

Promoting Sustainable Tourism in The Backpacker Community:
How Technology Devices Can Impact Local Economic Development
in Developing Countries

by

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ABSTRACT

The tourism industry has been indicated to make significant contributions to the global economy. Typically categorized as a niche market within the tourism industry, backpacker tourism is an option for travelers who are looking for an alternative, and more affordable way to experience a destination. The influence of backpackers on visiting destinations has had significant impact on cultural and environmental conditions; however, as reported in the literature review, only a slight impact on local economic conditions was recorded.

Based on the interesting observation above, this study aimed to explore the relationship between international backpackers and local communities in the developing world. By investigating the role of technology design in a backpacking trip, this research analyzed the potential to improve Sustainable Tourism for both international backpackers and local communities. The idea of achieving sustainability in this research is to assess both economic and cultural impact through the assistance of technology. This study originates from a grounded theory approach triangulated from literature reviews and the researcher's observations. The research tested the suitability of this theory by using qualitative research methods, then analyzed the appropriateness of its applicability. The findings suggested some useful standards for proposing design solutions to enhance sustainable tourism within the backpacker segment. When this design approach is applied to the social movement of sustainable tourism aims, it can provide a breakthrough in the previous approaches to social problem investigation by focusing on solutions that use design thinking and technology.

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CHAPTER 1

INTRODUCTION

1.0.0 Introduction

International tourism emerged slowly yet spread out quickly at some destinations, especially in Europe, Africa, and South East Asia. The growth of this phenomenon has caused many concerns to the governments and researchers of respective countries due to the impact it has on these destination nations. Since these influences are growing not only in zone (from environment to culture, economic), but also in scale, it has brought up a challenging scene for the world, especially for developing nations. Sustainable tourism, a notion based on the foundation of Sustainability, holds the hope to both balance and accelerate this uncontrolled developing situation in the Third World while taking all tourism stakeholders into consideration. Until now, in order to maximize the potential benefit earned from tourism, the government and citizens of developing countries have been adopting strategies to improve services, infrastructure, and availability of human labor. These strategies may or may not be ideally sustainable, but they obviously affect the community in multiple ways.

This research discusses the interpretive relationship among three fields: international backpackers, local economies, and the role of technology in the context of promoting sustainable tourism across developing countries. The question of how technology design can encourage international backpacker tourists to warmly engage in sustainable tourism during their trips to developing countries is what was examined in this research. This chapter explores an overview of the study, including the justification and significance; scope and limitations are evaluated as well. The purpose is to explain the

basic of the grounded theory - which describes to the impact of backpackers on sustainable tourism in developing countries. Some terms relating to tourism and design fields are also briefly described in the chapter one for a thorough understanding of the research.

1.1.0 Justification

Alternative tourism brings a new perspective to the tourism industry for travelers including backpackers and volunteer subsectors. In 2002, researcher Regina Scheyvens touched on the topic of backpacker tourism in the Third World:

“...it argues how local communities in the Third World might benefit from involvement in budget tourism. In particular, the often maligned backpacker market segment is considered.” (Scheyvens, 2002, p.145)

Scheyvens (2002) claimed that the backpacker tourism segment has been ignored by the Third World governments and local communities due to the low budget backpackers are willing to spend. The above misleading assumption made by the indigene results in many troubles for backpackers in developing countries. For instance, Vietnam – a South East Asia country – welcomes millions of international tourists including backpackers annually. Although it is good for the customer services industry, it is not always as good for the backpackers. The ugly truth presents itself in the majority of negative comments from backpackers. The root cause of this occurrence can be explained as: while revenue earning is driving local entrepreneurs to make more money from tourists, all backpackers, in reverse, are trying their best to save money on the trip. In 2010, a Vietnamese national daily newspaper published a piece that was a compilation of experiences shared by many foreign backpackers in Vietnam – and most of them were quite negative. This activity help address the problems by making the local stakeholders realize the consequences of under-

evaluating as well as lacking serious concern about the backpacker's need. Likewise, Scheyvens (2002) further argued that backpackers directly affect the community not only in terms of culture and environment but also in terms of economy. This argument strongly indicates the presence of a tight relationship between backpackers and local communities with regard to the three pillars: culture, environment, and economy. This research paper will narrow down specifically on the economic aspect of sustainable tourism, since it is an important concern shared by all stakeholders in the tourism industry.

Tourism has indicated to be one of the leading income sources for some nations. It has led to an impact on aspects, such as infrastructure, local products, and resource protection. With the goal to encourage tourism, developing infrastructure in terms of building and transportation is needed to bring comfortable experience to tourists. Therefore, both tourists as well as local people are able to take advantage of the resulting well-built groundwork. In addition, by raising the demand for local products, such as souvenirs, local food products and so on, tourism creates more employment opportunities for the local community. Lastly, thanks to the high interest of tourists, in scenic landscape, local businesses and governments begin to recognize the important role of natural resources and ecology at tourist destinations. On the bright side, governments start making efforts to preserve the natural environment and wild life at these destinations. Backpacker tourism, a subsector of alternative tourism, plays a significant role in the above revenue earning stream by encouraging the participation of the local community, which would be a sustainable strategy to develop the economy of the visiting destination (Hampton, 1998).

While mass tourism is easily controlled by the travel agencies and guidance networks (Wall, 1997), backpacker tourism has more freedom due to self-planning process.

This brings challenges to researchers concerning data collection. Based on a backpacker's culture study, the two most important features that identify this alternative tourism segment are flexibility and mobility (Sørensen, 2003). Therefore, there are many difficulties in approaching a research on backpackers. However, researchers in sustainable tourism cannot passively wait for the backpacker's self-engagement in either sustainable tourism or local-protection activities. Buhalis (1998) and Lou and Li (2009), their research being ten years apart, both praised the importance of Internet information in tourism including backpackers. They claimed that information searching behavior on Internet network is the most powerful tool for travelers. In essence, one potential way to approach a research on backpacker tourism is to follow this trend, thus step into their world beneath the title of travel information provider. The research's grounded theory is concluded from this key point: travel information providers could positively affect the backpacker's awareness of sustainable tourism. In order to specify the research area, economic development and travel-relating information searching behavior will be set as barriers to collect and analyze data.

A great amount of research indicated the power of internet and technology in travel. In addition, a technology device is a necessary utility that goes along with backpackers from the very beginning, like when planning a trip, till the very end when they come back home and start sharing their experience (Lou & Li, 2009). These innovation objects also demonstrate significant advantages by sharing some common features with the backpacker' culture: high mobility plus possessing wide network. Due to the strong impact of technology devices on human life, it has become a part of this research focus. Furthermore, one of the most challenging problems in developing countries is the security

of personal properties. In Vietnam, with the frequency once in a month, an article about a thief that stole a tourist's belongings on the street appears either in the newspaper or on social media. The irresponsibility and poor security systems of such nations cause many troubles for backpackers – who is always bringing all their necessary properties alongside during their trips without any possible guard 24 hours a day. The language conflict worsens this problem. The query about combining belongings security and a product that would provide information network builds the last brick for this research paper. This question remarkably opens up an opportunity for the design approach in finding an equipment that helps solving the problem.

1.2.0 Scope and Limitations

The expected achievement of this research is to examine the application of the technology design effect on the relationship between backpacker tourism and economic development at visiting destinations in the Third World. The backpacker's awareness and the technology design influence are the variables used to examine this connection. Findings from the research lead us towards proposing a practical solution in association with the design discipline. The relationship between design and social science research is represented in the final outcome of an industrial product. The findings of this study in design discipline could lead to the development of a product that provides a broad network of all the local restaurants and hotels, preferably in poor rural zones, whose participation would require a promise of protecting the rights of foreign backpackers. Such a network would encourage the participation of both local entrepreneurs and backpackers, which would ultimately fulfil the goal of sustainable tourism by enhancing the economic impact on local communities. Lastly, the engagement of design in the final stage would mark the

connection between design and social science research. This research also has potential implications on the future of cooperation between design and social science in other social movements research.

The current research is limited to certain South East Asian countries, specifically to Vietnam and Thailand, and consequently further explorations are required to understand how similar cases in other developing nations work. Furthermore, the findings are limited to the tourist season in Vietnam and Thailand during the months of December and January. Due to the possibility of diversity in tradition, lifestyle and national policies in the neighboring countries, the outcome of this study might not always be appropriate for all South East Asian nations, which calls for careful investigations in different contexts. The data collected mostly concerns the activities of backpackers in connection with local people and technology devices. However, data regarding the interaction between backpackers and local businesses was constrained to airport merchandisers in the Bangkok International Airport, and Tan Son Nhat International Airport. The attributions of the target population are: foreign backpackers, between 25 and 55 years of age.

1.3.0 Operational Definitions

1.3.1 Alternative Tourism

The term "alternative tourism" includes the concepts of active tourism as well as explorer and encounter travel, along with the concept of committed tourism. In some cases, it refers to projects fostering new forms of tourism, especially in developing countries (Pearce, 1992).

1.3.2 Mass Tourism

“Mass tourism refers to the participation of large numbers of people in tourism, a general characteristic of developed countries in the twentieth century” (Burkart & Medlik, 1974, p.42) This definition separates mass tourism from some other forms of tourism that have restricted participation of people, or in dissimilarity to the situation in developing countries.

1.3.3 Backpacking/Backpacker

Backpacking is a form of low-cost, independent travel. It includes the use of a backpack that is easily carried for long distances or long periods of time, the use of public transport, inexpensive lodging such as youth hostels, often a longer duration of trip when compared with conventional vacations and often an interest in meeting locals as well as local sightseeing. Backpacker represents the special segment of travelers who possess the characteristic of high mobility. They travel on limited budget and follow their own travel itinerary. Among the various traveler segments, backpacker tourism involves a strong interaction with the local community at any destination (Sørensen, 2003).

1.3.4 Sustainable Tourism

Sustainable tourism is the application of sustainable development to the tourism industry. It requires an efficient sustainability planning, which can maximize both the economic as well as the social revenue, while simultaneously minimizing any bad impact on the environmental and cultural heritage. Sustainable tourism concerns itself with a fairness in influence on both human and natural resources at tourism destinations.



In this study, the goal is to find ways of enhancing the economic viability in the case of backpacker tourism, and then coupling it with both environment conservation and social justice. In this way, one can achieve sustainable tourism development through a backpacker target group.

1.3.5 Internet Information

Coupled with the growth of the backpacker community is the expansion of the internet. Internet travel information is the database system that contains tourism information that is available to searchers.

CHAPTER 2

LITERATURE REVIEW

2.0.0 Introduction

This chapter presents a general conceptual framework related to the grounded theory: about how industrial design can be involved in promoting local sustainable tourism by pushing revenue growth from backpacker tourism service. The key point in the examination of this theory is the assessment of vital demands of backpackers associating with the current local tourism services in developing nations. Section 2.1 presents a review of sustainable tourism in the developing world, then moves on to the details of economic impact as it is the main focus of this research. Moving forward, section 2.2 focuses on the target subject of this study: the backpacker segment. It explains the reasons for choosing this special segment, its significant contribution to the current state of affairs and the possibility of research in the design discipline to connect this social movement to design research. Section 2.3 supports this research theory with the final factor: technology information network – which covers the two important elements of tourism information network and internet network providers. How these factors can support backpackers in order to achieve sustainable tourism is described in Section 2.

2.0.1 Conceptual Framework

The grounded theory indicates the existence of a tight relationship between backpacker tourism, local economy and technology development. Backpackers' travel activities such as purchasing local products, experiencing recreational activities and services, etc., bring significant benefits directly to the local residents. Based on the research of Sørensen (2003) on the backpacker community, the elements that affect their choices of travel include the

ratings on travel websites on the internet network, as well as recommendations from different sources, such as word-of-mouth or travel agencies. The expectation, thus, is that a well-developed information network could ensure the reliability of local entrepreneurs by helping them gain both revenue and a good reputation. In order to examine the grounded theory, this study employed qualitative methods. Furthermore, research was carried out to investigate the relationship between technology and sustainable tourism through its impact on backpackers and local economy. There have been several current studies that have tried to solve the problems between each couple of elements in the framework, but a network that connects those three have not appeared in any attempt – which makes the research framework worth studying.

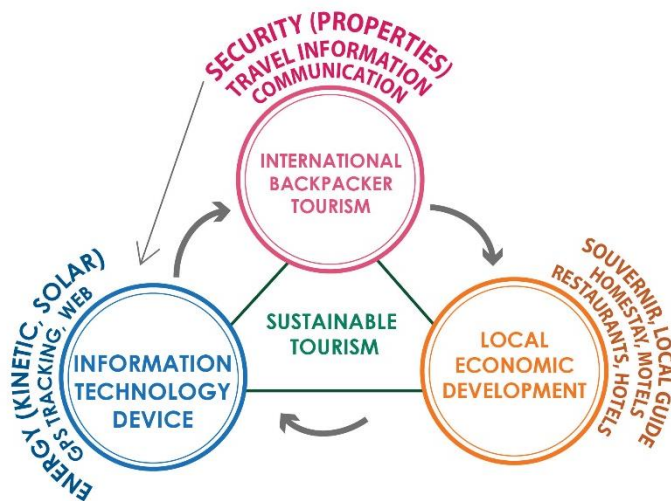


Figure 2.1 Conceptual framework

As seen in Figure 2.1, the backpacker’s needs of security, travel information, and communication influences local entrepreneurs. The services that local businesses currently offer to backpackers are restaurants, hotels, tour guide, and some other products for tourists. The businesses of these local merchandisers are impacted by the internet

information network. Meanwhile, the backpacker community is affected by both the internet information and the devices used to access those information sources. Technology device is important in terms of these functions as well as energy used. In short, a good combination of the relationships among all these factors will tend to promote sustainable tourism in developing countries.

2.1.0 A Summary of Sustainable Tourism

Sustainable tourism emerged as a new trend in the tourism industry that required contribution from the three pillars: environment, economy and society. It originated from the term “sustainable development” - which is the development practice that satisfies the needs of the current human generation without exploiting the natural resources system for future generations in fulfilling those needs (Brundtland, 1987). When this practice is applied to the tourism industry, it becomes known as “sustainable tourism”. In sustainable tourism, the long-term effects of tourist activities and the creation of opportunities for small entrepreneurs in the local community are both taken into consideration. The ultimate goal of sustainable tourism is to bring development to the economy, society and the environment through the involvement of all stakeholders in tourism. Interaction among factors of the triple bottom line is the key feature of sustainable tourism, since it shifts the concern from bare benefit to the bigger picture including environment and culture (Hunter, 1997). Brundtland’s standard definition of “sustainable development” covers the intergenerational equity, and clearly touches on environment as well as development. However, since it is the first full definition, it is still ambiguity in terms of some below aspects. Firstly, it is a difficult task to define “our needs”, and future generation needs. Next, what sought to

sustain and what is to develop are also big questions. Lastly, the goals and indicator of sustainable development were not mentioned.

Lately, Hunter (1997) explained sustainable tourism as “a set of principles, policy prescriptions, and management methods” that guides the development of tourism, particularly the natural and cultural core resources, in a way that causes no harm or damage for future development. Tourism development depends largely on natural and cultural capitals, however when considering sustainable tourism, stakeholders still place the financial benefit of tourism in prior to other elements. With sustainable development as a reference, Hunter reframed the relationship between those two to have a better approach for sustainable tourism. In other words, sustainable development plays a role as a preferred model, which is based on the interpretation of sustainable tourism. Due to this modality, some aspects of sustainable tourism are in consideration, such as flexibility in location according to environmental condition, and different economic background in developed and developing countries. This study, emerged from the demographical background experience of researcher, will concentrate on sustainable tourism development in developing countries.

2.1.1 Sustainable Tourism Development in Developing Countries

In the context of developing countries, tourism is a powerful source of economic growth. Statistics from UNWTO (2014a) presents a list of the world’s top 10 international tourism earners in 2013, in which the two developing countries: China and Thailand hold the fourth and seventh positions, respectively. Telfer and Sharpley (2015, p.29) mentioned Asia-Pacific as a new emerged destination for international tourists, including these developing countries: China, Thailand, Malaysia, Vietnam, Laos, etc. The rising of the

Third World in tourism industry requires a development direction that could enhance the sustainability for those nations.

Development refers to a process that attempts to positively change the living conditions of human, as well as to experience economic growth. “Development is not just about increased wealth. It means change; changes in behavior, aspirations, and in the way which one understands the world around one” (Dudley, 1993, p. 165). The effect of bad behaviors more likely put large impact on developing countries than any other nations on the world. A consequence of this chain is to make those regions become more vulnerable regardless that they are full of the best nature capitals in this industrialization century. The definition of development, when placing in sustainable tourism context, includes a set of five principles concluded by Tosun (2001). Across the sustainable tourism development rules, benefit for local communities is emphasized in four cases in terms of: basic and felt needs, reduction in equality and poverty, self-esteem acquisition, and fairly local economic growth. The appearance of local-orientated direction indicates the important role of local community in sustainable tourism development.

The challenges of sustainable tourism development in the developing world are different according to each country’s context. However, Brohman (1996) identifies some common problems of Third World Tourism sectors, which relevantly accounted here are: overseas leakage, “low multiplier and spread effects outside of tourism enclaves”, and “rising alienation among the local population”. The encounters occur in various field, such as society, culture, environment, and especially economic – the key factor that drives this research study.

2.1.2 Economic Impact of International Tourism on Developing Countries

International tourism is growing rapidly in the world economy, and is one of the means to earn benefit and financial support in developing countries (Salazar, 2005). Pacific Asia Travel Association reported a number of 178.1 million international arrivals in 2000 (PATA, 2000). Sørensen (2002), Scheyen (2002), Adkins and Grant (2007) all emphasized the commonality shared by backpackers, which is travelling with budget accommodation. This idea infers that economy is a critical factor to identify a backpacker. Likewise, regarding economic field, business development is a concern of local communities in developing countries. The impact of tourism on a destination presents in the three arenas: environment, economic and sociocultural. In developing countries - that are mostly unindustrialized regions with diverse natural resources, human ethnic as well as culture - financial issue seems to gain more important attention from both government and citizen. Wall (1997) indicated the bright side for the Third World to increase revenue from tourism: "Some developing countries can improve their international liquidity position with earnings from international tourism." As two edges of a blade, economic influence of international tourism has both positive and negative sides. Each of them individually place significant effect on revenue earning of local people at visiting destinations.

A positive economic impact of tourism is the multiplier effect (Mason, 2002). Not only does it create more job opportunities in tourism services but also in other business segments, such as restaurants to fruit suppliers to farmer equipment supplies. Follow that subsequence, more and more industries and business fields could take advantage from tourists. Because of such a wide positive influence, multiplier effect is very important for any tourism destination. Nonetheless, tourism is assumed to be one of the leading sources

of income for some nations. Besides multiplier effect, several economic benefits of it present in: infrastructure, local products and resources, and resources protection. As the ultimate goal is to encourage tourism, developing infrastructure in terms of buildings and transportation is a need in order to bring comfortable experiences to tourists. Therefore, receivers of benefit from the well-built infrastructure are both local people and travelers. Next, with the raising demand of local products, such as souvenirs and food supplies, tourism creates more employment chances for local community. Lastly, coupling with the high demand of tourists, the local people and government possibly recognize the important role of natural resources and the ecology at the destinations. Thus, they will find a way to preserve the environment there, which is a good start for sustainable development.

2.1.3 Leakages and Linkages

Economic impacts of tourism have multiple positive aspects, on the other hand, it still cannot completely overcome the negative effects. The most common financial disadvantage that has been acknowledged by many tourism researchers is leakage. Anderson (2003) mentioned: “Leakages have been defined by Mitchell and Page (2005) and Meyer (2006) as the part of the price of the holiday paid by the tourists, that leaves or never reaches a destination, due to the involvement of foreign-based transactions”. This statement includes international tourism, in which appears a high concentration on foreign exchange. Leakages happen in import and export activities, leading to high cost of infrastructure, and the increase in price of daily essentials.

To be more specific, foreign travelers in their trip throughout developing countries tend to use international services (e.g. hotels, airlines, restaurants, etc.) - which have headquarters in their home countries. Besides, most of modern, luxury properties in tourism

destinations at developing countries are owned by foreigners since the local people lack of capital, education and experience in tourism services industry to run their own business (Mitchell & Page, 2005). To satisfy the need of tourists and tourism consumption, local communities even have to import goods from the outside. All these three points contribute to high external leakages that constrain economic development in these countries. Some studies have addressed the low ability to capture financial benefit of rural zone or developing countries than highly developed nations (UNEP). With the poor standard system and low capital resources, a situation that less developed countries have been struggling in earning maximum revenue from tourism industry is a big question that worth investigating.

