

Developing Digital Nomads as a New Market Segment and Their Role in the Local Digital Ecosystem

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Abstract. Despite the large population of digital nomads in Bali, there is little awareness of their lifestyle, and they often have a bad reputation. Viewing them as mere tourists rather than as a new market segment is a loss of opportunity. Digital nomads' travel habits, spending, and accommodation choices are all different from those of traditional tourists. They feel insecure about the legal gray area in which they operate. There is room for improvement for Bali to maintain its top position as a digital nomad destination. In this qualitative research, semi-structured interviews were conducted with 24 informants, consisting of digital nomads, remote workers, government officials and affiliates, and young local professionals. An observation and immersion in five popular coworking spaces in Bali were done as well to give a better understanding of the working life in a digital nomad's natural environment. This study highlights digital nomads as a new market segment and the potential role they could play in the local digital ecosystem through knowledge transfer. The result shows that there is: 1. a willingness to share know-how among digital nomads and young local professionals; 2. a lack of coordination to realise the integration of digital nomads into the local digital ecosystem; 3. cultural challenges to overcome; and 4. legal status uncertainties in Indonesia. Through thematic analysis, a theoretical propositional path model emerged. The path illustrates the causal relationship between variables, illustrating how digital nomads are connected to the digital ecosystem in Bali and how various factors can make the connection stronger or weaker.

Keywords: Digital nomad, new market segment, Bali, destination attractiveness factors, knowledge sharing, local digital ecosystem.

1. Introduction

Bali is famous as a tourist destination (Hanna, 2016; Hobart, 2011), but a new group of international visitors has emerged—the digital nomads. Digital nomads are enabled by the ubiquity of the internet and cheap travel. Their lifestyle revolves around continuous travel and working remotely (Reichenberger, 2017). The government of Indonesia has a plan to develop a creative economy and diversify the economy of Bali (Ihsanuddin, 2019; Partners.wsj.com, 2019). Digital nomads in Bali can play a role as catalysts in the transition to a local creative digital economy. They have a culture of knowledge sharing, teaching, and providing inspiration for young local professionals (Bonneau et al., 2023).

While the tourist numbers dropped during the pandemic (Prasetia, 2020), digital nomads can be a significant contributor to the recovery of the economy in Bali, which largely depends on tourism. The COVID-19 pandemic caused a large drop in tourist arrivals in the second quarter of 2020. During the same period, the number of remote workers in the world exploded as people were forced to work from home. This leads to a potential increase in digital nomads going forward (MBO Partners, 2020a, 2020b). The interest in remote work continued after the pandemic, and more people can be expected to take advantage of the new flexibility in work (Bonneau et al., 2023).

As many as 4.8 million people described themselves as digital nomads in 2020, and 17 million, in the US alone, aspire to work remotely (MBO Partners, 2020a, 2020b). Some 20 nations in 2020, up to 33 in 2021 and 45 in 2022, opened up their borders to these "citizens of the world" who can work remotely from their laptops (Johnson, 2022; Karsten, 2021; Kucheran, 2020), showing the trend continues. However, currently, visa laws in most countries are not set up to deal with the new class of modern nomads who are working remotely (Hindriks, 2020; Kostic, 2019).

Makimoto and Manners first introduced the concept of digital nomads in their 1997 book *Digital Nomads* (Makimoto & Manners, 1997). The world paid attention to this phenomenon in 2007, when the book *The 4-Hour Workweek: Live Anywhere and Join the New Rich* was released (Ferriss, 2007). Ferriss explained that people have the option to live more sustainably. However, ironically, to escape the rat race and obtain personal freedom, the digital nomads have to contend with tax regulations, labour laws, and visa rules (Cook, 2022).

1.1 Phenomenal Gaps

Many people in Indonesia are unaware of the digital nomads in Bali because they are seen as tourists by the government and the local population. This can be due to various reasons, such as the fact that digital nomads may look like tourists, and most marketing to digital nomads is done by private businesses or coworking spaces. The digital nomad as a new market segment is not fully identified, and there is room for growth as marketing is not targeting them specifically.

Digital nomads are an emerging customer group in Indonesia (Neubauer, 2021). The lack of trust that occurs due to digital nomads' cultural misunderstandings, the government's lack of awareness about digital nomadism, and the lack of legal certainty act as barriers to marketing Indonesia to digital nomads. These gaps hamper marketing efforts, specifically the potential for improved market share amid increasing competition for digital nomads.

Furthermore, tax treaties do not cover international travelers; they only cover travellers who stay more than 183 days in a country. WTourist visa holders typically do not stay long, but they may become tax liable if they do. Other laws, such as international taxation, don't cover online work that involves international freelancers moving from country to country; this causes digital nomads to become digital outlaws (Kostic, 2019).

