FOREWORD

We are very pleased that the International Journal of Sustainable Strategy and Research (IJSSR) is presenting its inaugural issue. It aims to present relevant sustainability issues on developing pragmatic sustainable development strategies, tailor-made for each development and realistic action plans on sustainability that are grounded in both the latest best practices and any specific situation. IJSSR proposes to assist professionals, researchers, educators, and policy-makers in disseminating knowledge and to learn from each other's work for the assistance with global significance concerned with structural and economic sustainability.

We are also very excited that the journal has been attracting papers from a variety of advanced and emerging countries such as Finland, Cambodia, and Uganda The variety of submissions from such countries will help the aimed global initiatives of the journal. The inaugural issue has been very carefully put together covering a range of topics such as Business Ecosystem, Business Networks, Coastal Zone, External Environment Factors, Enterprise Sustainability, Enterprise Sustainability Measurement, Network Modules, PEST Factor, Relationship Management, Strategic Sustainability in Small Enterprise, Sustainability in Service Sector, Sustainable Tourism Development Terrorism, Tourist, and Tourist Decision Making.

We hope that the research featured here will set up new milestones. We have had an overwhelming response from some prominent international editors and researchers to support as editorial team. I look forward to more endeavors across the globe. Let me take this opportunity to express my appreciations and indebtedness for the contribution of Authors and Editorial Board to the journal. Their work, either by contributing articles, reviewing them or by working as board member, has framed the journal leading to the accomplishments of its goal.

Editor-in-chief

International Journal of Sustainable Strategy and Research

ISSN: 2286-7619
Volume 1
Issue 1
2017

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Connecting the Modules: The Importance of Strong and Weak Relationships in a Business Ecosystem

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ABSTRACT

Business ecosystem concept can be used to approach self-organized and managed business networks using analogies from ecology. Business ecosystem concept emphasizes coevolution, self-organization and interdependencies of the actors similarly as complex adaptive networks. Roles of the actors –persons or organizations- and their relationships are multidimensional and change over time defining the scope and value processes of the business ecosystem. This research uses business ecosystem concept as a perspective to model health and wellbeing business networks in Taiwan as a case study. The study describes health and wellbeing ecosystem as a compilation of business network modules. It presents how the number of involved actors and different actor roles characterize different relationships between the modules. The results of the study validate the applicability of the ecosystem concept as a method to understand business networks and to define important relationship within it. The results present a framework to identify strong and weak relationships in a business ecosystem and propose that the moderating actor and gatekeeper actor roles are the roles that drive the ecosystem sustainability, resilience, innovation capabilities and renewal. The framework is experimental and it requires detailed analysis of the dynamics of the ecosystem. Practitioners can use the findings of the study to broaden the understanding of the business network dynamics and to focus the governance activities. The research contributes to business network and complex adaptive network literature by presenting business ecosystem as a concept to link self-organized and managed business networks and as a method to assess the relationships within networks.

Keywords: Business Ecosystem, Business Networks, Network Modules, and Relationship Management.

1) INTRODCUTION

Business ecosystem presents ecology driven metaphor (Moore 1993; 1998) to approach multi-organizational value creation entities such as self-organized business networks. As a relatively novel concept the business ecosystem has multiple different descriptions. This research describes business ecosystem as a concept to approach interdependent and co-evolving complex business networks. Business ecosystem is not seen as a new organization form of its own, but as a concept to analyze the networks using industrial network research and complex adaptive system theory as building foundations.

The literature review of the research presents the characteristics of business ecosystem in academic discussion highlighting the importance of relationships between the actors for ecosystem formation and health. Literature on business networks (Snehota and Håkansson 1995; Möller and Rajala 2007) provides baseline for this research on characterizing networks as nodes of actors and defining different types of relationships between them. From complex adaptive systems theory the research applies insights about joint value creation, mutual dependencies, value creation and multidimensional transactions (Choi et al 2001).

Large scale business network consists of modules of individual actor networks (Campagnolo and Camuffo 2010). Network modularization (Borgatti and Foster 2003) brings a theoretical baseline that enables consolidation of an ecosystem by compiling business networks as modules via interfacing actors and their relationships. Business ecosystem perspective frames how the modularity of the value creation entity can be described and how the modules interact and evolve together.

Based on the existing literature we formulated a proposal that business ecosystem concept brings closer the discussions about self-organized and managed business networks as it introduces the role of relationships as a channel of network modularization, evolution and governance activity definition. As the roles of relationships in business ecosystems formation and success are not been discusses widely (Kortelainen and Järvi 2014), we selected it as the theme of this research.

In order to investigate further what kind of relationships are important in business networks we applied the findings from business ecosystem literature (Moore 1993; Moore 1998; Iansiti and Levien 2004) into empirical

research. We conducted a qualitative case study in Taiwan health and wellbeing industry sector as an inductive research (Eisenhardt, 1989). By applying the literature based relationship analysis framework we identified actor driven business networks. We defined how these networks are connected to each other as modules forming a large scale ecosystem entity. The purpose of the case study was to address following research questions:

RQ1: How relationships between network modules contribute to business ecosystem constitution?

RQ2: What are the important relationship types in a healthy business ecosystem?

To answer RQ1 we combined the actor networks that were drawn as network diagrams based on interviews in the case study. Service providers, customers and external stakeholders participate in different roles in different networks connecting the modules through their relationships. The relationships build connection paths inside the ecosystem. Following the network modularization approach in an efficient ecosystem the interactions between network modules should be limited and interactions inside them should be maximized (Baldwin 2007). The case study results illustrate how the interactions between modules are limited by number, but they have different characteristics based on number of involved actors and their ecosystem role types. As a response to RQ2 we identified that both strong and weak relationships exist between network modules. They both are important for the business ecosystem health in different dimensions.

Strong relationships keep the system level structure in place and ensures its adaptability to events of external forces and internal changes. Weak relationships attract new entrants and innovations to the ecosystem scope and make it evolve.

Business ecosystem health status defines the prosperity of the ecosystem and capabilities for long term success. According to Iansiti and Levien (2004) the ecosystem health can be measured in terms of robustness, productivity and ability to create new business. Based on the ecosystem literature (e.g. Moore 1993; 1998; Iansiti and Levien 2004), business network research (e.g. Snehota and Håkansson 1995) and complex adaptive systems theory (e.g. Gulati et al 2000; Choi et al 2001) and the case study we present that sustainability, resilience, innovation capabilities and renewal capabilities are key attributes that can be used to determine the ecosystem health. These

attributes apply into both self-organized and managed networks linking the research findings to business network research.

2) LITERATURE REVIEW

2.1) Business ecosystem as network research metaphor

Business ecosystem as an ecological metaphor has been applied since Moore (1993; 1998) to provide understanding of complex business relationships. Business ecosystem stresses interconnectedness and interdependency of actors (Adner and Kapoor 2010) and self-organization of the value constellation entity. Business ecosystem takes the metaphor from ecological ecosystems but the foundation can be derived to business network research (e.g. Snehota and Håkansson 1995; Möller and Rajala 2007; Ford and Håkansson 2013) and complex adaptive system theory (Choi et al 2001; Ritter and Gemunden 2003; Gulati et al 2000; Gundlach and Foer 2006). In a business ecosystem the ultimate value creation process is aligned to create more value to the ecosystem's end user together than the actors could generate individually (Gossain and Kandiah 1998; Vargo et al 2014).

Business network research has developed from social network theory (Granovetter 1983; Hayek 1945) to relational, contextual and systemic understanding of self-organized and managed organizational networks (Porter 1985; Granovetter 1983; Ford and Håkansson 2013). Network is a set of actors ("nodes") connected by relationships. The relationships can be directed or undirected (Gulati et al 2000). Undirected relationships are typical in business networks either as dichotomous (close, based on trust, usually strong, multidimensional connections) or valued (measured in scale, usually transaction based connections). Business networks concentrated around actors formulate modules of larger scale systems "networks of networks" through relationships. This system of business networks can be approached as a business ecosystem through ecology metaphor view (Borgatti and Foster 2003).

The ecology metaphor has been discussed widely in strategy research (e.g. Beckham 1997) but most of the research on ecosystems are on conceptual level. Iansiti and Levien (2002; 2004) developed the business ecosystem concept from Moore (1993; 1998) by considering the firm as an interconnected part of a wider value constellation, by emphasizing the role of individual actor or group of actors and by stressing the importance of collective health of the ecosystem. Iansiti and Levien (2002; 2004)

introduced the ecosystem health measures (2002) and described generic strategies based on different roles that the actors have in the ecosystem (2004). There is lack of empirical research with practical applications and consensus on definition of business ecosystem itself (Anggraeni et al 2007).

Complex adaptive systems theory (Choi et al 2001, Gundlach 2006) can be seen as another foundation of business ecosystem thinking. Iansiti and Levien (2002: 2004) and Gossain and Kandiah (1998) do not consider business networks as ecosystems but utilize the metaphor to describe specific features such as relationships, actor types, evolution and structures of business networks in a novel way. Business ecosystem is applied as a perspective to analyze behavior of these complex adaptive systems and the relationships that create them.

Illustration about how we defined the theoretical foundations of business ecosystem concept for this research is presented below in figure 1. It synthesizes the sources and to clarifies the academic contribution area on ecosystem, complex systems and business network discussions.

Figure 1 presents the business ecosystem as a metaphor to analyze interconnected business networks with social interactions. The metaphor drives to expand the network analysis beyond atomistic and internal views of individual actors towards a view of complex, self-organizing entities where actors collaborate and compete to reach common targets (Moore 1993; Anggraeni et al 2007). This aligns the ecosystem concept with complex adaptive network dynamics in terms of co-evolution, internal mechanisms and environment interaction as described by Choi et al (2001).

