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Determinants to Stay and Digital Nomad Satisfaction Index in Bali as Digital Nomad Agglomeration Area

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Abstract

Digital nomads choose destinations that provide tourism facilities, as well as support for remote workers. Bali, especially Canggu and Ubud, are among the world's five main destinations for digital nomads. This study aimed to analyse the determinants of the willingness of digital nomads to stay and their satisfaction with staying in Bali. Data collection in this study was carried out using a questionnaire instrument. The analysis was carried out using SEM-PLS regression analysis techniques, composite index analysis to determine the Digital Nomad Satisfaction Index (DNSI) and the Importance-Performance Analysis (IPA). Results analysis of determinants of willingness to stay: It is known that remote working environment, tourism environment, public facilities and services, community attachment, and cost and benefit have a significant positive effect on the willingness of digital nomads in Bali. Digital nomads are generally satisfied living in Bali. Future policies focus on improving performance in terms of visa processing, healthcare services, network expansion opportunities in events, and housing affordability.

Keywords: *Digital Nomad, Satisfaction Index, Willingness to Stay, Agglomeration Area*.

Introduction

Digital nomad is a term for people who work using information technology and digital media in different places (nomadic), are not bound by working hours, and work in an informal atmosphere, even while on vacation (as a lifestyle) (Richter & Richter, 2020). The nomenclature 'nomad worker' has been around for decades, while the phrase 'digital nomad' shows the impact of technology on human life patterns, including work (Dery et al., 2017). The new normal era due to the COVID-19 pandemic has increased the pattern of mobile workers. Digital nomads choose destinations that provide tourism facilities and support for remote workers. Several Southeast Asian countries, such as Indonesia and Thailand, are favourites for digital nomads because of their long-term visa policies. Thus, digital nomad concentration areas have been formed, such as in Bali and Chiang Mai (Prabawa & Pertiwi, 2020).

Responding to the high interest of the younger generation (especially from developed countries) in becoming digital nomads has made many tourist areas transform to have the vibes of a digital nomad area. Discussion of the digital nomad phenomenon is mostly done by looking at the technology, business, and tourism aspects. Previous research places digital nomads as a point of view.

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On the other hand, tourism business actors view this phenomenon as a business opportunity that must be utilized. This is evident from the increase in coworking spaces, cheap accommodation, and nightlife venues to attract digital nomads. Moreover, coworking spaces and entertainment venues are one of the main considerations for digital nomads in determining their destinations. The massive development of tourism facilities supporting digital nomads makes the burden on tourism areas heavier and denser. This is important to study by placing the area as a point of view of the digital nomad phenomenon. Tourism agglomeration in an area is like two sides of a coin (Swarbrooke & Page, 2001), which have economic, socio-cultural, and physical environmental impacts (both divergent and overlapping) (Kreag, 2001). The results of this study are important so that the allocation of development programs, especially tourism supporters, can be directed to supporting areas around the digital nomad agglomeration areas that have been formed today.

As reported from the Digital Nomads website, two areas in Bali are included in the top five destinations for remote workers, namely Canggu (in North Kuta, Badung Regency) in 4th place, and Ubud (in Gianyar Regency) in 5th place. The combination of the low cost of living, good internet connection, and tropical environment make locations like Canggu, Bali, Indonesia, a "top destination" for digital nomads (Green, 2020; Thompson, 2021). The number of digital nomads in Bali is believed to continue to increase after Indonesia issued a remote work visa in October 2022, especially since Bali is a popular tourist destination worldwide (Rustini, 2023; Budhi, 2022). Digital nomads in Bali also believe there are many opportunities for collaboration and socialization with talented people from all over the world who also live in Bali (Haking, 2017). The agglomeration of digital nomads in the Canggu area does have a positive impact on the economy. Still, on the other hand it also causes pressure on the Canggu area which has externalities for socio-economic and environmental conditions (Sutawa, 2012). Such as the massive conversion of agricultural land, increasing land prices, and disruption of public order due to night entertainment activities that end in petitions from the community. Likewise the Ubud area, which is also known as one of the best tourist cities in the world, especially with its cultural tourism. Ubud has an image of a tourist area that still strongly holds its culture (Anggi et al., 2020). The density of tourism in Ubud has also begun to cause various problems, such as congestion and land conversion (Sutantri & Wijaya, 2021). Preparing an area management strategy will be an important reference in spatial planning and equitable, sustainable development.

