Faculty of Economics and Business

The Determinants of Business Performance of Homestay Operators in Rural Tourism in Sarawak with Moderating Impact of Digital Technologies

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The Determinants of Business Performance of Homestay Operators in Rural Tourism in Sarawak with Moderating Impact of Digital Technologies

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DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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ABSTRACT

Tourism has been known as the green industry in the microeconomic point of view though in mass tourism or rural tourism. However, though Sarawak has carried many powerful resources yet the tourism industry in this state is somehow still very much underdeveloped. Therefore, the moderator should be considered and introduced to the industry to boost the tourism industry in the state of Sarawak. Rural tourism is somehow not a new form of tourism experience, it has indeed existed in western countries decades ago. It is a booming industry or baby boomer for Sarawak in which Sarawak tourism board and related agencies aim to promote and make it a unique and intend to sell it globally. First and foremost, homestay operators tend to be the first entrepreneurs to treasure and explore such business as there have been no luxurious hotels established in the remote and rural areas. Hence, besides road show promotion and marketing planning from the tourism board; digital technologies will be the next effective tool to promote and sell rural tourism to achieve its competitiveness. As such, digital is powerful and virtual, it will efficiently and effectively be crafted as the most and powerful instrument to market and sell rural tourism of Sarawak. This study has focused on homestay operation in rural tourism and the study investigates the relationship between economic, environmental, and socio-cultural factors of homestay operation towards its performance in Sarawak. A quantitative study has been carried out to obtain the data from the accommodation aspect – homestay operators. There are 241 valid responses collected for the study. Measurement model assessment and structural model assessment have been applied to analyse the constructs and path relationship of the study. The relationships between independent and dependent variables have been investigated and are anticipated to be a useful source of reference to the academic researchers, tourism authorities and other tourism stakeholders to further carry out investigation to bring out the positive impacts of the rural tourism industry in Sarawak, Malaysia. The findings have shown that the main pillars of tourism attributes (economics, environmental and socio-cultural factors) were only partially but significantly affecting the performance of tourism in Sarawak, either financially or non-financially; based on the literature studied from past researchers, the moderator introduced to this framework should be able to enhance the relationships of independent variables and dependant variable. However, the results obtained were not as expected, the reasons could not deter by education level, technology infrastructure, promotion, funds projection and other factors.

Keywords: Homestay operators' performance, tourism factors, digital technologies, rural tourism, Sarawak.

Prestasi Perniagaan Pengusaha Inap Desa dalam Pelancongan Luar Bandar di Sarawak: Kesan Penyerderhanaan Teknologi Digital.

ABSTRAK

Pelancongan telah dikenali sebagai "industri hijau" dari sudut pandangan ekonomi mikro baik di kalangan pelancongan tradisional mahupun pelancongan desa. Walau bagaimanapun, meskipun Sarawak mempunyai banyak keupayaan sumber, industri pelancongan dalam negeri ini masih kurang berkembang. Oleh demikian, penyederhana harus dipertimbangkan dan diperkenalkan kepada industri ini agar dapat meningkatkan industri pelancongan di Sarawak. Pelancongan desa bukanlah sesuatu cabang pelancongan yang baru, di mana ia telah muncul di negara-negara barat sejak beberapa dekad yang lalu. Ia merupakan industri yang sedang berkembang, ataupun "baby boomer" bagi Sarawak, di mana Lembaga Pelancongan Sarawak, termasuk agensi-agensi yang berkaitan, berminat untuk mempromosikan dan menjadikan sebagai satu pakej yang istimewa untuk dipasarkan ke arena antarabangsa. Pertama, pengendali inap desa merupakan usahawan perintis yang meneroka dan membuka pasaran dalam perniagaan ini, akibat ketiadaan hotel-hotel mewah di kawasan pedalaman dan luar bandar. Oleh itu, selain promosi melalui jerayawara dan pelan pemasaran oleh lembaga pelancongan, teknologi digital bakal menjadi peralatan yang berkesan untuk mempromosikan pelancongan demi meningkatkan daya saingannya. Oleh itu, teknologi digital yang canggih dan berkesan dalam dunia virtual, akan mampu dan berupaya untuk dijadikan peralatan pemasaran pakej pelancongan desa untuk Sarawak. Kajian ini mengkaji hubungan antara faktor-faktor ekonomi, alam persekitaran dan sosial-kebudayaan terhadap prestasi pelancongan desa di Sarawak. Kajian kualitatif telah dijalankan untuk mendapatkan maklumat pengendali inap desa dari aspek penginapan. Seramai 241 orang responden telah ditemuduga untuk kajian ini. Penilaian model *pengukuran dan penilaian model struktur telah diterapkan untuk menganalisa konstruks dan perhubungan laluan dalam kajian ini. Hubungan antara pemboleh ubah tidak bersandar dan pemboleh ubah bersandar telah dikaji dengan harapan ia dapat menjadi sumber rujukan yang berguna kepada penyelidik-penyelidik akademik, pihak pelancongan dan pihak berkepentingan pelancongan agar dapat melanjutkan penyelidikan ini untuk tujuan menunjukkan kesan positif industri pelancongan desa di Sarawak, Malaysia. Kesimpulan yang diperolehi daripada kajian ini telah menunjukkan ciri-ciri utama pelancongan (faktor-faktor ekonomi, alam persekitaran dan sosial-kebudayaan) amat ketara ke atas prestasi pelancongan di Sarawak, walaupun kesannya hanya sebahagian sahaja dan bukannya secara keseluruhan; sama ada kesan daripada sumber kewangan mahupun bukan kewangan; mengikut dasar dari segi literatur daripada para penyelidik, penyederhana yang di perkenalkan ke dalam rangka kajian ini sepatutnya akan berupaya berfungsi sebagai pengukuh talian hubungan antara pembolehubah tidak bersandar. Akan tetapi, hasil kajian yang dicapai adalah tidak menakjubkan sebagaimana yang telah dijangka. Alasan yang munasabah mungkin disebabkan oleh tahap persekolahan, infrastruktur teknologi, promosi dari kalangan pihak berkuasa, jangkaan dari segi perbelanjaan negeri dan mahupun faktor-faktor yang lain.*

Kata kunci: *Prestasi pengusaha inap desa, faktor pelancongan, teknologi digital, pelancongan luar bandar, Sarawak.*

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LIST OF ABBREVIATIONS

AR	Augmented Reality
ASEAN	The Association of Southeast Asian Nations
AVE	Average Variance Extracted
CB-SEM	Covariance-based Structural Equation Modelling
CD	Compact Disc
CFA	Confirmatory Factor Analysis
CMV	Common Method Variance
CR	Composite Reliability
DV	Dependent Variable
EE	Effort Expectancy
EFA	Exploratory Factor Analysis
EIU	Economist Intelligence Unit
ERP	Enterprise Resource Planning
FC	Facilitating Condition
FDI	Foreign Direct Investment
FP	Financial Performance
GDP	Gross Domestic Product
GoF	Good-of-fit
GSV	Generic Strategy View
HTMT	Heterotrait-Monotrait ratio of the correlations
ICT	Information and Communications Technology
IT	Information Technology

IV	Independent Variable
LO	Learning Orientation
LV	Lantent Variable
MAR	Missing At Random
MCAR	Missing Completely at Random
MoTAC	Ministry of Tourism and Culture
MTAC	Ministry of Tourism, Arts and Culture
MTCP	Ministry of Tourism, Creative Industry and Performing Arts
NFP	Non-Financial Performance
NRM	Non-Random Missing
OECD	Organisation for Economic Co-operation and Development
OI	Organisational Intelligence
PE	Performance Expectancy
PLS-SEM	Partial Least Squares Structural Equation Modelling
POT	Performance of Tourism
RBV	Resource-based View
RT	Rural Tourism
SET	Social Exchange Theory
SI	Social Influence
SMA	Sarawak Multimedia Authority
SME	Small Medium Enterprise
SPSS	Statistical Package for Social Sciences
STB	Sarawak Tourism Board
STP	Sustainable Tourism Practices

TelCo	Telecommunications Company
TCP/IP	Transmission Control Protocol/ Internet Protocol
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNWTO	World Tourism Organization
UTAUT	Unified Theory of Acceptance and Use of Technology
VIF	Variance Inflation Factor
VR	Virtual Reality
WTO	World Tourism Organization
WTTC	World Travel and Tourism Council

CHAPTER 1

INTRODUCTION

1.1 Background of Study

In this post-millennium era, tourism is one of the main economic driving forces for many developed countries (Villanueva-Álvaro et al., 2017). In the case of Cyprus by Charalambos Saitis and Yiannis Panayiotou (2021), it analyses the relationship between tourism and economic growth in Cyprus. The authors found that tourism has a positive and significant impact on the country's economic growth, with every 1% increase in tourist arrivals leading to a 0.2% increase in GDP. As backed by researchers, tourism has been a recognized effective catalyst of socio-economic regeneration for over hundred years (Yusof et al., 2013; Ibrahim et al., 2021). Tourism has never been neglected as revenues generator for a country regardless of its national development. Hence, tourism industry is regarded as important or even pivotal economic sector in every country (Suntikul & Butler, 2017; Díaz-Bautista & Murguía-Cánovas, 2021).

As reported by WTO, international arrivals have an increase of 6% growth in 2018 as compared to statistics to a year before to 1.4 billion based on figures collected around the world (World Tourism Organization, 2019). In the same year, travel and tourism sector has grown globally at 3.9% to contribute a record $8.8 trillion and 319 million jobs to the world economy. This has made tourism industry to be one of the fastest growing sectors across the world. This has reflected how important and influential tourism has impact to national's economy in the context of tourism industry.

Rural tourism is another form or dimension of travel experience, and it will be the upcoming trend of travel and tour to the industry, in which it could be pairing up with mass tourism which involves urban visit together with countryside visit. It does not carry any impact or even effect to outperform traditional mass tourism. This form of tourism industry could efficiently and effectively be carried out simultaneously with mass tourism at the same time.

Since, the experience and intension for the tourists to travel to rural areas uphold a totally different motives and objectives when they opt for such vacation experiences. As defined by Lane (1994), Sharpley and Telfer (2015), and Kastenholz and Lane (2021), rural tourism is a discrete activity conducted with distinct characteristics and varies in intensity and it differs by area. As cited by Śonca, Csosz, Sabin Jr. and Mateoc-Sîrb (2020), rural tourism is one that has prospect of greater growth in coming decades even with variety of tourist typologies.

Rural tourism holds a very important and significant role to play economically for a national's economy and foreseen to have great potential in the sector of tourism. Mbaiwa (2005) regarded community-based tourism like rural tourism provided benefits to host destination and acts as a development tool. Its potential contribution towards community development is still acknowledged by Moscardo (2008), Stone and Stone (2011), Mtapuri and Giampiccoli (2014), Kunjuraman and Hussin (2017), and Mtapuri and Giampiccoli (2019).

However, rural areas and rural lifestyle have gone through a challenge in recent years, particularly in those developing countries where traditional agriculture and rural culture is threatened and undergone a situation where they are assimilated through urbanisation and modernisation (Mohd Nor & Kayat, 2010; Pusiran & Xiao, 2013). More and more rural people are leaving their hometown and reside in big cities to look for job opportunity, undergo quality education, seek better medical services, abandoning their houses and lands, especially practised by younger generations. (Gao & Wu, 2017).

This scenario is exactly what is happening in mainland China now. Under this circumstance, it is very alarming so in many developing countries; to prevent this situation from worsening, tourism industry has been targeted to offer rural communities the opportunity to convert their country living lifestyle of agro-based crops and livestock farming and turning it as local resources to competitive advantage for a destination. Besides, there are also changes in other aspects, such as demand and supply, political economic changes, technological innovation, and socio-cultural transformation; these changes are either pinpointed as opportunities or challenges to tourism development (Sharpley & Telfer, 2015).

As such, there are scholars appealing and have interest in the field of rural heritage and communities now (Jimura, 2011; Sun et al., 2013; Gullino & Larcher, 2013; Zou et al., 2014; Xu et al., 2021). As a norm in past years, tourism industry is known to improve economic development especially in those remote areas, sub-urban villages via those ancillary services like accommodation, handicrafts production and sales, food supply from local stalls and restaurants, and other tourist related services like land shuttle transportation, boat transportation, or pottering of traveling goods (Phelan & Sharpley, 2011; Schubert et al., 2011; Su, 2011; Kumar et al., 2012; Kontogeorgopoulos et al., 2015; Wang et al., 2021). According to Bramwell and Lane (1994), Garrod and Fyall (2000), and Shuai, Liu, Ahmed, and Wang (2021), have further explanation, it could include elements like heritage, arts, health, education, sports, adventure, farm activities and interests in which located at a remote, rural destinations. In the case of Himalaya, Jhawar and Sharma (2020) analyses the relationship between sustainable tourism and the environment in the context of the Himalayas, they found that sustainable tourism practices can help to protect the environment and promote economic development in the region. Therefore, promotion of tourism in the rural not only help to sustain tourism but also helps to conserve nature and promote economic development.

The results that brought by rural tourism could be very promising and lucrative to the economy of the destination, or even to the state and country. For example, Statistics obtained for Castilla y León; being the largest region in Spain; research shown it has contributed more than 18% of the rural tourism destinations in Spain, offers more than 3000 accommodations and more than 27,000 hotels available for tourists. With such an environment, it has generated more than 4000 job opportunities to cater more than 15,000 overnight stays solely from a single region. (Instituto Nacional de Estadística. Encuesta de ocupación en alojamientos turísticos, 2017) Hence, this is how impactful it is for rural tourism industry to the national with only one typical potential case from the development of tourism in Spain. Hence, with cases showcased above, it clearly proves that economic, environmental, and socio-cultural factors have played a role in improving the tourism performance. These factors have been identified by researchers to be pivotal factors in tourism industry in generating incomes to nation.

1.1.1 Malaysia Scenario

In the context of Malaysia, the government has realized the impacts, and the benefits brought by rural tourism, with laws, regulations and policies been established and enacted to support the sustainability of the tourism development in the country (Khan, 2014). Statistics has shown that tourism sector with revenues generated RM86,143.50 million in 2019 and reached the all-time high, and being the largest contributor to Malaysian GDP from service sector by achieving 54.21% of total Malaysian GDP in 2019 (Statista, 2020).

Malaysia is strategically located on the equatorial regions and is enjoying tropical climate weather. As such, it has abundant natural resources that is be one of selling points for tourism industry, specifically as market front-runner in adventure and ecotourism activities (Isa et al., 2015; Ariffin & Ching, 2019; Adnan & Omar, 2022). Adventure and ecotourism activities are benefiting the homestay operators in the homestay programme because those activities supplement the homestay business indirectly ever since the programme has been introduced and in the run in late 80's by Ministry of Tourism and Culture (MoTAC) from the federal government.

The Malaysian government is emphasizing and supportive towards the development in tourism especially the rural tourism, with plan and actions taken on those tourism destinations to improve the local communities' living standard. Plan in managing household waste effectively to make sure the environment of the nation is portrayed as a gesture and effort of the government in taking care of the tourism sector (Jalil, 2010). It implies that tourism activities and attracting tourists to the country is valued. However, it will never be an easy job, and it must be long-term and live long project. As a result, rural tourism has very much been concerned for the past 20 years ever since homestay programme which has been officially launched by Ministry of Tourism in 1995 in Malaysia with the initial inspired idea from development of homestays as resource of revenues (Ramele et al., 2017).

As quoted by Dahal, Anup and Sapkota (2020) that community-based homestay is in fact strongly supporting in ecotourism globally that boost the income of the local community; enhancement to income means improvement in the standard of living for the residents influencing their culture, foods, costumes, and hospitality aspects. It was also supported and quoted by Kunjuraman, Hussin and Yassir (2015), and Kunjuraman and Hussin (2017) on Mbaiwa (2005)'s quote in which community-based tourism like homestay operation in rural tourism is indeed acts as a development tool that provides multiple benefits to host destinations.

1.1.2 Rural Tourism in Sarawak

Sarawak is the biggest state in Malaysia in term of area, and the richest in term of natural resources; somehow, it is still very left behind in term of its development in comparison to other states in Malaysia. However, viewing from a different perspective, this has indeed created another opportunity to the rural communities to explore and expand their horizon in tourism industry.

The term of 'rural' in the context of 'Sarawak' in general, somehow as perceived by locals is 'remote'. However, definition on rural is still needed to be drawn a line to better understand the landscape and differentiate it from urban, though 'metropolitan' could be an obvious picture if compared to rural. There is neither specific, consistent, and definite term nor terminology to identify 'rural Sarawak' by the domestic authorities and past researchers in general or it could somehow be very subjectively opined from individual to individual; therefore, for identification purpose, a benchmark has been adopted from the official U.S Census Bureau definitions, rural areas comprise open country settlements with fewer than 2500 residents.

As claimed by researchers, traditional agriculture gradually been neglected due to urbanisation and modernisation with more rural people are leaving their hometown (Mohd Nor & Kayat, 2010; Pusiran & Xiao, 2013). Currently with rural tourism brought into the indutry, residents could stay back in their hometown and carry on with their existing agricultural jobs. In addition, there could be extra incomes generated from rural tourism from ancillary services opportunity created by the industry (Kumar et al., 2012; Kontogeorgopoulos et al., 2015; Wang et al., 2021). Partial transformation from the mentioned activities in rural tourism activities tends to be emerging to the locals. The transformation is worth cultivating as rural tourism is a sunrise industry as the intention and behaviour of the travellers and tourists at present time have very much been influenced, toned, and shaped by 'travel green and environmental-friendly' concept.

A review of empirical research by Argyro Elisavet Manoli and Anastasia Athanasopoulou (2020) studied on the relationship between tourism and cultural heritage and found that tourism can have significant impacts on cultural heritage, including changes to historical sites, artifacts, and traditions. So, to preserve the authentic cultural heritage of Sarawak, steps ought to be planned and executed carefully. On one hand to gain from tourism, on the other hand do not lose heritage identity.

In order, to allow visitors to expose to rural destinations, accommodation is the key factor to drive this force because without its existence and offer of lodging, rural tourism does not seem to be able to be materialised. The challenge, but at the same time is also a beauty of remote areas in Sarawak is its isolation from concrete jungle, no luxurious hotels. Hence, accommodation should complement this environment and opportunity. So, to reach out, digital technologies could be a tool and a solution, initiated by communities to reach out rather than over dependent on government and authorities in a passive way.

1.1.3 Homestays in Sarawak and Its Digital Approach

Reference to the breakdown of tourists' expenditure in Malaysia in 2017, statistics showed that accommodation being the second highest expenditure from tourists with 25.6% (Statista, 2019). With statistics obtained from Domestic Tourism Survey 2018 (Department of Statistics Malaysia, 2018) accommodation has achieved 8.5% of total expenditure components of domestic visitors. In other words, accommodation has played a role as the second largest income generator to tourism industry in Malaysia after shopping activities, indeed it will be the key contributor to rural areas. So, the role of the homestay operators is very significant in the rural tourism scenario in Malaysia and even Sarawak.

Research has demonstrated that rural tourism can provide significant economic benefits to rural areas. A study by Sharpley and Vass (2006) found that rural tourism can contribute to job creation, income generation, and the diversification of rural economies. This has shown that accommodation plays a very critical role in improving the tourism performance and contributing to state economy because accommodation has occupied a quite a big chunk of shares in total expenditures. In addition, accommodation in rural tourism can also help to promote the preservation and conservation of natural and cultural resources in rural areas.

Besides, in line with the Sarawak Digital Economy Strategy 2018-2022; Sarawak is moving towards Digital Economy within the 5 years plan. One of the clusters under this plan is nonetheless the Tourism industry with objectives to position the state as major tourist destination using digital technology, and to create better presentation tourism product and services using digital technology to enhance tourist experience. Other related clusters could be Digital Infrastructure, Digital Inclusivity, Digital Innovation and Entrepreneurship, and e-Commerce. These clusters are also working closely on stakeholders of tourism too. Though, the natural resources are indeed an original and utmost natural is an advantage to the state; but somehow, it was not reaching out to international effectively to all the potential foreign visitors.

1.2 Problem Statement

As highlighted by Hafiz Hanafiah, Hemdi and Ahmad (2016), and Michael, Reisinger, and Hayes (2019), as of today there is not much of comprehensive study on tourism performance been undertaken towards rural tourism's homestay operations. Most of the research studied and exploring on rural tourism on tourism destination competitiveness or destination's competitive advantage and concerns on the factors that affecting destination competitiveness. Those studies do not focus much on issues and problems faced by rural tourism industry in specific but rather a general overall development and improvement. Particularly in Sarawak's rural tourism industry, not much attention has been obtained from respective ministry or authorities. There is no concern given by the relevant bodies to the rural folks and rural entrepreneurs with clear intention and objective to assist them in generating incomes and improving their standard of livings.

The prevailing situation in Sarawak's tourism industry, especially in rural tourism, the performance is not on par with the tourism performances as compared to other states. To tackle the issue, there should be an introduction of deployment on ICT into the industry. Once posited by Lo (2019), in the current information age, it is said to be impossible for tourism industry to expand without the presence of ICT in place, as it helps to create new business environment, provides technological tools, cutting off lengthy distribution channels. Rural tourism in Sarawak is not emerging in tourism industry simply because it is not reaching out to the world, may it even be to domestic nationals. The outreach of rural tourism through ICTs in the international level is not prolific. As such, promotional activities should be via 'Digital' and 'Virtual' rather than the conventional booth promotion, travel fair and campaign awareness or even those 2D booklet advertisements in overseas or domestically. Low taping rate on 'digital promotion' platform, such as Airbnb, Booking.com or even Agoda, and low exposure on social medias like Facebook, Twitter, Instagram from the homestay operators. This passive aspect of digital promotion has proven that rural tourism is very heavily and dependently rely on tourism ministry, government's tourism board, private agencies, and other industry players. ICT is the solution not only in promotion but also to facilitate tourism products and service online to enable businesses to be operated in an efficient and effective way (Mowla, 2019). Digitalisation has creatively and innovatively changed the fundamental structure of tourism industry by eliminating the barriers of entry, promote price transparency to compete fairly, revolutionising distribution channels, enhance service quality efficiently with costs optimisation (Navío-Marco et al., 2018).

The novelty of this study to the state, is its investigation and exploration towards the deployment of ICTs in an innovative digital approach (Digital Technologies) by stakeholder (homestay operators) on accommodation sector. It is meant to influence and improve rural tourism performance in the long run. The success of the deployment will not only bring economic benefits to the state, the industry players and the locals but also profoundly promote sustainability of rural tourism (Department of Statistics Malaysia, 2018; Statista, 2019).

With the deployment of digital aid, it testifies on how effective and efficient it could help the rural folks to withstand on their own to be more independent to overcome poverty by improving their current living standards. As quoted by Mutana (2013), Sugianma (2013), Guo, Zhang, and Zhang (2014), Karmilah, Nuryanti, Soewarno and Setiawan (2014), and Sugiama, Hidajat and Adrianto (2014) that rural tourism can raise economic viability of the rural areas, later enables poverty reduction. It is said to be contributing to poverty alleviation by creating jobs opportunity, income generating, eventually leads to improvement in tourist attraction, accessibility, amenity, and tourism ancillary. The study would justify how far this strategy could go, and how feasible is digital aid helps to promote and grow their businesses.

Apart from improving the business performance of homestay and the national tourism industry during this critical time of pandemic; digital technologies have also demonstrated an important role where physical monetary denotes has gradually been substituted by e-wallet to prevent contraction of virus (e.g., Sarawak Pay Apps). Another milestone achieved is the mobile phone application developed by Ministry of Health - My Sejahtera. My Sejahtera has been widely used to track on individual on places visited. Besides, it also serves as a permit to enter any premises with the proof of vaccinations. It has been enforced by law that minimum of 2 doses of vaccines are required to enter a premise. Hence, digital technologies come handy during this pandemic time to serve as a tool for safety measures besides to be deployed as booster to tourism performance.

1.3 Research Questions

The previous section has highlighted the current rural tourism performance situation in Sarawak and the issues that are currently facing by homestay operators in the sector of homestay industry. Since, homestay industry is the turning point to boost rural tourism performance; besides, accommodation is being chosen as a marking point to represent rural tourism. Hence, this study is to examine and evaluate the moderating role and moderating effect of digital technologies on its relationship with the factors influencing business performance of homestay operation in rural tourism. To provide a simple and clear direction to guide the study along the way, the following questions are suggested to the research problems:

Why is the rural tourism in Sarawak still unsatisfactory despite having considerably good Economic, Environmental and Socio-cultural factors? Referring to the statistics of Foreign and Domestic Visitors Arrival to Sarawak (IDS 2019).

The sub-questions are set to address the research questions:

i. How does the economic factor affect the homestay operators' business performance in Sarawak?

ii. How does the environmental factor affect the homestay operators' business performance in Sarawak?

iii. How does the socio-cultural factor affect the homestay operators' business performance in Sarawak?

iv. Will Digital Technologies (ICTs) moderate the relationship between economic factor and homestay operators' business performance in Sarawak?

v. Will Digital Technologies (ICTs) moderate the relationship between environmental factor and homestay operators' business performance in Sarawak?

vi. Will Digital Technologies (ICTs) moderate the relationship between socio-cultural factor and homestay operators’ business performance in Sarawak?

1.4 Research Objectives

The fundamental aim and objective of this study is to identify and explore how digital technologies (ICTs) could play its role in rural tourism assessing through those impact factors (economic, environmental & socio-cultural) in influencing and enhancing rural tourism’s performance in Sarawak on homestay industry.

Further, to simulate how industry players, in specific the homestay operators could gain greater opportunity and even lucratively benefited from rural tourism with the technological aid been introduced and deployed, then efficiently promoted, and wisely strategized by the respective authorities during this IT-prone era. Meaning to say, with intension that the findings from this study will enable stakeholders (such as local authorities or individual commercial operators from the community) to utilize it to understand more thorough on the current situation and shortfalls in rural tourism by citing on accommodation sector. Hence, improvement and adjustment could be made to cater the needs for effective management and deployment the necessary in this sector and in this industry at a local level or applied to a national level with concern from the government.

In short, the specific objectives of this study are as follows:

(i) To investigate the impact of economic factor, environmental factor, and socio-cultural factor on tourism performance citing on accommodation sector; and

(ii) To examine the moderating role of digital technologies (ICTs) on the relationship between economic factor, environmental factor, socio-cultural and tourism performance citing on accommodation sector.

1.5 Significance of Study

This study possesses significant contributions to theoretical development (theoretical contribution) and managerial practices (practical contribution). Firstly, it has clarified that economic factor, environmental factor and socio-cultural factor are factors that determine the tourism performance from the theoretical aspect, but in an actual environment it differs from the theory. It is believed that regardless of how good quality of factors possesses by a destination; without an effectively right promotion and advertising platform, the impacts from those factors are not significant. Hence, to discover the right ways and making use of it to promote and advertise those factors are crucial in achieving good performance results in rural tourism destinations.

Secondly, the deployment and application of technological aid in tourism is a trend and as a common practice conducted in other countries. However, in the context of Sarawak, there are obstacles and challenges that need to be addressed and overcome. Therefore, this study fills the gap in the literature about impact of ICTs towards performance on rural tourism in Sarawak. Education levels (knowledge) of the operators to utilise the aid, the infrastructure advancement level available in the country, and the confidence level of adopting the right tools and right platform by the operators are all the crucial substances that should be integrated as one.

Lastly, the findings from the study could address to the right audience who are the tourism stakeholders like government, authorities, investors, and even local communities to better manage and understand the actual situation happening to homestay operators (accommodation aspect) in the rural setting, and what the operators perceived and want. With better understanding related authorities could offer various trainings and workshops to improve on the skills and knowledge in managing the operations. It is anticipated that rural tourism development in Sarawak is moving towards greater levels of success and prosperity rather than treating as a sun set business, with commitment from all parties adopting the right tool and right platform. Besides, Pigg and Crank (2005) also quoted that modernization that goes hand in hand with deployment of telecommunications (in this thesis context it is refers as ICTs) are charmed as a 'saviour' for rural areas when Clinton Administration launched the National Information Infrastructure programmes in 1992-1993. It has been publicly recognized that ICTs has solved economic, community and social development obstacles that rural communities have encountered.

1.6 Scope of Study

This study focused on those rural areas scattered in Sarawak. There were eleven destinations undergone investigation, the sites are listed in the directory of homestays registered under MTCP. These sites are Kuching, Samarahan, Serian, Sri Aman, Betong, Sarikei, Sibu, Mukah, Kapit, Miri, Limbang and Lawas. They have been fully selected and justified by their attributes of the nature of the destination and has fulfilled the criteria of its remoteness with infrastructure being considered. Its population and density[1] of residents as another factor considered. Nevertheless, its availability of homestay operators' existence to provide accommodation service to tourists under the list of MoTAC under federal level and

[1] Population density is defined as less than 100 inhabitants per square kilometre by European Commission, less than 150 inhabitants per square kilometre by OECD.

MTCP under state level. The goal for this study is accessed this group of stakeholders, to gain their insights for investigation purposes. The time frame allocated for data collection including interviews were about 3 months. That excludes time for processing and analysis of data collected. The respective homestay operators will be discussed in detail in Chapter 3 under Methodology.

1.7 Organisation of Chapters

In this thesis, the flow of the chapters is arranged as such, Chapter 1 emphasizes introduction research background, problem statement, research objective and scope of study. As for Chapter 2, it is all about literature reviews, reviews from journals, definition of models, underlying theories, theoretical framework, conceptual framework, underlying gap, justifications of theoretical framework and development of hypotheses. In Chapter 3, Methods are discussed, research site is mentioned, research design, sample size and sampling approach, data collection procedures, research questions, measurement, pre-test (pre-test of tools used) and presentation on statistical analysis. As for Chapter 4, presentations on the results analysed which is with the data obtained from questionnaire survey. Final Chapter, marks the discussions and summarizing on this research.

1.8 Summary

This is an introductory chapter that shows the overview of the study that is researched on. It starts off with some general introduction on tourism and skims down to rural tourism on its concepts and potentials in Malaysia, particularly under the atmosphere of the state of Sarawak. Then, it briefs on with the current problems under problem statement, followed by the objectives of the research, significance of study to stretch up the importance of it and ended with scope of study pinpointing the areas covered. Finally, the structures of thesis are presented in a systematic way with organization of chapters to reader(s). The following chapter, which is Chapter 2, it will be a chapter where literatures related to area of study being presented throughout the whole chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In this chapter it presents the theoretical and empirical studies of the relationships among three factors or also known as the tourism attributes that lead to rural tourism performance of Sarawak and later introducing a moderator (digital technologies) to the relations to test the impact of the moderator, whether the relationships among these three impact factors and the tourism performance will be strengthened and improved after been moderated. In other words, a moderation effect is tested on digital technologies in this framework. Lastly, the conclusion section will seal the chapter.

2.2 Rural Tourism and Its Overview

Tourism being the oldest and yet still the popular industry in the world. Among all other industries, it has been viewed uniquely as an industry that does not need a complex mechanism to operate. This sector of industry is still classified as the major sector in the world, since it is still growing, which grows even faster than automotive, healthcare, or financial sectors, and has never been running outdated (Mtapuri & Giampiccoli, 2019). By having said that, it portrays that it is an ever-green income generator, and employment contributor that eventually will enhance livelihoods of a country (Dupeyras & MacCallum, 2013). Later, in the literatures, tourism has no one specific definition over its products, but in general acceptance it includes activities for a tourist (or rather to be known as person who travel to and stay at a place outside his or her hometown usual environment for not exceeding one consecutive year) for leisure, business, or any other purposes (Lloyd-Wright, 2009).

Tourism industry is recognised as the cleanest and greenest industry in industrial revolutions history. From the points of view from economic, environmental, and socio-cultural aspects. Tourism was once promoted as a clean and harmless economic activity, environmentally friendly, in the sense that it does not create any impact attributed to manufacturing, mining, logging and intensive agri-business (Lane, 1994; Śonca et al., 2020; Strzelecka et al., 2021). It is not only friendly to environment by creating the lowest pollution, minimize harmfulness to the earth, generates the negative impacts to the environment to the least possible but also imposes socio-cultural recognition and enrichment at a destination specific rural area. Tourism is a powerful engine for economic growth, functioning in transferring capital, income, and employment from industrial, urban and developed areas to non-industrial sectors. These are the impacts from tourism to national's economy, the reason is still relatively important to nation's general revenues. As mentioned by Fleischer and Felsenstein (2000), Sharpley (2002), and Kusumah (2021), tourism is recognized to be an effective instrument to economic development of a nation and it has been conveniently adopted and addressed world-wide; as also supported by Briedenhann and Wickens (2004), Mutana (2013), Sugianma (2013), Guo, Zhang, and Zhang (2014), Karmilah, Nuryanti, Soewarno, and Setiawan (2014), and Sugiama, Hidajat, and Adrianto (2014), tourism is strategized to alleviate poverty, revitalize industry and restructure economy. This is said to generate positive economy impacts to a nation. To tackle all the incomes imbalance and living standard inequality issues between rural and urban, tourism has played a role as caretaker in addressing and handing them.

Tourism has been regarded as an important pillar of the Malaysian economy. Having said that, tourism industry in this nation is also referred to as one of the fastest-growing economic sectors, with a continuing upward trend in 2018. It has been proven to be so resilient despite the nation’s instable and uncertain economic and politics (TalentCorp, 2018; Timboung, 2018; Zahari et al., 2020).

In Malaysia, tourism is contributing to a nation’s economy and environment, besides the socio-economic impact. In the development of economy in tourism industry, entrepreneurship is a major force (Stephen & Connell, 2014). Entrepreneurs help in generating ideas and create opportunities to boost the economy. The business opportunity development has given an upper hand widening the process of developing more firms in the industry.

According to Lo (2019), tourism sector is noted as one of the largest economic contributors to Malaysia’s gross domestic product (GDP). In Malaysia, one of the effective strategies to develop rural is through planning of rural tourism activities (Liu, 2006). Hence, the diversification strategy to venture into rural areas has earned its justification from tourism, environmentally and for its economic reasons, as quoted by Hernández, Suárez-Vega, and Santana-Jiménez (2016). The economy enables more and more entrepreneurs to venture businesses in the rural tourism for homestay operators in the accommodation sector.

The uniqueness of Malaysian rural tourism characteristics has incorporated multiple ethnicities with diverse ethnicity, values, and mixture of different cultures of the indigenous communities (Lo et al., 2013). This has added colours and attraction power to Malaysia’s rural tourism and regarded as one of the emphases of the government. In the ‘old school’ term or more commonly known in tourism is referred as mass tourism; characterised as in mass, standardised, rigidly packaged holidays, hotels, and tourists. As for the emerging aspect, the ne tourism is venturing into rural areas; characterised with flexibility, segmentation, and more authentic tourism experience. Besides, marking by the thrust towards the diagonally integrated organisation and management of the tourist industry, driven by the power of information technology; therefore, it is recognised as rural tourism.

Sarawak, being the largest state in Malaysia and naturally rich in natural resources. Apart from that, Sarawak is inherited with natural heritage, its distinctive cultures have lucratively so much to offer to tourism. These have given the state an upper hand, an advantage in the management and development of tourism to the locals, to the ministry, to the government and to the state. With such diverse products to offer to tourism, it is expected that rural tourism is one of the ways to alleviate poverty (Mutana, 2013; Sugianma, 2013; Guo et al., 2014; Karmilah et al., 2014; Sugiama et al., 2014) and increase employment opportunities for the residents (Xue & Kerstetter, 2019).

Due to its geographical location, one of the major challenges is the shortage of international air connections. Therefore, visitors' satisfaction is essential to ensure repeat and returning loyal customers and improving communication skills and knowledge in integrating sophisticated technological gadgets like social media, e-wallets, publicity through websites and other modes of communication media. Hence, proper planning in rural destinations would be beneficial to the locals of Sarawak.

Rural, is referred to a place that is remote and may be perceived by tourists with some elements like qualities of symptomatic of its atmosphere, that is nature of scenic beauty, quaintness and uniquely beauty (Brown & Hall, 2000). Rural tourism has been identified by Erdeji, Gagic, Jovicic and Medic (2013) as a sub-urban environment that subsets natural, ethnic and heritage; whereas Mohamad, Lo, Songan and Yeo (2012) defined rural tourism as an area that carries and provides physical natural environment that there is less congestion, offering relaxation for a destination to be competitive, and upholds unique features, sceneries, and attractions. Reference made to Bel, Lacroix, Lyser, Rambonilaza and Turpin (2014), argued that 'rural' is not an established concept, rather it maintains as a default category. They simplify it by saying rural refers to anything that is not urban with agricultural or forestry being the primary activities (Beeton, 2006).

There are no standardized definitions for it. Past researchers like Oppermann (1966), Pakurar and Olah (2008), and Lo, Songan and Mohamad (2013) documented rural tourism can be used interchangeably with other tourism terms like ecotourism, adventure tourism, heritage tourism, nature-based tourism, and village tourism. Its peripheral is the selling point of rural by itself and is a highly saleable feature to rural tourism. According to Demen-Meyer (2005), the concept of rural tourism is problematic when it comes to defining, as it is always complicated with the delimitation of definition. Even in defining 'tourism' is having difficulty, since types of travel and reasons for traveling affects the meaning of what is considered as tourism and what is not. So long as tourists manage to treasure under an atmosphere where it is said beyond physical experience but rather a spatial concept in a lifetime to construct symbolising an unbelievable non-complex, authentic lifestyle and refuge to a tired, stressful soul of every single urbanite that wish to escape.

Having emphasized that, tourism practices are a spectrum of tourists' activities, it includes farm tourism, ecotourism, green tourism, nature tourism and many more. These have piled up the difficulty on defining what is the exact meaning of rural tourism. The distance from cities is not always a defining characteristic of rural areas and rural tourism (Garrod and Wornell, 2001). As a result, researcher likes Frochot (2005) has put forward the notion of 'tourism in rural areas' to supersede the term 'rural tourism' to cover all tourists' activities in countryside. This has eased the arguments and debates on the concept of rural tourism. So, it makes definition straightforward and less complicated. In a more direct manner, rural tourism was introduced to satisfy visitors in exploration at the same time appreciating the beauty and diverse sceneries of the nature and admiring important architectonic accomplishments (Lo, 2019).

Rural tourism has been growing rapidly over decades in regions includes Europe, America, Australia, New Zealand, and Southeast Asia. Ecotourism being part of rural tourism has promoted responsible travel of undisturbed natural areas, appeal to travel to nature and promotes natural learning, natural environment conservation and benefiting the locals (Cheung & Fok, 2014; Walker & Moscardo, 2014). In fact, rural tourism has been vastly benefitted from ecotourism because tourists visiting to national parks must embark on local accommodation, which is known as homestays.

Buhalis and Costa (2006) mentioned, nature-based tourism is tightly related to nature, its attractiveness, and the in atmosphere of the nature experience. So, it is the reason rural tourism emerged with such reception from environmentalists and naturalists. In relation to those groups of tourists, rural tourism is working very similarly and closely like ecotourism.

The unique characteristics of an area, its unique selling propositions, attractions and nonetheless the objective of visiting its behavioural effects on both visitors and inhabitants (Spyros et al., 2019). Therefore, rural tourism is very much being influenced by ecotourism due to sharing some common characteristics and objectives of travelling, such as exploring, respecting, studying, protecting, and enjoying ecosystems (nature) water courses and bodies, wildlife (flora and fauna), natural, archaeological elements and socio-cultural elements.

2.2.1 The Rationale and Importance of Rural Tourism to Community and State

Rural tourism, from the perspective of development it is based on the notion of sustainability with integration of basic tourism attributes of economic, environmental, political, cultural, and social factors considerations (Dragulanescu & Drutu, 2012). It is not parting far from the main pillars of tourism attributes. Besides, it is also mentioned by them that rural development area and planning problem is the most complex, as it requires to balance the requirement of conservation of rural economic, environmental, social, and cultural of the country on the one hand and modernization trend of the rural life on the other.

The impacts and importance from rural tourism are significant. As the rise of conventional tourism, the benign view of mass tourism has gradually been challenged since 1970s. Problems seem to arise after the development of the industry, the physical impact of feet, litter, infrastructure (developments on roads, transports), the economic impact of tourism's multi-nationals, the social impact of mass visitation on culture, heritage areas and objects, security and crime issues in specific areas, noises and disturbance to local community. As another literature backed by Galloway, Sanders and Deakins (2011), rural tourism is claimed to be increasingly clinching its importance of diversification activity in rural destinations' progress and seen as an important asset for the European economy (Correia-Loureiro & Miranda-González, 2008; European Commission, 2010) and being key European Union objective since 1997 (European Council, 2009).

From that statement, it has shown how impactful rural tourism is in contributing a nation's economy in general. Meccheri and Pelloni (2006), and Camarero Izquierdo, Carrión, and Gutiérrez (2008) also emphasized that rural enterprises make substantial contribution to local employment and local development. Specifically, in sustainable development (UNWTO, 2007; European Commission, 2010) that is the key objective of EU back in 1997 (European Council, 2009). In achievement of such development, rural tourism has played an important role as an important tool (UNWTO, 2007) and treated as an important asset (Buhalis & Deimezi, 2004) for the demand distribution.

As quoted by Mackenzie and Gannon (2019), rural tourism has brought benefits in different aspects to the communities, such as increases employment opportunities, improves income level, alleviate poverty (economic and socio-cultural), upgrading of infrastructures, flora, and fauna conservation, (environmental), and social and political networking, traditional cultural heritage preservation (socio-cultural).

From the environmental aspect, conservation tasks been fulfilled and been taken care of. As from the point of economic aspect, rural tourism does introduce and encourage new investment, employment, and enterprise into the countryside. Rural tourism in another way is used as a tool to broader economic progress by helping to balance the economic growth between rural and urban; if not, at least closing the extreme gap to the minimum. As rural tourism involves local business and communities, it plays a role in contributing to national economy in hand with other auxiliary services (Dwyer & Kim, 2003).

From the general economic, environment and socio-cultural aspects, rural tourism needs to be sustainable to maintain its manifestation of its unique selling point. Again, from the three aspects, rural tourism not only bringing in advantages into them; but, looking in a long run, a lot of efforts and contributions have been invested. Fruits do not get harvested overnight, but it takes time for the harvest; likewise, same scenario applies to rural tourism.

Visitors could come from all over the world to the specific rural destination regardless how remote the place, how time-consuming and how taxing the journey is.

However, before the destinations are reaching out, the stakeholders, government, broadcasting media have invested their efforts to make the destinations a success by introducing the place, promoting packages, campaigning the travel, coordinating with the locals, designing management systems, and regulating the access.

Final aspect comes from the environmental aspect, shall there is no concept of rural tourism been promoted, countryside would be at risk. If there is no introduction of rural tourism concept to the local communities, countryside will be exposed to unmanaged or even ill-managed tourism. Parts of physical environment might be spoilt as natural habitats could be destroyed, archaeological features could be demolished, and footpaths could be gone without conservation or deforestation to give way for agriculture or development.

This study concerns on the business performance of rural tourism from the accommodation sector. Homestay operators are the entrepreneurs who are involving themselves as one of the industry players in the development of rural tourism industry. An entrepreneur is regarded as good and sharp, when he/ she can observe and understanding the economic capabilities is the region that could lead to explore new domains of opportunities (Varga et al., 2020).

Opportunists who are able and capable of taking advantage of identifying opportunity is indeed the central to the domain of entrepreneurship to be in a business and to be a competitive business player (Frederick & Kuratko, 2010). Therefore, a local industry player needs to reflect and to respond to situation as on when and how to grab opportunities for the creation of gods and services within their environment at their destination. Only with the skills, opportunists (industry players) can generate personal wealth, and nevertheless their societal wealth.

Sensitive awareness towards any opportunities that lie in the environments is a must for every local industry player, especially to those industry players in Sarawak in this emerging market of rural tourism. These industry players are categorised as the micro-entrepreneurs in rural tourism industry of Sarawak, particularly those homestay operators in the remote. Homestay operators being one of the local industry players in tourism, and they are specifically serving the tourists on the accommodation sector. The operators are partially of industry players and on the other hand, they are also the local communities. Those who are staying in their own area take advantage on their existing residency in providing lodging to tourists. So, their contributions to tourists with commercial intention will eventually rewarding back to the communities with other developments that brought by the government.

As for other local communities, they must not necessarily be involved in operating the homestay business. Hence, the targeted respondents for the industry player for rural tourism is none other than those homestay operators from the remote areas scattered throughout Sarawak.

Statistical evidence derived from Immigration Department Sarawak (IDS, 2019) it showed that visitors arrivals in year 2019. The statistics show the arrival of visitors segregated by regions on Table 1.1. International visitors only achieved 5.25% of total visitors visited Sarawak. With reference made to the total foreign visitors' arrivals to national park extracted from MTAC, Sarawak in comparison of 5 years data (MTAC, 2020). Certain destinations having a very poor acceptance/ visits from foreign visitors and it could be as low as only a few visitors throughout a year. These national parks are in fact able to search from STB website, what more to say to those areas/ destinations in which are not promoted by STB and unavailable on STB website. Table 1.2 has shown Total foreign visitor arrivals to national parks of Sarawak from year 2015 until 2019 on brief. These numbers of visitors might only be part of the total international visitors' arrival in Sarawak, and it might not be full percentage achieved as recorded (5.25% of total international visitors' arrival).

Table 1.1: Visitors Arrivals to Sarawak by Regions in Percentage

Regions	**2019**	**2018**	**2017**
Malaysia	55.34%	52.31%	45.65%
ASEAN	39.41%	41.97%	48.98%
Europe	1.58%	1.70%	1.59%
North Asia	1.52%	1.67%	1.50%
South Asia & Middle East	0.79%	0.82%	0.86%
Americas	0.40%	0.46%	0.42%
Australia & New Zealand	0.45%	0.47%	0.50%
Rest of the World	0.51%	0.60%	0.50%

Source: Immigration Department Sarawak, (IDS, 2019)

Mass tourism has been traditional tourism industry to urban folks all these years, as most of the tourist destinations are strategically located at major cities or urban areas. Communities or councils from sub-urban or rural areas normally are not benefited from mass tourism. Therefore, to be self-efficacy and prosper in tourism industry. Rural tourism seems to be the ideal solution and the only way to reach out to tourists from domestic markets and foreigners internationally. Rural tourism activities are very much depending on the intermediaries (e.g., tourism promotion board). It has great impact on the performance in the long run to penetrate the society influentially.