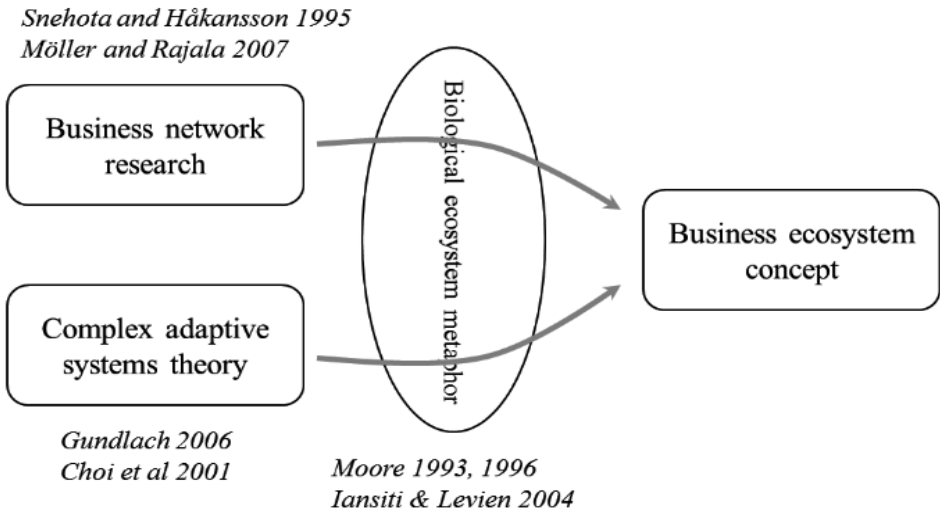

Figure 1: The foundations of business ecosystem concept in this research.

2.2) Multiple forms of interaction and interconnectedness in ecosystem's relationships

In the ecosystem discussion the definition of actor refers usually to an individual or a group. According to Moore (1993; 1998) including external actors like government offices, associations or standardization offices expands the analysis scope towards a multidimensional ecosystem. Taking collaboration and competition as forms of interaction the business ecosystem concept has similarities with Collaborative Networked Organizations described by Camarinha-Matos et al (2009): Collaboration involves joint engagement of participants into value creation and it enhances their capabilities (Vargo et al 2014). Collaboration involves dependencies between the engaged actors. It fits therefore well to describe the networked way of operations in business ecosystem.

Collaborative Networked Organizations have emerged to gain competitive advantage over other value constellations (Camarinha-Matos et al 2009) but there is also internal competition in the business ecosystems. Internal competition as a form of interaction shapes business ecosystems. It provides the ecosystem with divergence and innovation that are necessary attributes for long term health (Camarinha-Matos et al 2009). When collaboration and competition take place in same relationship, the interaction form is referred as coopetition (Moore 1998). Coopetition is conceptualized in terms of a system of linkages in a network that includes all products or services whose

adoption either increases of decreases the adoption of the ecosystem's value proposals (Dass and Kumar 2014; Ford and Håkansson 2013).

Business ecosystem members are capable for conscious decision making and the interconnectedness of the members lead to shared destiny (Adner and Kapoor 2010). Environment and the roles of members of the ecosystem can change rapidly. This makes business ecosystem fundamentally a dynamic and evolving structure (Peltoniemi 2005). Business ecosystem metaphor brings three advantages to relationship analysis (Moore 1998; Iansiti and Levien 2004):

1. Networks are sources of renewal, not passive elements
2. Actors have several roles and strategies to success and to contribute to the success of the ecosystem
3. Both cooperative and competitive relationships and their interplays are important

According to knowledge based theory (Hayek 1945) the actors in business networks know more than they do. Therefore the boundaries of the network can be wider than physical transaction network. This extends the value creation of business ecosystems to larger multi-industrial value entity where business networks as modules interact through individual actors (Anggraeni et al 2007; Ritter and Gemunden 2003; Gunlach and Foer 2006). The actors can be part of multiple ecosystems in dynamic and diverse roles contributing in wider context (Baldwin 2003).

2.3) Network modules build ecosystems

Using modularization (Borgatti and Foster 2003) to combine of business networks as an ecosystem opens up new module based view to analyze ecosystems (Gundlach and Foer 2006): The actors can play multiple type of roles on ecosystems (Lappi and Haapasalo 2016). The focus of the analysis is on system level relationships between modules (Gossain and Kandiah 1998) rather than on business relationships of individual actors. The business network modules in the ecosystem can be seen according to Daft and Levin (1993) as "flexible and learning organization that continuously change and solve problems through interconnected self-organizing processes".

Structure of business ecosystem and the business network modules can be built with industry network research factors like network density, structural holes, structural equivalence and core versus peripheral actors (Gulati et al

2000). Organization can be assessed by diversity and number of interactions (Granovetter 1983). Low connection ratio in business ecosystem leads to orderly dynamics as each actor is connected only to limited number of other actors. High connection ratio indicates deep relationship with turbulent and volatile interactions and high interdependency of actors and modules.

Modularity is an attribute of business networks that advocates designing system structures based on minimizing interdependence between modules. The structure enables new module configurations without loss of the system basic functionality or performance. Modularity in business ecosystems is key to enable adaptability for changes. Same module can be part of multiple ecosystems. (Campagnolo and Camuffo 2010; Gulati et al 2000).

2.4) Peer production in ecosystem creates resilience

A distributed peer production model (Benker 2002) allows individuals to identify themselves how they contribute to the business network. Peer production suits best for the tasks that involve human capital. Peer production concept describes well the multidimensional contributions in a business ecosystem. These contributions that increase the ecosystem resilience make the ecosystem stronger (Benkler 2002; Anggraeni et al 2007).

Resilience describes the degree to which the ecosystem will return to stable position after an external shock (Götlich and Wenzek 2004). It also describes the velocity of adaptation to the shock. Peer production, loose boundaries, free information and free entry attract participants to a peer production community. This lead to formation of an ecosystem with unbounded set of actors (Choi et al 2001; Benkler 2002). Suitable governance mechanisms for peer production need to be in place to ensure resilience development (Choi et al 2001).

One of the main challenges in multidimensional peer production is how to integrate the contributions and how to control their quality (Adner and Kapoor 2010). Integration challenge can be solved either as iterative peer integration, separate integration function, technical solutions or limited introduction of hierarchy to the ecosystem. The ecosystem facilitator should refrain from direct end product appropriation. The threat of appropriation dissipates motivation and decreases self-organization of actors. Rather the ecosystem facilitator could promote some key contributors as moderators based on their role in the ecosystem's relationships (Benkler 2002).

2.5) Value creation in business ecosystem

Value creation in business ecosystems is not linear and many ecosystem actors belong outside traditional value chain. (Clarysse et al 2014; Vargo et al 2014; Kinnunen et al 2013). The specifics of value creation in business ecosystems include (Clarysse et al 2014; Hearn and Pace 2006: Vargo et al 2014):

1. Consumers become co-creators of value as peer producers, they are not passive customers
2. Value is created in multiple directions, not in one-directional chains
3. Networks hold value, not products
4. Interactions in networks are characterized as complex co-opetition relationships
5. Strategy is related to value ecology as a whole, not for individual actor only

The ecosystem metaphor suggests a holistic dynamic view to networked value creation. The generation of value does not reside on products or services alone (Hearn and Pace 2006). It argues that competition and co-operations are in interaction with each other and with the surrounding environment contributing to the network value (Kinnunen et al 2013). Joint value creation involves iteration and feedback processes where the ecosystem customers are an integral part (Lappi and Haapasalo 2016). Small changes in actor roles and relationships can lead to different directions in ecosystem value creation as new structures, patterns or properties emerge (Choi et al 2001; Götlich and Wenzek 2004).

Business ecosystem support both explorative and exploitative development and innovation in value creation. The emerging business ecosystems consists of weak and informal relationships between actors. These relationships promote explorative, new alternative and new technology seeking innovation. Compared to more formal value constellations business ecosystem provides opportunities for easy exit for the actors in case the technologies being investigated prove not to be useful. Strong relationships between the actors that are characterized by intimate, recurrent and trustful relationships are more common with exploitative strategies and in more developed business ecosystems. Exploitation requires intensive knowledge exchange and sufficient economies of scale. Sustainable, resilient and

innovative ecosystems should have both weak and strong relationships with explorative and exploitative learning. (Dittrich et al 2004)

2.6) Summary: ecosystem concept guides relationship analysis in modular networks

Business ecosystem provides a salient perspective to analyze network of modules, actors and their relationships. Ecosystem can be seen as a compilation of network modules. Roles of the actors and their goals have been describes in the ecosystem academic discussion. The interactions between the roles and how those interactions can be used to broaden the understanding on ecosystems is not widely addressed amongst the scholars.

The interconnected business networks modules with actor interdependencies, peer production, strong and weak relationship types, joint value proposals, exploitative and explorative learning and multidimensional roles change the system value creation process to value of the ecosystem (Choi et al 2001). Using business ecosystem concept as described in figure 2 emphasizes several attributes that determine the role of the relationship in the ecosystem and how the relationship contributes into the ecosystem health. The framework to analyze ecosystem's relationships is illustrated below in the figure 2 based on the reviewed literature.

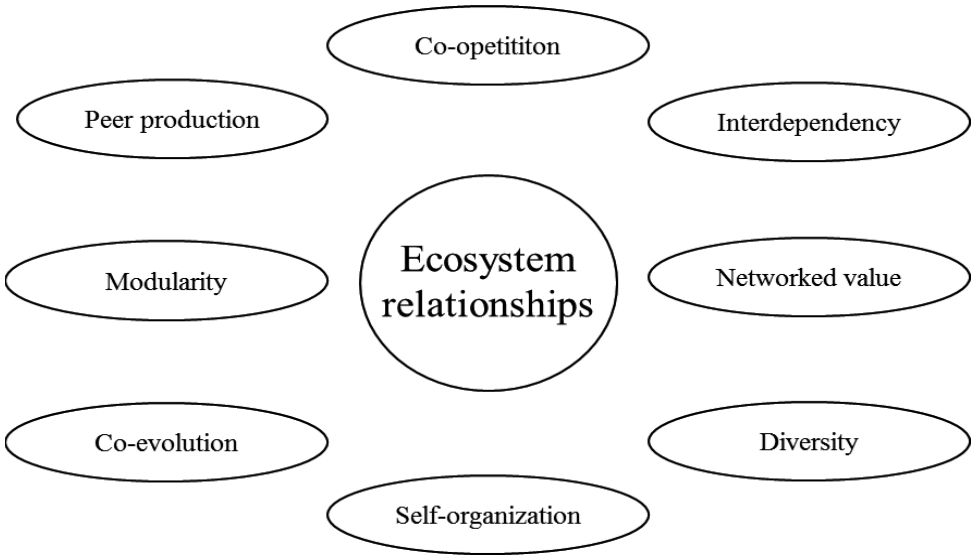

Figure 2: Analysis framework for ecosystem's relationships

The analysis framework can be used to define how relationships between network modules contribute to business ecosystem constitution (RQ1), and what are the important relationship types in a healthy business ecosystem (RQ2). The framework enriches the network analysis and expands the scope of contributing actors. The defined attributes derived from business network research and complex adaptive system theories extend the traditional value chain thinking.