Prabawa & Pertiwi (2020) explained several travel pull factors that attract digital nomads to work from Bali, namely: (1) Bali has easily accessible tourist destinations; (2) Bali provides a good vibe for working digitally; (3) Bali offers a comfortable atmosphere in completing projects, especially those that require inspiration; (4) Bali has 24-hour restaurants with good internet connections and working spaces; (5) Bali is a safe place to travel and work alone; (6) There is comfortable accommodation that fits the budget; (6) Bali has good transportation modes; (7) Bali is an international destination and fits western culture (entertainment).

Digital nomads are part of stress-free workcation tourists (Pescek, 2018). Digital nomads are easier to move, compared to someone with a job that requires 'work from office'. The perception of digital nomads' assessment of an area is important, such as a special website that presents digital nomad preferences about various areas in the world that are suitable for digital nomads. To attract digital nomads, an area must have facilities that match the needs of digital nomads. This is supported by the Tiebout Hypothesis, which states that someone chooses a housing location in an area with good facilities and public services. In addition, preferences for the

environment and community are also determining factors in supporting comfort. To obtain valid information related to digital nomads, this study uses a questionnaire research instrument targeting digital nomads who live in two main digital nomad areas in Bali, namely the Canggu and Ubud areas. To ensure the quality of the questionnaire, validity and reliability test of the questionnaire instrument was conducted.

Through the questionnaire research instrument, digital nomad perceptions of a region can be measured through the Digital Nomad Satisfaction Index (DNSI), which adopts the customer satisfaction index measurement. The variables that are attributes in the DNSI measurement are also analysed for their impact on the willingness to stay digital nomads in a region.

Literature Review

Digital Nomad Concept

Based on several studies and surveys that have been conducted, it is known that there are several components of factors that are considered important for digital nomads in determining where to live, respectively: (1) cost of living and food, internet access; (2) security (crime, environmental security; (3) access to the outdoors and nature; (4) friendly to digital nomads, and visa situations; (5) availability of café/coworking culture (Andrade et al., 2023). Reviewed further, the behaviour of digital nomads is presented in Graph 1.

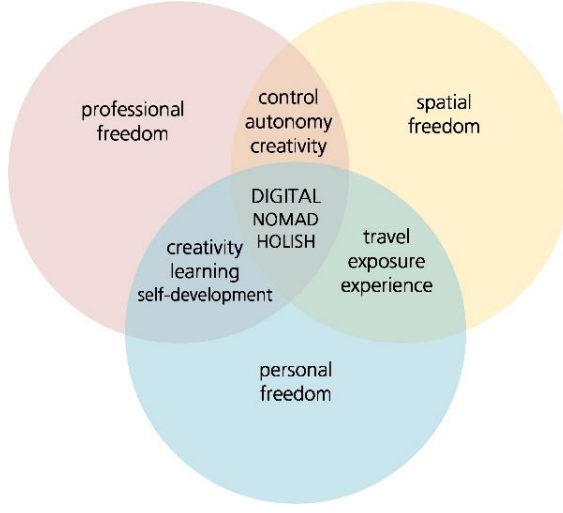

Figure 1. Digital Nomad Holism

Source: Prabawati (2020)

As digital nomads become increasingly popular, researchers are also interested in conducting conceptual, substantive, and applied research related to digital nomads. Pescek's (2018) research results have formulated several main characteristics of digital nomads, namely: staying longer in an area, preferring to live in or near cities, working from anywhere, routine daily activities adjusted to clients, socializing with local people and workcation tourists, including slow tourists, highly dependent on modern technology, with accommodation that tends to be modest and environmentally friendly, with a tendency to consume/shop like local residents to obtain authentic experiences. Previous studies have examined the characteristics and lifestyle of digital

nomads (Hermann et al., 2020; Thompson, 2019; Tyutyuryukov & Guseva, 2021; Wen et al., 2021). Including research on the behavioural and psychological aspects of digital nomads (Chevtaeva & Guillet, 2021; Hannonen, 2020; Prabawa & Pertiwi, 2020; Bulut & Maraba, 2021). Further research directions develop into digital nomad work systems (Nani & Ali, 2020; Massaro & Kim, 2022; Merkel, 2022; Huda et al., 2024) and travel behaviour (Nugraha & Nuryanti, 2022; Bozzi, 2020; Pancarelli, 2020; Abbas et al., 2021; Lee & Kwon, 2022).