During the pandemic, while tourism is declining (Prasetia, 2020), the government has encouraged Bali to open up for investment and as a workplace (Rosana, 2021; Uno, 2022). The government was creating a long-term visa to attract foreign investment and target investors to Bali, and digital nomads can use this visa too to come and work in Bali (Neubauer, 2021). As of September 2022, digital nomads

should use the existing social-cultural visa B211A, which is initially for 60 days and can be extended twice for a total of 180 days (Indonesia Expat, 2022). This visa will not enable Indonesia to reap any additional benefit from the work of digital nomads, e.g., taxes or increased visa fees, but it may attract more digital nomads (Anne Barker et al., 2022; Indonesia Expat, 2022; Uno, 2022). The government hopes this will lead to technology transfer, investment, and employment for locals. Ironically, this visa does not allow people to work in Indonesia.

As of January 2023, 52 countries in the world offer a digital nomad visa (Valencia, 2023). Indonesia is still in the process of developing a digital nomad visa.

1.2 Research Gap

Previous research on digital nomads focused primarily on their identity (Jarrahi & Sutherland, 2018; Richards, 2015); motivation and lifestyle (Haking, 2017; Reichenberger, 2017; Wiranatha et al., 2020); and whether they are part of the GIG economy or some type of online worker using a laptop, apps, and the internet to earn a living (Sutherland & Jarrahi, 2017; Thompson, 2018a). No other study has been found on how to implement the government's plan or on how to integrate digital nomads into the local community in Bali. The digital ecosystem studies focused on the technology part of the digital ecosystem (Chang & West, 2006; Morgan-Thomas et al., 2020), whereas this study will focus more on the relationship of people (the participants) in the local digital ecosystem.

1.3 Theory Gap

Digital nomads do not fit into the current categorization of travellers, as they are neither tourists nor migrants (Goeldner & Ritchie, 2011; Iom.int, 2021). According to Ens et al's Typology of Digital Workers, digital nomads have high mobility and low precarity, which means their jobs can be very insecure (Ens et al., 2018). There is a need to validate their identity, and if it is made legally, the rest of the digital nomad ecosystem will follow accordingly. Digital nomads work online and travel simultaneously — they are not on holiday or taking a vacation, as many locals may still perceive. It is a question in marketing management theory about where digital nomads belong. This study comes up with evidence that digital nomads are their own category of travellers (see tables 1 and 2 below).

Furthermore, as for Bali as a tourist destination, it has lost its unique brand power (Hobart, 2011), as it is not clear what Bali is trying to sell. In the sixties, Bali used to sell authentic cultural tourism with distinct customers, but today, as Bali's nature starts deteriorating, people go to Bali for a cheap holiday, and Bali offers all kinds of services that other places can do better (Hobart, 2011). This study suggests that, in response to Bali's dwindling power as an authentic tourist destination and the strong trend of the digital nomad trend as a new market segment, Bali has the potential to extend its brand to be a digital nomad destination.

1.4 Research Question

This research works on the following questions:

- How can digital nomads be developed as a new market segment in Bali?
- How can digital nomads be utilised in the local digital ecosystem?

1.5 Research Objectives

- The first objective of this study is to create more awareness of digital nomad culture in Bali, which aims to show that digital nomads are a new market segment, and this may mean Bali has a new brand. A brand that is extended from Bali as a tourist destination to a digital nomad destination.
- Second, this research aims to create an understanding of how to utilise digital nomads in Bali. Indonesia has a mission to develop the creative economy in Bali to create a more sustainable economy. The government is trying to establish a digital nomad society in Bali. If Indonesia grants digital nomads

a permit for them to work legally, they can be utilised by society. Digital nomads have been working in this creative economy for decades, and they manage well globally. Digital nomads can be an inspiration to young local entrepreneurs.

2. Literature Review

2.1 Digital Nomads

Digital nomads are young people who live a nomadic lifestyle, where they travel the world frequently and do not have a permanent home. Wang et al. (2018) divided digital nomads into cultural, technological, and economic phenomena (Wang et al, 2018). Digital nomads choose the sites of tourism that offer lower living costs than cities in the Global North, such as Chiang Mai in Thailand, Bali in Indonesia, and Medellin in Colombia. Richards (2015) pointed out that the digital nomad lifestyle is used as a way to fight against traditional ways of working and escape from the system (Richards, 2015). Reichenberger defines digital nomads as location-independent, young professionals who can unite, travel, and do virtual work to seek freedom and increase their happiness (Reichenberger, 2017).