The role of relationships has significant importance for the health of the ecosystem measured in terms of productivity, robustness and ability to create new business (Iansiti and Levien 2004; den Hartigh et al 2006). Ecosystem health in these dimensions is built through resilience, sustainability, renewal and innovation capabilities. Multi-actor and diverse strong relationships enforce sustainability and resilience. Weak, temporal relationships with less participants and more specific transactions bring in innovativeness and renewal capabilities. Resilience and sustainability enable adaptation to external and internal changes. Renewal and innovation capabilities enable evolution and new value creation. Analyzing the relationships with the framework in figure 2 can determine the relationship type.

2.7) Case study: Ecosystem view to Taiwanese health and wellbeing field

We conducted a single case study in Taiwanese health and wellbeing domain to see what of the ecosystem's relationships attributes described in figure 2 are present in a real modular business environment and how the relationships build an ecosystem. The case study was conducted as part of the ecosystem's relationships and their importance research process as illustrated below in figure 3.

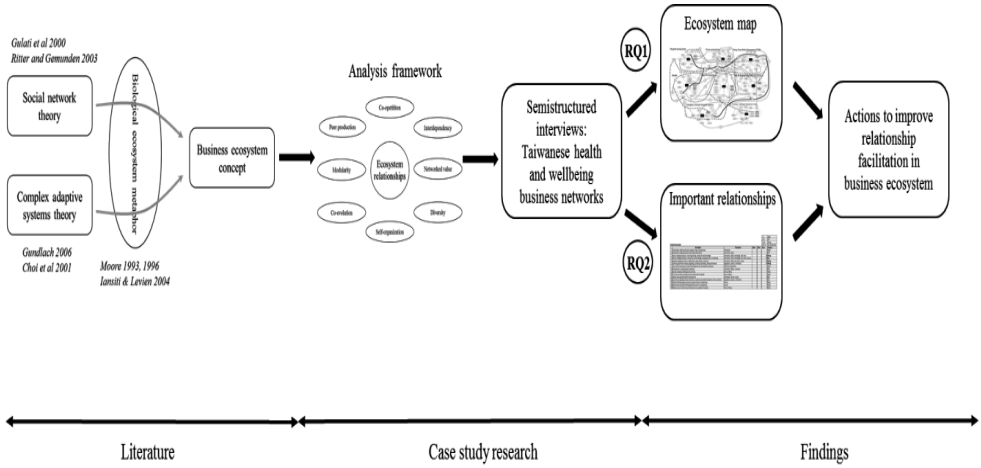

Figure 3: The research process for ecosystem's relationships and their importance

The case study included established companies, public sector organization and small and medium size enterprises (SMEs). SMEs benefit from participation to business networks as they have various limitations including lack of internal R&D resources, unstructured innovation processes and underdeveloped internal capabilities (Carvalho and Moreira 2015). Surrounding business networks or ecosystems represent a complementary response to the limitations. They include necessary relationships for value creation. In Taiwanese culture the mode of conducting business and the country's culture contains several ecosystem metaphor applicable characteristics. These are such as self-organized evolution, relationships across industry boundaries, concept of business group, family ties, loyalty and group belongingness, mutual dependencies between the actors and informal and trust based relationships (Hsieh et al 2010; Chang and Lu 2007).

Like most of the empirical studies on ecosystems (Kortelainen and Järvi 2014) the case study was qualitative. We selected qualitative single case study research approach as it could provide unusual research access (Yin 2013) to in depth investigation about relationships in businesses ecosystems. Due to missing exact theoretical frameworks we selected inductive research method for the case study by applying the analysis framework into empirical setting (Eisenhardt, 1989).

In the case study the interaction between health and wellbeing field actors such as medical instrument companies, pharmacies and hospitals is founded on personal relationships, loyalty, trust and mutual benefit seeking not limited to the primary business transaction only. The relationships aim to enable diverse opportunities across industry boundaries. The analysis framework described in figure 2 applies to Taiwanese business context that emphasizes cross-industrial social networks where members have unequal position in different networks (Hsieh et al 2010: Gulati et al 2000). Business in Taiwanese environment includes also organizational intermediators, actors that do not directly contribute to the value development. They carry out various roles related network operations like acting as agents, brokers or marketplace providers (Chang and Lu 2007).

We selected eight actors and their business networks to this case study from public and private sectors from twenty eight actors interviewed between March and May 2016 in Taichung and Taipei cities. The interviews were semi-structured discussions. Interviewees were asked to describe their business network, goals of the networks, role of actors, ecosystem state of life and evolution so far, interactions in the network and how the network is connected to other business networks. The connection between networks followed concept of ego-centric networks presented by Borgatti and Foster (2003). The actor business networks were considered as ecosystem modules following modularity design of complex system (Campagnolo and Camuffo 2010).

We defined the scope of the health and wellbeing ecosystem by analyzing key relationships joining the business networks in tight interaction as modules and by identifying transaction specific relationships. These relationships present opportunities to transfer new innovations and service proposals between modules. We applied Activities, Resources and Actors (ARA) model from business network research (Håkansson and Snehota 1995) to analyze relationships through the transacted resources between actors. Using the relationships as guidelines a public hospital nursing home,

private nursing home, medical instrument company, electronic pharmacy company, security company, public hospital long term care department, private hospital logistics department and Taichung city government development department (IMC Taichung) were selected as the eight actors to present health and wellbeing field ecosystem modules in Taiwan.

We selected the actors to be interviewed based on access to local health and wellbeing field service providers and based on interviews already conducted following the snowball sampling technique (Goodman 1961). The identified relevant actors connected to the interviewed ones were prioritized as next candidates to be interviewed. The actors share products, people, resources and practices such as medical instruments, medical personnel, physical spaces, and regulations. Conducted interviews were recorded and translated on the spot from Chinese to English. After the interviews we draw a business network diagram of the actors and reviewed it with the interviewee. An example of actor business network is presented in figure 4.

The relationships between modules were described in the interviews following the analysis framework in figure 2 and ARA model. The purpose was to clarify what kind of transactions were conducted, who are involved, how the relationships were formed and what were the relationship driving forces. The intent of the interview discussions was to clarify the modularity structure of the ecosystem and whether the relationships between the modules were strong multidimensional relationships or weak temporal specific relationships following Granovetter (1983) network theory. During the interviews we identified that the relationships between the business network modules were based on personal level trust and loyalty. These characterize Taiwanese cross-industry business ecosystem mode of operation (Chang and Lu 2007). This validated suitability of the selected ecosystem approach for the case study.

During the interview we listed and categorized the actors in the business networks according to their roles: central actor, core service providers, 2nd tier service providers, external stakeholders and other actors following the ecosystem role categorization presented by Lappi and Haapasalo (2016). Number of different actors and diverse roles involved into a relationship between ecosystem modules presents the interaction strength. More participants and high role diversity indicate stronger connection (Baldwin 2007).

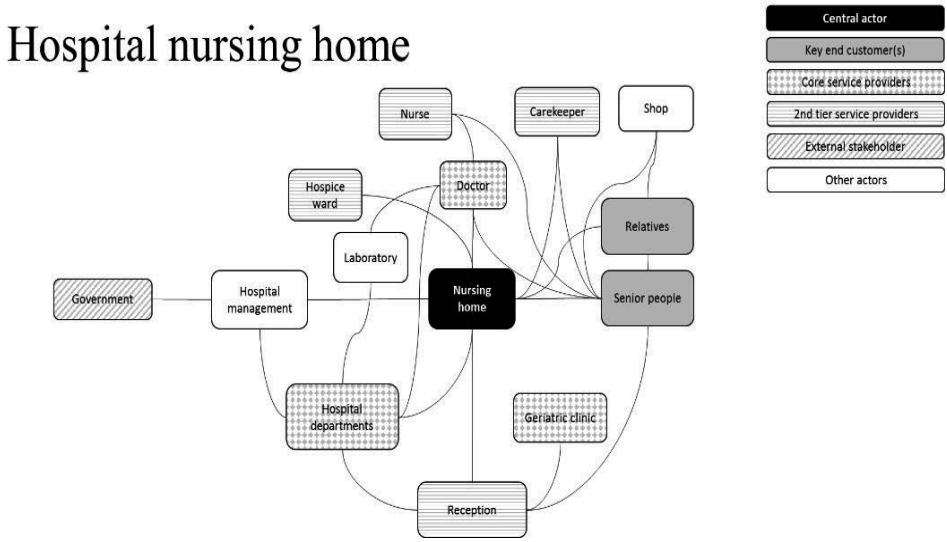

***Figure 4**: Business network (ecosystem module) of hospital nursing home in Taichung*

Relationships where the ecosystem modules are connected on specific value proposals or are temporal can be seen as streamlined specific connections. They have capabilities to bring in novel input for value creation and new actors into ecosystem scope. On the other hand these connections can be removed from the ecosystem with little or no disturbance to the system level value. These relationships have small number or participants and less diversity indicating weaker connection (Baldwin 2007).

The analysis of the data was conducted in specialist workshops where individual business networks were reviewed using ARA model and network mapping diagrams (e.g. Baldwin 2007). We connected the eight individual business networks into a single health and wellbeing ecosystem map using the inter-modular relationships as the connections. The actors involved into similar interaction in terms of transaction items, temporality or personal relationship (Baldwin 2007; Anggraeni et al 2007) were linked into same relationship.

The strength of the each inter-modular relationship was evaluated by multiplying the number of actors involved with number of different ecosystem roles they had. We used the multiplied score to prioritize the

relationships in terms of relationship strength. High score presented strong relationship that connected the network modules. These strong relationships are vital to the ecosystem survival as they create sustainability and resilience into the system (Götlich and Hagen 2004). The relationships that included small number of roles and only two actors got low score in prioritization. They represented weak relationships. These connections are more temporal and specific to transaction.

