Digital Nomads' Willingness to Stay – a Combined Analysis of SEM and fsQCA Results

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Abstract
Lisbon is a multicultural city with a business center that hosts major technology companies and professionals in the field, including digital nomads. High demand for tourist accommodation and the arrival of foreigners to work in the country have led to an imbalance between the supply and affordable cost of real estate for residents of the capital. This work aims to survey and determine whether digital nomads in Lisbon intend to settle in the city or are just passing through. To identify the combination of factors that influence digital nomads’ decision-making, we conducted a quantitative study using survey data tested through structural equation modelling and configurational analysis by fsQCA. The results show that while the decision to stay in the city is heavily influenced by community attachment, we found three configurations that reveal distinct patterns of digital nomads’ intention to stay in the city. These results suggest that policymakers need to consider that digital nomads are not a homogeneous group. This study makes an important contribution to the understanding of behavioral intentions and is, to the authors’ knowledge, the first to identify different configurations based on digital nomads’ intentions to stay in a city.

Keywords: community attachment, cost-benefit, configurational analysis, destination marketing.

JEL Classification: Z18, Z38, O33


1. Introduction

The Portuguese capital Lisbon is a center of attraction for tourists and immigrants due to its richness in culture, quality of life, tourist attractions, and good summer climate. Lisbon has recently invested in becoming a technologically advanced hub (Poder, 2021), attracting large technology companies and professionals in this area. In a post-pandemic scenario, some countries (e.g., Portugal,
Indonesia, Spain) see digital nomads as having the potential to restart the economy after the 2020 pandemic and an attractive visa policy for remote workers (Forum & Altringer, 2015). Digital nomadism refers to the ability for people to work remotely from their laptop and use their freedom from an office to travel the world (Thompson, 2018; Richter & Richter, 2020). Lisbon has recently opened visas focusing on digital nomads called the “D7 Digital Nomad Visa”. The visa will allow non-Europeans who work remotely to apply for a temporary residency visa and relocate to the country (SchengenVisaInfo.com, 2022).

In addition to the numerous tourists and visitors that Lisbon receives, along with the visa incentive for digital nomads, Coca-Gant et al. (2020) claim that there is pressure in the local community concerning the cost of living and lack of accommodation. The media often point out the arrival of digital nomads as one of the causes of the high price of houses and the lack of supply for Lisbon residents. A rise in foreign investment and short-term rentals, along with the city's growing tourist appeal, have all contributed to rising housing costs and the eviction of long-term residents (Monteiro, 2023). This rise is partially attributable to the popularity of short-term rentals like Airbnb, which have fewer long-term rentals available, and increased housing competition (Statistics Portugal, 2022). Although there are many studies on digital nomads and their motivations to maintain this way of life (Khatri & Shukla, 2022; Sánchez-Vergara et al., 2023; Thompson, 2019), there is room for research on this public and its relationship with the place they chose to reside; furthermore, to understand whether the chosen destination can be their permanent residence.

The aim of this study is to understand the digital nomads' willingness to stay in Lisbon and if the visa impacts the decision-making process, as well as identifying other factors that affect their willingness to stay. As a final goal, it is intended to identify the profiles of Lisbon's digital nomads, analyze the reasons for moving to the Portuguese capital; compare and identify motivating factors by employed variables and determine whether they would like to maintain their residence in Lisbon; provide suggestions for cultural and community planning decisions for the city of Lisbon; and contribute to future studies in social policies and housing crisis management for Lisbon's community.

To address the research objectives this study uses a quantitative methodology combining Partial Least Squares structural equation modelling (PLS-SEM) and fuzzy set qualitative comparative analysis (fsQCA) procedures to examine the influence of community attachment, the cost-benefit ratio of living in Lisbon and having or not having a digital nomad visa (referred to as the visa-no-visa variable) on the digital nomads’ willingness to stay.

The remainder of the study is organized as follows. The next chapter develops the theoretical framework and provides support for the hypotheses. The method is then described in detail, followed by PLS-SEM and fsQCA results. Section 5 is devoted to the results. The article ends with conclusions and suggestions for future research.

2. Literature review

2.1. Digital nomads

Being able to work remotely and lead a location-independent lifestyle make digital nomads a relatively new and rapidly expanding group of professionals. Therefore, as a direct consequence, they frequently travel widely, living and working in various countries and cities for extended periods. Although this way of life has grown in popularity recently, there is still much that academics and researchers are exploring about this group and their effects on the economy and society (Khatri & Shukla, 2022).

Being a digital nomad requires having both the “urge to travel” and the means to do so (Makimoto & Manners 1997, p.17). The expression “digital nomad” first appeared in the eponymous
book by Makimoto & Manners in 1997, and its use was intended to foretell how technological advancements would eventually enable people to become mobile workers worldwide (Makimoto & Manners, 1997). Their prediction became a reality less than 20 years later, as researchers and journalists now commonly refer to professionals who primarily use digital technologies to perform work while living a location-independent way of life as digital nomads (Reichenberger, 2018).