2.2 Digital Ecosystem

A digital ecosystem is a distributed, adaptive, open socio-technical system with properties of self-organisation, scalability, and sustainability inspired by the natural ecosystem. It has shifted the economy from a physically connected economy to a digital network economy, which has discharged the traditional individual form to an open, dynamic, and networked collaborative environment. In "The Pressing Need for a Global Digital Ecosystem" (Campbell & Jensen, 2019), researchers focused on the idea that humanity must capitalise on the massive increase in data generation and processing power.

2.3 Marketing Theories

- **Market Segmentation**

The three steps of creating a new market segment according to Dibb and Simkin (Dibb & Simkin, 2016) are identifying the new market segment, understanding its quality, and knowing its attractiveness. The segment quality of digital nomads includes homogeneousness, size and potential profitability, stability and potential profitability, accessibility, compatibility, and actionability. The attractiveness of this new segment includes market share, competition, growth potential, and how the available resources fit with customer needs.

- **The Supremacy of the Brand, Brand Value and Brand Equity**

Brands are not just identifiers; they are first and foremost providers of experiences. People choose brands because the brands can help fulfil their emotional needs. Customers need to be stimulated, emotionally affected, and creatively challenged. Brands give them meaning, not just in the functionality of the products and features, but also in their lives (Brodie & Glynn, 2006). Many disciplines are used to study consumer behaviour, such as psychology, behavioural economics, neuroscience, sociology, and anthropology. Research has identified the concept of brand communities, which is defined as a non-geographically bound community based on a structured set of social relations among admirers of a brand. It has a shared consciousness, respect for rituals and traditions, and a sense of moral responsibility. Brand equity is an effort to show the value of marketing in financial terms. The focus is on making branding part of the process that creates customer experiences, dialogue, and learning. To measure the outcome of investments in marketing, it is necessary to measure the outcomes of brand building (Srivastava et al, 2018).

- **Service-Dominant Logic (SDL)**

Service-Dominant Logic (SDL) holds that all transactions are the exchange of services, including manufactured goods (Vargo et al., 2016; Vargo & Lusch, 2004). In terms of digital nomadism, digital

nomads consume services on their travels while providing services to their clients globally. As a result, Bali, as the service provider, is part of the same chain or network of services.

2.4 Social Cognitive Theory

Considering Indonesia and, more specifically, Bali as a brand as a digital nomad destination, the brand community would be the digital nomads visiting Bali and staying longer than normal or returning several times. Digital nomad consumer behaviour can be studied using the Social Cognitive Model of Behaviour (Social Cognitive Theory). According to theory, people learn to cope with their surroundings by imitating others (Bandura, 1986). A social cognitive model of behaviour consists of personal factors, an external environment, and behaviour. This concept fits well with the growth of the digital nomad community that has seen influencers such as digital nomads showing others how to live the lifestyle.

2.5 Knowledge Transfer Theory

Knowledge transfer is the basis for gaining a competitive advantage (Argote & Ingram, 2000). Once the awareness is there, it is reasonable to anticipate that the knowledge can be transferred naturally. Fundamental learning involves the content, incentives, and social and societal dimensions. Illeris emphasised that language and communication are important parts of learning. The main drive for learning is motivation, and the key to learning is to lead to new cognition and understanding (Illeris, 2006, 2007, 2017). According to Argote and Ingram (2000), knowledge transfer is the process through which one group is affected by the experience of another.

3. Methods

3.1 Approach and Paradigm

This qualitative research uses a semi-structured interview technique to gather information from the primary source. Interpretivism is the right paradigm in this research, which aims to obtain data and information through immersion in the research subject's environment and conversational communication. This research involves communication with the informants, interpretative thinking, and critical thinking. The end result is analytical, and conclusions are drawn from the gathered information and analysis performed (Frances et al., 2009; Reeves et al., 2008). Interviews were conducted with digital nomads and government and business stakeholders, as well as with Indonesian professionals who have the potential to work on digital platforms.

Digital nomadism is a new culture, and immersion can be done in coworking spaces, where they get together and work every day. This experience enabled the researcher to develop an understanding of digital nomads and their culture. Ethnography involves a moral orientation approach as follows: It takes into consideration what situation they are in, which country it is about, and what context they are speaking in. The truth found is valid only for the given set of circumstances this research took place in (Harrison, 2020).

3.2 Informants, Place and Time

In this research, key relevant groups of stakeholders were interviewed: four digital nomads and two remote workers, five coworking spaces, three young local professionals; and one IT university in Bali, five governments and their affiliates, five subject matter experts; three Balinese cultural representatives; one Bali expatriate and one repeat visitor; and three cultural representatives. The five coworking spaces are: Dojo in Canggu, Livit in Sanur, Kembali in Seminyak, Jimbaran Hub in Jimbaran, and Hubud in Ubud, Bali. Data triangulation was carried out to get information from different angles. The observation of digital nomads and immersion in coworking spaces were done directly while the researcher was living in Bali from March to November 2019. The interviews were conducted during and after the immersion period, up to 2021.