Linkage is one of the tools that can overcome negative effects of leakages. Leakages happen due to the invasion of foreign owners that hold the majority of properties and luxury services in developing destination, thus leads to leakages in exchanging currency, importing outside resources and goods. Meanwhile, linkages minimize the effect of foreign dominance through enhancing the chance of local community engagement in tourism industry in terms of local ownership, employment, and suppliers. Another category of linkages is strong connection between natural capital and livelihood situation. As in developing countries, the majority of attractions that in unindustrialized state is poor. Poverty and biodiversity conservation are linked in regards to the dependence of biodiversity conservation' success on poverty problem. In order to solve the issue of poverty, pro-poor tourism was created to develop community financial, human and natural capitals. The mission of tourism is to provide more employment chances for the local community in tourism, and to expand local goods market. The benefit is to simultaneously

maximize linkages and minimize leakages, which will result in the rise of total income. With that strong financial fundamental support, livelihood can be improved through health, education, and infrastructure. While livelihood improvement concentrates mainly on people, biodiversity conservation mostly focuses on the environment. The relationship between nature conservation and tourism development is conflicting but supportive at the same time. Natural base of tourism development consequently leads to a positive attitude towards ecology conservation, not only from tourism management organizations but also from surrounding communities.

Conclude from the three above forms of linkage, in an ideal circumstance, linkages strategy can possibly cover and balance all local community livelihood, ecology, and culture. Among various types of tourism, backpacker subsector is mentioned in several research studies as an alternative to encourage linkages (Hampton, 1998; Scheyvens, 2002; Westerhausen and Macbeth, 2003).

2.2.0 Backpacker Tourism

In the book *Tourism and Sustainability*, Mowforth and Munt (2015, p.29) presented a shift in contemporary tourism from Modern to Post-modern style. As seen in Figure 2.2, the change from mass tourism to individual travelers with a spontaneous trip indicates the

Mass	Individual
Packaged	Unpackaged/Flexible
S's (Sun, sea, sand, sex)	T's (Travelling, trekking, trucking)
Unreal	Real
Irresponsible (socially, culturally, environmentally)	Responsible
MODERN	POST-MODERN

demand for seeking new, alternative ways to experience tourism of people. In modern mass tourism, travelers prefer a packaged trip, and

Figure 2.2 Shifts in contemporary tourism (Mowforth & Munt, 2015)

have irresponsibility to society, culture and environment. Meanwhile, travelers in post-modern trend show interest in a flexible, unpackaged trip. This trend exposed to the emergence of backpackers, and influenced characteristic of this tourism segment as well (Yakushiji, 2010).

Uriely, Yonay and Simchai (2002) stated in their research: “The study of backpacking began when Cohen (1972) differentiated between non-institutionalized tourists and their institutionalized counterparts. The latter comply with the conventional features of mass tourism, while the former, prevalently middle-class young tourists are referred to in the literature by various terms: drifters (Cohen, 1972); nomads (Cohen, 1973); youthful travelers (Teas, 1974); wanderers (Vogt, 1976); hitchhikers (Mukerji, 1978); tramping youth (Adler, 1985), and long-term budget travelers (Riley 1988).” Backpackers are widely described as self-organizers and independent travelers on a prolonged multiple-destination trip with a flexible itinerary (Maoz, 2007). Sørensen (2002), in his journal research “Backpacker Ethnography”, conducted a long-termed study in backpacker culture, then sketched a typical backpacker’s portrait with those features: seeking for budget accommodation and having a flexible multi-destination travel plan. Hampton (1998) additionally visualized some features of backpackers as who can survive under \$15 per day, use local transportation, bargain for food and services while trying to avoid overcharging, crowds, and be eager to explore new places. Research conducted by Choy (1998) reported an increase of travel arrivals to Asia and the Pacific with average annual growth of 8.2% - almost double from the rate of 4.7% in world tourist arrivals. This number shows an interesting development situation in Asia tourism, that leads to the need for investigation specifically within the Asian context.

2.2.1 International Backpacker Tourism in Pacific Asia

In the fast developing pace of industrialization, tourism industry is highly impacted due to the changing in environment, society, and culture. There is a noticed shift of travelers' interest from highly civilized countries to under-developed destinations. Sørensen (2003) described this game changer is moving forward accordingly in South East Asian countries since the last century. While Thailand, China, and Malaysia are popular destinations for a long period, new options in this region have been mentioned as promising travel targets, such as Vietnam, Laos, Cambodia, Indonesia, etc. (Hampton, 1998; Yakushiji, 2010; Telfer & Charpley, 2015). The attraction of those destinations counts on distinct culture, wild and unindustrialized nature, and economic saving. A plus of tourism in developing countries is credited to low involvement of industrialization progress. Thus nature is kept as its original beauty without artificial changes; environment habitat is diverse, which play an importance role in advertising the nation tourism. In addition to natural resources attraction, developing countries most possess distinct cultures and traditions. Travelers who acquire leisure activities and adopting new knowledge are often more interested in those specialties. Particularly for backpacker segment, they are favorable destinations also because of low budget requirement (Yakushiji, 2010). Compare to average expense in Europe developed countries, travelers can be spent half of it to get the same quality in food, local transportation, and living. For instance, a traditional meal in Thailand normally costs 3 to 10 dollars, while in Germany, the price is double to triple (according to TripAdvisor, 2016). The combination of these advantages has pushed up the tourism market in the developing world, intrigued large investment in tourism, and increased the need for tourism research studies. However, the concern of tourism development at government level does not put

favor in this independent tourism sector. In South East Asia, the investment that government places in services for independent travelers is negative (Scheyvens, 2002). Meanwhile, Tosun (2001) mentioned the fourth principle of sustainable tourism development is that it “should accelerate not only national economic growth, but also regional and local economic growth. This growth must be shared fairly across the social spectrum.” Accordingly, how can backpacker tourism achieve this guide of economic development? Why are they matter in sustainable tourism in the Third World? And what is the market chance for indigenous people in developing countries in accordance to the rapid increasing of independent travelers? Those questions will be answered in the following sections.

2.2.2 An Overview of Economic Impact of Backpackers on Local Community

Backpacker tourists possess a budget feature that makes them marginalized by local governments as placing insignificant impact on destination’s economic growth (Mintel, 2009, cited in Yakushiji, 2010). For instance, in Maldives, independent travelers including backpackers, are “actively discouraged” (Lyon, 1997, cited from Scheyvens, 2002). Via the Backpacker Ethnography journal, Sørensen (2003) highlighted the topic of “exchange of information about prices” as a social interaction amongst backpackers. He also mentioned that previous definitions of backpackers better implied in social rather than economic and demographic terms. Those cases somehow indicated the less economic value of this special tourism segment. Nevertheless, Scheyvens (2002) pointed out that the financial benefit earned from high tourism developments in developing countries very barely “trickle down” to “be any significant to people at grassroots level.” Scheyvens (2002) argued that actually backpackers brought more revenue than people’s expectation

in terms of remote level. The requirement for simple travel services of backpackers has stimulated the involvement, and emergence of small, individual local tourism service suppliers.

Likewise, Brohman (1996) mentioned a strategy to improve local multipliers effect in the Third World economy is to “strengthen linkages between the tourism industry and the domestic economy, and by encouraging alternative, smaller-scale forms of tourism.” To illustrate that, Visser (2004) explained the achievement of the effect has resulted from the actively involvement of local community in planning, that give priority to local needs and enterprises. This idea of an alternative form of tourism can be implied to the backpacker subsector. In the midst of previous research studies, a research paper titled “Backpackers and empowered local communities” (Westerhausen & Macbeth, 2003) emphasized the power of the backpacker community in economic development at destinations. They placed the cause of this success on the “longer overall stay, less economic leakage, and lower establishment costs”, which are accomplished due to distinct characteristics of the backpacker community. To conclude the positive effect in local economic growth, Visser (2004) stated seven reasons to support the idea. The context in Visser’s research focused particularly in South Africa, but several arguments fit well with general situation of the Third World. For instance, the minimization of foreign exchanges due to small-scale developments specialized for backpackers, such as hostels; the enhancement of linkages amongst local services to supply for the need to experience local goods and lifestyles (Muzaini, 2006). Those above findings have accentuated the significant contribution of backpacker tourism in local economy, especially in remote level.

2.3.0 Relationship Between Technology and Tourism

Technology – in tourism industry context – has a broad category including: tourism information technology (Werthner & Klein, 1999), technology mobile devices (Molz, 2012), technology innovation in materials, power source (Pigram & Wahab, 1997). There is a debate on whether the development of technology would bring harm or good to environment. Majority blames the fault of it on overuse of resources, pollution and emissions. However, keeping pace with the trend of sustainability, innovation in technology spares focus on this topic by inventing new technology that reduces harms on environment. Pigram and Wahab (2005) emphasized the strength of technology in tourism industry: “Technology is a powerful influence on modern tourism. Technological breakthroughs can change the sustainability status of a tourism business or destination overnight” (p.24) Obviously a well-oriented development strategy for technology can possibly reverse negative feedbacks about technology innovation. This study will investigate in the two most frequent topics of tourism technology: information technology and technology devices. Due to the tight connection between those two, they previously often combined together as one big topic, which attracts many research studies on it (Brown & Chalmers, 2003; Molz, 2012; Buhalis & O’Connor, 2005; and Corigliano & Baggio, 2004). The relationship between tourism and technology is formed based on the need for travel information of travelers (Sørensen, 2002). Information technology assists travelers in getting to know a destination, while businesses at a destination take advantages from that to market and advertise their services. Keep pace with the rise of informational technology, and mobile technology devices such as smartphones, tablets, smartwatches, or whichever devices support accessing information, which has been shortly noticed some

improvements. Samsung, Apple, and several consumer electronics companies start to invest in tourism market with products specialized for travelers, such as: travel smart charger, travel smartphone case, and travel adapter kit. This trend implies an opened market opportunity for technology design aimed at travelers.

2.3.1 Mobile and Internet Network in Developing Countries

The dependence of travelers on various sources of information requires an investigation in the possible accessibility to those resources in developing countries, either through internet, or through mobile network. Telecommunication forms the linkage between where information resides and where it is accessed. In developing countries, telecommunication exposes to a lot of challenges and opportunities for providers (Kaul et. al, 2008). It includes fix-line, mobile line, and internet. This study, based on the mobility characteristic of backpackers, concentrates mainly on mobile and internet network. Donner and Escobari (2010) addressed that "...mobiles generally connect people to people, regardless of time, location and situation...mobile may enable the rise of roaming businesses, just-in-time service", which indicated the importance of mobile network in business perspective. For international tourism, universal connect is essential for them to contact with people at home countries, as well as to access internet information. In developing countries, the trend in communication supplies is the focus on universal access rather than universal service: "This focus makes universal service a prognostic goal rather than an obligation." (Mbamalu, 2014). Combining those information pieces together, a market for universal services in communication would show benefit for business development.

Regarding information internet network, Buhalis (1998) identified it as an efficient business tool in his research. Kaul et. Al. stated the significance of internet (2008) in the context of developing countries as:

“Developing countries stand to benefit greatly from the Internet’s communication and information delivery capabilities to help meet their growing needs... Developing countries can benefit from this information revolution through communication and information access.”

They indicated the impact of information network and communication on the economic growth of developing nations. Yet at the same time, they highlighted encounters that those less developed regions have to confront in order to improve the situation, such as information poverty, absence of new information and ideas, the lack of shared vision between multiple stakeholders. Above all, the limited network capacity - which is resulted from high amount of users sharing small available capacity - caused troubles for accessing internet, and quality of the services. This challenge brings an opportunity for service providers in developing countries to improve user experience.

Zelenka (2009), when discussing information communication technologies impact on tourism, outlined four forms of technology that support the idea: web pages, marketing, E-business, and Location based services. The researcher emphasized the potential of information technologies in promoting sustainable tourism by providing method for “visitor’s management optimalization, or prediction of visitors flows.” Generally, there is a possibility to enhance sustainable tourism development by utilizing information and communication technology.

2.4.0 Concluding Conceptual Framework

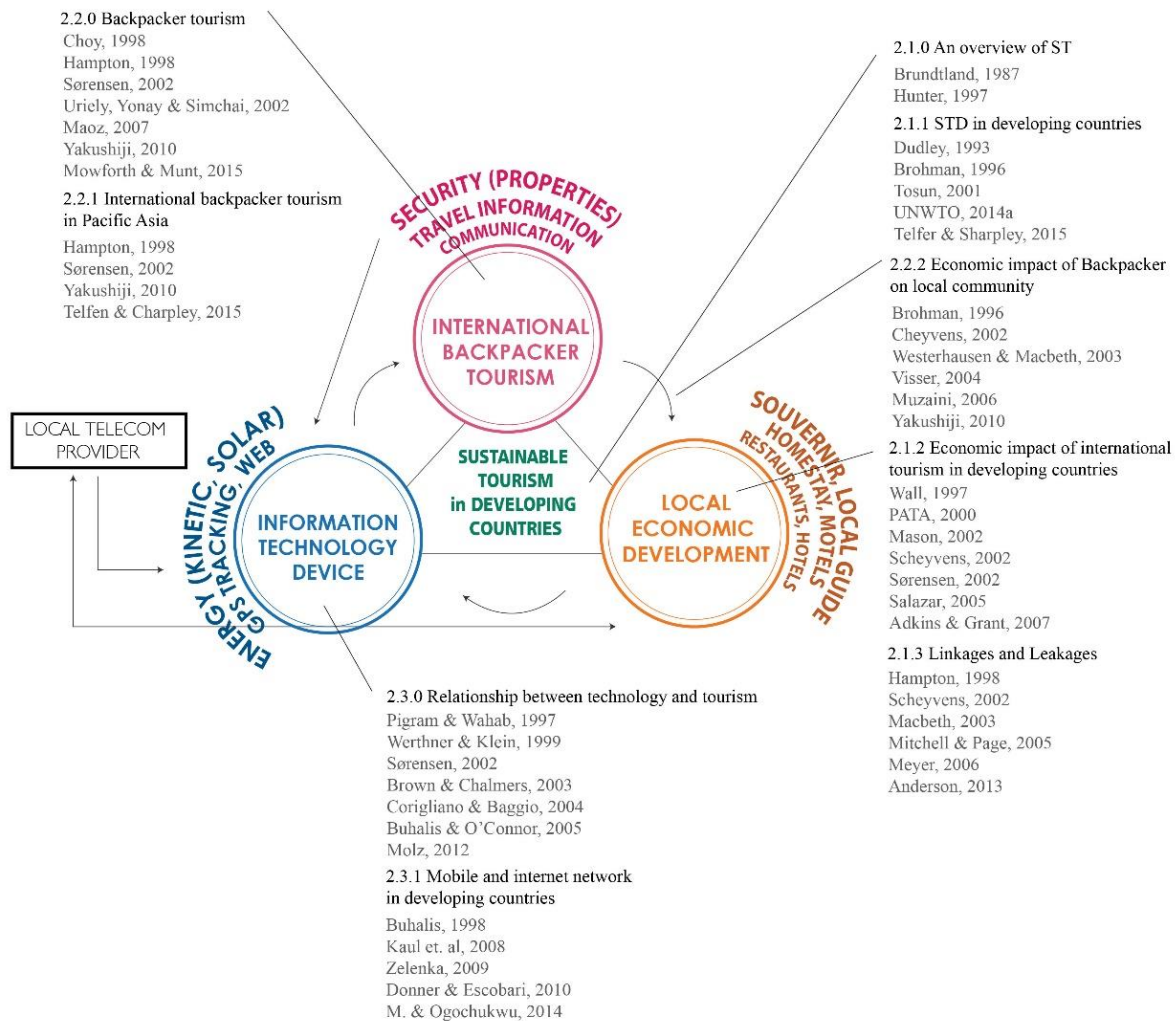


Figure 2.3 Conceptual Framework with References

Figure 2.3 presents the conceptual framework with references. Conclude from the literature review, there are some slight modifications were made, such as the involvement of local telecom providers (Section 2.3.1), and the context of developing countries (Section 2.1.1). The list of references provides a complete background of how, and where the grounded theory in this research evolved.

CHAPTER 3

METHODOLOGY

3.0.0 Introduction

This study goal is to propose a design solution to promote sustainable tourism in developing countries among the international backpacker community. On the road getting to that point, it is vital to understand the backpacker culture in terms of their demand on the trip regarding the connection with local businesses and technology devices. The current business strategies have been employed to earn incomes from technology were uncovered as well. How investigation in those issues featured by qualitative research methods was walked through by following these stages: presentation of the research topic, research questions, and a brief description of the methods used to provide best exploration in order to find answers for those questions. The detailed application of mentioned methodologies will be discussed in chapter 4.

3.1.0 Research Topic and Questions

General research query: How could technology design help improve both international backpackers experience and benefit of individual local business in developing countries in order to approach sustainable tourism?

The sustainability definition consists of the three pillars: society, economic, and environment, which are perfectly applied on tourism as well. Besides, the idea “Tourism is a profit driven industry” (Buhalis & O’Connor, 2005) has framed this research concentration mainly on economic impact of tourism. The expectation is to ease the scope in a way that could place significantly positive change on promoting sustainable tourism in developing countries. Sustainability is the center of research all over the world, yet in

the developing world, it is more critical due to all the difficulties it is facing. The biggest fear of citizens in the Third World is poverty. It is the driven motivation that led to unsustainable activities, and lifestyles, in which tourism industry also takes a remarkable place. With those influences, sustainability enhancement in developing nations is challenging yet worthy to explore using design and social science. Revenue growth in tourism, presented in numbers and graphs, may be a positive sign for government economy but its contribution for sustainable development, as well as life quality, is still an inquiry. This research, grounded in previous research studies that covered the field of sustainable tourism, focused on specifically economic development in the Third World with the expectation it can bring up a different view in this topic.

Local communities are one of the important stake holders of sustainable tourist. They are responsible for both the direct causes and consequences of market growth in tourism industry. Besides environment, a feature used to measure the success of applying sustainability is local people's life quality. Amongst traveler categories, backpacker has very strong relationship with local community because they directly interact with ingenious people for their needs (Scheyvens, 2002). While mass tourism appears in many research studies and statistical data, backpacker tourism draws less concentration in sustainable tourism context. Even though, they possess a unique culture among traveler groups that attracted many researchers in ethnography and tourism (Sørensen, 2002). This study, answers to the call of researcher's personal interest and this tourism fast-moving trend, chose backpacker sector as the research population. Since the researcher specializes in industrial design, the objective of this research is to propose a physical design solution to improve economic status – a principal dynamic of sustainable tourism in developing

countries. The first step is to determine the artifact, the user and the context. In details, while the artifact is technology device, the target user is international backpacker, and the context here is the relation between international backpacker's needs and individual local business in developing countries. That would be a support for the theory of possible impacts a backpacker put on local community. The research question 1's mission is to examine how strong that connection is.

Research Question 1 (RQ1): How do the common demands of international backpackers on a trip relate to a local community?

International backpackers tend to face more challenges than domestic backpackers due to barriers of language and lifestyle difference. The travel information they obtain about a destination is limited within the resources available in their known language. Eventually the quality and quantity of those sources will be questioned. Furthermore, while mass tourism has an advantage which is support from tourist agency and tour guide, who are willing to provide them much valuable information about a destination, backpackers mostly find that piece of materials by themselves through any accessible methods. This research question is to find out what exactly those common methods are, and which sources of information those self-planners often make use of. Above all, how the above mentioned contents relate to local merchandisers is also a question needed to be explored.

Research Question 2 (RQ2): How do technology information and devices impact backpacker decision? How does the local business take advantages of backpacker's need in technology information?

Innovation technology, as appeared in numerous researches, diverse from transportation, power resources to new materials. Technology, especially information

technology, draws attention of tourism researchers. While Zelenka (2009), Goessling (2000) indicated different technology roles in the development of tourism industry, this study will head specifically to personal technology devices. Additionally, Brown and Chalmers (2003), O'Regan (2008), and Paris (2009) emphasized the significant role of information technology in backpacker culture. It is noticed that the content of any travel sources will affect both backpackers and the noticed business either positively or negatively. Once backpackers interact with those supplied data, their decision will directly result to a business service revenue state. This research question was to examine how strong the impact of information place on a backpacker, which can be implied lately on local business growth. Accordingly, the finding could be used to validate the success of information technology assistance in coupling economic and cultural impact of backpackers on the local community, which hopes to boost sustainable tourism.

Research Question 3 (RQ3): What are the technology devices demand of backpackers on a trip?