Digital nomadism, however, is still a term with a hazy definition in popular literature for several reasons. First, the terminology used to describe digital nomadism is transmissive because it only slightly differentiates itself from related phenomena. And secondly, because it results from various ongoing developments and shifting work-related movements, digital nomadism has a constantly changing character (Ciolfi et al., 2014). Therefore, understanding these historical developments and pointing out the term's distinctions from other terminologies is necessary to understand the term comprehensively. This information identifies three basic traits of digital nomads and establishes a precise definition of the term (Nash et al., 2021).

Previous research has acknowledged the close ties between mobile work, nomadic work practices, and digital technologies (Ens et al., 2018). In the literature, workers who travel to meet with clients or other business associates have previously been described as nomadic workers (Mark & Su, 2010). Recent studies have drawn attention to the evolution of nomadic workers, who depart from the traditional definition by traveling for fun or other reasons and for varying amounts of time (Nash et al., 2018; Richards, 2015). With various definitions of mobile work, nomadic workers are typically distinguished from others by their willingness and capacity to move their work to various locations (de Carvalho et al., 2011). Nomadic workers must be capable of sustaining both mobile social interactions and mobile lifestyles (Humphry, 2014). Mobile technologies allow them to continue these social interactions while working in different environments (Hemsley et al., 2020).

Previous research explored the motivations and characteristics of digital nomads. For example, Hall et al. (2019) found that freedom, adaptability, and work-life balance are common goals for digital nomads. They frequently have advanced degrees, professional experience, and access to digital tools to collaborate and work remotely with people worldwide. Thompson (2018) revealed that digital nomads do not randomly choose temporary relocation destinations. There are a couple of digital nomads’ “hotspots” worldwide, according to diverse websites and blogs, such as Medellin, Colombia, Bali, Indonesia, Chiang Mai, Thailand, and Lisbon, Portugal (Nomad list, 2018; Poder, 2021). Nash et al. (2018) argue that it is likely due to a destination’s potential for leisure pursuits such as surfing, hiking, and skiing, whereas Reichenberg (2018) believes that lower living costs have a significant impact. This study builds on these studies and helps extend existing knowledge beyond initial decision-making. That is, this study examines digital nomads’ willingness to stay in a specific destination. Previous studies treat digital nomads as a homogenous group, in contrast to our study, which allows the identification of distinct groups through configurational analysis of the data. Furthermore, in this study, it was previously mentioned that the Visa for Digital Nomads was introduced in 2022. Therefore, when this study was carried out, there were no other academic studies permitted on this visa. It is anticipated to contribute to the academic community, particularly to studies of Lisbon's social policies and demographics, in the sense that offering opportunities to digital nomads who wish to stay in Lisbon is not the only element to be considered when making this choice.

2.2. Digital nomads’ willingness to stay and its determinants

Environmental psychology, geography, and urban planning have all investigated the idea of willingness to stay or “place attachment”. As a result, numerous authors have contributed to comprehending this concept. Relph (1997) argues that a “sense of place” describes people's emotional and psychological attachments to their surroundings. He claimed a strong sense of place could encourage community cohesion and well-being (Relph, 1997). Tuan (2013) emphasized the significance
of people's emotional and cognitive interactions with their physical environment in shaping their sense of identity and belonging.

One's propensity to remain in a particular community can be strongly predicted by the degree of community attachment (Stedman, 2002). People and organizations can contribute to developing a more secure and resilient community by fostering a sense of belonging and connection. Community attachment is how a person feels connected and identifies with their community.

A growing body of academic literature investigates the factors influencing community attachment in various groups, including digital nomads. Researchers have identified important components that shape community attachment, including social ties, a sense of belonging, place-based identity, quality of life, and economic factors (Hidalgo & Hernandez, 2001; Kerner & Kitsing, 2023). Hidalgo and Hernandez (2001) explain that social connections and ties to other people in a community can be a major component of cultivating attachment. As it relates to digital nomads, finding ways to network with locals or other digital nomads in the area, such as through co-working spaces or online communities, may be part of this for these individuals.

An additional factor in attachment is having a sense of community. This may entail having a sense of belonging and acceptance from others in the neighborhood as well as a sense of shared identity or values (Dias et al., 2022). Feeling a connection to a place's past, present, or environment may be necessary for this. Furthermore, life quality and economic factors play an important role in the sense of community and identity. Community attachment can also be influenced by the overall quality of life in a community, which includes factors such as safety, affordability, and access to amenities (Patwardhan et al., 2020). Therefore, the cost of living can influence the willingness to stay in a particular city or location.

It is crucial to remember that many other factors could affect a digital nomad’s willingness to stay in a specific area; the aspects pointed out in this study will cover some of them. Other elements, such as the standard of living, cultural attractions, safety, accessibility to coworking spaces, and environmental matters, may also be a decision point, as discussed by Song et al. (2019). Finding places that offer a good balance of affordability and quality of life and opportunities to pursue their work may play a fundamental role in digital nomads’ decision to stay in certain destinations.