3.3 Data Collection Method

The primary source of data is collected from interviews and observation gained from immersion in the digital nomads' community and environment. This approach seeks to understand how people live in a society and how they make their lives meaningful (Miles and Huberman, 1994). The benefit of primary data is to get a deeper understanding of the subject matter. Interviews were conducted via Skype, Zoom, and Google Meet, as well as other online-based interviews such as WhatsApp and emails. The researchers' style of interviewing is receptive toward the interviewees; they let them talk and give them control over how they will answer the questions. The interviews were recorded, transcribed, analysed and summarised to answer research questions (Brinkmann, 2020). Secondary data sources are used to verify and enrich the primary data.

3.4 Data Analysis

Values coding is a valuable analytical technique to build a profile of the digital nomads interviewed as well as understand their market behaviour (Saldana, 2021). Marking the codes shows the value, attitude, and beliefs associated with the positions expressed by the interviewees. The method infers the heart and mind of an individual's or group's worldview. Thematic analysis is a method of analysing qualitative data that is applied to a set of text, such as interview transcripts. The researcher closely examines the data to identify common themes—topics, ideas, and patterns of meaning that come up repeatedly (Caulfield, 2020; Riessman, 2020). The thematic analysis is expected to bring to a conclusion how capable Bali is of attracting more digital nomads and catering to their needs in terms of marketing strategy, policy, and infrastructure, and how digital nomads can connect, play a role, and benefit from Bali within the local digital ecosystem.

4. Results and Discussion

4.1 Result from Primary Data

Theme 1: Servicescape

- **Digital Nomad Visa**

In general, Indonesia does not want to create a digital nomad visa yet because they want to protect local jobs and have control over visitors in the country. The Indonesian government suggests digital nomads use the investment or socio-cultural visa instead, even though this visa does not allow digital nomads to work. Digital nomads will not invest in Indonesia; they are both online workers and not investors. Therefore, an investment visa is of no use to them. A one-year visa would be perfect for their lifestyle, as they will move to another country. Some young Indonesians want to help digital nomads get a visa, as shown in the digital nomad petition on [change.org](https://www.change.org) (Taufiq, 2021). They fight for digital nomads' right to have the right visa. Local IT universities in Bali would like to have digital nomad visas so their graduates can broaden their horizons and get exposure to digital nomads to show they can use their skills in the real world.

- **Internet Infrastructure**

Bali's internet infrastructure is considered good, but the main challenge is not the internet but a stable power supply. Some big businesses, companies, and organisations as well as coworking spaces, have backup electrical power sources such as generators. What seems to be a problem in Bali is the electricity blackout, which influences the online worker who cannot use their laptop and space facility efficiently.

Theme 2: Service Risk (Health Care, Safety in General and Traffic Safety)

There are health care facilities in Bali suitable for foreigners, but they need to be better communicated. There is a hospital, for example, Bali Mandara in Sanur, which was meant for medical tourism, but the hospital is rather unknown to the foreign customers. Crime such as petty theft is not considered a big problem, but it is a nuisance. Traffic safety, however, is getting worse, and it may deter people from coming to Bali.

Theme 3: The Difference in Spending between Digital nomads and Tourists, and Digital Nomads' Reputation

The local Balinese perceive digital nomads as tourists. Digital nomads spend less per day but stay longer than tourists. Because they look like they spend less, they are disliked by the locals in the hospitality industry. If it can be shown that they contribute positively to the Balinese community, for example, through knowledge sharing, this can help improve their reputation.

Theme 4: Knowledge Sharing

Coworking spaces understand the need for digital nomads to have a community. Digital nomads have actively shared their knowledge at events arranged by coworking spaces. The only thing preventing this from happening now is the cultural barrier, such as language and cultural differences between the digital nomads and the young local professionals. A catalyst to kick starts the knowledge sharing process is perhaps all that is needed. This could be a formal networking event arranged by coworking spaces with local universities in Bali, with the cooperation of the government, as these parties have shown a willingness to support this knowledge sharing effort. What happens currently is that knowledge sharing and events are done between the digital nomads themselves and the local participants.

Theme 5: Competence (Improving the Education, Skills, Language (Indonesian and English), and the Incentive for Knowledge sharing)

Bali needs experienced people like digital nomads to mentor and guide the young professionals to get global online jobs or to create start-ups. Creating a startup is inherently risky, and many will fail, which is why it is important to create a startup culture. The incentive for young professionals is to feel the confidence to compete in the global market, and the incentive for digital nomads is to not be an isolated community but become more integrated into the local society they choose to live in.