Beyond doubt, the need for travel information rising will lead to the increasing of demand for information accessing support products (such as books, travel forum, internet network, mobile devices, etc.). Amongst those items, a technology device is a companion with its owner on every road. Due to that intimate relation, plus the expansion of consumer electronics market, this research chose personal devices for backpacker as the target research artifact. Pigram & Wahab (2005) mentioned that personal technology devices (smartphones, tablets, etc.) - which are known as travelers' assistant to access travel information – do contribute to the development of tourism. This evidence implies that electric devices show an important role in travel generally, yet that implication - once

applied on backpacker tourism - need further research. Therefore, the research questions 3 is to study the appropriateness of referring that theory to backpacker segment. Furthermore, in the design perspective, it is essential to learn the target user's need and behaviors regarding to a product in the design process. The findings from this research question, in short, could help the researcher understand backpacker's demand and insights - which is a priority step before starting to propose a design solution.

3.2.0 Scientific Approach

Backpacker tourism and local community together forms a special relationship between human being given a requirement to use qualitative research approach, as Phillimore and Goodson (2004) stated: “In tourism research, sociologists and anthropologists have been turning to qualitative approaches for a long time... qualitative tourism researchers consider and implement the criteria that make a qualitative study trustworthy” (p.166). This research based on a grounded theory concluded from literature review. The theory initially is triangulated from different perspective and information sources to ensure both the trustworthiness and appropriate implement of qualitative research data (Decrop, 1999).

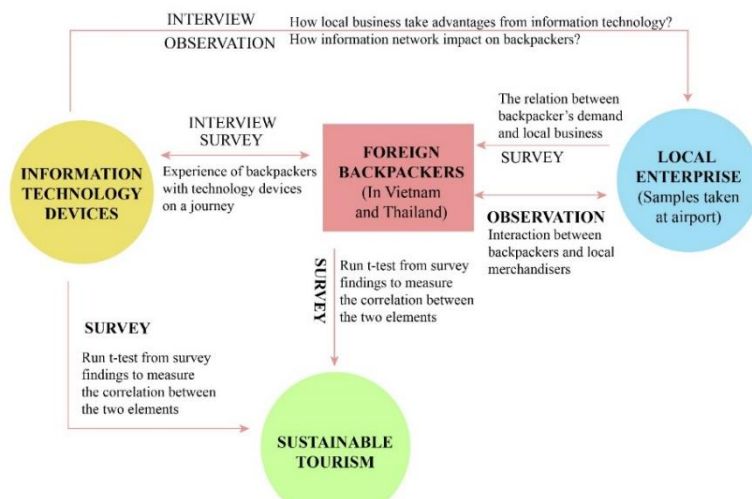


Figure 3.1 The Application of Qualitative Methods

Three qualitative research methods: survey (O’Leary, 2013), observation (O’Leary, 2013), and interview (O’Leary, 2013) were conducted to find the fit between collected data and the theory. Moreover, findings from the research is not only for testing the hypothesis, but also is a useful data for the researcher to utilize them to create a solution within industrial design discipline. The final stage here, thus, is to confirm the theory, take advantages of those outcomes, later on propose a tangible solution engaging design thinking.

Figure 3.1 shows the application of qualitative methods on each research question. For the research question 1, survey method was employed to find the answers. Besides, the interview and observation methods were used to investigate the research question 2. While interview was aimed for finding answers for the first phase of research question 2, the second phase was explored by observing interaction between the backpackers and the local merchandisers. To examine the research question 3, the researcher used interview and survey methods. The details of each research method including sampling strategy and data analysis are described in the following sections.

3.3.0 Research Method One – Survey

Survey research (O’Leary, 2013) was called in to create “sample data to make statistical inferences about the target population” (Smith, 2007), from that researcher can test whether there is a match between that data and the grounded theory (Strauss & Corbin, 1994) or not. In the research question 1 and 3, participant’s opinion and choices are important information. Therefore, survey, with the advantages of little time consumed, and high degree of plausibility (Glaser & Strauss, 2009), helps the researcher collect answer from many participants in a limited duration of time. This method, was used to recover data on object’s choice routine (Hartenstein & Iblher, 1967 and Marchand, 1974), once implied on

this research topic is meant to find out the selection of accommodations, destinations, and travel-related options of backpackers. The survey questionnaire (O’Leary, 2013) also use Likert scales, where backpackers can freely, easily express their feeling towards an information source, a destination, technology devices, or concern about sustainable tourism in a mostly definite level. The structure of designed survey separates into three parts including: general information, backpacking activities, technology-related information. The cover of survey questionnaire is explained in table 3.1.

No	Question Aim	Factors Covered	Style
1	Demographical information of participants	Gender, Age, Nationality	Open-ended question
2	Qs 1: Understand the depth of backpacking experience	Duration of being a backpacker	MCQ (One Selection)
3	Qs 2: Collect reason why a participant want to be a backpacker	Motivation to backpack	Open-ended question
4	Qs 3 - 8: Understand a backpacking trip experience	Countries have been to, companion in a trip, agency contact, reason to choose a destination, length of time and money spent on a trip	MCQ (Multiple Selections), Question 3, 5, 6 made provision to provide open-ended answers as well.
5	Qs 9 - 11: Collect travel information demand of a backpacker during a trip	Information sources, searched data categories, favorite activities	MCQ (Multiple Selections), Question 9, 10 made provision to provide open-ended answers as well.
6	Qs 12 – 13: Understand experience with street robbers	Street robber experience, personal items storing method	MCQ (Multiple Selections), These questions made provision to provide open-ended answers as well.
7	Qs 14: Understand the seriousness ranking of problems on a trip	Problems ranking order	LSQ (0: least serious – 5: most serious)
8	Qs 15: Understand the impact of online rating on a backpacker’s decision	Effect of online rating on backpacker’s choice	MCQ (One Selections), The questions made provision to provide open-ended answers as well.

9	Qs 16 - 19: Collect information on technology devices experience in a backpacking trip	Technology devices bringing on a trip, Devices using purpose and inconveniences, Rate value of a wearable technology supporting backpacking	Qs 16 – 18: MCQ (Multiple Selections), These questions made provision to provide open-ended answers as well. Qs 19: LSQ (0: least valuable – 10: strongly valuable)
10	Qs 20 - 21: Examine the understanding and concern of backpackers on local community development	Familiarity with “sustainable tourism” term, concern of travel impacts on local economic development	Qs 20: MCQ (One Selections), The questions made provision to provide open-ended answers as well. Qs 21: LSQ (0: Completely no concern – 10: extremely concern)
Notations: MCQ – Multiple choice question, LSQ – Likert Scale question, Qs – Question(s)			

3.3.1 Survey Sampling Strategy

The sampling strategies used to recruit participants for survey are purposive sampling (O’Leary, 2013) and convenience sampling (O’Leary, 2013). Initially, researcher formally conducted a survey pilot test with three students in sustainable tourism class at Arizona State University before the final version of survey questions was finalized. Participants in the pilot test were practitioners in tourism industry, having had experience in tourism research methods and backpacking trip around South East Asia, provided feedbacks to help the researcher clarify ambiguities, then modify the survey. The process of recruiting participants occurred in two ways: online and face-to-face, accordingly to which, the recruiting scripts was made. For online survey, a Google survey form was created, then sent to the researcher’s traveling friends network. Face-to-face engagement happened in Vietnam and Thailand, initiated from informal conversations with backpackers on the streets. At this stage, purposive sampling (O’Leary, 2013) was applied. In details, the researcher chose the participants based on their common feature: foreigners who wear a big travel backpack, walk on the streets, or sit together in bars, street vendors. The

application of convenience sampling strategy (O’Leary, 2013) shows in the chosen research fields. All of them are famous gathering space for foreign travelers, which are District 1 (Ho Chi Minh City, Vietnam), Khaosan road, and Pattaya (Thailand). In total, researcher spent three weeks in Ho Chi Minh City, two days in Bangkok, and two days in Pattaya to conduct the survey research. The researcher approached potential backpackers, provided a brief introduction and purpose of the research. Later on, a survey paper was handed out to each of participants after their approval to engage in the research. Many refusals from international backpackers occurred in Vietnam research field, yet only several from target population in Thailand. In short, there were 32 (n=32) complete face-to-face surveys, and 13 (n=13) online surveys collected. To maintain the accurateness of the range in participant’s age from 25 to 55 years old, a question in the survey is set for that purpose. There were 5 surveys out of the range, thus the survey’s results were eliminated. At the end, 40 (n=40) surveys were counted as data.

3.3.2 Survey Data Analysis

Results from survey methods were analyzed by using descriptive analysis method (Munoz & Civille, 1992), and were presented in visual graphs to highlight the key data. Respondent’s answers were typed down in script, then used a word count software to filter out the most common words. Additionally, the researcher utilized the Maslow’s hierarchy of needs (Maslow, 1987) to categorize the backpacker’s needs on a journey accordingly. Besides, in order to test the impact of backpacker’s choice on their concern of sustainable tourism, IBM SPSS (Statistical package for Social Sciences) was used to test a couple of queries. Implication of those findings are presented in Chapter 5.

3.4.0 Research Method Two – Observation

The research question 2 is to assess how current local merchandisers do business by taking advantage from technology mobile device. To achieve that, this study applied open-field observation (Seaton, 2002), “where the researcher and research population are not united within a common spatial and temporal field, but exist as separate and independent actors, within parallel, though partly overlapping rather than identical, time and spatial fields” (Seaton, 2002). The researcher plays a role of a “complete observer”, who does not have any contact with participant (Ritchie, Burns & Palmer, 2005). By witnessing the traffic flow of travelers around airport kiosks, and the density of population at each of the booths, there are two factors researcher aimed to learn: the priority of backpacker’s need and the business state of local merchandisers working in travel services, technology providing. The reason for no contact between observer and target population is to allow observed individual instinctively moving around without influence by words, or awareness of someone watching. Consequently, the data collected are more precise. While traveler observation in tourism was very popular before, the implementation of it on observing backpacker’s behavior at airport merchandisers has little exploration. This study, via this technique, aimed to lead to a new direction in tourism research. The results help to make sense of international traveler’s decision in local travel suppliers, thus could propose a routine of backpacker’s priority needs, and the impact it puts on local airport businesses.

3.4.1 Observation Sampling Strategy

The observation progression was conducted completely at the airport. The magnitude of the research is measured by time consumed on observed field. The researcher spent a total of four hours at Bangkok International Suvarnabhumi Airport in Thailand, and four hours at Tan Son Nhat International Airport in Ho Chi Minh City, Vietnam. The process was done by the researcher and an assistant, no individual images nor videos recorded. Mobile network, 3G/4G Sim merchandiser, travel information supplier, tour agency, transportation guide, and other travel-related business were the target observed kiosks at airports. The researcher's position and airport's plan are visualized in Figure 3.3 and Figure 3.4

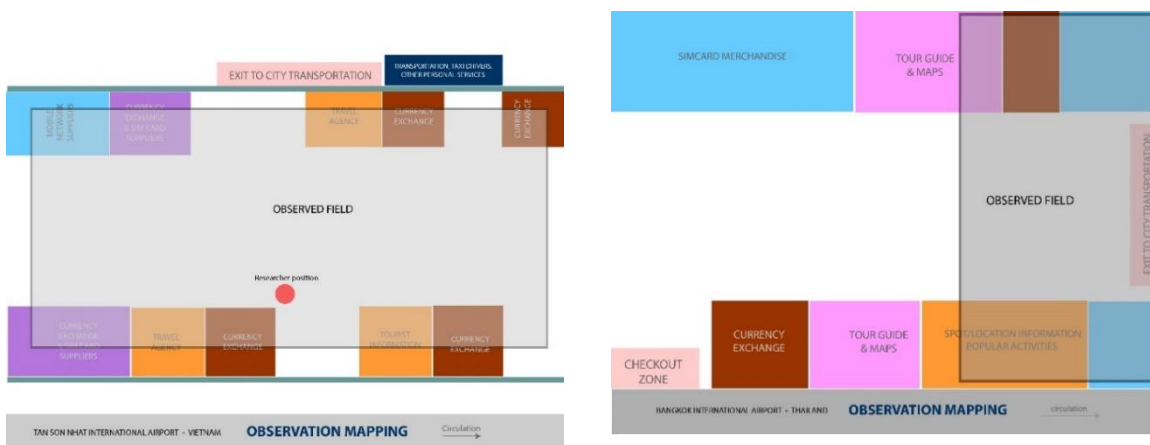


Figure 3.3 Tan Son Nhat Internation Airport mapping Figure 3.2 Suvarnabhumi Airport mapping

Similar to the survey research, purposive sampling (O’Leary, 2013) was also used in observation research. Nonetheless, a limitation of this strategy when combined with open-field observation method is the promise of a certain backpackers’ quantity. Since there is completely no contact between observer and the target population, in other words, individual observed subjects did not know they were observed, the researcher cannot tell for certain if all of the travelers they observed are backpackers. Information collected from observation might be a mix of all kind of international traveler segments except for group

tourists. This disadvantage may have somehow affected the outcome of this study, requiring further investigation.

3.4.2 Observation Data Analysis

Behavioral mapping was used to analyze observation in this research. It is a “systematically document location-based observations of human activity, using annotated maps, plans, video, or time-lapse photography” (Hanington & Martin, 2012). The methodology for mapping object’s behavior is tracking that “involved recoding the subject’s movement by drawing a line corresponding to the subject’s observed movement on a base map” (Hill, 1984) of a destination. In this research, airport at the observed fields will be drawn into a general plan map. Kiosks were coded by colors. Circulation and movement of objects in observation were noted down as line and arrow, while the density of a circulation routine was marked in accordance to the arrow thickness.

3.5.0 Research Method Three – Interview

Working towards finding the motivations beneath backpacker’s decision and concern about the local community and technology, the third qualitative method used in this research was semi-structured interview (O’Leary, 2013). Interview method helped to find the answers for the research question 3 and partial of research question 2. While the survey method allows the researcher to approach a large amount of participants, the interview method is known to help understand insights of participants: “Interviewing is becoming the global research method for understanding and making sense of the lives of the people of this world” (Tourism research methods, Ritchie, 2015). The structure of interview questions is similar to survey questionnaire, yet slightly different since the interviewees are not provided with options. Therefore, data collected from them are original and valuable

to get a deeper investigation. In semi-structured interview, some general questions are fixed to create the border of topic researched, the expanded detailed questions will be asked according to previous answers as the interview moving on.

3.5.1 Interview Sampling Strategy

The sampling strategies of interview method is similar to the way used to recruit face-to-face participants in survey method, which are: purposive sampling and inconvenience sampling (O’Leary, 2013). For interviews, the research field restricted only in Ho Chi Minh City, Vietnam. Due to a requirement of long time consumed for an interview, the number of participants in a full, detailed recorded interview session is ten (n=10). Among whom, three (n=3) of them also completed the survey before moving further to an interview with the researcher. Their overlap of their feedbacks on Survey and Interview was counted together while analyzing the data.

3.5.2 Data Analysis for interview research

Raw data collected from Interview research method was audio recorded from the start to end of interviews, which is later transferred into text scripts. As interview is a tenant of qualitative research, the forms of interview data vary from oral words, facial expression to body languages, yet in this study, verbal words are noted down as key data. The method used to analyze those raw data into meaningful content is conceptual equivalence. “Conceptual Equivalence refers to a functional aspect of the construct that serves the same purpose in different cultures, although the specific behavior or thoughts used to make sure the construct may be different.” (Lee & Sue, 2011, p.294). In details, the researcher will compare the “raw data” to identify the common factors or relevant differences, then link the data to abstract ideas and general processes. Criteria applied while categorizing the data

is to create a systematic, relevant, impersonal control over data (Glaser, Strauss & Strutzel, 1968). In the next stage, relationships among categories were hypothesized to create a meaningful flow, or theory. Whether there is a match between grounded theory and the flow was discovered to support the research.

3.6.0 Institutional Review Board

The study was submitted to the Institutional Review Board (IRB) in October of 2015 and approved with exempt status in the same month. (See Appendix B)

3.7.0 Limitations of Research Methodology

The goal of this study, as stated above, was to support both backpackers and local community economy. During the research, however, the involvement of local community is limited. Most of collected data are from target population: backpackers – who plays the centric role in leading the design process. It subsequently might lead to biased conclusions, in which backpacker's demand and viewpoint are in strong consideration yet not local community. Inference of impact that backpacker tourism places on indigenous society requires further study should be conducted. At that time, an approach from local community' standpoint should be the leading criteria.

3.8.0 Method justification table

Research Question	Research Method	Justification/Rational
How do the common demands of international backpackers on a trip relate to a local community?	Survey	Survey provide the efficient way to approach a large amount of participants in a limit of time
How do technology information and devices impact backpacker decision?	Survey Semi-structured Interview	Interview allows researcher to understand the insight of backpackers in making decision, and using devices
How does the local business take advantages of backpacker's need in travel?	Open-field Observation	Observation provide an objective view of interaction between backpackers and the local business.
What are the technology devices demand of backpackers on a trip?	Survey Semi-structured Interview	The survey is to collect participant's demand, while interview help to justify them, and know the reason beneath the user's need.

CHAPTER 4

FINDINGS AND DATA ANALYSIS

4.0.0 Introduction

This chapter presents the findings from the research methods described in chapter 3. Results from the survey method helped to find the answer for the research question 1. Meanwhile, the combination of the three research methods rendered the potential answers for the research question 2 and 3. The outcome was categorized and analyzed regarding to the topic of each research question. Chapter 4 also explains the implication of data collected from observation research method. The sole concentration on this chapter is to facilitate the later conclusion, which will be discussed in chapter 5.

4.1.1 Survey Results

Generally, data from survey method were evaluated, then visualized in graphs and tables enclosing descriptions for each focus. Besides, statistical analyzation from SPSS test was discussed as well. The survey has been targeted for participants who are backpackers being on a trip across South East Asia, specifically in Thailand and Vietnam. In total, 40 (n=40) of them completed the survey. Besides, the occurrence of incomplete responds scattered among 40 participants, which is considered as fractured data, will be noticed throughout the discussion.

4.1.2 Demographical Background of Respondents

Demographical background of participated backpackers in this research included: gender, nationality, and annual income. From literature review, researchers suggested that there is an unbalance distribution in backpacker gender, where male backpackers dominate the quantity. In this study, 65% out of 40 participants are male, which is higher than 45%

female backpackers. Sørensen (2002) emphasized in his journal Backpacker Ethnography that the age range of backpackers is from 22 to 33 years old, whereas the group above 27 years old takes the majority. The situation occurred the same in this study. He also noted that Western travelers are the main members to the backpacker community in South East Asia thanks to their convenience in flight routine, time zone, and lifestyles. Geological background of respondents in this study gives out the same result. There are 48% out of 40 backpackers from Europe, 37% from Asia, and 15% from America. In short, regarding the demographical background of backpackers in this study, there is a match between their features and what was described in Backpacker Ethnography journal of Sørensen (2002). This result guarantees the accurateness in targeting the population, thus ensured the trustworthiness for the rest of the findings, as well as the discussion will be made upon literature review and those outcomes.

The question about economic background was designed to get an overview of their spending ability, thus lately helped designer propose an affordable solution. There are 40 (n=40) participants provided answers. Among which, 47% (18/40) of them have annual income less than \$20,000USD, 31% (13/40) earns \$20,000 USD – \$50,000 USD per year, and the rest have no income at all (See Figure 4.1).

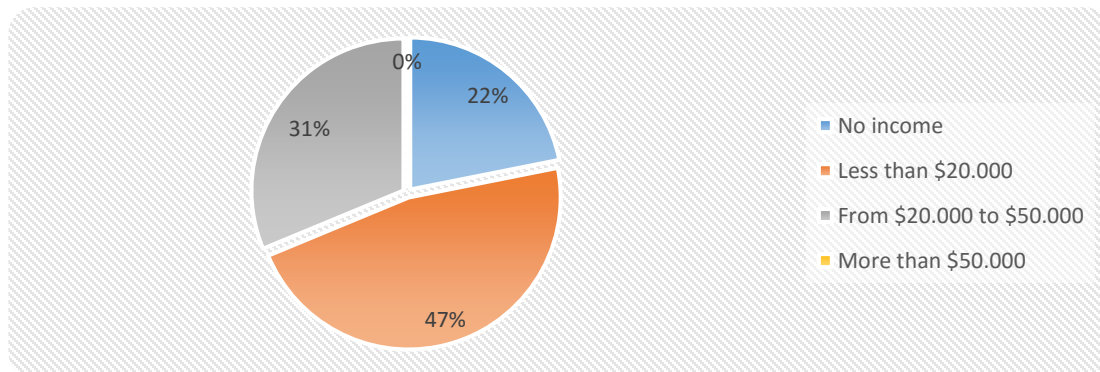


Figure 4.1 Respondent Annual Income Distribution

4.1.3 Backpacking Experience of Respondents

As this study set the boundary in foreign backpackers who chose South East Asia as their destination, their backpacking experience is brought into the table to find out a parallel in characteristic. The relating issues include: depth of experience, motivation, companions, and the reason to choose a destination.