However, research is also needed that looks at digital nomads and in a region. When an area becomes a digital nomad agglomeration, it will be followed by an increase in local infrastructure, including housing, digital facilities, and work and entertainment facilities. Prabawa & Pertiwi (2020) identified the travel push factors of digital nomads, namely: (1) to find places related to work/projects; (2) increase cooperation; (3) find business opportunities; (4) earn money without the pressure of working in an office; (5) get inspiration in completing projects; (6) open up opportunities to meet people with the same interests; (7) to have friends from the local community.

Hypotheses

The selection and determination of a place of residence for everyone is certainly different according to the considerations of each individual. Digital innovation is the key to digital innovation that digital nomads must carry out (Dery et al., 2017).

H1: Remote working environment positively affects willingness to stay digital nomad.

Ellis (1967) emphasized the importance of environmental preferences and surrounding characteristics in choosing a housing location. Digital nomads are part of workcation tourists, with the main characteristic of staying for a relatively longer period of time. Because they are actually part of tourists, of course, the tourism environment is also important (Pescek, 2018).

H2: The tourism environment positively affects the willingness to stay as a digital nomad.

Tibeout (1956) developed the Tiebout Hypothesis, which states that a person chooses to live in a city or area with good taxes or public services.

H3: Public facilities and services positively affect willingness to stay digital nomad.

Social agglomeration theory states that people choose a place to live with the main consideration that they will feel comfortable with a certain social group where this group can be based on race, income, age, and so on, which then gives rise to segregation. This is confirmed by the research results by Little (1974) and Ball & Kirwan (1977) regarding the implications of the desire of most people to live with homogeneous neighbours.

H4: Community attachment positively affects willingness to stay a digital nomad.

The trade-off Model by Alonso (1964) and Solow (1972, 1973) can be simply interpreted as the existence of accessibility trade-off to the space chosen as a residential location. This model also assumes that the city is circular, with a centre of labour and transportation available everywhere; all locations are considered homogeneous. Someone will be willing to pay more for property closer to the agglomeration area because of lower commuting costs.

H5: Cost and benefit positively affect willingness to stay digital nomad.

As part of the analysis to develop a strategy for expanding the digital nomad agglomeration area as a source of new economic growth, it is necessary to know the factors that influence digital nomads' decisions in choosing an area to live in.

Methods

Research Design, Variables, and Measurement

This study was designed with a quantitative approach, where the analysis uses econometric models (regression analysis and composite index) to analyze data collected through questionnaires. The questionnaire used as an instrument in data collection was compiled and has been tested for validity and reliability. The sample size was determined by quota sampling, which was 100 digital nomads spread across Ubud and Canggu. The sampling technique used purposive sampling, providing that digital nomads have lived in Bali for at least three months and considering the representation of countries (continents), age, gender, and status. It can provide an assessment of the Bali tourism area. The results of the data tabulation were then analyzed to determine the determinants of digital nomad willingness to stay and the Digital Nomad Satisfaction Index.

This research instrument (questionnaire) uses a five-point Likert scale ranging from one (very unimportant/very dissatisfied) to five (very important/very satisfied). The questionnaire was compiled by developing previously formulated research variables, especially related to measuring the digital nomad satisfaction index and the determinants of willingness to stay. The questionnaire began with several open-ended questions to obtain general information about the characteristics and activities of the respondent's remote workers. The digital nomad satisfaction index was analyzed from the tabulation of questionnaire data with the IPA (Importance-Performance Analysis) pattern for the variables: (1) remote working environment; (2) tourism environment; (3) public facilities and services; (4) community attachment; (5) cost and benefit. The five variables were then used as independent variables in the analysis of willingness to stay, using the respondent's perception on the performance side.

Willingness to stay (WTS), with indicators: (1) tendency to stay for a long period (WTS1); (2) planning as a future residence (WTS2); and (3) attention to future regional development (WTS3). Remote working environment (RWE), with indicators: (1) Reliable internet connectivity (RWE1); (2) Coworking spaces amenities (RWE2); (3) Mail and package forwarding (RWE3); (4) Banking and finance (RWE4); (5) Access to remote working support equipment (RWE5). Tourism environment (TE), with indicators: (1) Choice of natural tourism destinations (TE1); (2) Attractive cultural tourism (TE2); (3) Availability and quality of entertainment venues (TE3); (4) Access to tourist attractions (TE4). Public facilities and services (PFS), with indicators: (1) Visa processing (PFS1); (2) Healthcare services (PFS2); (3) Accessibility to public transportation (PFS3); (4) Safety and security (PFS4). Community attachment (CA), with indicators: (1) Family/Colleague relations (CA1); (2) Ease of making friends (CA2); (3) Comfort with local community lifestyle (CA3); (4) Opportunity to expand the network in events (CA4). Cost and benefit (CB), with indicators: (1) Housing affordability (CB1); (2) Transportation expenses (CB2); (3) Food prices (CB3); (4) Entertainment cost (CB4); (5) Healthcare cost (CB5).

