern or not.

9. What do you know about social housing programs in Portugal? Have you ever decided to participate in one of these? Tell my why yes or no.

(La4): Yes, i know about it but i don't have interest in renting for 5 years (minimum period of that type of program). I think it's too long to depend on a tenant and we don't know in which condition he will leave the house.

(La3): I didn't know about that.

(La1): Me, neither

(La2): Same here.

(La5): I don't know much about it. I have friends that had help because they were Young. I was never able to apply, as I had the luck to have a family house.

10. In which area of Ericeira do you have apartments and how does the location affect the prices you charge?

(La3): Next to the center because there is a lot of searches of this zone. And if a lot of people are searching it will impact the prices.

(La1): Yes, near the center for sure. But also, near the beaches and I know that in São Sebastião they have good prices.

(La5): I have through Ericeira and Mafra municipality. The location affects if they need of car or not. Ribamar and Carvoeira have One price because there is a need of car to have Supermarkets and other facilities. And the transports here don't operate fine through the whole municipality. We have to consider all these factors.

(La2): I agree with you, near the center I could easily charge more!

(La4): Absolutely, if you have houses near the city center it increases the value of the property so much.