Participants are asked an open question about their backpacking motivation. Thirty-six (n=36) participants provided feedbacks, amongst which some similar ideas have been recognized. The result is presented in the table 4.1. According to 36 open-ended comments expressed in the survey, the desire to discover and explore new things is the most popular mentioned terms, which totally covered up to 27 (n=27) counts. Following is the lists of experiences that they often seek for during the trip: fun, culture, and people, each with six mentions.

Answer Option	Respond Count
New	14
Discover, Explore, Learn	13
Fun, relax	6
Culture	6
People	6
Cheap	2
Follow	2
Hobby	2
Feeling	2
No reason	1
Gather stories	1

Thirty-seven (n=37) out of 40 backpackers responded to the question about their depth of backpacking experience, there is 45% of them (17/37) have one to five years' experience

in backpacking. Meanwhile, only 21% of them (8/37) have more than five years' experience, and 34% (12/37) has been a backpacker less than one year (See figure 4.2).

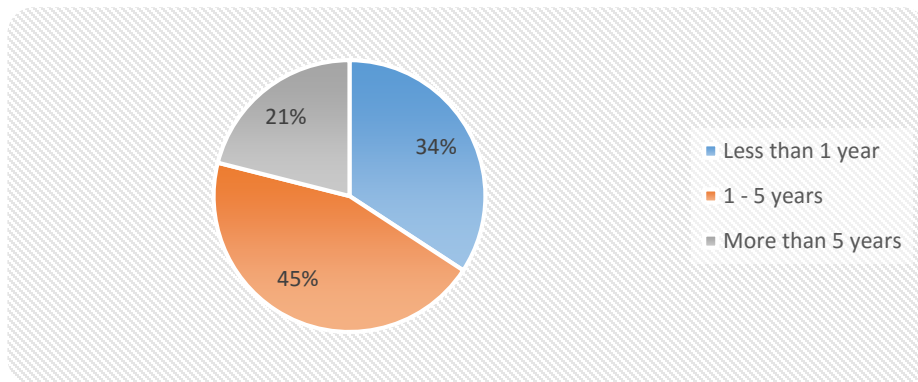


Figure 4.2 Backpacking Experience

In total, 39 out of 40 backpackers (n=39) responded to which destination they have visited (See Figure 4.3). Because this research was conducted in Asia, all of them (39/39) check for South East Asia. Besides, 24 of the participants (n=24) have backpacked through Europe, and seven (n=7) were previously backpacking through Africa. Amongst South East Asia countries, Thailand (26 picks), Vietnam (25 picks), and Cambodia (seven picks) are recorded to welcome the most backpackers.

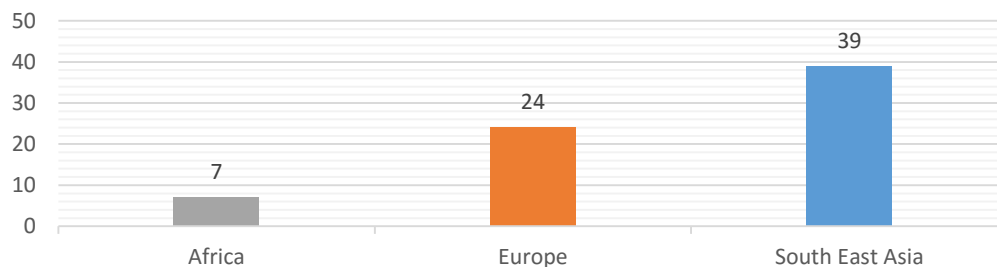


Figure 4.3 Visited Destinations

The reason for backpackers to choose a destination is also diverse. Figure 4.4 presents the distribution of reasons for choosing a destination. The most common response was following others suggestions (n=23), followed by seeing interesting news about a place (n=19). In the minority segment, six people (n=6) backpacked to Thailand/Vietnam to visit

their international friends, two of them (n=2) revisited the destination, and the other two (n=2) have their own purpose without giving further explanation on it.

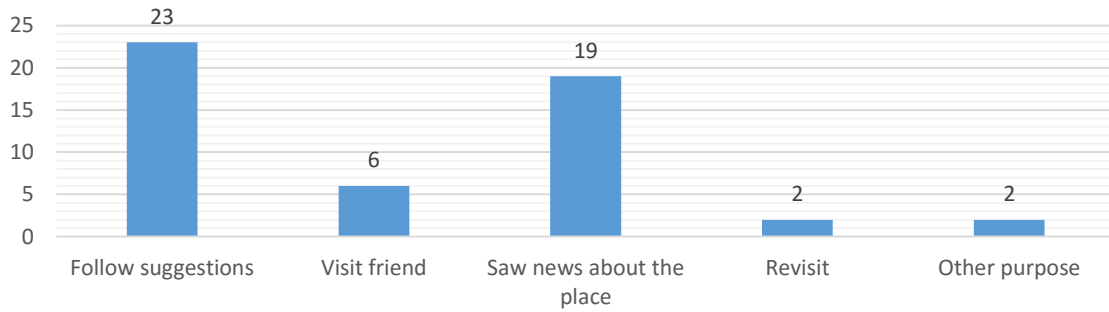


Figure 4.4 Reason for Choosing A Destination

In addition, companion is also an influential element that distinguishes backpacker from other tourism sector. When being asked who do they often travel with, 25 backpackers (n=25) chose the option “with a small group of friends” (Figure 4.5). The reasons they provided in the open-ended question are: safe, sharing, and fun. Backpacking alone is a favorite choice (n=21). Reasons for choosing are: freedom, interest, and comfort. Only three out of 40 (3/40) participants chose to backpack with family, and one of them (1/40) prefer going on a trip with other experienced backpackers. This statistic reported shows just a slightly small different between backpacking alone and with a few friends. In addition, there are nine of them (9/40) chose both of the most common options.

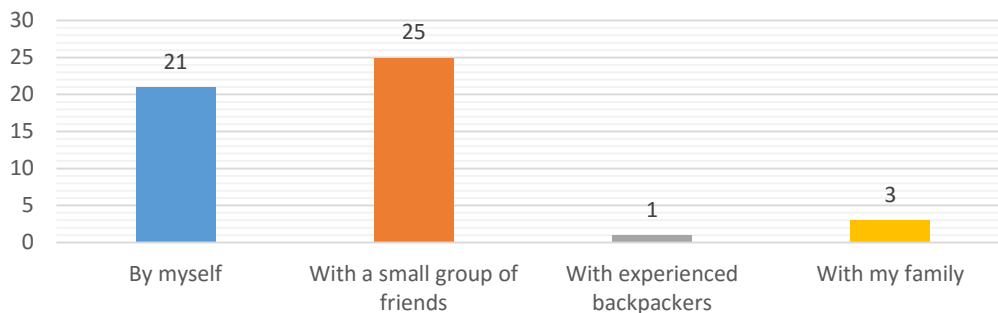


Figure 4.5 Preferred Companion in A Backpacking Trip

Next, agency contact is the other feature used to distinguish mass tourism and backpackers. Agency involvement is always guaranteed in mass tourism, yet backpack tourism is not. Regarding the interaction between backpackers and travel agency, 39 (n=39) answered the question. The result found out that there are 27 out of them (27/39) respondents do not have any communication with travel company before a trip. Some mentioned explanations are: “no need”, “not useful”, “have friend at destination.” The rest of them (12/39) confirmed contacting a travel agency in order to collect more information about the destinations.

4.1.4 Travel Information in Relation With Backpacker’s Demand

According to Sørensen (2002), two characters that contribute to form backpacker culture are alternative guidebooks and travel internet. The two both belong to travel information source, which highly impact every traveler. A survey question thus is meant to study the potential influence of any special travel source on backpackers’ activities. There are 40 (n=40) participants answered this multiple choice question, in which one people can check more than an answer. Among the list of most popular information sources, TripAdvisor received the most accessed from backpackers (n=23) (See figure 4.6). Coming up next is Couchsurfing, a website for traveler to find a local host at a destination with cheapest price, or even free (n=19). The third place goes to guide books and Lonely Planet website (n=13). Backpacker magazine, a popular printed book for travelers, received the least number of backpacker’s choice (n=7).

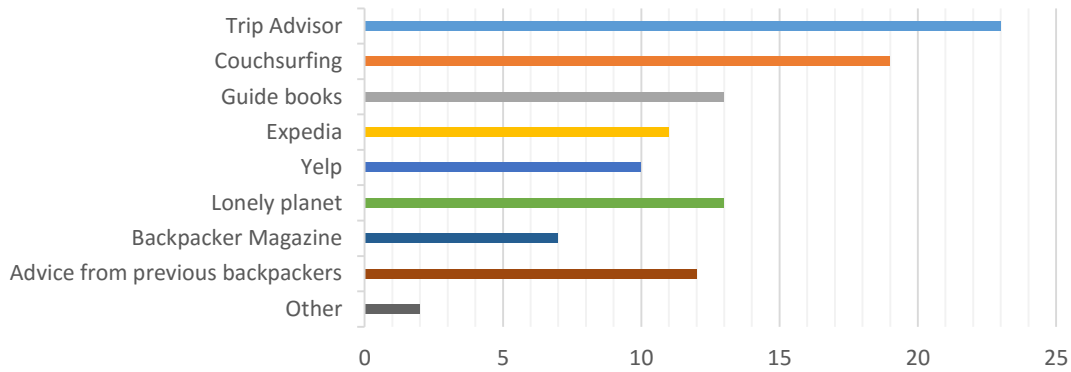


Figure 4.6 Travel Information Sources

After knowing which travel information sources respondents often access, exploring what info categories they frequently search for is essential to understand their needs. In the question about which information segment that backpacker mostly searched preparing for a trip, a sort list of common travel data field is made to figure out actual backpacker’s demand. Amongst seven categories, “Places to visit at a destination” is leading with 33 out of 40 people (n=33) chosen (Figure 4.7). Transportation and Restaurants/Hotels share the second place (n=28), and the third place (n=20). The bottom three ranking are Fees, Cuisine, and Recreational Activities. The data render the circumstance that important information pieces go to “eat-stay-go” demand, whereas “go”, in other word: mobility, takes the leading role.

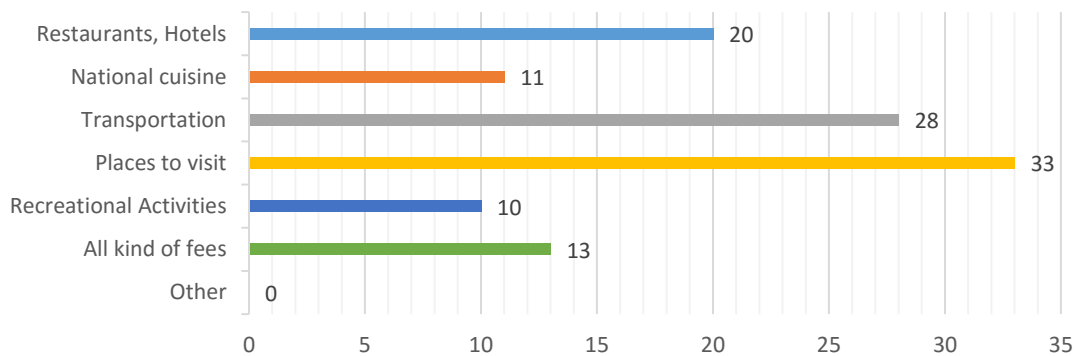


Figure 4.7 Category of Travel Information Searched

Traveling is seeking for experience through activities. Concluded from literature review, researcher categorizes travel activities into three subjects: Adventure, nature, and culture. Among the three, cultural activities such as cuisine exploration, sightseeing, and traditional villages visiting got the most picks (n=33) (See Figure 4.8). Twenty-two out of 40 backpackers (n=22) showed interest in natural activities (such as fishing, diving, harvesting, etc.), and 17 (n=17) respondents chose adventure events to join. Cultural activities provide the best opportunity for participants to know about a new culture, people, and lifestyles - which matches well with the major motivation explored previously.

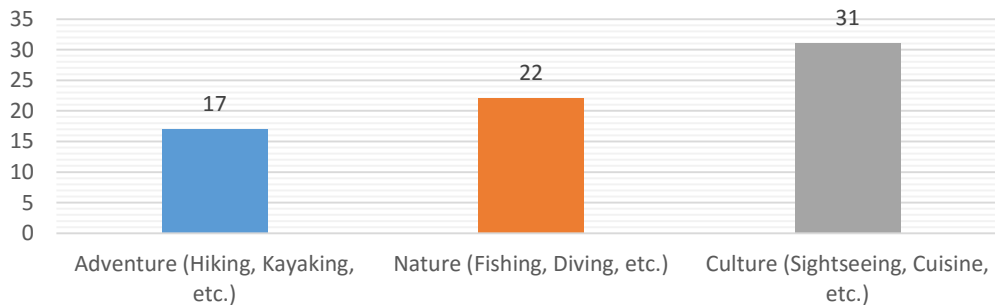


Figure 4.8 Favorite Backpacking Activities

In order to understand the difficulties that backpackers have to face while going on a trip through a developing country, a list of problems are created for them to rank based on their own experience. The range is from 0 (least important) to 5 points (most important). Out of 5 points scale, the problem “overcharged by the local business” scored 3.07 mean, thus takes the first place (See table 4.2). Next are robbery and poor local service with 2.82 and 2.78 means. The two issues backpackers are less worries about are currency changing and cultural adaptation. It is important to learn from the result that the top two concerned problems both directly relate to local community: overcharged by the local business and poor local services. In the meantime, the second group of difficulties, relate

to top three searched travel information searched previously, is issue about the needs in travel activities.

	Number of Responses	Mean	Rank
Overcharged by local business	40	3.07	1
Robber	40	2.82	2
Bad local service	40	2.78	3
Eat - stay - transportation	40	2.55	4
Plan/schedule change	40	2.49	5
Internet and signal	40	2.48	6
Visa application	40	2.40	8
Weather, health issue	40	2.27	7
Culture adaptation	40	1.97	9
Currency changing	40	1.40	10

4.1.5 Online Rating Impacts

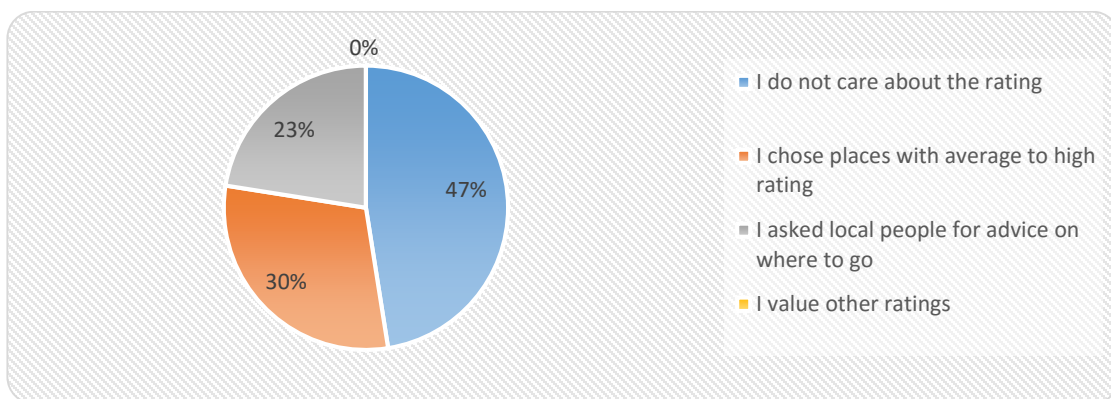


Figure 4.9 Effect of Online Rating on Making Decision

From the former question, internet is found out to be the most popular channel for accessing travel information. Listed website sources are famous for eat-stay-go

information, provide users options to sort data based on price, rating, and location. This question asks for the possible influence of internet rating on a user’s making decision. The result come out that 47% percent out of 40 respondents (19/40) spare no interest in the rating of a services, and 23% of them (9/40) decided upon local people’s advices (See figure 4.9). Only 30% of them (12/40) chose services that possess average to high rating; in other words, they are highly impacted by internet rating results.

4.1.6 Technology Devices Experience

A companion of travelers on a trip is technology devices. Backpackers are asked to choose what devices they often bring with them during a trip, yet the researcher received only 39 feedbacks (n=39) (See Figure 4.10). Amongst six options, smartphone is selected the most (n=34). Camera – which is used to capture memorial images during the trip – is the second top pick (n=23).

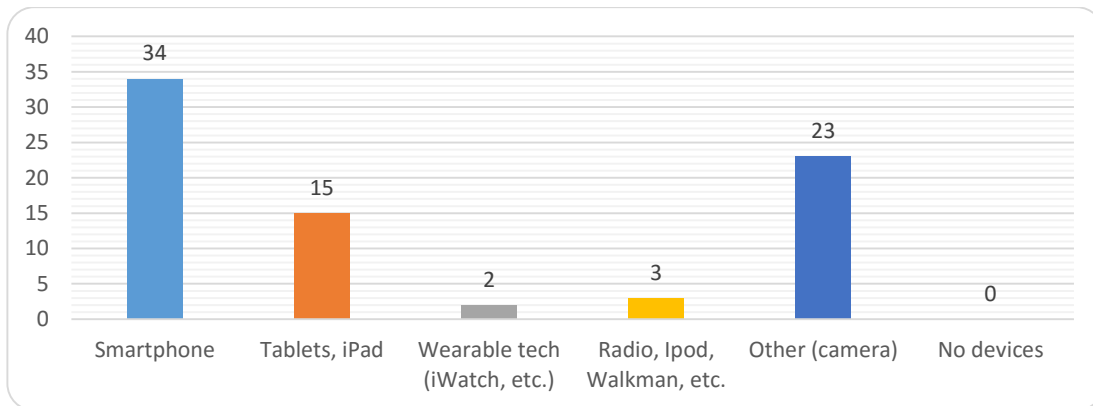


Figure 4.10 Common Technology Devices

The using purpose of technology devices is varied according to each individual user. In total, 40 respondents reacted (n=40), 30 among whom (30/40) claimed that they use devices to contact with their friends and family (Figure 4.11). Twenty-four of them (24/40) used it to find information relating to the on-going trip, and 23 respondents (n=23) reported

to use them as a way-finding device. For the rest of choices, responses distributed quite evenly with 11 for booking tickets and hotels, ten for entertaining, and seven used them for working purpose.

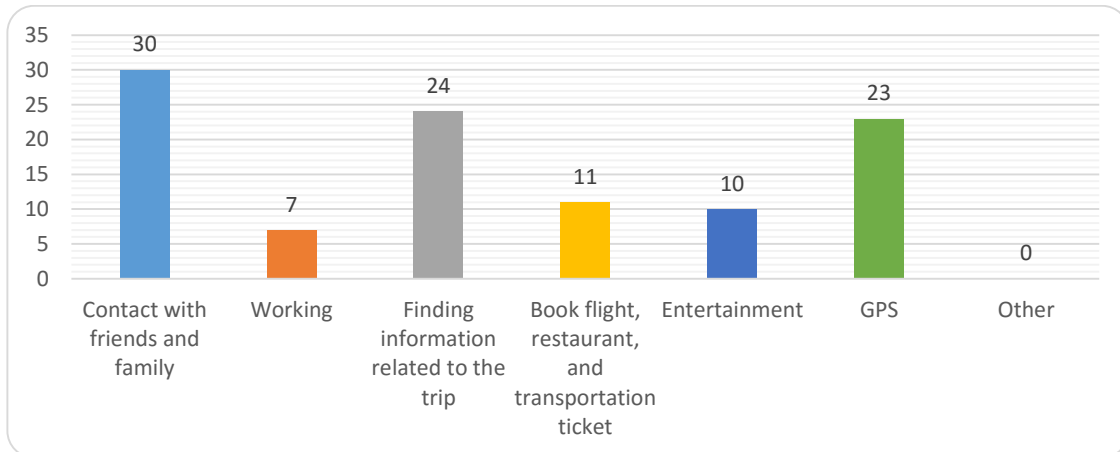


Figure 4.11 Backpacker's Purpose on Using Technology Devices

The frequent user of devices will lead to advantages and disadvantages for users. In terms of technology's inconvenience, 38 people responded to the question. Amongst them, 17 backpackers found battery charging is an inconvenience of the technology devices (See Figure 4.12). Fifteen feel unhappy with the signal status. The lacking of waterproof function is picked by eight participants, and the other eight addressed that there is no inconvenient experience with their devices so far.