Data Analysis Technique

SEM-PLS Analysis

Structural Equation Modeling (SEM) was developed to test the conceptual model, where the SmartPLS tool will be used to perform Partial Least Square (PLS), which is a variance-based structural equation modelling technique (Ringle et al., 2015).

Based on the previous research framework, the equation for willingness to stay a digital nomad can be written as follows:

$WTS = \gamma 1RWE + \gamma 2TE + \gamma 3PFS + \gamma 4CA + \gamma 5CB + \epsilon$

Where:

WTS = willingness to stay

RWE = Remote Working Environment

TE = Tourism Environment

PFS = Public Facilities and Services

CA = Community Attachment

CB = Cost and Benefit

$\gamma 1\text{-}5$ = regression coefficient

ϵ = model error

PLS-SEM analysis is carried out in two stages: outer model testing and evaluation/measurement of inner model/structural model. The outer model is carried out by assessing the reliability and validity of the measurement model (Suasih et al., 2018).

The outer model test to assess the quality of the measured model was carried out using convergent validity, internal consistency reliability, and discriminant validity tests (Hair et al., 2017) with the test criteria in Table 1.

Test Type/Parameter	Rule of Thumb
1. Convergent Validity (Convergent Validity)	
a. Loading factor	Loading factor from construct with indicator > 0.6
b. Average Variance Extracted(AVE)	AVE value > 0.5
2. Discriminant Validity (Discriminant Validity)	
a. Cross Loading	The loading value on the target construct must be greater than the loading value on other constructs.
3. Unidimensionality (Reliability Test)	
a. Composite Reliability	Composite reliability value >0.7
b. Average Variance Extracted(AVE)	AVE value > 0.5
c. Cronbach's Alpha	Cronbach alpha value > 0.6

Table 1. Rule of Thumb Evaluation of Outer Model

Source: Chin (1998), Hair et al. (2011), Hair et al. (2012)

Inner model/measurement model evaluation is the second test in evaluating the structural model to see the significance of the influence between variables by looking at the coefficient and the significance value of the t statistic (t table significance 5% = 1.96).

Criteria	Rule of Thumb
R-Square	0.67, 0.33, and 0.19 indicate strong, moderate, and weak models (Chin, 1998). 0.75, 0.50, and 0.25 indicate strong, moderate, and weak models (Hair et al., 2011).
Effect Size f^2	0.02, 0.15, and 0.35 (small, medium, and large).
Q^2 predictive relevance	Q^2 >0 indicates the model has predictive relevance, and Q^2 <0 indicates that the model lacks predictive relevance.
Significance (two-tailed)	t-value 1.65 (significance level = 10%), 1.96 (significance level = 5%, and 2.58 (significance level = 1%)

Table 2. Rule of Thumb Evaluation of Inner Model/Measurement Model

Source: Chin (1998), Hair et al. (2011), Hair et al. (2012)

Digital Nomad Satisfaction Index

Digital Nomad Satisfaction Index (DNSI) adopts the Customer Satisfaction Index (CSI) measurement technique, which is a quantitative analysis that determines the level of user satisfaction by considering the importance of a product or service's attributes. So, DNSI presents the percentage of digital nomad satisfaction with various attributes related to the digital nomad agglomeration area.

Attributes	Importance (I) Scale: 1-5	Performance (P) Scale: 1-5	Score (S) (S = I x P)
…..			
…..			
…..			
Total Score	Total (I) = (Y)		Total (S) = (T)

Table 3. Digital Nomad Satisfaction Index Calculation Matrix

Then, it can be calculated:

$$DNSI = \frac{T}{5Y} x100\%$$

The attributes used are determinants of willingness to stay a digital nomad, which include remote working environment, tourism environment, public facilities and services, community attachment, cost and benefit. DNSI values can then be classified according to the criteria presented in Table 4.