Table 1.2: Foreign Visitors Arrival to National Park, Sarawak

National Park	2019	2018	2017	2016	2015
Bako National Park	40,406	40,832	35,304	30,610	28,211
Gunung Mulu National Park	15,046	15,850	15,903	14,700	12,843
Niah National Park	5,188	6,210	4,660	5,389	5,189
Lambir Hills National Park	2,679	2,450	2,807	3,524	3,401
Similajau National Park	1,141	1,823	1,158	1,211	2,676
Kubah National Park	5,143	4,873	3,721	3,730	3,163
Gunung Gading National Park	3,164	3,491	2,398	1,858	2,082
Batang Ai National Park	50	33	36	42	24
Matang Wildlife Centre	4,909	4,434	3,546	4,014	3,690
Semenggoh Nature Reserves	49,691	43,255	37,881	34,330	30,335
Loagan Bunut National Park	47	42	28	84	51
Tanjung Datu National Park	795	599	389	405	477
Wind Cave Nature Reserves	4,152	5,150	4,203	4,080	3,761
Talang Satang National Park	669	514	624	852	963
Fairy Cave Nature Reserves	U/R	7,118	6,551	5,576	5,081
Santubong National Park	3,789	3,828	3,058	2,600	2,017
Maludam National Park	8	2	1	0	6
Sama Jaya Nature Reserves	2,176	2,492	2,449	0	0
Piasau Nature Reserves	317	0	0	0	0
Bukit Sembling	89	0	0	0	0
Total	139,559	142,996	124,717	113,005	103,970

Source: Immigration Department Sarawak, (IDS, 2019)

Statistical evidence from the Immigration Department of Sarawak is derived from the Sarawak Tourism Board (STB) as shown above on Table 1.2. It has stated that the information obtained and comprehended from the source shown that, in overall the grand total visitors visited Sarawak has the sign of inclining and declining, it is a sign of instability. There is inconsistent of up and down in the number of visitors to Sarawak, may it be foreigners or domestic local tourists, both are facing the same destiny. The comparisons are between year 2015 to year 2019. Statistics show on Table 1.3 Breakdown of Foreign & Domestic visitors Arrival to Sarawak.

Table 1.3: Breakdown of Foreign & Domestic Visitors Arrival to Sarawak

Year	Total Foreign Visitors	Total Domestic Visitors	Grand Total
2012	2,634,715	1,434,308	**4,069,023**
2013	2,664,682	1,707,066	**4,371,748**
2014	2,995,855	1,862,012	**4,857,867**
2015	2,497,016	2,020,163	**4,517,179**
2016	2,258,656	2,402,444	**4,661,100**
2017	2,639,522	2,217,366	**4,856,888**
2018	2,112,975	2,317,946	**4,430,921**
2019	2,082,444	2,579,975	**4,662,419**

Source: Immigration Department Sarawak, (IDS, 2019)

In 2015, the grand total of visitors visited Sarawak has hit 4,517,179 with total foreigners of 2,497,016 and total domestic visitors of 2,020,163. Statistics in this year have been used as benchmark for the performance of tourism in Sarawak for this study. In these 5 years, 2017 seems to be a remarkable year for Sarawak's tourism with grand total of 4,856,888 visitors' arrival. However, this sign of improvement in tourists visited Sarawak shown an instability, it did not persist to the increment. Though the figures increased from 4,517,179 in year 2015, and 4,661,100 in year 2016; then reached the climax in 2017. In year 2018, the figures, could not even maintain but declined drastically with a fall of over 400,000 tourists. It only hit 4,430,921 tourists in 2018, likewise total foreigners visited Sarawak had reached the lowest compared to the previous 3 years with tourists of 2,112,975; statistics shown in year 2015 it was 2,497,016, in 2016 it was 2,258,656 and in 2017 it was the highest at 2,639,522 tourists. In 2019, it bounced back with the grand total visitors of 4,662,419 as compared to year 2016 (MTAC, 2020).

As for the breakdown on total foreigners received throughout these four years, year 2019 has reached the lowest compared to the past previous three years. Only 2,082,444 foreign visitors were received in 2019 as compared to 2017 of 2,639,522 visitors as highest foreign visitors received, with gap difference of more than 600,000 visitors (MTAC, 2020). All these inconsistencies are somehow alarming the industry, it should be an issue to be concerned. Efforts and resources invested seem not worthwhile, looking at the returns, when the results tend to be not promising. Should these situations persist, it is detrimental, income from the tourism industry or sector to the state government is not promising, on the other hand it also impacts the stakeholders, community, households per capita. Hence, with the current inconsistency in the visits of tourists to Sarawak ever in the last 10 years until present; the thesis to study on deployment of Digital Technologies (ICTs) to be introduced as moderator to improve the tourism performance in Sarawak seems to be handy and beneficial. The proof of figures obtained and showed in statistical presentation portrayed the true situation of Sarawak's tourism industry.

2.3 Tourism Performance

In the digital world today, everything needs to be quantified to come out with a figure to show its outcome. Data, statistics, numbers, figures, measurement are all forms of information that are quantified to present some messages that to be sent across. Under the subject of performance, it should be reflected by figures to generate and convey a message to convince and persuade the audience. Performance is none other than the key element that is used to measure, evaluate, or even been used to analyse a firm, a body, or an entity. Performance is regarded as a focal phenomenon in the discipline of management, it is also argued to one of the most predominant dependent variables in strategic management literature (Domi et al., 2018). Being the most known definition, business performance is cited as a notion that could be characterized as the 'firm's ability to create acceptable outcomes and actions' (Pfeffer & Salancik, 2003).

Performance measurement systems enable the organisations to evaluate, control, budget, motivate, promote, celebrate, learn, and improve (Behn, 2003). Thus, Organisational performance plays an important role in determining the success and achievement of an organisation (Simon et al., 2015; Migdadi et al., 2017). It determines how successful an organisation is in implementing its strategic goals (Folan et al., 2007; Hernaus et al., 2012).

In other words, an organisation can see the effectiveness of its organisational strategies by assessing organisational performance (Sloma, 1980; Tseng & Lee, 2014). Presented by Slack et al. (2001), and Slack et al. (2010), there are five types of performance objectives been distinguished: cost, flexibility, speed, dependability, and quality. Somehow, two of the five objectives are close and similarly related to efficiency and effectiveness. The flexibility and dependability are just like that effectiveness and efficiently respectively. It has frequently been argued that performance measurement is an effective approach to increase competitiveness and profitability of a company to assist organisation through support and encouragement of productivity improvements (Tangen, 2003).

Evaluation of organisational performance normally involves analysis or comparison of an organisation's actual outputs against its intended outputs (Ahmad et al., 2017). There has been vast amount of literature on performance over the last decades and the recent too (Khan & Khalique, 2014; Ho et al., 2016; Migdadi et al., 2017).

In the early years, as quoted by Szilagyi (1984), business performance reflects the results of an organization on their activities operated displayed through an overall concept. Dugrette and Stove (1993), and Wu and Lu (2012) have quoted that business performance is an index used for evaluating the level of achievement to a certain project. Regarding achievement, as quoted by Sirmon et al. (2015), Cheng and Krumwiede (2017), and Migdadi et al. (2017) organisational performance is important to measure and determine the success and achievement of an organisation, without this indicator and quantified data it makes comparison complicated.

Others like Evans et al. (1996) posited that performance is evaluated for the purpose of identifying how effective an organization manage its resources and achieving it goals. As defined by Neely et al. (1995), and Neely et al. (2005), performance measurement is a process of quantifying action, whereas the measurement is the process of quantification and action that correlates with performance and further proposed that performance to include efficiency and effectiveness of action. Those were some definitions and purposes of performance, and the essence are not changed over times even in the progression of advancement in technology.

As mentioned by Ahmad et al. (2017), business performance is an analysis or comparison of an operation's output against its prospected outputs; hence, evaluation is taken place to assess success. Success in interpreted by how strategic goals are achieved through implementation in an operation (Folan et al., 2007; Hernaus et al., 2012; Williams et al., 2019). However, in getting of performance measured seems to be a hurdle as there has been a lack of agreement on which performance measures best represent organisational performance (Richard et al., 2009; Silvestro, 2014; Vij & Bedi, 2016).

As debated by Sainaghi et al. (2017), there is dearth of literature studies on performance measurement purely in hospitality and tourism industry, because of the complexity of business, intangibility, hefty capital investment and sensitive production process, customers being part of service and production processes, the importance of location or labour factors, high vulnerability to the external environment that made the characteristic unique.

In the context of an organisation, organisational performance used by firm to indicate its company's performance; in the context of tourism, the performance is reflected by the industry. Therefore, effectiveness of an organisation's strategies could be assessed by organisational performance; yet tourism performance is then used to assess the tourism industry (Sloma, 1980; Sloma, 1999; Kruger & Johnson, 2011; Tseng & Lee, 2014). In other more common terminology, it is known as business performance. Business performance is a measurement towards a business operation. Business performance in general being measured with two different variables, namely non-financial performance, and financial performance. In the sub-sections, financial and non-financial performances will be discussed respectively.

In general, financial measures are adopted to evaluate performance of an operation for entrepreneurs who are operating their homestay businesses; apparently, these measures been commonly used to measure organisational performance (Tangen, 2004; Carter & Greer, 2013). But it was argued by Kaplan and Norton (1992, 1995, 1996a, 1996b, 2001) that financial performance measures are insufficient to capture an organisation's success and as a result balanced scorecard (BSC) model is introduced by them for measuring organisational performance. This model measures the performance of an organisation from four dimensional, namely financial performance, internal business processes, customer, and innovative and learning.

A thorough and comprehensive performance measurement should be able to evaluate the ability of an organisation is capable to meet future goals other than only on its accomplishments (Lin, 2005; Tseng & Lee, 2014). Value is the point stressed on by Joshi et al. (2014), suggested that financial performance capable of accurately assessing and reflecting value realisation over examining the value creation activities. Hence, a comprehensive study on financial and non-financial performance measurements are required. This idea is also posited by Altin, Koseoglu, Yu, and Riasi (2018) that usually, a distinction should be made between quantitative and qualitative criteria, and financial and non-financial forms of measurement to address the traditional biased focus on quantitative financial measures while emphasizing more balanced measurement that includes non-financial values.

Besides, financial performance measures, performance evaluations should focus on product market performance and shareholder return (Richard et al., 2009) to reflect a more thorough picture of performance. Later, as it evolves, experts debated that organisational performance embraces a wide range of performance assessments, should not concern only on single measure, it is said to be an extensive and complex concept; so, should include both financial and non-financial performance (Prieto & Revilla, 2006). This concept has also been supported by Tseng and Lee (2014) that many operations are found being assessed financially and non-financially by their organisations in recent years.

According to Richard et al. (2009), and Ruíz et al. (2017), there are two approaches for measuring performance, it could be objective or subjective measures. Objective performance measures are where the organisational outcomes are not affected by any individual's personal judgements or perceptions of performance, as for subjective performance measures, it is the opposite, it is referring to any individual's personal judgements or perceptions of performance (Wall et al., 2004; Vij & Bedi, 2016). Subjective performance measures are commonly used than objective performance measures due to the availability of objective performance measures are often not available or it is difficult to obtain among the smaller-scale industries such as SMEs, and in this context the homestay operators (Ho et al., 2016; Singh & Gupta, 2016; Sisay et al., 2017). With reference to the discussions above, so subjective financial and non-financial performance measures are used to assess the rural tourism performance for the homestay operations.

In the previous discussions, all those have discussed are for general, it is applicable across the board to various industries. However, in this thesis it is the tourism industry that it is discussed and researched on. Sainaghi (2010) has mentioned that particularly in this tourism industry, it has been attracting researchers and practitioners from tourism industry to tempt them to measure the business performance in this industry-specific context. It is a shame that not many studies on performance measurement in the tourism industry had carried out though there are more studies done for other industries (Nuntsu et al., 2004; Yılmaz & Bitici, 2006; Leiper et al., 2011; Sainaghi et al., 2017). Hence, this thesis focuses on performance measurement specifically in tourism industry, as part of the objective of the research.

In the industry of tourism and travel, it has been formed with diverse businesses that offers various services to tourists. Those businesses are none other than accommodation business, transportation business, tour operators and travel agencies, tourism promotion and advertisement businesses, businesses involved travel insurance and finance, local eateries and delicacies caterers (food and beverage businesses), entertainment businesses (concerts, theatres and shows management, gaming business, marathon event), nature parks/ national parks/ zoos (conservation sanctuary), convention and meeting organising businesses, translation/ interpretation and guiding services, business that ventured into souvenirs and handicrafts, business that produce and sell travel goods (Uriely et al., 2002; Kim et al., 2012; Reichenberger & Iaquinto, 2021)

Before, further explaining on the performance measurement mechanism on small business in tourism industry, a criterion of defining small business is needed to be clarified. The author of the thesis has borrowed Thomas, Friel, Jameson and Parsons (1997)'s definition in defining small business, as 'one which employs fewer than 50 people. This represents a conflation of the European Commission's very small (or micro) enterprises (fewer than 10 employees) and small enterprises (between 10 and 49 employees)'. Another support backed from a different geographical location, in Turkey size of the businesses is recognized by its number of employees for identification of measure purpose (Arslan, 2003). Thomas et al. (1997) definition is employed and looking at the fact that largest part of the tourism industry is represented by small businesses (Morrison, 1996; Tamu & Tsot, 1999; Main, 2001). Areas of research is for this thesis is focusing on homestay operators, that is the accommodation business catered by the residents and this has made it possible to capture and represent one of large proportion of tourism business within the scope of study. As mentioned by Getz and Carlsen (2000), to measure business performance in this tourism industry there are possibly various tools offered as stated in literature and in this industry, there are special features that been indicated and differentiated them from measures in other sectors and industries. Hence, there is reason to focus on to further discuss on the performance measures.

It is direct to recognize the characteristics of the tourism industry, it comprises intangibility, perishability, interdependence, service quality, heterogeneity, inseparability of production and consumption, imprecise standards, short distribution channel, reliability and consistency, face to face interaction and information exchange, participation of customer in production process of the product, and fluctuating demand should all be reflected in the measurement process. Researchers have stressed on the acknowledgement of differences between industries and the characteristics of the industry in which the venture operates need to be considered when measuring performance is concerned (Chrisman et al., 1998).

Due to the characteristics unique to the industry for tourism, so the measures of performance need to be thorough as all-rounder (Getz & Carlsen, 2000). This statement could be explained by the example when past researchers argued that it was recommended to adopt non-financial performance measures knowing that tourism operations are labour intensive and customer oriented, depending solely on financial measures could not be sufficient (Law et al., 1995; Lin, 2005; Joshi et al., 2014; Altin et al., 2018). Cho, Woods, Jang, and Erdem (2006), and Karatepe (2013) stressed that business performance is indeed a complex and multi-dimensional concept.

By focusing on specific area like employee turnover rates or profit margin is not sufficient to represent overall picture. By having said that, rely on few measures to explain the overall complete and comprehensive understanding of performance is somehow under presenting the actual performance. Thus, to get a more comprehensive understanding of performance, more performance measures should be used. Suggested measures like profitability measures like return on equity and return on asset (Kim & Kim, 2005; So et al., 2013), argued on bedroom occupancy rate, annual revenue, break-even point and guest satisfaction (Morrison & Teixeira, 2004; Shaw, 2014), the numbers of customers served in a certain time period, average spending by customers, trends in turnover and expectations in these indicators in the following year (Page et al., 1999; Pike & Page, 2014; Saaidin & Latif, 2020) and occupancy percentages (O¨ktem, 2001).

These are the primary business performance measures that been adopted in literature. Besides the characteristics of the industry, certain industries have industry-specific points that require different measures since it is meant to have different view in measuring performance. As quoted by Lynch (1998), Thomas et al. (2011), Dian et al. (2018), they have mentioned that due to industry, certain performance measures even need to consider idiosyncrasies like job generating for family members, achieving lifestyle goals, improving, and enriching social life and personal income. In the context of tourism industry, Fick, and Ritchie (1991), and Chen and Chen (2010) quoted that in the travel industry, it is essential using both measures of objective and subjective measures would allow managers to collect information on factors that cannot be measured objectively.

It seems there are other researchers at the later years also agreed upon on this point, as and Anderson and Fornell (2000), and Lerner and Haber (2001) also mentioned on customer satisfaction is important as far as performance measures is concerned. Customer satisfaction, emotional and other holistic aspects would eventually be factoring service quality and tourist experience. In addition, since the nature of the products offered in tourism industry is an intangible experience, Reichel and Haber (2005), and Lado-Sestayo et al. (2016) have argued that subjective performance measures with objective indicators are important. This argument seems to be complementing on point brought up by Fick and Ritchie (1991) earlier. In short, this study focuses on homestay operation in accommodation industry in rural tourism which has the nature like ordinary organisation. It needs to study as thorough as all-rounder from financial and non-financial aspects. Hence, tourism performance is none other than organizational performance.

2.3.1 Types of Performance Measurements

Performance is fairly a broad concept with definitions differ according to user's perspective and context (Lebas, 1995; Franco - Santos et al., 2007; Bititci et al., 2012). Conventionally, the accounting terms have more commonly used to measure performance (Conant et al., 1990; Jennings & Seaman, 1994; Mat et al., 2021). It is always challenging when comes to business performance measurement, particularly to a small firm. It is difficult to define key performance dimensions, as quoted from scholars (Hudson et al., 2001; Garengo et al., 2005; Richard et al., 2009; Silvestro, 2014; Vij & Bedi, 2016). Besides, the challenge also involves establishing a business, faces uncertainty, lacking resources and stability; those are the characteristics of small ventures like homestay operators (Ho et al., 2016; Singh & Gupta, 2016; Sisay et al., 2017).

Thus, all these have caused researchers to explore survival as the dimension of success (Van de Ven et al., 1984; Folan et al., 2007; Hernaus et al., 2012; Simon et al., 2015; Migdadi et al., 2017). Kalleberg and Leicht (1991) have viewed differently, they identified success and survival as different aspects of business performance, and each of them is determined by different factors. Hence, it is important to conduct a measurement to a firm's operation in evaluating its performance. Apart from its functions, Birley and Westhead (1990), Kalleberg and Leicht (1991), and Westhead, Wright and Ucbasaran (2001) have also commented that knowing the complexity of evaluating business performance; multiple measures of performance are recommended and suggested to be used. Cameron (1986), and

Smith and Lewis (2011) have noted that measurement of achievement is problematic, noting that it is very difficult in defining effectiveness and performance, the performance of an organisation or operation cannot be determined without a measurement activity (Sainaghi et al., 2017).

First, performance measurement needed to be defined as thorough and as comprehensive as possible. According to Neely et al. (1995), and Neely et al. (2005), performance measurement is defined as the process of quantifying the efficiency and effectiveness of action, whereas a performance measure is the metric used in the measurement process. Performances were reflected with discussions and measurements of firm's financial outcomes in the early days. In the last 25 years, the revolution in performance management and measurement has changed the approach (Neely & Bourne, 2000).

Most of the approached have switched from relying solely on financial results to a more integrated systems that combine financial and non-financial results. This situation has been pointed out by Hoque (2005) mentioning that performance measurements are driven by today's changing business environment, therefore, the conventional measures has become a shortcoming where actual performance is not reflected. So, advised that the present and future researchers be aware of the application of non-financial performance measures is essential. In addition, scholars from the accounting field have also suggested that particularly in service sector, non-financial performance measurements should be considered (Fitzgerald et al., 1991; Kaplan & Norton, 1992).

Among the earliest likes Venkatraman and Ramaujam (1987) had proposed three perspectives for performance evaluation, namely (1) financial performance, emphasizes on profit gain rate; (2) enterprise performance, emphasizes on the sum of financial performance and operation performance, includes market share; (3) organisation performance, includes both previous perspectives and conflict resolution, i.e., improving employee morale.

Different school of thought, it goes with the other performance measurement concept proposed by Kaplan and Norton (1996a, 1996b, 2004) with their Balance Scored Card (BSC) that covering both financial and non-financial aspects. BSC divides performance measurement into four perspectives but different from the Barney (2002) concept, it comprises (1) financial; (2) customer; (3) internal process and (4) learning and growth. The BSC is said to be measuring performance not only from the traditional financial perspectives to evaluate tangible assets but also from the non-financial perspectives in evaluating the intangible assets and intellectual aspect. As supported by Pinero (2002), it seems to be an evaluation of completeness, an all-rounder, covering overall performance evaluation system.

2.3.2 Financial Performance Measurement

It has been a normal practice to almost all the organisations in using financial measurement to evaluate a firm's performance. It is mainly because those financial measures are simple, and direct, easy to interpret and compute. Ever since 1900s, it has traditionally been used and employed extensively in any studies of performance. Financial performance is interpreted as a tool or measure used to evaluate the strength of an organisation financially over a period, so financial performance involves a specific time frame (Horngren et al., 2012; Ho et al., 2016). It helps to indicate how successful or how badly an operation or an organisation in achieving it status financially in a more general explanation (Lin & Jang, 2008). The goal for financial performance to be taken place is to present on the measurement of results on how effective an organisation has executed its strategies in monetary terms, and how rewarding it is in gaining back the returns from its initial investments (Rašula et al., 2012; Migdadi et al., 2017).

According to literature, there are various measurements for financial performance, the simplest concept of performance referring to profit, costs, and market share (Latinen, 2002). The commonly used financial performance measures are profitability or revenues, net profit margin, sales, return on assets (ROA), and return on investment (ROI) (Smith et al., 1987; Duchesneau & Gartner, 1990; Barney, 1997; Kean et al., 1998; Richard, 2000; Wang et al, 2004; Gorgievski et al., 2011; Joshi et al., 2014). To determine an organisation's financial health, decision makers often used financial stability and growth in their financial performance measures (Simon et al., 2015).

Financial stability is referred to the liquidity aspect; it is concerned on cash flow (Simon et al., 2010). Besides, other commonly used financial measures are return on equity (ROE), increased share price, gross and net profit margin (Hill et al., 2007). Hence, objective financial measurement seems to the simplest way in evaluating performance, although these dates are sometimes confidential and resisted to be provided by the respondents (Sapienza et al., 1988; Brush & Wanderwerf 1992; Sapienza & Grimm, 1997). Besides, Covin and Slevin (1989) commented that small firms are normally unable and unwilling to provide desired information as requested.

Most of the time, these objective financial data are not publicly available and obtainable, this indeed has made it difficult or even impossible to check the accuracy of the reported figures. Unlike those public listed organisations, accounts are all been audited and publicly announce to the stakeholders, accuracy of the performance is precisely reported accordingly. Therefore, these are the shortcomings for adopting solely on financial performance measurements to evaluate an organisation.

Also mentioned by Covin and Slevin (1989), its industry-specific factors that influence the scores on financial performance criteria. In comparing the objective financial data obtained from a small firm in different industries could be misleading. Therefore, it is more flexible and practical to compare a multi-industry in term of subjective measures as it is not as rigid as just comparing figures and numbers. Hence, to overcome the data availability and accuracy issues that associated with financial measures; broad subjective categories adopted to complement the measurement in a more thorough and comprehensive manner (Begley & Boyd 1987; Sandberg & Hofer, 1987; Covin & Slevin 1989; Kunkel & Hofer 1993).

Research supported vast number of evidence in support to validating the subjective performance measures and backed with considerable reliability for the measures (Venkatraman & Ramanujam, 1987; Brush & Wanderwerf, 1992; Pnevmatikoudi & Stavrinoudis, 2016; Sainaghi et al., 2017). As such, researchers strongly suggested that hospitality industry indicators should include financial and non-financial perspectives. However, though the precision for subjective measure somehow needs to be compromised; such measures are anchored to objectively defined performance criteria and present to be content-valid and reliable (Chandler & Hanks, 1993).

As quoted by Govindrajan (1988), and Naman and Slevin (1993), the application of both measures been conducted at the same time will also serve as corroboration purposes and permits the evaluation of inter method reliability. Though it is not counter check with other, it gives a more thorough and picture of the performance measured.

As for this study, the financial performance has focused on measures on return on assets (ROA), sales growth, cost of production, profitability, and productivity level are all being referred to, and posited by Prieto and Revilla (2006). ROA is a ratio used to determine an organisation's utilisation of its assets to generate profits (Kabajeh et al., 2012). Sales growth is used to determine the sales of products or services of an organisation have been increased over a fixed period (Barbera & Hasso, 2013; Çoban, 2014). Cost of production is referred to a result of a reduction in costs of goods in relation to the improved productivity or removal or elimination of unwarranted expenses of an organisation (Akeem, 2017). Profitability is defined as the ability of making profit by an organisation (Sivathaasan et al., 2013; Tulsian, 2014); in other words, profit orientation is the goal for every organisation to run business. Productivity level is a ratio comprises of measurements of volume of outputs produced against the volume of inputs used, it is used to visualise how efficiently an organisation has utilised it inputs in generating its outputs in the production process (Linna et al., 2010; Quinn, 2018).

2.3.3 Non-Financial Performance Measurement

As argued by Sink and Tuttle (1989), and Hudson, Smart and Bourne (2001) that performance should not be restricted only from financial perspectives for a comprehensive picture to a firm or industry, non-financial indicators (customer satisfaction, employee satisfaction etc) should also be considered. Avci et al. (2011) also supported and quoted such an ideology. Phillips (1996) had his perspective to adopt multi-dimensional approach in evaluating performances in hotels since late 90s, later been supported by Reichel and Haber (2005) of the three dimensions, namely (1) effectiveness; (2) efficiency and (3) adaptability.

It has been quoted by Prieto and Revilla (2006), in general non-financial performance seems to be no intrinsic value to companies' directors. It is said financial performance measurement is still to be used primarily as a leading indicator of and applied to be for future financial performance in which is not contained in contemporary accounting measures. However, they mentioned that non-financial performance is required to determine whether it can secure future financial success. This set of measurement is crucial in a way that it is used to evaluate and secure its long-term objective, for instances future revenue and competitive advantage (Anderson & Fornell, 2000; Joshi et al., 2014; Ho et al., 2016). In addition, it could also be used to measure on customer loyalty, growth, and positive long-term reputation of an organisation (Blazevic & Lievens, 2004; Chen et al., 2009).

There have been a lot of concerns and studies on non-financial performance measures towards an organisation's performance (Ho et al., 2016). In general, non-financial performance emphasizes on key six measures, namely customer satisfaction, customer retention, employee satisfaction, teamwork, quality, and safety (Sirmon et al., 2015). Fuentes et al. (2015) have their measures developed with three key measures: product or service quality, customers satisfaction, and employee satisfaction. Goh et al. (2012) have posited their key measures: innovation, efficiency, and job satisfaction. Cegarra-Navarro et al. (2016) have identified their own seven measures, better service quality, improved internal processes, more efficient use of resources, better customer satisfaction, faster customer service, less employee turnover and absenteeism. Rodríguez Antón et al. (2016) have their own measures on non-financial performance metrics, such as customer satisfaction, meeting work deadlines, quality of work, and productivity. These are the examples quoted based on literature collected. In the business world of trades and profit-oriented organisations, nothing could be running away from being assessed and evaluated. Financial measures have been there as a tool or instrument to measure business performance in a traditional mindset. The conventional approach of business performance systems to exist is mainly for monitoring and maintaining organisational control purpose. By attaining a set number of key financial and accounting measures, measurement focuses on financial data likes return on investment, return on sales, price variances, and sales per employee, productivity, and profit per unit of production (Ghalayini & Noble, 1996; Bakotić, 2016). Whereas, for non-financial or operational results are measured by product and service output. Results are presented in terms, and messages conveyed such as quality, quantity, volume, time, ease of use and money (cost, price, and value).

Liu, Wu, Xu, and Chen (2021) also argue that traditional performance measures could not provide information for the development of strategy. For instance, improvement efforts cannot be quantified in monetary terms when it is concerns on customer satisfaction and product or service quality related matters. Also backed by Maskell (1991), Ghalayini et al. (1997), and Kaplan and Cooper (1998), limitations of the conventional financial measures have been identified and documented. Therefore, it is safe to comment that it is somewhat an irrational behaviour for companies to primarily still relying on and adopting the traditional cost-related performance measures.

As time lapsed, era changed and things evolved, it is necessary for firms to investigate on non-financial aspects (quality, flexibility and making use of new technologies) to be competitive. Ross et al. (1993) debated that adopting financial measures to assess business performance has become a normal practice, but there is no completely unambiguous way of assessing a company’s profitability. His argument is that many businesses are trading off current and future profits. The common measures are as follow:

a. Profit margins (Return on sales)

   This measure indicates how well a company could withstand competition and adverse rising costs, falling price or declining sales in future (Ross et al., 1993).

b. Return on assets (ROA)

   This ratio is borrowed from DuPont analysis, it was developed by E.I. du Pont de Nemours in 1919 - Dupont (1919) and it is the mostly used models in performance measurements (Zairi, 1994). This measure portrays how efficient company's assets are being used, in other words how efficiently profits are generated from current assets. But this measurement lacking in indicating the performance of company to stockholders.

c. Return on equity.

   This measures the income generated those stockholders get from their initial investment. These measurements are to provide a general idea on how accounting financial and those non-financial performance have given indications to business performance.

As for this study, non-financial performance is measured adopting measures developed by Prieto and Revilla (2006). There are five key areas been identified to define non-financial performance: customer satisfaction, customer growth, employee satisfaction, product and service quality, and organisational reputation.

Customer satisfaction is referred to the extent to which the customers are satisfied with an organisation's products or services offered. It is very important to assess customer satisfaction for retaining customers and to ensure returning customers from purchasing of products or services. From a marketing discipline, researchers have identified that there is a strong positive link of customer satisfaction, market share and profitability (Capon et al., 1990; Anderson et al., 1994; Anderson & Fornell, 2000). The explanation is as such, customers' satisfaction simply leads to purchase and repurchase of a product or service. It directly affects the purchasing behaviour of customers by either more frequently buying or buying in a bigger quantity that offered by the company. Consistency is the key, by consistently satisfying customers through products and services would somehow reducing failure cost and increase financial performance. On top of the new customers, the returning customers will eventually boost the customers growth in the long run. That will achieve customer growth.

Employee satisfaction is the satisfaction level of the employees towards their job or task. Employees with a higher level of job satisfaction tend to be more productive and efficient (Harter et al., 2002; Sashi, 2012). Likewise, as quoted by Kov (2001), and Rich et al. (2010), company's economic returns are substantially factored by employee satisfaction as it is impacting efficiency and productivity. In addition, cost of attracting new customers or employees seem to work opposite direction with the reputation of an organisation. It means the more popular the products or services, the lighter the efforts to promote to new customers or employees. In the long run, non-financial performance is a precedent of a financial performance in the long run (Prieto & Revilla, 2006; Kavalić et al., 2021; Latifah & Jati, 2021). Customer and employees' satisfaction play a role in non-financial performance. Product and service quality is the core value of business and deemed to have an important role in determining the success of a business. In a manufacturing industry it is benchmarked to be the defect level of a product or service experienced by the customers (Prahalad & Ramaswamy, 2004).

Last but not the least, the final measure of non-financial performance is organisational reputation, this enables an organisation to increase acceptance level of its customers towards new products and services, it is the rapport of a business. It helps to gain competitive advantage in developing or maintaining a clientele-relationship with suppliers, distributors or between consumers and supplier (Anderson et al., 1994; Viana et al., 2021).

In conclusion, after reviews on literature, it marks the trend that from solely financial and intangible variables to a combination of adoptions of financial, tangible, non-financial and intangible measures as the most appropriate way in evaluating business performance (Neely & Bourne, 2000; Amhalhal et al., 2021; Mitrea-Curpanaru, 2021). In the context of small business operation in tourism industry, distinguishing the characteristics of small businesses are concerned. This seems to be a more holistic approach to cover all the necessary aspects (Bergin-Seers, 2007; Oyewobi et al., 2015).

As argued by past scholars, financial measures should not be the only indicators of business performance, reason being that personal abilities and motivations of an entrepreneur is decisive towards whether business owners want to expand and enlarge their firms or maintain as it is to current scale according to ability and comfortability (Avci et al., 2011). Meaning to say, financial gain is not the only and primary factor or source of motivation for a micro entrepreneur. So, it is not accurately and relevantly indicated by business performance via a financial measure. Besides, researchers also quoted those measures like self-fulfilment, goal achievement, pride in the job and flexible lifestyle should be considered (Buttner & Moore, 1997; Walker & Brown, 2004; Akbaba, 2012). In support for adoption on financial and non-financial measures to evaluate business performance at the same time, Naman and Slevin (1993), and Oliveira, Santos, Gomes, Sousa, and Lopes (2021) have emphasized on using both objective and subjective performance**.**

2.4 Tourism Factors and Its Impacts to Rural Tourism Performance

Conventionally, in the context of tourism industry and by referring to the tourism development; the three impact factors that come into the picture are always relate to economic, social, or socio-cultural and environmental dimensions (Mowforth & Munt, 1998; Mowforth & Munt, 2015; Agyeiwaah & Bangwayo-Skeete, 2021; Bakker, 2021). This research framework is backed by the literature, the three impact factors are adopted to this framework is according to the traditional dimensions quoted by past researchers. Besides, Hunter (1995), and Fennell (2020) had also mentioned in his seminal work highlighting the importance of these three factors that impacting tourism development in short or long-term. In addition, another literature review derived, is from Amelung (2006), and Nikerson et al. (2011) have mentioned in analysing specific tourism sector and its development attention need to be focused on the four main impact factors, namely economic, environmental, social and cultural (in this research, social and cultural is combined as one factor). On the other hand, World Tourism Organisation (2015), has also emphasized that for tourism development to be sustainable, the main three key pillars are crucial in playing their roles. The three pillars as quoted by WTO are environmental, economic, and social factors. Beside the above mentioned, in the theories underpinning section, it will further discuss how the governing theories provide further explanations on the framework. Nevertheless, each of the impact factors come with indicators or also known as variables. Indicators are defined by OECD (1997), and Álvarez-García et al. (2018) as a quantitative account of a complex situation or process. It provides information in a simplified, numerical, and communicative form (Peterson, 1997; Choi & Turk, 2011).

2.4.1 Economic Factor

A stable economy is always supplementing with safe and harmony society and atmosphere. According to Johnson and Thomas (1992), Petrevska (2013), and Akpomera and Agbehado (2021), tourism demand analysis is always at interest from different parties.

From the public policymakers, they are into determining the trends and the determinants for the interest of generating more incomes by assessing the contribution of the tourism industry to the economic welfare and ensuring that resources are efficiently used. Other parties who will involve in tourism demand analysis will be management of commercial tourism sector and local government. They have strong interest in demand-supply interaction since marketing decisions and the strategic planning are profit-generators that directly impact the outcome. All these planning require knowledge on factors that will affect destination choice, trips, and forecasts of tourist flows in short and long term (Khalifa & Al-Kadi, 2020). Hence, as mentioned by Witt and Witt (1995), and Song and Witt (2012), the objective of tourism demand studies is for the improvement of forecasting and understanding travel behaviour.

In the general environment of tourism, there are several models of tourism system as proposed by scholars (Leiper, 1979; Mill & Morrison, 1985; Gunn, 1994; Gunn & Var, 2020). In a more rigid and direct explanation, tourism system consists of an origin and a destination. The origin refers to the demand-side of tourism, where that region is the one that generating visitors whereas for the supply-side, in contrast it is the destination where it attracts visitors. Nikerson et al. (2011) have stated that out of the four factors that affecting tourism sector and its development, economics factors have the greatest influence on this industry.

Standing from the economic factor point of view by a nation's economy, tourism industry has always been a favoured option to boost a country's economy, regardless it is a developing or a developed country. According to World Travel and Tourism Council (2008), tourism indeed is the world's biggest industry which can contribute of USD 10,855 billion in year 2018 to the global GDP. Foreign exchange generated from tourism with making use of the nation's natural resources (attractions) has attracted the influx of tourists from different continents of the world to the country through this industry or sector is infinite in potential. Another source of proof from the Malaysian government was mentioned in Husin and Kunjumaran's (2014), and Zahari, Hanafiah, Akbar and Zain's (2020) study that the government realised rural tourism could also contribute to the country's economy besides urban development. It is reflected that economic factor has impact vice versa.

Economic factor undeniably has an impact on the tourism demand or in another words it affects tourism performance in fundamental. It is widely agreeable that rural tourism being a multidimensional branch of tourism in relation to natural attractions and human connections in which eventually plays a role in contributing to local community and country's economy (McDonald & Jolliffe, 2003; Kastenholz et al., 2012; Hall et al., 2017; Fang, 2020). It is the benefits that has impacted tourism performance, according to Knetsch and Var (1976), and Surugiu et al. (2012) there are two types of benefits that brought to economy by tourism, namely primary benefits, in which it is welfare gain accruing to the visitors, and secondly the benefits that derived from the actual expenditure by tourists. The fundamental concept is stressing on the impact of any expenditure on the domestic economy.

The round of spending direct impacted the domestic economy, general turnover increases, jobs opportunity being created, and residents' personal income rise. Persists with situation, the following rounds of spending spread transactions through economy when business and respective households re-spend some of the incomes earned directly or indirectly from tourism within the same location. As such, tourist expenditure has created impact on the domestic economy in three ways, direct expenditure (spending from visitors on goods and services provided by hotels, retail outlets, restaurants, entertainment centres and other tourist-related facilities), indirect expenditure (following rounds of business transactions in relations to direct expenditures) and induced expenditure (the spending of income earner from tourism-related activities).

As stated by Filiposki, Ackovska, Petroska-Angelovska and Metodieski, (2016) job opportunity and revenues have been created by economic at various levels, for instance local levels, regional, national, and international. Hassan and Hossain, (2021) quoted that the impact of tourism has a positive and significant impact on economic growth, with every 1% increase in tourist arrivals leading to a 0.12% increase in GDP, above scenario shows how economic is impacted through tourism.

The effect that brought by tourism, the benefits that channelled by tourism to communities have frequently been discussed but most of the time the definition and measurement been overlooked and not been focused on, or on why particular kinds of matter for conservation been carried out.

Benefits from tourism is defined by Campbell (1999), Gossling (1999), Wunder (1999), Wunder (2000), and Walpole and Goodwin (2001) as primarily economics, that is measurable as new employment or cash income. Agrawal and Redford (2006), Coria and

Calfucura (2012), and Agrawal and Redford (2013) commented that generation of local jobs, incomes were the indicators of success to tourism. Langholz (1999), and Stronza and Gordillo (2008) have argued that benefits of income generated from ecotourism has the impact of minimize or eliminate the activities like exploiting natural resources, for instance to go for commercialised agriculture, logging and setting up cattle ranching. This is another form of benefit gain from tourism under a win-win situation. In addition, UNESCAP (2005) reported that local communities regardless of rich, descent or poor, all have equal opportunities to earn additional incomes from tourism by selling products or rendering services directly to tourists.

Besides, Bookbinder et al. (1998), and Brechin et al. (2012) also considered benefits as from economics, they concluded ecotourism in general does not cater sufficient support for the goal of conservation. Hence, economic benefits are important, it even paramount to success in the context of tourism; non-economically, it creates chances for conservation. In conservation, it requires new skills, experiences in human resources management, projects management, and negotiation skills with outsiders, even polish up capability to gain support from community and the circles of contacts. Another evidence, quotation from Thongma et al. (2011), and Ertuna and Kirbas (2012) had mentioned that participation and active involvement of local community to the tourism development is mandatory to sustain and enhance the overall welfare in the community. In order, to have the persistent involvement from community, a role to mingle around and to maintain good rapport with community to be a requirement to fulfil. This is indeed benefits that been characterised as community empowerment (Scheyvens, 1999; Scheyvens, 2012; Fennell, 2014; Sharpley & Telfer, 2015). It is very much required whenever a project or campaign is run by government bodies or officials.

According to Fleming and Toepper (1990), and Getz and Page (2019) there is a need to study on the economics factor and its impacts. Many nations, states and local communities have intensified their tourism development efforts due to the potential economic benefits of increased travel. In the regional recession time that factored by socio-political has caused budget deficits in certain states or nations. Tourism acts as an economic alternative to traditional industries (e.g., manufacturing, agriculture) has demonstrated favourable results. With this industry, it has brought positive economic impacts by increasing budgets of many of the organisations results from the lure of visitors to the state. Budgets been allocated by state travel and tourism agencies for primarily promotional purposes. As an outcome, these budgets help to grow and gain exposure and scrutiny from legislators and their constituencies. Effect from a softening economy, it leads to reductions in promotional budgets and decrease in advertising in the private sector. From this situation, it motivates managers to maximise the return for investment and substantiate it. Though in good times when there is economic growth, the managers from the private sectors are accountable for their budgets and results. Economic impacts not only been used as an indicator to tourism performance, but there are backed with reasons and uses. It could be performed as an indicator to an assessment of tourism industry.

Directors of state travel offices, areas and regional travel organisations, city/ district visitors and convention bureaus are the groups of people that use economics impact studies in the form of expenditure, payroll income, jobs, and taxes to assess impact with the purpose to educate legislators, economic development officials, and public about the current condition. The studies on economics impact are playing an important role to policy making and programme planning to both public and private sectors in goals and objective setting. With the information derived from the studies, it enables travel agents and tourism developers in determining the feasibility and test its effectiveness of the destination and its by-products like transportations, accommodations, entertainments, and recreational facilities. Besides, it is also a good indicator for measuring costs and benefits of the travel and tourism destinations and activities.

Apart from being used traditionally to measure the direct impacts, the use of study on the economic impacts explored to analysing total impacts including direct, indirect, and induced impacts of traveller spending on economy. In-depth analyses performed could also portray the industrial linkages within economy and other related industrial activities effect on economy. There could be rounds and rounds of spending within a community, when in one industrial sector’s activity is traced through these spending. On top of that, industrial linkages within an economy could also demonstrate how well it is as a self-sufficient economy, shall there are gaps in the structure of an economy exist and identify on different activities which spending are generated the most or the least.

Finally, these economic impacts could also be adopted and used as forecast and econometric simulation of travel impacts. Forecasting models are used to predict the upcoming direction on travel impacts with past trends and events; nonetheless, predictions on social and economic forces with current trends within related industries. Hence, it is highly useful as tools for long-term planning, strategize marketing strategies and policy analysis. With reference to the classical economic theory, quantity of a good or service demanded in a trading of business is a function of price, income of consumer, prices of related goods and personal preferences of consumers (this is more an element of an individual or personal tastes). Hence, in an economics standpoint, the theory of demand has included the variables as price and income. Factors affecting price and income are key roles in influencing the demand for tourism. As embedded in theory of economics, potential demand determinants in unlimited, meaning to say any factors are possible to affect demand of tourism.

In general, these factors could be categorized into three types of demand determinants, namely exogenous determinants (business environment), social-psychological determinants and economic determinants (Uysal, 1998; Hall & Page, 2014). In this study, the economics determinants are the economics factors that are going to be discussed on. Economics factors are one of the variables out of the three variables discussed in this study. Economics factors are going to contribute to tourism performance of the nation, the states and even the destinations. As commented by Ray et al. (2012), and Nadotti and Vannoni (2019), most occurring economic variables affecting tourism demand are income levels, population, relative prices, exchange rates and travel costs. Later, he also quoted few more important determinants, such as promotion, common language, accommodation capacity, carrying capacity and degree of urbanization. Besides, Armstrong (1972), Schulmeister (1979), and Song et al. (2019) have also mentioned those variables which are similar. Due to the limitation to involve in relating the volume of demand with all the variables at once, as a result only a selection of most influential variables is used as determinants of demand for tourism. In short, the justification for tourism development to be taken place is the potential for positive economic impacts and enable tourism to flourish across the world due to anticipated benefit (WTTC, 2020). With reference made to the World Travel and Tourism Council (WTTC, 2012), tourism has generated 254 to 260 million jobs (about 9.1 per cent of gross domestic product), and 8 per cent of the total employment of the global tourism activity.

2.4.1.1 Income

Income has been the most common and popular variable to be referred to as a benchmark by tourists to explain and determine tourism demand especially under economics factor. It is quoted by Lim (1997), and Song and Li (2008) that the income in the origin country is the most frequently use explanatory variable through her studies from one hundred of published tourism studies. In the context of the thesis, it is discussing on the economics factors of the destination rather than the effect of income on the origin country (visitors generating country). Thus, the limelight is focuses on the destination's income level instead.

There is no doubt that it is rationale to say changes in consumer income can affect changes in the demand for goods and services, Likewise, changes to the income of the residents in the destination country may also affect the purchasing power of the consumers. Increase in real income of consumers with enable greater purchasing power but increase in real income to the residents in the destination will increase the price of the goods and services. In other words, it is a chain effect to cost of living in the destination. Real per capita income of tourists generating countries is commonly used in tourism demand functions (Archer, 1980; Uysal & Crompton, 1984; Carey 1991; Moshirian 1993; Crouch, 1994; Song et al., 2010). Income will also reflect the living cost of the destination, greater income obtained by the residents in destination will lead to increase in price of goods and services. For definite, this scenario will affect the decision of the tourists to travel. This affects the private consumption of tourists as quoted by Witt (1980), Quayson and Var (1982), Summary (1987), and Canina and Carvell (2005). Since, Kim and Kim (1996), and Nara et al. (2014) have also argued that form of income should be adjusted to accommodate different tourism context. It does play a role to influence the tourists in term of private consumption or personal disposable income.

2.4.1.2 Price

Under this dimension of economics factor, price is an absolute important variable in determining a destination's economics factors to influence its destination's tourism simply because that it reflects another dimension of purchasing power. Reference made to Martin and Witt (1987), Song and Witt (2012), and Song et al. (2019), price has two elements, cost of travel to the destinations and the cost of living for the tourists in the destinations. Though, both influence the intensity of travel flows and the amount of demand for the destination. In this context, the author is referring to the latter as it creates a situation that the destination's cost of living becomes an advantage to attract more visitors when it is viewed from the economics factor's dimension. The latter is cost of living at the destination where it stands for the price of tourist goods and services in the destination. Under the relative price or tourism prices, it is referring to things like accommodation, local transportation, food, and entertainment. Nevertheless, it is closely related to the effect of exchange rate variations in purchasing power in which it will be discussed on later section. In a simple explanation, tourists will respond in such a way that if there is a price change. In relation between prices at the origin and in relation to price at the destination. They are price-sensitive in that sense, so this variable is an influential factor when comes to economics factor and tourism performance.

2.4.1.3 Exchange Rates

It is undeniable that foreign exchange or foreign currency has a great impact on tourism performance from the economic standpoint. If currency devalues (values depreciated) in a foreign country, international tourism expenditure will become less costly and that will result boom in travel to that country. In contrast, if the currency value of a country is increased in value (values appreciated), that will result international tourism expenditure to be more costly and impact a drop to travel to that country. From this point, exchange rates have a significant effect or direct impact to the international travel and tourism in this free market. As mentioned by Gündüz and Agayi (2020), it is important for rural tourism to local destination as it supports both local and national economies by not only generating employment opportunities, but also earning the foreign exchange for the country, meanwhile attracting international and regional investments among others. As mentioned by Witt and Witt (1995), and Song and Witt (2012), tourists are more cautious towards exchange rates than prices in the destination. Artus (1970) seemed to the earlier researcher that commented on exchange rates are used in addition of living variables. Later been supported by other researchers like Witt and Martin (1987), Lim (1997), and Patsouratiset al. (2005). It is meant to say that consumers are more aware of exchange rates than cost of living of the destination country. This variable is used as price proxy or as benchmark for of tourist's cost of living when they visited the country (Quayson & Var, 1982; Arbel & Ravid, 1985; De Vita, 2014; Nazari et al., 2017). There is an argument from scholars that using exchange rates alone to represent cost of living variable may be misleading since exchange rates could be counterbalanced by a relatively inflation rate (Witt & Witt, 1995; Song & Li, 2008; Song et al., 2010; Song & Witt, 2012). Therefore, exchange rate is to be considered as a standalone variable to economic factor that affects tourism demand and tourism performance. This is stated with reference made to them the researchers stated above that exchange rate should enter the demand function as a separate variable.

This variable is so influential and impactful to the extent that Economist Intelligence Unit (EIU) (1975) has identified that it will cause unfavourable change in results, at such affecting tourists to less travel abroad, travel to different destinations, reduction in expenditure and/ or length of stay, changes in the more or time of travel and lastly reduction in spending by business travellers.