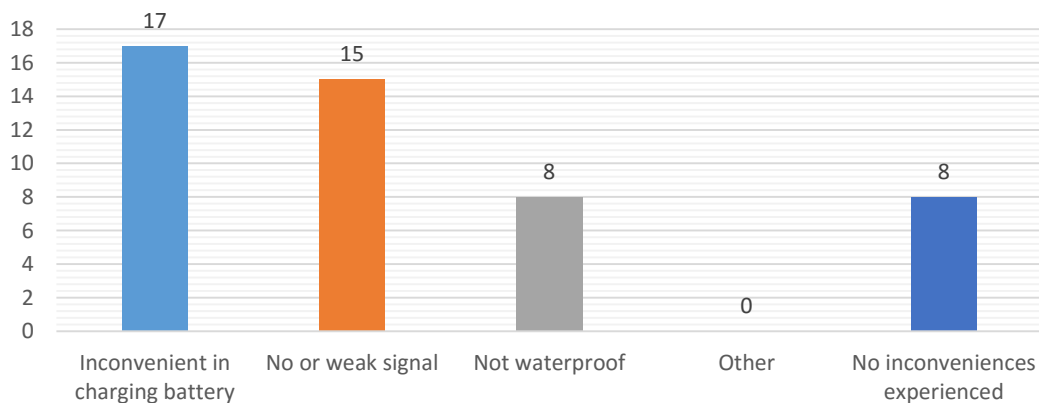


Figure 4.12 Inconveniences Experienced with Technology Devices

To conclude, a Likert scale is given to respondents to ask them value a wearable technology devices' importance in a backpack journey; and 38 backpackers (n=38) provided feedback for this question. The calculated average score of devices' value is 5.42 out of 10 points scale score. The score is slightly above average, and shows a moderate interest of backpackers in the idea.

4.1.7 The Backpacker's Concern on Sustainable Tourism

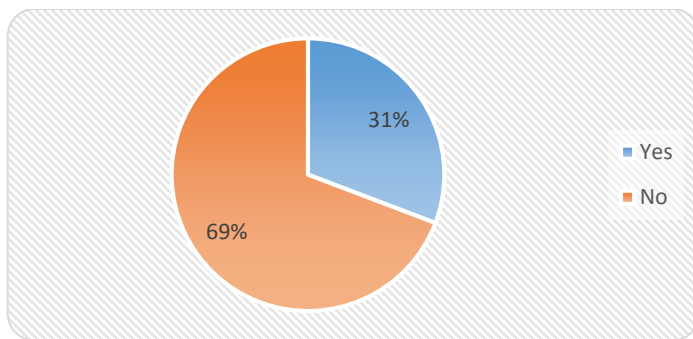


Figure 4.13 Experience with “Sustainable Tourism” Term

Sustainable tourism is a term specialized in tourism study. While it is a popular concern in tourism academic research, travelers – the main stakeholders in this model – rarely

fully understand its definition and meaning. In the question finding out backpacker's familiarity with “Sustainable Tourism”, 69% out of 40 respondents (28/40) insisted on never hearing about it. Among the rest (12/40) - who selected Yes for the answer - once filled the open-ended question asking to briefly describe what the term means, only one of them provided the closely correct definition. Most of the answers mainly emphasized the importance of environment, culture, and traveler's behavior, yet only several were concerned on local community in terms of economic.

From the previous question, it is learnt that understanding of backpackers about sustainable tourism is poor, especially for the missing point regarding economy. With the aim is to test if the beneath reason falls to their knowledge or their awareness, a Likert scale is provided for backpackers to value their concern about the impact of their travel activities

on local economic development. The average score from 39 responses (n=39) is 4.49 out of 10 points scale score, from 0 – completely no concern to 10 – extremely concerned. This number is around the average score, indicates a moderate attention of backpackers on the economic impact of their travel activities.

4.1.8 Test 1: Relation Between Information Sources and Backpacker’s Concern

The tight relationship between travelers and information network have been mentioned in numerous researches (Sørensen, 2002; Adkins & Grant, 2007; Lou & Li, 2009). Regarding that finding, the first test is to examine if the content in those information sources would have any influence on backpacker’s concern about of tourism or local community at the destination. The average score of backpacker’s concern on local economic development and technology devices, filtered based on variables is described in

Table 4.3:

Table 4.3. Backpacker Concern on Information Sources				
Information sources	Technology devices value		Impact Concern	
	Responses counted	Average score	Responses counted	Average score
TripAdvisor	19	5.21	19	4.11
Couch surfing	12	5.00	13	4.46
Guide books	0	0	0	0
Expedia	10	5.8	11	4.91
Yelp	9	6.44	10	5.00
Lonely Planet	13	5.46	13	4.46
Backpacker magazine	7	4.29	7	3.43
Advices	12	6.08	12	4.58
Others	2	9	2	8

Note: This Likert scale is the 10 points scale score, range from 0 (least concern) to 10 (most concern)

From the table, an interesting outcome is found out: Backpackers who chose to use Yelp possess highest score in both concern value on technology (6.44 compared to 5.42 average score) and travel activities impact (5.0 compared to 4.49 average score). Expedia users got the second place at both of the topics. Backpackers in this study chose South East Asia as their destinations, yet only Philippines and Malaysia appear on Yelp network. Therefore, Expedia will be brought in to consider as well to fully examine the information relating to South East Asian developing countries.

4.1.9 Test 2: Relation Between Backpacker's Experience and Their Concern on Economic Growth at Destinations.

The second test assumed that for backpackers who have longer experience in backpacking would more likely to care about sustainable tourism and local community than the others. This hypothesis developed based on a theory suggested that when people spend a long time at a place alongside indigenous people, they tend to have feeling towards that place, thus might enhance their awareness, and care about the location. To test this assumption, an independent samples t-test was run to examine the possibility of this relationship.

The null hypothesis is that there is no relation between the length of backpack experience and their concern of travel activities impact. The alternative hypothesis is that there is a relation between those two. An independent samples t-test was run to test the hypothesis. There is a significant difference in concern rating points between backpackers who have more than five years' experience ($n = 8$, $M = 5.18$, $SD = 3.8$) and who have less than five years' experience ($n = 29$, $M = 4.14$, $SD = 2$); $t_{15} = -1.3$, $p < 0.01$, $CI = 0.07, 4.6$). These results suggest that backpacking experience does have an effect on backpacker's

awareness of sustainable tourism. More specific, backpackers who have longer time backpack shows more concern on local community economic than the ones who have been backpacking in shorter time. The longer experience a backpacker has, the more concern they put on their travel activities.

4.2.0 Observation Result

In accordance to the definition of an open-field in observation described by Seaton (2002), the researcher in this study has no contact or interaction with actors in the research space. Raw data was collected from the subjects without them knowing that they were under observation.

4.2.1 Airport Travel-Related Business Overview



Figure 4.14 Suvarnabhumi Airport Arriving Hall

At the Bangkok Airport, all business stores are located right at the exit of the arrivals terminal alongside the arriving hall outside the checkout zone. Once after the passengers have finished all the procedures needed to enter Thailand, and picked up their luggage, they can easily explore the merchandise zone that serve the traveler's purposes with four themes: mobile network connection, transportation, travel information, and currency exchange. The arriving hall is a wide space and has a high capacity (See Figure 4.14). As one can notice, there are more than 20 stores located at the terminal exit. The majority of

them supply mobile sim network and many others provide Thailand travel information. Several other stores are run by non-profit organizations help people with transportation schedule. Due to the vast space of the hall, the researcher chose the zone at the hall exit leading to the public transportation level. The observed zone had four stores of mobile network providers, three of travel information, two of transportation services and two for currency exchange. To mention the available services, mobile network merchandises were varied with diverse choices and plans for customers. Plans they provided widely ranged from data usage to number of full service days, each plan being associated with very competitive prices and benefits. Mobile services include internet access, text and call sim, sim installation and activation. From the employment perspective, those stores also possess the largest number of employees compared to other service fields. In each of stores for mobile network plan, stood at least four employees, while the other stores had only one to three employees per store. All of them spoke both English and the indigenous language and seemed to be very active and friendly in their interaction with customers. Travel information suppliers, on the other hand, also helped customers find spots of tourist attraction, public transportation maps with schedules and tour guides. Leaflets, handy booklets and flyers displayed on the shelves were free for visitors to pick. Their contents ranged from mini tour, hotel booking, bus/train services to variety show tickets booking. Employees dressed more formally and were less active than those working for the mobile stores.



Figure 4.15 Observation Field at Tan Son Nhat International Airport

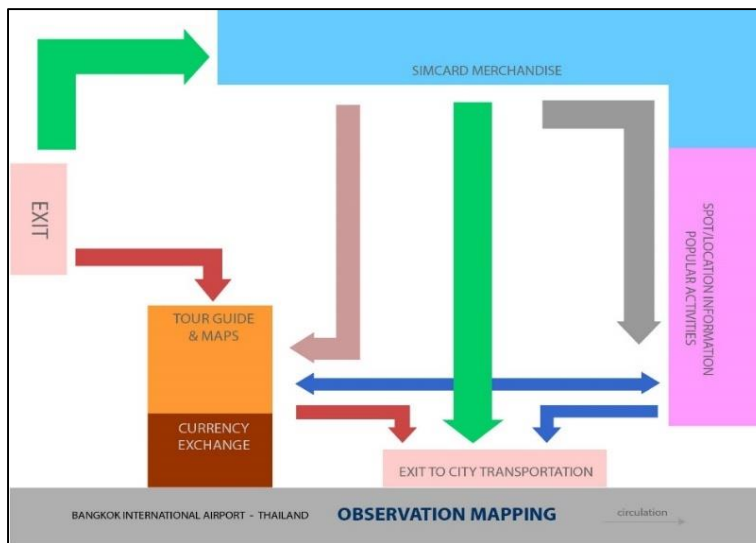
The situation at Tan Son Nhat airport in Vietnam (See Figure 4.15), however, is different both in scale and in structure. Business stores serving customers are positioned at the intersection hall of two exit doors and take up a smaller space. The stores are also smaller in size and can fit only one to a maximum of three employees per booth. The diversity and

quantity of choices are also limited with less than 15 stores or booths. This less competitive environment happens to be the cause for no options in price range, and the absence of any plans and offers specialized for travelers. More than half of the business stores at this airport are currency exchange services that belong to certain Vietnamese banks. One special feature about the stores here is that the SIM card network can be purchased at any kiosk, even at the currency exchange service. There is a mix of service providers at each merchandise booth. Among the official mobile network providers, there are only three options for visitors: Mobifone, Vinafone, and Viettel. The number of choices is quite low as compared to the range available in Thailand. As for the travel agencies there are two official travel service companies present at the airport. Leaflets and posters are available but with limited information, and they can be found at display shelves positioned at some corners. Besides, the researcher noticed that eco-tourism does not appear in any of the

information sources. The most eye-catching pieces of information are price, tourist spots and entertainment services.

4.2.2 Traveler’s Activities Flow

The observation study at Bangkok Airport was conducted in two sessions. The second session occurred three days after the first one and both the sessions took around two hours. The researchers spotted potential backpackers once they stepped out of the terminal exit. Their circulation around kiosks are mapped in the form of arrow directions. The observation map is visualized in Figure 4.16. The three different circulations shown with



three different colors represent three different patterns of people movement. Unfortunately, the time spent by each backpacker at a kiosk was not noted down to know more about the depth of their concern.

Figure 4.16. Backpackers Circulation at Suvarnabhumi Airport

Green, Grey, Pink Arrows: First Circulation
 Red Arrows: Second Circulation
 Blue Arrows: Third Circulation

As noticed in Figure

4.16, in the first routine of movement or the first circulation (marked as green, grey, and pink arrows), majority of the passengers went straight to the mobile network merchandisers (green arrows). Most of them got their choices right at the first stores they spotted. Others wandered around the kiosks, yet all ended up with a purchase. This circulation split into 3 branches. One of them took the exit to the city transportation (green arrow). A second

branch was attracted to the tour guide and maps store (pink arrow). The tour agency welcomed these visitors and provided them with tour information and free maps, enclosed with public transportation information for visitors. Most people that came to these stores were observed to leave with a flyer, map or a leaflet in their hands. A third branch was attracted to the popular activities store (grey arrow). This store supplies visitors with a variety of advertisement on tourist spots and activities. The handout information is free but not the services related to travel guide or ticket-booking for shows. Backpackers can easily find entertainment pieces and advertisements at any booth. However, little of them have any content about sustainable or eco-tourism. Environment and culture do show up in the section as an advertising method to lure customers but do not seek to serve any other purpose. In this zone, the observed people had less interaction with the representatives as compared to other kiosks. They frequently browsed and took free advertising papers but rarely talked to the employees standing at the booth.

The number of people who came to the tour guide and maps store directly after the exit door (red arrow) constitute the second circulation. The number of people involved is fairly less than the number in the first circulation. Some of these people took the exit to the city transportation (red arrow) while others moved to the third circulation (blue arrows).

The third circulation consisted of a small number of people constantly shuffling between three zones: travel information, travel agency and transportation (blue arrows). The flow of backpackers among the three zones were evenly distributed and did not possess any direction tendency.

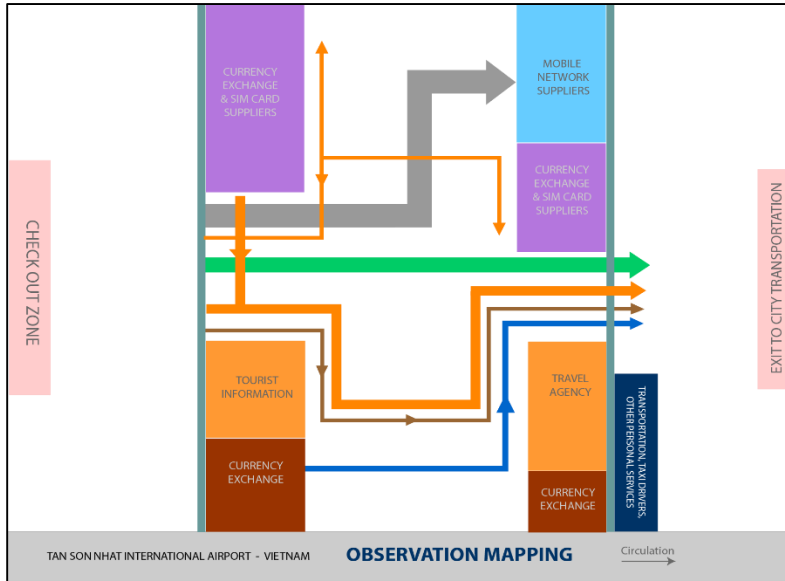


Figure 4.17 Observation Field at Tan Son Nhat International Airport

Grey, Orange, Brown Arrows: First Circulation
 Green Arrow: Second Circulation
 Blue Arrow: Third Circulation

size of the hall caused inconvenience to visitors in moving around and comparing services. Therefore, the movement or circulation of observed people is simple and can be categorized into two types: mobile/internet network demand and travel agency demand. As shown in the map, in the first circulation (grey arrow) more than half of the backpackers walked directly to the sim card merchandise zone without spending time hesitating at any of the other zones. Among them, more than half walked out of the airport right after doing business at the store, while the rest of them wandered around in the other stores (orange and brown arrows). A note related to the circumstance at the Tan Son Nhat airport is that the sim card booths are located at the corner of the hall. Visitors have to pass by the travel agency and information suppliers before reaching the sim card stores. Nevertheless, the first population stop is still the sim card zone, after which they may visit the currency exchange (the ones that combine with 3G SIM and travel services supply), and then the

At Tan Son Nhat international airport in Ho Chi Minh City, Vietnam, the space is much smaller than the Bangkok airport. Due to restraint in space, quantity as well as quality of travel service providers are impacted. The visitor circulation is illustrated in Figure 4.17. The small

tourist information booths. In the second circulation (green arrow), the observed subjects walked straight out of the airport without interacting with any of the airport merchandisers. In the third circulation (blue arrow), travelers visited only the currency exchange services. During the observation session, some participants were seen struggling to communicate with the store employees due to language barrier. However, it did not seem to affect the business' result since purchase activities kept going on.

The interaction between international backpackers and airport local merchandisers was summarized in table 4.4. The strength of interaction is measured by the amount of backpackers that had direct contact with local store's representatives. More specific, mobile network merchandisers at the two research field were observed to welcome the most population of travelers, thus takes the first rank. Followed by travel agency as second rank, and currency exchange services as third rank. Transportation suppliers received less interactions with travelers, consequently placed in the last rank.

	Interaction rank	Airport businesses
Backpackers	1 st	Mobile network
	2 nd	Travel agency
	3 rd	Currency exchange
	4 th	Transportation

The observation data from the two biggest airports at each country show some similarities and differences. Implications from those findings will be discussed in the next chapter.

4.3.0 Interview Results

Survey questions share the understanding and ranking of backpacker’s choice and awareness. Meanwhile, Interview questions meant to dive deeply into their motivations and emotions of backpacking activities. Their use of words, phrases, as well as sentences while answering questions would help researcher learn more about their insight feelings. The interview data are categorized into topics relating to the research question. There are answer of some questions similar to the open-ended questions in the survey were combined with the findings here to analyze.

4.3.1 Backpacking Experience

Motivation of an action could potentially explain the cognition and characteristic of the actor (Dweck & Leggett, 1988). This study, by asking participant’s motivation of being a backpacker, aimed to explore how they perceive the world, thus could propose a solution in design that might fit their attributes. There are 10 (n=10) backpackers from interview and 35 respondents (n=35) from Survey answered the motivation question. Their answers are categorized into four topics based on the similar ideas in feedbacks.

	Responses Counted	Phrases used
Exploration	18	“I would like to explore the world”, “learn new things”, “explore new cultures”, “spend as much time as I can”
Connection	12	“meet new people”, “create meaningful relationship”
Self-building	8	“Challenge myself”, “to find my inner peace”, “improve my knowledge”
Sharing	6	“Share the moments”, “Share with my friends”

Notations: The responses counted throughout the interview and survey are the number of times the keyword/phrase appear.

From table 4.5, exploration and connection stand up as the two main motivations for backpacking. The desire to discover new things, meet new people, learn new cultures has driven people to pick up their backpack and travel. There is an overlap between survey and interview results, which presents the similarity in backpackers' insight. Scanned throughout the answer, "new" is the revealing keyword that motivates the action of backpacking. It exposes the curiosity, eagerness to discover of participants, which would be a great source to propose a design solution that intrigue those emotions.

4.3.2 Backpackers' Trust on Internet Information Network

Overall, interviewed backpackers show more variety of their trust on internet rating of travel services. It is not about a definite Yes or No, but emerging some variables used to measure the reliance of those reviews. While mentioning internet ranking, those words possess the most appearing frequency: rating, review, comment, price, and compare.

	Count	Phrases used
Positive	6	"Yeah, I believe", "I definitely trust them", "Yes, It's 100%", "Yes, it is reliable"
Neutral	3	"I believe but it depends", "I do search online but I still ask some travel agency for more information"
Negative	1	"Neh...Just go and experience by myself"

Table 4.6 indicates an unbalance situation, in which most interviewees (n=9) emphasize the importance of internet information on making a decision in tourism services. Even in neutral responses, they still addressed part of their belief on internet information. There is only one exception who does not keep faith in the rating, yet still insisted on skimming through these information pieces, then explored by himself. The backpacker

community is previously defined as good self-planners (Adkins & Grant, 2007). The online searching behavior is a critical section of trip planning process, and a frequent activity that requires a series of repeating action: search – review – compare. Knowing about the factors that impact this stage will help to propose a solution engaging the idea of sustainability, which might eventually increase backpacker's awareness.

4.3.3 Technology Devices Experience

Interviewees' answers about technology devices shared some similarities in terms of inconveniences and using purposes. All ten interviewees brought a smartphone along during their trip. Four of them had professional cameras to capture images, and one of them carried an iPad. Unlike surveys, where participants answered only given multiple-choice questions, interview sessions gave participants the opportunity to give feedback related to concerns which might have been missed. For example, many participants mentioned a common new problem according to technology device experience, which is wifi internet access. As in Thailand and Vietnam, LTE internet access is not yet available by the time the research conducted, 3G SIM card is the method to connect to internet when wifi is not available. Therefore, the speed as well as the strength of connection is low according to the interview results. Seven out of ten backpackers (n=7) complained about the internet access ability of the device they were bringing along. Obviously, the fault is not on the devices, yet this fact opens an opportunity for a resolution that could enhance the network connection for backpackers on a trip.

Once participants were required to give opinion about an auto-charged device, 100% (10/10) of them shows approval with the idea since they think it would be a great

replacement for smartphone when it is out of battery. This is a positive sign for proposing a design solution that could augment the market supplies for the backpacker community.