No	Index Value	Criteria
1	80% < satisfaction index ≤ 100%	Very satisfied
2	60% < satisfaction index ≤ 80%	Satisfied
3	40% < satisfaction index ≤ 60%	Neutral
4	20% < satisfaction index ≤ 40%	Dissatisfied
5	0% < satisfaction index ≤ 20%	Very dissatisfied

Table 4. Digital Nomad Satisfaction Index Criteria

Importance-Performance Analysis

This analysis relates the level of importance of an attribute owned by a particular object with the reality (performance) the user feels. The initial stage of IPA analysis is to calculate the average level of importance and level of satisfaction for each item of the attribute with the formula:

$$\overline{X_i} = \frac{\sum_{i=1}^{k} x_i}{n} \qquad \overline{Y_i} = \frac{\sum_{i=1}^{k} y_i}{n}$$

Where:

$\overline{X_i}$= weighted average satisfaction level of item i

$\overline{Y_i}$= weighted average level of importance of item i

n = number of respondents/samples

The next step is to calculate the average level of importance and level of satisfaction for all items using the formula:

$$\overline{\overline{X_i}} = \frac{\sum_{i=1}^{k} \overline{x_i}}{p} \qquad \overline{\overline{Y_i}} = \frac{\sum_{i=1}^{k} \overline{y_i}}{p}$$

Where:

$\overline{\overline{X_i}}$= average item satisfaction value

$\overline{\overline{Y_i}}$= average value of item importance

p = number of items

These values are plotted into a diagram presenting the IPA quadrants (Figure 2).

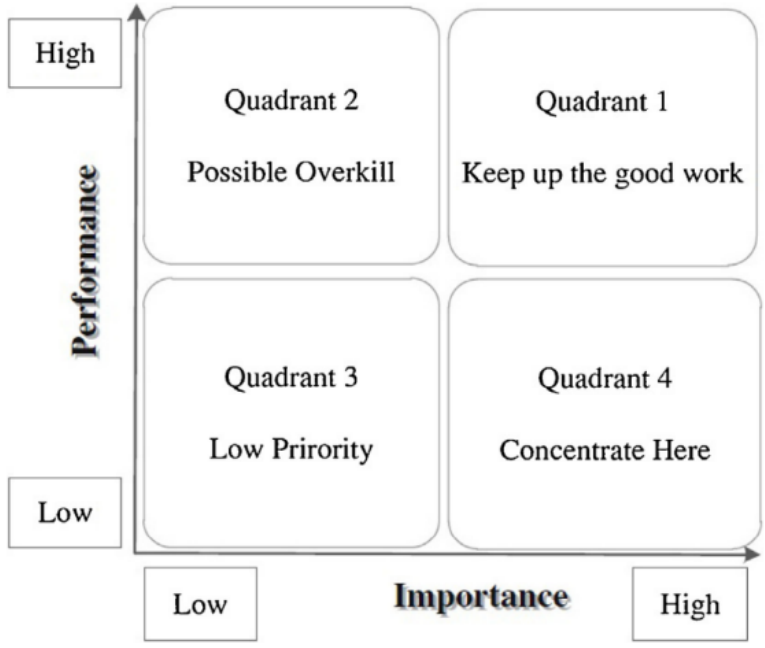

Figure 2. Importance-Performance Analysis Quadrant Division

Source: Phadermrod et al., 2019

The IPA diagram, as in Figure 2, consists of four quadrants, namely:

- Quadrant 1 contains attributes considered very important to customers, and the organization appears to deliver high performance levels. Thus, the attributes in this quadrant are referred to as key strengths and opportunities for achieving or sustaining competitive advantage.

- Quadrant 2 contains attributes considered less important to customers, but the organization is delivering a high level of performance. In this case, the organization should reallocate resources allocated to attributes in this quadrant to other quadrants that require improved performance.

- Quadrant 3 contains attributes with low importance and low performance, which are referred to as minor weaknesses. Therefore, the attributes in this quadrant do not require much priority for improvement.

- Quadrant 4 contains attributes that are considered very important to customers but whose performance level is quite low. These attributes are referred to as major weaknesses that require immediate attention for improvement.

Results and Discussion

Respondent Characteristics

The characteristics of the respondents that were photographed were related to nasal (country), gender, age, length of stay in Bali, and experience of living in other areas as a digital nomad.