Theme 6: Participating in Digital Creative Economy in Bali

The digital economy is part of growing and diversifying the economy to accompany the tourism industry. The current economy is too reliant on one source of industry, which is tourism. It is not actually a threat to tourism; rather, it will be a different industry living in the same area. Most informants agree that it is the right time to plan for a creative economy and to act now.

Theme 7: Perception (Intercultural Understanding and Tolerance)

Understanding the alternative lifestyle of digital nomads is still a new concept for many local people. The one-year digital nomad visa would have helped them stay longer and build a network with young local professionals. Digital nomads contribute more money to society, stay longer, and become more involved in local businesses. All visitors are expected to respect the local customs, traditions, and environment of Bali.

Theme 8: Integration of Policy Makers

The government needs to provide clear guidelines for what constitutes illegal work in Bali. Many people, both foreigners and locals, have a low level of trust in policymakers and government, as they have a history of corruption. This makes it harder to build relationships with people outside the government, such as coworking spaces, digital nomads, and local businesses.

4.2 Result from Secondary Data

4.2.1 Profile of Digital Nomads in Bali

The profile of digital nomads in Bali below is based on an analysis of 32 members of Nomadlist.com who were in Bali on the 6th of December 2019.

Table 1. Digital Nomad's Profile

Occupation and Background	Percentage
Software Developer	28%
Entrepreneurs	22%
Designers	9%
Education	

Occupation and Background	Percentage
Master Degree	31%
Ethnicity	
Caucasian	75%
Latin	3%
Asian	9%
Black	3%
Religion	
Spiritual (Religion not specified)	16%
Activities/Hobbies	
Diving	34%
Yoga	19%
Surfing	25%
Fitness	41%
Cross-fit	9%
Relationship	
In relationship	13%
Gender	
Female	13%
Male	87%

Source: (Nomadlist.com, 2019).

The majority of digital nomads are between the ages of 20 and 30; they range in age from 21 to 49. Most are from the Millennial Generation, born from 1981–1994, and some are from Generation X, born from 1965–1980 (Nomadlist.com, 2021). The gender ratio of all digital nomads worldwide is 52% female and 48% male.

4.2.2 Bali's Market Position

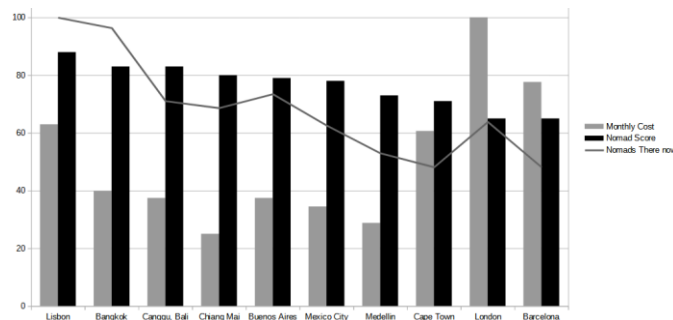


Fig. 1: Market Positioning of Bali vs Top 10 Destinations (December 2022)

Source: (Nomad List, 2022)

Bali has a high Nomad Score (83%) and a relatively low cost of living compared to the top ten nomad destinations as of December 2022. Bali is clustered with Bangkok and Chiang Mai, Thailand, all of which are affordable and score highly with digital nomads. Not surprisingly, high-cost destinations such as London and Barcelona score relatively lower with them.

4.3 Discussion

4.3.1 Application of Marketing Theories and Strategy to Attract More Digital Nomads

Digital nomad influencers are showing others how to live the lifestyle. When digital nomads show themselves on social media in Bali, the image of Bali can multiply. According to Social Cognitive Theory (Bandura, 1986), people learn by observing others. The *Bali Digital Nomad Facebook* brand

community is a group of digital nomads visiting Bali and staying longer than normal or even returning several times. The government can use influencers like this to promote Bali as a digital nomad destination.

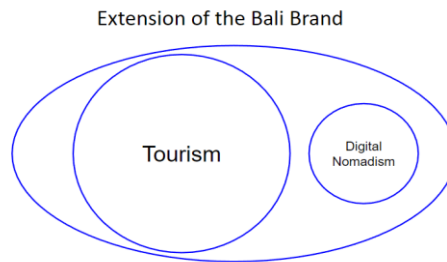


Fig. 2: Bali Brand Extension

The Bali brand has expanded to also cover digital nomadism. This has not been a conscious decision from the government or business, but something that has happened organically as digital nomads have flocked to the island. The government has tried to embrace the new brand by attracting digital nomads and eventually creating digital nomad visas. The extension of the Bali brand will benefit the local community, as it makes the economy more sustainable and resilient. For businesses and the government, it has been a challenge to adapt to this image of Bali as they have to adapt infrastructure, services, and marketing strategies.