Both strong and weak relationships are needed in the ecosystem to keep it from dissolving (Iansiti and Levien 2004), to make it to adapt in novelty brought by external shocks (Adomavicius et al 2005) and to ensure its evolution through new innovations and entrants (Gossain and Kandiah 1998). Both connection create the key processes for sustainable development: processes that maintain stability and continuity of the existing system, processes that introduce novelty and variability, and processes that make the system to adapt to the novelty (Hearn & Pace 2006).

3) RESULTS

The actor business networks are the modules of Taiwanese health and wellbeing ecosystem. We combined the eight actor business networks by analyzing the connecting relationships between the modules with ARA model. The map of combined business ecosystem is presented in figure 5. Each connecting relationship between the modules, cross-module relationship, is described as a separate number in the figure 5.

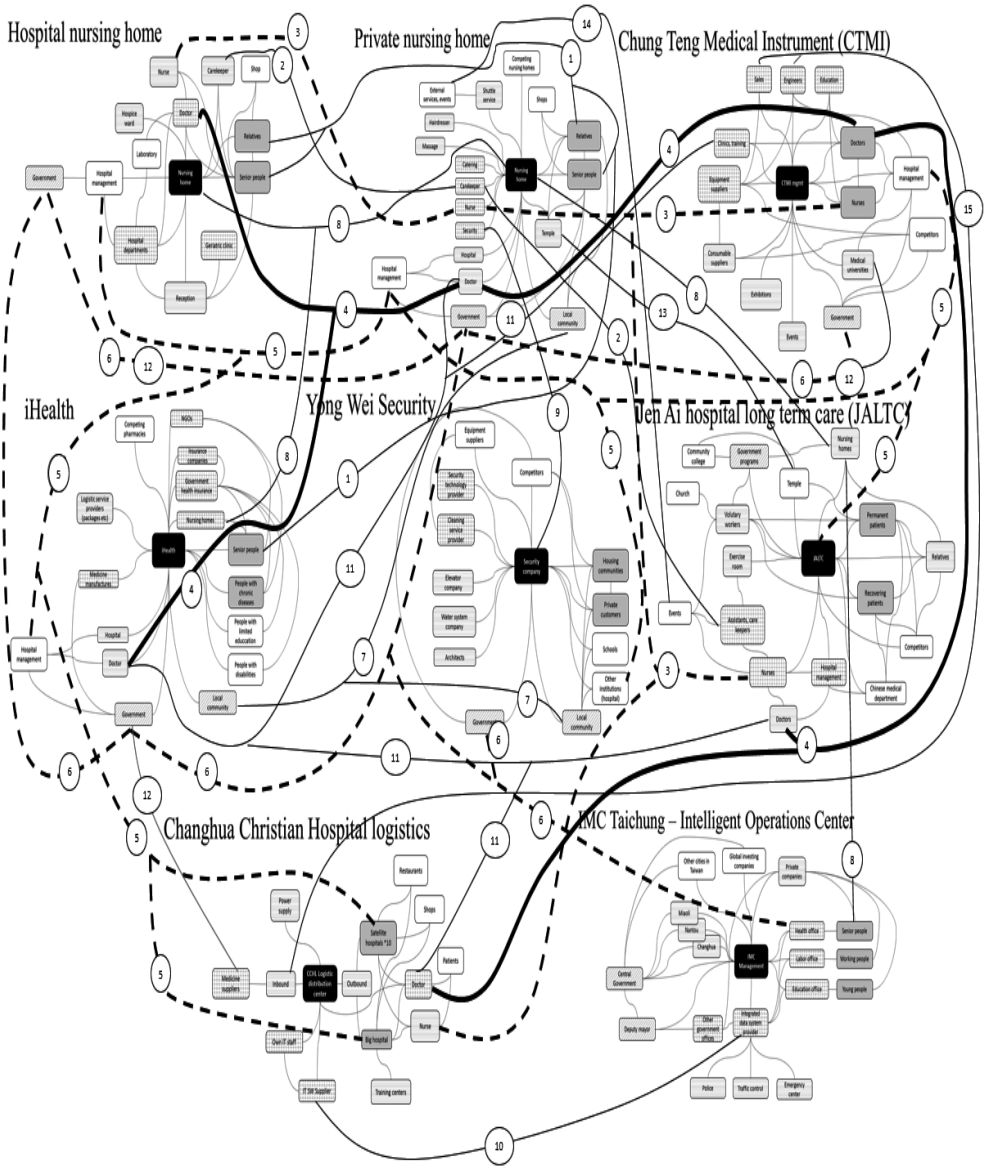

Figure 5: Taiwanese health and wellbeing ecosystem map

We defined the module connecting relationships based on the interview results and validated the results with experts of Taiwanese business environment in separate specialist workshops. Relationship types, transaction items in the relationship, number of involved actors and number of involved role types are presented in table 1.

Table 1: Module connecting relationships in Taiwanese health and wellbeing ecosystem

					1-5	Weak
					6-10	Mid
					11-15	Strong
Relationship analysis					Over 15	Key relationship
	Description	**Transaction**	**Actors**	**Roles**	**Score**	**Category**
1	Link between relatives and senior people living in nursing homes	Information	4	1	4	Weak
2	Carekeepers changing empolyers and sharing information	Information, effort	3	2	6	Mid
3	Nurses changing employers, receiving training, sharing info and knowledge	Information, effort, knowledge, joint value	5	3	**15**	**Strong**
4	Doctors changing employers, sharing info and knowledge, creating business, co-operating	Information, effort, knowledge, joint value, business	6	3	**18**	**Key**
5	Hospital management comms, relationships, value creation, customers	Information, effort, joint value, money	6	2	**12**	**Strong**
6	Common government instances regulating, controlling, facilitating, sharing information	Regulations, policies, information	6	2	**12**	**Strong**
7	Local community people and clubs interacting with serv providers and customers	Information, guidelines	3	1	3	Weak
8	Nursing home co-operating and competing	Information, Money, customers	3	3	9	Mid
9	Security company providing security services	Service, Money	2	2	4	Weak
10	IT service providers providing service solutions and sw support	Service, Money	2	2	4	Weak
11	Doctors receiving training from training clinics	Information, service, money	4	2	8	Mid
12	Government regulating medical instrumens, medicine and related transactions with universities	Regulations, policies, information	4	2	8	Mid
13	Temples offering religious services to people living in nursing homes	Service	2	2	4	Weak
14	External event providers offering tailored services to nursing homes	Service	2	2	4	Weak
15	Medical service instruments and related services supplied to hospitals	Service, Money	2	2	4	Weak

The relationships were categorized as key, strong, medium or weak based on resulting score of multiplying the number of actors with the number of different ecosystem roles. The strongest relationship with score 18 is the key relationship driven by doctors (relationship number four in table 1). Relationship number four is highlighted with black bold color in figure 5. Doctors operate in different roles in the different network modules. Doctors change positions in the ecosystem, link with each other and are involved into multiple modules at the same time. Doctors exchange information, receive and give training, conduct business operations with companies, care patients, participate into hospital administrative activities and interface government either directly or via the intermediating actors such as hospital management. Personal relationships and close co-operation combined with competition makes the interaction amongst doctors very multidimensional.

3.1) Key relationship makes the doctors the ecosystem moderators

Based on their dichotomous relationship (Borgatti and Foster 2003) and wide presence the doctors can be seen as ecosystem moderators following the term used by Benkler (2002). They link the modules together but are not presented as central actors in any of the analyzed business network modules.

Their role as moderator becomes visible when the modules are connected into large scale ecosystem using logic of strong and weak connections and network modularity (Baldwin 2007; Anggraeni et al. 2007; Borgatti and Foster 2003). In a modular ecosystem the moderators mediate the interactions but do not participate into end product appropriation (Benkler 2002). The do not hold ecosystem leadership keystone position (Iansiti and Levien 2004) or define who are entitled to contribute to the ecosystem but they form relationships in the ecosystem that are necessary to keep it operating as a whole.

3.2) Nurses, government and hospital management keep the ecosystem intact with strong relationships

The result scores indicated that nurses, government offices and hospital management drive three significant other strong relationships. The first strong connection between nurses and other ecosystem actors includes various types of transaction items and exchange processes. The nurses operate in multiple roles like the doctors in multiple modules. The difference between the nurses and doctors in this case is that the nurses did not lead own business initiatives such as private medical care offices or medical instrument businesses. The nurses share knowledge, develop operational practices, take care of patients and enable knowledge flow (Götlich and Hagen 2004) between the ecosystem modules. Their presence is essential to keep the ecosystem together, but compared to the doctors their contribution to system level value is more limited.

In Taiwan the public sector – local and national government offices- is heavily involved in the country's economic system. Health and wellbeing field government offices operate on multiple levels forming the second strong relationship in the case study. We abstracted these offices as "government" as they had similar external stakeholder role (Lappi and Haapasalo 2016) in seven of the described business network modules. The contribution of government has indirect impact to the ecosystem value creation. Exception is the IMC Taichung where the government health agency is in a customer role.

The involvement of government into the analyzed ecosystem is critical as both in positive and negative contributions. Government policies may favor business operations of actors or they may be harmful for them. Regulations, for example on medicines or patient caring, establish entry barriers to the ecosystem and form ecosystem operational guidelines. The government also

facilitates the discussion amongst the ecosystem participants with specific development programs, national level initiatives or joint public-private sector projects. The regulating-facilitating relationship path is essential in aligning the ecosystem operative practices.

Strong interaction between the hospital management units is the third strong connection in the ecosystem. Exchange of information (such as patient records, medical histories or medicine data), personnel, patients, technology, knowledge and other versatile assets form a diverse relationship between the management units. These relationships are co-opetitive increasing exponentially the value development as joint proposals (Carvalho & Moreina 2015). The hospital management units compete on patients, doctors and nurses but co-operate in specialization areas and complement each other for example in Chinese and western medical practices. The hospital management unit driven strong relationship provides unique joint value proposals for the end customers.

3.3) Various weak relationships hosted by gatekeepers drive evolution

In table 1 the relationships between temples and external event organizers (recovery days, parties, trips, training programs etc.) are examples of relationships that score lowest with four points. In total we counted seven weak relationship the case study. These relationships are centered upon specific transactions, namely religious services and recovery/recreational events or services such as security. For example the religious services are available free-of-charge based on presence of local temples, and organizing events is usually temporary and based on contracts. Compensation is defined in weak relationships. The weak connections are easy to create and dissolve. The services provided are temporary and tailored for specific purposes. They do not require any major contributions from the ecosystem actors. Their impact to the overall value creation is limited but for specific actors their availability has significant value.