Description	Criteria	Percentage
Country of origin	Australia	19
	French	12
	Malaysia	10
	English	10
	Ukraine	9
	USA	5
	Dutch	9
	Others	12
	Amount	100
Gender	Male	78
	Female	23
	Amount	100
Age	21 – 30 years	14
	31 – 40 years	53
	41 – 50 years	25
	> 50 years	8
	Amount	100
Length of Stay in Bali until now	≤ 1 year	63
	> 1 year	37
	Amount	100
Have lived in other areas as a digital nomad	Yes	52
	No	48
	Amount	100
Main job	Marketing jobs:	
	- SEO Specialist	10
	- Social media and community manager	19
	Tech jobs:	
	-Web developer and/or programmer	16
	Creative jobs	

	-Vlogger/YouTube content creator	14
	-Graphic designer	3
	-Wedding Photographer	14
	Business jobs	
	-Business consulting/management	3
	Administrative jobs	
	-Virtual Assistant	10
	Education jobs	
	-Online teacher	9
	Others (Traditional jobs)	
	-Author and/or journalist	2
	Amount	100

Table 5. Respondent (Digital Nomad) Characteristic

Results of PLS-SEM Analysis

As previously explained, this study uses PLS-SEM with SmartPLS software to estimate and evaluate the research model, namely the determinants of willingness to stay a digital nomad. The measurement of this research model, which is entirely a reflective variable, is carried out in two stages, namely the evaluation of the outer model and continued with the evaluation of the inner model.

Outer Model Evaluation

As presented in Table 1, the outer model's evaluation includes convergent validity, discriminant validity, and unidimensionality tests. Convergent validity is reviewed using the loading factor and Average Variance Extracted.

Indicator	Construction					
	Community attachment	Cost and benefit	Public facilities and services	Remote working environment	Tourism environment	Willingness to stay
Family/Colleague relations	0.621					
Ease of getting friends	0.787					
Network expansion opportunities in events	0.848					

Comfort with local community lifestyle	0.864					
Housing affordability		0.841				
Transportation expenses		0.673				
Food prices		0.798				
Entertainment costs		0.757				
Healthcare costs		0.685				
Visa processing			0.732			
Healthcare services			0.674			
Accessibility to public transportation			0.682			
Safety and Security			0.748			
Reliable internet connectivity				0.779		
Coworking spaces amenities				0.682		
Mail and package forwarding				0.700		
Banking and Finance				0.734		
Access to remote working support equipment				0.715		
Choice of natural tourist destinations					0.672	
Interesting cultural tourism					0.860	
Availability and quality of entertainment venues					0.756	
Access to tourist attractions					0.614	
Tendency to stay long-term						0.885
Planning as a future residence						0.713
Attention to future regional development						0.892

AVE	0.617	0.568	0.504	0.522	0.535	0.696

Table 6. Respondent (Digital Nomad) Characteristic

The rule of thumb for convergent validity evaluation is when the loading factor > 0.6 and AVE > 0.5. Based on Table 6, this model meets the criteria of convergent validity, where all indicators have a loading factor > 0.6 against their constructs and the AVE value of each construct > 0.5.

Furthermore, discriminant validity testing was done by reviewing the cross-loading (Table 7).

Indicator	Construction					
	Community attachment	Cost and benefit	Public facilities and services	Remote working environment	Tourism environment	Willingness to stay
Family/Colleague relations	**0.621**	0.502	0.264	0.559	0.539	0.489
Ease of getting friends	**0.787**	0.461	0.496	0.435	0.328	0.512
Network expansion opportunities in events	**0.848**	0.615	0.474	0.681	0.448	0.727
Comfort with local community lifestyle	**0.864**	0.641	0.510	0.718	0.540	0.745
Housing affordability	0.535	**0.841**	0.339	0.694	0.653	0.694
Transportation expenses	0.326	**0.673**	0.259	0.409	0.329	0.442
Food prices	0.736	**0.798**	0.386	0.617	0.473	0.680
Entertainment costs	0.698	**0.757**	0.491	0.541	0.500	0.690
Healthcare costs	0.308	**0.685**	0.318	0.485	0.389	0.578
Visa processing	0.351	0.292	**0.732**	0.349	0.267	0.431
Healthcare services	0.298	0.175	**0.674**	0.248	0.201	0.259
Accessibility to public transportation	0.295	0.234	**0.682**	0.265	0.286	0.342
Safety and Security	0.551	0.527	**0.748**	0.456	0.249	0.601
Reliable internet connectivity	0.738	0.670	0.521	**0.779**	0.499	0.739
Coworking spaces amenities	0.522	0.578	0.347	**0.682**	0.710	0.611