4.3.2 The Government’s Strategy to Utilise Digital Nomads

The government of Indonesia has recognised the potential of digital nomads and is trying to develop a digital ecosystem in Bali. Digital nomads can use their existing visas, which are easy to obtain, and stay in Indonesia for up to six months. There are still legal and service risks related to health care and safety, as well as the reputations of digital nomads, to be considered.

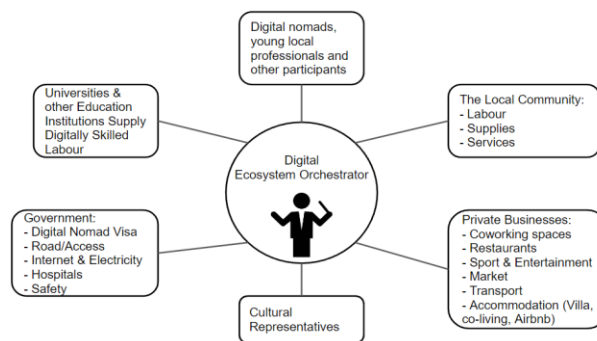


Fig.3: Digital Ecosystem Orchestrator

The results indicated that Indonesia needs a digital ecosystem orchestrator to guide and facilitate connections and networking with people to find each other, and what is needed in Indonesia is a coordinator who is capable of guiding and facilitating connections between different parts of the country.

4.3.3 Interactions between Digital Nomads, and Young Local Professionals

The development of a digital ecosystem can be an attractive feature of a destination in and of itself. In the local digital ecosystem, one of the most important factors is the relationship between digital nomads, remote workers, and young local professionals. It is an active network, sharing knowledge, having project discussions, and potentially sharing jobs in safe places such as coworking spaces but also online.

4.3.4 Future of Remote Work in Bali: Challenges and Rethinking Immigration System

As the number of digital nomads in Bali increases, it is expected that local professionals will want to emulate them and become remote workers. This could be in the form of attending knowledge-sharing events at coworking spaces or working together on projects. It seems natural that Indonesia will eventually introduce a digital nomad visa. Digital nomads present a challenge for all nations that receive visitors wishing to work during their travels, especially from the point of taxation.

4.3.5 Bali Digital Nomad Destination Attraction Factors

Based on secondary data, such as the examination of the digital nomad community in Bali, data from Nomad List, and global digital nomad trends, factors can be grouped as constant and variable factors. These factors reinforce the validity of the driving motivations of the digital nomad market segment. These factors are illustrated below:

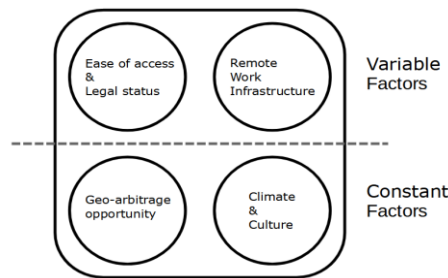


Fig. 4: Bali Digital Nomad Destination Attraction Factors

The constant factors being identified are:

- Geo-arbitrage opportunities (low-cost economies)
- Desirable climate & culture

The variables being identified are:

- Remote work infrastructure (internet connectivity and coworking spaces)
- Ease of access and legal status (visa, tax)

The first two factors are native to a destination and are hard to change in a short time frame. The last two factors can be manipulated, and for a destination wishing to attract digital nomads, these are the areas to develop. The first two factors are prerequisites, and if a destination has them, they should be highlighted to increase its attractiveness as a destination.

Using the subjective but easy-to-apply qualifiers of poor, average, good, and great, the following model can be applied to Bali.

Table 2. Bali Digital Nomad Attraction Factors

Ease of access and legal status:	Remote work infrastructure:
Poor	Average
Geo-arbitrage opportunity:	Climate and culture:
Great	Great

Ease of access and legal status are rated poor, as there is currently no digital nomad visa and it is illegal for them to work in Indonesia. Remote work infrastructure is rated average as Bali still suffers from power outages and has average internet speeds compared to other countries internationally (Speedtest, 2022).

This table shows that Bali has plenty of room to improve its attractiveness as a destination for digital nomads. The destination attractiveness factors model developed from the secondary data supports the findings of the primary data below. The constant factors (geo-arbitrage, culture, and climate) belong to the concept of servicescape and therefore function as mediating variables. Furthermore, the variable factors (legal access and remote work infrastructure) are part of the moderating variables. This shows

that secondary data fits into the theoretical framework developed from the primary data, which is explained below.