2.3. Lisbon as a digital nomad’s destination

Based on the prior literature on digital nomads and Lisbon as the hotspot point of the investigation, this research aims to determine whether the pre-specified concepts as points that can influence a person's willingness to stay at an expected location, apply to the demographics of digital nomads living in Lisbon. Thompson (2019) suggests that future research opens the question of whether this way of living is temporary for some people while they search for the ideal place to settle down and have their lives established or if it is an indefinite way of living. At the same time, Beaumont (2019) questioned whether Lisbon is just another destination for digital nomads or if it's a place where they go to die.

Aside from that, there are certain elements and aspects of Lisbon that support and encourage study of the said sample in the Portuguese capital. In the first place, it seeks to understand the specific intention of this public to remain indefinitely or not in Lisbon. This is because it is believed that more foreigners living in Lisbon will diversify the city’s demographics with different cultures and nationalities. However, immigrants and other foreign communities can present challenges and tensions regarding social integration. Authorities and society must work together to ensure that all communities are treated with respect and justice and that all residents benefit from Lisbon's rich cultural diversity.
The present condition of Lisbon’s tourism industry, which also directly affects the real estate market, is another driving factor behind this research. Several academic studies have recently highlighted the positive and negative aspects of Lisbon’s tourism industry growth, which has recently impacted the local community. As a direct result of over-tourism raised by academics, these studies point two issues with accommodation and re-urbanization of traditional neighborhoods to lure tourists (Daly et al., 2021). These issues include rising housing costs, displacing locals, and harming the environment (Ribeiro & Torkington, 2022). Furthermore, the increase in immigration is also directly related to the problem of adequate housing for the Lisbon population (Da Cunha et al., 2023), in addition to significantly affecting the Portuguese culture. The housing shortage issue in Lisbon is linked to various factors and demographic groups, such as tourists and immigrants and growing foreign investment in the city’s real estate market. The rise in immigration has been emphasized and investigated as a factor in Lisbon’s multiculturalism, in addition to the problems with tourism and its effects on regional culture and tradition.

A rise in foreign investment and short-term rentals, along with the city’s growing tourist appeal, have all contributed to rising housing costs and the eviction of long-term residents. The Portuguese Association of Real Estate Professionals and Companies (APEMIP) reported in 2021 that the average rent in Lisbon increased by 16.7% in 2020 to reach an average of €1,251 per month (Imobiliário, 2022). This rise is partially attributable to the popularity of short-term rentals like Airbnb, which have fewer long-term rentals available and increased housing competition. Moreover, Lisbon suffers from a severe lack of social housing. The Lisbon Municipal Council reported that there are currently over 26,000 families waiting for social housing, with an average wait time of about seven years (Redação, 2023). Interestingly, gentrification has resulted in the displacement of longtime residents and an increase in property prices in Lisbon’s historic neighborhoods like Alfama and Mouraria. A study by the University of Lisbon found that between 2011 and 2019, the number of residents in these neighborhoods fell by about 15%, while the number of short-term rentals rose by roughly 1,200% (Lestegás & Gonzales, 2019).

2.4. Hypotheses

The following hypotheses were developed after analyzing Lisbon’s character traits and attractions, as well as the factors that were referenced as able to influence an individual’s willingness to stay in Lisbon, and it is intended that the findings from this research will corroborate or refute that:

H1. Digital nomads intend to settle in Lisbon regardless of their visa.
H2. The visa for digital nomads is the beginning of the process of permanent stay in Lisbon.
H3. Lisbon’s culture and community influence the willingness to settle in Lisbon in those who came with a visa and those without a visa.
H4. The cost-of-living impacts digital nomads' willingness to stay in Lisbon.

3. Methods

3.1. Research design

The research approach is depicted in figure 1. The first phase consisted of the preparation of the questionnaire as detailed in the next section. The second phase of this exploratory study used a questionnaire to collect quantitative data from the research sample. According to Rowley (2014), a questionnaire is a research technique composed of many questions presented in writing to individuals to learn about their opinions, beliefs, feelings, interests, expectations, and experiences. In this sense, the questionnaire was critical for investigating the variables stipulated to respond to this study's hypotheses.
and explore discoveries about digital nomads in Lisbon. The following variables were examined through the survey: Willingness to Stay; Visa no Visa; Community attachment; Cost-benefit.

Figure 1. Research framework

In addition to analyzing the study’s variables and investigating the intention of the digital nomads to remain in Lisbon permanently, the survey questions were established to characterize the study’s sample. The questionnaire included open and closed questions throughout this perspective, as this research focuses on a quantitative approach. O’Cathain and Thomas (2004) claim that open questions allow the informant unlimited freedom of answers. The respondent's language may be used in them. They have the advantage of not being influenced by the answers pre-established by the researcher, as the informant will write whatever comes to mind. A barrier to open questions is also found in the fact that there is freedom of writing: the informant will have to have writing, formatting, and reasoning skills. On the other hand, closed questions will generate specific options for the informant to choose from. The stipulation of response options adversely influences the interrogator's ability to express himself. They can be heterogeneous or only dichotomous. A broad question can elicit responses to many different aspects of reality. The questions can include information about facts, attitudes, behaviors, feelings, action patterns, current or past behavior, and so on, according to Chaer et al. (2012).