Mail and package forwarding	0.457	0.444	0.109	**0.700**	0.416	0.425
Banking and Finance	0.465	0.519	0.328	**0.734**	0.456	0.585
Access to remote working support equipment	0.562	0.395	0.380	**0.715**	0.360	0.496
Choice of natural tourist destinations	0.441	0.466	0.225	0.466	**0.672**	0.479
Interesting cultural tourism	0.549	0.586	0.305	0.632	**0.860**	0.648
Availability and quality of entertainment venues	0.281	0.403	0.218	0.413	**0.756**	0.424
Access to tourist attractions	0.415	0.364	0.283	0.465	**0.614**	0.389
Tendency to stay long-term	0.721	0.636	0.644	0.651	0.457	**0.885**
Planning as a future residence	0.506	0.761	0.340	0.686	0.800	**0.713**
Attention to future regional development	0.778	0.680	0.566	0.693	0.450	**0.892**

Table 7. Cross Loading Output

Table 7 shows that the loading values of all indicators on the intended construct are greater than those with other constructs, thus fulfilling the cross-loading criteria.

Reliability testing is shown by evaluating composite reliability, Average Variance Extracted (AVE), and Cronbach Alpha, with the output presented in Table 8.

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Community attachment	0.791	0.824	0.864	0.617
Cost and benefit	0.808	0.822	0.867	0.568
Public facilities and services	0.694	0.713	0.802	0.504
Remote working environment	0.774	0.786	0.845	0.522
Tourism environment	0.706	0.747	0.819	0.535
Willingness to stay	0.774	0.777	0.872	0.696

Table 8. Output Construct Reliability

If the value is > 0.7 and the Cronbach's Alpha value is > 0.6, the model is said to meet the composite reliability criteria. Table 8 shows that the composite reliability and Cronbach's alpha of all variables have met the testing criteria.

Inner Model Evaluation

Evaluation of the inner model or structural model is evaluated to analyze the significance of the influence between variables.

Dependent Variable	Independent Variables	R-Square	Effect size f-Square	Coefficient (p-values)	t-values	Hypothesis Testing
WTS	RWE	0.837 (strong)	0.080 (weak)	0.213 (0.003)	3.018	H1 supported
	TE		0.041 (weak)	0.117 (0.036)	2,098	H2 supported
	PFS		0.138 (weak)	0.183 (0.001)	3.261	H3 supported
	CA		0.088 (weak)	0.210 (0.003)	2,951	H4 supported
	CB		0.300 (moderate)	0.361 (0.000)	4.071	H5 supported

*) sig ($\alpha = 0.05$)

Table 9. Inner Model Analysis Output

Table 9 shows that the model is generally a strong model with an R-Square of 0.837. Judging from the influence of each independent variable on the dependent variable, it is known that remote working environment, tourism environment, public facilities and services, community attachment, and cost and benefit have a positive and significant effect on the willingness to stay digital nomads in Bali, especially in the Canggu and Ubud areas.

When reviewed based on each construct related to the remote working environment, an internet network is important for digital nomads. Meanwhile, cultural tourism factors are important in the tourism environment. In addition, related to the residential environment that determines the intention of digital nomads to live in an area is comfort and security, as well as affordable changes in price and location. Digital nomads need access to capable technology with a good internet connection for their work needs. It tends to have to live in urban areas, where natural scenery, cultural attractions, and entertainment are available (Pecsek, 2018, Nugraha & Nuryanti, 2022).

Digital Nomad Satisfaction Index (DNSI) Calculation and Positioning on IPA Matrix

Measurement of digital nomad perception/satisfaction is based on attributes, which are indicators of variables that significantly determine willingness to stay digital nomad, namely remote working environment, tourism environment, public facilities and services, community attachment, and costs and benefits.