4.3.6 Theoretical Framework

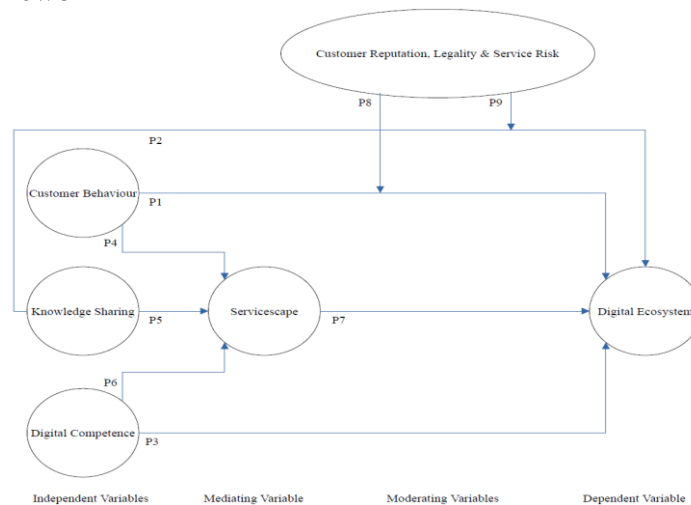


Fig. 5: Digital Ecosystem Propositional Path Model

Linkage between Variables and Theoretical Propositions

- **Dependent Variable:** The dependent variable identified in this research is the local digital ecosystem. This is because it acts as an outcome variable for the other concepts: customer behaviour, knowledge sharing, digital competence, servicescape, customer reputation, legality, and service risk.
- **Independent Variables:** The goal of an analysis of the digital ecosystem is to explain why a variable (customer behaviour, knowledge sharing, and digital competence) has an impact on the dependent variable (the digital ecosystem).
- **Moderating Variable:** Customer reputation, legality, and service risk are moderating variables because they can improve or deteriorate the relationship between independent and dependent variables.
- **Mediating Variable:** Servicescape is a mediating variable that enables the direct relationship between independent and dependent variables. It is partial mediation because the independent variables have an effect on the dependent variable that cannot be accounted for by the local servicescape alone.

The Elaboration of the Causal Relationships of the Variables:

●P1. Customer behaviour influences the local digital ecosystem

The presence of digital nomads on the island makes them part of the digital ecosystem, which creates jobs for local professionals.

●P2. Knowledge sharing influences the local digital ecosystem

Part of the digital nomad's culture is sharing knowledge among themselves, and their desire and willingness to share with local people can influence the success of the local digital ecosystem. Digital nomads' know-how should flow from them to local professionals who, in turn, can enable them to participate in the global digital market on an equal footing.

●P3. Digital competence is a prerequisite for participating in the local digital ecosystem

Local and online education providers play an important role in the success of the local digital ecosystem since they prepare participants for the digital world. All digital nomads are digitally competent; anyone who needs to take part in the digital ecosystem needs to be digitally competent as well.

●P4. Customer behaviour influences the servicescape

Digital nomads' buying and spending behaviour, which is the combination of living locally, remote work, and leisure, necessitates the adjustment of the servicescape in the local destination so it can better accommodate the customers' needs.

●P5. Knowledge sharing influences the servicescape

Knowledge-sharing cultures among digital nomads happen in coworking spaces. Knowledge sharing requires that the service and facilities be in nice surroundings, and coworking spaces supply them with space, desks, equipment, programs, and even an audience. Some coworking spaces have co-living for digital nomads, with gym and yoga facilities nearby.

●**P6. Digital competence influences the servicescape**

Good coworking spaces with international standards know their customers' needs and can meet them. The digital competence of digital nomad customers requires infrastructure suitable for their professional skills, such as reliable electricity (with generators to avoid blackouts), , high speed of internet, printing services, and receptionists' assistance.

●**P7. The servicescape enables the local digital ecosystem**

Bali's existing services and facilities, which attracted digital nomad customers in the first place, aid in the creation of a digital ecosystem in Bali. The quality of the servicescape in the local destination is an important element of the success of the local digital ecosystem.

●**P8. Relationship between customer behaviour and the digital ecosystem and how customer reputation, legality, and service risk affect this relationship**

The image of the digital nomad customer is important because they have a bad reputation. A good reputation will enable them to participate more deeply in the local ecosystem. They can interact with young local professionals and speed up the development of the ecosystem. If not deemed legal, they may be unwilling to participate in the digital ecosystem, afraid of being caught. Customer complaints and dissatisfaction can discourage others from visiting a local destination and participating in the digital ecosystem. By minimising the risks associated with the services used to support the lifestyle, more digital nomads will come to the destination, adding more actors to the local digital ecosystem.