On top of data gathered from the selected sample, research was conducted using textual analysis of online material to draw on established non-academic information and semi-structured in-depth interviews to verify and further explore online-based information through the cohesive narrative of individual experiences – both methods linked to and suitable for interpretive constructivist approaches (Angen, 2000).
Initially, research was conducted on the profile of digital nomads on websites, videos, newspapers, and blogs using the "Google" search tool, which led to subsequent websites. Sequentially, the previously mentioned variables were defined, as well as how each one would be examined via the questions developed. During phase 3, the results were analyzed using PLS-SEM (phase 3a) and fsQCA (phase 3b). By applying fsQCA, it was analyzed that the possible combinations of the independent variables are equifinal, leading to a willingness to stay in Lisbon (dependent variable).

3.2. Variables and measurement

The application of the applied questionnaire divided the questions by the variables to be explored to analyze the data provided by the participants of this research. The following open-ended questions were initially used to gauge participant profiles and sample characteristics: How old are you? Where are you from? How long are you in Lisbon? How do you identify yourself (Gender)? What is your professional classification?

Follow-up open-ended questions were applied to explore the characteristics that the group of interviewees believed to be a part of the profile of digital nomads and their motivations to choose Lisbon as their destination. The questions were designed to give participants the freedom to describe and highlight aspects unique to each participant, thereby contributing to a vertical reading of the main points mentioned after receiving the answers. The characterization questions were: What is your previous professional experience? What is your previous experience as a digital nomad? Why did you decide to relocate to Lisbon?

The following closed questions attempted to initially understand and separate the sample between those who consider this lifestyle temporary or long-term and separate the participants into those who have and those who do not have the visa. This closed question accepted the binary responses "Yes" or "No." Those who responded that they held the visa received an additional question: Do you consider your current lifestyle as temporary or long-term? Do you have a Digital Nomad visa?

Questions were asked using seven-point Likert-type scales with anchors ranging from one (strongly disagree) to seven (strongly agree) after the group was divided into those who have and those who do not have visas. The Visa or No Visa question was only applicable to those who had answered “Yes” to the previous binary question:

(WS) Willingness to stay: (1 = strongly disagree; 7 = strongly agree)
- (WS1) I would like to stay indefinitely in Lisbon.
- (WS2) I wish to follow the future development in Lisbon.
- (WS3) Lisbon plays an important role in my future plans.
- (WS4) My personal future is connected to Lisbon.
- (WS5) I'm not looking for a place to live indefinitely right now.

(CA) Community attachment: (1 = strongly disagree; 7 = strongly agree)
- (CA1) My friends live in or near Lisbon.
- (CA2) I made new friends in Lisbon.
- (CA3) My friends will settle down in Lisbon.
- (CA4) I have family members in Lisbon.
- (CA5) I identify with the local community lifestyle.

(CB) Cost Benefit: (1 = strongly disagree; 7 = strongly agree)
- (CB1) The cost of living in Lisbon is attractive for my stay in the city.
• (CB2) Lisbon has a better living cost than other destinations where I could live.
• (CB3) I consider Lisbon an expensive city to live in.
• (CB4) In Lisbon, I have a good quality of life.
• (CB5) The cost of living in Lisbon is not a concern.
• (CB6) If the cost of living were lower, I would live in Lisbon indefinitely.

(VISA) Visa no Visa: (1 = strongly disagree; 7 = strongly agree)
• (VISA1) The visa was decisive in the choice of Lisbon as a destination.
• (VISA2) I intend to renew my visa or apply for another visa to stay in Lisbon.
• (VISA3) I was coming to live in Lisbon regardless of the digital nomad visa.
• (VISA4) The ease of obtaining a visa was decisive in my decision to come to Lisbon.

3.3. Sampling

The research set are digital nomads in Lisbon. One of the difficulties of this study was locating official data from the Portuguese government indicating the number of digital nomads currently present in the country. Although it was announced that approximately 200 visas for digital nomads were issued in two months (Monteiro, 2023), citizens in the European Union and Schengen countries do not require a visa to work and live in Portugal; thus, the current population of digital nomads in Portugal, and particularly in Lisbon, is unknown.

The online platform Nomadlist, a barometer of the digital nomad movement, currently shows 13,800 digital nomads in Lisbon in 2023. Although it aids in estimating the number of digital nomads in Lisbon, it is not overall trustable since the platform does not display the number of accounts that are regularly active in real time. Furthermore, it is necessary to consider that there is a representation of digital nomads who haven't enrolled on this platform.

The results of this research were obtained from a non-probability sample of 35 digital nomads who currently reside in the city of Lisbon. It was carried out using self-selection sampling, in which the researcher specified the inclusion and exclusion requirements in the digital nomad's criteria and the participants decided to answer the questionnaire based on their free will, in conjunction with snowball sampling, in which existing participants recruited future participants from others they know (Elfil et al., 2017; Shorten et al., 2014).