2.4.1.4 Standard of Living

The living standard in the destination has an impact to influence the performance of the tourism in the destination. According to Judd and Fainstein (1999), Snaith and Haley (1999), Law (2002), Andriotis and Vaughan (2003), Dumont et al. (2005), and Nunkoo and Ramkissoon (2010a), standard of living to a host destination is greatly influenced by the job opportunities (in this context particularly in the sector of tourism industry), new fields for commercial activities, tourists spending in the destination that later will be a source of revenue, a form of multiplier effect that originated from tourist spending in different sectors in contribution to creation of jobs and revenues on other sectors indirectly related to the tourism industry, and increment expenses for the host destination ultimately, increase in the price of real estates, and general price increase on goods and services or inflation. So, the judgemental of increase in living standard is viewed and being considered from those aspects. In the study of rural green tourism, Gutkevych and Haba (2020) have also quoted that in term of rural development, rural tourism has become one of the most important areas. Likewise, rural tourism is another means of improving the standard of living of rural populations, in the context of Ukraine.

2.4.1.5 Jobs Opportunity

Under the dimension of job opportunity, it has an impact on tourism under economic factor. Reduction of poverty starts from the employment opportunities, when tourism creates jobs to the locals (Gündüz & Agayi, 2020). An Evaluation of Rural Tourism Potential for Rural Development in Kenya. According to Haley et al. (2005), level of income and employment in the industry play a role to affect the attitudes of the communities towards destination tourism. Employment has been a benefit to the local to improve their standard of living and this is closely and tightly related to each other in term of costs and benefits. Andriotis and Vaughan (2003) had mentioned that residents are supportive of tourism with employment influencing attitudes. Glasson (1992), and Glasson (1994) also posited that employment in the tourism industry has a positive influence over attitudes toward tourism. Attitudes in this context has indirectly contributed to economic factor of tourism in Sarawak. This scenario has again been supported by the quote from Snaith and Haley (1994), and Almeida-García et al. (2016) mentioning that age and related employment shown to be relevant factors in determining support for tourism development. With more opportunities been created for jobs for locals from different age groups it has helped to encourage the communities in serving in this industry. Hence, it is important for the generation of work opportunities in the communities, as Andriotis (2005) quoted that tourism business entrepreneurs and dependents on tourism had been found to be supportive towards tourism development.

2.4.2 Environmental Factor

In the world of tourism, the main factor that contributes to the performance of tourism is none the less environmental factor. Environmental factor is all about environmental benefits that brought by the development of tourism resources (Danish & Wang, 2018), and it is the basic of economic benefit, and social benefit is the consequence of environmental benefit and is also mutually conditional. These three factors are said to be closely related to each and another.

In a more direct, simple picture or explanation; weather, scenery, natural phenomenon are all parts of the natural environmental attractions that attract travellers and tourists from worldwide (Edgell, 1990). As backed by Angelkova et al. (2011), environmental quality in preserving the natural and cultural values or heritage resources is another critical factor that leads to competitive advantage and ultimately affect the overall performance of the rural tourism. As such, scenery is one of the main selling points in tourism.

As quoted by Lo, Ramayah, Songan and Nair (2013), it is a fact that due to environment impact, if it is not carefully handled, the consequences of having responses from local communities will negatively affect rural tourism development. In other words, distorted tourism development leads to loss of destination competitive advantage. This loss of competitive advantage means jeopardising the overall performance. Explained by Kreag (2001), perceived environmental impact is how local community's tourism implication in positive way or negative way. So, it not up to neither the ministry nor the stakeholders to declare how well or how poor environment is impacting the community but rather it is how the community perceived it. In order, to sustain the rural tourism performance, efforts from the community towards the environment plays a very important role (Kapsimali & Papatheodorou, 2020). As mentioned by Dwyer and Kim (2010), to achieve destination competitiveness for rural tourism performance, it is relatively important to preserve, conserve and maintain environmental resources. Environmental resources are invaluable and intangible assets to competitive advantage (Grimstad & Burgess, 2014) that contributes to rural tourism performance.

Local communities in rural tourism destinations are said to be one of the fundamentals aspects of the tourism product; as a result, their attitudes and behaviours have great impact on the performance or the success of the destinations (Deery et al., 2012).

Another fact on the importance of local communities is backed by Jurowski, Uysal and Williams (1997), and Yoon et al. (2001), stating that communities' attitudes towards the environmental concerns is very much influencing the supports rendered by the local communities. Their actions will determine attractiveness of the destination to attract tourists that emphasizes on natural beauty, appreciating and conserving environment as part of tourism activities to be as environmental-friendly as possible and yet on the other hand not destroying the environment as per its authenticity. The tourism development has needed to maintain a balanced with its wilderness and originality and all these very much depending on the local communities rather than the stakeholders or the environment enforcer. Physical and social environment as defined earlier are both as equal important to tourism performance as these two provide satisfaction of consumers (Bitner, 1992; Ryu et al., 2012). Physical environment gives the direct effect to the tourists on natural environment and surroundings with visual on sight satisfaction. In the early days, Oliver (1980) has proposed that satisfaction is defined as a situation when there is a comparison of an expectation in two different stages, before visit (pre-visit) and after visit (post-visit) (Ramseook-Munhurrun et al., 2015). It is a pleasure that is sensed during, involved or from the experience of an activity (Carù & Cova, 2003). From the tourism point of view, it is impactful and influential when tourists can differentiate the destinations against its competitors (Walls et al., 2011), then this the competitive advantage that a destination is creating. With that consequence, satisfaction is highly considered as an important factor to affect tourists' forthcoming acquisition and revisit intention (Choo et al., 2016). As quoted by Lo, Ramayah, Songan and Nair (2013), destination environment has been identified by them as one of the key factors in booming the performance of a tourism site, in the rural tourism setting when tourists have high expectation on quality atmosphere to be prior objective in visit. Ritchie and Crouch

(1993), Tung & Ritchie (2011), and Mason (2020) have also quoted that destination attractions and resources played a part in competitiveness of the rural tourism destinations. This has supported the point that it is the income generator to one destination in tourism performance. With this, it will bring more tourists to the destination through words of mouth of even return tourists.

Tourism performance is very much affected if destination surrounding, and natural environment is not well-kept or well-maintained. Researchers have quoted that the consequences of those poorly maintained destinations would face the destiny of dropping visits from tourists. As mentioned earlier citation from Tatoglu, Erdal, özgur and Azakli (2002) that those not planned or monitored destinations will face destroyed and damaged natural environment. With that it is how lead to drop in visit from tourists. End up not only performance is highly affected, yet government and related authorities must pump in funds for preservation and conservation. Instead of profit, it is now turn up to be deficit.

Besides physical environment, social environment also plays its role in influencing the tourism performance. According to Kauppila et al. (2009), Acharya and Halpenny (2013), and Salvatore et al. (2018), to let rural tourism, perform, physical and social cultural efforts from the local communities are relatively important in the contribution to tourism performance. A contributively community must come from a happily satisfied community. According to Chaudhry et al. (2021), support and cooperation from the communities are very important, without these contributions the whole mechanism of tourism does not seem to be smooth and sound. Technically, the involvement of communities seems like the aid for generating ideas and collecting opinions and voices to know what have been demanded from the community, it shows that they are being respected, recognised, opinions are not overlooked, ignored, and most importantly not suppressed by respective authorities. Psychologically, in an indirect way it is a gesture of honouring gratification to the communities. With both technical and psychological outputs, it will touch the community and encourage them to work hand-in hand with the authorities to achieve higher performance and prosper in tourism development. As a result, these group satisfied, motivated and happy communities will be delighted and willingly to entertain and affect tourists in a positive and optimistic way by trying to fulfil tourists' expectations, expenditures levels, their revisit intention and influence to promote the destinations via their personal experience through words of mouth (Gursoy & Rutherford, 2004). This is a very effective way in boosting the performance of a destination. Lo et al. (2013), and Guner and Bilgihan (2021) have also quoted that local communities' attitudes has played a very vital role in affecting destination's performance. Nevertheless, this communities' attitudes are part and parcel of community satisfaction that linked to social environment. So, this communities' attitudes factor is very much a concern that is tighten up to satisfied community. According to past literature, based on the communities' perspective, there are five general elements that influence the environment impacts on general rural tourism performance, namely destination environment, communities' satisfaction, environmental management practices, influence of environmental resources and communities' attitudes (Bhati, 2021). Each single element among these five has an influence on the environment construct. In other words, these five factors are the main factors that lead to tourism.

2.4.2.1 Destination Environment

Natural environment of a destination, as in general specifying that an atmosphere that is factoring-in to attract tourists from travelling all over the places to that destination. As defined by Bitner (1992), and Ryu et al. (2012), there are two aspects of environment, namely physical and social environment; both are equally important to satisfaction of consumers, and it is called as services cape. So physical is more towards the visible natural environment that attracts tourists on the pleasure of visual aspect. As for social environment or service environment aspect it constitutes of four elements, which are physical facility, location, ambience and interpersonal (Clarke & Schmidt, 1995; Vengesayi, 2003). These four elements are clarified to affect human behaviour physiologically, cognitively, and affectively. Hence, destination environment is a key factor in booming the performance in tourism especially in rural tourism where tourists are approaching for the quality atmosphere as their main objective. With reference made to Scheyvens (2000), Honey (2008), Walter (2011), Leonidou, Leonidou, Fotiadis and Zeriti (2013), these researchers have mentioned that in order for rural tourism to sustain, there are a numbers of factors that affect the sustainability needed to be taken into account, those factors are environmental conservation, sustainable use of land and natural recourses, cultural preservation and deterioration, local control and outside market forces, visitor education and impacts, issues of land rights and others.

For definite, there is a price to pay if the environment is not being well-kept, tourists visiting the destination will gradually drop and costs payable to maintain the environment will be foreseen to happen. This evidence is backed by Tatoglu, Erdal, özgur and Azakli (2002), and Wakil et al. (2021) have mentioned that if there are unplanned and uncontrolled constructions going on, it will damage the natural environment and wildlife. Consequently, costs bearable to conserve and preserve the nature, historical, cultural sites will be in tremendous amount. Therefore, environment construct has a direct relationship to rural tourism performance by studying on the cause and effect.

2.4.2.2 Environmental Management Practices

In rural tourism, it is the environment that played a critical role in attracting the tourists and visitors. Undeniable, some visitors are environmentalists, they value nature more than anything, and in short, their core intention to visit rural destinations is from the nature perspectives than the indulgence in tour and travel. However, in the situation that the nature is spoilt and polluted; that simply means their objective of those tourists whose intention to visit the rural destinations is not met anymore, the consequence from this situation is going to be very straight forward and it is destructive. This situation is not getting very far from reality. This scenario comes in assumption, as studies after studies have carried out and indicated environmental pollution to tourism destinations comes into a picture that scientist and environmentalists are worrying about (Kasim, 2009; Siti-Nabiha, 2011; Kostić et al., 2019). This situation is evidenced by United Nations' actions concerning on the environmental protection since decades (Chong et al., 2009; Mensah, 2020). Besides UN, researchers like Kirk (1998), Bramwell and Alletorp (2001), and Graci (2013) have even commented that there is no proper planning on water conservation, waste and energy management in tourism industry when it comes to consuming local and imported non-durable goods, furnishings and appliances. In relation to this situation, stakeholders of tourism industry ought to act immediately to execute the necessity in protecting, preserving, preventing the situation from getting worse for the sake of sustainability of environment (Chan, 2008). According to Mensah (2006), some actions have been taken, such as Sustainable Tourism Practices (STP), this is an environmental management practices that is guiding hotels' operating businesses, improve image and protect the environment in terms of energy management, waste management and water conservation (Chong et al., 2009; Park, 2009; Ustad, 2010; Mensah, 2020). Back to the fundamental, the 'saleable' items or products of rural tourism is indeed the ‘nature’, that is eventually the cash cows to rural tourism in term of profit generating. Referring to the scenario, when rural tourism is booming, development will compliment, this is the time when situation starts to get complicated when issues like environmental conservation, the right of indigenous and the development of communities begin (Reimer & Walter, 2013). In short, the environmental management practices come in handy and effective in solving issues with environments destruction, it is undeniable that this is one of the factors that will lead to destination competitiveness and eventually affect rural tourism performance. Ultimately, the management practices will either improve or worsen the actual beauty of the destination.

2.4.2.3 Influence of Environmental Resources

Destination attractions and resources available is undeniably factoring-in the competitiveness of the rural tourism destinations (Ritchie & Crouch, 1993; Tung & Ritchie, 2011). Referring to this fact, it is the physical environment and the resources available that have attracted tourists to come over to visit the destinations. As compared to destination environment, it is more an overall environment consist of physical and social aspects, whereas for the influence of environment resources, it is more emphasizes on the physical aspect, in particularly the resources that are unique to the destinations. For instance, those resources could be referred to natural features (wilderness areas), climate, culture and social characteristics, infrastructure, and other special attributes. As defined by Weaver (2005), Hall, James, and Baird (2011), wilderness areas mean natural destinations in mountains, deserts, rainforest, and others. Rural tourism can provide venues to relax, explore for new experiences with nature (Snepenger et al., 2007; Bruwer & Rueger-Muck, 2019) and to de-stress (Hipp & Ogunseitan, 2011). In short, natural resources of rural destinations are the selling point to many tourists (Ferreira, 2011; Ramkisson et al., 2013). With researches from the past showing that there are possibilities that tourism, in specific, referring to travelling, accommodations and recreational activities have caused negative impact to natural environment (Lee et al., 2013); therefore, it is mandatory and critically in need to regulate policies and regulations on the practice of preserving the nature (Fons et al., 2011) knowing that the natural resources will eventually lead to destinations competitiveness that determines the performance of rural tourism.

2.4.3 Socio-Cultural Factor

Socio-cultural factor being one of the main factors that has massively influencing the performance in tourism. In another word, socio-cultural has played an important role in affecting the destination competitiveness in the context of tourism industry. From a macro perspective, as quoted by Dwyer and Kim (2003), and Blanco-Cerradelo et al. (2018), competitiveness is explained in such a way was an issue or subject that is a concern at the national level and with its goal to improve community's income. As mentioned by them, competitiveness is a construct that encompassing social, cultural, and economic variables that affect the performance of a nation in international markets. Hence, from this relationship, socio-cultural factor is directly linked to competitiveness; and competitiveness represented by performance in this context, so social factor and cultural factor both are factors tightly linked to performance. Meaning to say, the more positively the social elements the destination contented, and the richer its cultural elements, the better it will affect its destination attractiveness (performance). The rationale is that it attracts more tourists and creates businesses to the destination. Meantime, Ramos, Stoddart and Chafe (2016) had argued that the value of socio-cultural in tourism will establish community identity, a heightened sense of linking with local environments, and leads to an increase of social capital then with an increase in tourists.

Socio-cultural has an impact on human, so it has been recognised as ‘human impacts’ of the tourism industry in which stresses on change of quality of daily lives of residents at tourist destinations with also cultural impacts on transformations in traditional values, norms, and identities to locals (Glasson, 1994; Lewis & Rossetto, 2019). Mathieson and Wall (1982) during their time, they have presented a synthesis of research findings on perceived impacts of tourism within a conceptual framework designed about tourism as an amalgamation of phenomena and their interrelations. Later been supported also by Mowforth and Munt (2015) and researchers like Nejati et al. (2015) on that specific finding. According to them consequences of tourism are indeed very complex and contradictory and there are manifested. Therefore, the relationships between constructs are tested to show its significance. There are past researchers also studied on issues of perceived impacts (Kaul, 1985; Mill & Morrison, 1985; Murphy, 1985; Ritchie & Goeldner, 1987; Gunn, 1988; Gee, Makens & Choy, 1989; Hudman & Hawkins, 1989; McIntosh & Goeldner, 1990) and other disciplines like anthropology (Farrell, 1977; Smith, 1977), economics (Peters, 1969; Archer, 1973; Liu, 1979), geography (Butler, 1974; Murphy, 1981; Keogh, 1989), and sociology (Turner & Ash, 1975; Cohen, 1978; de Kadt, 1979).

There are two types of measuring methods been proposed by researchers. The first being the stage-based models according to Pearce, Moscardo and Ross (1996), and Fredline, Jago, and Deery, (2003) or ‘extrinsic’ studies according to Faulkner and Tideswell (1997), and Small (2007). These two methods are investigating the impact of tourism on the community as a whole; hence, level of homogeneity among the residents of region been anticipated.

Another method used is 'intrinsic' (Faulkner & Tideswell, 1997), the opposite of 'extrinsic', considering the heterogeneity of the communities by measuring social impacts through the perceived values of the residents or host community and examining the differences of perceptions among them from various subsectors of the community. The research addresses on the sub-groups that could possibly be influenced by tourism differentially and the differing value system is accountable for the variations in perceptions. The perceptions from the residents are said to provide informative understanding of the costs and benefits of event tourism.

The concept of social impacts stands on the boundary on the wider scope of theory of social capital. Kelly (2000) has posited that study on social impact has illustrated different communities, confronted similar change, but reacted differently. Researcher mentioned that the key contributing factor in differentiating communities reflected by leadership style. Measuring social impacts is even a more complex work than measuring the leadership style and its success.

Origins of development of social indicators researched by Horn (1980) has then been studied by Bauer and Green (1996), and Edwards (2001) and produced many titles, reports in the area. Solely to define social indicators, Horn (1980) has also quoted that social indicator has related to sector of social concern, with purposes of curiosity, understanding and action (Stone, 1975). Later, McCool et al. (2001) quoted those indicators of the social impacts are the quantitative variables that to be used to reflect the condition of critical social issues that are measured periodically. Also suggested it is used to attain goals with this efficacy actions. In early of 80s, Mathieson and Wall (1982) posited that the impacts from social and cultural from tourism is the outcomes of which tourism is contributing to changes in values systems, individual behaviours, family relationships, collective lifestyles, safety levels, moral conduct, creative expressions, traditional ceremonies, and community organisations. Brunt and Courtney (1999), Bello et al. (2017), and Aman et al. (2019) had come out with summary of research into the area of tourism research on the host perceptions of socio-cultural impacts of tourism and show the need to examine in greater detail the social impact of tourism on communities.

In short, socio-cultural factor is where social and cultural tourism took place, tourists visiting to a destination away from their own place of residence because of its social and cultural values and attractions, aiming to gain information and experiences. Socio-cultural factors in brief are referring to historical sites, archaeological sites, events, and festivals, attracted by its safety with peace of mind during vacation and other contemporary cultural expressions. Cultural tourism in recent years have become a trend to attract tourists to come over to respective regions due to the artistic and cultural heritage of a region with contemporary intellectual activity. This is mentioned by The Economic and Social Committee of EU in European continent, indicates that cultural tourism has provided direct understanding and appreciation to tourists of the local populations' achievements, attitudes, and customs (Thornycroft, 2000). As for the social factor aspect, definition is expressed as the relationships where tourism which encourage participation in travel economically or otherwise a disadvantage to society (Hall, 2000; Hampton, 2005). As study shows, social factor that leads to social tourism under the aspects of social exclusion help to boost family relationship of a tourists, it gains greater independence and wider social networks in the tourism destination (Minnaert, 2007; Eichhorn, 2020). Safe environment for tourists is definitely an important factor that under tourists' consideration. It is also supported from the study of Sugiama (2019) positing that apart from environment factor, socio-cultural factor is also triggering the sustainability of rural tourism development process.

As posited by Allen et al. (1998), and Kamanga and Njoloma (2019) that many states and local governments have tried to optimize economic benefits from tourism but not much attention have paid on to social and environmental cost associated with tourism expansion.

Social and cultural factors are two factors that work hand in hand, in one way or other they have similarities in nature in affecting the tourism performance. As argued by Krippendorf (1987), Yoon and Uysal (2005), and Krippendorf (2010), and Mowforth and Munt (2015), social effects are so important to the extent that it is a must to study it before anything else. Mathieson and Wall (1982), and Lewis and Rossetto (2019) quoted that research should be directed more explicitly at determining the perceptions and attitudes of the host community towards tourists' behaviour and their presence. In short, they claimed that residents' survey is closeted to detect social impacts.

Also as mentioned by Fons, Fierro, and y Patiño (2011), it is said that in order to achieve social sustainability, a tourist destination needed to manage to preserve historical and cultural heritage. In another words, social factors need to exist so that a destination is there to perform and working closely with other factors.

A normal and healthy social factor will directly reflect an image of heathy lifestyle of a community to a specific destination to tourists, this has a direct relation to destination competitiveness. Eventually, it leads to better performance in tourism. This scenario is supported by the quotes from Thongma et al. (2011), Deery, Jago and Fredline (2012), and Eshliki and Kaboudi (2012) mentioning that with the participation of local community in rural tourism, it will help to achieve positive social performance; for examples, decrease in vandalism, gambling, drugs, and prostitution. A destination that is free from all these activities are almost impossible, but the chances of having low existence will have an upper hand in attracting more tourists.

Therefore, a strong social factor will tend to boost tourism performance; and vice versa, booming in tourism activities and performance will decrease if not eliminating those negative issues. Hence, as mentioned by Fong and Lo (2015), tourism could enhance the social relationship with stakeholders, that will bring benefits mutually.

As specifically for the events to attract more tourists, events and festivals needed to reinvigorate existing facilities and at the meantime create an image or tourist destination cum promoting tourism sustainability (Getz, 1991; Arcodia & Robb, 2000).

Other issues, such as safety issue, trust and 'sense of personal and collective efficacy' from the social capital concept and would appear to have relevancy in an investigation of social impacts of events and community festivals. There are researchers studied on events and festivals influence socially. Delamere (1997), and Getz and Page (2016) have investigated the impact of the festival on the friendliness, safety, tolerance, and creativity of community by using social impacts instrument. In the discussion of the triple bottom line concept, Rogers, and Ryan (2001) had argued that nine basic, universal, human needs comprising of sustenance, protection, affection, idleness, creativity, freedom, understanding, participation, and identity are required to be satisfied to achieve healthy community. These needs could all be assessed through events.

Social impacts in this context are defined as any effects that come to potential to influence quality of life for residents. Therefore, economic outcomes like job opportunities from the events and environmental effects like vandalism or littering are also to be included simply because impacts perceived are contributing to residents' reactions to an event.

Socio-cultural factors and its impacts should be taken into consideration seriously throughout the planning process in tourism development and in an environmental impact assessment procedure to optimize benefits and minimize problems. It is critical for the communities to involve so that the residents could understand tourism, and have participated themselves in decision making, to be benefited from tourism (McIntyre et al., 1993; Kavallinis & Pizam, 1994; Fennell, 2020). For the success in development, marketing and operation of existing, and future programmes and projects in tourism; perceptions and attitude of residents towards the impacts are as important as planning and policy consideration (Ap, 1992; Lankford, 1994; Türker & Öztürk, 2013). All these have addressed the need for and importance of addressing social and cultural impacts in the tourism industry.

As quoted by researchers, it is important to monitor the impacts of tourism on a continuous basis to avoid harmful effects, or less if it is rectified then correction and improvement should be taken. This action is mandate, so that relevant works would be executed to protect the community' well-being, ensure the quality and sustainability of the tourism products offered at the destination (Zehuder, 1976; Hoffman & Low, 1981; Cooke, 1982; Inskeep, 1991; Woodley, 1993; Getz, 1994; Faulkner & Tideswell, 1997; Small, 2007).

One key point as suggested by researchers, ultimate element to promote sustainability to tourism is the support from the residents (McCool et al., 2001; Ahn et al., 2002; Twining-Ward & Butler, 2002). Satisfied and contented community from the destination will complement that development and direction on tourism progress. Hence, welfare, well-beings of community need to be taken care. Positive impacts will complement the development, but the negative impacts will jeopardise it. This is the indirect effect obtained from the impacts received. As backed by Andereck and Vogt (2000), tourism will have some positive impacts on improving the quality of residents' lives, and it was also mentioned by Tomic, Gajic and Bugar (2012) since tourism involves arrangements on activities and engagements of more manpower from diverse social strata, age groups, gender, and various levels of education.

Apart from mentioning the effects of impacts towards tourism performance, Sofield (2002) has touched on the social and cultural performance indicators through the Green Globe concept. Those social and cultural performance indicators are reducing poverty, promoting social equity, raising standards of living, increasing local participation, purchasing, and employing locally. However, Sofield (2002), and Twining-Ward and Butler (2002) have both not conclusively tested the concepts, so it is only on theory. The research progress of development of indicators for social impacts and socioeconomic impacts (social capital), are so rich and has been selected to be used to measure and report information for social policy and planning (Horn, 1980). There is past research suggested these indicators to measure components of community life – covering the safety level of community, crime levels, the sense of community and community well-being, and the sense of pride in the community. These indicators can be directly related to tourism activity, but it may be reflecting the views of the community, it has only been used as benchmark and indicative signal. Somehow, the involvement of the community is still important in the development of tourism. Hence, the role or the purpose for the indicator is used to reveal change over time and used as benchmark against measurement of change. The outcome from the measurement of quantitative variables will reflect the condition of the social factors. Indicators are good signalling in distinguishing and reflecting local issues that are important and require immediate action.

In the context of sustainability of tourism, a sustainable tourism development and ecotourism is critical in the sense that development of tourism needs to prosper and perform, at the same time social and natural environment cannot be trade off or compromised for the sake of development. As quoted by Pearce, Morrison, and Rutledge (1998), there have been an acceptance of the concept of 'social responsibility' of the responsible tourism and alternative forms of tourism. This has shown that, in the trade for tourism over a destination area, social costs should not be totally compromised, community are aware of the degree of responsibility that they should uphold to the social and natural environment. The sign of an increasing community opposition to tourism developments towards the destruction of both social and natural environment is an obvious response from community. As described by Marcouiller (1997) in his study of tourism developments in US rural communities, social impacts of tourism are just like a double-edged sword, argument being that on one hand it brings positive impacts to the community, on the other hand it could be as damaging to the community when the arrival of tourists into a rural community it could possibly divide a homogenous community due to the influx changes dynamics of the community.

Similar situation in a different geographical location, according to Glasson (1994) in Oxford, UK, though in his study, overall is positive in terms of the impacts, still there are many local respondents commented that tourism increased overcrowding, noise, littering and crime issues. On top of that referring to King and Stewart (1996), pointed the negative effects when destination's culture been commodified, and unhealthy tourist activities been created such as sex tourism or prostitution.

Another interesting discovery found by Teo (1994) of his study of Singapore was that conservation projects of the city had preserved the cultural heritage but on the other hand it had also dispersed the community along the way. This is as explained by Teo that it is a social impact from tourism, when project meant to preserve cultural aspects, but residents did not identify the environment created and yet moving out. This seems to be protecting one element (culture) but at the same time destroying the other element (social).

There are other hard facts about the effects of social and cultural perspectives on tourism due to rapid expansion of tourism apart from those discussed above. Another two more respects about the importance of identifying socio-cultural impacts. Firstly, based on the destination area or countries, development in tourism has led to changes in societal structure. Those positive points are such as enhance of income, improve education, increase of job opportunities, and improve local infrastructure standard and services level (Ross 1992; Lankford 1994; McCool & Martin 1994; Small, 2007).

Nevertheless, there seem to be some negative points or less favourable facts where for example, social and family values are challenged, the emergence of new economically powerful groups, acculturation to adapt to needs of tourists (Ap & Crompton, 1993; Johnson, Snepenger & Akis, 1994; Xie et al., 2014). The latest evidence from recent researchers also posited that local communities are fear of acculturation, local culture and traditional values may be weakened through the acculturation and process of development in rural tourism (Kabote, 2015).

Secondly, tourism is explained such a way that tourism as an export industry, but the unique phenomenon is consumers must travel to the country of origin to collect the goods with the expansion of international tourism has increased the contact among different societies and cultures (Crick, 1989; Brunt & Courtney, 1999; Marx, 2018). They are saying that this type of interaction would destroy traditional cultures and societies. There are ideologist viewing that as an opportunity for peace, understanding and greater knowledge among different societies and nations. These social impacts treated as direct and instant effect on both tourists and host communities in term of quality of life (Sharpley, 1994; Sharpley, 2018). Mathieson and Wall (1982), Akkawi (2010), and Mowforth and Munt (2015), commented that depending on the extent and duration of the exposure of the host population to tourist development, the impacts on social and cultural could gradually be changed through time in response to the structural changes in the industry. This could be quoted with an example from Allen, Long, Perdue and Kieselbach (1988), Andereck and Vogt (2000), Andereck and McGehee (2008), and Vargas-Sanchez et al. (2011), argument that due to the direct relations to the degree or stage of development, it would shape the attitudes of the residents towards tourism.

Another critical issue to socio-cultural impacts is cultural issue or rather to be addressed as ‘acculturation’. This is going to be a severe impact if it is not to be taken into concern carefully and seriously. In the long run, society’s values, beliefs, and cultural practices are going to be changed gradually or drastically. In other words, it is just the matter of time that the elements are going to be accultured. The reason being that due to the demand of tourists for instant culture and authentic souvenirs, the situation of the host society is said would be culturally dependent on the tourists or over rely on the tourism generating country, according to the statement made by Sharpley (1994), and Sharpley (2018). The uniqueness of the host society will lose its original culture (authenticity) just to adapt to the demand from the tourists. This issue is also not reported and discussed by researchers today, mentioning that tourism can cause both positive and negative impacts on host communities' socio-cultural fabric, and that managing these impacts is essential for sustainable tourism development (Filep & Ram, 2020), the impacts on host communities' socio-cultural, including changes to values, norms, customs, and loss of cultural identity (Alzoubi, 2021; Munar & Hannam, 2021; Wardhana & Ardika, 2021).

On the other hand, it is quite a contradiction to local communities towards its development (Johnson et al., 1994) even under rapid growth rate (Hernandez et al., 1996). It is concluded that the degree of socio-cultural impact affects and at the same time experienced by host communities could be influenced by a few factors such as the number and type of tourists visiting to the destination, the nature of tourism development in the area and its pace in development.

There are comments that tourism contributes to social and cultural change instead of being a cause of the change. The industry is highly visible, as a result often it become the scapegoat for socio-cultural change (Crick, 1989; Brunt & Courtney, 1999; Marx, 2018). Therefore, it is wise if it is addresses and been taken care carefully to avoid being a scapegoat unnecessarily to be blamed on later, or even if it is true then precautions or solutions could be provided then. As suggested by Sharpley (1994), and Sharpley (2018) earlier, the dynamic character of societies and cultures should not be overlooked, the potential influences must be considered against this background. Such influences are tourism development, tourist-host interaction, and culture.

2.4.3.1 Social Factor

Socio-cultural factor is indeed the combination of two factors, namely social factor and cultural factor. In the context of tourism industry, social factor could be elements like safety, crime rate, languages, customs, events and occasions, community attitudes and others.

As quoted by Ajzen (1991) and supported by other researchers like Rhodes and Courneya (2003), that social factor (subjective norm) been defined as the perceived social pressure either to perform or not to perform behaviour. In the study conducted by Gündüz and Agayi (2020), also posited that security, safety and comfortability are the elements that need to have while visiting a tourist destination. According to Gitelson and Crompton (1983), and Vogt and Fesenmaier (1998) the influence of social factors on behaviour is already well established in prior studies. Ever quoted by Ajzen and Fishbein (1980), Moutinho (1987), and Schiffman and Kanuk (2000), social factors will play a role in influencing behavioural intention of consumers. In other words, it is the factors that influence consumers' decision in spending. It is comprehended in a way that social factors are the critical constructs in determining how consumers make decision in accepting or not accepting (Venkatesh & Morris, 2000). Trafimow and Fishbein (1994), and Wan et al. (2017) had mentioned, an individual's performance in specific behaviour is affected by his/ her behavioural intention and determined by attitudes and subjective norm. Consumers or users depends on context, may compelled to be involved in an activity or destination because they want to belong to a community (Hsu & Lu, 2004). This is to give the sensation of experience of the atmosphere. Peter and Olson (1994), and San Martin et al. (2013) categorised the subjective norms into two components, interpersonal and external influences. The interpersonal refers to influences from friends, family, colleagues and experienced users, whereas the external influences refer to influences from mass media, expert opinions and other non-personal information.

In context of tourism, according to Ahmad and Juhdi (2008), Lee (2012), and Madadhi (2015) the influences and recommendations and source of information from friends and family members being the most powerful and effective travel information sources for travelling purposes.

As mentioned by Ap and Crompton (1998), Jackson (2008), and Shafaei and Mohamed (2015) social impacts may be viewed as 'real' or 'perceived' and it could be measured and quantified to cope with both dimensions. The 'real' impact will be measured with objective data to proof its existence. One example quoted, it is the degree of traffic congestion, it needs to be quantifiable outcome though the attributes of cause of traffic congestion is difficult to make. On the other hand, a 'perceived' impact is purely a personal view of that specific impact though factoring elements like community discussion and media attention might influence the point of view, as Lankford (2001) has ever argued that the view is too simplistic to make comment on.

Social impacts and cultural impacts as defined by Teo (1994), and Fredline et al. (2003) as the 'way in which tourism is contributing to changes in the value systems, moral and their conduct, individual behaviour, family relationships, collective lifestyles, creative expressions, traditional ceremonies and community organisation'.

Besides, this definition made by Teo (1994), others that related to this concept of social impacts is the use of the term 'social capital'. There are definitions of social capital, one that is most widely accepted is as following. Social capital defined as features of social organisation by Kawachi, Kennedy and Glass, (1999), and Yuan and Wang (2019) as the extent in which interpersonal trust between citizens, norms of reciprocity and density of civic associations that facilitate the co-operation for mutual benefit.

Event is one of the social factors that attracts tourists to a destination. In tourism industry, 'event' is often used to describe range of activity categories with different characteristics. The scale of the range could be extreme, event could be as grand as Olympic Games or small as regional festivals. It is subjective even within sub-groupings, as debate on definitions could be referred to Getz (1991), Jago and Shaw (1998), and Arcodia and Robb (2000). In this thesis, the adopted definition is taken from the definition proposed by Jago and Shaw (1998) and been used by Olivé (2004) which is 'a one time or infrequently occurring event of limited duration that provides the consumer with a leisure and social opportunity beyond everyday experience'. This definition includes other subcategories of events like festivals and mega events.

Reference to Murphy (1985) and Murphy (2013) have his definition of tourism as a socio-cultural event for both the guest and host. He also agreed that in order to achieve the hospitality industry in tourism, these two impacts, namely social and cultural impacts on host community need to be seriously taken into consideration as an impactful factor to tourism in long run.

Besides event, another important factor that contributes to social factors is attitude of the community towards tourist (Brida et al., 2011; Shen et al., 2017). Brougham and Butler (1981) had studied on the resident attitudes towards tourism in Sleat, Scotland. They discovered that resident attitudes differed in terms of age, language, length of residence, degree of tourist exposure, and personal and locational contacts. Studies from Belisle and Hoy (1980) in Santa Marta, Columbia has discovered that attitudes differ based on distance of home from the tourist zone. Pizam (1978), and Postma and Schmuecker (2017) empirically attempted to determine the existence of negative impacts of tourism with the hypothesis focusing heavy tourism concentration on a destination area leads to negative attitudes towards tourists. He has confirmed the relationship between individual's economic dependency on tourism and one's overall attitude towards tourism. Murphy (1981) and García et al. (2015) both have a comparative study on resident attitudes in three different types of destinations respectively during different era, namely daytrip, short-stay and long-stay, and concluded that an identifiable attitude from resident was developed towards tourism. All of these researches had concluded that resident attitude played an important as one of the social factors in influencing tourism's performance of a destination. Likewise, studies conducted by Gearing, Swart and Var (1974) on Turkey, Var, Beck, and Loftus (1977) on British Columbia had shown that the importance of attitudes toward tourists in overall attractiveness of tourist regions. In short, the attitude of residents toward tourists being one of the most important factors after natural beauty, climate, infrastructure, and lodging factors (Liu & Var, 1982; Tatoglu et al., 2002; Hao et al., 2011; Choong et al., 2018). Su and Wall (2014), and Su, Wall, and Wang (2017) all had run analyses to predict on individual, whether in a particular area, tourist will return to it. It was found that resident attitudes toward tourism is the most important factor in predicting a destination choice (Sheldon & Var, 1985; Morley et al., 2014).

Nonetheless, there are factors that influence to social impacts of the tourism activities being identified, such as state of the local economy (Gursoy et al., 2002), the maturity of the tourism destination, and the level of the community attachment (Fredline, 2001). Faulkner and Tideswell (1997) quoted that in more detail, factors could be segregated into two parts, extrinsic and intrinsic factors. It is destination or site specific, so it is difficult to generalize across the board over its types.

2.4.3.2 Cultural Factor

Culture is defined as a set of traits that are shared by the characteristics of human societies and are transmitted by non-genetic means (Mulder et al., 2006). In the same context of tourism, cultural factor comprises of ethnical elements, festivals celebrated by different races or tribes, handicrafts, beliefs etc.

It is always struggling for competitiveness in the tourism industry and that leads to trigger of growth into several new markets segments. Hence, destinations and marketing agencies have been making full use of the existing resources to improve images and attractiveness with what are available (Brent et al., 2000) in order to boost the visits of tourists to the destinations (Sirgy & Su, 2000). Now, the challenge is to differentiate the current product to the sophisticated travellers for their search of new and exotic travelling destination. Therefore, cultural factor has played an important role to influence the tourism performance by segmenting a new niche market effect of cultural tourism with considerable attention recently (Andersen et al., 1997; Martin et al., 2016) expanding the horizon of tourism by diversifying the traditional standardized mass tourism product of destinations. Cultural tourism is defined as tourism constructed, provided, and consumed explicitly or implicitly as cultural appreciation, as in experiences or schematic knowledge gaining or it could be as simple as just want to experience living places and cultures other than tourists' own culture (Prentice, 2001; Ramkissoon & Uysal, 2011). Due to curiosity, tourists to experience new environments that is brought but different cultures, so every new culture is a new experience to tourists visited from other places (Ying & Zhou, 2007; Ramkissoon et al., 2011).

Cultural tourism is regarded to have great potential as experiential consumption. It is all about knowing and understanding tourist behaviour in a hunt for authenticity and sincerity

(Prentice, 2001; Steiner & Reisinger, 2006). Cultural attractions here include museums, music and dance, gastronomy, festivals, drama, arts, history, fortifications, monuments, and those that give the tourists the feel of the culturally different from where they have come.

According to Chon (1990), Baloglu (1997), and Sonmez and Sirakaya (2002) had mentioned that image of destination has its impact on travel behaviour and tourist destination choices; it is also commented that to be an important factor to the process of decision-making to tourists (Hong et al., 2006). Cultural tourism and cultural factor have their importance in making its attractiveness to many destinations, it has been a favour to many holiday makers (Walle, 1996).

As referred to World Economic Forum (2001), politics and culture are recognized as the competitiveness of a nation that could be influenced by climate, morals, power of the state, cultural values, and morals discipline. Therefore, destination competitiveness could be influenced by these variables. With the influences of competitiveness, it is viewed as inimitable resources to a destination performance. Resource-based theorists debated those inimitable firm resources and distinctive capabilities, and competencies somehow is produced with incorporating resources to obtain sustainable competitive advantage (Prahalad & Hamel, 1990; Barney, 1991; Grant, 1991). In this context, instead of firm, it is applied to destination in the tourism industry.

2.5 The Moderating Role of Digital Technologies

Today, in this advance world of science and technology, lifestyle has been deeply reshaped through the revolutions of Information Technology (IT). Information not only perceived as skills and knowledge in improving humanistic aspects, but rather it has completely permeated into human lifestyle. As defined by Buhalis (1998), IT is collective term given to the most recent developments in the mode (electronic) and the mechanisms of computers and communication technologies used for the acquisition, processing analysis, storage, retrieval, dissemination, and application of information. IT can be viewed and comprehended from two different levels for its ultimate functionality. Buhalis had categorised IT as instrument at the macroeconomic level to perform its task in determining the competitiveness in global marketplace for development and prosperity of regions and emphasized that IT also plays an important role in strategic and operational management at the microeconomic level and outstands itself in the competitiveness of enterprises. There are other researchers who have also supported the saying that Internet and other forms of ICTs are playing key role in incorporating technological innovations in the large extent permanently to business. Subsequently, this will result higher competitiveness in business (Okumus & Hemmington, 1998; Camisón, 2000; Ottenbacher & Gnoth, 2005; Karanasios & Burgess, 2008).

In the tourism industry, managing this fast-paced business is indeed a challenge in tourism businesses. Undeniably, the influence of technology is giving a powerful impact to business performance to tourism sector regardless of nationality. Technological convenience and virtual reality have created innovativeness to major industries, there is no exceptional to tourism industry. Technological factor serves a strong influence in creation of an innovative and efficient product (Page & Connell, 2014; Asoba, & Mefi, 2021; Lipták, & Tarkó, 2021). It has improved the conventional mass tourism in pursuit for authentic tourism experience with new innovative elements of experiences. Product innovativeness and efficiency will lead to business performance by the end of the day. Cho and Olsen (1998), Nyheim et al. (2004), Wang and Qualls (2007), and Morosan and De Franco (2016) have also pointed out that technology, in particular ICTs, is becoming an important strategic asset to hospitality organisations or hospitality industry to improve organisational performance and strategic competitiveness. Under this thesis context, it is referred to the homestay operators. Hence, it is said the role of ICTs in improving hospitality organisations' competitive advantage is taking place, and it is influencing the final performance of the organisation or even the whole industry (Wang & Qualls, 2007).

There are studies emphasizing on the deployment of ICTs and quoting that it helps the development of competitive actions in tourism related business, those studies were from Buhalis (1998), Camisón (2000), Ekeledo and Sivakumar (2004), Garau and Orfila (2004), Scarone (2004), Sunil and Islam (2005), Willians et al. (2006), Luque- Martínez et al. (2007), Karanasios & Burgess (2008), Wang (2008). Deployment of ICTs towards rural tourism sector is considered an appropriate strategy, looking at the importance of ICTs for competitiveness of the tourism sector (Polo-Peña & Frías Jamilena, 2010). As mentioned by Baláz (2004), ICTs deployment is accounted even more pivotal to businesses situated in emerging areas or those areas located at low in development in economy. Camacho and Rodriguez (2005), and Vermeulen et al. (2005) stressed the importance of ICTs on areas with limited services. Whereas Martin and Matlay (2003), Martin (2004), and Stare et al. (2006), they quoted those smaller areas even more hunger for the deployment of ICTs for the benefits of businesses.

Researchers like Digiorgio (2016), and Spencer (2020) have disclosed that Internet plays an important role with the use and execution strategically of IT has now become pivotal to companies in survival of business in today's global economy. This has shown how crucial IT plays its part in daily operational tasks. That has shown how influential the IT towards business and economy of the world throughout.

Besides, Namasivayam, Enz and Siguaw (2000), Porter (2001), Sirirak, Islam and Khang (2011), and Mihalič and Buhalis (2013) have also claimed that IT has played a very important role in creating competitiveness to a destination and enhancing the performance and its competitive advantage of a destination. Particularly in hospitality industry, IT has greatly been targeted and invested for the purpose of improving performance but not many studies and research focus on the relationship of competitive advantage factors of ICTs and performance (Tsai et al., 2009). Even geographically, studies in developing countries require more attention of research (Sirirak et al., 2011). This has implied a very solid and promising reason for the study to focus on the rural tourism towards homestay operators (accommodation operators), particularly in state of Sarawak. (one of the thirteen states in Malaysia that is rich in natural resources categorised in a category of developing nation.)

In terms of competitive advantage of a destination that directly impacted the performance of a rural area, there are two different set of views explaining the scenarios, namely generic strategy view (GSV), and resource-based view (RBV) as quoted by Bilgihan, Okumus, and Kwun (2011). GSV generally explains on the situation where a company is capable of marketing their goods and services with a low-cost or rather unique products or services at a premium price, and able to tap onto the market that could be very niche. RBV focuses on the resources that a company possesses and the impact on competitiveness (Barney, 1991; Hunt, 1995; Chan et al., 2004). Both schools of taught have come to a common conclusion that to sustain the competitive advantage, only the intangible sources or intangible factors that would add most of the value to product or service.

Buhalis (1998), Camison (2000), Buhalis (2003), Sunil and Islam (2005), Luque-Martinez, Castaneda-Garcia and Frias-Jamilena (2007), Ma, Buhalis and Song (2007), Polo-

Peña and Frías Jamilena (2010) have all quoted that ICTs is a competitive factor in the tourism and hospitality's research. Hence, ICTs is said to be one of the most influential factors of competitive advantage in rural tourism direct and indirectly.

In order, to take advantage and achieve competitive advantage of enterprises, a tourism manager must embrace new information technology and aggressively participate in the technology planning process to take the lead as market leader and to identify new and potential users then manage their development (Moutinho, 2000; Moutinho & Vargas-Sanchez, 2018). Undeniably, process of globalisation is due to the great influence of ICTs which contributes to spatial and temporal convergence. (Knowles et al., 2001; Mazaar, 2005). Hence, theoretically, could conclude that ICTs would offer a great help in the sector of tourism as well, specifically in rural tourism. There are four cases exhibited in this study that ICT been adopted and introduced as a moderator in enhancing the relationships between the variables.

Alderete (2017) has published a paper titled 'Examining the ICTs access effect on socioeconomic development: the moderating role of ICTs use and skills' with adoption of ICTs as a moderator to examine the role that ICTs play in the socio-economic development of developed and developing countries. In a simple explanation, it is to examine whether socio-economic development is moderated by ICTs use and skills. In this scenario, the research model is somehow very similar to the current thesis on the moderator basis. This study is using the same moderator to test on a different set of constructs (IV). Besides the core objective, this study also examining the telecommunication impact on economic growth or development in which usually ICTs is treated as an input into the productivity or growth model as an indirect effect or any benefits gained as infrastructure investments.

The study analyses the relationship between ICTs access, ICTs use and socio-economic development with Structural Equation Model (SEM) as a tool to assess and estimate country-level data. The results obtained from the study has indicated that moderating role of ICTs use and skills in the relationship between ICTs access and the socio-economic development is significant. There is an indirect effect of ICTs access on the socio-economic development. The finding suggests that the learning process to create ICTs skills and facilitate ICTs diffusion is crucial; meantime, ICTs use, and skills are positively and significantly related to socio-economic development. The greater the emphasis on ICTs use and the skills and abilities to seize digital access, the brighter the chances to penetrate the economy by finding new jobs, increase productivity, improve income distribution. Therefore, ICTs usage and ICTs skills are improving the effect of ICTs access on socio-economic development and ICTs is said to be a good moderator in the study and functioned well as projected.

Ebrahimi, Shafiee, Gholampour and Yousefi (2018) have also adopted ICTs to be a moderator in their study on 'Impact of Organizational Innovation, Learning Orientation and Entrepreneurship on SME Performance: The Moderating Role of Market Turbulence and ICT'. This study was to determine the effect of organisational innovation (OI), learning orientation (LO) and entrepreneurship on small and medium-sized enterprise (SME) performance with market turbulence and ICTs considered as moderating agents. In comparison to this study with the current thesis, the moderating role of ICTs is functioning the same as to examine whether it creates any effect on the dependant variable which under this scenario, not only the moderator (ICTs) is similar, but the dependant variable is also somehow very close in similarity (performance). So, ICTs have also been used to test its role on performance. The result from this study shows that ICTs has indeed played a very important role as moderating agent in moderating OI, LO, entrepreneurship on SME performance. It shows that with an increase of use in ICTs, it increases the effect of innovation, learning orientation and improve SME performance. This aligns with past studies on the effect of ICTs on business performance (Powell & Dent-Micallef 1997; Tippins & Sohi 2003).