4.3.4 Backpacker’s Concern of Sustainable Tourism

While survey findings gave readers a measure of the backpacker’s concern by ranking number, interviews additionally supplied emotional feedbacks from backpackers. The words responded from interviewees are categorized into the list in the table 4.7.

Feedback	Number of responses	Phrases used
Actively positive	2	“What is it? Can you tell me more?”
Positive	4	“It sounds interesting”, “Nice”, “What is it?”
Neutral	2	“hummm...”, “I don’t know”
Negative	2	“I do not care. I am too lazy”, “I do not have time for it”

The table shows that there are six out of ten (6/10) responses from actively positive to positive, while neutral attitude takes the leading percent with two reactions. The common reaction found in neutral responses are hesitating behavior and words like: “hummm...”, or silent moment. Rejections for negative reaction focuses mostly on lacking of time, and unawareness of the situation. Even though backpacker tourism is the traveler segment who spends the longest time on a trip comparing to other sectors (Scheyvens, 2003), the claim of not having time is not convincing.

An interesting point found in the interview is the disunity in answering questions relating to local community and sustainable tourism. The researcher noted that there are three out of ten (3/10) interviewees who showed no interest in participating activities that support local community at destinations, yet possessed positive to actively positive reaction

to sustainable tourism definition. In details, they reacted negatively once being asked if they would be willing to join in activities help promoting local community economic. Nevertheless, after hearing researcher mentioned sustainable tourism, their verbal and facial expressions exhibited quite encouraging feedback, such as smiling, nodding head, and using words: “That is interesting”, or “it sounds great.”

CHAPTER 5

CONCLUSION

5.0.0 Introduction

This chapter presents the implications of the findings analyzed in the previous chapter. The content of this section is structured based on the answers to research questions. From these, implications for design and direction of future development will be discussed.

5.1.0 RQ1 Findings Summary

The RQ1 aims to determine how much the local community satisfies the expectations and needs of the backpacker and how much is the gap between the expectations and the available services. Concluded from the outcomes of the research, the association between the backpacker and the local community suppliers will be discussed with special focus on three topics: category of needs on a trip, personal security, and backpacking experience.

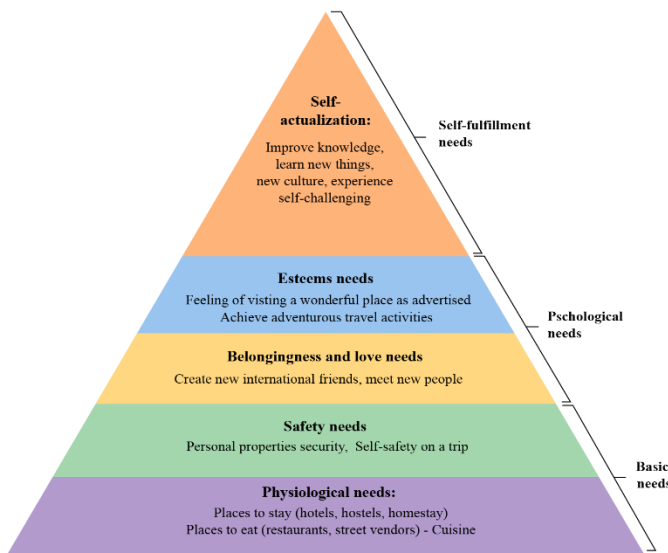


Figure 5.1 Maslow Pyramid of Backpacker's Need

From the survey findings, the researcher gathered data about the most popular needs of the backpacker and then categorized them based on the Maslow hierarchy of needs. As illustrated in

Figure 5.1, the backpacker's basic needs are a combination of safety and physiological requirements with

regards to stay-eat-go places. On the next level are the psychological needs based on the backpacker’s feeling when they interaction with local people and a new environment. On the topmost level are the self-fulfillment needs, which can be described as a feeling of self-actualization a backpacker gets when he or she achieves new experiences, such as an improvement in knowledge or upon conquering new milestones. The basic needs and the physiological needs are fundamental issues that can be easily supplied by local communities, yet the self-fulfillment needs have to be attained by the backpackers themselves. When the gap between needs and demands are reduced, backpackers would get psychological satisfaction and would thus be more willing to open up their budget. As a result of this, the local community would achieve economic development. To get closer to this step is the basic goal of this study.

RQ1. RELATIONSHIP BETWEEN BACKPACKER’S NEED AND LOCAL COMMUNITY

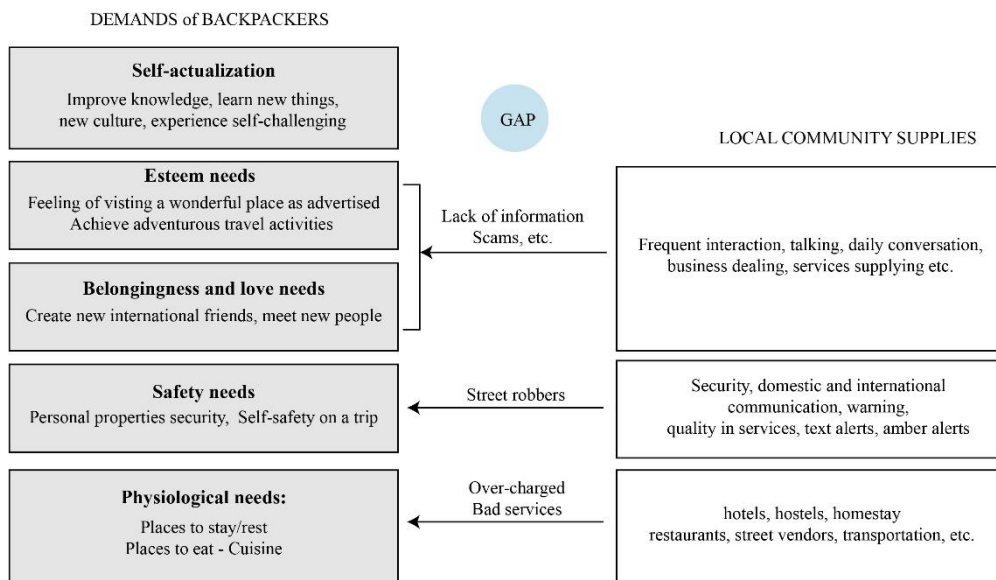


Figure 5.2 RQ1 Summary of Findings

The summary of the research findings is visualized in Figure 5.2. On the first level of need, the backpacker community is seeking a fundamental travel demand: places to stay – eat – go. On the next level, safety is a very essential criterion since most backpackers choose to travel alone (Section 4.1.3). The lack of interaction with friends and family in a foreign country increases the requirement for self-security. Besides language, the poor network connections by service providers in developing nations is also a barrier for self-protection due to the unstable connection. Therefore, a combination of safety and basic needs regarding places and food – which essentially make up the bulk of the travel experience - would be a great asset to encourage the participation of backpackers in interaction with the local community. From the findings (Table 4.2), the researcher learnt that the most worrisome problems of international backpackers while traveling in developing countries constitute two important issues relating to indigenous people: overcharging, and robbery (especially in South East Asia, with a bad reputation for relevant scams and street robberies). Currently, however, the only sources available to backpackers in their search for recommendations related to these problems are limited to several online forums and articles for travelers. However, these forums seldom provide any information related to security-related travel information for independent international travelers.

Lastly, based on the findings from test two (Section 4.1.6), the deeper the backpacker's experience is, the more is their concern for their travel impact on the local community. The depth of backpacking experience positively correlates with the time spent alongside the local community, the habit of frequently searching information and trip planning. This outcome indicates that a regular contact between travelers and local people subsequently leads to the rising of awareness and care for the community at destinations. Therefore, the

bright side of improving local tourism services to meet the backpackers' demands is that the interaction between travelers and native people will become stronger and more positive. Once the communication between those two stakeholders is improved, the second need - the creating of an amicable relationship - would be achieved.

The research question two consists of two phrases to explore, which are actually related to two coupled relationships: backpacker - internet information and information technology - local community. The attempt here is to assess how information technology can affect the connection between backpackers and the local business - which is the idea of RQ1. According to the research framework (Section 2.0.1), these two links support each other. These links will serve as the key to achieve sustainable tourism in developing countries.

5.2.1 The Influence of Internet Travel Information on The Backpacker Community

Both the survey and interview results reflect the high impact of internet information on backpackers, from choosing a destination to planning a trip. Regarding the influence of online rating for services, while the survey respondents showed average acceptance levels with internet rating, the interviewees have a significantly higher percent of agreement with internet ratings. This outcome shows that the range of impact strength of internet data on backpackers' decision varies from average to very high. Information from interviews was analyzed to learn more about the variables may affect a traveler's choice of an online service. The three factors found included: price, reviews/comments, and news.

As Scheysven (2002), Sørensen (2002), and Adkins & Grant (2003) have indicated, backpackers represent a special group of independent travelers who carry their backpacks and look for budget accommodation at destinations. Their findings support "price" as an important variable considered by the backpacker while choosing travel services. Concern

for the budget during a trip also shows up in the survey results, where over-charging is categorized to be the most important problem during a backpacking trip in South East Asia (Section 4.1.3). This is especially true for the cuisine street food services – an Asian cultural tradition – where prices are neither fixed nor available online for reference. Over-charging is a serious trouble that causes travelers much frustration.

Following “price”, the next variable that travelers consider are the review/comments left online by other travelers about various services (restaurants, hotels, etc.). Currently, most travel websites that support online booking, such as Agoda, Expedia, Tripadvisor and Yelp, possess this function and encourage visitors to leave opinions and feedback about their services. These reviews are considered as reference for prospective customers who are looking to purchase the services. From the survey, the researcher found out that backpackers who rely on ratings only, choose the services that have an average to high star-score. Upon investigating further in the interview research, participants exposed that the information they look for in the review/comments mostly constitute the service quality and negative feedbacks. To be more specific, all ten interviewees reported to having read the negative feedbacks first in order to judge if they could tolerate those disadvantages. Besides comments, they also give importance to a good location, especially for hotels and homestays services.

The impact of news and social media not only influences the backpacker’s choice of a service but also the choice of a travel destination. An observation that stands out in the survey is that the majority of the participants chose South East Asia as their desired travel destination because of the positive news about the places on the internet and social network (Section 4.1.3). In short, the backpacker community in this study share the same

characteristics about their dependence on internet travel information as those of previous researches in this topic. They rely largely on this free, giant source of data in almost every step in the travel plan. This outcome accentuates the important role of an information network among backpackers, one which is easily accessible everywhere and at any time. The constant interaction between backpackers and the internet is what possibly leads to the available information on the internet making an impact on the backpacker's preferences while planning travel activities. The relationship is also mentioned in the Hypothesis 2 testing (Section 4.1.6), in which participants use the Yelp webpage, which partly shows that when travelers possess a higher awareness of their travel activities, it has a positive effect on the local community. Further implications of this outcome on design solution will be discussed in section 5.3.0.

5.2.2 Local Business Specialized in Travel

A finding about the local business activities at the observed airports is that there are no special offers particularly for the backpacker tourism segment. Yet the interaction between backpackers and local community is generally observed to be strong, especially in the mobile network business. Scheysven (2002) described backpackers as travelers who seek for "local style", which illustrates why intimate connection with local people is necessary for them to experience local living style. The demand for indigenous services thus increases accordingly. The local community, by taking advantage of this primary need of backpackers, could potentially push up direct revenue earning from them. This study takes an example from airport business, where enterprises successfully identify and supply for the travelers' need of travel services information and internet connection technology.

The research field includes two locations: Vietnam and Thailand. Findings show that while in Thailand the travel services at the airport are more organized and well-structured with diverse choices for different customers, Vietnam pays less attention to travelers as a business target. The efficient marketing strategies for tourism in Thailand is best experienced through the crowded and busy trading activities at the main international airport. The availability of a large variety of options is displayed in order to encourage visitors to engage in products/services purchase. Whereas, in Vietnam the tourism advertising tactics at the airport is moderately weak in comparison to the circumstances studied in Thailand. The number of travel agencies joining the airport merchandisers is small in Vietnam. Majority of the airport services focus mainly on currency exchange and mobile network sim card. Little information about spots and activities for independent travelers is offered. Therefore, the interaction between backpackers and airport store representatives is observed to not be very strong. These results imply that an efficiently organized service, which could supply different choices to visitors would result in a successful business.

In the secondary analysis, the mobile network enterprises at the airport are chosen to look into. Apparently the busy activities at mobile stores illustrate well the need for connecting people, even among travelers. From the survey and observation findings, since most participants claimed that they use technology devices along the trip for contacting their family and friends across nations, the business at the mobile network supplier stores at the two airports is reported to welcome most number of backpackers. When the network suppliers sense the opportunity to fulfill that need and provide the products that hit that exact target, they undoubtedly get the customers. The more investment they put into supporting the customer's demand, the more benefit they gain. The inference here emphasizes on a bright opportunity for a product that focuses on network connection demand of international backpackers.

**RQ2. RELATION AMONG
BACKPACKER - INTERNET INFORMATION TECHNOLOGY - LOCAL ENTERPRISE**

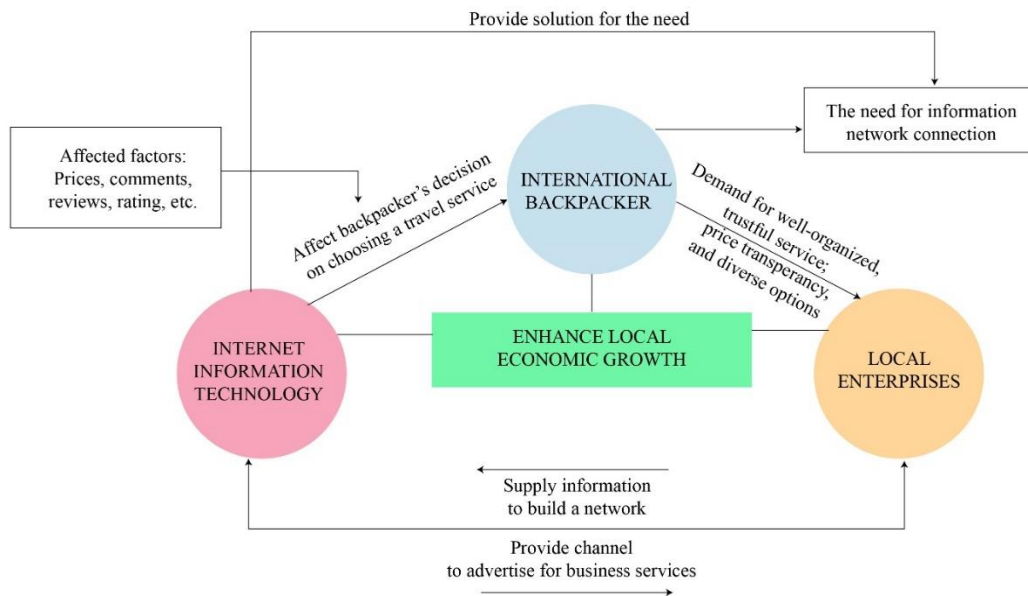


Figure 5.3 RQ2 Findings Summary

As seen in Figure 5.3, the international backpacker is observed to demand well organized and trustful services from the local enterprises. This need could be supplied by internet technology through an information network. Backpackers access those information sources, consider several factors such as prices, comments, reviews, and rating, and only then decide whether or not they should choose a particular local service. Their decisions directly impact local enterprises development, thus subsequently impact local economic growth. Besides, the relationship between internet technology and the local businesses is supportive. While internet offers a channel for local people to internationally advertise their service, internet technology benefits from the information supplied by the local enterprises.

5.3.0 RQ3 Findings Summary

Technology devices, together with backpackers and local enterprises, build the research framework of this design study. After investigating the relationship between the two main stakeholders of sustainable tourism, the role of technology in the context of a backpacking trip seems vital to explore. Drawn upon by the findings from survey and interview methods, the connection between technology devices and users can be classified into three topics: using purpose, devices inconveniences, and desired functions.

Technology equipment, such as smartphones, tablets, and wearable tech are indicated as companions of the backpackers. This outcome is also found to be true for the participant group in this research study. By understanding the useful purpose fulfilled by the devices, design researchers can gain an insight into the backpacker's demand for technology on a trip. This knowledge will be a useful foundation for future design implications that fit within the industrial design discipline. However, there is a minor difference between the survey and observation results. While investigating devices' using purposes, most travelers

picked the option “Contact family and friends” in the survey method. Whereas, most interviewees indicated that the most important purpose of using these devices was related to wayfinding, such as maps and GPS. The general final outcome in terms of the top priority purposes, however, remains the same, with contacting family and friends, finding ways and searching for travel information being the top three contenders. Recently, the demand for the fulfilment of these basic purposes have become so strong that inconveniences and desired functions also relate to these purposes.

Independent travelers like backpackers possess high mobility. From the survey, majority of the participants insisted on spending about one to two weeks on a backpacking trip. Although this is not long-term as compared to extreme backpackers who frequently spend month(s) on a trip, the duration is still longer than that of other mass tourism. Backpacking therefore requires careful planning and preparation. In the context of foreign countries, contact with family and collecting information is very essential. From the RQ2, internet information is revealed as the main source of information for trip planning and travel services searching. During the trip, nothing but technology devices are the tools available to access those online resources. Due to the long duration of device use, the battery life of a device becomes a common concern shared by most backpackers. In addition, from observation results, the network connectivity is another priority criterion for the device purchase list once a backpacker arrives at a destination. During international trips, internet access leads as the topmost required function of a technology device because it is necessary for contact across different countries, for GPS and for online data searching (Section 5.3.0). Nevertheless, the Literature Review section has indicated that the internet network in developing nations is quite poor, where technology is under-developed (Section

2.3.1). As a consequence, constraint in internet access is a limitation of technology devices during an international trip. The above mentioned inconveniences are the top picks from survey and frequently mentioned by the interviewees, which supports the second relationship between backpackers and technology devices.

With the aim to improve technology devices experience for the backpacker, regardless the type of the device, participants were asked to speak up their mind about a wishful function of a backpacking device. Analyzed from interview results, the most common roles expected of tech devices are those that boost ways of finding directions and, of course, having a better internet access - that was mentioned by seven out of ten interviewees. In addition, there are several new and interesting suggestions from backpackers regarding device function, including compass, trip plan note and local price tracking. Such functions are meant to support adventurous and culture activities such as hiking, jungle exploration and cuisine discovery, which are, to some extent, isolated from the findings about devices' using purposes of backpackers. This gap determines an unmet need for backpacking support devices for this traveler segment. Here is where the design researcher can jump in and use design thinking to utilize the findings and come up with a tangible design solution.

5.4.0 The Goal of Design Application on Social Science

The ultimate goal of this study is to achieve sustainable tourism mainly through enhancing economic development via backpacker tourism. Over all, the key point is to maximize revenue earned from tourism services for the local community in developing nations. How the findings from the three research questions can contribute to this final purpose will be answered in this section.

From literature review, linkages and leakages (Section 2.1.3) are recognized as two themes related to the tourism economic sector. While leakage restrains financial development among the local community, linkage is considered as a solution to that problem. To be more descriptive, independent travelers like backpackers are interested in local experience. Their demand for indigenous lifestyles ranges from accommodations to tourism supplies (clothes, souvenirs, etc.), and is high. Conclusion from a case study in hostels for backpackers in South Africa (Visser, 2004) says that the requirement for local goods and services by this tourism sector will encourage linkages at destinations. The linkage effect will occur in tourism services, where opportunities for local employment by utilizing local resources will help cut down on outside leakages. For instance, when a backpacker visits a fishing village in Vietnam (Phu Quoc island, for example), he or she would request for budget accommodation, such as hostels, food at night market, corals viewing and diving, which are all easily provided by the local community. Indigenous people may not be the only ones to support those services but they obviously supply them most economically. Excluding the quality element, any option that saves money would be the priority choice of a backpacker. Thanks to that, local people have more opportunity to participate in directly providing travel services and thus earn direct benefit from customers. Since the demand to have a local experience from the backpacker segment is strong, travel services have to improve in ways that support this need. Consequently, leakages - in terms of labor and resources – will be reduced thanks to this tourism subsector (Macbeth & Westerhausen, 2003). In this study, by understanding the demand of international backpackers in developing countries, especially related to technology development, the design researcher hopes to come up with a solution utilizing technology device that could

enhance the interaction of international backpackers with the local community. The goal is to help increase linkages, as well as reduce leakages from the local economy.

The above arguments indicate the possibility of empowerment of the local economy by coupling it with the development of services specialized for backpacker tourism. Therefore, a positive economic impact of the international backpacker will be valued as highly as their cultural influence on the destinations. Thus, one can hope to promote sustainable tourism in developing countries.