The weak relationships are formed in different phases of ecosystem life cycle. They can be renewed and tailored for specific purposes. These relationships are important for the ecosystem adaptability as they are channels to bring in new actors and services into the ecosystem. They also enhance peer productivity that is important for ecosystem diversity (Benkler 2002). Some of the actors or services in weak relationships may success in the ecosystem and become later more permanent parts of it. Unsuccessful weak relationships can be easily removed to streamline the ecosystem and

to provide exit for the actors that have better opportunities to prosper elsewhere.

Key value add of the weak relationships for the ecosystem is that they have potential to bring new value proposals and new relationships. They thus drive the ecosystem evolution. For example temples can act as informal meeting places. The actors creating and developing new weak relationships are considered as the ecosystem gatekeepers. They provide interfaces for new entrant candidates and create new connections between already included actors. The contribution of gatekeepers to the core value of the ecosystem may be limited but linking the ecosystem with its environment creates critical external interaction.

3.4) Transaction backbone defines the ecosystem structure and value creation

The key and strong relationships define the ecosystem structure and how the system creates value. They form the transaction backbone of the ecosystem. All business network modules are connected to the transaction backbone. The actors moderating the transaction backbone determine through their actions the ecosystem value proposals, who are the actors involved into developing them and what are the operational guidelines and process.

We found out that the transaction backbone and included key and strong relationships are not formal joint ventures or agreement based relationships. This is slightly different finding compared to Dittrich et al (2004) view on formal relationships between entities characterizing mature and established value constellation. Due to cultural way of conducting business in Taiwan (Hsieh et al 2010; Chang and Lu 2007), the role of personal, informal and trust based relationships stands out in the analysis of this case study. This makes the transaction backbone an informal, dynamic and self-organizing connection path between the business network modules.

3.5) Relationships reflect the ecosystem life cycle stage

In emerging ecosystem the number of temporal entrants is high as the ecosystem scope is volatile (Peltoniemi 2005). Correspondingly the number or weak connections should be high when the ecosystem is being ramped up. Seven weak connections against four key and strong connections in our case study indicate that the analyzed health and wellbeing ecosystem in Taiwan is in stabile, operational phase. The ecosystem has established set of

moderators and gatekeeper actors, and there are no big external forces (Adomavicious et al 2005) at the time of analysis driving major changes. In this life cycle stage most of the learning and innovation is cumulative, exploitative (Dittrich et al 2004). Existing actors configure new value propositions from available elements. In the case study new innovation entries is limited and very specific due to strong government legal and regulation involvement.

4) DISCUSSION

Responding to the RQ1 (*How relationships between network modules contribute to business ecosystem constitution*) the case study presents how Taiwanese health and wellbeing field can be described as a network module based business ecosystem. The ecosystem is formed through the relationships between modules operated by moderators and gatekeepers. We conclude thus on RQ1 that relationships analyzed with ARA model connect the individual business networks to a business ecosystem. The relationships between modules are multidimensional, and the value of the ecosystem resides in those relationships. The relationships in the case study reflect the Chang and Lu (2007) findings on person related Taiwanese business culture aligning the findings further with the business network research stream on how social capital is built through trust and embedded and personal ties (Borgatti et al 2003).

The module based ecosystem structure has similar characteristics, such as affiliated and unaffiliated firms and diversity, as the business groups in Taiwan presented by Hsieh et al (2010). Compared to the business groups that are concentrated around large companies, the ecosystem we describe in the case study as response to RQ1 is more heterogeneous, dynamic and dichotomous value creation entity (Gulati et al 2000). This reflects also the description of complex adaptive network architecture (Choi et al 2001).

The relationships between the business network modules form the ecosystem structure. Definition of modules and how they are connected as an ecosystem is important for the efficient facilitation of the system. Modularity is key to ecosystem adaptability as described by Campagnolo and Camuffo (2010). By understanding the moderating actors, transaction backbone and interfaces for external innovation it is possible to define actions to build up sustainability, resilience, innovation and renewal capabilities (Götlich and Wenzek 2004; den Hartigh et al 2006).

Adner and Kapoor (2010) highlight relationship interdependency as determining factor for ecosystem success and innovativeness. Building on that we conclude as a response to RQ2 (*What are the important relationship types in a healthy business ecosystem*) that both strong and weak relationships are important in a healthy ecosystem. We base this conclusion on the Granovetter (1983) findings on strong and weak relationships' strategic role in successful networks. Strong relationships driven by moderators keep the ecosystem structure in place, enable self-organizing activities and define the operating principles. Weak relationships driven by gatekeepers are sources for innovation and evolution. Ecosystems emerge from innovations, transform and create new value proposals (Peltoniemi 2005). The findings on RQ2 respond on their part to the Artto et al (2008) further research proposal about relevant service types and concepts in life-cycle investment project by linking the individual business networks as modules.

The importance of strong relationships to the ecosystem comes from complex, uncertain and iterative transactions (Baldwin 2007). They connect the network modules together. The strong relationships in the case study are formed around doctors, nurses, government and hospital management who are the ecosystem moderators. Following the description from Baldwin (2002) the moderators have high contribution to the ecosystem value, but their criticality to the ecosystem comes from the strong relationships they create and maintain. Therefore the moderator role in this study includes also characteristics of the role of intermediator (Lappi and Haapasalo 2016) and network structural hole (Gulati et al 2000).

Importance of strong relationships in the case study is based on human contributions and social capital (Borgatti et al 2003). Transaction backbone formed around key and strong relationships has little physical product transaction and related compensation. There is limited direct compensation between the actors or written formal promises for future relationships to provide indirect compensation. Following Baldwin (2007) these characteristics represent risk to ecosystem as they create room for opportunistic skimping behavior. This risk needs to be managed carefully to maintain the ecosystem structure. The transaction backbone is based on intangible human capital contributions including information, professional competence, guidelines and personal trust. This follows the peer production model described by Benkler (2002) where the small individual contributions from unbounded set of self-organized agents form a strong relationship.

The weak relationships create gates to the ecosystem. They are operated by the gatekeeper actors as in the case study. The importance of the weak relationships, reflecting Granovetter (1983), comes from their role as ecosystem external interfaces. The importance is based on specificity of transaction and temporality. Actors involved have mutual agreement of transaction content and timing. The external interfaces are specific to certain purposes. They bring direct compensation to the involved parties and include opportunity for deeper integration to the ecosystem and novel value proposal definition in case the initial weak relationship appear beneficial. The gatekeepers in the case study have similarities with the role of opportunists as described by Iansiti and Levien (2004) in business ecosystem discussion. They fulfill also partially the role of peripheral actors (Gulati et al 2000) in strategic business network research. In the case study we found that the gatekeepers can also act inside the ecosystem. This is a difference to the role of a peripheral actor (Gulati et al 2000). Inside the ecosystem the gatekeepers open up new relationships creating internal changes.

Strategies, technologies and knowledge change over time. This changes the location of transactions and role of relationships. Some areas or business network modules of the ecosystem should be isolated from the external interfaces. Isolation should be done either to protect some key information, ensure productivity of the unit or due to too high transaction costs. On the other side the ecosystems should provide opportunities for new innovations, interfaces and value proposals to occur (Baldwin 2007). According to the results of the case study, we propose that the limited number of strong relationships between network modules keep the system structure in place and maintain the system level cohesion. Strong connections protect module internal actors from the external shocks securing their contribution.

Managing the relationships is challenging but activities to enhance the identified important connections between the modules can be defined to improve the ecosystem success opportunities (Choi et al 2001). According to Baldwin (2007) formal or relational contracts can be used to secure the relationships and commitments of the actors. Contracts bind the actors into agreements and legally define their roles in the relationship. Another way to systematize the relationships is to use maximal transaction design (Baldwin 2007) to define and measure all transactions. This may weigh down the productivity of the ecosystem as it creates lot of overhead. Central actors in the business network modules and the ecosystem moderators should agree on the ecosystem level practices and to ensure the transaction backbone

continuation and development. These transaction design actions should not be too exhaustive as details may decrease the relationship productivity due to overhead costs. Similarly, the use of contracts to define the ecosystem operation mode should be carefully considered. It may decrease actor independency and whole system's innovation capabilities.

More detailed insights on how to manage successfully the innovation and renewal gates without damaging the existing relationships would increase our understanding about the business network evolution. One way for this would be to follow the Baldwin (2007) and Langlois (2006) concept about transaction free zones – areas, spaces or communities that provide environment for sporadic and free interaction. Transaction free zones boost modularity, innovativeness and role of transaction backbone in the ecosystem. The main benefit for the transaction free zones is that their members consider gaining more from contributing to them than remaining isolated. Non-rival value proposals limit the scope of opportunism and due to free contribution there is no need to create reward mechanisms.

Transaction free zones can be physical, virtual or social (Langlois 2006). They are easy to create but difficult to facilitate. For example finding balance between free information sharing and intellectual property rights protection can be challenging. Common meeting places, government driven programs and joint forums are examples of transaction free zones that could be introduced in the case study ecosystem. Depending on the transaction items involved, the zone could be encapsulated (Baldwin 2007) as a separate legal entity to ensure intellectual property rights preservation. The encapsulation of the transaction free zone for example with agreed rules (Baldwin 2007) removes the need to co-ordinate activities across the zones. On the other hand keeping the transaction free zones as unencapsulated makes them evolving and self-organized. This makes the links between the modules become spontaneous.

We found that the results obtained from the case study gave answers to the research questions RQ1 and RQ2. The answers reflected the way of conducted business in Taiwan. The applied business ecosystem analysis framework provided aligned and complementing insights for complex adaptive systems and business network research streams.

5) CONCLUSIONS

The case study results for RQ1 and RQ2 support the metaphor based approach (Anggraeni et al 2007) for business ecosystem concept applicability into complex business network analysis. Business ecosystem key building blocks are the actors, their relationships, ecosystem health and governance model (Iansiti and Levien 2004). In the case study we analyzed eight business networks using ARA model. We identified how they connect to each other with different relationship types and defined roles of moderator and gatekeeper. The findings should be tested through quantitative studies to further validate the theoretical contributions. This supports Kortelainen and Järvi's (2014) proposal on how to strengthen the ecosystem research area where currently the number of quantitative research constructs is limited.