●**P9. Relationship between knowledge sharing and the local digital ecosystem, and how customer reputation, legality, and service risks affect this relationship**

Digital nomads' knowledge-sharing culture among themselves can be expanded to young local professionals, which, if it can be expanded to the local people, can improve their reputation. This is a chance to show the true nature of their identity and their desire to integrate themselves into the local destination. It requires that digital nomad customers be recognised as having a legal status by the government. Digital nomads' knowledge sharing is represented by how they build their network, which enables them to live and work anywhere in the world. This requires minimum risks associated with their health, safety, and well-being during their travels. If the risks are higher, this may keep the digital nomads away, and then a destination becomes less attractive.

Proposition 1: The working behaviour of the customer positively affects the local digital ecosystem.

Proposition 2: Sharing knowledge with local professionals positively affects the local digital ecosystem.

Proposition 3: Digital competency is required by all participants in the digital ecosystem.

Proposition 4: The lifestyle behaviour of the customers necessitates the improvement of the servicescape to suit their needs of the customers.

Proposition 5: Knowledge sharing can spread positively in the local community and expand the scope of the servicescape.

Proposition 6: Digital competence positively affects the growth of the local institution by preparing and producing more competent professionals, thus encouraging the servicescape to adjust.

Proposition 7: The extension and quality of the servicescape enable the success of the development of the local digital ecosystem.

Proposition 8: Customer behaviour contributing to the success of the development of the local digital ecosystem can be impacted by the digital nomads' reputation, legal status, and service risk in the local destination.

Proposition 9: Knowledge sharing in the ecosystem can be impacted by the digital nomad's reputation, legal status, and service risk in the local destination.

Fig. 6: Summary of Propositions

5 Conclusion

Bali can no longer be content with the way it is and must be more specific about attracting digital nomads. Bali already has a relaxed and tropical climate and affordable rental places, but other aspects such as the legality and improvement of services and facilities may easily be overlooked. It is a matter of whether Bali has the financial means to invest in healthy economic development plans or tax incentives to attract investors to develop the island. There is no doubt that Bali will see an increase in the number of remote workers and digital nomad communities on the island. As the lifestyle is adopted by more and more people, greater regulation and legal clarity will be needed in the future.

Many countries have already created a digital nomad visa during the COVID-19 pandemic, and the trend continues to support the idea that digital nomads are not tourists or migrants either. Digital nomads fulfill the theoretical requirements of a new market segment because they are homogenous, of reasonable size, stable, profitable, and reachable. The government is trying to serve this new market segment. The strategy from the government team is to allow them to use their existing visas, which are easy to obtain.

Digital nomads are a new market segment that can be utilised in the digital creative economy to help Bali diversify its economy. Bali is preparing its ecosystem for the recognition and use of digital nomads in order to boost technopreneurship on the island. This group fulfills the requirements of a new market segment because they are homogenous, stable, and reachable. However, at the time of this writing, this market segment is not yet fully compatible, as digital nomads face some cultural and legal challenges. A digital ecosystem orchestrator is needed to guide and facilitate connections for tourists, and thus they are a new market segment. Two models have emerged in this research that may contribute to the existing theory in regards to digital nomads' participation in the local digital ecosystem and developing services and facilities to develop Bali as a digital nomad destination.

6 Research Contributions, Limitations and Future Research Agenda

6.1 Theoretical Contribution

This research highlights digital nomads as their own category, separate from tourists, and thus a new market segment. This new market segment theoretically creates a brand extension for Bali from being a tourist destination to a destination for digital nomads. Two models have emerged in this research that may contribute to the existing theory in regards to the digital nomad's participation in the local digital ecosystem and the development of services and facilities to develop Bali as the world's best digital nomad destination.

6.2 Practical Contribution

The practical contribution of the research is to achieve a win-win outcome by creating more awareness of digital nomads and targeting more of them by catering to their wants and needs. Bali can benefit from the knowledge-sharing culture of digital nomads and use them and their know-how to help the local digital ecosystem and boost the local creative economy. By doing this, digital nomads benefit from having a more meaningful connection with the locals while they are living and working in Bali and can build a stronger network. After some time, when it is expected that the local digital ecosystem will be stronger, the locals can work like digital nomads, earn international income, and compete to work remotely in the global business world.

6.3 Limitations and Future Research Agenda

- This research was based on observation and immersion in five coworking spaces and in-depth interviews with 24 key informants. Due to limited time, a group discussion has not been conducted, but it can be done in future research.
- The theoretical propositional path model emerged from the primary data; this model can be tested further using quantitative research to measure the strength of each propositional part.

● This research aims to examine the potential role of digital nomads in the digital ecosystem to help enhance the progress of the creative economy in Bali. A deeper discussion on cultural erosion, increase in property development in certain areas like Canggu, Bali can be done in future research, as these may be an impact of digital nomads living close in residential areas.

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