5.5.0 Design Implications

The discussion for each research question positively supports the theoretical framework proposed in the initial literature review. Findings indicated a tight relationship between international backpackers and the economic development of local communities. Furthermore, the current role and possible future contribution of technology devices and internet information show that there is scope for tightening that relationship. Nevertheless, this study is approached by a researcher in design discipline with a hope to apply design thinking on a social science research topic. Therefore, it is necessary to fit the research outcomes into industrial design field, which is the content of this section. The design researcher came up with a hypothetical solution, named Easy Travel. The design implications mentioned in following sections are elements of Easy Travel.

5.5.1 Improvement of Backpacker – Local Community Relationship

Concluded from the research, there are several problems occurring in the conflict between backpackers and local community such as overcharges, language barrier, and bad services. While mass tourism travelers have advantages from having a guide during a trip, to and a fix price range for accommodations, dealing with uncertain fees and charges from

local services is none of their concern. As stated previously in Literature review (Section 2.2.0), economics is the concentrations shared by those two stake holders in tourism. Therefore, in order to improve the relationship between them, the original solution is to pay attention to their similarity in concern: increase revenue earning for local people, and decrease extra unnamed fees for international backpackers. Obviously balancing the two opposite phases has to face difficulties, yet at some points, negotiating individual advantage is a way to get out of the problems.

From backpacker sector's view, their demand for a good service is high, such as transparent price range, and friendly customer services. Safety, in this case, is not only physical safety, but also psychological and economical security. Eventually, it might lift up their trust in local people, and encourage them to participate in more local travel services business. A proposed solution is to organize a program (Easy Travel) that encourages small, independent local enterprises to join the network of protecting the right of travelers. All members who wish to participate in the program should come up with a commitment to treat international backpackers as equally as local travelers. Any reported action against the agreement will result in a punishment level. In return, what the local community could get from the program is the chance to widely advertise their business in order to increase the customer market growth.

The above direction is aimed to solve the two top problems directly related to local community: bad local services and over-charged, and simultaneously engaging safety needs for visitors. International backpackers will be provided with two reliable judging sources, which are the program organization and reviews from experienced customers of the services. While the program starter is in charge of checking small local services quality

in order to give them permission to join in the network, rating and reviews from previous visitors will help justify the accurateness of that information, and also give directions to improve the services.

On the other hand, be listed as a research limitation, the approach from local community's perspective is missing, which is need further research or testing in their reaction to the planned program. Their demand and benefit must be examined to guarantee both the development of the backpacker community and local people.

5.5.2 Internet Travel Information Network

Zelenka (2009) mentioned E-business as an efficient way to promote tourism services by providing information and tangible products for travelers. A case study from Sri Lanka also presents a successful method to push up sustainable tourism through travel website – an internet technology method. The above evidences support the efficiency of internet information on tourism development, which is applied to this study as a design solution.

What the backpackers are looking for in this mobility experience, or the motivation to travel, was studied from the backpacker's perception. From the research, some keywords often used are: exploration, adventurous, learning, and new. Those are also what the parts of the design essence for this market segment need to be. A suggestion to utilize the idea of information network in association with that motivation is to build a self-explore routine specialized for independent travelers, such as a treasure hunting route (See Figure 5.4).

From the participating individual businesses in the sustainable program, organizers shall randomize them and create a group of five to ten spots to build a discovery map. At each travel region of a country, backpackers can purchase that map of must-visit locations to explore culture, cuisine or adventurous activities. Collection of each map will depend on the backpacker's favorite discovery theme, which may range from nature, culture, adventure, to a complete mix. The idea of a treasure map tends to intrigue the curiosity and exploration spirit that match with backpacking motivation.

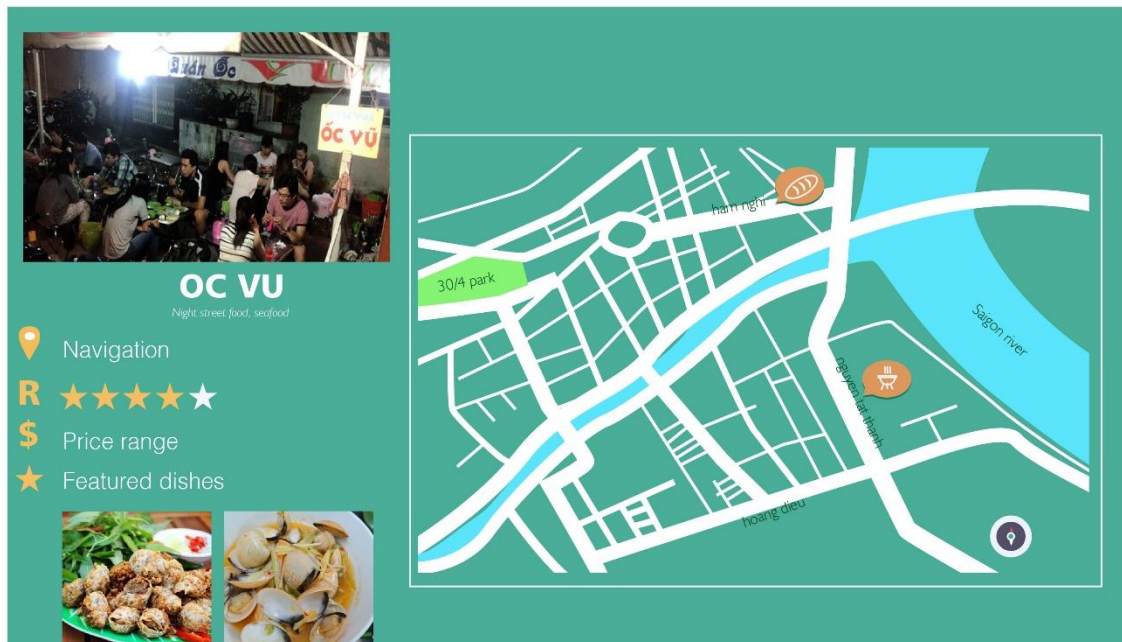


Figure 5.4 Easy Travel Treasure Hunting Map Sample

As seen in Figure 5.4, the map contains not only the services description but also information on navigation from one place to another. In the developing nations' context, poor development of transportation and complicated traffic planning may cause troubles in finding routes. Therefore, a navigation map showing most precise road directions will allow users to save time by not getting lost.

Findings from survey and interview indicate that internet information draws high attention from backpackers. Test 1 (Section 4.1.7) also indicated that internet content could influence the backpacker's concern about his or her travel impact on the destination. Therefore, the combination of travel services with sustainable tourism information would enlarge the understanding of sustainability topic in travel activities. The encouragement for sustainable tourism could be disguised in the form of advertisements, a reward or a business strategy. For instance, when a backpacker executes a sustainable travel activity, he/she could get a reward point – which may later be exchanged for a local souvenir, or as a discount coupon at a business store.

5.5.3 Enhancement in Network Connection

The lack of internet access, found to be a major problem from interview research, is closely associated with the devices. It is especially vital for travelers to connect with others while going on an adventurous trip, such as jungle exploration or mountain hiking. Any solution to this problem is constrained by the mobile network providers in developing countries. However, this is a major concern among travelers because it could result in a threat to personal safety in dangerous situations. Therefore, a design solution for this problem could be to create a connection plan that could provide users a sharing connection. The expectation of this function is to allow product providers (such as a hypothetical service called Easy Travel) to track the user's position, combining with an emergency contact function for backpackers to communicate with the closest business providers on the trip. This link between backpackers, Easy Travel and engaged local services would aim

to guarantee a stable, available connection to fulfil the backpackers' need. This would improve both the backpacking experience as well as the personal safety of users.

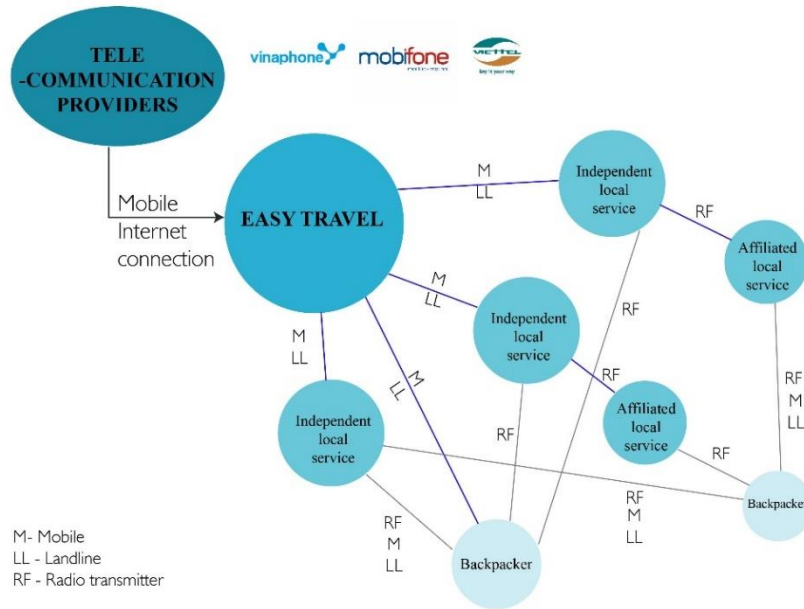


Figure 5.5 A Proposed Solution for Network Connection Enhancement

Figure 5.4 shows a communication network provided by Easy Travel. Easy Travel would connect with all the telecommunication providers in a destination country, and offer three communication methods for users: mobile, landline, and the radio frequency module (RF) signal. All of the independent local services and their affiliated services in the Easy Travel network could contact each other through landline and mobile network. When a backpacker purchases a product from Easy Travel, he or she would be provided with the ability to connect with all members in the network regardless of their locations and time. The expansion of the communication infrastructure that Easy Travel could offer users largely counts on the cooperation from all the telecom providers and the RF functions in the technology devices. In the current situation, most backpackers rely on their smartphones to connect with other people (Section 4.3.3). Whereas, Easy Travel aims to

bring diverse connecting options for users. For instance, if a backpacker were on a hiking trip in a jungle – where mobile signal is not stable, his or her smartphone would possibly become useless. Nonetheless, the device provided by Easy Travel could give them options to connect with other people in case of danger. With the engagement of RF signal in the device, backpackers could easily contact any nearby independent local service. The expectation of this frequent connection is to enhance the backpacker’s safety on a trip.

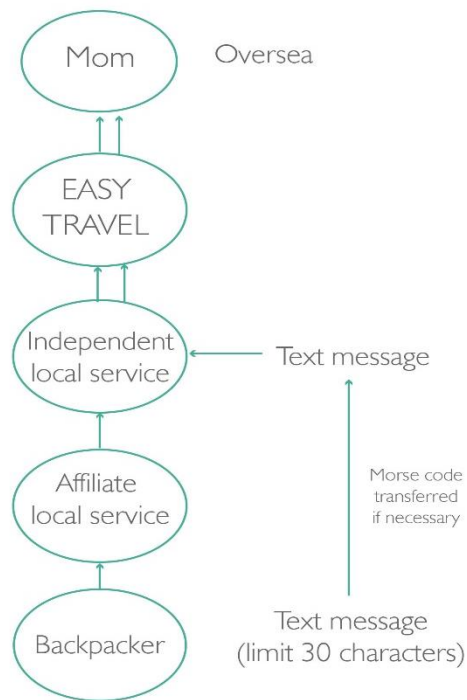


Figure 5.6 International Connection Using RF

Furthermore, the RF function can offer another precious advantage to the international backpacker. Findings from Section 4.3.3 shows that international backpackers have a frequent demand to contact their families and friends in their home countries. However, this need could hardly be fulfilled during a trip to a remote area, in jungles or on mountains, due to the constraint in the communication network in developing

countries (Section 2.3.1). Therefore, the RF signal could be a potential solution for this problem. For example, a backpacker who is on an adventurous trip hiking across a jungle for three days wants to send a message to his Mom overseas but the mobile network does not work. He could use Easy Travel device to send a message to any nearby local services in the network. The text message could be limited to, say, 30 characters in order to ensure accuracy and speed in transferring the message. In the case of poor network connections,

communication and text messages could be sent via RF by using a device function that could interconvert the message to and from the Morse code. Once the message arrives at the local business, it could be easily sent to the backpacker's Mom in a foreign country through the available mobile network. This communication benefit is expected to be the flagship of Easy Travel solution.

Besides, not only could Easy Travel provide communication benefit to international backpackers, but it could also bring revenue benefit to all stakeholders in the network (See Figure 5.7).

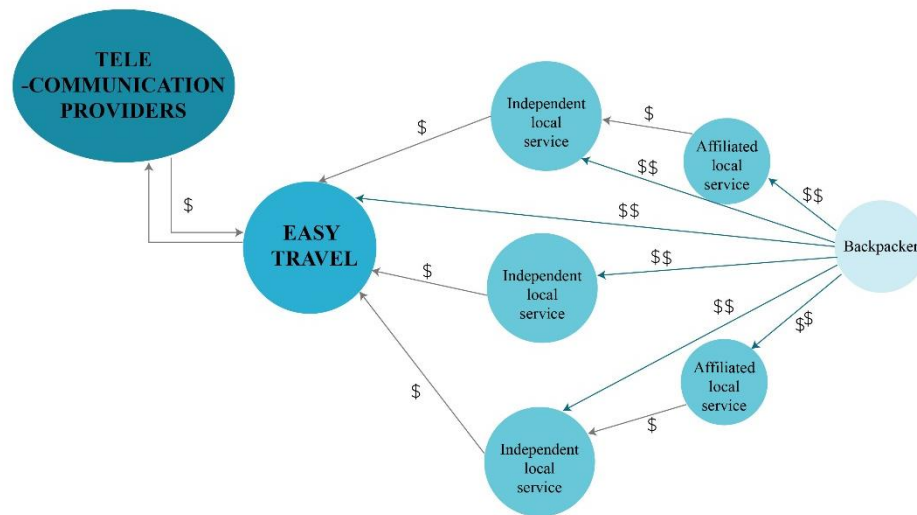


Figure 5.6 Revenue Benefit of Easy Travel

The flow of revenue is illustrated in Figure 5.6. Once backpackers purchase an Easy Travel product, they would use the provided services in the network. Therefore, all of the local members who join the information network of Easy Travel could earn financial benefit from the backpackers. Easy Travel gains revenue from both the fees an independent local service has to pay to participate in the network and the backpackers themselves when

they purchase a product. This revenue stream runs throughout each member of the network, thus eventually promotes economic development of the local people.

5.5.4 Technology Devices on A Trip

Findings from survey and interview provide a useful list of important technology device factors in a backpacking trip including purpose, disadvantages and desired functions. Results show that smartphones always lead the mobility tech devices for traveling, thus there are two ways for a designer to interrupt the backpacking support devices market: improve the disadvantages of current smartphone devices or create a brand new product specialized for independent travelers. Power for the devices is also an issue that requires more investigation with regard to local power sources. The South East Asia countries in this study, such as Thailand and Vietnam, are popular for the use of solar power and wind turbine power. What is important is how much power the energy sources supply in their relation to environmental costs. Göessling (2000) indicates that the overuse of energy at destinations is counted as an unsustainable activity that might harm the destinations. Besides the use of natural power resources, technology that enables kinetic energy transfer from backpacker's walking motion could partially erase the worry of battery charging and natural exploitation. Sørensen (2002) paints a picture of backpackers as a high mobility community that prefers public transportation and self-services. Therefore, on the bright side of this finding is a technological solution for sustainable energy from kinetic motion - in which physical movements can be transformed into a power source.

The user's insight is important in a design process since it is the user satisfaction that drives the indicated success or failure of a design. Data collected from survey describes an

overview of the user's perception in technology devices and thus helps design researchers to come up with a general tangible product design idea. For example, the backpacking supported product could be an armband that could transform backpacker's walking movement into power. The armband could work like an interactive tangible map with users, that has all the necessary information needed for a discovery "treasure hunting" trip including: direction navigation, business contact information, and services description. An immediate drawback of this idea is the inability to combine it with some form of customer review – a popular feature in most internet information networks recently. Nevertheless, the combination of this design with an Easy Travel website for customers to leave comments and reviews, and check the reviews left by other customers before making decisions to purchase the product could easily solve this problem. Features within this product could also efficiently tackle the problems of possible robbery and power exploitation, and inspire the adventurous spirit of the backpackers via the map's design language.

5.6.0 Future Research

This study, with the goal to enhance sustainable tourism by pushing economic development in developing countries, focuses merely on fulfilling the backpackers' needs with the hope that they could lengthen their stays and be more economically open while staying with the local community. However, the lack of research related to the local people, who play as much a significant role in this model, is a potential disadvantage. For future investigation, a research from the local perspective would be a great support to examine the current results and potentially improve the findings from this study. This requires a deeper research in tourism services specialized for backpackers, the current state of

development of these services and their concerns in matching their products with the backpacker's needs.

In addition, the economic leakage mentioned earlier can be decreased through design solutions by efficient utilization of materials and human labor available in developing countries. One could hope that the application of indigenous resources would pull up employment opportunities for local people, and simultaneously cut down spending on outsourcing, importing and exporting. The boundaries of this study, however, is limited to the South East Asian circumstance, which is far different from Africa, Mexico, or Northern America. As such, an improvement to current research would be a design research that delves into the details of a model that could possibly be applied to different contexts for developing nations that attract most international backpackers.

In terms of technology device, further investigations in the RF technology should be made to examine the possibility of real solutions. The important things to consider here are the cost of infrastructure needed to build the communication network, the environmental influence of the design solution, and the efficiency of RF signal in transferring messages.

5.6.1 Research Challenges

A major challenge in conducting research is getting to know the backpacker's routine in order to approach them successfully. Besides, the time limit in collecting observation data also led to some of the backpackers' insights remaining partially undiscovered. For example, the researcher was unable to record the amount of time an observed subject spent on a merchandise kiosk, and on communicating with each local enterprise. The missing data discreetly lowers the strength of this discussion.

Moreover, some of the survey questions were found ambiguous by the backpackers due to the lack of information provided. The questions asked about the backpacking experience of participants did not clearly emphasize on their current trip in the developing countries. Thus, their answers could be drawn from previous experiences from trips to both developed and developing countries. A rectification of these flaws by making the questions clearer would certainly enhance the accuracy of the findings in the future.

Lastly, also due to limited time, the direct relationship between internet information technology and local businesses were not completely investigated. During the research study, the backpacker community was found to frequently play the role of a bridge that connected technology and merchandisers. For instance, the researcher mentions how technology impacted the local businesses through the decisions of backpackers but hardly describes the direct influence of internet information on local businesses.

5.6.2 Opportunities for Improvement

Based on the findings and discussion for each research question, and going along with design implications to get closer to the research goal, the opportunities for design improvement is easily recognized. The wearable gadgets design industry is gradually improving thanks to the growth of technology. One can also look forward to efficient technological solutions to problems regarding power resources and network connection in developing countries. With rapid changes in technology innovation, a reliable network (always available to connect) for users to contact services suppliers would become possible. However, some desired functions concluded from the interview findings have not been applied into the proposed design. That said, the design researcher, hand in hand with

engineering research, could come up with better solutions to engage technology with sustainability for tourism development in developing nations.

While the original research framework tries to link the three components, namely economic development, international backpackers and technology design, in order to achieve the sustainable tourism, the environmental component could also be brought to the table to explore the possibility of connecting it with the proposed network. As mentioned above, further studies that carefully explore the local community's opinion about participating in this plan will help effectively blend the demands of both the backpacker and the local people. In an ideal case, a sustainable tourism will be approached, that completely covers all the three pillars, coupled to the involvement of all potential stakeholders.

REFERENCES

- Adkins, B., & Grant, E. (2007). Backpackers as a community of strangers: The interaction order of an online backpacker notice board. *Qualitative Sociology Review*, 3(2).
- Anderson, W. (2013). Leakages in the tourism systems: case of Zanzibar. *Tourism review*, 68(1), 62-76.
- Brohman, J. (1996). New directions in tourism for third world development. *Annals of tourism research*, 23(1), 48-70.
- Brown, B., & Chalmers, M. (2003). Tourism and mobile technology. In *ECSCW 2003* (pp. 335-354). Springer Netherlands.
- Brundtland Commission, & Brundtland Commission. (1987). Our common future.
- Buhalis, D., & O'Connor, P. (2005). Information communication technology revolutionizing tourism. *Tourism Recreation Research*, 30(3), 7-16.
- Choy, D. J. (1998). Changing trends in Asia-Pacific tourism. *Tourism Management*, 19(4), 381-382.
- Corigliano, M. A., & Baggio, R. (2004, November). Tourism, technology, information and the relationship with customers. In *International Conference on Leisure Futures, Bolzano* (Vol. 10).
- Decrop, A. (1999). Triangulation in qualitative tourism research. *Tourism Management*, 20(1), 157-161.
- Donner, J., & Escobari, M. X. (2010). A review of evidence on mobile use by micro and small enterprises in developing countries. *Journal of International Development*, 22(5), 641-658.
- Dudley, E. (1993). *The critical villager: Beyond community participation*. Psychology Press.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95(2), 256
- Glaser, B. G., & Strauss, A. L. (2009). *The discovery of grounded theory: Strategies for qualitative research*. Transaction Publishers.
- Glaser, B. G., Strauss, A. L., & Strutzel, E. (1968). The Discovery of Grounded Theory; Strategies for Qualitative Research. *Nursing Research*, 17(4), 364.
- Gössling, S. (2000). Sustainable tourism development in developing countries: Some aspects of energy use. *Journal of Sustainable Tourism*, 8(5), 410-425.