It is important to emphasize that traveling and using technology while on travel do not qualify as being a digital nomad to identify the participants in this study. It requires carrying out online professional activities and tasks while on the road to be considered a digital nomad; this can be considered the common aspect of all digital nomads’ definitions by academic studies in this field. In this sense, those who were “backpackers” or “flash packers” (Richards, 2015) were not accepted as participants in this study.

Flash packers use technology to stay connected and share experiences via digital channels such as blogs, videos, and social media sites. Their physical mobility and online/virtual connectivity are linked (Hannam et al., 2014) since their travel experience produces content for their social media. Flashpackers and digital nomads coexist since they also share their travel experiences online (Hannam et al., 2014; Hannonen, 2020). The digital nomad, on the other hand, has a remote occupation that consists of providing a service, whether for a company or an end customer, which, because it is completely online, allows them to perform it from anywhere. As for the backpacker, Hannonen (2020) discusses the backpacker as a person who travels for leisure or lifestyle reasons without needing to work or being ready to work on any job to support their daily lives.
4. Results

After the questionnaire was submitted, 35 responses were collected. The identification questions made it possible to determine that 54.3% of participants identified as male, 34.3% as female, 8.6% as non-binary, and 2.9% preferred not to stay. Despite the absence of participants from Oceania and Africa, 13 countries participated in the research, which is one of the sample’s biggest strengths. It is worthy to note that more than 60% of the sample are non-Europeans.

With the oldest participant being 45 years old and the youngest being 26, most participants were between 29 (14.3%) and 33 (20%), with an average participant age of 33. Because digital nomads’ average ages fluctuate regardless of their country of origin. Subsequently reviewing the data collected during the sample identification questions, the following information was gathered concerning everyone’s current period of stay in Lisbon. According to figure 2, twenty out of the 35 participants have lived in Lisbon for a year or longer, which represents 57% of the total sample, while 15 have spent between one and seven months in Lisbon.

Figure 2. Length of stay in Lisbon in months

![Bar chart showing length of stay in Lisbon in months](Source: Author’s elaboration (2023))

Regarding subsequent experiences as digital nomads, participants primarily informed the countries where they lived as digital nomads. However, some also specified other professional occupations while living the nomad life. Seven participants indicated that this was their first time traveling as a digital nomad, of which two have lived in Lisbon for over a year, and the remaining five have been here for less than 12 months. Overall, 60% of the sample had previous experiences as digital nomads in different places.

It was possible to determine that most participants currently or previously worked in information technology. Each participant could have nominated more than one profession; therefore, the corresponding table below were determined relative to the participants’ professional experience. It was acknowledged 40 different occupations. The more specific classifications, such as “Mobile Developer” or “Desktop Developer”, were combined into one single profession, with “Developer” being represented as “Developer (all)”; the same applies to the more specific IT and technology jobs, such as “IT Technician” or “Tester”, which are both represented as “Information and Technology (all)”/ The survey found 21 information and technology professions suggested out of 40.
The climate and location elements, along with the quality of life in Lisbon, were most prominently highlighted in this section of the survey of the reasons that motivated the individuals to choose Lisbon as their destination; this connotation is evident in the instances below:

i. Participant 1: “It is a very popular destination, and I produce a lot of online content about Lisbon, also the nice weather and quality of life, beach and food”.

ii. Participant 2: “I like surfing, and in Portugal I can do it every day if I want to, Cascais is very close to Lisbon and good for surfing, also for travel and easy access to the center of the city”.

iii. Participant 3: “Experience a new country with good sunny days, Lisbon offers nice events, festivals, activities, good food and wine”.

Finally, the closed-ended responses around the Digital Nomad visa and whether this way of life is temporary or long-term revealed that 60% of participants (21) claimed this way of life was long-term, and 40% (14) considered it temporary. Since responses were gathered from participants of all genders and different nationalities for both the temporary and long-term lifestyle, the outcome did not reveal trends based on gender, nationality, or age. On the other hand, there was a clear majority in terms of nationality among the eight participants who stated that they had a visa, with six being North Americans (Canada and the United States).

Structured equation modeling (SEM) was employed to test the conceptual model. In particular, the SmartPLS 3 software was used to perform Partial Least Squares (PLS), a variance-based structural equation modeling technique (Ringle et al., 2015). The examination and comprehension of the findings were carried out in two phases. The first assessed the measurement model’s reliability and validity before moving on to the structural model.

Individual indicators of reliability, as well as convergent validity, internal consistency reliability, and discriminant validity, were examined to assess the quality of the measurement model (Hair et al., 2017). The standardized factor loadings of CA5, CB1, 2, and 4, and WS1, 2, 3, and 4, were greater than 0.6 (with a minimum value of 0.65). All of them were significant at p < 0.001, supplying confirmation for individual indicator reliability (Hair et al., 2017).