In the paper of Limbu, Jayachandran and Babin (2014) titled ‘Does information and communication technology improve job satisfaction? The moderating role of sales technology orientation’, similarly, ICTs or rather been known as sales technology orientation in the study’s context has been selected by researchers to be used as moderator in the context of assessing job satisfaction. Likewise, job satisfaction will eventually lead to performance ultimately. It has also been cited by Chuang (2020) that job satisfaction improved by ICT as mentioned by Limbu et al (2014). As such, the situation of this study portrays the same scenario as in the thesis. ICTs has also been tested as a moderating agent to see if it helps to influence the dependent variable. Empirically, this research is concerning the role of ICTs in shaping business-to-business salesforce job satisfaction, and it is described as relatively scarce and rare.

The study analyses the causal model in theory of a structural relationships of a factor comprising ICTs and salesperson’ job satisfaction. It resulted that ICTs has an impact on affecting job satisfaction through salesforce administrative performance. Meaning to say, as ICTs infrastructure, training and support are positively relating to administrative performance, and not affecting the outcome performance significantly. From the finding of this study is the fact that the ICTs have a greater and more favourable effect on administrative performance than on outcome performance. Besides, salesperson technology orientation moderates the effect of both ICTs infrastructure and support on job satisfaction. The findings indicate that the salesforce's propensity and proficiency in the use of ICTs tools favourably affect sales tasks and job satisfaction. Hence, it is relevant to say that adopting ICTs to be a moderator has somehow ever been used and tested according to literatures.

Final example quoted is referred to the paper of Gil-Saura, Molina & Berenguer-Contri (2016) with paper titled ‘Store equity and behavioural intentions: The moderating role of the retailer’s technology’. These researchers have also adopted ICTs as a moderator to assess its role on how it could influence the relationship between store equity and consumer behavioural intentions towards the store. This paper is exploring the dimensionality of store equity that provides a model relates store equity with customer behavioural intentions on retailer.

The results of study have concluded that identified dimensions of the store equity like loyalty, service quality, product quality and perceived value are all having positive influence on behavioural intentions toward the retailer. The other findings are ICTs solutions implemented by the retailer as a moderator has exerted a moderating role in the relationship between consumer perception of the store equity and customer behavioural intentions towards the store. It is saying that the more advanced the technology deployed, the stronger the impact on consumer behavioural intentions towards store equity. This paper has demonstrated that ICTs been adopted as a moderator in moderating a relationship.

The need for IT and ICTs to penetrate tourism industry is feasible and practical. As mentioned by Minghetti and Buhalis (2010), the demand, the emergence of those skilled and demanding travellers who intend to treasure new and unexplored destinations, experiences that are supported by transport developments (Low-cost carriers, rapid trains and proliferation of private cars like Grab or Uber) and the Internet have indeed make all destinations not far from the potential markets. It is solid and proven that IT, ICTs or even Digital Technologies are highly requiring the deployment of Internet that goes hand in hand with the tourism industry.

The revolutions of tourism begin with conventional sales of tour packages to consumers from the intermediary like tour agents from overseas operators or local operators. That is what it is known as inbound tour and outbound tour depending on the tour packages you enquire from. As business grows and evolves with technology, it revolves from traditional practices of relying on intermediaries to making own initiative in sourcing own information through the deployment of ICTs. Internet permits large numbers of consumers, the potential to explore information and reservation facility at a lower cost. It also enables direct communication between tourism suppliers, intermediaries, and consumers to take place (Hojeghan & Esfangareh, 2011). Another fact support is indeed from WTO, quoted that Internet is changing the game, revolutionising the distribution of tourism information and sales. Buyers from online channel are occupying the big chunk of pie in overall sales, and tourism has gained a larger share of online commerce market.

This e-commerce is a platform of a result of IT revolution towards buying and selling or exchanging products, services, and information via computer networks, including the Internet (Turban et al., 2000; Bucci, 2014; Kurnia et al., 2015; Chand & Kumar, 2017; Tiwari et al., 2020). This is the era of new economy, the so called ‘e-economy’ when conventional economy has been intervened by the digital technology. Hence, the digital economy is existed and the whole digital economy taken place with a form of transaction relies on the electronic goods and services produced by an electronic business and traded in an e-commerce (electronic commerce) way. All these transactions do not seem possible without the emergence of Internet and Worldwide Wed as new technologies. The concept of digital economy existed and comes to reality in 20th century with the use of metaphor of shifting from processing atoms to processing bit by Negroponte and Garène (1995). That begins the chapter of 'digital economy' with the strong foundation of information technology that enables the subsequent development in terms of pace and speed in transmission of data. That caters to the ideal situation of economic activities which required widespread of dissemination of information in huge quantity, in digital format and even with the rapid pace as fast as light that could pervade into all aspects of human lives.

IT and ICTs are very closely related but they are signifying two different areas of study and industry. ICTs is an extensional term from IT that emphasizes on the role unified communications and integrated with telecommunications, computers, software, middleware, storage, and audio-visual systems. In short, ICTs falls under the IT umbrella that specifically dealt on IT with the communication element or purpose.

The implementation of ICTs has enabled companies to create room for improvement for their companies' performance and fulfil promised services to customers (Suárez-Álvarez et al., 2007; Buhalis & Law, 2008; Fuchs et al., 2010; Spencer et al., 2012; San-Martín & Herrero, 2012; Chand & Kumar, 2017; Spencer, 2020). IT has penetrated the tourism industry with the main concern to focus on communication. Hence, the terminology Information Communication Technology (ICTs) has come into picture.

As published on Organisation for Economic Co-operation and Development (OECD) Insights, it explains a scenario when ICTs has entirely changed and disrupted the existing value chains since past ten years. It has gradually evolved the trading system from the conventional store selling goods or services to everything could be done online. It describes that digitalisation of goods and services has impact towards business models. The example quoted, Spotify demolishes the sales of CD; Netflix is introducing linear television for every home; Facebook is exponentially ruling over media business; Grab in the context of Malaysia is replacing the taxi business. From this point, the power of digitalisation is far beyond what could be predicted. It has been quoted that IT industry is a very fast-paced industry where digital technology could drive change and it could enhance new business processes, new products, and new services. For those whom not capable of following on track, they will be eliminated from their respective industry.

The introduction of Internet to the tourism industry and its increase usage as explained by Galloway et al. (2011), and Roberts and Townsend (2016) with a possibility described by them as that Internet technologies has become more prolific throughout social and business life. Even more and more rural firms incorporate them into daily business use. Through observation, this experience of common application and facilities all based on personal Internet use and later evolves to be adopted as business tools thereafter. The adoption and use of Internet in rural areas started off with rural firms taking advantage of the Internet’s ability and sound results after adoption, to reach out the business to external markets and customers (Forman et al., 2005; Salemink et al., 2017; Thonipara et al., 2020).

In the present digital era, neither Information Technologies (IT) nor Information Communications Technologies (ICTs) are considered as highly sophisticated, emerging and techno-savvy terminologies or even to be considered as very techno-abbreviations in this fast pace changing world. Almost in all sectors and industries could not escape from having a connection and linkage with IT or ICTs. It is all started off with Internet (inter-networking), Net or even Worldwide Web, a global networking system inter-connected for the purpose of communications, information sharing and platform for connectivity with the use of computer as the fundamental tools. Benson (2008) and Standing et al. (2014) have defined internet as the global system of interconnected computer networks typically using the protocol TCP/IP. This, indeed, is a technical term used in IT industry.

In this thesis, Digital Technologies encompasses ICTs, it is part and parcel of IT. It is a term that is used in this digital era which adopting the technology of ICTs breaking through innovation thinking in world of business.

Wirtz, Schilke and Ullrich (2010) had quoted that Internet has had a profound impact on business starting mid-1990s. Regardless in corporate or businesses sectors, particularly in travel and tourism sector, IT is not only helping in the speed of retrieving and processing but also helps in reducing operational costs (Standing & Vasudayan, 2001). Systems can take in businesses like bookings and reservations from potential customers and customers virtually from any regions at any hours. This has greatly reduced the labour costs in engaging personnel in handling the task. With the help of ICTs, emergence of new business models, it also tends to open more choices of selection and providing information to consumers (Benson & Standing, 2008). In short, the benefits in general that been provided by ICTs can be described as easing the complications; from destinations search, tourism providers search to services search, it makes the whole preliminary process a lot easier, richer, and complete than any other traditional channels (Minghetti & Buhalis, 2010).

Hojeghan and Esfangareh (2011) has quoted that ICTs has provided the operators a tool for communication purpose. No shifts are required for the staff to take calls or handling facsimiles for enquiries between tourism suppliers, intermediaries, as well as end-consumers.

Buhalis (2003) has concluded that all the hardware and software, groupware and netware, and humanware (intellectual capacity) that used to develop, programme, and maintain IT related things are all adopted by hotel companies for the improvement on business operations efficiency, to gain competitive advantage. Tsai, Song and Wong (2009), Hall and Williams (2019), and Terdpaopong (2020) had also agreed and supported the point that information technology (IT) is an investment that will never be missed out by hotel industry operators to boost their business performance. However, Mihalič and Buhalis (2013), and Shehata and Montash (2019) had viewed it slightly different, he debated that IT could only be a factor as strong competitive advantage when it is integrated into a strategy. In short, regardless of all the perspectives, IT is undeniably could act as a powerful factor of competitive advantage when it is adopted in business.

ICTs has reengineered the business structure of the entire system of tourism and totally creates a brand-new range of opportunities and threats for all participants (industry players). Unofficially, ICTs is said to lead to evolve the effectiveness and efficiency of a relationship of entities in tourism in two ways radically. First, being the interaction of businesses and the clients, and secondly the regulation of relationship among entities that ascertaining business operation in the tourism industry (Buhalis, 2003; Oduori, 2016; Rejab & Karim, 2019). Internet in general has changed tourism consumer behaviour dramatically (Mills & Law, 2004).

Mihalič and Buhalis (2013) backed that their empirical research shown ICTs indirectly affect firm performance and has a positive potential towards firm performance.

Particularly in hotel industries, its firm's performances had indirectly reshaped through other competitiveness factors with the use of ICTs. Productivity potential of ICTs to firm performance has been proven significantly related and reacted even though investment have been found very low. They also commented that managerial attitudes to technological changes were significantly higher to international hotel chains that also concluded international hotel chains are more prone to a positive impact on ICTs business integration. In knowing such scenario has taken place, now without fixing a solid assumption towards local homestay operators; ICTs would have an impact towards the local business integration too. As mentioned by Buhalis (2003), Sigala (2007), and Ashari et al. (2014) information is a lifeblood, information is the key, it is so powerful and influential to the extent that it can change the entire value chain of tourism creation, marketing, distribution, and consumption (Buhalis, 1998; Gretzel, Yuan & Fesenmaier 2000; Salavati & Hashim, 2015; Benckendorff et al., 2019). Hence, performance has easily been manipulated by the deployment of ICTs. As cited by Theodosiou and Katsikea (2010), adoption of ICTs on business brings benefits like increased revenues, operational efficiency, customer satisfaction, and relationship development.

2.5.1 Digital Technologies (ICTs) Development in Tourism

Digital technologies have played a significant role in the development and promotion of rural tourism. The use of digital technologies has enabled rural tourism businesses to connect with potential customers, promote their services and products, and provide visitors with a better overall experience. Firstly, promotion and marketing through the internet, social media, and mobile devices have made it easier for rural tourism businesses to promote their services and reach a broader audience. According to a study by Adu-Ampong et al. (2019), social media platforms such as Facebook, Instagram, and Twitter have become essential tools for rural tourism promotion and marketing. Social media can help businesses to increase visibility, engage with potential customers, and create brand awareness. In addition, websites and online travel agencies (OTAs) have made it easier for tourists to find and book accommodations and activities in rural areas. Secondly, by enhancing visitor experience through digital technologies have improved the visitor experience in rural tourism destinations. For example, mobile applications can provide tourists with real-time information on local attractions, events, and weather conditions. Furthermore, the use of virtual and augmented reality can enhance the visitor experience by providing immersive and interactive experiences, as demonstrated by research by Buhalis et al. (2019). Thirdly, in improving business operations with digital technologies can help rural tourism businesses to improve their operations and efficiency. For example, cloud-based software can simplify inventory management, reservation systems, and payment processing. The use of digital technologies can also help businesses to collect and analyse data on customer preferences and behaviour, allowing them to tailor their services to meet customer needs. Fourthly, sustainable tourism development through digital technologies can play a significant role in sustainable rural tourism development. According to a study by Jovičić et al. (2020), digital technologies can be used to promote sustainable tourism practices, such as reducing waste, conserving natural resources, and supporting local communities. Digital platforms can also help tourists to make more sustainable choices, such as eco-friendly accommodations and transportation options.

In short, digital technologies have played a critical role in the development and promotion of rural tourism. The use of digital technologies has improved the visitor experience, promoted sustainable tourism practices, and enhanced business operations and efficiency. Appraisal and credits are flooding to ICTs in cultivating rural tourism's performance, nevertheless there are drawbacks and hindrances towards the development of ICTs in rural tourism performance. Beside availability of technology is always being questioned, implementation and maintenance of ICTs-related strategy in small firms has always been neglected (Lawson et al., 2003) and specifically in rural areas (Thomas et al., 2002).

Despite there are more advantages gain from ICTs deployment than disadvantages, undeniably it is because that the management of the hotel is lacking knowledge and training in ICTs deployment, lack of implementation towards achieving medium and long-term commercial strategy and less focus on managing the business regards to age and family factors (Buhalis, 1998; Red.es. Ministry of Industry, Tourism and Commerce of Spain, 2007; Polo-Peña & Frías Jamilena, 2010).

In addition, Laukkanen and Niittykangas (2003), Patterson and Henderson (2003), and Galloway, Sanders and Deakins (2011) agreed on and quoted that due to shortages of skilled labour in rural areas that lead to difficulty in recruiting and deploying ICTs to rural tourism that causes application of Internet as a tool is less effective and popular. Another critical factor from Courtney and Brydon (2001) backing on the outward migration of younger generations of the population from rural to urban. With that, exposure on training and access to technology solutions to mitigate against concentration on local market with the deployment of ICTs is low in acceptance (Smallbone et al., 2002; Grant, 2003). Warschauser (2004) has also backed such point where the important element that is carried by ICTs is not much depending on the availability of gadgets such as computing device or the Internet line, but rather it is the human effort that synergise the impact in making use of the device and the access of Internet to engage in effective social practices.

2.6 Underlying Theories

In this section, it reviews the theoretical perspective that underpin the rationale for the relationships between the three impact factors, namely economic factor, environmental factor, socio-cultural factor, and the rural tourism performance. This research study is governed by one major underlying theory, which is the resource-based view (RBV) and one minor underlying theory, which is the social exchange theory (SET). RBV focuses on the resources that a company possesses and the impact on competitiveness (Barney, 1991; Hunt, 1995). In this study, it is under the context of tourism rather than firm or company that it is referred to. The concept and the details of the theory will be probed and discussed in the sub-section for a thorough understanding on the foundation of the study. As for SET, it focuses on the local communities who are also the homestay operators (involved in accommodation sector) understand their behaviour on the reaction why they are willingly to be so dedicated and involved in rural tourism activities, due to the costs and benefits received out from tourism activities (Andereck et al., 2005).

2.6.1 Resource-based View (RBV) Theory

Resource-based view were first been published by Wernerfelt (1984) with his paper titled ‘A Resource-based View of the Firm’ based on the traditional concept of strategy and laying the foundation of this theoretical framework that has dominated for more than 30 years (Božič, & Cvelbar, 2016). Later in 1991, Barney (1991) has published his article titled ‘Firm Resources and Sustained Competitive Advantage’ in 1991 is widely reviewed, accepted, and cited by scholars from the field of strategic management with extension from this traditional concept strategy. RBV, proposes a managerial framework that been used to determine the strategic resources of a firm to achieve sustainable competitive advantage to clinch its competitiveness in market. RBV theorists have quoted that by optimizing internal resources, knowledge and capabilities, firms can achieve sustainable competitive advantage (Enriquez de la O, 2015). As quoted by Corbett and Claridge (2002), RBV provides a framework for a firm to better understand how competitive advantage is achieved through intra-firm resources and capabilities. In this theory, it quotes that firms are heterogeneous in nature as firms possess various resources. This mixture of resources is indeed advantage for firms to execute their own strategies differently.

RBV, generally posits that sustainable competitive advantage is derived from resources and capabilities. The RBV theory is impactful to strategic management as it could identify resources and capabilities, it enables the management to lead to sustained competitive advantage and consecutively results to performance (Lippman & Rumelt, 1982; Day, 1988; Jacobsen, 1988; Barney, 1991; Grant, 1991; Rumelt, 1991; Amit & Schoemaker, 1993; Day, 1994;). RBV is an interdisciplinary approach, it is not confined to certain industry or a specific discipline or subject matter, it is representing a substantial shift in thinking (Fahy & Smithee, 1999). This theory been developed within the disciplines of economics, ethics, law, management, supply chain management and general business (Hunt, 2013). The theory mainly concerns on an organisation’s internal resources as a mean of organising processes to obtain competitive advantage. The characteristics that been identified by Barney, to uphold as competitive advantage includes being valuable (Barney, 1991, 1986), rareness in the sense that it is unique and never been found elsewhere, imperfectly imitable (Barney 1991; Amit & Schoemaker, 1993), and non-substitutable (Barney, 1991). Valuable, as explained, it means resources should be capable of facilitating the implemented strategies that lead to improve firm’s effectiveness and efficiency. As for rareness, it means that some strategy requires a blend of few resources; if these resources are rare of firm specific (Hart, 1995) then competitors will drop the idea of implementing the same strategy so that there will be sustained competitive advantage. Likewise, as explained in a situation where firm has passed through the time, the history and firm founded presents and such experience and period are resources imperfectly imitable. Another element of imperfectly imitability is causal ambiguity that not being able to be understood by competitors. It is a tacit resource, it might be labour intensive and skill-based (Hart, 1995). Klein and Leffler (1981) commented that culture and reputation among customers is also a typical example to the mentioned characteristic. The final attribute which is non-substitutable is the element that must exist for firm to be considered sources of sustained competitive advantage.

With these four attributes in resources, it is said to be in competency to outperform other competitors and to be outstanding among the rest (Prahalad & Hamel, 1990). The absence of either one of the four core resources, will exploit the competitive advantage; hence, neither one should be neglected (Carmeli, 2004). Since, RBV is used to evaluate the potential factors of a firm or organisation (or in this context is tourism environment) that could be deployed to achieve competitive advantage. In this theory it has been elucidated that not all the resources possess equal importance, neither do they possess same weight and same potential as the source of competitive advantage (Fahy & Smithee, 1999). As such, the values created by each, and every single resource differs from resource to resource. Hence, sustainability of being competitive very much rely on the degree of the resources in which they could be imitated or substituted (Lowson, 2003). As clarified by Barney (1991), imperfectly imitable and substitutable explains on the value of the resource to be influential to competitive advantage of a destination. As referred to Duarte Alonso (2017), the framework has also been adopted in tourism and hospitality research by past researchers (e.g., Espino-Rodríguez & Padrón-Robaina, 2005; Denicolai et al., 2010; Haugland et al., 2011). Therefore, it is valid to claim that RBV is legit to be used as a theory to govern this study. Barney (1991) posits that firm resources such as organisational process, knowledge, capabilities, and all assets from various aspects could enable a firm to devise and set its own strategies favourable to more efficiency and effectiveness.

In the context of tourism, economic factor, environmental factor, and socio-cultural factor within this study have been considered as resources that contribute to tourism performance under this framework. As quoted by Wu (2009), past research on tourism development have focused primarily on a perspective of either economic or social impact factors, and this means a lot of time some factors have been neglected. This study incorporates three factors in a single framework as it will provide a more comprehensive and diversified perspective. The view has changed, empirical evidence demonstrated that socio-cultural, environmental, and economic impact factors should be studied seriously as those will have impacts on a nation and community (Dogan,1989; King et al., 1993; Wang & Miko, 1997).

Ever been claimed by Wernerfelt (1984) that products and resources are related, as such many products require compliment from resources, while many resources can be employed and turn into different products. This is accurately depicting the current scenario in tourism industry, where factors like environment is indeed a resource to tourism and turning into a product to be marketed; socio-cultural factor another resource within, been massively promoted by tourism promotion board that social lifestyle and ethnics' diversity of culture being truly unique tourists' attractions to the destination. These examples precisely portray the scenarios where products need compliment from resources and resources turn into different products. However, both competitive advantage and sustained competitive advantage should be both been implemented and maintained to achieve its competitiveness.

Competitive advantage is giving the upper hand to a destination to boost its performance by attracting more tourists and helping incur more expenditures from the visitors. Competitive advantage emphasizing on value creating strategies that are not been carried out by any potential or current competitor (Barney, 1991). Whereas, sustained competitive advantage concerns on a similar strategy and outcome, and in addition holding to a principle that potential or current competitors are not able to replicate the benefits of strategy used by the firm (Barney, 1991).

RBV has illustrated the flow on how the mechanism works in the context of tourism. Firstly, resources (e.g., economic, environmental, and socio-cultural factors) are all served to be the base. These bases will have its own functions and role in creating impacts to competitive advantages. Eventually, competitive advantages attract visitors and contribute to tourist's expenditures. Part of tourism performance in general is reflected by tourists' expenditures. Jurdana and Frleta (2016) quoted tourists' expenditure has played an important role in contributing to tourism performance especially in the accommodation sector. Tourists' expenditure has been one of the most crucial variables of analysis for a tourist destination knowing that it has a direct determination towards tourism profitability (Kastenholz, 2005). Profitability indicating performance in a financial performance view. Besides, Tourist expenditure is also very important in affecting economic activities, for instance transportation, accommodation and restaurants' food and beverage industry (García-Sánchez et al., 2013). This at the same time has demonstrated how essential is homestay operators playing their role in contributing to rural tourism performance. Craggs and Schofield (2009) have viewed tourism as a tool for economic development due to its capability to generate economic benefits. Hence, under the RBV, tourism is influential in making use of its resources in contributing to tourism performance.

In the context of homestay (accommodation), the economic impact of tourism is greatly driven by the head counts of tourists visiting and the tourists' expenses in the destination. Increase in tourists' overall expenditure I reflected by an increase in total number of days tourists spend in a destination, or in another words, the length of stay affects tourists' daily expenditure (García-Sánchez et al., 2013). Under RBV, resources are very impactful towards the goal (performance) in this industry. Jayawardena and Ramajeesingh (2003), have introduced a tourism analysis tool for measuring tourism performance, tool includes tourist arrivals, average tourist nights, total tourist nights, expenditure per tourists stay, expenditure per tourist night, gross tourism receipts, foreign exchange leakage, net tourism receipts, population, and per capita net tourism receipts. In short, Jayawardena and Ramajeesingh (2003)'s study, they have exhibited on how tourists' expenditures have influenced performance of tourism (POT) analysis in an overall picture. This has shown a relation on a factor played by tourists' expenditure in driving the tourism performance.

Under the context of this study, the factors (economic, environmental, and socio-cultural factors) are regarded as the resources that carry various attributes to contribute to destination competitiveness, and leads competitive advantage possesses. Within the dimensions of environmental factor, apart from destination environment and its environmental management which is more superficial and directly related to nature atmosphere; communities' satisfaction and communities' attitudes have also played their part as they are also dimensions of environment. Hence, these behavioural attitudes are also affecting competitiveness, that eventually leads to tourism performance as result (Albayrak et al., 2021; Zawadzki & Siemiatkowski, 2021). As argued by Božič and Cvelbar (2016), knowledge and capabilities related to natural resources management and conservation is important in contributing to a pleasant environment and that will indirectly construct a pleasant community. With that atmosphere, it will influence the satisfaction level of the community and reflected by individuals' attitude towards tourists. In another words, happy communities are more capable of entertaining and affecting tourist' satisfaction by trying to fulfil their needs, expectations, and expenditures, or even revisit intention (Gursoy & Rutherford, 2004). Hence, leaving a good impression to tourists is always an advantage gained, letting a happily satisfied visitor departing a destination will earn an opportunity for returning visitor. Environment factor is said to have dynamic capabilities to influence the success or failure of a destination with better respond to external changes (del Mar Alonso-Almeida et al., 2017). Natural environment was an external manifestation of firm's ecosystem, in the context of this study firm is tourism, and it emphasizes that environmental factor is crucial and natural resources upon which it depended were included in the whole system (Borland et al., 2016). Firm operates in a constant state of rivalry to achieve a comparative advantage through the acquisition of resources that are valuable, rare, and imperfectly imitable (Kauffman, 2015; Al-Ghaith et al., 2021). As from the socio-cultural aspect, it is perfectly fitted under this situation, where most of the dimensions (event, cultural festivals, diversity of cultures) under socio-cultural factor are indeed valuable, rare and imperfectly imitable as describe. Festivals celebrated by various ethnics are unique and destination-specific, there is no reason for imitation or substitution. Events and cultures that been practiced and carried out various ethnics and tribes are just traditions that been practiced in daily life; within the context of tourism, these has just been publicized and exposed to tourists. In tradition it is a heritage, inherited from generation to generation; in commercial, it is an exposure to tourists for the value of knowledge extension.

2.6.2 Social Exchange Theory (SET)

Social Exchange Theory (SET), according to Ap (1992) it is a general sociological theory that is concerned with the exchange of resources between individuals and groups in an interaction. It is an ideology prototype of explaining the behaviour of a pool of individual who work together (Cropanzano & Mitchell, 2005; Tracy, 2019). This theory also been adopted in the field of sociology and psychology as quoted be Homans (1958), and Blau (1964), so this has shown that the theory does not restrict or applicable to only particular industry or subject matter. As mentioned by Emerson (1976), this theory is in fact a two-sided theory, meaning to say it is a theory explaining for both parties. It is mutually rewarding and mutually contingent process involving transactions. The theory simply explains that the benefiting party could is also a party that brings benefits to the initially rewarding the benefits, so under this circumstance it is like an exchange, the beneficiary turns to be rewarder also in the relationship. In general understanding, SET is examining the inter-relationships between individuals' perceptions of costs and benefits, the impacts from the consequence and the support to tourism (Purdue et al., 1990; Jurowski & Gursoy, 2004; Choi & Murray, 2010; Nunkoo & Ramkisson, 2010b). Hence, this study adopts the theory to demonstrate an indicate how critical and significance stakeholder's involvement (in this context, it is particularly referring to homestay operators) have played their role in the development and prosper in rural tourism. This reference to this theory, it is said to be one of the most widely and commonly used model in the study of local community attitudes in tourism that ever been used by researchers like Byrd, Bosley and Dronberger (2009), Gursoy, Chi and Dyer (2010), Lee, Kang, Long and Reisinger (2010). Past studies demonstrated that for those local communities who involved in tourism, they have the mentality that they benefited from the gains (economic, environmental and socio-cultural aspects) are greater than the costs that they ought to bear (Jurowski et al., 1997; Yoon et al., 2001; Teye et al., 2002; Andriotis & Vaughan, 2003; Gursoy & Rutherford, 2004; Nunkoo & Ramkisson, 2011; Jepson et al., 2013). This has portrayed that whenever the communities believed that they gain from the tourism development, they will not hesitate to devote and involve themselves for the rewards. In a layman term, the response from the local communities is said to be in exchange for resources between local communities, or as stakeholders (the operators are also residents) after incomes generated from tourism from domestic tourism activities. This situation is in line with the outcome from past studies researched that local communities' involvement in supporting tourism development and tourism activities is greatly influenced by their perceptions on a more positive impacts to them than negative impacts (Allen et al., 1993; Gursoy & Kendall, 2006; Nunkoo & Gursoy, 2012; Kim & Kang, 2021).

As mentioned earlier in the scenario where local communities are said to experience resources exchange with tourism stakeholders, ever been quoted by Kayat (2002), and Bimonte et al. (2016) that under this exchange process, power is considerably an essential role. This power relationship with tourism stakeholders is an important element of social exchange theory (SET) (Ap, 1992; Madrigal, 1993; Hernandez et al., 1996; Lindberg & Johnson, 1997; Andereck et al., 2005; Sharpley, 2014). Empowerment gives it sense of belonging to the local communities in the context of tourism development. Nunkoo and Ramkisson (2012), and Khalid et al. (2019) ever quoted that empowerment has influence over local communities against their decision to support, and involvement in tourism development in their destination. As empowerment is integrated in social exchange theory (SET) as local communities perceived their sense of belongings, and the sense of value to be part of the tourism development. By having said that, local communities in this study they are also the stakeholders, tend to have authority and their own crucial role played in tourism activities will reflect themselves in a more favourable attitude towards tourism. Hence, community empowerment does help in maneuvering the mentality and attitude of the local communities to be positive and favourable towards social exchange.

Social exchange is based on a long-term relationship involving economic and social outcomes which between local communities, stakeholders and the tourism development are required (Cook, 2000; Nunkoo, 2016; Adong et al., 2018; Aman et al., 2019). This indicates that relationships built over times, rapport is where one party (e.g., stakeholders) has good understanding, efforts, and relationship with other party (e.g., tourism developer/ government); as a result, mutually are benefited and enjoyed favourable outcomes, it is a reciprocal situation. This is also quoted by Kayat (2002), and Bimonte et al. (2016) as relationship trust to reciprocate in the context of social exchange. Trust, under the theory of SET is determined by the expectations by one party (e.g., stakeholders) from another party (e.g., tourism developer/ government) and eventual extending it back to that specific party (e.g., tourism developer/ government) (Boon & Holmes, 1991; Lewicki & Bunker, 1995; Cole, 2018) out of merciful (Yamagishi & Yamagishi, 1994). It has been agreed upon that the relationship of trust between partners in an exchange process is affected by only single factor of obligation only (Hwang, 1987; Redding, 1990; Xin & Pearce, 1996; Kipnis, 2002; Cropanzano & Mitchell, 2005). This is backed by Zafirovski (2005), Nunkoo and Ramkissoon (2011), and Nunkoo and Ramkissoon (2012) posited that personal trust is indeed the element that give persistency and extension to social exchange. Trust as an element that contributed to social exchange as an outcome, it is believe that it is trust which align people to accept an activity and eventually lead to support, involvement, and devotion. (Blau, 1964; Holmes, 1981). This value embedded to either local communities or stakeholders are considerably crucial to prolong the tourism development and tourism activities.

As explained from a sociology perspective, people will tend to commit and devote to a relationship that attracts positive economic and social outcomes from an exchange (Lambe et al., 2001; Chang et al., 2016; Jeong & Oh, 2017). This has explained that the outcomes from an exchange, may it be positive or negative will somehow influence an individual's perception towards commitment in a relationship. This statement is mentioned by Homans (1961)'s findings, noting that relationship trust between one party and another party could be increased within a commitment of relationship under a mutual exchange of benefit through interaction (Muthusamy & White, 2005; Fatima & Mascio, 2018). As aforementioned, reciprocity is the key for one party to return to another party based on past relationships experienced of past benefits received (Ndubisi, 2007; Gupta & Sahu, 2012; Corbishley, 2017). This is applicable to tourism industry to local communities and stakeholders who are also local communities in this research study, these categories of people are willing to commit themselves in the relationship with other stakeholders such as government authorities in executing the tourism activities. They are committed in hope for having a good return and value from this relationship under the collaboration. Trust is the important element embedded to clear whatsoever doubts and uncertainties to achieve their goal – good and favourable returns. Another important factor which comes crucial under the SET, is the factor or satisfaction; benefit or profit gained from the outcome of the relationship minus off the cost of commodity will leave the result of satisfaction if the balance is a positive value. This factor of satisfaction is obtained along this relationship is said to determine long term collaboration (Sun & Shi, 2010; Jin et al., 2021). Hence, with the party that they gained from tourism development will tend to be satisfied with the relationship that they maintain with other party(ies), and this ultimately will lead to positive attitudes, more committed and devoted to rural tourism development in their destination as part and parcel of social exchange along the relationship.

With extension from the concept of benefits and costs, and satisfaction factor, are greatly affected by trust level, empowerment level and relationship satisfaction with tourism stakeholders (or other stakeholders, looking at accommodation operators are also being considered as stakeholder) (Nunkoo & Ramkisson, 2011; Nunkoo & So, 2016; Eslami et al., 2018). Besides, Achieng et al. (2014), and Mansour (2018) also supported that benefits and costs from a social exchange relationship is weighted, so commitment and satisfaction level will then be determined by the parties as to whether how involved and devoted their commitment to be. In short, response and reaction from both parties involved in social exchange is very much dependent on the rewarding factor in a relationship over time. Therefore, SET is said to be influential in the notion model to study local communities' attitudes, their role and its importance, their involvement and need for the existence of the relationship in rural tourism.

2.6.3 Unified Theory of Acceptance and Use of Technology (UTAUT)

Unified Theory of Acceptance and Use of Technology (UTAUT) is a theory proposed by Venkatesh et al. (2003) with his main concern over argument on users are facing new information technology, the individual responses towards the utilization of those technology that strongly matters the intention of use of information technology, later influences the actual usage behaviour. In addition to that, individual responses to information technology had also positively influenced the actual use of information technology. In other words, this theory is about a comprehensive synthesis of prior technology acceptance research studying on the behavioural intention of users towards technology acceptance. The four main elements in digital technologies incorporated the extracted ideas determined by Venkatesh et al. (2003) to perform their comparative empirical study are performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating condition (FC). Performance expectancy is defined as the degree to which the use of a new technology has the effect of benefiting users in performing certain tasks; as for effort expectancy it is the degree of the ease of use is associated with users' use of technology; social influence is the degree to which users' perception towards the importance of others (particularly family and friends) to believe that they should use a particular technology; and facilitating conditions are emphasizing on the users' perceptions of the resources and support that make available to them when adopting the use of the technology to perform tasks (Venkatesh et al., 2003; Brown & Venkatesh, 2005; Chua et al., 2018; Sair & Danish, 2018; Li et al, 2021; Zhang et al., 2021). Digital Technologies have borrowed, adopted, and incorporated the extracted ideas of the four elements from UTAUT into the dimensions.

Referred to UTAUT, the three constructs, namely performance expectancy, effort expectancy and social influence are theorized to have influence over a user's behavioural intention on the use of technology, meanwhile this behavioural intention and facilitating conditions will lead to determine the technology use. As such, the theory suggested that the objective of UTAUT in general is to guide and provide users of the theory with a management tool to measure the introduction of new technologies. It is also used to predict and explain users' behaviour of acceptance of new information technologies. Hence, this theory has been used in this study is to adopt the concept and to measure on the users (in this context the homestay operators who will or already engaged the technology) of digital technology in their daily business. So, it will enable the study to predict and explain on users' behaviour of acceptance of information technologies to be incorporated into their business.

2.7 Gaps in Literature

It is understandable that this study is unique and research findings are not identical as other studies in literature. Hence, this study serves to fill up the unfulfilled literature gap in the rural tourism in Sarawak. The present studies investigate on the factors that impacted the performance of rural tourism in the state of Sarawak. The three factors are the key pillars that influence the tourism performance of a nation according to the past literatures recorded by past studies.

The variables in the tourism performance include performance in term of financial and non-financial aspects. With references made to the reviews from past and existing studies, it is found out that there are gaps in this area of study. Firstly, according to the research of various scholars' work in this industry especially on homestay from the accommodation sector, it is really lack of empirical work been carried out on tourism performance done on rural areas. As stated earlier, mentioned by Hafiz, Hanafiah, Hemdi and Ahmad (2016), and Michael, Reisinger, and Hayes (2019) most of the studies from scholars focusing on destination competitiveness, competitive advantage or even factors that affect destination competitiveness, return on investments, service quality and satisfaction level of tourists in general. In particular, the remote area like Sarawak of even other states, it has really been neglected on the performance aspect. It is less on emphasis on studying the performance in rural tourism, and particularly to those homestay operations.

Secondly, most of the literatures focus on sustainability of tourism, the challenges and obstacles, the involvement of local community and study of the attributes to tourism development and its products. There is no further study on quoting the current issues faced, and how to improve the performance of such business operation in this sector. Though, homestay is one of the area of studies in the tourism field, it is not a popular topic academically since homestay programme was only brought into the Malaysian context in 1995 (Ramele et al., 2017). It is considered relatively new in the country as compared to other developing countries.

Lastly, there are not many investigations on the homestay operators' resources in the rural destinations in Sarawak. Their internal and external resources not properly been documented in Sarawak, and these create significant literature gap in providing a different prospective for the researchers in the rural tourism as Sarawak is unique in its socio-cultural and nature resources in promoting homestays. The authority does not seem to pay much attention in guiding and supervising the entrepreneurs from this industry.

This study emphasised on the investigation of the attributes of tourism or more commonly known as factors to tourism performance in relation to the rural tourism performance, and the moderating effect of digital technologies on their relationships. Three theories, there are RBV, SET and UTAUT are integrated to develop an integrative conceptual framework for this research. The following section will discuss the conceptual framework and those study variables. In short, a study incorporating technology theory, business theories to investigate on an issue in which is currently affecting the economy of a state is somewhat attempting to help in solving the problem.

2.8 Theoretical Framework

Based on the RBV, SET and UTAUT, a conceptual framework has been developed. The independent variables (or known as exogenous constructs) are the three key pillars in tourism, namely economic factor, environmental factor, and socio-cultural factor. The dependent variables (or known as exogenous constructs) are the two dimensions of tourism performance, namely financial performance, and non-financial performance. In addition, this study proposes digital technologies as the moderator in the relationships between the attributes of rural tourism or known as factors of tourism and tourism performance.

In accordance with RBV, this theory proposed that strategic resources of a firm (in this context it is the tourism atmosphere) to achieve sustainable competitive advantage, and this advantage will lead to performance. Based on this underlying theory, several hypotheses have been developed to test whether the factors are positively related to tourism performance. It is certain that having valuable resources and capabilities need not necessarily guarantee a competitive advantage in a fast-changing environment (Barney, 1991; Sirmon et al., 2007; Bamel & Bamel, 2018). According to SET, the business performance should grow and prosper, that eventually will develop rural tourism which leads to rural tourism to perform. Under the theory of UTAUT, digital technologies are suppose come in handy to enhance the business performance. In this study, digital technologies are seen as an effective tool to boost and grow business even in the tourism context. It is undeniably a trend where all sorts of business are now relying on digital technologies as their marketing tool in daily business operation. On this basis, six hypotheses have been proposed to test whether the relationship between tourism attributes and tourism performance is moderated by digital technologies. Figure 2.1 presents the theoretical framework of this study.

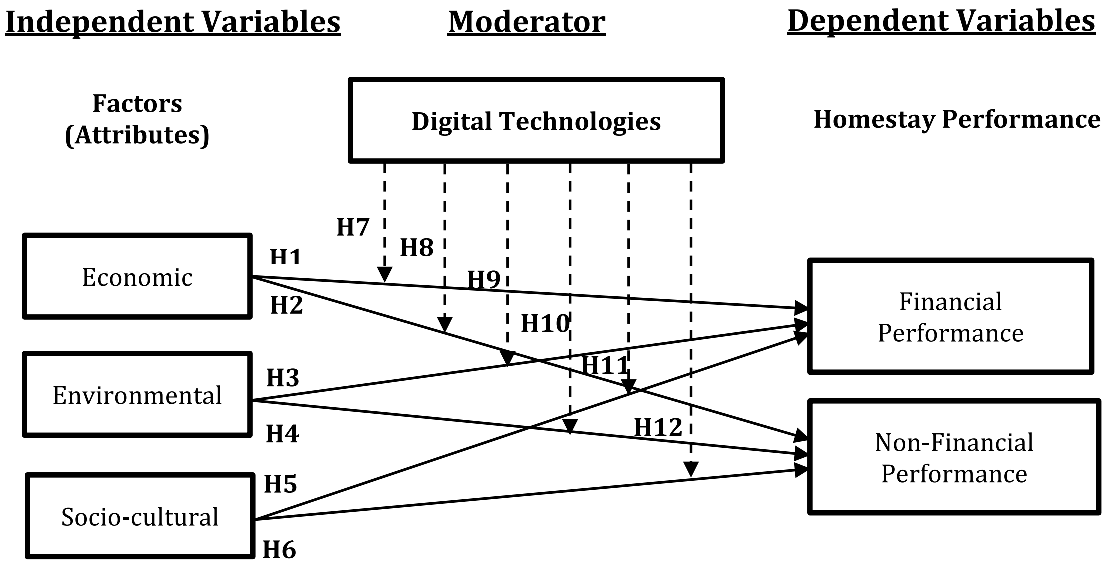

Figure 2.1: Theoretical framework

2.9 Hypotheses Development

With reference to the conceptual framework shown in Figure 2.1, the following sections will explain the hypotheses representing the relationships of the independent variables (economic, environmental, and socio-cultural factors) with the dependent variable (rural tourism performance) along with moderating effects of the moderator (ICTs).

2.9.1 Economic Factor and Homestay Operators' Business Performance

It is vital for a strong and stable economy in attracting tourists and improving small economies. Researchers argued that developing countries always take the advantage of foreign direct investment and joint ventures from overseas to expand their economy and in return attract even more tourists. An ever-changing economy often having many indicators of a strong economy, for instance price index, purchasing power parity, foreign direct investment (FDI), trade and industry value added (Manrai, Manrai & Friedeborn, 2018). It is quoted that destinations with strong economies have better competitiveness and perform better in term of overall tourism performance. For example, the USA has the second largest economy in the world and is ranked the top in the destination competitiveness scoring (Assaker et al., 2014). Referring to Snieška, Barkauskienė and Barkauskas (2014), economic factors being the most influential to the development or rural tourism, so it is very dynamic in contributing to the income generation to the nation. Hence, performance is directly related to the economic factor in a simple straight forward relationship. Development of tourism is also greatly reliable on revenue growth, that also signalling the importance of the expenditures from tourists (Botezat, 2003). In the economic field, the income of the communities is substantially improved, considering the own resources as a competitive advantage (Mendoza Velazco et al., 2020). Ramanauskienė, Astromskienė and Andriūnas (2010) have argued that increment in wages enable people to spend more on recreational and leisure activities, this is a very crucial and practical factor to rural tourism's performance. Increment in wages is in impacted by income of visitors in spending on lower purchasing power destinations, so creates a situation where tourists are very willing in spending. Romikaitytė and Kisieliauskas (2012) have mentioned that as tourists flew in from other countries, GDP per capita, inflation, establishment of tourism companies in the home country and tangible investments are different from visitors. In addition, the performance of the tourism is also very much affected by interest rate changes, government expenditure, foreign investments, and unemployment rate (Vadymovich, 2016). Hence, visitors coming from those nations with greater purchasing power and powerful currencies might greatly been influenced and attracted. Therefore, hypothesis proposed:

H1: Economic factor is positively related to homestay operators' business performance (i.e., financial performance).

In rural tourism, economic contribution is significantly crucial in generating businesses (Christiansen, 2019). Under this niche sector of tourism, somehow it improves the employment opportunities to the tourism destination, though it does not exist in a big scale; it helps up in strengthening the local economy in one way or another while at the same time also capable to promote nature resources. Though, from the economic context performance is always related positively to financial aspect; meantime, it is also regarded to non-financial aspects. Rural tourism activities are related directly to economic factor in relations to price, income, foreign exchange, job opportunity and standard of living of the destinations. All these attributes of economic factor directly impacted the livelihood of the local communities in one way or another. Elliott and Mann (2005) had mentioned that that rural tourism is not only capable sourcing in foreign exchange, economic growth and employment, but also enables host community to be involved in biodiversity conservation, urban growth, infrastructure overhaul and planning, rural development, environmental restoration, coastal protection and cultural heritage preservation. Those activities as mentioned (specifically foreign exchange) are capable to bring satisfaction to rural tourists in meeting their expectations and later generates growth in visitors to the destinations with reputation comes along the way. Past researchers also argued that with tourism acts as a catalyst for national and regional developments, rural tourism is providing and creating employment, exchange earnings, balance of payment and infrastructure, benefiting host communities and visitors in visiting the destinations (Glasson et al., 1995). That indirectly assure customer satisfaction, promote growth is customers, products, and services, and finally leads to reputation of the destinations. Thus, H2 is proposed as:

H2: Economic factor is positively related to homestay operators’ business performance (i.e., non-financial performance).

2.9.2 Environmental Factor and Homestay Operators' Business Performance

A destination's core resources and attractions (environmental factor), like those inherited, man-made and supporting resources have formed the characteristics of a destination to be attractive or unattractive to visit (Gomezelj & Mihalič, 2008; Hafiz et al., 2016; Michael et al., 2019). This indicated that the environmental factor has a direct great impact on the tourism performance through visitations from tourist.

Directly, the arrivals of tourists contribute to tourism performance financially. Croes and Kubickova (2013) have incorporating the size of the industrial base of the economic structure and the quality-of-life standards in a country over time in measuring competitiveness; the study revealed that tourism competitiveness is the antecedent of tourism performance. Hence, tourism performance is reflected and indicated by destination competitiveness.

Literatures are obtained to support this finding refers to Mowforth and Munt (1998), Farrell and Twining-Ward (2004), Choi and Sirakaya (2006), Mowforth and Munt (2015), and Liu, Wu and Zumbo (2010) that conventionally, tourism destinations are said to grow spontaneously without been planned, and consequence from such stage many natural environment and socio-cultural environment, transforming economic development into a deficit of competitiveness.

In short, environmental factor, socio-cultural factor and economic factor are all been directly influencing tourism performance, in which performance is reflected by the growth of destinations; if tourism destination was not managed well, it will then lead to a loss in term of competitiveness. At the same time, there is evidence that effective and efficient environment management capabilities could ensure maximum impacts of tourism industry on the economy; economy brings impacts to performance (Bhatia, 2004). Bornhorst et al. (2010) indicated that product and service offered in the destination, location and accessibility, and community support as important factors to a destination to be regarded successful and popular. Reference to Gunn and Var (2002), quoted that the attractions, promotion, tourism infrastructure and services as important drivers too.

In the context of environmental factor, besides the physical atmosphere as nature resource; community support is playing a critical role in contributing to tourism performance as in this scenario as it is also one of the dimensions to environmental factor. Therefore, environmental factor is very influential towards the performance of tourism.

In De Freitas (2003) opinion, the choices, and options to be considered by tourists in visiting a destination includes the landscape, geographical location, topography, flora and fauna, weather, and climate. As such, from this statement it could be concluded that eve before the physical visit from tourists, environmental factor has already existed in the plan of tourists prior to visit. Therefore, this factor is portraying the utmost importance among other factors. Therefore, hypothesis proposed:

H3: Environmental factor is positively related to homestay operators’ business performance (i.e., financial performance).