- Hampton, M. P. (1998). Backpacker tourism and economic development. *Annals of Tourism Research*, 25(3), 639-660.
- Hanington, B., & Martin, B. (2012). *Universal methods of design: 100 ways to research complex problems, develop innovative ideas, and design effective solutions*. Rockport Publishers.
- Hartenstein, W., & Iblher, H. R. (1966). Visitors' Records: a Method for Analyzing the Flow of People in the CBD. *University of Amsterdam, Sociographical Department, Urban Core and Inner City, Proceedings of the International Study Week, Amsterdam, 11*, 17.
- Hill, M. R. (1984). Stalking the Urban Pedestrian: "A Comparison of Questionnaire and Tracking Methodologies for Behavioral Mapping in Large-Scale Environments". *Environment and Behavior*, 16(5), 539.
- Hunter, C. (1997). Sustainable tourism as an adaptive paradigm. *Annals of Tourism Research*, 24(4), 850-867.
- Kaul, S., Ali, F., Janakiram, S., & Wattenstrom, B. (2008). *Business models for sustainable telecoms growth in developing economies*. John Wiley & Sons.
- Lacher, R. G., & Nepal, S. K. (2010). From leakages to linkages: Local-level strategies for capturing tourism revenue in Northern Thailand. *Tourism Geographies*, 12(1), 77-99.
- Lee J. and Sue S. (2001). Clinical Psychology and Culture, *The Handbook of Culture and Psychology*, edited by David Matsumoto. Oxford University Press, pg. 294
- J. O. Mbamalu (2014, February 25). Imposing Universal Service Obligation on A Telecom Operator in A Developing Country: Challenges. *Mondaq Business Briefing*. Retrieved 2016, from http://www.highbeam.com/doc/1G1-359737096.html?refid=easy_hf
- Maoz, D. (2007). Backpackers' motivations the role of culture and nationality. *Annals of Tourism Research*, 34(1), 122-140.
- Marchand, B. (1974). Pedestrian traffic planning and the perception of the urban environment: a French example. *Environment and Planning A*, 6(5), 491-507.
- Mario, T. (2012). New mobile technology promotes Calgary tourism. *Calgary Herald*, D3. Retrieved May 28, 2016.
- Maslow, A. (1987). Maslow's hierarchy of needs. *Salenger Incorporated*.
- Mason, P. (2010). *Tourism impacts, planning and management*. Routledge.

- Meyer, D. (2006). Caribbean tourism, local sourcing and enterprise development: Review of the literature.
- Mintel., 2009, Young Travel Accommodation -International- June 2009., Retrieved June 5th, 2016.
- Mitchell, J., & Page, S. (2006). Linkages and leakages: local supply and imports. *Overseas Development Institute, UK*.
- Molz, J. G. (2012). *Travel connections: Tourism, technology, and togetherness in a mobile world*. Routledge.
- Mowforth, M., & Munt, I. (2015). *Tourism and sustainability: Development, globalisation and new tourism in the third world*. Routledge.
- Munoz, A. M., & Civille, G. V. (1992). The spectrum descriptive analysis method. *Manual on Descriptive Analysis Testing for Sensory Evaluation*, 22-34.
- Muzaini, H. (2006). Backpacking Southeast Asia: strategies of “looking local.” *Annals of Tourism Research*, 33(1), 144-161.
- O'Leary, Z. (2013). *The essential guide to doing your research project*. Sage.
- O'Regan, M. (2008). Hypermobility in backpacker lifestyles: The emergence of the internet café. *Tourism and Mobilities: Local-Global Connections*, 109-132.
- Paris, C. M. (2009). The virtualization of backpacker culture. *Information and Communication Technologies in Tourism 2009*, 25-35.
- Pearce, D. G. (1992). Alternative tourism: Concepts, classifications, and questions. *Tourism Alternatives: Potentials and Problems in The Development Of Tourism*, 15-30.
- Phillimore, J., & Goodson, L. (2004). *Qualitative research in tourism: Ontologies, epistemologies and methodologies* (Vol. 14). Psychology Press.
- Pigram, J. J., & Wahab, S. (Eds.). (2005). *Tourism, development and growth: the challenge of sustainability*. Routledge.
- Ritchie, B. W., Burns, P., & Palmer, C. (Eds.). (2005). *Tourism research methods: integrating theory with practice*. Cabi.
- Salazar, N. B. (2005). Tourism and glocalization “local” tour guiding. *Annals of Tourism Research*, 32(3), 628-646.
- Scheyvens, R. (2002). Backpacker tourism and third world development. *Annals of Tourism Research*, 29(1), 144-164.

- Seaton, A. V. (2002). Observing conducted tours: the ethnographic context in tourist research. *Journal of Vacation Marketing*, 8(4), 309-319.
- Smith, J. A. (Ed.). (2007). *Qualitative psychology: A practical guide to research methods*. Sage.
- Sørensen, A. (2003). Backpacker ethnography. *Annals of Tourism Research*, 30(4), 847-867.
- Strauss, A., & Corbin, J. (1994). Grounded theory methodology. *Handbook of Qualitative Research*, 17, 273-285.
- Telfer, D. J., & Sharpley, R. (2015). *Tourism and development in the developing world*. Routledge.
- Tosun, C. (2001). Challenges of sustainable tourism development in the developing world: the case of Turkey. *Tourism Management*, 22(3), 289-303.
- Travel and Tourism, Economic Impact 2014: Thailand* (2014 ed.). London: World Travel & Tourism Council. 2014. Retrieved 10 March 2015.
- Wall, G. (1997). Sustainable tourism—unsustainable development. *Tourism, Development and Growth: The Challenge of Sustainability*, 33-49.
- Uriely, N., Yonay, Y., & Simchai, D. (2002). Backpacking experiences: A type and form analysis. *Annals of Tourism Research*, 29(2), 520-538.
- Visser, G. (2004). The developmental impacts of backpacker tourism in South Africa. *GeoJournal*, 60(3), 283-299.
- Werthner, H., & Klein, S. (1999). *Information technology and tourism: a challenging relationship*. Springer-Verlag Wien.
- Westerhausen, K., & Macbeth, J. (2003). Backpackers and empowered local communities: natural allies in the struggle for sustainability and local control? *Tourism Geographies*, 5(1), 71-86.
- Yakushiji, H. (2010). Responsible Behaviour amongst Backpacker Tourists in Less Developed Countries: A case study of Thailand.
- Zelenka, J. (2009). Information and communication technologies in tourism-influence, dynamics, trends. *E+ M Ökonomie a Management*, (1), 123.

APPENDIX A
SURVEY INSTRUMENT

FOREIGN BACKPACKERS IN DEVELOPING COUNTRIES

SURVEY QUESTIONS

General Information

Gender: Male/ Female Age: _____

Nationality: _____

Annual income:

- No income
- Less than 20.000
- 20.000 – 50.000
- More than 50.000

Backpacking experience

1. How long have you been a backpacker?

- Less than 1 year
- 1 - 5 years
- More than 5 years

2. What is your motivation for backpacking?

3. Which countries have you been to?

- SE Asia - be specific _____
- Europe - be specific _____
- Africa - be specific _____

4. Do you often travel alone or with your friends/family?

- By myself
- With a small group of my friends
- With experienced backpackers (strangers)
- With my family member

Because

5. Did you contact any travel agency before/during your trip?

- Yes: Because

- No: Because

6. Why did you chose that destination?

- Follow other suggestion, from who? (Friends, forum, books, etc.) _____
- I have friend here
- I saw news about scenes/record in this country
- I have been here before, and now I come back
- I came here for other purpose
- Other: (Please specify)_____

7. How long did you stay there?

- Less than 1 week
- 2 weeks
- 2 – 3 weeks
- 1 month
- Several months

8. How much did you spend for your whole trip? (excluding round-trip flight ticket from your country to the destination)

- Less than \$1000
- \$1000 – \$3000
- More than \$3000

9. Can you name some website/forum/book that you used to search information?

- | | |
|---------------------------------------------|-----------------------------------------------------------|
| <input type="checkbox"/> Trip Advisor | <input type="checkbox"/> Expedia |
| <input type="checkbox"/> Couchsurfing | <input type="checkbox"/> Yelp |
| <input type="checkbox"/> Guide books | <input type="checkbox"/> Lonely planet |
| <input type="checkbox"/> Other. Be Specific | <input type="checkbox"/> Backpacker Magazine |
| _____ | <input type="checkbox"/> Advice from previous backpackers |
| — | |

10. What kinds of information did you search for before the trip?

- Restaurants, Hotels
- National cuisine
- Transportation
- Places to visit
- Recreational Activities
- All kind of fees
- Other: _____

11. What are your most favorite activities when backpacking?

- Adventure (Hiking, Kayaking, Sky diving, etc.)
- Nature (Fishing, Diving, Swimming, etc.)
- Culture (Sightseeing, Nature wonder exploring, Cuisine, etc.)
- Other: _____

12. Have you ever been robbed on a backpacking trip?

- Yes (Please specify what)_____
- No

13. Where do you keep your money or valuable items while backpacking?

- In the shirt/pants pocket
- In the backpack
- Divide into small parts, and put in different places
- Other: _____

14. Please rate the seriousness of problems according to your own experiences? (0: least - 5: most serious)

	0	1	2	3	4	5
Currency changing						
Visa application						
Weather, health issue						
Bad local service						
Overcharged by local business						
Robber						
Plan/schedule change						
Eat - stay - transportation						
Internet and signal						
Culture adaptation						

15. How does the rating on the internet affect your choice of places to stay, or eat, or go to?

- I do not care about the rating
- I chose places with average to high rating
- I asked local people for advice on where to go
- I value other ratings (Please specify): _____

16. Which technology devices do you often bring with you on a backpacking trip?

- Smartphone
- Tablets, iPad
- Wearable technology (iWatch, Google Glass, etc.)
- Radio, Ipod, Walkman, etc.
- Other: _____
- I do not bring any technology devices

17. What is the most important technology device and what do you use it for?

(select all that apply)

- Contact with friends and family
- Working
- Finding information related to the trip
- Book flight, restaurant, and transportation ticket
- Entertainment
- GPS
- Other: _____

18. What inconveniences have you experienced regarding your technology devices while backpacking?

- Inconvenient in charging battery
- No or weak signal
- Not waterproof
- Other _____
- No inconveniences experienced

19. How would you value a wearable device that can provide you travel communication/information on your backpacking trip? Please rate your value in the scale from 0 least – 10 most valued

0	1	2	3	4	5	6	7	8	9	10

20. Have you ever heard about the term “Sustainable tourism”? Can you please briefly describe how you understand “Sustainable tourism”?

- Yes . Sustainable Tourism is

- No. I do not know what it is.

21. Can you please rate your concern on how your travel activities impact the local economic development at visiting destination? Scale from 0 (Completely no concern) – 10 (Extremely concerned)

0	1	2	3	4	5	6	7	8	9	10

22. If you have a chance to backpack to developing countries again, would you like to explore by yourself or would you like to be guided by a local person there?

- Explore by myself
Because: _____
- Guided by local people

Because: _____
 Either of them
Because: _____

23. Please list your suggestions for enhancing the backpacking travel experience in developing countries?

Thank you for your participant! If you would like to share more your experience in backpacking in developing countries, please contact me for a follow-up interview at Truc.T.Ho@asu.edu

APPENDIX B

IRB EXEMPTION STATUS LETTER



EXEMPTION GRANTED

John Takamura
The Design School
480/965-7171
John.Takamura@asu.edu

Dear John Takamura:

On 10/27/2015 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	A TECHNOLOGY DEVICE IMPROVES BACKPACKERS' EXPERIENCE IN DEVELOPING COUNTRIES
Investigator:	John Takamura
IRB ID:	STUDY00003363
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none">• RECRUITMENT SCRIPT(email).pdf, Category: Recruitment Materials;• Recruitment Script (in person).pdf, Category: Recruitment Materials;• Interview questions.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);• OBSERVATION DATA.pdf, Category: Other (to reflect anything not captured above);• HRP-502c - CONSENT DOCUMENT -SHORT FORM.pdf, Category: Consent Form;• TRUC HO_IRB Form.docx, Category: IRB Protocol;• Survey Questions IRB.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 10/27/2015.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Truc Ho

APPENDIX C
SAMPLE OF INTERVIEW QUESTIONS

BACKPACKER SUPPORT IN DEVELOPING COUNTRIES

TRUC HO

Introduction

"Thank you for participating!

I am not evaluating you in any way, but we're learning from you about how you experience(d) your trip in developing countries (South East Asia). With this, we hope we can make our product better for people like you. There are no right or wrong answers to any of the questions I'm asking in this study. We will conduct this study mostly as a discussion - I will ask you questions to better understand your experience as a foreign backpacker to developing countries.

I will record our conversation. I won't use your name in connection with the recordings or the results. The Voice record will only be used internally.

How does all that sound to you? Do you have any questions at this point?

Interview Questions

General Questions

Q: Do you define yourself as a backpacker or a flashpacker? (*Explain flashpacker term*)

A: A backpacker? (laughing) Um... who stay in hostels, and um... someone with not much money, not many resources, and very free in time.

Q: Who are you traveling with?

A: Normally I travel alone. Most of the time 90% I travel by myself

Q: Why did you decide to backpack rather than booking a tour?

A: I prefer travel by myself in a hotel. I don't like a tour because they charge you....um... they take you to uncertain places that make you leave very quickly. I Don't want that. I want to spend as much of the time at anywhere I want

Q: Did you contact any travel agent before you plan your trip?

A: Never

Q: Do you have any experience with backpacking before? If yes, can you tell some details about your previous trips (joy, frustration, lesson, etc.)?

A: Okay. I travel to about 25 or 26 countries now. My first country I went to Singapore. I went there quite a few times... and then...to a few other places in Asia, because they are close and cheap. And then I went to Europe (French, England, Italy, Germany). But the 1st time I went on a tour do I found that it is not worth for travel. I thought I have to come back by myself to do more. I went to America, New York and some other places around

there, and back to Europe recently. I went to Russia, Norway, and experiences are all good, all memorable, even the back I am very interest. Very amazing, especially when you see things you have seen on TV, when you really stand in front of it. It is really amazing. I have seen that, I was there.

Trip-related Questions

Q: Can you name some website/forum/book you used to search the information?

A: Yes, For hotels, I always search for hotels on Agoda.com

Q: How much do you trust those sources of information?

A: It 100% I normally just look on agoda and tripadvisor. Up here, I search all the time. I search for 1, and then I searched the other one, and I compares, and then sometimes another website called hostels.com That is really cheap. They have other thing else, but normally I just stayed for hotels. They are the best

Q: How could you come up with your plan?

A: Normally just like a place I heard about, or I have seen pictures of it online, maybe from somebody who went there. I like wohh, its look good. I wanna go that... or maybe just like I have heard about that place, like um... like Saint Antorine, It's a place you hear from when you were young. You always know that it is a very beautiful stuff. You always want to go sometimes

Q: Did you write you plan down on notebook or how did you store it?

A: Normally I have a notebook, and I just basically plan how many days I have, how many places I can squeeze in in that time (laughing). If you do it yourself, you have to be very good at planning, where to go, how the flexible work... something like that. But I think it is fun doing the planning

Q: How does the rating on the internet affect your choice of places to stay - eat - go?

A: It depends. If it is a hotel room, if the rating is very poor, normally I won't go there. Um... but it depends if it is a... like I went to Barcelona, when the rating was quite poor for the hotel, but the hotel is really at the middle of the city, at the best location, but quite cheap... so it doesn't matter like even if it was a bad, it is really ... so you just have to...um... just deal with it.

Q: Do you much likely rely on that rating or just go to whatever places you see, or do you ask the local people to come up with a decision throughout the trip?

A: Um... of course, it because...um... if there is enough people there, it's better. It not always possible to know people in that area that u can trust, so...

Q: If you know a restaurant tell you a higher price than they usually charged local citizen, what will you do?

A: Cry... (smiling). If I am overcharged, normally I will complain, I will bring it to the attention and say "what is going here? Why do you charge me so much and normally they sorry, that is the money

Q: Have you ever met that situation before? If yes, can you tell some of your experience and thinking?

A: Once, actually in Australia. I went to a restaurant in ... I had dinner w my friend. And it was about 80USD. When I went to pay, they said it was 160 USD, and I “what the hell”, and they actually double charged to everything, so I...

Q: How do you think about overcharged?

A: Um... I don't really care; it was not really bad. I don't think they do on purpose so it is okay.

Q: Have you been robbed on the trip?

A: Thankfully not, but I am very careful with everything when I am travelling, I am very safe, my good, my money, I used the hotel safe

Q: Can you share some of your experiences and feeling on a special trip? (Bad and good impression, favorite activities, etc.). What make you feel most interesting and want to comeback?

A: Two places: japan – very polite people, very clean, and the food is the highest. It makes u to go back. And the other place is New York because it is just so many things to do even after 10-15days. It is not enough time. You want to see more more more.

Q: Do you care about the impact of your behavior on local community (culture, economic, environment)?

A: Yes, it is always important when you travel to somewhere else that you outside out of that, especially culture or environment because it will offense you. Just like in Japan, they don't talk on the phone, or have the phone on the train. So if u have your phone on, u talk on the phone, it is very rude and disrespectful.

Q: Do you wish to participate in any project that help enhance the positive of travel impact on local community?

A: Not really, I am too lazy to do that.

Q: Are you interested in a device/service/mobile app that can lead your backpacking behavior in a sustainable way?

A: I usually use some apps, like some maps app, trains, or something like that. I normally downloaded it before I go. It is just helpful... so yes, I am!

Technology Devices Questions

Q: How much do you rely on technology during the trip?

A: I used a little paper map. I kind of know what I am gonna to do, where I go before I go. I used to learn train map and public map. I don't use phone too much except looking up certain things like hotels, yeah... and... what else do I use?...um... it's a barrier , I guest

Q: What did you use technology device for during your trip?

A: I use the GPS, the maps so I can find my way. Anything else? And so I can take pictures.

Q: What is the inconvenience of technology devices you were bringing? (Battery, no or weak signal, waterproof, etc.)

A: The only inconvenience is the fact that you cannot access the wifi at any places. Every hotel has wifi but it is very very slow in every hotels. It drives you crazy.

Q: What do you think of a device that can be charged automatically when you are walking (kinetic)? In that case, what kinds of function that you wish the device would have? (GPS, Plan your trip, etc.)

A: That would be great! Mobile phone, because I never have a watch, and my watch was compass. When I travelling, I often use the compass, because when you travelling, and you know you want to go north, you can just look at your watch and go north. But previously I often use my phone for that,...but oftenly when it run out of battery so u cannot use it all of the day. It is not good, because it takes video, photos and everything. So if you can charge when you walk, it is good

Closing

Q: Do you know sustainable tourism?

A: Yes. Is it to do with the environment? Or...?

Researcher: “Sustainable tourism is the application of sustainable development on tourism industry. It requires an efficiency sustainability planning, which can maximize both economic and social revenue, also simultaneously minimize bad impact on environmental and cultural heritage. Sustainable tourism concerns the fairness in influence on both human and natural resources at tourism destinations”

Q: How do you think about it?

A: I don't really know much about this... so... I don't think about it too much

Q: Can you rate your care about this issue from 1 to 10?

A: Yeah I think it is very important, so I guess like out of 10, it maybe 9 out of 10 because it is very important, its... when I visited places, especially like Asian places, you have to be careful when you walk, or when you touch, because so many people go there, people want to touch everything. If everybody does it, then it will be destroyed soon, so they have to be careful, huh?

Thank you for your participation! Hope you enjoy your trip!

**Flashpackers: Share the same attribute with backpackers, but they are willing to spend more money in their trip than backpackers.*