Internal consistency reliability was confirmed because all the constructs’ Cronbach alphas and composite reliability (CR) values surpassed the cut-off of 0.7 (table 1) (Hair et al., 2017).

The convergence of validity was also confirmed for three main factors. As previously mentioned, the items mentioned below filled positively and significantly on their respective constructs. Furthermore, every construct had a CR value that was higher than 0.70. Lastly, as shown in Table 1, the average of the variance extracted (AVE) for all constructs exceeded the 0.50 threshold (Bagozzi & Yi, 1988).

Two methods were used to assess discriminant validity. Started with the Fornell and Larcker criterion. This criterion demands a construct’s square root of AVE (shown in bold on the diagonal in Table 1) be greater than its strongest correlation with any other construct (Fornell & Larcker, 1981). This requirement is fulfilled by all constructs represented in Table 1. The second criterion we used was the heterotrait-monotrait ratio (HTMT) (Hair et al., 2017; Henseler et al., 2015). All HTMT ratios were less than the more conservative threshold of 0.83 (Hair et al., 2017; Henseler et al., 2015). They add to the evidence of discriminant validity. Table 1 below shows the in bold square roots of AVE.

Below the diagonal elements are the correlations between the constructs. Above the diagonal elements are the HTMT ratios.

The findings in Table 2 demonstrate that community attachment has a positive effect on willingness to stay ($\beta = 0.328$ p < 0.05) while the cost-benefit is the opposite ($\beta = 0.282$, n.s.). Thus, the results support hypotheses 1 and 3 and invalidate hypothesis 4.

The fuzzy set qualitative comparative analysis (fsQCA) method was employed to perform an empirical assessment in the present investigation. FsQCA is presented by Misangyi et al. (2017), a set-theoretic analytical technique that allows for extremely fine empirical analysis of causal complexity through the logic of the set theory, equifinality to permit various equally effective configurations of
conditions that can end up resulting in the same outcome, and asymmetric correlation to permit configurations that result in an outcome that distinct from the arrangements, leading to the rejection of it.

Table 1. Quality indicators of the constructs

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>(t) Cronbach Alpha</th>
<th>(CR) Composite reliability</th>
<th>(AVE) Average variance extracted</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (CB) Cost-Benefit</td>
<td>0.791</td>
<td>0.874</td>
<td>0.703</td>
<td>0.834</td>
<td>0.459</td>
</tr>
<tr>
<td>2. (WS) Willingness to Stay</td>
<td>0.935</td>
<td>0.953</td>
<td>0.833</td>
<td>0.446</td>
<td>0.915</td>
</tr>
</tbody>
</table>

Source: Author’s elaboration (2023)

Table 2. Path coefficients

| Path                        | Path Coefficients | (STDEV) Standard deviation | (|O/STDEV|) T statistics | P values |
|-----------------------------|-------------------|----------------------------|--------------------|----------|
| Community Attachment > Willingness to Stay | 0.328             | 0.156                      | 2.104              | 0.035    |
| Cost-Benefit > Willingness to Stay           | 0.282             | 0.171                      | 1.646              | 0.100    |

Source: Author’s elaboration (2023)

FsQCA is based on the concept of set membership. To analyze data in fsQCA, the original variables must be transformed into fuzzy sets (i.e., a set of membership scores ranging from zero (complete exclusion from a set) to one (complete inclusion) (Ragin, 2014); this procedure is defined as calibration and requires the specification of three different anchors: one to define full membership, another to define full non-membership, and a cross-over point (Ragin, 2014). Following the structure of Woodside’s (2013) research, three values were used to defy these anchors: full membership was set at the original value that covered 95% of the data values, the cross-over point was set at the original value that covered 50% of the values, and full non-membership was set at the original value that covered 5% of the values.

The causal condition or combination of conditions is sufficient for the outcome if it happens when the condition (or combination of conditions) is present (Rihoux et al., 2009, p. 184). Three sequential steps were used to analyze sufficiency (Ragin, 2014; Fiss, 2011). A truth table was initially developed, containing all rational combinations of the three conditions and the corresponding number of empirical instances. In the following step, the truth table was condensed into essential configurations using two parameters: consistency and frequency, which both referred to “the degree to which cases correspond to the set-theoretic relationships expressed in a solution” (Fiss, 2011, p. 402). Often explained as the number of experimental instances for each possible combination.

Only configurations with at least five best-fit cases were retained because the minimum frequency threshold was set at five (Rihoux et al., 2009). The lowest acceptable consistency score was set at 0.8 (Ragin, 2014), a measure of consistency. To avert concurrent subset relations of attribute combinations in both the outcome and the negation, the proportional reduction in inconsistency (PRI) was also examined, and eliminated any configuration that had a PRI lower than or equal to 0.7 (Fiss, 2011; Schneider, 2012). The truth table was finally condensed into simpler configurations using the Quine-McCluskey algorithm (Ragin, 2014) and Boolean minimization.