In general, visitors’ perceptions of physical environment quality, personal interaction quality and the destination atmosphere affects behavioural intentions relating to customer loyalty and customer satisfaction during tourists’ visit (Chen et al., 2013). Environment not only attracting incomes by tourists’ visit but also underly the quality of satisfying the visitors psychologically, providing sentimental and emotional values by satisfying their expectations. This is a form of competitiveness that been created through the quality and physical environment significantly to achieve customers satisfaction and lead to growth in customers. Research have shown that physical environment has positive influence on non-financial performance. Meantime, the management practices implemented and conducted by the local authorities and communities have also play a part in leading to non-financial performance. In the task of increasing competitiveness to destination, human talent management in environmental management practices in tourism form the basis of authorities and communities are required because it becomes responsible for the change by either be produced and introduced with a view to increasing competitiveness and/or expected productivity (Cejas 2016; Juan & Álvarado 2017; Villarroel & Bruna 2017). Thus, management practices contribute to the growth of rural tourism through work activities in demonstrating, innovating, and expanding rural tourism, incorporated human resources into this sector to obtain higher level of customer satisfaction, customer growth, product quality enhancement and reputation (Mendoza Velazco et al., 2020). On the other hand, ability to influence and rectifies problems, and attending to service recovery on environmental issues, customer satisfaction and subsequently on customer loyalty of the hospitality industry is indeed a critical factor in leading tourism's non-financial performance. In the study on the service recovery dimensions on customer satisfaction and customer loyalty done by Cheng et al. (2019), their findings revealed that efforts to attend to service recovery (rectifying problems, environmental issues are significantly related to customer satisfaction and also have a positive response to customer loyalty. Therefore, hypothesis proposed:

H4: Environmental factor is positively related to homestay operators' business performance (i.e., non-financial performance).

2.9.3 Socio-cultural Factor and Homestay Operators' Business Performance

Socio-cultural factor has brought benefits to tourism development that leads to tourism performance by attracting more influx of tourists visiting to the host country. In the context of tourism performance, it could be segregated into financial and non-financial. The socio-cultural value of tourism from the rural includes community identity, heightened sense of linkage with local environment and increase in tourists (Zhuang et al., 2019). With that, direct effect from the influx of tourists will improve the rural performance financially.

According to Ritchie and Crouch (2010), the most important attributes to destination competitiveness are physiography and climate, mix of activities, culture and history, tourism superstructure, safety and security, cost and value, accessibility, and special events. Among all mentioned, attributes like culture and history, safety and security and special events are what have been discussed under the dimensions of socio-cultural factors in this study. As such, this socio-cultural factor has played a very significant role in contributing to tourism performance financially as well.

Culture is indeed a very complex subject embracing various aspects of human life. It is not only attracting visitors to experience but on one hand also inculcate the attitudes of local community towards the visitors. The uniqueness and variety of cultural experiences are the key points that attract tourists to the destination.

In addition, as mentioned by Ryan and Aicken (2005), and Glasson and Therivel (2019) socio-cultural factor is indeed the 'human impacts' in tourism context, it focuses on the changes in the quality of residents' daily life at the tourist destinations and cultural impacts related to the transformation in traditional values, norms and identities arising from tourism.

Culture could comprise of festivals, art, architecture, and cuisine. This element is undeniably a unique selling proposition to a destination in attracting the tourists. As quoted by Bacsi (2017) cultural and ethnic tourism are showing increasing trend in world tourism, and comprises of physical objects (buildings, objects of arts), values revealed in everyday lifestyle (customs, food, drinks, celebrations), and events and festivals.

Chin et al. (2014) have also supported those natural resources and cultural heritage are important determinants of competitiveness in a destination. As such, culture undeniably has influence over the tourism performance of a destination. Culture can be tourists' attraction in variety of forms, it could be represented by destinations like Chinatowns, Little Tokyo, or Thai Towns throughout the world (Lin, 2008). So, likewise, it could be having its on attractiveness in every destination. These destinations could lead to tourist's influx and contribute to performance financially. Cultural factor has become a system in global production and consumption that lead to homogenization of cultures, and often generates a need to actively search for 'differentness' by way of tourism to achieve better performance (Sharpley, 1996; Cole, 2007).

From the social aspect, Patterson et al. (2004) defined society consists of population, migration, social networks, pride of place, subsistence practices and employment; as such, well-rounded society will therefore have a positive influence on tourism performance. As stated in Özyurt and Kantarcı (2017)'s study, they have mentioned that what makes a destination to be successful and popular or recognised as the core determinants of being a successful destination has been identified as safety and security and able to provide high level of health care facilities are regarded as the most important determinants (Dwyer & Kim, 2003; Zaiton et al., 2018).

Safety and security being the dimensions of social factor have been regarded as one of the important factors to tourism performance. Safety and security are social element that cannot be neglected, both play crucial role to influence tourism performance. A harmonious, peace and safe environment is one of the criterions needed before even thinking of visiting a destination. Events (cuisine and nightlife), one of the dimensions to social factor identified by Kastenholz et al. (2018) as opportunities for socializing as rural experiences.

Socialising is weighted to be an important element, according to Maslow (1943), and Maslow (1987)'s hierarchy of needs, it a mix between belongingness and esteem. Besides, Ritchie and Crouch (2003) also quoted that the most important competitive destination produces societal prosperity and that means prosper in the context of performance. Hence, hypothesis proposed:

H5: Socio-cultural factor is positively related to homestay operators' business performance (i.e., financial performance).

Culture, as mentioned earlier, it is an abstract element that strongly bonded with attitudes that will play a role in determining the sustainability of rural tourism in a non-financial aspect (López et al., 2018). Pramanik and Ingkadijaya (2018) quoted that establishment of tourism destination influences the attitudes of residents towards accepting differences and their understanding of other people's habits, and that has an encouragement on local to have a healthier live; with that this creates an impact to attract tourists with its host's lifestyle. The uniqueness and variety of cultural experiences are the key points that attract tourists to the destination. Cultural heritage of a destination is important for long-term prosperity, also will strengthen residents' sense of place and civic pride (Chu & Uebegang, 2002). This civic pride provides the pride to the residents; hence, they will be more willing to share homes and environment with the visitors (Manrai et al., 2018). The attitudes that give the warmth of hospitality that eventually will achieve growth in performance non-financially (Kallmuenzer et al., 2018). As discussed, safety and security are also factors that considered before a visit is planned. It is not only affecting the tourism performance in a financial way but also on its non-financial performance. Safe and healthy environment for the visitors is the among the most considered factor to the non-financial performance to achieve customer satisfaction (Zaiton et al., 2018). As mentioned, events that include cuisine and nightlife and festivals are determined by researchers to be the key determinants or motivators for tourists in making their selection in visiting a tourism destination, and it is also indicated that special events even have had a significant positive impact on that destination that been visited (Lo et al., 2019). Therefore, hypothesis proposed:

H6: Socio-cultural factor is positively related to homestay operators' business performance (i.e., non-financial performance).

2.9.4 Digital Technologies as Moderator to Business Performance of Homestay

Digital technologies or layman term known as ICTs has been proven by past research to be a useful, effective, and efficient element in moderating a relationship for better outcome. Alderete (2017) has adopted ICTs as a moderator to examine the role that ICTs plays in the socio-economic development of developed and developing countries and is found significant. Another research done by Ebrahimi, Shafiee, Gholampour and Yousefi (2018) similarly, also used ICTs as moderator in determining the effect of orgainsational innovation (OI), learning orientation (LO) and entrepreneurship on small and medium-sized enterprise (SME) performance. The results obtained is also significant, ICTs is found to moderate optimised effect on its variables – OI, LO and SME's entrepreneurship performance. The study is quoted to be aligned with past research on the effect of ICTs on business performance (Powell & Dent-Micallef, 1997; Tippins & Sohi 2003). In the study of anlaysing the causal model in theory of structural relationships between a factor comprising ICTs and salespersons' job satisfaction; ICTs is also found to be a proven effective moderating in moderating the relationships (Limbu et al., 2014). The study resulted that ICTs has impacted job satisfaction through salesforce administrative performance.

Gil-Saura, Molina and Berenguer-Contri (2016) also used ICTs as moderator in their study on assessing its capability in influencing the relationship between store equity and consumer behavioural intentions towards the store. The study concluded that the more advanced the technology deployed, the stronger the impact on consumer behavioural intentions towards store equity. Hence, outcome could be achieved, and performance could be enhanced; performance is indirectly affected by moderator in this study.

There is no identical or levelled technological innovations to all the countries, as it is constantly changing. Technological innovations under this context is referring to ICTs. Operation mode innovations, special events creation and electronic information resources are categorized as technological innovations (Hong, 2009), as it has also been mentioned in Manrai, Manrai and Friedeborn (2018)'s study. Electronic information not only cater to operators as an infrastructure but also supply to the visitors whom visiting to the destination. Electronic information resources seem to be a necessity for business travellers for some basic use, such as e-mail access and international calls (Manrai et al., 2018). In many developed countries like the USA, UK, Japan and many more, it is considered 'normal' to regularly access to e-mail from smartphone or even accessing social media from time to time and even chatting with relatives or friends back from home. So, tourists traveling to developing countries and rural destinations might be restricted with these luxuries. As such, technological innovations not only easing the communication between visitors and accommodation operators but also provide convenience to visitors for access to technological gadgets. This adds advantage to the tourism performance to certain charismatic travellers.

In short, with the deployment of ICT in business, especially in tourism industry; it is an effective and advantageous for technology to sit in as a new factor to improve business performance in reducing costs and maximising revenues of the industry (Ibrahim & Jebur, 2019). An example quoted by Laudon and Laudon (2015) in their study on enterprise resource planning (ERP) software in which helps to integrate businesses in term of production, sales, human resources, and finance business enhancement. As such, ICT has proven that it is an advantage to ease and enhance business performance not solely on transactions but also in logistics (Cho et al., 2008), where rural tourism in accommodation sector is lacking now in the co-ordination.

According to Nevo and Wade (2010), SMEs like operators of homestay can communicate and respond to either competitors or their respective potential customers with minimal costs by engaging the use of technology, through social medias and electronic mails for correspondence purpose. It has been supported by studies that social medias provide a cheap option for analytics, automated publishing, content management, conversion tracking and customer targeting (Siamagka et al., 2015). Hence, technology is proven to be an efficient way of improving business performance, not restricted to promote products, services and brands only but boosting brand recognition, collecting feedbacks and comments from clients, generating of mouth-to-mouth recommendations and other benefits gained in improving business management and performance (Ainin et al., 2015).

Digital technologies have played an important role as an essential tool and medium in tourism development by acting as functional opportunist in promoting the opportunities of rural tourism (providers) and for exploring and planning experiences of rural tourism (consumers). Therefore, digital technologies serve the gap between the rural tourists and the rural tourism providers, in this context the accommodation providers (homestay operators) through the deployment of ICT to link and improve the business performance and environment of the local communities.

It has a very crucial impact to local tourism performance in the accommodation sector with the economic contribution brought by visitors on national level or international level as it helps to generate businesses to the local communities (Christiansen, 2019). Rural tourism plays a role in creating job opportunities in the local communities, helping to contribute and improve household economy among local communities while at the meantime appeal to preserve the host environment. It is certain an advantage to the economy of the local communities with prospects of benefits and costs generated by tourism. Page and Connell (2014) have mentioned that more on a positive economic gain is received than a negative aspect from tourism’s impact. An example from the study in Indonesian national park has found that communities have been benefitted from economic growth in relation to the utilisation of tourism activities; it has found to be significant on this relationship (Manurung et al., 2019). This implies that economic factor in rural tourism will positively impact the business performance in tourism industry. Besides, Mondino and Beery (2018) also emphasized that economic stability is required in the development of tourism industry apart from socio-cultural and environmental sustainability. This has drawn out the inter-relationships of economic factor and tourism performance. Therefore, hypothesis H7 is proposed:

H7: Digital technologies moderate the relationship between economic factor and homestay operators' business performance financially.

Digitalisation is profound in creating effect on companies, up and downstream operations, networks, and ecosystems (Iansiti & Lakhani, 2014; Porter & Heppelmann, 2014; Jacobides et al., 2018). Example is made referring to corporates like Rolls-Royce, Kone, Caterpillar and Hilti, these companies are already moving towards emerging business models, data-based value chains and enjoying flexibility on organisation forms towards their agile operations. These changes and transformations are linear with the intention to improve the overall performance even non financially in efficiency and customers cum employee's satisfaction. Kohtamäki et al. (2019) postulated that digitalisation does have an impact on performance and the relationships is present, though it is said to be complex. Later, it is evidenced that digital technologies (digitalisation) have direct relationships to performance in the recent study (Kohtamäki et al., 2020). Kindström and Kowalkowski (2014), and Abou-Foul et al. (2021) have posited that advancing digitalisation incentives with service business model improves service quality and leads to a more efficient operation development. Enhancement in service quality can provide contentment non-financial performance. Evidence from studies shown understanding the effect of embedded digital technologies in the service offering that enhances the customer experience, reduces time and cuts cost for the operators (Rymaszewska et al., 2017; Abou-Foul et al., 2021). Thus, hypothesis is proposed:

H8: Digital technologies moderate the relationship between economic factor and homestay operators' business performance non-financially.

Study has shown that environment factor has an impact on tourists not only on physical atmosphere like unique biological objects, flora, fauna, territories and water areas but values in term of organisation and management of destinations and its ecological aspects as well (Arshinova et al., 2019). It is crucial to maintain environment as it has a direct effect on the performance to tourism. Another support on this factor is mentioned by Christiansen (2019) that tourists visited to sites in rural areas were attracted by landscape beauty and the sighting of wildlife available in the rural. Tourists are willing to foot for higher premium, while having greater interest towards nature and having stronger attitude on nature; this portrayed that environmental factor leads directly to tourism performance (Teeroovengadum, 2019). Therefore, nature in the rural tourism context leads to environmental identity, which can establish stronger bond and longer-term engagement. As such, environmental factor influences rural tourism performance at destination. Hence, H9 is formulated.

H9: Digital technologies moderate the relationship between environmental factor and homestay operators' business performance financially.

Latest research has backed and shown that more than half of the traveling populations have tried on paying online and using e-sales booking system (Henry, 2016). This implied that the ability of digitalisation greatly influenced and shaping the business models in tourism in this information era of digital. These changes in the operation of the tourism enterprises have portrayed the application of e-technology in daily operation is taking in place. The modern tourists' return to nature and tradition, the development of rural tourism has resulted improvement of quality of life in the rural areas, bringing in more activities in agricultural and forestry sector, and eventually leads to conservation and preservation jobs to environmentally (Magdinceva-Sopova et al., 2017). Consecutively, all those the impacts resulted to a boost to local destinations' non-financial performance. It has been concluded that digital technologies to rural tourism is useful and economically viable in promoting rural resources and eco-systems for environmental protection and sustainable natural resource management (Magdinceva-Sopova, & Boskov, 2018). Hence, H10 is formulated.

H10: Digital technologies moderate the relationship between environmental factor and homestay operators' business performance non-financially.

Community identity, as one of the socio-cultural values of tourism that is linking the local environments to tourists and attracts tourists in visiting destinations (Zhuang et al., 2019). Indeed, this influences the local to love a healthier live with tourists understanding, accepting and appreciating their existence; their differences of habits and their living been accepted and encouraged by tourists has been a motivation to improve the attitudes of the residents (Pramanik & Ingkadijaya, 2018). Socio-cultural under tourism context are 'human impacts' of the tourism industry where quality of residents' daily life is valued and cultural in relation to traditional values, norms and identities are being appreciated in tourism (Glasson et al., 1995). As a result, socio-cultural factor changes are being noticed and valued when tourism industry development is taken place (Muresan et al., 2021). As such, this factor is very much influential to the progress of the development in the tourism. Therefore, a hypothesis is constructed.

H11: Digital technologies moderate the relationship between socio-cultural factor and homestay operators' business performance financially.

In the study of Ojobi et al. (2020), posited that socio-cultural is significant to small-medium enterprises (e.g., homestay operators) on performance variables as it has impact on the sales turnover of SMEs. The factor is to be vital to the host society for survival in operating businesses in rural tourism setting. The negative impacts of unplanned tourism development on socio-cultural are factors that directly affect rural tourism as an alternative set of principles and practices to harness tourism potential (Travel and Tourist Analyst, 2004; Ajagunna et al., 2020). Past researchers have evidenced that information and communication technology (ICT) has effectively brought in the third industrial revolution to another level with unprecedented growth of ICT applications reshaped the operating environment of tourism industry today to a new era (Law & Cheung, 2006; Shang et al., 2008). Singh et al. (2006) quoted that ICT can facilitate greater customer satisfaction and provide a competitive advantage. Thus, it has been common now to incorporate tourism facilities by using ICT to customize products and services and to enhance guest satisfaction (Lee et al., 2015). It is factful that with the adoption of ICT in the tourism industry, it improves guest satisfaction, improve service quality, reduce costs, improve decision-making and increase revenue (Ansah & Blankson, 2012; Aziz et al., 2012); and establishments that fail to invest in ICTs run the risk of being ill-equipped to compete with their more technologically advanced competitors (Yousaf, 2011).Undeniably, ICT rebuilds the tourism industry in this new IT era with applications been adopted to use as a channel to promote socio-cultural factor of host destinations. Hence, hypothesis is proposed:

H12: Digital technologies moderate the relationship between socio-cultural factor and homestay operators’ business performance non-financially.

2.10 Summary

In short, the main objective on the use of digital technologies for the rural tourism industry for those operators in this industry is not so much focus on the gains of individual firms but is rather aimed to re-orientate to the global market, apply those ubiquitous features in this contemporary business world to enhance function, process and quality of business involved and consumer experience in the local rural economy setting specifically in tourism industry in the accommodation sector. This chapter discussed the independent and dependent variables used in this study with the moderating effect from moderator been introduced. Reference made with underpinning theories of Resource-based View (RBV) Theory and Social Exchange Theory (SET) to support the relationships establishment between each factor and the tourism performance in the context of Sarawak state. The theoretical framework and the development of hypotheses are shown as above. The following chapter will discuss and explain the rationale of research methods and its procedures.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology portrays the ways, the mode of methods and ruling of how particular research been undertaken. It is a stage to document how data are sourced and collected by a set of guided design and planned and managed through the pre-set methods. The methods ought to be in a systematic form of principles, theories, and values and formed by a specific approach to research (Somekh & Lewin, 2005). The rationale of selection on a specific research setting would have been identified and indicated as a foundation before further into research methodology. Then, choice for research paradigm, research design such as type of study, purpose of the study, unit of analysis, population of the study, sampling technique, sample size, response rate will be decided and justified. Following with procedures and methods of data collection, questionnaire design, and measurement instruments are presented. Finally, preliminary data assessment and data analysis techniques are brought to picture. Justifications will be discussed for each, and every single step proceeded.

3.2 Research Sites

This research study is focusing on the accommodation sector in those remote areas in a rural tourism setting with targeted respondents focuses on homestay operators. Therefore, survey will be conducted to either the homestay's operation managers or the owners of the homestay operation. In the state of Sarawak, one of the states in Malaysia in which it is the biggest in coverage in parameters and very much less developed; hence, the nature of the state makes it an ideal region for the study. Geographically, Sarawak is one of the only two states of Malaysia sharing the terrestrial borders with its neighbour state Sabah, neighbour countries Indonesia’s Kalimantan and Brunei Darussalam with all located on the Borneo Island. Sarawak, consist of 12 divisions with many rural areas under all these divisions. The state is naturally rich and inherited with natural resources and cultural, traditional elements though geographically it is not a strategic to international tourists. The sites selected and been conducted for research study are evenly spread within Sarawak with criteria of a rural tourism destination being fulfilled. There is a total of 11 divisions and districts in Sarawak’s rural tourism market. The sites’ information is obtained from Ministry of Tourism, Arts and Culture (MoTAC) and Ministry of Tourism, Creative Industry and Performing Arts (MTCP). Both providing the identical list of homestay operators in Sarawak. These sites include 15 homestay sites in Kuching, 4 sites in Serian, 1 homestay site each in Samarahan, Sri Aman, and Kapit, 3 sites each in Sibu and Limbang and Lawas, 2 homestay sites each in Betong, Mukah, and Sarikei, and 10 sites in Miri.

The sites selected for the purpose of research study have fulfilled the criteria of low in population and inhabitants and there is remote as with distance away from the cities or township. As argued by Lane (1994), and Śonca, Csosz, Sabin Jr., and Mateoc-Sîrb (2020), different countries would have their own standards on population densities. Typical examples are quoted, Australia and Canada consider rural area with population less than 1,000 residents, and Austria defines rural areas with 5,000 residents. Gartner (2004) regards rural as population less than 2,500 residents in United States of America. In the context of Sarawak, the author has decided to use population density of less than 1,000 to identify the rural population densities under this research study. Sites selected are accessible either by road or by air or by river.

The sites selected can represent the rurality, the rural tourism of Sarawak as there provide the tourists the nature (environment), the authentic socio-culture of the rural community and their ethnicity in Sarawak. The research sites that scattered throughout Sarawak, with locations like outskirt of divisions and districts have accounted for more than 23% of the rural (remote) destinations in Sarawak. With the focus on year Discover Sarawak 2019, the Sarawak Tourism Board has indeed segregated the tourism into five main categories to promote Sarawak, namely, Culture, Adventure, Nature, Festivals and Food. With the advancement, expansion and credibility to ICTs in Sarawak, the reputation of the state has opened to the world in a very promising pace. Hence, targeting the one of the group of stakeholders from these research sites as the sampling would deem to secure its reliability and credibility of the research findings as these group of people are residents who were currently residing in and have been living in this rural, remote setting of Sarawak for more than a year; and involve themselves as stakeholders in operating businesses in the industry. It is very convincing, and results are going to be promising. Therefore, the sites are all fully covered with directory of homestay operators obtained from MoTAC and MTCP. Respondents are picked randomly from each site with an averaged sampling size computed.

3.3 Research Setting and Rationale

The research setting for this research study focuses on the rural tourism in Sarawak with study stressed on the impact factors that affect the performance of the industry. Respondents will be approached to study on their perceptions on how they foresee Internet of Things (IoT) or more to be known by Information, Communications and Technologies (ICTs) has affecting their businesses. The impact of the internet, in particularly Web 2.0 and the influence of social media technologies like Facebook and Instagram have a very impactful outcome on every aspect shared among consumers. Also, not to forget the impact of software applications for booking purpose, such as Booking.com, Agoda, Air BNB; for transactions purpose, likes e-wallet such as Sarawak Pay, Boost, Touch n Go. In short, the digital technologies that are concerned focus on these four main aspects, namely social medias, e-wallets, booking apps and websites.

3.4 Research Design, Sample and Procedures

Research design is explained as master plan for a research study that sketches the techniques and procedures to be used for data collection and analysis (Zikmund et al., 2013). It is the process that directs the answering of research questions and works towards research objectives that is known as research design of the study (Cooper & Schindler, 2003). Further explanation on the definition of research design also written as how sample is selected, how data is collected, how different constructs are measured, and how data has collected being analysed. The purpose of the research design is to provide guidelines to assist researchers to tackle troubles with distribution of limited resources (time factor and cost factor). Research design enables researcher to plan and select the suitable techniques which is adopted in methodology.

Generally, there are two different approaches in research, namely quantitative approach and qualitative approach (Hair et al., 2007; Zikmund et al., 2013; Sekaran & Bougie, 2016). The research approaching measurement of attitudes, behaviours, opinions and/ or knowledge is referring to quantitative research (Cooper & Schindler, 2003). Research objective that needs to be achieved that requires researcher in obtaining empirical evaluation consisting numeric data measurement and analysis for further investigation and confirmation is categorised as quantitative research study; whereas, for qualitative research study it is the opposite of quantitative research, and does not handle numeric data, indeed it is more on a conceptual approach (Zikmund et al., 2013). Hence, this study deployed quantitative approach.

This research study has engaged a quantitative method in a Confirmatory Factor Analysis (CFA) and participatory approach, and a survey designed to measure and assess the relationships between the three impact factors, namely economic factor, socio-cultural factor and environmental factor of rural tourism against the rural tourism performance. In the second scenario, the same set of relationships will be assessed again with an introduction of a moderator to the three relationships, to explore the foreseen outcome of performance with respect to the perceptions of one of the industry players (homestay operators). Hence, this method is selected by the researcher to conduct the interview.

Data to be collected from survey, by adopting questionnaire in participatory approach (interviews) with respondents answering a series of questions that best describe their feelings, the degree of agreement or disagreement and point of views (perceptions) in a 7-pointer Likert scale format.

The unit of analysis for this study focuses on individuals who are homestay operators operating their business in the rural areas. In other words, targeted respondents are referred to key person or key informant.

As mentioned by Thanos et al. (2017), and Kull et al. (2018), key informant is referred to who are having the designated position and knowledge to exercise with their organisational strategies to assess its organisational performance. Hence, they are appropriate to provide the information required. In this context, the operators are either the operation managers, who have been appointed to operate the business or the business owners who are entrepreneurs in this industry.

The criteria of respondents are set with minimum age of 18 years old who are the owner or the designated person in-charge of the business entity. In other words, it shall only be the owner of the business operation or the highest authority of the business operation. Staff, crews, or any members of the business operation are not going to be approached for survey.

Those research sites from rural tourism destinations are to be selected were from recent and updated list of Sarawak Homestays that collected from the directory of Ministry of Tourism and Culture Malaysia, Sarawak Office (2019) and cross-checked with MoTAC on the list. The sampling frame for this study comprises weighted on registered homestays operators listed in the MTCP Homestays Directory 2019. So, the targeted respondents are the licensed homestay operators throughout the Sarawak with majority weighted in most populated areas.

There is a total of 607 homestay operators in Sarawak have registered with the authority in-charged. There are 205 of registered homestay operators in Kuching, 53 operators in Serian, 10 each in Samarahan and Sri Aman, 40 operators in Sibu, 176 operators in Miri, 12 operators in Kapit, 19 operators in Betong, 21 operators in Mukah, 22 in Sarikei and 30 operators in Limbang and Lawas. From the list of registered homestay operators located and registered with the authority, eleven rural tourism destinations will be approached to conduct survey and to be studied on. These sites are qualified to be the model samples as destinations of rural tourism, with criteria that there are close to nature (environment), distant from cities, restricted coverage of telecommunications facilities, limited supply on water and electricity and simply an agro-based village or township. Table 3.1 presents the eleven sites in Sarawak that have been selected for the study.

Table 3.1: The 11 Sites in Sarawak Selected for the Study

Div/ Dist (Sites)	Number of Homestays	No. of Operators
Kuching	15	205
Serian	4	53
Samarahan	1	10
Sri Aman	1	10
Sibu	3	40
Miri	10	176
Kapit	1	12
Betong	2	19
Mukah	2	21
Sarikei	2	22
Limbang & Lawas	3	39
Total	44	607

Source: Ministry of Tourism, Arts and Culture (MTAC, 2019)

3.4.1 Population Sample and Sampling Technique

Population in research refers to the targeted group of people, events, or things of interest that researcher intends to investigate or to study on, through means of questionnaires, interviews, or any other methods (Cooper & Schindler, 2013; Sekaran & Bougie, 2016). As mentioned by Malcom and Blerkom (2008), population is explained s a set of observations or people that help in selecting a sample to be investigated on various variables present in a study. Since this study focuses on the performance of the rural tourism specifically in accommodation sector in Sarawak. Hence, the targeted group of people or so called the population for this research study are the homestay operators in the rural tourism industry. Therefore, the sampling choice would be determined once population has clearly been identified. In another word, sampling is used to draw a sample from a given population. It is selection of elements from a defined targeted population for the sake of representing the whole population (Cooper & Schindler, 2003). Sample requires characteristics to be selected, (1) sample must be selected from whole population, (2) sample must characterise the whole population, and (3) the results from the outcome must generalise the whole population (Ruane, 2016). The objective of determining sampling choice is to permit the generalization of population with using sampling to randomly select items from the population. Sampling is adopted because it is not possible to collect data from the whole population, therefore it is an important step to process results (Zikmund et al., 2013; Sekaran & Bougie, 2016). Sample size should not be too excessively large, or too excessively small, it should be optimum. Optimum sample is to fulfil the requirement of efficiency, representativeness, reliability, and flexibility. Confidence level for the estimate and the desired precision level for the estimate should both be determined (Kothari, 2004). The right and appropriate sample size is capable to generalize the results to the whole population with consideration to the cost, effort, and time constraints (Gill & Johnson, 2002).

In the selection a representative sample from a population, sampling is important and critical process. Sampling encloses the choice of design and the size of the samples (Sekaran & Bougie, 2016). Sampling is divided into two categories of choice, namely probability sampling and non-probability sampling. For probability sampling, the element in the population contains known chance or probability of being selected as sample subjects. As for non-probability sampling, under this scenario the elements in the population do not have equal chance among others or predetermined chance of being selected as subjects (Sekaran & Bougie, 2016). As for this study, it adopts probability sampling method though it is with known targeted respondents. Hence, the sampling technique used is certain as list of homestays are obtained and will be approached accordingly. According to Bhattacherjee (2012), probability sampling can achieve higher generalisability of results. By using stratified sampling, the samples are being collected. Stratified sampling aims to collect samples randomly selected from a population that been divided into different smaller subgroups (strata) (Kumar et al., 2012). From the list of MTCP's Registered Homestay Operators Directory 2019, samples were selected based on proportionate stratified sampling in which the population was sampled in each of the following stratum: Kuching, Samarahan, Serian, Sri Aman, Betong, Sarikei, Mukah, Kapit, Miri, Sibu and Limbang and Lawas. As a result of stratification, all the 44 sites were sampled: 61 sets from the 15 sites from Kuching, 4 sets from the 1 site from Samarahan, 16 sets from the 4 sites from Serian, 4 sets from the 1 site from Sri Aman, 8 sets from the 2 sites from Betong, 8 sets from 2 sites from Mukah, 8 sets from the 2 sites from Sarikei, 4 sets from the 1 site from Kapit, 41 sets from the 10 sites from Miri, 12 sets from the 3 sites from Sibu and also 12 sets from the 3 sites from Limbang and Lawas. Table 3.2 presents the distribution of the sample of Homestays Operators by locations.

Table 3.2: Computation of Distribution of Homestay Operators by Divisions/ Districts

Div/ Dist (Sites)	Number of Homestays	Proportionate Ratio	Sample Size
Kuching	15	180 (15/44)	61
Samarahan	1	180 (1/44)	4
Serian	4	180 (4/44)	16
Sri Aman	1	180 (1/44)	4
Betong	2	180 (2/44)	8
Sarikei	2	180 (3/44)	8
Sibu	3	180 (3/44)	13
Mukah	2	180 (2/44)	8
Kapit	1	180 (1/44)	4
Miri	10	180 (10/44)	41
Limbang & Lawas	3	180 (3/44)	13
Total	**44**	**180 (44/44)**	**180**

Factors like type of variables and/ or measurement scale, precision, complexity of model, power, reliability, number of indicators and missing values are important in determining sample size (Kline, 2017). Further quoted by Kline (2017), common sample size used in different studies related to various disciplines is about at the size of 200. Sample size is one of the factors that affecting the acceptance and rejection of research articles, generally editors require a minimum sample size of 200 for a journal paper publication (Barrett, 2007). However, as Partial Least Square Structural Equation Modelling (PLS-SEM) is concerned, small sample size issue is not a very critical concern. PLS- SEM does not require large sample size to perform analysis (Henseler et al., 2009; Hair et al., 2012), but it does not indicate that no criteria are required for sample size while conducting a study by using PLS-SEM (Marcoulides & Saunders, 2006; Goodhue et al., 2012). According to Cohen (1992)'s power analyses, a minimum required sample size for PLS-SEM as posited by Hair et al. (2019) to detect R^2 values of 0.75, 0.50, 0.25 and 0.10 in the endogenous construct present in a structural model with significance of 1%, 5% and 10%, with consideration of statistical level of 80% along with a certain complexity level of the path model of PLS (number of arrows directing towards a construct). Table 3.2 shows the sample size recommendations suggested by Hair et al. (2019) based on the Cohen's (1992) power analyses.

Table 3.3: Sample Size Recommendations (80% Statistical Power)

Maximum Number of Arrows Pointing at a Construct	**Significance level**		
	1%	**5%**	**10%**
2	158	110	88
3	176	124	100
4	191	137	111
5	205	147	120
6	217	157	128
7	228	166	136
8	238	174	143
9	247	181	150
10	256	189	156

Source: Hair, Hult, Ringle, and Sarstedt (2019)

Hence, with reference made to Hair et al. (2019), the model used in this research study has incorporated 3 arrows pointing to a construct and the shaded area shows the sample size requirements for 3 arrows which is 176 in the case of 1% significance level, 124 in the case of 5% significance level, and 100 in the case of 10% significance level. This study is conducted using Smart PLS, therefore the sample size of 150-200 is selected to meet and satisfy requirement for minimum sample size.

In this study, the third reference was made by using G*Power 3.19.2 software to calculate and obtain the minimum sample size required. As referred to Ringle et al. (2018) have suggested that power analyses should be performed. Cohen (1988) has mentioned that power should be at least 0.80 and higher power (>0.80) to validate the relationships between the constructs to be existed when statistical tests generating significant results. As calculations shown, a sample size of 153 (N=153) is required to meet a statistical power of 0.95, with assumption to significance level of 5% and effect size of 0.15 exhibited in Figure

3.1. Hence, sample size sets at 180 sets are justifiable to be accepted with three references made as explained above.

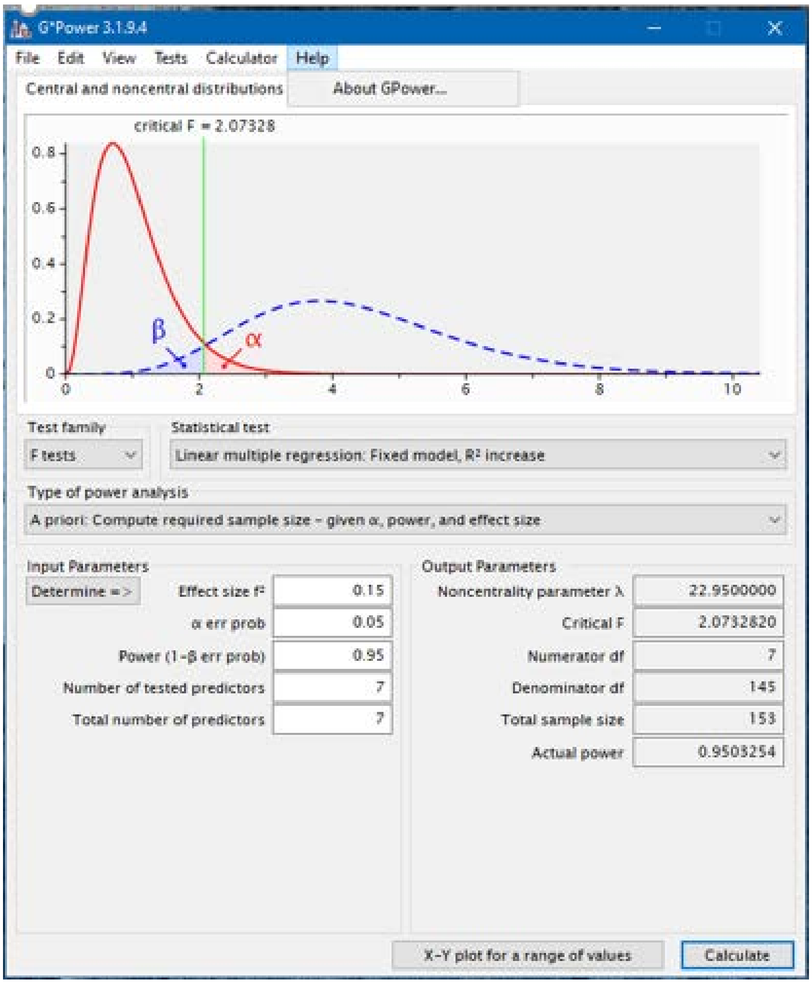

Figure 3.1: Results of G*Power Analysis

Table 3.4 has exhibited the number of sites of the homestay operators from respective divisions and districts. Kuching being the top with the most sites of homestay operators achieving as high as 15 sites, followed by Miri with 10 sites, Sibu and Limbang and Lawas being the third with 3 sites each, Betong, Mukah and Sarikei with 2 sites each, Samarahan, Sri Aman and Kapit with one site each.

Table 3.4: The Respective Homestays from Each Divisions/ Districts

Div/ Dist (Sites)	No.	Homestays
Kuching	1	Homestay Kampung Telok Melano
	2	Homestay Kampung Tanah Hitam
	3	Homestay Kampung Pueh
	4	Homestay Kampung Telaga Air
	5	Homestay Kpg Panglima Seman Lama
	6	Homestay Kampung Buntal
	7	Homestay Kampung Siol Kandis
	8	Homestay Kampung Santubong
	9	Homestay Kampung Bako
	10	Homestay Kampung Benuk
	11	Homestay Kampung Annah Rais
	12	Homestay Kampung Senah Rayang
	13	Homestay Kpg Darul Islam Belimbing
	14	Homestay Kampung Krokong
	15	Homestay Kampung Singai
Samarahan	1	Homestay Kampung Sadong Jaya
Serian	1	Homestay Kampung Tebakang Melayu
	2	Homestay Kampung Mongkos
	3	Homestay Kampung Pichin
	4	Homestay Kampung Lobang Batu
Sri Aman	1	Homestay Rumah Wilson Bana
Betong	1	Homestay Kampung Maludam
	2	Homestay Pusa

Table 3.4 continued

Sarikei	1	Homestay Rumah Nyuka
	2	Homestay Rumah Magretta
Sibu	1	Homestay Rh. Panjang Bawang Assan
	2	Homestay Rh. Penghulu Philip Kayak
	3	Homestay Rh. Benjamin Angki
Mukah	1	Homestay Kampung Senau Oya
	2	Homestay Kampung Pedada
Kapit	1	Homestay Kampung Uma Belor
Miri	1	Homestay Rumah Patrick Libau
	2	Homestay Kedayan
	3	Homestay Kampung Narum
	4	Homestay Kampung Kuala Sibuti
	5	Homestay Bario Highlands
	6	Homestay Rumah Hillary Tawan
	7	Homestay Long Banga
	8	Homestay Mulu
	9	Homestay Kedaya Telang Usan
	10	Homestay Long Iman
Limbang & Lawas	1	Homestay Kuala Mendalam
	2	Homestay Ba’kelalan
	3	Homestay Long Semadoh

Source: Ministry of Tourism, Arts and Culture (MTAC, 2019)

3.4.2 Data Collection Procedures

Data intended were collected through a survey method in self-administered questionnaire. The surveys were planned to be collected via face-to-face interview (participatory approach) with questionnaire. The survey is conducted in this manner (interview) is because this study is taken place at those rural areas. In Sarawak, inland and remote areas might not have a very established and sophisticated telecommunications facilities. This is a technological and geographical constraints in term of infrastructure and development of technology in the state. Therefore, survey cannot be conducted in a 'paper-less' mode (such as Google Form) as in an online method. Besides, through face-to-face interview, it is more up close and personal with a sentiment of personal touch and being able to explain and elaborate to the interviewees more thorough and comprehensive with consideration of the educational level and exposure of the respondents considered. Pre-test process will be further discussed in Section 3.7. Regards to the comments given from respondents in the pre-test, the designed questionnaire has then been revised, finalised and adapted for actual full data collection survey.

In the questionnaire, the respondents are prompt with questions on their perspectives on how well or how effective is Digital Technologies influences the performance of their business if it is applied and integrated in their business. Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

First, a courtesy call was made to each and respective homestay operators from that region to seek approval for the survey to be conducted, while seeking for approval appointment for the interviews are to be set. For those who have responded and granting their permissions, a formal letter will be handed over with a copy of questionnaire. Each time before the interview is commenced, personal communication will be conducted with explanation of topic and its objective of study. Another session for the respondents to clarify anything they want before the official interview is commenced. Interviewer stresses the importance, the usage, and the benefits from this research to stakeholders and the community where the stakeholders and community are allowed to make use of the findings from this study to improve their businesses. The results will be shown to the stakeholders and of course it will only been disclosed to those who have participated and the community only. Disclaimer is made known to the respondents that their feedbacks and answers collected were solely used for research purpose, and it is rest assured that nothing would be revealed to third parties. As emphasized by Podsakoff et al. (2003), several steps like assuring respondents that there were no right or wrong answers to the questions asked, anonymity, and confidential of their information, the data reported in aggregate and only used strictly for research purpose; this is to minimise threat of common method bias.

Identities for those who have been interviewed are uphold to utmost confidential in this study. These interviews are strictly targeting those homestay operators, may it be the owner or the designated highest authority from the management with age minimum 18 years and above who is a legal employee of a company, currently residing and has been in rural tourism destinations environment for more than a year or so. The reason being that, so that the right respondents are approached (e.g., research on stakeholders), the respondents are matured to handle questions related to the industry. This is to maintain the reliability and validity to the samples. Respondent will be circulated with a set of questionnaire and ample time given to the respondent to understand the questions asked. The researcher also acts as an enumerator, going through the questions with detailed instructions and explanations provided to respondents to ensure that they fully understand the context of questions asked with answers as close and as accurate as possible to the questions. It is assumed that all the owners of the operations/ homestays are not illiterate (educated to the extent could read, write, understand questionnaire and capable to response and answer the questions asked) and they can attend to the questionnaire independently. However, shall they be illiterate, the author will still be able to go through the questionnaire with the respondents in person to obtain feedbacks and opinions from them. Finally, every single set of questionnaires will then be collected and compiled end of the interviews.

The respondents are niche targeted group from rural tourism, they are either the owners of the homestay lodge or the appointed person in charge to oversee the operations. They are approached to collect their point of views and response relates to their nature of business as homestay operators. The total number of questionnaires collected is 241 sets. This study is adopting participatory approach as mentioned in the earlier section. This approach enables author to penetrate direct to the actual owners or managers in charge to understand and obtain information more privately on their perceptions (it is of how economic, environmental, and socio-cultural factors could improve tourism performance with technological aids been introduced).

3.5 Design and Development of Research Questionnaire

The research study is examining the moderating role of digital technologies to rural tourism performance on its economic factor, socio-cultural factor and environmental factor, a survey questionnaire is designed and constructed to be friendly and approachable so that the interactive interview will be smooth and pleasant for the respondents. Pleasant session will ease the process of obtaining more insights or in-depth information. For the ease of the interviewer and interviewees’ interaction, questionnaire is set up in bilingual, and the session could also be conducted in bilingual too, either Malay language (Bahasa Sarawak) or English with closed-ended questions with scale options to determine the level of agreement or disagreement.

The research questionnaire is set to be in the standard format comprised of 55 questions to be used for data collection. The questions adapted in the questionnaire are concise, easily understandable and were developed in a bilingual manner, in English as the main and referred language and official national language - Malay language. As shown in Table 3.4, the questionnaire was split into 6 sections. Section A comprised of demographic information of respondents in 6 questions to identify their demographic profile. Section B, C and D contain 7 measures, 8 measures and 8 measures respectively reflecting on measures of the three IVs, 16 measures in Section E to measure moderator, 10 measures to measure dependent variable.

Table 3.5: Summary of Questionnaire

Section	Measures	Dimensions	Number of Items	Sources	Rating scale
A	Demographic Information	-	6	-	-
B	Economic	-	7	Nunkoo and Ramkisson (2009), Yu, Cole and Chancellor (2018)	1 = Strongly disagree and 7 = Strongly agree
C	Environmental	-	8	Ramseook-Munhurrun and Naidoo (2011), Robinson, Newman and Stead (2019)	1 = Strongly disagree and 7 = Strongly agree
D	Socio-cultural	-	8	Ramseook-Munhurrun and Naidoo (2011), Robinson, Newman and Stead (2019)	1 = Strongly disagree and 7 = Strongly agree
E	Digital Technologies	Performance Expectancy	4	Yu (2012), Venkatesh and Zhang (2010)	1 = Strongly disagree and 7 = Strongly agree
		Effort Expectancy	4	Yu (2012), Venkatesh and Zhang (2010)	1 = Strongly disagree and 7 = Strongly agree
		Social Influence	4	Yu (2012), Venkatesh and Zhang (2010)	1 = Strongly disagree and 7 = Strongly agree
		Facilitating Condition	4	Yu (2012), Venkatesh and Zhang (2010)	1 = Strongly disagree and 7 = Strongly agree
F	Tourism Performance	Financial	5	Prieto and Revilla (2006), Kim & Pennington-Gray (2017)	1 = Strongly disagree and 7 = Strongly agree
		Non-Financial	5	Prieto and Revilla (2006), Kim & Pennington-Gray (2017)	1 = Strongly disagree and 7 = Strongly agree

3.6 Measures

A set of questionnaire comprises of three independent variables and one dependent variable, and a moderator have been constructed with using 7-point Likert scale to measure the IVs, DVs and moderator. The IVs being the Economic impact factor, Environmental impact factor and Socio-cultural impact factor, whereas the DV is the Tourism Performance from the Financial and Non-financial contexts and moderator being the ICTs to be introduced to moderate the relationships. In prior to the measurements on the IVs, DV and moderator; an individual demographic information is set to be answered to understand those respondents' profile. These private and confidential data are personal information like age, gender, race, academic qualification, monthly income, designation (owner status or employed to be person with highest authority to manage the business operation).

Essentially, it is undeniable that identifying optimal measures for both variables of performance (non-financial and financial measures) is complex and problematic due to the impact of the learning capability in which it is not possible to assess by only upper measure. Therefore, two uni-dimensional constructs with multi-indicators measures will be used, in which items are extracted from previous study.

Five dimensions of perceptual measures of non-financial performance have been identified to give the non-financial performance a more comprehensive view, namely customer's satisfaction (EFQM, 2001; Ellinger et al., 2002), customer's growth (Kaplan & Norton, 1996; Saint-Onge, 2002), employee satisfaction (Johansson et al., 1998; EFQM, 2001; Goh & Ryan, 2002), quality in products and services, and the organizational reputation (EFQM, 2001; Bontis et al., 2002).

In contrast, as for financial performance, another five dimensions of perceptual measures are identified, it comprises of return on assets (Bierley & Chakrabarti, 1996; Calantone et al., 2002; Ellinger et al., 2002; Goh & Ryan, 2002), sales growth (Johansson et al., 1998; Tippins & Sohi, 2003), profitability (Johansson et al., 1998; Calantone et al., 2002; Tippins & Sohi, 2003), average productivity (Vekstein, 1998; Ellinger et al., 2002), and cost reduction (Ellinger et al., 2002).

These five sets of perceptual measures each from each approach are adopted from Prieto & Revilla (2006) and adapted in this thesis. It is used as tool since the measures have been econometrically tested and concluded to be consistent with the objective measures (Dess & Robisnon, 1984) and said to have been able to overcome strong reluctance of managers in providing objective outcomes of performance.

3.6.1 Demographic Information

These profiles of personal demographic information collected from the respondents, namely age, gender, race, academic qualification, monthly income, designation (owner status or employed to be person with highest authority to manage the business operation) were solely to be processed and analysed for the purpose of research only. Private and personal information obtained such as income might be somehow sensitive element to be revealed if respondents do not feel comfortable to answer; therefore, they need to be rest assured to order to answer all the questions with full trust and confidence. Qualifications last obtained and designations might be another area that seem to be sensitive if it is not handled properly. They fond to feel discriminated or answer with awkward feeling as this relates to status-quo of an individual. Hence, explanation is a must to clarify the objective of asking these questions is to understand the characteristics of the respondents than carrying other agendas.

3.6.2 Economic Factor

Measures used for measuring economic factor were incorporated in the first three sections of the questionnaire. It is also a subjective measure that was used to measure economic factor. It is also in a context to obtain opinions from respondents on how impactful and influential economic factor benefits the community in the tourism industry to accommodation sector. A scale constituted of 7 measures of economic factor influence on community. This set of questionnaires was adapted from Nunkoo and Ramkisson (2009) with reference made from recent source like Yu, Cole, and Chancellor (2018). Again, 7-point Likert-scale was used to evaluate effects of the factor to the community, from 1 (strongly disagree) to 7 (strongly agree). This factor is surveyed in section B in questionnaire to answer the research question (i) in section 1.3, Chapter 1.