Determining the strength level of relationships between the network modules is essential to understand the ecosystem value creation and structure (Kinnunen et al 2013). As a summary of the application of the analysis framework for our case study we propose following activities to model complex network relationships in a business ecosystem:

- Model the individual business networks of the actors as modules of the ecosystem
- Use the ecosystem concept as analysis framework to consolidate the ecosystem map
- Define and analyze the relationships linking the business network modules through number or actors and different role types
- Determine the strong connections and moderator actors
- Determine the weak connections and gatekeeper actors
- Define the ecosystem transaction backbone
- Define governance actions for strong and weak relationships and corresponding actors

Consolidating the ecosystem from business network modules describes the system as a modular architecture. Like a biological ecosystem, the business ecosystem perspective provides a multidimensional architecture when approached through modules and their interconnectedness. Strong connections between the modules form channels for resource and knowledge exchange like paths in forests. What will be delivered through these paths is not controlled by the surrounding ecosystem. The actors and their dependencies to each other define it. Transaction backbone linking the

modules is the main road enabling joint value creation and delivery to the customers. Weak connections are like entrances to the forest that provide exit or entry point for actors. This modular relationship based view contributes to complex system modularity design (Campagnolo and Camuffo 2010; Gulati et al 2000) as it describes how the self-organizing entities form multidimensional connections.

We propose based on the Taiwanese health and wellbeing ecosystem case study results that both the strong and the weak relationships between network modules are essential for the ecosystem health: Strong connections for ecosystem sustainability and resilience, weak connections for innovativeness and renewal. Both relationship types build the social capital for the ecosystem as presented by Borgatti et al (2003).

The case study describes an ecosystem at one phase. Number of identified connections between business network modules can also be used to illustrate the phase of the ecosystem when following the social network theory on relationship strength (Granovetter 1983). In the analyzed ecosystem that is operational, the number of strong connections (4) is considered to be high compared to number of weak connections (7). The emergence mechanisms of business ecosystem and how to predict the future of it could be addressed further using control versus emergence concepts of complex adaptive networks (Choi et al 2001). As a further research topic we are suggesting to study the relationship types in different ecosystem phases. This would provide more understanding if weak connections are more dominant in emerging ecosystems where there are more alternatives, new actors and lot of innovation diffusion (Granovetter 1983).

The ecosystem's relationship types and their number reflect the health level of the ecosystem. Robustness, productivity and ability to create new business opportunities are important ecosystem health measurements (Iansiti and Levien 2004; den Hartigh et al 2006) that can be derived from the relationship types and characteristics. As another topic for further research we are proposing how to use relationship characteristics to define the health level measurement parameters for a business ecosystem.
Continuous and controlled management does not fit well into scope of self-organized ecosystem metaphor (Moore 1993). Den Hartigh et al (2005) discuss about ecosystem governance as a way to orchestrate the ecosystem activities and to align the goals of the ecosystem actors. Governance is about enabling the resources and willingness to prosper rather than providing resources and guidelines to the actors in a top-down way. As a next step the

assessed ecosystem health level parameters could be used to define a "compass" (den Hartigh et al 205) for ecosystem important relationship governance.

Formal agreements can be utilized to systematize transactions in the important connection and decrease opportunistic behavior of actors referred as skimping (Baldwin 2007). Finding a right balance between risk of skimping and overproducing information and agreements is essential to facilitate successfully the business ecosystem. How to define the balanced ecosystem governance activities is a subject of further research based on the conclusions from this study.

The conducted case study answers the defined research questions (RQ1 and RQ2) and provides insights how to utilize business ecosystem concept to bridge the features of self-organized and managed business networks. Though the results are based on a single case study in Taiwan, the implications can be seen globally applicable everywhere dynamic multidimensional business networks exist and the role of relationships are in key position for network success. To validate internationally the applicability of the research set-up, we propose a comparison study to be conducted in similar environment.

Positioning business ecosystem concept as a perspective to analyze complex networks provides a metaphoric analysis framework. The concept enables identification of business network modules and how they are connected as a larger scale ecosystem. Strong and weak relationships with moderator and external interface actor roles provides novel insights on how the ecosystem perspective can support facilitation of self-organized trust based organizational networks.

As a continuation of this research we propose to investigate further how strong and weak relationships are present in different lifecycle state of an ecosystem, how the important relationships should be governed and how the relationships determine parameters to measure the ecosystem health. Also the relationships that create interaction with the external environment would benefit from additional research activities. In academic discussion more understanding on these areas would strengthen the position of business ecosystem as a perspective for business network analysis. For practitioners the further research activities could be used to develop methods for efficient business ecosystem governance.

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Enterprise Sustainability Performance Measurement beyond Compliance: Cases of Small and Medium Service and Manufacturing Enterprises in Thailand

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ABSTRACT

A significant amount of research has been developed and is under development exploring future business systems that deliver high value to the growing base of interested parties needs and expectations, while considering the impacts of sustainability on traditional strategy and performance management. This piece of research fits in this topic by providing a discussion on how enterprises can transform businesses from traditional models to sustainable business models. Characteristics of enterprises in the case studies are looked at to highlight the evolution of this transformation. Systemic implications for service and manufacturing enterprise sustainability and organizational change are provided in this paper in the form of open questions and discussion with the executives and management team of the sample companies. Information in the case study provides interesting insights into the drivers, enablers, and some unanticipated additional benefits of service enterprise sustainability measurement.

Keywords: Enterprise Sustainability, Enterprise Sustainability Measurement, Strategic Sustainability in Small Enterprise, and Sustainability in Service Sector.

1) INTRODUCTION

Value creation in enterprises will change to align with sustainability principles. In fact, based on leading academic and practitioner insights, sustainability is the most critical issue for enterprises in positioning themselves for their economic survival and benefit and also for simultaneously creating environmental and social value. Sustainability performance is now generally understood as the combination of economic, social, and environmental performance. Its measurement aims to build long-term survival for the enterprise in the 21st century. Enterprises need to understand deeply what can make business sustainable in long term and how to achieve that. Furthermore, enterprises aim to create their sustainability performance to satisfy stakeholders including community and society needs and expectation. Currently, sustainability has become the important challenge for most enterprises over achieving the best quality or cost leadership (Serban and Kaufmann, 2011; Tan *et al*., 2015).

However, the adoption of sustainability at all levels of an enterprise is a difficult task because the enterprise needs to think of the multi-dimensional nature of sustainable development (Goyal *et al.,* 2015). In order to achieve the long-term purpose, Bansal (2005) proposed that the industry itself require not only growth and financial performance, but also require enterprises to create value to achieve societal and environmental strategic goals (Searcy, 2012 and 2016), following sustainable development concepts. Additionally, it also is a business approach that creates long-term shareholder value by embracing opportunities and turning to a sustainability strategy derived from economic, environmental and social issues (Searcy, 2016; Starik and Kanashiro, 2013).

The simplest way that an enterprise can demonstrate the survival mode in their business is to adopt a positive financial and broader economic sustainability performance approach. Sustainability is one of the most crucial dimensions of the triple bottom line approach. Economic sustainability is related to the long-term sustainability of an enterprise (Delai and Takahashi, 2011). It is not only traditional financial performance, the enterprise should transform its performance to cope with a sustainability approach by linking economic performance with overlapping environmental and social dimensions. This means that an enterprise needs to additionally demonstrate their capability to make positive economic contributions to the local community, society, and the world in general. To increase long-term survival opportunities, the environmental and social issues need to be

integrated into strategic goals and strategies to guarantee economic sustainability.

2) LITERATURE REVIEW

2.1) Enterprise Sustainability

Enterprise sustainability should be considered a transformational process that could create value from economic, environmental and social sustainability through the use of technology to assist nature. This transformational path should also positively affect materials, products, processes, plants, and systems of production at all levels. Tonelli *et al*. (2013) pointed out that among the options which could assist enterprises, was manufacturers' and service enterprises' abilities to elevate themselves to the next level of performance, through added value derived from rapidly reduced use of input materials, reduced energy consumption in the production of goods, more efficient use of discarded or extracted materials, redesigned industrial systems, and newly developed or reconfigured business models (Schaltegger *et al*., 2012). Product and process design will typically play a role in the reduction of pollutants, hazardous waste, energy consumption and overall resource use.

Unfortunately, the current state of enterprises require the continuous exploitation of new, emergent markets for business growth, which in turn requires rapid enhancement of products and processes through technology to satisfy increased demand. Additionally, this requires sourcing of low cost supplies and concentration on reliability and optimization to sustain profit margins. Enhanced public image and market exposure, among many other significant benefits of investment in Corporate Social Responsibility (CSR) initiatives must be emphasized, as most initiatives are undertaken only if proven economically viable. To have a successful transformation process (Schaltegger *et al*., 2012), enterprises will need to apply the necessary tools and framework to manage business environments amid resource scarcity and supply uncertainty (Tonelli *et al*., 2013) and to align social and environmental risk management with organizational strategy management (Hart, 1975; Hart and Milstein, 2003). Furthermore, it needs to link customer value with the values of sustainability (Richardson, 2008). Moreover, it should enhance, not detract from, customer/supplier relationships and shift emphasis to stakeholder concerns, needs and expectations, the management of resource security in supplies and demand (Hart and Milstein, 2003; Meadows *et al*., 2004), utilization of closed-loop management systems for

material cycles, resource flows, energy conservation chains, waste, water, and materials within plants and supply chains (Tonelli *et al*., 2013; Taticchi *et.al*, 2010; Taticchi *et.al*, 2012). This should include product innovations that view renewable resource use and community development (Gupta and Benson 2011) as necessary components of the transformation from silo approaches to more holistic approaches to management to better utilize fundamental value creation principles (Tonelli *et al*.,2013; Gupta and Benson, 2011; Richardson, 2008).

2.2) Sustainability Performance Indicators

2.2.1 Economic Sustainability Indicators

The Economic indicator dimension had been proposed by Delai and Takahashi. It is comprised of the following elements: investors, investments, profit and value, and crisis management. The investor element can be classified into sub-elements such a corporate governance and shareholder remuneration. Furthermore, the investment element can also be classified into capital employed and research and development (Delai and Takahashi, 2011).