Counterfactual analysis, which distinguishes between simple and complex counterfactuals, is incorporated into the Quine-McCluskey algorithm (Fiss, 2011). The truth table algorithm generated three possible outcomes (complex, intermediate, and parsimonious) that reflect the differences between these two types of counterfactuals; this makes it possible to categorize antecedent conditions as “core”
or “peripheral” (Fiss, 2011). As a result, the fuzzy-set intermediate solution for both outcomes (high and low willingness to stay) was provided, as well as a distinction between “core” and “peripheral” conditions (Fiss, 2011). The following table displays the fuzzy set intermediate solution for high and low willingness to stay.

**Table 3. Configurations for high and low willingness to stay**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>High Willingness to Stay (ws)</th>
<th>Low Willingness to Stay (~ws)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S1</td>
<td>S2</td>
</tr>
<tr>
<td>Community attachment</td>
<td>●</td>
<td>☐</td>
</tr>
<tr>
<td>Cost Benefit</td>
<td>●</td>
<td>☐</td>
</tr>
<tr>
<td>Visa no Visa</td>
<td>☐</td>
<td>●</td>
</tr>
<tr>
<td>Consistency</td>
<td>0.80</td>
<td>0.80</td>
</tr>
<tr>
<td>Raw coverage</td>
<td>0.65</td>
<td>0.55</td>
</tr>
<tr>
<td>Unique coverage</td>
<td>0.14</td>
<td>0.03</td>
</tr>
<tr>
<td>Overall solution consistency</td>
<td>0.77</td>
<td></td>
</tr>
<tr>
<td>Overall solution coverage</td>
<td>0.78</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s elaboration (2023)

Consistency and coverage are two criteria that must be met for a solution to be deemed valid; these criteria were applied using the formulas proposed by Ragin (2014). The degree to which empirical cases that share a configuration agree in displaying the result is described by the consistency value of each configuration. The table lists the corresponding values for each solution (S). All solutions' consistency scores exceeded the cutoff point 0.8 (Ragin, 2014). Therefore, all solutions could be deemed adequate for high willingness to stay (WS). Coverage evaluates the fraction of circumstances that take a specific route and encapsulates the configuration's empirical significance (Ragin, 2014). Unique coverage is the proportion of cases that can only be explained by one configuration. Table 3 demonstrates that the unique coverage of all solutions was greater than zero. As a result, all solutions had practical relevance.

The outcomes show that the visa was present in all solutions, even as a low indicator. The first solution (S1) demonstrates that a low visa/no visa and a high level of community attachment can result in a high willingness to stay, regardless of the cost-benefit. The second solution (S2) indicates that a high cost-benefit combined with a low visa/no visa also results in a high willingness to stay. Finally, in the high-ws solutions, the third solution (S3) demonstrates the combination of high visa no-visa with low cost-benefit and community attachment.

As fsQCA considers, causal asymmetry, which translates to solutions that predict a high willingness to stay, may not always be the opposite of configurations that predict a low willingness to stay (~ws). The sufficiency analysis used the same frequency, consistency, and PRI thresholds as those used for a high willingness to stay. The fuzzy set intermediate solution for low willingness to stay is shown in Table 3, with the fourth and final solution (S4) demonstrating that for those who have a visa, combined with low cost-benefits, leads to a low willingness to stay.

### 5. Discussion

As expected, according to hypotheses 1 and 3 previously established, the results indicate that community attachment directly influences the willingness to say, and this confirmation was reaffirmed with the sample of digital nomads that participated in this research. Social ties, a sense of belonging, place-based identity, quality of life, and economic factors are a few of the significant factors that
researchers have identified as influencing community attachment (Hidalgo & Hernandez, 2001; McCool & Martin, 1994). In this perspective, this research confirms this position claimed by previous research (e.g., Patwardhan et al., 2020) since the quality of life was one of the positive points most pointed out by digital nomads when asked about their motivation for choosing Lisbon. Furthermore, this study extends existing knowledge about willingness to stay, which was previously studied in the context of tourism entrepreneurs (Dias & Silva, 2021; Dias et al., 2023; Ragmoun, 2022), but not in the context of digital nomads. Furthermore, findings from this study expands knowledge regarding the attraction factors of the digital nomads. For example, Reichenberger (2018) showed that digital nomads choose a destination, they consider the structures of the destinations to accommodate them, for example, offering coworking and co-living style accommodations. Out study adds the importance of community participation. This can also be associated with keeping in touch with the community of digital nomads that live in these places, which will strengthen local connection ties, and which we can see also has a great impact on community attachment and these are aspects that Lisbon offers.

It is important to mention that the cost benefit variable showed, in the quantitative results, to have a direct influence on the willingness to stay decision-making, regardless of the other variables, while in the qualitative results it had an influence even when combined with the other variables, therefore, it is of great influence on decision making for digital nomads to stay in Lisbon.