3.6.3 Environmental Factor

Measures used for measuring environmental factor were incorporated in the first three sections of the questionnaire. It is also a subjective measure that was used to measure environmental factor. It is also in a context to obtain opinions from respondents on how impactful and influential environmental factor benefits the community in the tourism industry to accommodation sector. A scale constituted of 7 measures of environmental factor influence on community. This set of questionnaires was adapted from Nunkoo and Ramkisson (2010) with reference made from recent source like Yu, Cole, and Chancellor (2018). Again, 7-point Likert-scale was used to evaluate effects of the factor to the community, from 1 (strongly disagree) to 7 (strongly agree). This factor is surveyed in section C in questionnaire to answer the research question (ii) in section 1.3, Chapter 1.

3.6.4 Socio-cultural Factor

Measures used for measuring socio-cultural factor were incorporated in the first three sections of the questionnaire. It is also a subjective measure that was used to measure socio-cultural factor. It is also in a context to obtain opinions from respondents on how impactful and influential socio-cultural factor benefits the community in the tourism industry to accommodation sector. A scale constituted of 8 measures of socio-cultural factor influences on community. This set of questionnaires was adapted from Ramseook-Munhurrun and Naidoo (2011) also with reference made from recent sources like Moslehpour, Wong, Lin and Nguyen (2018), and Robinson, Newman and Stead (2019). Again, 7-point Likert-scale was used to evaluate effects of the factor has to the community, from 1 (strongly disagree) to 7 (strongly agree). This factor is surveyed in section D in questionnaire to answer the research question (iii) in section 1.3, Chapter 1.

3.6.5 Digital Technologies

Measures used for measuring digital technologies were incorporated in the last second part of the questionnaire. It is also a subjective measure that were used to measure digital technologies. It is also in a context to obtain perceived usage and how impactful of digital technologies if it was ultilised to moderate the relationships the independent variables towards dependent variable in the tourism industry to accommodation sector. A scale constituted of 16 measures of digital technologies influence towards the relationships. These measures comprised of 4 different dimensions, namely performance expectancy, effort expectancy, facilitating condition and social influence. This set of questionnaires was adapted from Yu (2012) with reference made from past sources like Venkatesh et al. (2003); Venkatesh and Zhang (2010), and Foon and Fah (2011). Again, 7-point Likert-scale was used to evaluate effects of the digital technologies have to the industry from 1 (strongly disagree) to 7 (strongly agree).

3.6.6 Business Performance of Homestay Operators (Financial and Non-Financial)

In the last section of the questionnaire, measures to measure tourism performance is incorporated. Subjective measures were adopted to measure tourism performance in two perspectives, namely financial and non-financial performance. Due to unavailability or difficulty in obtaining objective performance data from the small-medium scale industry, Sok et al. (2017), and Irwin et al. (2018) have quoted that it will be a more appropriate approach to opt for subjective performance measures.

Besides, supported by literature reveals, the correlation between subjective and objective performance measures is strong (Rauch et al., 2009; Vij & Bedi, 2016).

With that consideration, this study finds it is justified to use subjective measures for assessing the tourism performance of homestays through perceived performance from the respondents. A scale constituted of 5 measures of financial performance was adapted from the work of Prieto and Revilla (2006). These items were: return on assets, sales growth, profitability, improvement in work productivity, and improvement in production. A 7-point Likert-scale was used to evaluate an organisation’s financial performance in the past two years with anchors from 1 (strongly disagree) to 7 (strongly agree).

As for the non-financial performance was operationalised using a 5-item scale adapted from the work of Prieto and Revilla (2006). These items were: customers’ satisfaction, customer growth, employee satisfaction, products and services quality, and organisational reputation. Respondents were asked to compare the non-financial performance of their organisations with that of their competitors based on their knowledge. Responses were anchored on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree).

3.7 Pre-test

Pre-testing, or also known as pilot test on questionnaire as quoted by Biemer and Lyberg (2003), and Zikmund, Babin, Carr, Adhikari and Griffin (2013), as a screening process to trial run the survey design with a group of experts and respondents for the purpose of rectifying potential problems in that set of questionnaires with the purpose and outcome of determining problems and searching best solutions to alleviate problems rectified. After the first draft of questionnaire is produced to test on the theoretical framework of this research study, pre-test was then be proceeded before the actual main full survey. Full developed questionnaire has then been formalised for the going of real data collection at the actual study sites after pre-test. In this context, it is targeting the group of people who are the owners of the homestays or the designated person who is in-charge of the business, who has resided and have been living in rural tourism destination for more than a year. So, they are qualified candidates to be interviewed. In the stage of pre-testing, it allows the researcher to ensure that the questions stated in questionnaire could be comprehended and interpreted correctly and accurately to their best of their knowledge as per what is intended by the researcher to convey. In another words, pre-test is to ensure that questionnaire does not create ambiguity or confusion situation when attended by respondents. So, the respondents could response and propose and answering meaningfully before the actual questionnaires are distributed to the targeted respondents (Perneger et al., 2015). Even though, questionnaire is adopted and adapted and ever been tested econometrically by past researchers; however, since questionnaire is translated and not in researcher or respondents' mother tongue, or may it be cultural factors, or in the context of Sarawak the locals might have problem understanding and comprehending. Therefore, it is necessary to pre-test to eliminate ambiguity and confusion, so able to maintain its reliability and validity to best that is capable.

Two sites from Kuching were adopted for pre-testing purpose, (Kpg Santubong and Kpg Singai) so a sample size of minimum 30 sets is required to achieve a reasonable high power to rectify an issue that may occur in a 5% populated sample, consequently, to address the problem that repeatedly take place on a basis of 10% of the respondents (Perneger et al., 2015).

So, two sites were used to pool up at least 30 sets of questionnaires would be prepared, and interviews conducted in one of the sites that having homestays facility with participants involved. One of the sites comprised of Malay population and the other is a Dayak populated village. The pre-test been conducted months before the actual survey is taken place, so ample time could be allocated for amendments made to the official questionnaires used for the study. The reason being that pre-test is to check whether any errors or mistakes in the questionnaire and to ensure that the questions and instructions are clearly understood by the respondents (Kumar et al., 2012). The objective of conducting this first pre-test are: (1) to ensure that questions are correctly selected to collect information that is reflected the actual scenario; (2) to assess the content validity of measurement scale, meaning to say to what degree the measures' items have rightly represent a sample of the theoretical content domain of a construct (Nunnally & Bernstein, 1994); and (3) to cross check for wording and interpretation problems (eliminating ambiguity, confusion or redundancy), meaning of words in context due to different language, and also the sequencing. Interviews only been conducted towards business owners or Operation Manager only as stated. The respondents were asked to answer and judge whether the items used to operationalise measure what are supposed to be measured. Besides, they have also been invited to give suggestions or comment on the questions asked to possibly improve the quality of the survey instruments if they have any.

Followed by that, a second stage is proceeded with the objective to ensure that the questionnaire items are clear, sound, understandable and accurate after translation and preserves its original meaning even in other language context. The second 30 improved sets of questionnaires would be distributed to respondents to answer. Then, besides picking up their answers, suggestions and comments were also welcomed with the goal to tune and improve the questionnaire as neat and effective as possible. The original and revised copies of questionnaires were attached in Appendix respectively.

Table 3.6: Outcomes of Pre-test

Sections & Question Items	Comment I	Comment II	Changes Attempted
Section B			
6.Tourism has led to an increase in price level of goods and services.	What does it mean by “has led to increase in price”?		6.Tourism is the reason for the hike of price for goods and service.
7.Tourism has led to an increase in land prices.	What does it mean by “has led to an increase”?		7.Tourism is the reason for the hike of the price of land.
Section C			
2.There is improvement of roads and other public services.	Is it in relation to tourism or general impression?		2.Road condition and general public service standard has improved due to tourism.

Table 3.6 continued

5. The level of urbanisation has increased due to tourism development.	Do not understand the meaning of "level of urbanisation".		5.Process of moving towards township is increased and expedited due to tourism development.
Section D			
2. There is understanding of different people and cultures by residents.	Is it in relation to tourism development or general impression to tourists?		2.Tourism helps to foster better understanding towards cultural diversity.
5.There is a change in lifestyle that occurs because of tourism development.	The sentence is hanging.	Prefer direct questions/ statement.	5.Tourism development has changed the lifestyle of local people/community.
Section F			
4. My business has improved on work productivity for the past 2 years.	Business just started 1 year ago.	Should include pandemic factor?	4.My business has improved on work productivity for the past 2 years.
6.My business has achieved higher level of customer satisfaction.	Ambiguous. What is to benchmark? Year-to-year?	Who to compare against? By regions?	6.My business has achieved higher level of customer satisfaction than my competitors.
7.My business has higher growth in number of customers.	Ambiguous. What is to benchmark? Year-to-year?	Who to compare against? By regions?	7.My business has achieved higher growth in number of customers than my competitors.
8.My business has achieved higher level of employee satisfaction.	Ambiguous. What is to benchmark? Year-to-year?	Who to compare against? By regions?	8.My business has achieved higher level of employee satisfaction than my competitors.
9.Mybusiness has better quality in products and services.	Ambiguous. What is to benchmark? Year-to-year?	Who to compare against? By regions?	9.My business has better quality in products and services than my competitors.
10.My homestay is more reputable.	Ambiguous. What is to benchmark? Year-to-year?	Who to compare against? By regions?	10.My homestay is more reputable than my competitors.

Table 3.6 shown the comparison of questions in the questionnaires in which have been rephrased in accordance with the level of understandings of the respondents from the batch of pre-test group. Comment I and Comment II are the feedbacks from those respondents before the final questionnaire is shaped and set. The original and unamended questions are all shown on the right column as stated, “Changes Attempted”. Questions were rephrased with the objective to cross check for wording and interpretation problems by eliminating ambiguity, confusion, or redundancy. Respondents with different background of education levels, language tend to have different understanding on questions and instructions given on the survey form. Hence, pre-test is important to text the capabilities in comprehending questions asked during the survey.

3.8 Statistical Analysis

This research is in quantitative approach, so has opted for software that is meant for quantitative study. Data collected will be analysed by using Statistical Package for Social Sciences (SPSS) version 26.0 for preliminary stage, to obtain descriptive statistics of the respondents. Then, partial least squares structural modelling (PLS-SEM) was used to perform a two-step approach to test the model. The first step being construct validation and reliability testing and followed by a second step of hypothesis testing an evaluation of model’s predictive capabilities. The Smart PLS 3.0 software will be used to empirically testing the research model under the PLS-SEM analysis.

3.8.1 Preliminary Data Analysis

In the preliminary data assessment stage, prior to conducting structural equation modelling, initial data cleaning is required to rule out inappropriate responses by using SPSS 26.0 to screen through and validate all collected data.

Firstly, checking on the unqualified responses are done manually screening through the physical questionnaires. The missing data to be identified and rectified. Application of SPSS is also meant for spotting and elimination of missing values data set (Sarstedt & Mooi, 2014; Hair et al., 2017). As quoted by Hair et al. (2019), an observation should be removed from data set if missing data more than 15% or there are many responses missing from a single construct. As referred to Little (1988), there are three types of missing data: missing completely at random (MCAR), missing at random (MAR), and non-random missing (NRM). For the case of MCAR, listwise deletion should be used when there are less than 10% of values are missing, or otherwise multiple imputations with m = 5 should be used when there are more than 10% of values are missing. For the case of MAR, multiple imputations with m = 5 should be used. For the case of NRM, listwise deletion should be used and any limitations arising from the missing data should be acknowledged; these are the ways of handling missing data issues posited by Mooi et al. (2018).

Secondly, checking on the response patterns on the questionnaires. Straight lining method is one of the methods used to check respondents consistently give the same answers (i.e., ‘1’,’4’ and ‘7’) throughout almost all the questions. Another scenario will be inconsistency, where a response pattern that a respondent gives a very different answer to very similar question (Hair et al., 2019). These two possibilities happened when the respondents lose their motivation to participate, and they rush through the survey without paying attention to the questions. An observation with straight lining or inconsistency responses should be considered for elimination from the data set as it may pose a serious threat to the data quality (Mooi et al., 2018). Another requirement added to discard the answered questionnaire sets are conditioned to those respondents who have completed the surveys unreasonably short durations (i.e., time elapsed for attending to answering questionnaire less than 15 minutes). As suggested by Meade and Craig (2012), with response time used less than 15 minutes could possibly indicating that respondents do not possess full attention and intension to attend to the questions. They are attentive to the questions randomly in haste complete and exit the survey session.

Finally, after the stage of data cleaning, few issues in the preliminary data evaluation need to be addressed. The need for a check on outliers, normality of data distributions and Common Method Variance (CMV) (Tabachnick & Fidell, 2006; Hair at al., 2010; Kline, 2017) are discussed as following. Normality issue is said to be less critical with PLS-SEM due to the nature of the software in which it is to be non-parametric, but normality is still required to be assessed (Hair et al., 2019). Skewness and kurtosis values indicate the normality of the distribution of the data. Skewness referred as statistical measure of determining the symmetry of a data distribution, whereas kurtosis is referring to statistical measure of assessing the relative peakedness of the data distribution (Pallant, 2007). Both values for skewness and kurtosis values of more than +1 or less than -1 are accepted (Hair et al., 2019). The final step attempted to be the test for common method variance. It is a serious bias that undermine actual relationship between the constructs, mostly it has been presented when data was collected from a single informant (Podsakoff et al., 2003). As suggested by Podsakoff et al. (2003), the issue to be tackled is to use Harman's single factor test and full collinearity variance inflation factor (VIF).

3.8.2 Descriptive Statistics

Under the descriptive statistics, descriptive analyses such as mean, standard deviation, frequency, minimum, maximum range, and percentage are to be utilized to analyse, examine, determine, and summarise the profiles of respondents. Descriptive analysis enables data and information to be presented in a systematic, organized tabular format in values to summarize on respondents' demographic profile immediately according to the characteristics of respondents. The results will be categorized following on age, gender, ethnic, academic qualification, income, and the position hold by the respondent. In short, this descriptive analysis is to portray the characteristics and details of the respondents.

3.8.3 PLS-SEM

Structural Equation Modelling (SEM) as quoted by Haenlein and Kaplan (2004), is a second-generation multivariate data analysis method that has been used to test on the theory supported linear and additive causal models. This method could measure those unobserved and difficult to measure's latent variables; hence, it is suitable to be used by researcher for countering those difficult research problems. On the other hand, Structural Equation Modelling (SEM) could also be used as statistical model in explaining on the relationships among multiple variables. Another useful function of Structural Equation Modelling (SEM) is being able to answer those interrelated research questions in a more approachable way, being in single, systematic, and comprehensive analysis by examining the direct and indirect relationships among multiple constructs of both independent and dependent constructs simultaneously (Gerbing & Anderson, 1988). Structural Equation Modelling (SEM) has also been described as combining interdependence and dependence techniques, since Structural Equation Modelling (SEM) assesses on factor analysis and multiple regression analysis, these are indeed a multivariate technique. The structure of Structural Equation Modelling (SEM) comprises two sub models in one modelling, meaning to say the model shown consists of inner and outer model. The inner model being the model that indicating the relationship between independent and dependent variables, as for the outer model reflecting the relationships between the latent variables (independent variables) and their observed indicators (sub dimensions of independent variables) (Wong, 2013).

As identified in Structural Equation Modelling (SEM), it consists of two types of variables, as such exogenous and endogenous. Exogenous variables being the latent and multi-item equivalent of independent variables. As for the endogenous variables, they are the latent and multi-item equivalent of dependent variables (Hair et al., 2010).

Partial least squares (PLS) were developed by Herman Wold analyzing principal component (Wold, 1966). It is soft modelling approach to Structural Equation Modelling (SEM), it can estimate complex models in a single modelling with many constructs, inner model relationships, and indicator variables (Hair et al., 2012). Partial Least-Squares structural equation modelling (PLS-SEM) is a second-generation data analysis technique that can analyse relationships among multiple independent and dependent variables to be modelled simultaneously (Gefen et al., 2000; Hair et al., 2017). In short, it is a method of choice of working towards spectrum of constructs in highly complex models and even with a much wider range of sample sizes. It can simultaneously test the relationships between constructs and their respective measures, as well as all hypothesised relationships between constructs in a single analysis (Sánchez et al., 2005; Hair et al., 2006).

They even quoted that model's quality is determined by the model's predictive capabilities indicated by the measures obtained from partial least squares (PLS). Hence, SEM is capable to construct unobservable variables measured by observable variables (it is also known as indicators, manifest variables, or some context as items) and manage to observe explicitly model measurement errors for the observed variables (Chin, 1998; Henseler et al., 2004; Hubona & Ray, 2016). The reason being that partial least square (PLS) stresses on the discrepancy between observed (manifest variables) or the approximated values (latent variables) of the dependent variables and the values predicted by the model in the question. Under partial least squares (PLS), it has been identified that there are two distinct models, (1) measurement model, relating the manifest variable (MV) to the latent variable (LV), and (2) structural model, relating endogenous latent variables to other latent variables describing partial least squares (PLS) path model (Tenenhaus et al., 2005).

Partial least squares (PLS) are having its own unique characteristic of able to incorporate reflective and formative measures (Hair et al., 2011) and suitable to handle both exploratory and confirmatory analysis method (Barroso et al., 2010). As noted by Fornell and Bookstein (1982), Haenlein and Kaplan (2004), and Reinartz, Haenlein and Henseler (2009), it also capable of processing nominal, ordinal, interval, and ratio scaled variables, which is one of the advantages of using partial least squares (PLS). It has also been used for research with research objective in which it is to predict and explain the variance of key targeted constructs by different explanatory constructs and when available data is non-normal (Henseler et al., 2009; Hair et al., 2012). By having said that, partial least squares an alternative to covariance-based SEM (CB-SEM) and even able to offer even more benefits than covariance-based SEM (CB-SEM) can offer (Hair et al., 2012). Even though, both methods share the same roots (Hair et al., 2012), in terms of objectives and their analyses they differ, statistical assumptions they based on also differs, and nature of fit statistics they produce are also not the same (Gefen et al., 2012). One example quoted by Diamantopoulos and Siguaw (2000), under a situation when using covariance-based SEM (CB-SEM) could not fulfil assumptions, as it requires multivariate normality of data and minimum size, then partial least squares (PLS) could be preferred to replace covariance-based SEM (CB-SEM) method. Besides, partial least squares (PLS) are useful and simple for the researcher to understand and ease of use in evaluating research model as in comparison to Statistical Package for Social Sciences (SPSS) software ever mentioned by Halawi and McCarthy (2008). Another reason backed with reference made to statement from Chin (2010), mentioning that results generated from partial least squares (PLS) are easier to assess and comprehend regard to its simple graphical illustrated way of presentation and language. Hence, it serves as another appropriate, powerful reason to deploy partial least squares (PLS) for this research study.

As for this study, PLS-SEM was selected for data analysis. Based on the characteristics of the constructs in the research model. There are three variables, namely Economic factor, Environmental factor, and Socio-cultural factor were modelled as formative constructs with each of the constructs having their own dimensions. There is a moderator been introduced to the model, Digital Technologies. With is moderating effect been introduced, another relationship is constructed between independent variables and the dependent variable. Hence, PLS is suitable for this model with such scenario. Secondly, PLS provides better (validity and reliability) construct scores than sum scores that can be used in subsequent analysis (Henseler et al., 2014). Hence, it is appropriate as for this study to deploy such tool. Thirdly, PLS is suitable in giving explanatory nature of this study. Finally, PLS is said to be more beneficial than CB-SEM in handling complex model without strict sample size requirements and normality assumptions (Hair et al., 2017; Matthews et al., 2018; Ringle et al., 2018).

3.8.4 Measurement Model

Measurement model represents the relationships between the measures and the constructs. The purpose of measurement model assessment is to check the reliability and validity of the measures and the constructs. In this study, all constructs are measured by reflective measures and thus the reliability is assessed in terms of indicator reliability and internal consistency reliability, whereas the validity is assessed in terms of convergent validity and discriminant validity (Sarstedt et al., 2014; Hair et al., 2017). The details of these criteria are presented in the following sections.

3.8.4.1 Reliability Analysis (Indicator Reliability)

Reliability analysis is an analysis conducted to the data to test on the scale items in the questionnaire to ensure that items are consistent in reflecting the concepts that are measuring. It is used to indicate the stability and consistency of the items used for each factor (Haque & Khatibi, 2005); this enables not only the researcher to have confidence in the measurement but also playing its function in convincing the audiences on the results analysed. The items or also known as the indicators are representing the constructs. Indicator reliability represents how much of a measure’s variance can be explained by the construct (Götz et al., 2010). It is evaluated based on the outer loadings of the measures. The outer loadings vary between 0 and 1, the higher the outer loadings indicating better reliability (Hair et al., 2014). For an establishment of indicator reliability, outer loadings of the measures should be more than 0.70 (Hair et al., 2017). Measures having outer loadings between 0.40 and 0.70 should be reviewed and the impacts of removing these measures on the CR and AVE should be examined. If the CR and AVE increased after removing these measures, then the given measures should be removed; otherwise, the given measures should be retained (Hair et al., 2014).

Therefore, this reliability analysis is meant for checking on the consistency of multi-item scales are measuring the dimensions of each factor, namely economic factor, environmental factor, and socio-cultural factor respectively in the questionnaire are consistently reflecting the notions that are measured.

3.8.4.2 Internal Consistency Reliability

Internal consistency assesses whether the measures measuring the same construct produce consistent results or similar scores (Hair et al., 2017). The most used coefficient for measuring internal consistency reliability is Cronbach's alpha. Cronbach's coefficient alpha developed by Cronbach (1951) is used to measure internal consistency of multi-item scales. The analysis will verify and show the scale used in the study are not ambiguous, vague or misinterpreted by respondents, most importantly all the items used are measuring to a common dimension.

According to Sekaran (1992), Cronbach's coefficient alpha ranges within a scale of 0 to 1 and it should be considered ideal at 0.7. For a coefficient alpha higher than 0.7 indicates that researcher can rely on the measurement, it is with high level of consistency among the items for each factor. As for a coefficient alpha that falls below 0.7, it indicates that the consistency among the items for each factor is poor and weak. For this study, by complying the standard suggested by Sekaran (1992), author adheres to the reliability acceptance level of 0.7.

However, researchers argued that Cronbach's alpha may overestimate or underestimate reliability (Hair et al., 2019). For this reason, the researchers preferred composite reliability (CR) over Cronbach's alpha as a measure of internal consistency reliability. According to Garson (2016), CR produces higher estimates of true reliability. The suggested cut-off for composite reliability is the same as Cronbach's alpha. Both composite reliability and Cronbach's alpha are ranging from 0 to 1, and the values of these reliability coefficients should be more than 0.70 but less than 0.95 for the internal consistency reliability to be established (Hair et al., 2017). Another literature used for backing the use of this method is based on quotation from Luo, Li, Zhang, and Shim (2010), partial least squares (PLS) is being used to examine model fit and the proposed hypotheses in research study that have been used to investigate factor loadings, composite reliability, and convergent validity. Composite reliability (CR) and Cronbach's alpha are tests used to evaluate the reliability of the items (Karim, 2009); whereas, convergent validity (CV) is related to Average Variance Extracted (AVE), in which convergent validity (CV) is assessed to check on Average Variance Extracted (AVE) of constructs is larger than its correlation with other constructs and that each item has higher loading on its assigned construct as compared with other constructs (Gefen, Straub & Boudreau, 2000). Quoted by Chin (2010), Average Variance Extracted (AVE) is a measure of amount of variance that a latent variable (LV) component captures from its indicators. In short, as rule of thumb, composite reliability (CR) and factor loading should maintain at value of greater than 0.7 according to proposal from Hair, Black, Babin, Anderson and Tatham (2006). Factor loadings of 0.5 and above are already considered significant for the interpretation of structure (Hair et al., 1995; Hair et al., 2010).

3.8.4.3 Convergent Validity

Convergent validity refers to the extent to which the measures of the same construct are correlated to one another (Hair et al., 2019). Average variance extracted (AVE) is a common measure used to evaluate convergent validity. A common threshold for adequate convergent validity is that the values of AVE should be equal or exceed 0.50 (Fornell & Larcker, 1981; Kock & Lynn, 2012). An AVE value more than 0.50 indicates that the construct can explain at least 50 per cent of its item's variance on average (Chin, 1998; Hair et al., 2017). AVE less than 0.50 is not acceptable because the error variance is more than the explained variance (Götz et al., 2010). As for convergent validity (CV), as proposed by Chin (1998a), it should be maintained at a value of greater than 0.7 as well. For the value of Average Variance Extracted (AVE), suggested by Fornell and Larcker (1981), it must be maintained at a value of greater than 0.5. Hence, value of Average variance Extracted (AVE) greater than 0.5 indicates that variance of indicators on average is able to be explained by a latent variable (LV) (Karim, 2009).

3.8.4.4 Discriminant Validity

Discriminant validity refers to the extent to which the constructs that are not theoretically related to each other are truly distinct from each other (Hair et al., 2014). It determines whether a construct has the strongest relationships with its respective measures (Hair et al., 2017). The most commonly used evaluation criteria for discriminant validity is Fornell-Larcker criterion. This criterion suggests that discriminant validity is established if the square root of AVE for each construct is higher than any of the inter-construct correlations (Fornell & Larcker, 1981). The other criterions are made to refer to Cross-loadings and HTMT.

3.8.5 Structural Model

Structural model is explaining the relationships between the constructs in the research model. It is used to test the hypothesised relationships between constructs and the predictive capabilities of the research model. Under this model, the assessments involve the path coefficients, the effect size f^2, the coefficient of determination R^2, and the predictive relevance Q^2.

3.8.5.1 Path Coefficients

Path coefficients referring to the estimated path relationships between the constructs (Hair et al., 2014). The path coefficient ranges between -1 to +1, with negative number refers to the negative relationship and positive number refers to a positive relationship. In short, path coefficients near to -1 indicate strong negative relationships between the constructs; 0 indicate no relationship between the constructs; near to +1 indicate strong positive relationships between the constructs.

3.8.5.2 Effect Size (f^2)

Effect Size (f^2) is used to assess the substantial impact of an exogenous construct on an endogenous construct. It represents the strength of the relationships between the constructs. Reporting effect size is important because in some cases, the relationship between an exogenous construct and endogenous construct is statistically significant, but its effect can be too small to attract the managerial attention (Kock, 2014). In general, effect size values of 0.35, 0.15, and 0.02 are considered as respectively large, medium, and small (Cohen, 1988; Hair et al., 2017). Partial least squares (PLS) is also exhibiting an effect size (f^2) to indicate the omitted exogenous construct leaves an impact on the endogenous constructs when there are changes in the R^2 value (Hair et al., 2014). As Cohen (1988) has suggested that, for the values of 0.02, it indicates ‘small effects’, 0.15 indicates ‘medium effects’ and 0.35 indicates ‘large effects’ of the exogenous variables on endogenous variables. Path coefficients of the partial least squares (PLS) structural model is the standardized beta coefficients of ordinary least squares regressions, and its significance is evaluated by bootstrapping (Hair et al., 2011). Path coefficient’s significance is explained as hypothesized direction to show empirical support to the causal relationship.

3.8.5.3 Coefficients of Determination (R^2)

Coefficient of determination (R^2 value) and path coefficients, both could be obtained from partial least squares (PLS) (Halawi & McCarthy, 2008). The function of R^2 value is used to indicate the strength of the relationship between the observed and the simulated values (Santhi et al., 2001). Referred to Chin (1998a), R^2 values of 0.67 regards as 'substantial', 0.33 regards as 'moderate' and 0.19 regards as 'weak'. The value of R^2 being high or low indicates the degree of the impact of independent variables on the dependent variable(s) (Chin, 2010). He also mentioned that for those models resulted with low R^2 and low factor loading can also have excellent Good-of-fit (GoF).

Coefficients of Determination (R^2) is a determinant of the model's predictive accuracy, and it shows the combined effects of all exogenous constructs on the endogenous constructs (Hair et al., 2017). It represents the proportion of total variance in an endogenous construct that has been explained by all the exogenous constructs associated with it (Hair et al., 2018; Ringle et al., 2018). Falk and Miller (1992) suggested that the R^2 value should be at least 0.10 for data interpretation to be meaningful. An R^2 value below 0.02 suggests that the combined effects of the exogenous constructs on the endogenous constructs are too weak and thus the model should be considered for revision (Cohen, 1988; Kock 2014). According to Chin (1998), the R^2 value of 0.19 is considered as weak, 0.33 is considered as moderate, and 0.67 is considered as substantial. On the other hand, Hair et al. (2017) suggested that R^2 values of 0.75, 0.50, and 0.25 are classified as substantial, moderate, and weak, respectively.

3.8.5.4 Predictive Relevance (Q^2)

Partial least square (PLS) can provide predictive relevance (Q^2) value of predicting data points of indicators in a reflective measurement manner of the independent constructs and dependent single-item constructs. As suggested by Hair et al. (2014) Q^2 value greater than zero for a reflective independent variable shown the path models predictive relevance for this construct. Stone-Geisser's Q^2 value is used to assess the predictive relevance of the research model and it can be obtained using the blindfolding procedure in PLS (Geisser, 1974; Stone, 1974; Kock & Gaskins, 2014; Kock, 2015). According to Hair et al. (2017), a model that has a Q^2 value more than zero ($Q^2 > 0$) is regarded as a model that has predictive relevance. The higher Q^2 value indicates the higher predictive relevance of the model. Specifically, Q^2 values of 0.02, 0.15, and 0.35 indicate respectively weak, moderate, and strong predictive relevance (Cohen, 1988; Chin, 1998; Henseler et al., 2009; Hair et al., 2017).

3.9 Summary

In short, this chapter provides overall pictures on how the study has been carried out and a detailed account of the research methodology and statistical analysis used for this study. It consists of research sites, research design, sampling, data collection procedures, instruments, construction, and measurement methods. It further explains on procedures, techniques of analysing on data and modelling approach which is the structural equation modelling (SEM) and partial least squares (PLS) and also on the verifications of hypotheses. Final section of this chapter mentioning the rationale or the reasons on adopting the choice of analysis methods and its tools. The following chapter will focus on results of hypotheses testing and analysis on data obtained presentation, meaning to say results of the statistical analysis will be reported in the following chapter.

CHAPTER 4

RESULTS

4.1 Introduction

In this chapter, the presentation of the results of the statistical data analysis. Preliminary data analysis is first been conducted prior to test of constructs and their respective measures. Then, the demographic information of the respondents is shown. Next, results of measurement model and structural model analysed based on SmartPLS 3.0. Following with the results of the hypotheses testing will be provided. Lastly, followed by the summary to conclude the chapter.

4.2 Preliminary Data Analysis

Firstly, preliminary data analysis is presented with the objective of showing the process of how data been screened through by identifying the errors in the data with the use of SPSS version 26.0. Errors that been rectified will then being cleaned or corrected, that includes missing data, suspicious response patterns, the normality of data, and common method bias testing before being proceeded to the next stage. First, missing data is to be detected. Total of 241 sets were collected from a pool of respondents, and very fortunate all the questionnaires collected were all without missing data, so they are all usable. Second stage, it was to detect suspicious response patterns. A straight-lining response is considered a suspicious response pattern where respondent used the same response scale to answer all the questions. According to Kaminska et al. (2010), straight-lining response may reduce the data quality, so it should be eliminated from data sets. But data sets collected do not consist or face such situation. Thus, no responses should be removed from the existing data sets.

Next, the normal distribution of the data was assessed by referring to skewness and kurtosis. Hair et al. (2017) suggested that skewness and kurtosis values less than -1 or greater than 1 may indicate a problem. Based on this recommendation, the normal distribution of the data is within an acceptable range in this study as the values of skewness and kurtosis of all the constructs ranges between -1 and 1 as shown in Table 4.1.

Table 4.1: Skewness and Kurtosis of Constructs

Constructs	Skewness	Kurtosis
Economic factor		
ECO1	-1.023	0.926
ECO2	-0.874	0.550
ECO3	-0.879	0.571
ECO4	-1.009	0.586
ECO5	-1.063	1.322
ECO6	-0.774	0.122
ECO7	-0.509	-0.278
Environmental factor		
ENV1	-0.923	0.678
ENV2	-1.099	1.632
ENV3	-0.697	0.033
ENV4	-1.014	0.920
ENV5	-0.908	0.792
ENV6	-1.152	1.192
ENV7	-1.079	0.925
ENV8	-1.055	0.779
Socio-cultural factor		
SC1	-1.538	3.892
SC2	-1.103	1.892
SC3	-1.069	1.893
SC4	-0.783	0.584
SC5	-1.048	1.421
SC6	-1.084	0.790
SC7	-0.942	0.033
SC8	-1.378	1.179

Table 4.1 continued

Digital Technologies		
DT1	-1.383	2.125
DT2	-1.605	2.965
DT3	-1.469	2.265
DT4	-1.305	1.718
DT5	-1.086	0.939
DT6	-0.936	0.845
DT7	-1.233	1.542
DT8	-0.775	0.119
DT9	-0.785	0.165
DT10	-0.916	0.672
DT11	-0.816	0.121
DT12	-0.896	0.494
DT13	-0.743	0.250
DT14	-0.809	0.296
DT15	-0.962	0.553
DT16	-0.869	0.252
Financial Performance		
FP1	-0.625	-0.476
FP2	-0.635	-0.419
FP3	-0.626	-0.248
FP4	-0.664	-0.199
FP5	-0.429	-0.482
Non-Financial Performance		
NFP1	-0.717	0.235
NFP2	-0.632	-0.093
NFP3	-0.533	-0.093
NFP4	-0.800	0.251
NFP5	-1.033	0.508

Final stage, Harman's single-factor test was conducted in order to test the presence of common method bias. Common method bias is a test where a study is said to show more than 50% of total variance resulted from a single factor, then common method bias is existed (Podsakoff et al., 2003; Podsakoff et al., 2012).

31 items used in this study yielded five factors and only 44.07% of the total variance was accounted for by the first factor, indicating that common method bias is not an issue in this study. Further to that full collinearity variance inflation factor (VIF) was also referred to assess common method bias (Kock & Lynn, 2012). Common method bias is said to be present if the full collinearity VIF value is more than 5 (Kock, 2017). As shown in Table 4.6, the full collinearity VIF values of all constructs were clearly less than 5. Sequel to the above, it can be concluded that there is no common method bias that could affect the results of this study.

4.2.1 Demographic Profile of Respondents

A pool of sample of 241 respondents was successfully collected out of 300 respondents been interviewed. Table 4.2 presents the demographic profile of the respondents. The data shows that majority of the respondents (homestay operators/ managers) are female amounting to 153 individuals (63.5%), while the male respondents accounted was 88 (36.5%). The majority are aged between 51-60 years old (39.4%), followed by those age group above 61 years old (29.0%). The highest ethnic that is running the homestay operations in the rural areas was the Malay ethnicity with 123 individuals (51.0%), followed by Bidayuh accounting 92 (38.2%). The highest level of academic qualification obtained by respondents was postgraduate level, there are 3 of them (1.2%), majority of the respondents have obtained SPM level with 85 of them accounting for 35.5%

of the total sample collected, followed by 69 of them with primary school qualification (28.6%) and 54 of them with PMR level (22.4%). As for the income level, majority were from the low-income level of below RM1000 per month with 54.4%, that been generated from homestay operations. Only very minority could achieve more than RM4000 per month generated from this operation (3.3%). Most of the respondents interviewed are business owner (87.6%) and the rest are managers that been employed to run the operations (12.4%).

Table 4.2: Demographic Profile of Respondents

Demographic Profile	Category	Respondents (N=241)	Percentage (%)
Gender	Male	88	36.5
	Female	153	63.5
Age	Below 20	1	0.40
	21-30	10	4.10
	31-40	18	7.50
	41-50	47	19.5
	51-60	95	39.4
	Above 61	70	29.0
Ethnic	Malay	123	51.0
	Iban	9	3.70
	Bidayuh	92	38.2
	Melanau	0	0
	Chinese	3	1.20
	Orang Ulu	10	4.10
	Other ethnics	4	1.70
Academic Qualification	UPSR	69	28.6
	PMR	54	22.4
	SPM	85	35.3
	STPM/ Diploma	17	7.10
	Degree	13	5.40
	Postgraduate	3	1.20
Income Level	Below RM1000	131	54.4
	RM1001-2000	66	27.4
	RM2001-3000	27	11.2
	RM3001-4000	9	3.70
	Above RM4000	8	3.30
Position	Operation Manager	30	12.4
	Business Owner	211	87.6

4.3 Assessment of Measurement Model

Measurement model assessment is where evaluation of reliability and validity of the constructs and measures taken place. It involves indicator reliability, internal consistency reliability, convergent validity, and discriminant validity assessments. Table 4.3 presents the summary of construct reliability and validity. The reliability and validity assessment of measurement model were established prior to the examination. The measurement model consists of the relationships between constructs and their corresponding indicator variables (Hair et al., 2019).

Table 4.3: Summary of Construct Reliability and Validity

Constructs	No of Items	Items Deleted	Items	Loadings	AVE	CR	CA
Economic factor	7	2	ECO1	0.860	0.653	0.903	0.869
			ECO2	0.815			
			ECO3	0.876			
			ECO5	0.778			
			ECO6	0.698			
Environmental factor	8	2	ENV1	0.736	0.665	0.922	0.899
			ENV2	0.832			
			ENV4	0.884			
			ENV5	0.886			
			ENV6	0.802			
			ENV7	0.739			
Socio-cultural factor	8	4	SC4	0.565	0.612	0.859	0.793
			SC6	0.689			
			SC7	0.889			
			SC8	0.928			

Table 4.3 continued

Digital Technologies	16	None	DT1	0.818	0.680	0.971	0.968
			DT2	0.822			
			DT3	0.711			
			DT4	0.773			
			DT5	0.861			
			DT6	0.873			
			DT7	0.882			
			DT8	0.823			
			DT9	0.792			
			DT10	0.825			
			DT11	0.860			
			DT12	0.825			
			DT13	0.841			
			DT14	0.844			
			DT15	0.864			
			DT16	0.763			
Financial Performance	5	2	FP2	0.958	0.94	0.979	0.968
			FP3	0.972			
			FP4	0.978			
Non-Financial Performance	5	None	NFP1	0.926	0.818	0.957	0.944
			NFP2	0.881			
			NFP3	0.913			
			NFP4	0.944			
			NFP5	0.856			

Notes: AVE = Average Variance Extracted, CR = Composite Reliability, CA = Cronbach Alpha.
**Please refer to*

4.3.1 Indicator Reliability

Indicator reliability was examined using the factor loadings. As a rule of thumb, the factor loadings more than 0.70 should be retained (Chin, 2010; Hair et al., 2014). As can be seen in Table 4.3, all factor loadings were found to exceed 0.70, except the factor loading of ECO6 which was 0.698, SC4 and SC6 which are 0.565 and 0.689 respectively. Hair et al. (2014) suggested that a measure with factor loading value between 0.40 and 0.70 could be removed if removal of this measure improves the CR and AVE or it does not reduce the CR and AVE scorings. Following this suggestion, ECO6 was initially exceeded 0.7 but due to elimination of other items, it was then affected on the loading. Removal of ECO6, resulted in meeting Hair et al. (2010)'s quote, that only maximum of 20% of questions (items) are permitted to be deleted. As for the items SC4 & SC6, these two items are retained as retainment of both does not reduce the CR and AVE scorings. Therefore, these measures have been retained for further analysis.

4.3.2 Internal Consistency Reliability

Internal consistency reliability was measured by CR and Cronbach's alpha. The value of CR and the Cronbach's Alpha higher than 0.70 and below 0.95 have been recommended in discussions of internal consistency reliability (Hair et al., 2017). The results of internal consistency reliability testing are shown in Table 4.3. As can be seen, most of the CR values were found to exceed 0.70 and below 0.95, except for DT, FP and NFP achieved 0.971, 0.979 and 0.957 respectively, the rest ranged from 0.859 to 0.922. The Cronbach's alpha values of all constructs were also found to exceed 0.70 and below 0.95, except for DT and FP achieved 0.968, the rest ranged from 0.869 to 0.944. Criteria for internal consistency reliability is a recommendation and it is not rigid as it is very much depending on the percentage of constructs left on the framework for study. Slightly higher readings are still taken into consideration.

4.3.3 Convergent Validity

Convergent validity is achieved when the AVE is more than 0.50 (Fornell & Larcker, 1981; Chin, 2010; Hair et al., 2017). The value of AVE more than 0.50 shows that the construct can explain at least 50 per cent of its item's variance (Chin, 1998). As depicted in Table 4.3, all AVE values were found to exceed the threshold value of 0.50 and ranged from 0.653 to 0.940. The results established the fact that the measurement model has adequate convergent validity.

4.3.4 Discriminant Validity

Discriminant validity reflects how much a construct is differing from any other construct in the model (Chin, 1998; Hair et al., 2017). Fornell-Larcker criterion and Heterotrait and Monotrait Ratio (HTMT) were used to establish discriminant validity in this study. The results of discriminant analysis using Fornell-Larcker criterion are presented in Table 4.4. The square root of the AVE for each construct (represented by the bold values) in the model was found to be higher than its correlations with other constructs, indicating that discriminant validity was established. Table 4.5 presents the discriminant validity of constructs based on HTMT Ratio with all the values above 0.90.

Table 4.4: Discriminant Validity of Constructs (Fornell-Larcker Criterion)

	ECO	ENV	SC	DT	FP	NFP
ECO	0.808					
ENV	0.709	0.815				
SC	0.357	0.438	0.782			
DT	0.166	0.320	0.695	0.825		
FP	0.311	0.331	0.514	0.679	0.970	
NFP	0.194	0.291	0.448	0.706	0.840	0.904

Notes: Diagonals (in bold) represent the square root of the average variance extracted while the other entries represent the correlations. ECO represents economic factor, ENV represents environmental factor, SC represents socio-cultural factor, DT represents digital technologies, FP represents financial performance, and NFP represents non-financial performance.

Table 4.5: Discriminant Validity of Constructs (HTMT Ratio)

	ECO	ENV	SC	DT	FP	NFP
ECO						
ENV	0.767					
SC	0.498	0.575				
DT	0.169	0.335	0.749			
FP	0.327	0.341	0.503	0.695		
NFP	0.196	0.306	0.469	0.733	0.876	

Notes: Diagonals (in bold) represent the square root of the average variance extracted while the other entries represent the correlations. ECO represents economic factor, ENV represents environmental factor, SC represents socio-cultural factor, DT represents digital technologies, FP represents financial performance, and NFP represents non-financial performance.

4.3.5 Multicollinearity

For cross checking on the collinearity issues existed in the structural model, the structural model was tested for collinearity test. The intention to examine this test was to ensure that there is no collinearity problem in structural model, meaning the items are not mistakenly perceived with close similarity to the respondents. A tolerance of 0.20 or below and a variance inflation factor (VIF) value of 5.00 or above to indicate high level of collinearity or multicollinearity problem among the independent variables as according to Hair et al. (2011). The summary of collinearity test was presented on Table 4.6. Thus, results established the fact that there is no issue of collinearity in this study.

Table 4.6: Collinearity Statistics

	FP (VIF)	NFP (VIF)
ECO	2.091	2.091
ENV	2.226	2.226
SC	2.217	2.217
DT	2.002	2.002

Note: ECO represents economic factor, ENV represents environmental factor, SC represents socio-cultural factor, DT represents digital technologies, FP represents financial performance, and NFP represents non-financial performance.

4.4 Assessment of Structural Model

The measurement model was found to be satisfactory using a variety of assessment criteria as shown in section 4.4. The next step was the structural model assessment which involves hypotheses testing and evaluation of the model's predictive capabilities. In doing so, the significance of the path coefficients, the effect size f^2, the coefficient of determination R^2, and the predictive relevance Q^2 were evaluated. These assessment criteria are described further in the following sections.

4.4.1 Hypotheses Testing

Twelve hypotheses were proposed in this study to answer the research questions raised in Chapter 1. Out of the twelve hypotheses, six hypotheses (H1-H6) examining direct relationships between the three impact factors, namely economic factor, environmental factor and socio-cultural factor and tourism performance of financial and non-financial dimensions, while another six hypotheses (H7-H12) investigating the moderating effects of digital technologies on the three impact factors-tourism performance relationships. All proposed hypotheses were tested using the Smart PLS 3.0 software. Figure 4.1 and Table 4.7 present the results of hypotheses testing include the path coefficients and p-value. Three hypotheses were found significant at a significance level of 0.05, which are H1, H4, and H8. One hypothesis was found significant at a significance level of 0.001, which are H8. Further details about the findings are presented in the following sections.

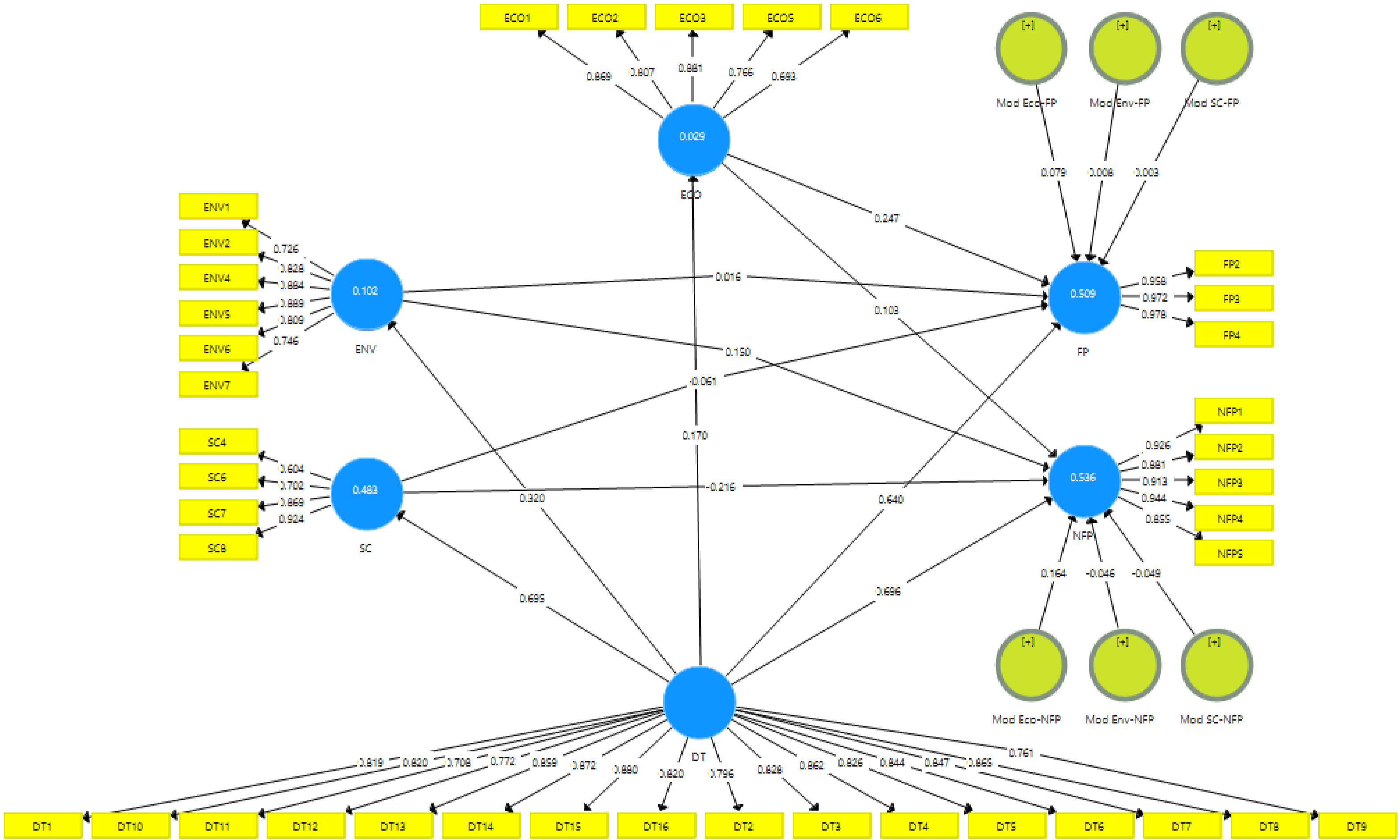

Figure 4.1: Results of Path Analysis

Table 4.7: Summary of Path Coefficients and Hypotheses Testing

Hypotheses	Relationships	*β*	*t*-values	*p*-values	Decision
Direct Relationships					
H1	ECO -> FP	0.247	2.979	0.001	Supported
H2	ECO -> NFP	0.103	1.507	0.066	Not supported
H3	ENV -> FP	0.016	0.171	0.432	Not supported
H4	ENV-> NFP	0.150	1.775	0.038	Supported
H5	SC -> FP	-0.061	0.615	0.269	Not supported
H6	SC -> NFP	-0.216	2.492	0.006	Not supported
Moderating Effects of Digital Technologies					
H7	DT*ECO -> FP	0.079	0.942	0.173	Not supported
H8	DT*ECO -> NFP	0.164	2.296	0.011	Supported
H9	DT*ENV -> FP	0.008	0.102	0.460	Not supported
H10	DT*ENV-> NFP	-0.046	0.678	0.249	Not supported
H11	DT*SC -> FP	0.003	0.058	0.477	Not supported
H12	DT*SC -> NFP	-0.049	1.061	0.144	Not Supported

*Note: * $p < .05$, ** $p < .01$*

ECO represents Economic factor, ENV represents Environmental factor, SC represents Socio-cultural factor, DT represents Digital Technologies, FP represents Financial performance and NFP represents Non-financial performance.