Corporate governance tends to use qualitative indicators (ISO 26000, 2010) such as in the development of strategies, objectives, and targets that reflect its commitment to social responsibility ,leadership commitment and accountability, creation and nurture of a social responsibility environment and culture, development and execution of incentive systems linked to social responsibility performance, development and execution of stakeholder engagement in order to balance needs and expectations, development and execution of two-way communication, reporting of efficient financial and resource use, the level of employee participation, development and execution of the manufacturing structure, records of authority and responsibility, development and execution of tracking systems to ensure the decision follow social responsibility practices, review and evaluate the governance process, and reporting of governance and transparency issues (Staniskis and Arbaciauskas, 2009; Okoye *et al*., 2013; Adams and Frost, 2008).

Moreover, Delai and Takahashi (2011) suggested that the shareholders remuneration count on the dividend yield paid by the manufacturing to shareholders ($ dividend received/$ invested). Also, the capital employed can measure with three indicators: investment return ($ profits/$ equity); investments average ($ invested per year), and the research and development can assess with investments in R&D ($ investments in R&D/$ turnover).

Furthermore, the profit and value can use the traditional financial indicators that are important for short term and long term business operations such as return on sale (ROS) and the profitability index (GRI, 2014; Ocampo *et al*., 2015). The crisis management can qualitatively measure that no indicator was established to measure it except analysis of the existence and quality of manufacturing structure and plans in place to prevent and manage crisis.

2.2.2 Environmental Sustainability Indicators

According to environmental indicator dimensions, the sustainability dimension covers the prevention of pollution, sustainable resource use, climate change mitigation and adaptation, and the protection of biodiversity and natural habit (ISO 26000, 2010; GRI, 2012; GRI, 2014; Ocampo *et al*., 2015). The prevention of pollution related to emissions into the air, discharge of water, waste management, use and disposal of toxic and hazardous chemicals, and other identifiable forms of pollution. The emissions of air pollutants covers such things as lead, mercury, volatile organic compounds (VOCs), sulphur oxides (SO_x), nitrogen oxides (NO_x), dioxins, particulates and ozone-depleting substances. Waste includes the generation of liquid or solid waste that contaminates the air, water, land, soil and outer space. Use of sustainable and renewable resources for electricity, fuels, and raw and processed materials is more responsible for land and water management. It includes energy efficiency, water conservation, use and access to water, efficiency in use of materials, and minimized resource requirements for products. Climate change mitigation and adaptation recognized the emission of greenhouse gases (GHG) from human activities, such as carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O), caused global climate change (Bubna-Litic, 2008; Dittrick, 2007). Finally, the protection of biodiversity and natural habit focuses on the value and protection of biodiversity, value, protecting and restoring ecosystem services, using land and natural resource sustainably, and advancing environmentally sound urban and rural development. (Staniskis and Arbaciauskas, 2009; GRI, 2012; GRI, 2014).

2.2.3 Social Sustainability Indicators

The social indicator dimension is comprised of the elements of human rights, labor practices and decent working conditions, customer and consumer issues, fair operating, and social development and involvement (ISO 26000, 2010; Delai and Takahashi, 2011; GRI, 2014; Ocampo *et al*., 2015). Human rights covers sub-elements including measures relating to exercising due diligence, risk assessment of human rights, complicity avoidance, the resolving of grievances, discrimination and vulnerable groups practices,

civil and political rights, economic, social, and culture rights, and fundamental principles and rights at work. Labor practices and decent working conditions covers elements which include employment relationships, the condition of work, health and safety at work, and training and development. The customer and consumer issues comprise elements including customer relationships, customer health and safety, fair sales, marketing, and advertising, the respect of customer privacy, and sustainable consumption (ISO 26000, 2010). Furthermore, fair operating with suppliers and competitors covers elements including political involvement and contributions, anti-corruption, fair competition, promotion of sustainable reporting in value chains, and property rights. Social development and involvement includes sub-elements such as community involvement and communication, technology development and access, income creation, education, health and culture, and social action and investment (Jurgis and Valdas, 2009; Williams *et al*., 2011; Warhurst, 2002).

3) EMPIRICAL STUDY

3.1) Research Objectives

The research has aimed to study how enterprise can illustrate the organizational performance in the area of sustainability beyond compliance as well as identify the role of stakeholders (policy makers, academic, sustainability consultant, etc.) in order to enhance the sustainability performance of SMEs in Thailand based on the previous study on sustainability research series which earlier identified the key elements including nine elements (anticipation, concern, leadership, communication, capability, planning, execution, performance, and report) and proposed enterprise performance framework model in the areas of sustainability. Therefore, researchers had worked at Thai Chemical Engineering (TCE; trading company) and Diary Home (Organic milk and yogurt producer) in Thailand, for approximately one and half years. Data for the case studies was collected by analyzing strategic organizational documents, internal sustainability reports, Internet documents and information, interviews with top management in different managerial positions, and personal observations at the enterprise,. These provided the research team with an extensive basis for developing these cases.

3.2) Research Design

The researchers also relied on experience and other case literature in order to present the evidence in various ways as the focus in these cases was on organizational change rather than identifying specific problems. The construct of these case studies was "designed with purpose" (Harrison and Freeman, 1999) to analyze and conduct an in-depth study of the role of enterprise sustainability in the service industry at TCE and a small and medium sized family-owned manufacturing company, Diary Home, in Thailand. The method for these case studies was chosen in order to assess and reveal the strength and extremity (Yin, 1994) of creating sustainability and value.

3.3) Research Finding

3.3.1 Thai Chemical Engineering and Diary Home Case Studies

Thai Chemical Engineering (TCE) is one of Thailand's leading distributor and seller of chemical treatment products for waste water treatment systems for the sugar cane industry, boiling and cooling systems, and solid waste disposal systems at general manufacturing sites and for consumer households. The core competency of TCE is in the area of water soluble chemical substances. The company is located in Bangkok, Thailand, which was the major focus of this case study, and has a manufacturing capacity of more than 2,500 ton per year (in 2015), with an annual turnover of 200 million baht and approximately 60 employees. The company has engaged more with food and agricultural manufacturing plants by offering them pre and post sales service. Since 2014, most of the large corporations and manufacturers in Thailand required the main suppliers in their supply chain to go beyond social responsibility in order to support their strategic direction. Enterprise sustainability is a crucial requirement for both suppliers and large corporations at both the domestic and international level. Additionally, the company adopted a new business model to improve its market share and competitiveness because these had been declining gradually since 2012.

Diary Home Co, Ltd., a small family-owned business, is one of the leading producers of organic dairy products in Thailand and was founded in 2004. The company is located in Nakon Rachasima province, Thailand. The company had sale revenues over 145 million baht in 2015. It has just 66 employees. Diary production relies on raw material from suppliers so an engagement program had been developed and routinely executed with

suppliers to ensure that the raw material (raw milk) was continuously delivered for production. Top management set up business initiative with the slogan "Good, Clean, and Fair". Dairy Home's top management team committed to provide high quality, organic, and safe products to consumers that were produced cleanly so that they did not have a negative effect on the environment. They also committed to paying employees and suppliers.

3.3.2 The transformation of the strategy planning process

Thai Chemical Engineering and Diary Home executives committed to transforming their businesses into be sustainable enterprises by adopting a "triple bottom line" approach as well as through engagement theory. Future sustainability challenges were discussed within their management teams and aligned with needs and expectations of prioritized interested parties to focus long term goals rather than on day-to-day operations. As a result, they could identify new business sustainability opportunities and new value to shift the enterprise to a new paradigm. The future business challenges statement indicated several challenges integrating economic, environmental, and social issues, for example:

- Changes in consumer behavior to sustainable consumption that requires providing new products and customer service solutions to maintain a friendly environmental campaign to conserve natural resources and the environment;
- Creating environmentally friendly innovation that can build good health for an aging population;
- Building the organic knowledge and awareness amongst consumers as part of sustainable consumption;
- Changing distribution and communication through the use of internet technology to satisfy lifestyle and real time processing;
- Employee quality of life after retirement;
- Water shortages which would affect agricultural yields and productivity.

Not only did the management executives focus, at the time, on increasing profitability and productivity but they also required taking environmental and social issues into organizational consideration seriously from the beginning stage of their strategic planning. But, an initial investigation at the time showed that the enterprise had not integrated environmental and social issues into their strategic planning phase. As a matter of fact, in 2015, both of the companies had been step up to be pioneers in industrial sustainability as well as create sustainability value throughout their value chains to include

suppliers, customers, and business networks as well as be able to align with large enterprise strategic directions as necessary.

Sustainability strategic destinations had been set up in the medium and long term. The companies expanded the scope of their destinations to not only cover company financial issues, as they had before, but to also include environment and social development destinations that had been set for this stage, for example,

- the amount of cash flow in the community and local economy;
- the number of people in the country who are aware of and received the knowledge on how they can preserve the natural resources in the society;
- the number of children in the local community who are able to continue their education to the academic level;
- the number of blue collar workers who can live comfortably after retirement.

The companies had defined strategic issues, which is a critical stage of the transformation process. The strategic issues of TCE and Diary Home were established, for example, (i) natural resources conservation, energy saving, and providing environmental friendly and healthy product innovation, (ii) develop a safe workplace with self-learning and sharing behavior, (iii) building long-term partnerships with interested parties, (iv) recover bio-diversity within local communities, and (v) secure employees' life after retirement.

The strategic change agenda had been divided into sustainability aspects, such as (i) aspects which related to the value chain, (ii) aspects of the operational process including purchasing process, production process, delivery and after sales service process, (iii) aspects of the participatory process to engage with the partners, community, and other stakeholders, (iv) aspects of the innovation management process, (v) aspects of the governance, environmental and safety and security management process within the company. In order to reach the strategic goals and sustainability vision, the company had designated various strategic themes such as the financial green growth theme (integration of economy and environment development), the socio-environment theme (integration of social and environment development, and human sustainability theme (development of the work life and happiness of employee).

Both of the companies also assessed the readiness of internal context compared with strategic issues and their change agenda to identify strength and weakness. The internal factors that effected the change agenda were readiness of human resources, availability of information, knowledge, technology and infrastructure, and organizational capital such as leadership, alignment, teamwork, or culture as appropriate to the change program (Kaplan and Norton, 2008).