Attributes/Indicators	Importance (I)	Performance (P)	Score (S = I x P)	Position in the Science Quadrant
Reliable internet connectivity	4.12	4.3	17.72	1
Coworking spaces amenities	3.89	4.27	16.61	1
Banking and Finance	2.89	4.01	11.59	2
Mail and package forwarding	3.14	3.99	12.53	1
Access to remote working support equipment	3.01	4.07	12.25	2
Choice of natural tourist destinations	4.06	4.3	17.46	1
Interesting cultural tourism	3.68	3.93	14.46	2
Availability and quality of entertainment venues	3.73	3.89	14.51	3
Access to tourist attractions	3.54	3.91	13.84	3
Visa processing	4.12	3.56	14.67	4
Healthcare services	3.82	3.72	14.21	4
Accessibility to public transportation	3.64	3.45	12.56	3
Safety and Security	3.42	3.96	13.54	3
Family/Colleague relations	3.82	4.16	15.89	1
Ease of getting friends	4.02	4.12	16.56	1
Network expansion opportunities in events	4.14	4.19	17.35	1
Comfort with local community lifestyle	4.08	3.9	15.91	4
Housing affordability	4.14	3.97	16.44	4
Transportation expenses	3.98	4.08	16.24	1
Food prices	3.56	3.92	13.96	3
Entertainment costs	3.68	3.95	14.54	3
Healthcare costs	4.24	4.19	17.77	1
Total Score	82.72	87.84	330.59	
Average	3.76	3.99		

Table 10. DNSI Calculation

The Digital Nomad Satisfaction Index can be calculated as follows:

$$DNSI = \frac{330.59}{5\ x\ 82.72} x100\% = 79.93\%$$

The analysis results show that the satisfaction of digital nomads in Bali, as measured by DNSI, is 79.93% in the satisfied category.

These attributes/factors can then be mapped into an IPA matrix, by the provisions explained previously.

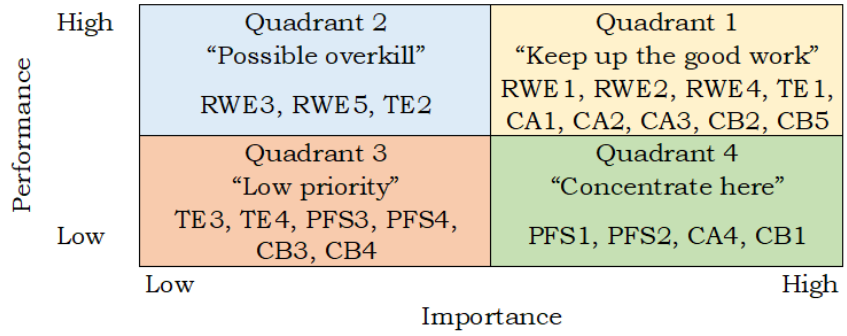

Figure 3. DNSI Attribute Positioning in the IPA Matrix

Figure 3 shows the position of each attribute in the IPA matrix:

- Quadrant 1 contains attributes that are considered very important for digital nomads, and their current performance is considered high, namely: (1) Reliable internet connectivity (RWE1); (2) Coworking spaces amenities (RWE2); (3) Banking and finance (RWE4); (4) Choice of natural tourism destinations (TE1); (5) Family/Colleague relations (CA1); (6) Ease of making friends (CA2); (7) Comfort with the local community lifestyle (CA3); (8) Transportation expenses (CB2); (9) Healthcare costs (CB5).

- Quadrant 2 contains attributes that are considered less important for digital nomads, but the conditions are already very good, namely: (1) Mail and package forwarding (RWE3); (2) Access to equipment to support remote working (RWE5); (3) Attractive cultural tourism (TE2).

- Quadrant 3 contains attributes with low importance and low performance, namely: (1) availability and quality of entertainment venues (TE3); (2) Access to tourist attractions (TE4); (3) Accessibility to public transport (PFS3); (4) Safety and security (PFS4), (5) Food prices (CB3); (6) Entertainment costs (CB4);

- Quadrant 4 contains attributes that are considered very important for digital nomads, but their performance levels are still not optimal, including: 1) Visa processing (PFS1); (2) Healthcare services (PFS2); (3) Network expansion opportunities in events (CA4); Housing affordability (CB1).

Conclusion

The results of the data analysis show that remote working environment, tourism environment, public facilities and services, community attachment, and cost and benefit have a significant positive effect on the willingness to stay digital nomads in Bali. Meanwhile, the results of the DNSI analysis show that digital nomads are satisfied with these factors. The results of the positioning in the IPMA matrix, which are also recommendations from the research results, show the need to focus on improving factors that are considered important but whose performance is still not optimal, such as visa processing, healthcare services, opportunities for network expansion in events, housing affordability.

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Contribution

Made Kembar Sri Budhi: Conceptualization, writing the original draft

Ida Bagus Putu Purbadharmaja: Methodology, validation

I Nyoman Mahaendra Yasa: Formal analysis, making the instrument

Ni Nyoman Reni Suasih: Conceptualization, visualization, software, writing-review-editing

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