4.4.1.1 Direct Relationships

Six hypotheses were proposed to examine the direct relationships between the three tourism impact factors and tourism performance. Three impact factors were consisting of economic factor, environmental factor, and socio-cultural factor, whereas tourism performance was divided into two dimensions: financial performance and non-financial performance.

Specifically, Hypothesis 1 (H1) suggests that economic factor is positively related to financial performance. The results showed that the relationship between economic factor and financial performance was positive and significant, with a path coefficient of 2.47 ($p < .05$). Thus, H1 was supported. Hypothesis 2 (H2) suggests that economic factor is positively related to non-financial performance. The results indicated that the relationship between economic factor and non-financial performance was positive but not significant, at the significance level of more than $p < .001$. Thus, H2 was not supported.

Hypothesis 3 (H3) suggests that environmental factor is positively related to financial performance. The results showed that the relationship between environmental factor and financial performance was positive but not significant, at the significance level of more than $p < .001$. Thus, H3 was not supported. Hypothesis 4 (H4) suggests that environmental factor is positively related to non-financial performance. The results indicated that the relationship between environmental factor and non-financial performance was positive and significant, with a path coefficient of 0.150 ($p = 0.038$). Thus, H4 was supported. Hypothesis 5 (H5) suggests that socio-cultural factor is positively related to financial performance. Contrary to expectations, the results showed that the relationship between socio-cultural factor and financial performance was negative and not significant, with a path coefficient of -0.061 ($p = 0.269$). Thus, H5 was not supported. Hypothesis 6 (H6) suggests that socio-cultural factor is positively related to non-financial performance. However, the results found that the relationship between socio-cultural factor and non-financial performance was significant, but not positively, with a path coefficient of -0.216 ($p = 0.006$). Thus, H6 was not supported.

4.4.1.2 The Moderating Effects of Digital Technologies

Six hypotheses were proposed to investigate the moderating effects of digital technologies. Digital technologies were hypothesized to moderate the relationships between the three tourism impact factors and the two tourism performance dimensions.

Specifically, Hypothesis 7 (H7) suggests that DT positively moderates the relationship between economic factor and financial performance. Surprisingly, the results showed that the moderating effect of DT in this relationship was not significant, with a path coefficient of 0.079 ($p = 0.173$). Thus, H7 was not supported. Hypothesis 8 (H8) suggests that DT positively moderates the relationship between economic factor and non-financial performance. The results found that the moderating effect of DT in this relationship was significantly positive, with a path coefficient of 0.164 ($p = 0.011$). Thus, H8 was supported.

Hypothesis 9 (H9) suggests that DT positively moderates the relationship between environmental factor and financial performance. However, the results indicated that the moderating effect of DT in this relationship was not significant, with a path coefficient of 0.008 ($p = 0.460$). Thus, H9 was not supported. Hypothesis 10 (H10) suggests that DT positively moderates the relationship between environmental factor and non-financial performance. Contrary, the results found that the moderating effect of DT in the relationship between environmental factor and non-financial performance relationship was insignificant, with a path coefficient of -0.046 ($p = 0.249$) and thus H10 was not supported. Hypothesis 11 (H11) suggests that DT positively moderates the relationship between socio-cultural factor and financial performance. The results found that the moderating effect of DT on the relationship between socio-cultural factor and financial performance relationship was also not significant, with a path coefficient of 0.003 ($p = 0.477$) and thus H11 was not supported. Hypothesis 12 (H12) suggests that DT positively moderates the relationship between socio-cultural factor and non-financial performance. However, the results found that the moderating effect of DT in this relationship was insignificantly and negatively, with a path coefficient of -0.049 (p = 0.144). It shows Hypothesis 12 (H12) was not supported.

4.4.2 Effect Size (f^2)

Following guidelines provided by Cohen (1988), the impact of economic factor (f^2=0.053) on financial performance was found to be small and the factor on non-financial performance was found to be weak. The impact of environmental factor (f^2=0.002) on financial performance and on non-financial performance were both found to be weak. No effect was found on the effect of socio-cultural factor (f^2=0.000) on financial performance, and a weak impact of socio-cultural factor (f^2= 0.018) on non-financial performance. As shown in Table 4.6, the effect sizes of all other constructs ranging from weak (0.002) to small (0.053).

Table 4.8: Effect size (f^2)

Hypotheses	**Relationships**	f^2	**Interference**
H1	Economic Factor -> Financial Performance	0.053	Small
H2	Economic Factor -> Non-Financial Performance	0.007	Weak
H3	Environmental Factor -> Financial Performance	0.002	Weak
H4	Environmental Factor -> Non-Financial Performance	0.002	Weak
H5	Socio-cultural Factor -> Financial Performance	0.000	No
H6	Socio-cultural Factor -> Non-Financial Performance	0.018	Weak

Note: ECO represents Economic factor, ENV represents Environmental factor, SC represents Socio-cultural factor, DT represents Digital Technologies, FP represents Financial performance and NFP represents Non-financial performance.

4.4.3 Coefficient of Determination (R^2)

Predictive accuracy of the model was measured by using the coefficient of determination (R^2). As shown in Figure 4.1, the model showed 50.2% variations in financial performance and 51.3% variations in non-financial performance, explained by the three exogenous constructs, namely, economic factor, environmental factor and socio-cultural factor. The R^2 values were considerably greater than 0.10 as recommended by Falk and Miller (1992) and thus further interpretation of data was deemed to be meaningful. Following the rule of thumb suggested by Hair et al. (2017), endogenous construct namely financial performance (R^2=0.502) was found to have moderate R^2, whereas non-financial performance (R^2=0.513) was also found to have moderate R^2 in this study.

4.4.4 Predictive Relevance (Q^2)

The predictive relevance of the model was tested by referring to Stone-Geisser's Q^2 value (Geisser, 1974; Stone, 1974). In this study, the endogenous construct namely financial performance was found to have a Q^2 value of 0.465, and non-financial performance was found to have a Q^2 value of 0.414. As the Q^2 values were considerably more than zero, it was verified that the model has predictive relevance (Hair et al., 2017). Specifically, the model was found to have large predictive relevance according to the rule of thumb (Chin, 1998; Henseler et al., 2009; Hair et al., 2017).

Table 4.9: Predictive Relevance (Q^2)

	SSO	SSE	Q^2 (=1-SSE/SSO)
ECO	1205	1205	
ENV	1446	1446	
SC	964	964	
DT	3856	3856	
FP	723	386.793	0.465
NFP	1205	706.588	0.414

Note: ECO represents Economic factor, ENV represents Environmental factor, SC represents Socio-cultural factor, DT represents Digital Technologies, FP represents Financial performance and NFP represents Non-financial performance.

4.5 Summary

In this chapter, the data analyses and the findings of the study have been described. Firstly, preliminary data analyses used to screen through and edit the data collected. Then, PLS SEM analysis using SmartPLS 3.0 is being deployed to analyse data. Indicator reliability, internal consistency reliability, convergent validity, and discriminant validity of the constructs has then been assessed in the measurement model. Lastly, hypotheses were tested, and the model was assessed for predictive power in structural model. With that it sealed the chapter and proceed on discussions and conclusion in the next chapter.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter starts with presentation of recapitulation of research objectives and research questions of this study. Then, discussions on findings of this study. Followed by discussions on theoretical and practical implications. Finally, revealing the limitations encountered for this study and recommendations for the future research prospects.

5.2 Discussion

Tourism have played such a critical role in influencing the business performance to the destination. It has been quoted by Lema, Hansen, Gujiro and Santos (2018) that in business management, external environment of a destination has an impact on business performance. Hence, it is necessary to make use of digital technologies to strategize as strategy to tackle the shortfalls encountered in the industry. As one of the three tourism factors studied in this research, economic factor is the most impactful and concerned external environmental factors to performance (García & Fernández, 2017). Efficiently making use of strategy such as, with the adoption of digital technologies into the business model could improve business products, services, and its processes. Hence, it will bring positive effect to business performance of this small enterprise reflecting on its financial and non-financial performances. This is evidenced with support of the result of studies conducted by Lin and Chen (2007), Hervas-Oliver, Sempere-Ripoll, and Boronat-Moll (2014), and Sok, Cass and Miles (2016).

The three impact factors as presented in the study, significantly influencing the performance of tourism in general. The relationships are existed between these variables seem to be criteria for a performing factor to the tourism industry. The study has proposed twelve hypotheses, with six hypotheses looking at the direct relationships among the three impact factors and tourism performance financially and non-financially respectively: another six hypotheses regarding the moderating effects of digital technologies on these relationships.

However, the results of the PLS-SEM analysis did not support all proposed hypotheses. Two out of the six hypotheses that were proposed to examine the direct relationships were supported; other four direct relationships hypotheses were not supported. On the other hand, only one of the six hypotheses that were proposed to determine the moderating effects of digital technologies was supported. Somehow, this study showed a significant contribution on moderation role of digital technologies in enhancing one of the relationships of tourism factors to tourism performance of Sarawak. The following sub-sections discuss these main findings in detail.

5.2.1 Economic Factor and Homestay Operators' Business Performance (Financial)

As anticipated, based on the past literatures studied, the results of the analysis show that economic factor has an impact, and it is the factor that is positively related to financial performance in the tourism industry. Thus, H1 is supported. The result is significantly showing that economic factor does play a role in contributing to tourism performance. As posited by Antonakakis, Dragouni, Eeckels, and Filis (2019), their research has found out that economic-driven tourism is growing and flourishing in those developing countries. It is practical and sensible, prices of goods and services, income earned by the citizens in a developing country are somehow lower and less, relatively the standard of living and job opportunity will be different as compared to developed countries. The standard of living and job opportunity will only be improved when there is influx of visitors from foreign countries. As such, the tourism performance is highly influenced by the visitations of tourists, especially on the financial aspect where there is growth in return in assets, growth in sales, growth in profits, growth in productivity and reduction in production costs in the long run. Afrodita (2015) has confidently regarded that tourism plays a part as development strategy in many countries economically.

5.2.2 Economic Factor and Homestay Operators' Business Performance (Non-Financial)

Contrary to expectations, the results of the analysis demonstrate that there is no significant relationship between economic factor and non-financial performance, thus H2 is not supported. Economic factor as quoted in this study, it is studying based on the dimensions of income, price, exchange rates conversion, standard of living, and job opportunity of the destination country. The dimensions stated have more to offer from the macroeconomic perspective, with which it has more influence financially instead. The non-financial aspects such as customer satisfaction, employee satisfaction, growth of customers, improvement in products and services quality, and reputation tend to have less effect from external economic factor. According to the respondents, economic factor is positively affecting customer satisfaction, employee satisfaction, improvement in quality of product and services, reputation and growth in customers has no direct impact. They further explained that non-financial performance is more affected by the human factor, the sentiment of human influence instead of the external environmental economy. The factor does not influence the non-financial performance regardless of how the factor performs. Fuentes et al. (2015)

posited that knowledge that refers to strategy and planning by the business operators enable an operation to anticipate market trends and customer needs more efficiently, that will contribute to the technical knowledge on how to improve customer satisfaction, product and service quality and employee satisfaction. It is the knowledge application that determine the non-financial performance of tourism (Haque & Anwar, 2012; Liu & Deng, 2015). So, the non-financial performance is said to be greatly influenced by knowledge application rather than external economic factor. Besides, Cegarra-Navarro et al. (2016) also quoted that knowledge application leads to better service quality, more efficient resource used and internal processes, more productive, higher customer satisfaction, and less employee turnover. Argued by Liu and Deng (2015) information available and knowledge possessed by the operators help the operators to strategize and expand business plans based on the resources available such as expertise and experiences in executing decision made. With that, it will ultimately lead to producing an optimal business performance to an operation. Non-financial performance is greatly affected by the creativity and new product or new service performance, in other words it simply means innovativeness (Chang et al., 2014). Innovativeness is found to be able to improve non-financial performance of an operation (Nguyen et al., 2016; Mohamad et al., 2017).

5.2.3 Environmental Factor and Homestay Operators' Business Performance (Financial)

Contrary to expectations, the results of the analysis demonstrate that there is no significant relationship between environmental factor and financial performance, thus H3 is not supported. As explained by past research, environmental factor in this study is judging from the three dimensions: destination environment (physical nature of the environment), environment management practices, and influence of the environment. These are the factors that said to contribute directly to the performance of tourism but need not necessarily have an influence over the financial aspect. However, according to Amel, Manning, Scott and Koger (2017), there were very limited evidence on the efforts of creating meaningful environment conservation in ecosystem by the residents. From such finding, one of the dimensions referring to environment management practices has not been executed. It could be deduced that financial performance of tourism is not positively been resulted. Indirectly, this has portrayed those operators do not try to maintain, preserve, or conserve the environment as posited by literature. Also postulated in the study of Sugiama (2019) citing that the role of tourism in conservation to nature and environment is only literally and purely on theory, but rarely in practical (Adamowics, 2010; Sugiama, 2019). Hence, that lacking efforts lead to neglection of the physical nature's beauty that primarily used to attract tourists. Massingham, Fuller and Dean (2019) had quoted that, in their studies, ecotourists felt upset concerning on the environment problems. This strong evidence in deduce that the financial performance of tourism in relation to environment is due to the emergence of negative feelings towards their tourism experiences from the environmental aspect. Besides, the communities might have the mentality that their business operation performance is not very much affected by environment. During the survey and interview sessions, majority have mentioned that there is not much promotion and advertising efforts been exercised. The businesses are very much dependant on the enquiry from the agencies and government authorities. In fact, for those operators who are situated in the inland remote locations are heavily relying on agencies and government authorities' correspondence. On the other hand, as postulated by Sharpley and Roberts (2004), Amir, Ghapar, Jamal and Ahmad (2015), and Gündüz and Agayi (2020), tourists visiting rural areas are because of its uniqueness, scenic factor; however, rural tourism host communities are vulnerable to economic shock and environmental hazards that leads disrupt livelihoods and community well-being. Thus, communities on one hand felt the threats too, so they are reserved towards positively looking at environmental factor that could help to perform well to financial performance. Meantime, there are arguments from scholars that hospitality industry like homestay is indeed operated with a different set of mentality from the operators; more like hobby, way of life, social rewarding, which are not so profit-minded or profit-oriented (Morrison et al., 2010). With that, financial performance to them is not at the utmost important matter to concern on, but rather paying higher expectation on non-financial performance aspects (Wang et al., 2012; Phan et al., 2021).

5.2.4 Environmental Factor and Homestay Operators' Business Performance (Non-Financial)

As anticipated, based on the past literatures studied, the result of the analysis shows that environmental factor has an impact, and it is this factor that positively related to non-financial performance in the tourism industry. Thus, H4 is supported. The result is significantly showing that environmental factor does play a role in contributing to tourism performance non-financially. As abovementioned, environmental factor reflected by the dimensions of destination environment, environmental management and influence of environmental issues. It is certain that the good name of a destination will boost the reputation of the destination, either through words of mouth or publicity on mass media. Subsequently, shall the management of environment be achieved at a very well-known standard and with less issues of environment at the destination, it gives it the destination an upper hand. With that influx of visitors who have been attracted to the destination, there is room for the communities to improve and diversified their services and quality of service, that indirectly contributes to customer satisfaction, employee satisfaction and improvement in quality of products and services. Of which these are the dimensions reflected in non-financial performance. Cognitively, good physical atmosphere of destination, with well managed environment that leads to low environmental issues; a combination of all these factors absolutely will score a higher point from visitors and earn a favouritism in general. This is a chain reaction that is inter-connected with each and one another from the very grounded influence on the individual psychological opinions.

5.2.5 Socio-cultural Factor and Homestay Operators' Business Performance (Financial)

Contrary to expectations, the results of the analysis demonstrate that there is no significant relationship between socio-cultural factor and financial performance in tourism, thus H5 is not supported. In this study, socio-cultural factor is a combination factor that comprised social factor and cultural factor. It is looking from the social safety aspect, culture aspect, events, and festivals aspect. This situation could be possibly explained by the fact that the respondent, who are homestay operators strongly felt that they have very limited knowledge and capacities to promote and appeal to tourists on the socio-cultural values of their own ethnics, and at their destinations in an effective manner. Tourism is unique in a way that the nature of industry permits people (communities) meeting people (visitors) from various nationalities, with different cultures and lifestyles in exchange for the experiences. It is quite certain and not a surprise with such result, as Inkson and Minnaert (2018), and Huang (2019), quoted that there might be a positive or negative socio-cultural impact to tourism development, not necessary to be reflecting on a good impact. This has a strong justification to the result of the analysis for this hypothesis being negative result. The richness in socio-cultural could possibly give the sense to visitors that the destination is safe, is harmonious and relaxing. The cultural elements had become joyful during the knowledge exchange sessions when they communicate reciprocally through any events and festivals that hosted during the visitation of the tourists at the host's lodging house. These are experiences that received or/ and passed on during the interaction. Hence, there is no direct relations that took place that this factor will influence the financial performance of rural tourism. Indeed, referring to the outcome of the analysis, the relationship experienced a negative sign. It means that socio-cultural factor has a negative relationship with financial performance of rural tourism. Socio-cultural is negatively related to financial performance of rural tourism. It requires a better and thorough understanding between cultures which could lead to the breakdown of negative stereotypes, because tourism is all about an opportunity to understand unfamiliar people, places, and cultures. Understanding, tolerance and mutual respect are all mandatory elements when comes to performance. Performance can be improved by acceptation and appreciation from both parties for these differences; to avoid misinterpretation, misunderstanding, unpleasant perception on others. Therefore, the negatively relation is established due to the circumstances mentioned above. As postulated, one of the possible reasons for the negative relationship could also be fear of changes in values and behaviour due to acculturation that could have an impact on creating a threat to indigenous identities (Ghaderi, 2004; Kabote, 2015; Zhuang et al., 2019). As mentioned, local culture and traditional values may be weakened through the acculturation along the way of rural tourism development (Suntayatron, 2010; Runhare, 2018). Another dimension of explanation, which has also aforementioned under environmental factor's section. Scholars do not envision homestay operators to be profit-oriented towards their operations, though homestay operation is an entrepreneurship and business operation (Morrison et al., 2010; Ye et al., 2019). Therefore, financial performance is not an utmost important matter to them, so they are more concerned on non-financial performance aspects in satisfying their customers, gaining good reputation (Wang et al., 2012; Kiena & Hab, 2020). As suggested by Ye, Xiao and Zhou (2019) in their study, satisfying the investors and satisfying the guests could be in conflict in terms of authentic experience; meaning that operators may face trade-off between satisfying authenticity seeking guests and satisfying their own income statement.

5.2.6 Socio-cultural Factor and Homestay Operators' Business Performance (Non-Financial)

Contrary to expectations, the results of the analysis demonstrate that there is no significant relationship between socio-cultural factor and non-financial performancein tourism, thus H6 is not supported. The result is not significantly showing that this factor does play a role in contributing to tourism performance. Somehow, as explained above; the dimensions of socio-cultural factor are including safety of the society, cultural aspects, and events and festivals hosted at the destination. These have created higher interests between the operators (host) and the visitors (tourists). Socio-cultural judging from a non-financial performance aspect has a more obvious and impactful effect from the operators. Customer satisfaction being the primary impact result not solely from socio-cultural factor; it is more towards an internal values (hospitality) created by the operators rather than the external factors of socio-cultural that affect the customer satisfaction in the context of rural tourism. Although, the rich ethnicity elements have a powerful influence to pull visitors; from the non-financial performance stand, the businesses are still contributed by the services and hospitality offered by the operators. That ultimately will lead to the growth in customers in the long run, that reflects the growth in businesses in this accommodation sector and operators strongly felt that core values are still heavily dependent on their services rendered. With such, as the businesses prosper and flourish, entrepreneurs will become innovative in order to attract more businesses by improving products and services quality. The healthy competitions among the entrepreneurs eventually strengthen the rapport and reputation of its recognition and position in the industry. Besides, employee satisfaction also plays a very important role in promoting returning customers, it is the stay that matters to visitors that encourage recommendations through words-of-mouth among customers rather than heavily depending so much on the host destination's cultures, social safety, events, and festivals. Hence, H6 indicates that socio-cultural does not have a positive impact on non-financial performance in rural tourism is affirmative. As quoted by Pusiran and Xiao (2013), and Liu et al. (2017), most communities in rural areas have restricted their level of participation and impedes the process of achieving sustainable rural tourism development because they have very limited understanding of the concept of tourism development and planning. From this finding, it has shown that indeed socio-cultural factor has an impact of boosting their non-financial performance as one of the attractions in pulling visitors to their community; however, due to their understanding they strongly felt that they do not have much to offer to the visitors. Lo et al.'s (2012) findings have stipulated that the decision-making involvement from local communities in rural tourism development has contribution to social, culture, economic and environmental sustainability. As such, the confidence and determination from the locals play a role in boosting the non-financial performance and the development of rural tourism in general. In addition, acculturation has created fear to local communities, so it could be a possible reasoning to why they felt that socio-cultural factor does not have much impact on their business performance non-financially. Evidence shows that the changes in values and behaviour in the younger generations threaten their indigenous identities, and often these changes alter the community fabric, family relationships, collective conventional (Kabote, 2015; Zhuang et al., 2019). On the other hand, the widening income disparity could also be the source of conflicts within a community and lead to hatred between the residents with two extreme categories (Ramchander, 2007; Tuntipisitkul et al., 2021). As a result, the respondents who answered to the survey could be one-sided in which from the negatively perceived group.

In conclusion to sum up the insignificance of the hypotheses tested to socio-cultural factor towards the tourism performance, it could also be explained that the current situation could possibly undergo at the stage where the impact is not kicking in, or in other word it is not obvious from the point of view of the communities. According to past researcher, the change in social and culture will undergo different stages (Zhuang et al., 2019). In early years of rural tourism, the factor is actively influencing the progress of development. As development progress, an equilibrium point of development will be met, later in the stage socio-cultural factor will be more prominent, and that reaches a more mature stage of industry. Thus, possibly the stage that is experiencing by the respondents now is still at the very beginning of the process where socio-cultural factor does not seem very prominent to boost business performance.

5.2.7 The Moderating Effects of Digital Technologies

Contrary to expectations, the results of the analysis provide no support on the moderating effect on the relationship between economic factor and financial performance, thus H7 is not supported. Moreover, the findings also indicate that the moderating effect of digital technologies on the relationship between economic factor and non-financial performance is significant, thus H8 is supported. These results are in contrast with each other when tourism performance has been broken down to assess from financial and non-financial aspects. The past studies from researchers showed that technology factor has a positive impact on business performance in improving its business performance (Page & Connell, 2014; Vaughan, 2018; Page & Connell, 2020); thus, the moderator is influencing this stand. By looking at the existing direct relationship between economic factor and financial performance of rural tourism (H7), it has shown that the relationship is not significant; as a result, it could be concluded that the operators have perceived solid reason not to deploy technologies to further improve the financial performance in rural tourism, or they could be ignorant towards the deployment of technologies due to certain reasons. There could be also supported by the fact that majority of the operators are village folks that possessed only basic academic qualifications, having very low education level in mastering the new technology. The level of educations could possibly be an obstacle for the operators to engage advanced and sophisticated gadgets, software, applications, and facilities in their daily business operations. Besides, judging from the ages of the operators, majority are also retirees who have very minimal knowledge in operating latest e-commerce application and even lack of skills in managing social medias in promotion of their businesses. With references made to literature, it argues that it is helpful for the technologies to boost the performance financially, according to Mosweunyane, Rambe and Dzansi (2019), in their study even though they had investigated the use of social media in tourism among small, medium and micro enterprises in expanding business networks in increasing competitiveness; their findings showed that with the use of technologies were successful in increasing level of competitiveness. Somehow, it is still a hurdle to the practitioners when comes to execution in our local context where level of education is not on par as compared to the western regions.

However, H8 that hypothesised the digital technologies moderates the relationship between economic factor and non-financial performance of rural tourism is significant. With survey based on interviews been conducted on the homestay operators, the feedbacks from the respondents are positive towards the deployment of social medias, websites, booking platform, and e-wallet payment system. The operators are very open and keen to accept the use of technologies onto their daily business operations. They strongly feel that with the deployment of technologies onto the operations, it could please more parties, such as existing customers, potential customers, employees, government authorities and even travel agencies. The respondents could imagine that with the technologies, they could reach out to more potential customers, by impressing and convincing those prospects, and nonetheless technologies as a tool to promote and convey message across is always far more persuasive as compared to conventional booth sell, agencies' hard sell, advertisements through tourism bulletins and magazines. This is in line with the literature, literally most scholars envision that with the incline of technology era in e-business and sharing platforms (e.g., Airbnb, Agoda, Booking.com), there should be a potential for those small accommodation businesses (e.g., homestay, guests house, B&B) to expand and prosper in scale, later to reshape the future dynamics of the hospitality industry (Guttentag, 2015; Sigala, 2015). Meantime, technologies enable feedbacks and comments freely from the customers without any awkward feelings when customers are reverting after their departure. It does not give a feeling to customers of being confronted by them, but rather it gives a more relaxing mood to the customers in replying to them at their own sweet time. Zeng and Gerritsen (2014) had ever quoted the impact of social medias on the local community is worth to be researched on, especially on tourism industry. Curley and Noormohamed (2014) had also stressed that the emerging technologies are influential for entrepreneurs to compete with larger businesses, so tourism enterprises like homestay operators should take advantage of this technological factor. Nevertheless, it is a more economical way of boosting sales, increase reputation, and services rendered. E-commerce platform is virtual, there is no constraint on time, place and people; everything is instant, immediate, thorough, detailed and rich just within a click away at the expand of internet. In recent years, most research were focusing on consumers' attitudes on social media marketing, and not much of the attentions been given to barriers and obstacles in applying digital tools (Alves et al., 2016). It is so true this scenario, it echoes that the applications of technologies by the entrepreneurs have very much been neglected. Another important point noted, as postulated in Zahari, Hanafiah, Akbar and Zain's (2020) study, majority of the rural folks from the rural areas still uphold the perception that rural tourism products are still unable to attract the international tourists, if there is lacking support and collaboration from government bodies, public agencies, private authorities like travel agencies and the tour operators (Khairil & Yuhanis, 2011; Christou et al., 2018; Mottiar et al., 2018). It is the confidence level that is not been boosted and assured to them that causing them to respond in this manner.

H9 hypothesised the relationship between environmental factor and financial performance is positively moderated by digital technologies, and result showed not significant, thus H9 is not supported. With reference made to the survey conducted on interviews, homestay business has indeed been accepted and operated by the communities with most of them upholding the objective to occupy the rooms available by each household. The operators were not so business minded or in other word they did not have a very high spirit of entrepreneurships. The core intention of the operators from this homestay business is to lease out their rooms available and at the same time to promote and share the existing available experiences, atmosphere, cultures, traditions to the visitors. It is part of the cultures and attitudes of the locals in offering warm hospitality to foreigners and even domestic peninsular visitors. Deployment of technologies to boost up financial performance on environment is not their goal. Besides, according to the operators, they are not knowledgeable and skilful enough to adopt latest advanced and sophisticated way of promoting environment through augmented reality (AR) of virtual reality (VR). They are only keen and capable of picking up fundamental skills in operating social medias, engaging the use of e-commerce applications, administering own websites, and any applications that could possibly be used to ease, smoothen and expediting their operations and transactions between them and customers only. According to Zahari, Hanafiah, Akbar and Zain's (2020) study, tour operators' unique role plays a crucial factor as key and catalyst factors in the rural tourism realm; they act to further goals of sustainable tourism development and executing the task of preserving the environmental and cultural resources for tourism industry, in which the industry heavily depends on its existence and growth (Metzger, 2003; Rønningen, 2010; Mottiar et al., 2018). Therefore, operators still insist that they rely on travel agents in bringing in tourists and businesses, so that could be the cause of this hypothesis not significant.

H10 hypothesised the relationship between environmental factor and non-financial performance is positively moderated by digital technologies, and result shown not significant, thus H10 is not supported. Findings shown that digital technologies do not play a role in enhancing the relationships between environmental factor and non-financial performance. The operators do not believe that with the use of technologies, it could possibly improve the non-financial performance on the environmental aspect, they strongly believe in human element and those intangible factors. They concluded that environmental factor is a self-experienced element where it is intangible asset that could not be replaced by anything virtual, people just must experience it in person. They have emphasized that happiness, pleasant feeling, and satisfaction is a feeling constructed cognitively and it supposed to be an experience that conveyed up-close and personal rather than through anything digital. Their conventional thinking somehow restricted them from accepting technologies in enhancing the relationship between environmental and non-financial performance in the rural tourism context. Hence, it seems to be rational to obtain such results from the analysis that H10 is not supported. Again, the confidence level has drawn back the thrust of the homestay operators. As argued, the belief of having active cooperation and commitment from tour operators are needed to extend development of the rural tourism sector (Gorbuntsova et al., 2018). This has resulted even with the technological aid been implemented to the system, the environmental factor is still not going to fruit returns to the tourism performance non-financially. It is somehow dependant on the private agencies again to bring in results.

H11 hypothesised the relationship between socio-cultural factor and financial performance is positively moderated by digital technologies, and result showed not significant, thus H11 is not supported. As for H12 hypothesised the relationship between socio-cultural factor and non-financial performance is positively moderated by digital technologies, and result also showed not significant, thus H12 is not supported either. Digital technologies are not playing a role in moderating the relationships of socio-cultural factor and rural tourism performance in the context of Sarawak's rural homestay operations. It is not to a surprise that socio-cultural factor did not seem to be influenced by digital technologies in boosting the financial performance in rural tourism. Through the interviews, majority of the respondents have revealed that social and cultural factors are very experiential. The feelings just could not be passed on and conveyed through lenses, photographs via digital technologies. The respondents have a strong belief, pride, and perception towards their own social and cultural elements, they do not perceive digital technologies could in one way or the other capable of portraying their iconic social status and cultures to the world by the adoption of technologies. The atmospheres, the moods, the celebrations, the sentiments are too abstract to be described and tell off to potential visitors through lens and pictures, neither with the technological interface such as VR and AR. The sentiments of social factor and cultural factor can only be sensed, experienced, and felt personally through the visitations and stays by the visitors themselves. It could possibly be described in brief of what and how the environment like in local, but it just could not be experienced through technologies and gadgets. Financially, they perceived that their businesses could not improve by solely relying on socio-cultural factor with the assistance of digital technologies in promotion neither creation of awareness in the eyes of the visitors without personal experiencing it themselves. Meanwhile, as mentioned in the earlier discussions, there is no plan, or directives from the authorities in guiding the operators on how business should be planned, strategized, and operated in the effective and efficient ways. In the business world today, it is mandatory that a clear plan is required before execution, on how and why for adopting social media before even tapping on it (McCann & Barlow, 2015). This concept is backed by Mkono and Holer (2019) that digital data indeed has its own originality and transparency and easily obtainable worldwide. Therefore, if all of these issues are not made known and clear to the operators, it seems to be very difficult to penetrate through their mentality, they also seem lost and vague towards making use of digital technologies in helping them to overcome the obstacle in socio-cultural factor. Last, but not least, referring to Zahari, Hanafiah, Akbar and Zain's (2020) argument most of the rural entrepreneurs insist that it is the tour operator's role to serve as intermediary between supply and demand and contributes to the success of rural tourism sites. It is argued that the commitment and cooperation are still utmost crucial in promoting Malaysia's rural tourism sites. Hence, from this notion, it could be explained why the findings are resulting in such outcome.

5.3 Theoretical and Practical Implications

There are significant implications obtained from this study for both academicians and practitioners in general. The implications are presented as following in theoretical and practical perspectives.

5.3.1 Theoretical Implications

This study has made a significant contribution to the tourism industry in the rural areas, in particularly to the accommodation sector; according to the past literatures from scholars, the three tourism attributes or also known as the impact factors have made positive significant contribution to the performance of tourism to a nation. However, from the results and analysis obtained from this study showed that in the context of Sarawak it does not seem to portray the same scenario. From the theoretical aspect and empirical aspect, neither of them goes parallel, it means that the empirical research shows opposite, and it does not appear to be what has been quoted as theoretical statement. There are not much significant links between the impact factors, and the tourism performance in rural areas. The links might take place in the mass tourism, but obviously not in the rural tourism context. Zielinski, Jeong, Kim and Milanés (2020) have their findings postulated that due to the economic conditions and context of the nations whether in developing or developed countries, it has different impacts on the success in rural tourism. The factors that affect the effectiveness are namely, socioeconomic, and cultural factors, policy and governance, land ownership, community cohesiveness, assimilation of external stakeholders, type of visitors. Past researchers have quoted that it is because of the factor of economic, legislative, and political structures, therefore there is no equality (Tosun, 2000). Hence, the type of development of a nation does play a role in its effectively.

This has established the basis for other researchers soon to further investigate on the relationships between these constructs in the rural tourism sector to help the local communities, the government, and the national economy to prosper and expand. Though in general, economic factor, environmental factor and socio-cultural factor have significant impacts on tourism performance; when they are skimmed down to financial and non-financial performances, some factors are significant towards financial performance and other factors are significant to non-financial performance. Thus, in the general picture, these factors are still significant and impactful to tourism performance in the general context.

Secondly, the situation here in Sarawak has shown that the factors do not highly and effectively influence the performance of tourism in rural areas, it has obviously portrayed that the scenario in this state or this region has not occurred as per what has been stated in theory. Hence, it is worth to further investigate, what are the other factors that could possibly help to boost and enhance the rural tourism performance apart from economic, environmental, and socio-cultural factors. Scholars could focus on other possible factors such as technological factor, legal factor, political influence, governmental support, and infrastructure factor. These factors could be substituted to boost and improve the tourism performance instead of counting on the conventional three factors mentioned above. Reflected based on the feedbacks from the respondents, majority of them have commented that infrastructure factor is their common obstacle in the rural settings. The establishment and development of technology infrastructure is way very far behind as compared to other states from peninsular. Their connectivity to broadband has obstructed them from going digital, or in a simple explanation they could not deploy digital technology aids as what have been mentioned in this study. Besides, governmental support towards the technological factor is somehow lacking to be rendered to these village folks. As commented, mostly retirees or silver-haired villagers are left to guard their inherited residences in the village. So, due to the education level, knowledge, and skills towards technology gadgets, and lack of sensitivity against the evolvement of the use of e-commerce applications on smartphone, software utilisation on computers, technological gadgets advancement, or even electronics promotion via social medias; these have all the impacts to possibly restrict the operators from technological factor influence. In addition, hardware establishments from the telecommunication companies (Telco) and support from the government in erecting telecommunication towers, and expansion of networks coverage have all had an impact on technological establishment that will eventually lead to technology advancement in the rural areas.

The researcher has borrowed RBV in this study to show the importance and the relations of the factors to the performance of tourism. As explained by the theory of resource-based view (RBV), it is undoubtful that economic factor, environmental factor, and socio-cultural factors are resources that are possessed by destinations, all the resources might be unique and only available at certain destinations; in fact, as explains by theory it could have helped the destinations in generating income and visitors. However, it is disappointing to see that these resources are not used wisely, not appreciated as resources, not accepted as unique selling propositions, not even been promoted to outsiders and visitors by the locals. In other words, the locals have failed to utilise what resources they have possessed and turn it into a competitive advantage that could ultimately become a cash cow to their destination. Otherwise, it could be possible that the locals could have treated all these resources for granted, omitting that these are all opportunities and strengths that they have already owned, or either they do not have a skill make it appealing to visitors and foreigners, not to mention they have not strategically planned in promoting these resources (unique selling propositions) to potential customers of their businesses. Eventually, these resources could have vanished and disappeared overnight or gradually from the destinations, if there was not any conservation and preservation works been done. The theory has helped to identify the resources that could be used to generate incomes, to ring the bell that strengths and opportunities that could possibly help the village folks to improve their life and standard of living. Unfortunately, those have not been realised and aware of by the locals.

Fourthly, though village folks have known that technological factor is indeed a factor that could help them to grow their businesses, to enhance their business relationships with customers especially in today's rapid growth of technology advancement, to reach out their customer clusters through the use of digital aids in other continents (i.e., smartphone, computers, user-friendly apps for tourists, software for e-commerce platform, e-payment mechanism, VR, AR application) and expediting the process of closing a deal and transaction; however, they have no knowledge, no skills or even any basic idea in turning such factor into a moderator to moderate the current existed factors (economic, environmental and socio-cultural factors) with the performance. Furthermore, there is no known researcher has ever examined the moderation effect of digital technologies towards the tourism factors on a destination's performance. Alderete (2017) has a very fruitful findings on ICT (as moderator) in influencing the socioeconomic development of countries. Ebrahimi, Shafiee, Gholampour and Yousefi (2018) has used ICT to moderate orgainsational innovation (OI), learning orientation (LO) and entrepreneurship on small and medium-sized enterprise (SME) performance and results found to be significant. Besides, Limbu, Jayachandran and Babin, (2014) have studied on causal model in theory of structural relationships between a factor comprising ICTs and salespersons' job satisfaction, ICT is found proven to be an effective moderator in moderating job satisfaction through salesforce administrative performance. Finally, another case referred to was Gil-Saura, Molina and Berenguer-Contri (2016) in their study of using ICT as moderator on assessing its capability and influencing the relationships between store equity and consumer behavioural intentions towards the store. All the cases mentioned above have used digital technologies in improving relationships and turn up to be a very successful moderator in moderating a relationship.

Fifthly, on the geographical aspect, this study is carried out and validated in a real-life scenario in those rural areas on those homestay operators in Sarawak. It is studied on first hand primary data collected from the Sarawakian homestay operators, who have run the businesses for years with their homestay locations been identified, and officially registered with MTAC. Thus, this study can provide true reflection and realistic overview of the perceptions and opinions from the actual operators of the industry. Findings are ascertained to be truly and accurately obtained from the right party and personnel.

As conclusion, this study portrays the basis of the importance of factors that influence the rural tourism performance in the opinions of the homestay operators, and on how digital technologies can moderate those factors in enhancing their relationships with the tourism performance in particularly to accommodation sector in the rural areas. The coverage of the study is utmost comprehensive in the sense that the respondents who were approached comprised all the operators throughout the whole Sarawak. So, it could represent the industry where registered operators are identified with list of operators obtained from the authority in-charged. This study has studied in detailed on the main pillar factors of contributing to tourism performance; hence, it could possibly stimulate the future researchers in looking at other factors that might lead to tourism performance apart from the current main three pillars. In addition, study on the cognitive aspect and behavioural aspect of the homestay operators could also be worth studied on. The influence of ethnic, age groups, education levels could be a possible manoeuvre towards the directions and perceptions of the operators. The essence of values and opinions are possible to shape a different perspective in a bigger picture. This study has demonstrated a more detailed picture of tourism performance in dimensioning it to financial and non-financial performance. It seems to be the first ever example in measuring tourism performance in two dimensions with cross validating the measures in a developing country with a rural tourism setting. The findings exhibited a high level of reliability and validity score for the measures adapted from past studies in a Western context (Gold et al., 2001; Prieto & Revilla, 2006). The measures found to consistent and useable in a cross-cultural, cross-nationality and even cross-ethnicity environment, and it is fit to be used for future study in different cultural, different continents and in a different social environment setting.

5.3.2 Practical Implications

The goal for every homestay operator in Sarawak eventually goes to operation performance when they get themselves involved in this rural tourism industry, though some of the operators initially just have the intention to run the homestay operations for the sake of occupying their vacant rooms in their households. In the advancement and development of digital technologies in our daily lives, technological factor has become a norm, an art and as part of our lifestyles. Internet, smart phone, application software, digitalised communications, and digital technologies have all become mandatory for our activities. Digital technologies have become a strategic resource in overtaking other resources in almost every human activity. From this study, it could provide recommendations for reference for the practitioners (homestay operators) on showing how important are digital technologies influence the tourism attributes (tourism factors) in meeting the tourism performance, or in other word, how has technological factor played its role in helping to boost the tourism performance on the condition that mentality, the knowledge, and skills have been improved. The improvements require the efforts from the government in upskilling the operators. Besides the homestay operators as the core practitioner in this scenario, other potential practitioners such as local government, governmental authorities (STB, SMA, MTCP, MoTAC), travelling intermediaries (travel agents, ticketing agents) and other tourism industry players (logistics providers, hoteliers, handy crafts related entrepreneurs and many more). Apart from the existing comparative advantages (tourism attributes) that possessed by the state, the study has portrayed how impactful and influential the digital technologies could create an impact on those factors in enhancing the tourism performance.

The homestay operators should appreciate the benefits and opportunities that brought by the tourism factors (namely the three key factors of economic factor, environmental factor, and socio-cultural factor) to the tourism performance in particularly in the rural sector. There is no room for them to take those factors for granted, without appreciating and valuing those factors performance could not be boosted out from nowhere. Rural tourism often has very limited resources and yet entrepreneurs like homestay operators need to generate their incomes out from this industry based on the resources that are available. Thus, strategy and efforts put on the existing resources is critical for these SMEs to improve its performance (Gharakhani & Mousakhani, 2012; Gholami et al., 2013). The literature quoted that these three factors have an impact on tourism performance on a positive aspect. The findings of the analysis from this study show that empirically it is true, the factors do have influence over the performance; it is either financially or non-financially when the tourism performance has been skimmed down to these two dimensions. Hence, the objective of taking in digital technologies into the study is clear, it could affect performance of tourism by facilitating the current factors and resources possessed by the industry to a better outcome as desired. A drop of incomes generated from rural tourism is not only creating an impact on the local destinations and the residents, but it also influences national economy in the tourism industry. It is the matter of viewing on scope of economy from macro perspective or micro perspective, so the influence is not only on destination-specific but also national level.

The findings have stressed that digital technologies not only have effect on financial performance, but at the same time it has an even greater influence over the non-financial performance aspect. Digital technologies have been very much perceived by the operators that it seems to be certain that in every single tourism factor, it has a positive influence on non-financial performance, such as guarantee on customer satisfaction and employee satisfaction, promote growth in customers, as a driver in improving their product quality and services, and nonetheless boosting their rapport by reaching out to more foreigners and potential customers all around the world.

From this study, operators or the entrepreneurs have shown that they are aware of the effectiveness, the role, the function, the impact and the trend of adoption and deployment of digital technologies. However, there are some restrictions and constraints that they are currently facing as a major obstacle that need to be overcome and sorted. This study could suggest to the related party or relevant authorities on the current situation of the rural operators in homestays sector that age and the education level of the operators are the major issues, and geographical location being the sub issues to the operations. Majority of the operators are veterans, meaning to say these entrepreneurs are retirees and most critically they are not brought up in the digital era. Even though, these veterans are aware that internet, smart phone, applications or more generally, technological factor being the key word is important to them; their current ambition in adopting digital technologies is beyond their ability. Besides, the findings have also shown the demographic profile that most of the operators are not highly educated or though they have received formal education, they are not well-versed in commanding the IT language and gadgets, not to mention the IT related application for functionality purpose. Hence, the respective parties like the local government and government authorities could consider the challenge of rendering proper and further educations in coaching for the deployment of digital technologies in the rural areas. Hence, it is strongly suggested that workshops and module trainings on technology application is essential. Workshops and trainings not only capable of educating the senior entrepreneurs but at the same time it also polishes up the application skills of those young entrepreneurs.

As the geographical aspect, certain rural destinations are neither equipped with the technological infrastructure, nor high-speed broadband capability internet. This has restricted the rural operators in reaching out for promoting their existence and creating demands for the potential visitors. In short, so long as the technological infrastructure is a hurdle to overcome, the breakthrough of adoption of digital technologies will always sustain to be an issue. That again will hold back the development of rural tourism in the upcoming years and generations. The study revealed the current situation faced by most of the rural entrepreneurs in the state of Sarawak. As a result, government ought to seriously consider investing and expediting the establishment of the technology infrastructure such as internet coverage and erection of signal transmitting towers throughout the whole Sarawak, especially in the rural and remote areas of those attractive destinations. In short, technology infrastructure is an issue to the rural. In order, to get the entrepreneurs to be capable of utilizing the technological aids, the fundamental facility is supposed to be equipped, installed, established before encouraging the users to be fully well versed.

With the findings obtained from this study, it has been obviously shown that the entrepreneurs are not convinced that the tourism attributes have not contributed much to the rural tourism performance financially, but rather they are only confident that those attributes could only affect the non-financial performance on their operations. Even with the introduction of technological aids like the introduction on internet usage, adoption of website in promoting of their businesses, and social medias' awareness creation, software application such as rooms booking platform, and nonetheless e-commerce instrument of e-wallet. With the moderation impact of digital technologies, it is still uncertain that it will help to boost the entrepreneurs' business performance and their confidence in using the technological aids. The outcome come be possibly due to the current technology infrastructure and facility offered by the government, the accessibility available to the users and not to exclude the skills and knowledge that made available to the users and entrepreneurs in the current geographical locations. Though the internet transmission coverage is made available and sorted out by the private telecommunication companies or may it be from the state government, the obstacle on know-how in using the technology and gadgets is another milestone to be considered. Workshops and courses should be taken into consideration by the government and related government authorities. Veteran operators or silver-haired operators are left unattended most of the time. Programmes and schemes are commissioned and officiated one off and there was not any assistance rendered thereafter. As a result, losing of confidence on technological factor is a critical issue to almost all the business operators at most of the time. This has shown that the support on businesses from hardware aspect from the officials could be established but teaching, execution and implementation are still way lacking. In other words, tools could be provided but the skills and methods to carry it out were not taught.