The cost of living compared to the benefits of living in Lisbon, however, proved not to be a relevant factor in the willingness to stay, according to the quantitative results refuting hypothesis number 4. Although it has an influence when combined with the other variables, solutions 3 and 4 in the qualitative results show high and low willingness to stay, respectively. The different configurations of digital nomads show that they are not a homogenous group. This study found that their reasons for staying in a place vary, with some being motivated by community attachment and others by more rational factors such as cost. This finding also aligns with previous studies. For example, Patwardhan et al. (2020) revealed that affordability also plays an important role in community attachment and consequently in willingness to stay, therefore having the results obtained going in accordance with this confirmation. However, it was possible to note and contribute to the academy that this variable can only influence when combined with other factors, for example, the community attachment and the legal visa of the digital nomad in the country. Additionally, in line with data from Statista (2023), which shows that the majority of digital nomads globally are from the USA, the sample of this research shows the Americans being one of the two nationalities that most participated in this research and that as the data shows of the MBO Partners website in 2023, this group presents annual income between 50,000 and 99,999 dollars per year, a value considerably higher than the average annual earnings of a Portuguese person. It is, therefore, understandable and explains how the cost of living is not directly influential in willingness to stay since a good part of the sample is from a nationality known for high income as digital nomads. Furthermore, most of the participants are from the Information and Technology sector, an industry in which Lisbon is investing in attracting professionals, and it is known for its high incomes compared to other sectors.

The quantitative analyses show that having a visa for digital nomads or not has no direct influence on digital nomads' willingness to stay; however, the qualitative data show that low visa no visa when combined with high community attachment (S1) or Cost Benefit (S2) has a strong influence on their willingness to stay. It was also possible to notice in the results for low willingness to stay that those who have the visa combined with a low cost-benefit will have a low willingness to stay (S4). It is understood here that for those with a visa, other aspects would lead these digital nomads to decide to stay permanently in Lisbon. Not having a visa is not directly associated with a contrary position. This study builds on the work of Sánchez-Vergara et al. (2023) and Mourato et al. (2023) by examining the conditions under which a visa influences digital nomads’ decision-making and the conditions under which it does not.
6. Conclusions

Dias and Silva (2021), in a study on willingness to stay, concluded that different factors influence individuals to make such a decision. This study identified similar results when analyzing digital nomads. The ties of connection and attachment to the place are fundamental factors; however, although the most striking, other aspects that generate the willingness to stay in Lisbon are aligned with the community attachment.

For digital nomads, Thompson (2018) suggested future research to understand whether the nomad lifestyle would be temporary or long-term and whether the destination itself was a decisive factor (Beaumont, 2019). In this research, it was possible to understand that for most digital nomads, this way of life is long-term and that, in the case of Lisbon, the quality and cost of living contribute to the coming of these individuals to the city, both for those with and without a visa for the digital nomad. Furthermore, it demonstrated that most digital nomads are not Europeans, and most work in information technology. This highlights that Lisbon currently aims to draw a profile of people with high income to the city, and they will be part of the capital’s demographic and socio-cultural scenario, although for a limited time.

The outcomes of the present research show that the variables studied do influence the willingness to stay of digital nomads in a certain destination, even if at different levels or when combined; however, it was also discovered that digital nomads tend to reside in chosen destination for more than one year, even though many of them are temporary residents, as this way of life is, for the most part, long-term. To encourage this population to stay in the capital, policymakers should provide support for events, celebrations, and other community-centered activities that help these individuals connect with themselves and their neighbors. Moreover, the digital nomad visa may be a gateway for non-residents to settle permanently in the destination. It is intended to motivate the public and social leaders of the destination to consider digital nomads in the hunt for housing in the city, which is currently, as previously stated, a challenge due to both a lack of housing and a high cost. The policy makers could fully invest in policies for digital nomad houses of availabilities that do not negatively compromise the real estate sector and houses for the local community. For example, limiting and restricting for investors and property owners where properties intended for digital nomads do not exceed the availability for the local community.

This study has some limitations. Firstly, the inability to identify the total population of digital nomads in Portugal compared to this study sample. One of the difficulties with this research was finding official data from the Portuguese government showing how many digital nomads there are currently in the country. Although the government provides the number of visas for digital nomads issued, many are not required a visa as citizens of the Schengen area and, therefore, can reside and work in Portugal without it. Undoubtedly, the convenience sample could be expanded; however, in line with the first limitation presented, there was difficulty in finding digital nomads who considered themselves digital nomads to respond to the survey.

Secondly, many remote workers from multinational organizations with their corporate offices in Lisbon were identified; they aren’t considered digital nomads. Nevertheless, they participate in digital nomad groups on social media and live in co-living spaces. This could lead to future research, as the same model could be applied to this group of remote workers (who are not considered digital nomads) and the intention to stay permanently in Lisbon could be compared between the two groups.

This research could also be continued by examining Lisbon community perceptions of digital nomads in the capital and the socio-cultural impact of digital nomadism in Lisbon. Finally, determine if the results are limited to Lisbon, or if the situation is different in other major Portuguese cities, such as Porto and Funchal in Madeira, which are also popular destinations for digital nomads. Therefore, similar research could be conducted in other tourist destination countries that are popular among digital nomads.
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