Finally, the operators of these SMEs should be aware that digital technologies could be a potential solution in their business enhancement to strengthen the relationship between the existing advantage on tourism attributes and rural tourism performance. The findings of this study show that digital technologies could at least be perceived by the rural homestay operators that it has opportunity in enhancing the positive relationship between economic factor and non-financial performance. As such, it is imperative for the operators from this SME to make use of digital technologies, since they are still convinced that digital technologies have the potential in helping them to utilise the factor to influence their performance non-financially, that in general will ultimately lead to better rural tourism performance. In addition, with the findings obtained from this study it has been discovered that in fact the moderating effect from digital technologies has a very impactful effect on entrepreneurial. However, majority of the entrepreneurs do not find it useful and effective due to the lack of execution and trainings provided by the respective governmental authorities only. The effort from the authorities is there but it is regarded to lack of finishings. Homestays programme has been introduced and launched to rural, but technological factor has not been promoted to the operators. Meantime, findings also shown that ethnical factor in the respective geographical areas has a different discovery in this study. For instance, Sadong Jaya is a Malay village, the ethnical background crossing with its geographical location, it makes the villagers ventures into snacks food industry, the '*keropok*' production village. Sematan and Telok Melano are two villages that comprised of two different major ethnicities, namely the Malays and the Dayaks, therefore entrepreneurial industry of handicraft is established. Seashells are collected from the seashore and later made into wind chimes by the villagers of Sematan, Lundu. The Dayaks from Telok Melano is creative and skilful in making '*manik*' the beads into necklaces as souvenirs. As for those Malays community they are venturing into handmade soap with ingredients extracted from local herbs like *Pandan* leaves, lemongrass, and eucalyptus. All these entrepreneurial business activities have not engaged digital technologies as too to promote and to market the products. Hence, the findings from this study have brought out the scenario in relating it to the importance and the impact of digital technology in digital marketing simultaneously. It significantly shows how important digital marketing is linked and significantly related to its entrepreneurship to rural tourism.

5.4 Recommendations to Entrepreneurs and other Stakeholders

While conducting this research, survey in the form of interviews have been conducted to respondents who are the homestay operators (entrepreneurs) had revealed many insights on the rural tourism in the accommodation sector based on operators' current situations and opine based on the surroundings in their own context. Thus, the actual scenarios have been understood and messages conveyed from the operators received. The true and solid messages have been comprehended and received first hand without being distorted nor manipulated through any intermediary. Majority of the operators have the same opinion that government authorities have good intentions and initiatives to start a programme and scheme such as this homestay programme which initially intended to promote Sarawak's tourism industry and at the mean time helping the communities to generate household incomes in offering their vacant rooms to visitors with a minimal charge imposed. However, after licenses been issued, programme been officiated, respected homestays have not received any aids or follow-ups from the authority. These groups of operators opine that they simply been used to fulfil the key performance index of the government evaluation requirement with no genuine intention to help to promote rural tourism neither do they have the objective to help the rural folks. It is undeniable that the establishment of homestays are scattered throughout the whole state with challenging geographical factor, but since the effort of issuance and certification of homestay status is granted, there should be a continuous and persistent responsibility rendered to the operators. The relevant parties should consider conducting trainings, workshops or even seminars for the operators in updating and persistent coaching to the rural folks in helping them managing the operations.

Secondly, the government should consider collaborating with the private sectors in improving the infrastructures in term of transportation and technological aspects. From the transportation point of view, the state requires a massive improvement and development towards the logistic of connectivity. Homestays are scattered throughout the whole state from the tip at Telok Melano to the plateau of Bario Highlands at the end of Sarawak border with Sabah. According to the responses from the local communities of the respective homestays, operators have mentioned that it is pointless for the set-up of homestay if the accessibility of visitors from the city is not sound. Many visitors will give up on taking the challenge to board coach, then switch to shuttle transports like vans, boats, four-wheel vehicles, or other modes of transport via tar road to river, then from river to off-roads. The challenge of physical accessibility is going to affect the visitations, then the performance of the rural areas. Besides, the connectivity in terms of signal receptions on technological aspect is at the same time also giving credits to the industry. For instance, there are too much of hassles for the operators from Bario highlands to rely on their representatives based in Miri division in helping them to take bookings and in return confirming on the availability of rooms from the operators before collecting deposits and finalise customers' reservations. The whole round process could even take up to days before a transaction is confirmed and closed for even one single transaction. Again, the opportunity is given to the authority in improving the telecommunication infrastructure for the sake of fluent and undisrupted communications. Logistics infrastructure should also be weighted since land transport is the key to access rural in the state of Sarawak besides travel via river by boats.

Thirdly, apart from the stay environments offered by the operators, food, festivals, cultures, traditions and the souvenirs could be seriously considered to be supplemented during the stay of the visitors. Perhaps, these elements could be packaged together with the accommodation while the visitors are staying in. This will make the experience of the visitors more meaningful with the extra feel of experiences to local cultures, traditions, cuisines, and festivals. For example, the unique tidal phenomenon of Pesta Monak in Sri Aman, the fruit festival of Nukanun in Bario, the offering to Pegan by the Dayak tribes during Gawai festival. In other words, the innovativeness of the packages offered should be more unique as there many regions and destinations offering attractive packages if there is nothing special as compared to others. Uniqueness should not only be applicable to the destinations, but other side offers as well to be outstanding and prominent in the eyes of the visitors and stakeholders. Thus, stakeholders and operators should be co-operative to work closely with one another to encourage and motivate each other. This is to produce and come out with more innovative and creative products with the resources that are widely available from the state. The collaboration enables cultivation of positive competition and leads to improvement and development of betterment of products offered.

Next, the local community and the operators should always be reminded and inculcated that knowledge, skills and persistent learning should be an ongoing and life-long process. This mentality should be implanted and even embedded in their attitude towards entrepreneurship in operating their business to ensure they always uphold the highest standard in administrating and managing their business operations. The power of knowledge not only permits them to sustain businesses but also helps to enhance and prosper their businesses. Legacy could only be created with the elite and fine heritage been passed on and inherited.

In addition, the findings have shown that operators do not have faith in tourism attributes in contributing to tourism performance financially. Operators of these homestay businesses have the mentality that they operate the businesses as an interest in promoting Sarawak and at the same time occupying their vacant rooms in their households rather than for the monetary income objective. However, spiritually they are rather proud of the cultures, attitudes in serving their customers, this could be portrayed through the research findings from the non-financial performance aspects. According to the findings, the tourism attributes have reflected positively related to non-financial performance.

Finally, the main issue that is faced by this industry to rural tourism in accommodation sector is the infrastructure issue, in term of technological infrastructure and logistics infrastructure. Majority of the operators are experiencing severe impact on the technological infrastructure and logistics infrastructure in this state. Though the resources are rich and diversified in the state of Sarawak, if the infrastructures are not established well then hard works, innovativeness and efforts rendered from the local community and stakeholders are not optimised. From the technological infrastructure aspect, majority of the remote destinations are experiencing poor coverage or even no coverage of internet. This obviously has led to inefficient use of technological factor in promoting the destinations and tourism attributes, poor in reaching out to potential visitors regardless of domestically or internationally. From the logistics infrastructure aspect, the state is still facing poor linkage in transporting visitors from urban to inland areas and rural destinations, may it be by land (bus, coach, shuttle van), by water transportations (expressed boat, long boat, fisherman boat) or by air (aeroplane, helicopter). Besides, the frequency of connecting flights is not favourable, especially channelling to those mountainous regions, remote inlands such as Bario Highlands, Mulu National Park, Ba'kelalan, Kapit, and Long Lamai. This creates a lot of opportunities for the potential visitors to give up or even withdrawn themselves from visiting the plateau, the inlands, and the national parks. From the survey, many operators have revealed that due to the infrequency of connecting flights and the misconnection of difference in sectors of flight, and difficulties or failure in getting the shuttle to reach destinations; often, visitors cancelled their reservations of rooms that had been made earlier prior to travel. The development and prosperity of rural tourism not solely rely on the willingness in venturing into the business, innovation and creativity and efforts from the operators and communities, but rather sourcing of investments from stakeholders in terms of monetary and external resources such as telecommunications and logistics aids. With that, the industry could achieve sustainability, self-efficacy and even expand and prosper. These are some inputs that the findings could contribute as a voice to the stakeholders in rectifying the issues and drawbacks accumulated all these years from the very down to earth scenarios. By summing up the recommendations to entrepreneurs and other stakeholders, it is solid to refer to some evidence and quotations that are recorded by past researchers. Indigenous people (known as local community in this study) rely heavily on the policymakers (known as government authorities in this study) when comes to building desirable small businesses to achieve sustainable tourism in the rural (Bramwell & Lane, 1994; Irvine & Anderson, 2004; Schendel & Hitt, 2007; Bosworth & Farrell, 2011; Peng & Lin, 2016; Situmorang et al., 2019). They believe that policymakers are a pool of experts having knowledge and experiences, to accommodate the local entrepreneurs in providing counselling, training, financial support in preparing them for businesses to achieve maximum economic potential. So, the passive responses from the policymakers have caused the upset and demoralised the confidence level in indigenous entrepreneurs.

5.5 Limitations of the Study

Besides those theoretical and practical implications and the recommendations made to the operators and other industry players, there are some limitations that need to be addressed and require further attentions and assessments in near future. One basic limitation that could be identified in this research is that data collected based on interview with the operators, who are the respondents of the survey. So, feedbacks and views collected are one-sided from single source. Precautious and careful procedural and statistical remedies have been practised to minimise the possibility of common bias even if elimination is not possible to achieve. It is known to be better if data could be collected from multiple sources to increase the validity and accuracy of the results. For example, in measuring the non-financial performance aspects, respondents have been surveyed on views like reputation, customer satisfaction, feedbacks from respondents are collected and taken for granted based on informed hearsay without cross-checking with other parties like visitors or the villagers surrounded from where the homestays are located to make sure the responses are truly portrayed the actual scenario.

Human factor is always having possibility of personal bias over the true actual phenomena. The respondents who have been approached are all entrepreneurs or managers of the operations, so there are chances where respondents applied some emotional sentiments towards the survey conducted on their businesses. In short, the personal perceptions are not fully accurate due to emotional factor, thus, bias factor could not be eliminated from the findings of the survey since the keyman's opinions might not be neutral to the maximum. Therefore, survey could possibly be extended to observe and investigate on other local industry players based on what they opined and how far they understand about the industry. Performance of an industry is rather complex and not as straight forward as measuring the figures and numbers. The weights should also be extended to other industry players who supplement the business, for example the shuttle van driver or the boatman who are transporting visitors (logistics provider), the handicrafts shop operators (souvenirs seller), restaurant operator (essential service provider), potter of those mountain hikers (tourist related service provider) and medical doctors at the destination (ancillary service provider). With those invitations extended to all these participants in the survey, the findings could be more thorough in the sense that it will provide a more holistic view in every single sector of the same industry. This can generalise the research results more comprehensively for the development of tourism performance in rural areas,

Another critical factor that should be considered is the time factor. The study is conducted, and data were collected after the occurrence of pandemic Corona Virus which was after 2019. Thus, results only showed valid and static perspective on fit to that timeframe (months before the eruption of pandemic and after pandemic). Therefore, a longitudinal data study by collecting data at a different timing for several years or even before and after the pandemic could possibly be different. The causality effect is said to be better over a longer time too.

5.6 Directions for Future Research

It is certain that the performance of tourism is heavily relying on the tourism attributes of a destination. In other words, the competitiveness and sustainability of local businesses are strongly affected by these factors, which implied to be the determinants of success to performance. These determinants are important to the rural tourism to flourish and prosper; hence, there are worth to be further examined and studied. The fundamental attractiveness of rural tourism is none other than its natural environmental resources, its rich and diversified cultural heritage, its peace and tranquillity social atmosphere and stable economy condition. These are impacts that will lead to sustainability of tourism, even in conventional mass tourism or rural tourism context as in this study. As such, further investigation on how to bring out the best of these factors at one destination with the aid of ICT to rural tourism is strongly recommended.

At the point of the time, there might be factors that are not able to manage or manoeuvre. Regardless of how good the regulations are set, how well the blueprint is planned, it bounces to have factors that affect the performance of tourism. Government authorities, industry players such as stakeholders and local communities should also stay united, collaborate, and interact with each other to maintain the consistency of development and the momentum of the development of tourism in rural, in order to keep the utmost performance. This lively example quoted under this scenario is what has been currently faced by the whole world to tourism industry, which is the pandemic attack of Corona virus (Covid-19). Apart from, being innovative and creative in bringing the best out from the existing factors, trust and confidence should also be established to visitors. In order, to revive the industry, gestures like 100% vaccination to local communities and visitors seems to be a must. Meantime, technological devices such as smartphones are engaged to provide the up-to-date information to tourists for things like medical attention, infected destinations and may be relief centres or quarantine centres. Future study is strongly recommended to investigate on developing solution from the perspective of the moderator – Digital Technologies, to assist and to execute precaution measures via technological aids.

Last but not the least, future scholars may consider implementing such investigation in the same model with expansion to other states of Malaysia under similar settings of rural tourism perspective. This research is conducted in the state of Sarawak towards those homestay operators, so similarly same research study could apply to different states in Malaysia with similar culture, climate, environmental factor, and social factor to perform a comparison between different states with the same economy factor that are experiencing. The differences of locations with some identical factors including moderator (such as digital technology studied in this study) may lead to a new discovery, same set of results obtained from different geographical locations could possibly trigger remedies to scholars on our current practices for improvement in the industry.

The earlier sections have quoted the limitations of this study, that enables the platform for improved study in the future in providing an even more comprehensive and thorough understanding of the relationships between the constructs adopted in this research. The future research could also try to study on other factors apart from the current three factors in relation to tourism performance specifically to rural areas. First, this study focuses on the context of Sarawak rural tourism with the key pillar factors of economic, environmental, and socio-cultural factors. Thus, in extension to assist the rural tourism, study could also look at different dimensions under same setting by including political and legal factors to test model.

Meanwhile, this study did not apply the use of mediator in the model in the relationship of tourism attributes-tourism performance. Interchanging the role of digital technologies from a moderator to be a mediator, the findings could be different as a potential mediator to facilitate the impact of tourism attributes towards tourism performance. The scenario will be an absolute change by mandating the use of digital technologies in the industry to influence the outcome, which is the performance. Besides, future research could also consider the use of non-financial performance as a mediator between tourism attributes and financial performance, rather than regards under tourism performance. The indicators of non-financial performance like customer satisfaction and employee satisfaction are affecting the financial performance most of the time. With the absence of these two factors, even with the present of rich, resourceful, diversified tourism attributes, and knowledgeable and strategic planning could not guarantee the financial achievements to the optimum. Thus, these non-financial elements might be turning to be an influential mediating agent to the relationship.

5.7 Conclusion

In conclusion, this study has provided empirical evidence on the differential impact of tourism attributes dimensions (economy factor, environmental factor, and socio-cultural factor) on the tourism performance. The empirical results have shown that these three tourism factors were positively related to rural tourism’s non-financial performance. Surprisingly, these factors were not positively related to financial performance of rural tourism.

A total of three factors (economy factor, environmental factor, and socio-cultural factor) are related to the relationship with tourism performance of the rural targeted to homestay operators in Sarawak has been investigated and clarified with the analysis of obtained results. The relationships were tested before a moderator has been introduced to the relationships. With that moderation effect, relationships were tested again based on the perceptions from the respondents of interview. Moreover, the moderating effects of digital technologies has been identified. Digital technologies were found to moderate the relationship between economic factor and non-financial performance. Economic factor-financial performance was not found to be moderated by digital technologies, though it works on non-financial aspect. From the literature, it seems to work for digital technologies to enhance the relationships of the tourism attributes and tourism performance financially and non-financially, but as an outcome the reality is not as predicted. The tendency of correcting this situation could possibly be achieved through various improvements in digitalised way. Digitalisation is in the trend, in the modern world today to facilitate the operation of the industry. Firstly, making use of the power of knowledge by upskilling this labour-intensive sector, so operators are more confident and skilful when come to handling and manoeuvring of technology in their daily business operations. Secondly, strategic planning is for long-term development and maintain that sustainability in this industry with partnerships and collaborations between the operators and the stakeholders. As for the practitioners, this study has provided a useful guideline on what is the best factors capability that can be used to enhance their current organisational performance and how the digital technologies can be adopted with tourism attributes to achieve superior tourism performance. Future research could further extend the model by conducting a comparative study to include other factors, or adoption of a mediator.

The empirical evidence offered practical information and insights from the locals and related parties to the tourism industry players such as government authorities and stakeholders for the benefits of the whole industry on knowing how these homestay operators think and perceive on the suggestion on deployment of digital technologies in rural tourism. In general, the goal for this study is to provide insights of the closet industry player – homestay operators, in collecting their perceptions towards improved tourism performance with the introductory of digital technologies in their business line-up and operations.

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APPENDICES

Journal Publications

1. **Lim, J.**, Lo, M.C., Mohamad, A. A., & Ibrahim, W.H.W. (2020). The Moderating Impact of Local Communities' Attitudes on Tourism Attributes towards Destination Competitiveness of Cat Museum in Kuching. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 10*(3), 418-437.
2. Thong, J. Z., Lo, M. C., Mohamad, A. A., & **Lim, J.** (2019). Culture, Carrying Capacity and Perceived Value on Tourists' Satisfaction and Revisit Intention. *13th Asian Academy of Management International Conference 2019*.
3. **Lim, J**., Lo, M. C., Mohamad, A. A., Wang, Y. C., & Chin, C. H. (2018). Booster of Rural Tourism's Competitiveness: Stakeholders' Involvement as A Moderator. *The Journal of Social Sciences Research, 6*, 539-546.
4. **Lim, J.**, Lo, M. C., Mohamad, A. A., Chin, C. H., & Ramayah, T. (2017). The Moderating Impact of Community Support on Tri-Dimensional Impacts of Tourism (Economic, Socio-cultural, & Environmental) Towards Rural Tourism Competitive Advantage. *International Journal of Business & Society, 18*(4), 869-880.

Questionnaire

A SURVEY FOR EXAMINING THE RELATIONSHIP BETWEEN 3 KEY FACTORS ON RURAL TOURISM PERFORMANCE IN ACCOMMODATION & EVALUATING THE ROLE OF DIGITAL TECHNOLOGIES ON THE 3 KEY FACTORS ON RURAL TOURISM PERFORMANCE

Dear Sir/Madam,

Sarawak is having an upper hand from the tourism point of view in possessing the advantages in Economic, Environmental and Socio-cultural factors as compared to many other states in Malaysia today. However, it is not at its optimal competitive condition. Hence, this survey is designed to gather information regarding your opinions on the relative issues from the rural areas with perspectives from the accommodation industry, to be specific information is derived from the homestay operators. It is your opinions that matter, rather than from the righteousness or wrongfulness of the answers.

This survey comprises of two parts. Kindly answer **all** the questions in the questionnaire and return it to the enumerator.

Please note that **all responses are confidential** and **only aggregate data is used** for the purposes of completing this research study. Your confidentiality and anonymity are rest assured.

Please do not hesitate to contact the undersigned shall you have any queries.
Thank you very much for your time spared and your kind participation is much appreciated in this survey.

Sincerely,

Jason Lim Wei
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Universiti Malaysia Sarawak (UNIMAS)
94300 Kota Samarahan.
Contact no: +6012 896 1896
Email: limweijason@gmail.com

Soal Selidik

PENYELIDIKAN UNTUK MENINJAU HUBUNGAN ANTARA TIGA FAKTOR UTAMA PRESTASI PELANCONGAN LUAR BANDAR DALAM ASPEK PENGINAPAN DAN MENILAI PERANAN TEKNOLOGI DIGITAL PADA TIGA FAKTOR UTAMA PRESTASI PELANCONGAN LUAR BANDAR

Tuan/Puan,

Sarawak mempunyai peluang besar dalam sektor pelancongan kerana memiliki banyak kelebihan dari segi ekonomi, persekitaran dan sosio-budaya berbanding dengan negeri-negeri lain di Malaysia. Namun begitu, sektor ini belum mampu bersaing pada tahap yang optimum. Dengan itu, penyelidikan ini dilaksanakan bagi mengumpul maklumat-maklumat penting daripada pendapat anda mengenai isu-isu yang berkaitan dengan aspek industri penginapan (maklumat khusus akan diperolehi daripada para pengusaha inap desa). Pendapat anda yang jujur dan sebenarnya amat penting untuk kajian ini. Tiada jawapan yang salah ataupun betul dalam menjawab soal selidik ini.

Soal selidik ini merangkumi dua bahagian. Diharap SEMUA soalan dapat dijawab dan sila kembalikan kepada enumerator setelah selesai.

Sila ambil maklum bahawa maklumat anda adalah sulit dan terjamin dilindungi. Hanya data agregat sahaja yang akan digunakan untuk tujuan menyelesaikan objektif penyelidikan ini.

Sekiranya anda mempunyai sebarang persoalan, sila hubungi pihak enumerator yang telah dilantik bagi penyelidikan ini untuk membantu anda. Terima kasih atas masa yang telah diluangkan dan kami amat menghargai kerjamsa dan sokongan anda.

Yang benar,

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Questionnaire Survey
Soal Selidik

The following questionnaire is for the purpose of examining the relationships of the three key factors on rural tourism performance in accommodation sector and also in evaluating the role of Digital Technologies (ICTs) on the relationships between the three key factors on rural tourism performance.
Hence, only person(s) in-charged and/ or the owner(s) will be approached to participate in this questionnaire survey.
Soal selidik yang berikutnya adalah untuk tujuan meninjau hubungan di antara tiga faktor utama prestasi pelacongan luar bandar/ desa dari sektor penginapan serta untuk menilai peranan yang dimainkan Teknologi Digital (ICTs) ke atas hubungan di antara tiga faktor utama prestasi perlancongan luar bandar.
Oleh demikian, responden yang menjawab soal selidik ini haruslah daripada golongan pemilik perniagaan atau pengurus operasi.

Section A: Demographic profile
Bahagian A: Profil Demografik
Name of the site/ Name of the Homestay ***Nama tempat/ Nama Inap Desa:***

____

Division/ District ***Bahagian/ Daerah***
☐Kuching ☐Samarahan ☐Serian ☐Sri Aman ☐Betong
☐Sarikei ☐Sibu ☐Mukah ☐Kapit ☐Miri
☐Limbang/ Lawas

Gender ***Jantina***
☐Male *Lelaki* ☐Female *Perempuan*

Age ***Umur***
☐Below 20 *Di bawah 20* ☐21 – 30 ☐31 – 40 ☐41 – 50
☐50 – 60 ☐Above 60 *Lebih daripada 60*

Race ***Bangsa***
☐ Malay *Melayu* ☐Iban ☐Bidayuh ☐Melanau
☐Chinese *Cina* ☐Orang Ulu:___________ ☐Others *Lain*: ___________

Education level ***Tahap Pendidikan***

☐UPSR ☐PMR ☐SPM ☐STPM/Diploma

☐Degree *Siswazah* ☐Postgraduate *Pascasiswazah*

Income ***Pendapatan***

☐Below 1000 *Di Bawah 1000* ☐1001-2000 ☐2001-3000

☐3001-4000 ☐Above 4000 *Lebih daripada 4000*

Designation ***Posisi Pekerjaan***

☐Operation Manager *Pengurus Operasi* ☐Business Owner *Pemilik Perniagaan*

Section B: Survey

Using the Likert scale given below, rate your opinion with the various degree of agreement/ disagreement:

Bahagian B: Soal Selidik

Sila jawab dengan menggunakan penentu ukur skala Likert terhadap persetujuan seperti berikut:

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	**Strongly Agree**
Sangat Tidak Setuju	*Tidak Setuju*	*Agak Tidak Setuju*	*Tidak Pasti*	*Agak Setuju*	*Setuju*	***Sangat Setuju***
1	2	3	4	5	6	**7**

Dimensions/ Factors ***Dimensi/ Faktor***	Strongly Disagree Strongly Agree *Sangat tidak setuju Sangat Setuju*						
1. Tourism has created more jobs for your communities. *1. Pelancongan telah mencipta lebih banyak peluang pekerjaan untuk komuniti anda.*	1	2	3	4	5	6	7
2. Tourism attracts more investment. *2. Pelancongan menarik lebih banyak pelaburan.*	1	2	3	4	5	6	7
3. Tourism has led to an increase of in standard of living. *3. Pelancongan telah meningkatkan taraf hidup.*	1	2	3	4	5	6	7
4. Tourism brings foreign exchange. *4. Pelancongan menjana pertukaran wang asing.*	1	2	3	4	5	6	7
5. Tourism has created more business. *5. Pelancongan telah menghasilkan lebih banyak perniagaan.*	1	2	3	4	5	6	7
6. Tourism has led to an increase in price level of goods and services. *6. Pelancongan telah menjadi punca kepada peningkatan harga barang dan perkhidmatan.*	1	2	3	4	5	6	7

7. Tourism has led to an increase in land prices. *7. Pelancongan telah menjadi punca kepada peningkatan harga tanah.*	1	2	3	4	5	6	7

<u>Section C: Survey</u>

<u>Bahagian C: Soal Selidik</u>

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	**Strongly Agree**
Sangat Tidak Setuju	*Tidak Setuju*	*Agak Tidak Setuju*	*Tidak Pasti*	*Agak Setuju*	*Setuju*	***Sangat Setuju***
1	2	3	4	5	6	**7**

Dimensions/ Factors ***Dimensi/ Faktor***	Strongly Disagree *Sangat tidak setuju*						Strongly Agree *Sangat Setuju*
1. The quality of the natural environment is enhanced due to tourism development. *1. Kualiti persekitaran alam semula jadi telah bertambah baik kerana wujudnya pembangunan pelancongan.*	1	2	3	4	5	6	7
2. There is improvement of roads and other public services. *2. Keadaan jalan raya dan taraf perkhidmatan awam asas telah dipertingkatkan atas perkembangan pelacongan.*	1	2	3	4	5	6	7
3. Host community benefits from recreation and sports facilities. *3. Komuniti tuan rumah mendapat faedah daripada kemudahan sukan dan rekreasi.*	1	2	3	4	5	6	7
4. There is better quality of buildings and city planning due to tourism development. *4. Pembangunan pelancongan membawa kepada penambahbaikan perancangan bandar dan pembentukan bangunan yang lebih berkualiti.*	1	2	3	4	5	6	7
5. The level of urbanisation has increased due to tourism development. *5. Pembangunan pelancongan telah meningkatkan / mempercepatkan proses pembandaran.*	1	2	3	4	5	6	7
6. Tourism must improve the environment for the future generations. *6. Pelancongan harus meningkatkan kualiti persekitaran alam untuk generasi baharu.*	1	2	3	4	5	6	7

7. Tourism development should strengthen efforts for environmental conservation. *7. Pembangunan pelancongan harus meningkatkan usaha untuk pemeliharaan persekitaran semula jadi.*	1	2	3	4	5	6	7
8. Proper tourism development requires that wildlife and natural habitats be protected at all times. *8. Pembangunan pelancongan yang sempurna amat diperlukan untuk melindungi hidupan liar dan habitat semula jadi pada setiap masa.*	1	2	3	4	5	6	7

Section D: Survey

Bahagian D: Soal Selidik

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	**Strongly Agree**
Sangat Tidak Setuju	*Tidak Setuju*	*Agak Tidak Setuju*	*Tidak Pasti*	*Agak Setuju*	*Setuju*	***Sangat Setuju***
1	2	3	4	5	6	**7**

Dimensions/ Factors ***Dimensi/ Faktor***	Strongly Disagree *Sangat tidak setuju*						Strongly Agree *Sangat Setuju*
1. Tourism encourages a variety of cultural activities by local population, e.g crafts, arts & music. *1. Pelancongan menggalakkan pelbagai aktiviti kebudayaan yang dianjurkan oleh populasi tempatan. Contoh: Kraftangan, seni & muzik.*	1	2	3	4	5	6	7
2. Tourism helps to foster better understanding towards cultural diversity. *2. Pelancongan membantu memupuk permahaman terhadap kepelbagaian budaya.*	1	2	3	4	5	6	7
3. Tourism has increased local awareness and recognition of local cultures and heritage. *3. Pelancongan telah meningkatkan kesedaran dan pengiktirafan terhadap budaya dan warisan tempatan.*	1	2	3	4	5	6	7
4. Tourism has provided opportunities to restore and protect historical structures. *4. Pelancongan telah menyediakan peluang untuk pemuliharaan dan pelindungan struktur/ bangunan yang bersejarah.*	1	2	3	4	5	6	7
5. Tourism development has changed the lifestyle of local people/ community. *5. Pembangunan pelancongan telah mengubah gaya hidup masyarakat tempatan.*	1	2	3	4	5	6	7

6. There is variety of shopping choices among local community. *6. Terdapat kepelbagaian pilihan tempat membeli-belah di kawasan komuniti.*	1	2	3	4	5	6	7
7. There is variety of entertainment facilities in the area. *7. Terdapatnya kepelbagaian kemudahan hiburan di kawasan komuniti.*	1	2	3	4	5	6	7
8. Tourism development leads to variety of restaurants in the area. *8. Pembangunan pelancongan membawa kepelbagaian restoran/ warung makan di kawasan komuniti.*	1	2	3	4	5	6	7

Section E: Survey

Bahagian E: Soal Selidik

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	**Strongly Agree**
Sangat Tidak Setuju	*Tidak Setuju*	*Agak Tidak Setuju*	*Tidak Pasti*	*Agak Setuju*	*Setuju*	***Sangat Setuju***
1	2	3	4	5	6	**7**

Dimensions/ Factors ***Dimensi/ Faktor***	Strongly Disagree *Sangat tidak setuju*						Strongly Agree *Sangat Setuju*
1. Using social medias/ e-wallet/ booking App/ website would improve my business performance. *1. Penggunaan media sosial/ e-dompet/ aplikasi tempahan/ laman web dapat meningkatkan prestasi perniagaan saya.*	1	2	3	4	5	6	7
2. Using social medias/ e-wallet/ booking App/ website would save my time in handling daily operation. *2. Penggunaan media sosial/ e-dompet/ aplikasi tempahan/ laman web dapat menjimatkan masa dalam mengendalikan operasi perniagaan harian saya.*	1	2	3	4	5	6	7
3. I would use social medias/ e-wallet/ booking App/ website anyplace and anytime. *3. Saya akan menggunakan media sosial/ e-dompet/ aplikasi tempahan/ laman web di mana-mana tempat dan pada bila-bila masa.*	1	2	3	4	5	6	7
4. Using social medias/ e-wallet/ booking App/ website is useful to my business operation. *4. Penggunaan media sosial/ e-dompet/ aplikasi tempahan/ laman web memanfaatkan pengendalian operasi perniagaan saya.*	1	2	3	4	5	6	7

5. Learning to use social medias/ e-wallet/ booking App/ website is easy for me. *5. Belajar menggunakan media sosial/ e-dompet/ aplikasi tempahan/ laman web adalah mudah bagi saya.*	1	2	3	4	5	6	7
6. Interaction with social medias/ e-wallet/ booking App/ website is clear and understandable. *6. Interaksi dengan media sosial/ e-dompet/ aplikasi tempahan/ laman web adalah jelas dan mudah difahami.*	1	2	3	4	5	6	7
7. I find social medias/ e-wallet/ booking App/ website is easy to use. *7. Saya dapati media sosial/ e-dompet/ aplikasi tempahan/ laman web adalah mudah untuk digunakan.*	1	2	3	4	5	6	7
8. I am skilful at using social medias/ e-wallet/ booking App/ website. *8. Saya mahir menggunakan media sosial/ e-dompet/ aplikasi tempahan/ laman web.*	1	2	3	4	5	6	7
9. I use social medias/ e-wallet/ booking App/ website because customers suggested so. *9. Saya menggunakan media sosial/ e-dompet/ aplikasi tempahan/ laman web di atas saranan pihak pelanggan.*	1	2	3	4	5	6	7
10. I use social medias/ e-wallet/ booking App/ website because of encouragements from government bodies/ travel agents. *10. Saya menggunakan media sosial/ e-dompet/ aplikasi tempahan/ laman web atas galakan pihak kerajaan/ agensi pelancongan.*	1	2	3	4	5	6	7
11. I use social medias/ e-wallet/ booking App/ website to compete with business competitors. *11. Saya menggunakan media sosial/ e-dompet/ aplikasi tempahan/ laman web untuk bersaing dengan para pesaing perniagaan.*	1	2	3	4	5	6	7
12. I make full use of social medias/ e-wallet/ booking App/ website because everyone is familiar. *12. Saya menggunakan media sosial/ e-dompet/ aplikasi tempahan/ laman web dengan sepenuhnya kerana semua orang sudah mengetahui kemudahan-kemudahan ini.*	1	2	3	4	5	6	7
13. I have the necessary resources to use social medias/ e-wallet/ booking App/ website. *13. Saya mempunyai sumber yang diperlukan untuk menggunakan media sosial/ e-dompet/ aplikasi tempahan/ laman web.*	1	2	3	4	5	6	7
14. I have the knowledge necessary to use social medias/ e-wallet/ booking App/ website. *14. Saya mempunyai ilmu pengetahuan yang diperlukan untuk menggunakan media sosial/ e-dompet/ aplikasi tempahan/ laman web.*	1	2	3	4	5	6	7

15. I use social medias/ e-wallet/ booking App/ website with the available (compatible) technologies that I have. *15. Saya menggunakan media sosial/ e-dompet/ aplikasi tempahan/ laman web dengan kemudahan teknologi yang sedia ada dengan sebaiknya.*	1	2	3	4	5	6	7
16. When I found difficulties in using social medias/ e-wallet/ booking App/ website, assistance is available. *16. Saya boleh memperolehi bantuan sekiranya menemui kesukaran dalam penggunaan media sosial/ e-dompet/ aplikasi tempahan/ laman web.*	1	2	3	4	5	6	7

<u>Section F: Survey</u>

<u>Bahagian F: Soal Selidik</u>

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	**Strongly Agree**
Sangat Tidak Setuju	*Tidak Setuju*	*Agak Tidak Setuju*	*Tidak Pasti*	*Agak Setuju*	*Setuju*	***Sangat Setuju***
1	2	3	4	5	6	**7**

Dimensions/ Factors ***Dimensi/ Faktor***	Strongly Disagree *Sangat tidak setuju*						Strongly Agree *Sangat Setuju*
1. My business has improvement on return on assets since past 3 years. *1. Perniagaan saya memperolehi peningkatan dalam kepulangan aset sejak 3 tahun kebelakangan ini.*	1	2	3	4	5	6	7
2. My business has improved in sales growth since past 3 years. *2. Perniagaan saya memperolehi peningkatan jualan sejak 3 tahun kebelakangan ini.*	1	2	3	4	5	6	7
3. My business has achieved higher profit since past 3 years. *3. Perniagaan saya telah memperolehi penigkatan atas keuntungan sejak 3 tahun kebelakangan ini.*	1	2	3	4	5	6	7
4. My business has improved on work productivity since past 3 years. *4. Hasil perniagaan/ produktiviti kerja dalam perniagaan saya telah meningkat sejak 3 tahun kebelakangan ini.*	1	2	3	4	5	6	7
5. My business has decrease in production cost since past 3 years. *5. Kos pengeluaran dalam perniagaan saya telah menurun sejak 3 tahun kebelakangan ini.*	1	2	3	4	5	6	7

6. My business has achieved higher level of customer satisfaction since past 3 years. *6. Para pelanggan telah mencapai tahap kepuasan yang tinggi terhadap perkhidmatan perniagaan saya sejak 3 tahun kebelakangan ini.*	1	2	3	4	5	6	7
7. My business has achieved higher growth in number of customers since past 3 years. *7. Perniagaan saya memperolehi peningkatan dalam jumlah bilangan pelanggan sejak 3 tahun kebelakangan ini.*	1	2	3	4	5	6	7
8. My business has achieved higher level of employee satisfaction since past 3 years. *8. Para pekerja telah mencapai tahap kepuasan yang lebih tinggi terhadap perniagaan saya sejak 3 tahun kebelakangan ini*	1	2	3	4	5	6	7
9. My business has offered improved quality products and services since past 3 years. *9. Perniagaan saya telah menawarkan produk dan perkhidmatan yang dengan peningkatan kualiti sejak 3 tahun kebelakangan ini.*	1	2	3	4	5	6	7
10. My homestay is getting more reputable since past 3 years. *10. Inap desa saya lebih dikenali sejak 3 tahun kebelakangan ini.*	1	2	3	4	5	6	7

End

Tamat

Thank you for sparing your time to complete this questionnaire survey.

Please be assured that your feedback is strictly private and confidential, solely used for research only.

Terima kasih kerana telah meluahkan masa untuk menjawab soal selidik ini.

Adalah dijamin jawapan anda hanya akan digunakan untuk tujuan penyelidikan sahaja.

SPSS Output:

Appendix: Demographic profile of the Respondents

Frequency table

Statistics

		Region	Gender	Age	Ethnic	Edu	Income	Pose
N	Valid	241	241	241	241	241	241	241
	Missing	0	0	0	0	0	0	0
Mean		5.38	1.63	4.80	2.16	2.42	1.74	1.88
Std. Error of Mean		0.241	0.031	0.070	0.093	0.077	0.066	0.021
Median		5.00	2.00	5.00	1.00	2.00	1.00	2.00
Mode		1	2	5	1	3	1	2
Std. Deviation		3.739	0.482	1.091	1.438	1.198	1.021	.331
Minimum		1	1	1	1	1	1	1
Maximum		11	2	6	7	6	5	2
Sum		1296	394	1158	520	583	420	452

Region

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Kuching	69	28.6	28.6	28.6
	Miri	46	19.1	19.1	47.7
	Limbang	17	7.1	7.1	54.8
	Samarahan	11	4.6	4.6	59.3
	Serian	22	9.1	9.1	68.5
	Sri Aman	8	3.3	3.3	71.8
	Betong	16	6.6	6.6	78.4
	Sarikei	12	5.0	5.0	83.4
	Sibu	20	8.3	8.3	91.7
	Mukah	12	5.0	5.0	96.7
	Kapit	8	3.3	3.3	100.0
	Total	241	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	88	36.5	36.5	36.5
	Female	153	63.5	63.5	100.0
	Total	241	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 20	1	0.4	0.4	0.4
	21-30	10	4.1	4.1	4.6
	31-40	18	7.5	7.5	12.0
	41-50	47	19.5	19.5	31.5
	51-60	95	39.4	39.4	71.0
	Above 61	70	29.0	29.0	100.0
	Total	241	100.0	100.0	

Ethnic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	123	51.0	51.0	51.0
	Iban	9	3.7	3.7	54.8
	Bidayuh	92	38.2	38.2	92.9
	Chinese	3	1.2	1.2	94.2
	Orang Ulu	10	4.1	4.1	98.3
	Others	4	1.7	1.7	100.0
	Total	241	100.0	100.0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UPSR	69	28.6	28.6	28.6
	PMR	54	22.4	22.4	51.0
	SPM	85	35.3	35.3	86.3
	STPM/ Diploma	17	7.1	7.1	93.4
	Degree	13	5.4	5.4	98.8
	Postgraduate	3	1.2	1.2	100.0
	Total	241	100.0	100.0	

Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 1000	131	54.4	54.4	54.4
	1001-2000	66	27.4	27.4	81.7
	2001-3000	27	11.2	11.2	92.9
	3001-4000	9	3.7	3.7	96.7
	Above 4000	8	3.3	3.3	100.0
	Total	241	100.0	100.0	

Position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Operation Manager	30	12.4	12.4	12.4
	Business Owner	211	87.6	87.6	100.0
	Total	241	100.0	100.0	

Descriptive statistics

Economics factor

Descriptive Statistics

	N	Mean	Std. Deviation
ECO1	241	5.42	1.412
ECO2	241	5.27	1.445
ECO3	241	5.50	1.265
ECO4	241	5.24	1.577
ECO5	241	5.37	1.292
ECO6	241	4.99	1.483
ECO7	241	4.78	1.626
Valid N (listwise)	241		

Environmental factor

Descriptive Statistics

	N	Mean	Std. Deviation
ENV1	241	5.24	1.429
ENV2	241	5.60	1.158
ENV3	241	4.85	1.565
ENV4	241	5.39	1.290
ENV5	241	5.34	1.326
ENV6	241	5.88	1.198
ENV7	241	5.93	1.145
ENV8	241	5.98	1.072
Valid N (listwise)	241		

Socio-cultural factor

Descriptive Statistics

	N	Mean	Std. Deviation
SC1	241	6.03	1.004
SC2	241	5.97	0.944
SC3	241	5.87	0.999
SC4	241	5.62	1.160
SC5	241	5.60	1.194
SC6	241	5.17	1.465
SC7	241	4.81	1.669
SC8	241	5.34	1.648
Valid N (listwise)	241		

Digital Technologies

Descriptive Statistics

	N	Mean	Std. Deviation
DT1	241	5.40	1.429
DT2	241	5.50	1.382
DT3	241	5.49	1.449
DT4	241	5.26	1.417
DT5	241	5.02	1.446
DT6	241	5.06	1.407
DT7	241	5.13	1.431
DT8	241	4.75	1.521
DT9	241	4.82	1.578
DT10	241	5.10	1.506
DT11	241	4.76	1.656

DT12	241	4.96	1.566
DT13	241	4.88	1.543
DT14	241	4.76	1.526
DT15	241	4.95	1.535
DT16	241	4.92	1.609
Valid N (listwise)	241		

Business Performance

Descriptive Statistics

	N	Mean	Std. Deviation
FP1	241	4.58	1.669
FP2	241	4.61	1.630
FP3	241	4.59	1.582
FP4	241	4.58	1.555
FP5	241	4.51	1.649
NFP1	241	4.94	1.530
NFP2	241	4.76	1.577
NFP3	241	4.63	1.555
NFP4	241	4.81	1.551
NFP5	241	5.10	1.610
Valid N (listwise)	241		

SmartPLS Bootstrapping Output

	Original Sample	Sample Mean	Standard Deviation	T-statistics	P Values
Eco – FP	0.247	0.247	0.082	3.000	0.001
Eco – NFP	0.103	0.105	0.068	1.518	0.065
Env – FP	0.016	0.023	0.094	0.172	0.432
Env – NFP	0.150	0.150	0.085	1.765	0.039
SC – FP	-0.061	-0.061	0.101	0.601	0.274
SC – NFP	-0.216	-0.214	0.089	2.419	0.008
DT – Eco	0.170	0.182	0.089	1.906	0.028
DT – Env	0.320	0.328	0.086	3.715	0.000
DT – SC	0.695	0.696	0.041	16.944	0.000
DT – FP	0.640	0.629	0.087	7.363	0.000
DT – NFP	0.696	0.689	0.073	9.574	0.000
Mod Eco-FP -FP	0.079	0.080	0.083	0.948	0.172
Mod Eco-NFP – NFP	0.164	0.159	0.070	2.349	0.009
Mod Env-FP – FP	0.008	0.009	0.078	0.103	0.459
Mod Env-NFP – NFP	-0.046	-0.040	0.066	0.691	0.245
Mod SC-FP – FP	0.003	0.001	0.047	0.058	0.477
Mod SC-NFP - NFP	-0.049	-0.049	0.046	1.070	0.142

Constructs	Description
Economic factor	
ECO1	Job opportunity
ECO2	Exchange rates
ECO3	Standard of living
ECO4	Exchange rates
ECO5	Income
ECO6	Price
ECO7	Income + Price
Environmental factor	
ENV1	Environmental management practice
ENV2	Influence of environmental resources
ENV3	Influence of environmental resources
ENV4	Influence of environmental resources
ENV5	Environmental management practice
ENV6	Environmental management practice
ENV7	Destination environment
ENV8	Destination environment
Socio-cultural factor	
SC1	Cultural
SC2	Cultural
SC3	Cultural
SC4	Social
SC5	Social
SC6	Social
SC7	Social
SC8	Social
Digital Technologies	
DT1	Performance expectancy
DT2	Performance expectancy
DT3	Performance expectancy
DT4	Performance expectancy
DT5	Facilitating condition
DT6	Facilitating condition
DT7	Effort expectancy
DT8	Effort expectancy
DT9	Social influence
DT10	Social influence
DT11	Social influence
DT12	Social influence
DT13	Facilitating condition
DT14	Facilitating condition
DT15	Effort expectancy
DT16	Effort expectancy

Financial Performance	
FP1	Return on assets
FP2	Sales growth
FP3	Profits
FP4	Work productivity
FP5	Production cost
Non-Financial Performance	
NFP1	Customer satisfaction
NFP2	Customers growth
NFP3	Employee satisfaction
NFP4	Products / services quality
NFP5	Reputation

Literature Review Summary

Variables	Dimensions	Purpose(s)	Citations
Economics factor	Income Price Exchange rates Standard of living Job opportunity	Rural tourism has great impact on nation's economy from national economic point.	Díaz-Bautista & Murguía-Cánovas, 2021; Saitis & Panayiotou, 2021; Gündüz & Agayi, 2020; Gutkevych & Haba, 2020; Zahari et al., 2020; Song et al., 2019; Husin &
Environmental factor	Destination environment Environmental management practice Influence of environmental resources	Available environmental resources that lead to environmental benefits, that brought by the development of tourism resources.	Sreedevi & Anand, 2021; Wakil et al., 2021; Jhawar & Sharma, 2020; Mensah, 2020; Kostić et al., 2019; Lee et al., 2013; Ramkisson, Smith & Weiler, 2013; Reimer & Walter, 2013
Socio-cultural factor	Events Attitudes Safety Cultural & Festivals	Destination competitiveness encompasses social & cultural elements.	Alzoubi, 2021; Munar & Hannam, 2021; Gündüz & Agayi, 2020; Yuan & Wang, 2019; Choong et al., 2018; Sharpley, 2018
Digital Technologies	Social medias e-wallet Booking App Website	Technological is an influence on business. ICT as moderator. ICT -socioeconomic/ SME Performance/ Job satisfaction/ equity & intentions	Asoba, & Mefi, 2021; Lipták, & Tarkó, 2021; Spencer, 2020; Ebrahimi et al., 2018; Alderete, 2017; Gil-Saura et al., 2016; Limbu et al., 2014.

Variables	Dimensions	Purpose(s)	Citations
Financial Performance	Return on assets Sales growth Profits Work productivity Production cost	As a tool to measure & evaluate the strength of an entity. Easy, direct, computable. Accounting aspect.	Migdadi et al., 2017; Sainaghi et al., 2017; Ho et al., 2016; Simon et al., 2015; Horngren et al., 2012; Rašula et al., 2012; Pnevmatikoudi & Stavrinoudis, 2016.
Non-financial Performance	Customer satisfaction Customer growth Employee satisfaction Products/ services quality Reputation	It secures future financial success. Envision long-term objectives. Assess long-term reputation.	Kavalić et al., 2021; Latifah & Jati, 2021; Ho et al., 2016; Joshi et al., 2014; Avci et al., 2011; Prieto & Revilla, 2006; Reichel & Haber, 2005.