TCE and Diary Home applied the prestige strategy management system (Balanced Scorecard) approach for their strategy planning process as well as integrated sustainability issues with the existing management systems, such as ISO 9001, ISO 14001 in their operations processes to create value, effectiveness, and efficiency. They were good case studies of this integrated strategy management perspectives with sustainability goals.

The traditional balance scorecard of Kaplan and Norton has been turned into an enterprise sustainability-balanced scorecard which includes 4 perspectives (Sustainability Perspectives, Stakeholder Perspectives, Process Perspectives, and Input Perspectives). Theme-based management was applied to manage and execute an holistic approach, the companies chose 3 themes; (i) economic-environmental theme, (ii) socio economy theme, and (iii) socio-environment theme. TCE and Diary Home explained the input perspectives as the foundation to execute any changes including human resources, knowledge and information, intended organizational behavioral. The inputs were analyzed for strengths and weaknesses of the companies to execute the strategies. The process perspectives were also explained in terms of the main internal processes in the value chain such as sales and marketing processes, innovation processes, operational processes, logistics and transportation processes which would need improve, modify or change in order to enhance stakeholder values. The company used stakeholder engagement approaches to analyze the future needs and expectations amongst identified stakeholders and then identify stakeholder value propositions. Finally, for the outcome perspective (Sustainability), the enterprises set up 3 strategic objectives, which showed the balance between economic, environmental, and social goals.

3.3.3 Engaging with the interested parties

Thai Chemical Engineering and Diary Home started to expand the scope of building the relationship not only to main customers but to engage with local communities, supplier, and employees as mentioned in ISO 9001, 2015; ISO 26000, 2010; GRI, 2012. On this account, the companies set up programs to

enhance employee capabilities and skills in communication and negotiation in order to have better dialogue with concerned parties. They applied the AA 1000 (Accountability Standard) as an engagement framework to develop the systematic engagement process within their enterprises. They started the process by identifying the main stakeholders that may affect their triple bottom line outcomes and then prioritized the groups of stakeholders. Then, the dialogue plan was initiated. The implementation phase was successfully completed within their planned intervals. The results were as follows:

- **Engaging with Employees**: Top management of both companies set up comprehensive training programs to empower their employees and create core competencies based on a 'triple bottom line' approach. The companies also invited their staff to participate actively in their programs by initiating a "Suggestion Program" to receive any suggested improvements based on experience. Staff attitudes and sustainability cultures were developed. Some examples of idea generation from the employees were: (i) a new idea of sustainable innovation by adopting the new technology to the service process; (ii) a modification of transportation systems by using alternative energy rather than fossil fuel; (iii) the introduction of an energy conservation system in the office and manufacturing building.

- **Engaging with Customers**: To support and align with customer strategic direction, TCE developed a strategic alignment program to support their customers' strategies, for instance, the reduction of greenhouse gas emissions, and a productivity program that lead to defect reduction and flexible delivering. As a consequence of aligning the strategy with the customer, the company has introduced a new service program to the market focused on the environment that could improve the profitability of the company.

- **Engaging with Suppliers**: TCE also established environmental guidelines and code of conduct for its suppliers, contractors, and external providers. This includes criteria on selection, evaluation, and reevaluation for its suppliers, based on their compliance with environmental regulations, eco-friendly practices, and a code of conduct related to fraud and anti-corruption. Diary Home decided to routinely teach suppliers new techniques and develop its supplier's productivity and capabilities in the organic farming system.

- **Engaging with Community**: both of the companies had dialogue with the surrounding communities to discover their current and future needs and expectations in order to increase community involvement and development instead of philanthropic activities. The education level, career development, and wealth of the communities were of highly concern.

- **Engaging with business networks**: In regard to limited resources and expertise, the companies have been supported by cooperative ventures with business networks including industrial development programs dealing with the performance improvement via performance standards, management consultants, and technological development.

3.3.4 Economic Enterprise Sustainability Measures

TCE market share declined gradually in 2015. Furthermore, the firm's sales turnover was only Baht 200 million in 2015. In 2014, TCE sales of chemical substance were 2,500 ton that are 90% of their total chemical sale. Chemical Engineering's management took sustainability seriously as a core value of the company, beyond social responsibility, and developed and implemented its sustainability model.

Diary home had sales turnover increased from baht 130 million in 2013 to baht 145 million baht in 2015. Also, their market share rose from 0.2% to 0.3% in 2015. Their production capability is over 2,100 ton per year. The management team committed to sustainability and sufficiency as a core business competency. Social responsibility and various international management system standards are crucial elements in getting the company to this level.

Economic enterprise sustainability measures beyond compliance are as follows:

- **Increase Productivity through technology and environment practices:** Since the input (fixed cost and variable cost) of the service operating process has increased annually such as salary, bonus, office expenses, and maintenance cost, the companies launched a new way of increasing productivity by adopting technology and environmental practices to reduce cost instead of the traditional economic approach. Long term investment on technology and energy consumption reduction can reduce costs in the long run were considered. The companies add the customer value proposition in term of real time communication by

applying the IT technology on tracking and tracing programs, initiated energy projects such as the renewable energy program, energy saving program, etc. As a result, the companies have reduced their operating costs while outputs remained at the same level. The results are that some indicators are higher than previous years such as their customer satisfaction index on delivery and service items and the energy costs that directly affect financial outcomes of the companies.

- **Integration of economic and environmental sustainability:** TCE has selected suppliers, farmers, and contractors who were able to provide green or organic products and services in line with the company's strategic direction. As the results, more than 20% of overall the suppliers and contractors of both companies achieved their goals as well.

- **Co- creation**: Top management vision was to be ahead in this area of development and not to be exposed to any particular risks. Hence, part of this strategy is profitability growth. The distinctive partnerships between the companies and the customers as well as interested parties have had positive effects in generating financial results. Employees and customers have presented most of the innovation ideas. It is shown strong participation between the employers and their employees as well as the companies and their customers.

- **Implement Management System*:*** They have achieved widespread recognition as pioneers in acquiring ISO 9001, GMP, HACCP for consistency of product quality, and considered the requirements in ISO14001, ISO 50001, and OHSAS 18001 for environmental concerns and development as well as safety management system for employee and related bodies. Furthermore, business governance and integrity have proved to be increasingly valuable over the long-term.

3.3.5 Environmental Enterprise Sustainability Measures

Thai Chemical Engineering and Diary Home management teams had assessed the significant environmental aspects that could impact the environment. Basically, the companies complied with local environmental laws and regulations. However, energy consumption and waste were of high level concerns of both top management teams. In regards to these aspects, they decided to build new infrastructure and technology to provide better environmental performance for the local communities and the overall environment.

- **Green procurement*:*** TCE invested in a wastewater treatment plant even though there were no significant problems in this area. It illustrated that TCE were fully committed to creating a better environment. Furthermore, the company set up a strategy to align its waste reduction policy to suppliers by introducing an environmental management approach, such as ISO 14001, and use of environmentally friendly packaging by their suppliers. Part of their non-toxic and solid waste is now distributed to waste banks of nearby communities for recycling purposes.

- **Integration of economic, environment and social sustainability:** Diary Home has enhanced the environment and social benefits by moving from "Fair procurement" to "Fair and Green Procurement. The local suppliers (Farmers) are required to deliver organic and nutrient raw material to the company. Moreover, the suppliers are allowed to set the purchase price based on the quality of their products. As the results, the company not only receives high quality and environmentally and safe raw material, but also the local farmers and suppliers are satisfied with the price they get for their products which represent genuinely fair operation of the company.

- **Green technology:** After TCE and Diary Home invested in new communication and information technologies, they reduced their CO_2 emissions, mainly in their sales, production and warehouse departments. For instance, sales personnel can tele-conference with the customers via Internet technology. Warehouse officers are able communicate the status of deliveries to their customers in real time via track and trace applications.

- **Reducing energy consumption*:*** With respect to energy consumption, the results in 2014 were satisfactory. TCE and Diary Home's fossil fuel consumptions were reduced compared to levels in 2013. This might reflect a change in production and service activities to less energy-intensive approaches.

3.3.6 Social Enterprise Sustainability Measures

Both of the companies had concerns about the social aspects in terms of internal boundaries. The top management teams considered a safe working environment the number one priority for employees. New organizational cultures had been chosen and implemented such as sharing, long term thinking, and self-learning behavior. As a result, a set of personal objectives

relating to working and living performance were set up and monitored for routine progress.

- **Sharing (Integration of social and environmental sustainability):** With respect to the core competencies of TCE and Diary Home, the top management teams had approved educational programs for local communities and society at schools, educational institutes, and in local communities on the topics "how we can reduce water consumption" as well as "Clean water consumption for kids". The results were very good in improving understanding of climate change effects and children's health.

- **Safety concerns:** TEC and Dairy Home management teams were committed to addressing safety issues. They provided personnel protective equipment (PPE) and developed a safety environment that ensured that each employee and contractor who worked within their designated boundaries were fully safe**.** The safety policies and guidelines have been communicated to everyone along with training. Only personnel safety qualified in specific tasks can be assigned that work. Additionally, TCE has developed safety guidelines for their customers and end users to assure that they use TCE products safely.

- **Life after work and retirement**: Quality of work life is one of the critical issues in the happiness of employees and their families. Each employee is assigned to perform a self-assessment in order to check the balance of his/her life. Topics included are the relationship with their family, training and development, personal finance, career growth, social life, health and exercise, religion, leisure time, rest, personal achievement, and community service. According to each person's self-assessment results, he/she can then pick one or two topics that they had a low score in to initiate a self-improvement plan. Human resource staff and each individual's supervisor review the results and consult with their staff in order to increase the score. Personal objectives, measures, targets and initiatives are collected on a "Personal Happiness Scorecard" that is used to establish an action plan which is executed, monitored, and recorded. Incentive programs are be linked to achievement of execution programs/initiatives.

4) DISCUSSION

The enterprise sustainability evolution will require enterprises to integrate the sustainability concept into their strategic direction and business processes and demonstrate that the emerging approach can improve business outcomes in term of economic, environmental, and social performance compared with the past and current approaches.

The provided case study shows that several approaches that SMEs in service and manufacturing enterprises can reach the sustainability concept by mobilizing change from top management commitment, apply strategic sustainability thinking to business strategic planning process, adapt the BSC framework to transform the sustainability strategy into operations, and determine and routinely engage with the groups of interested parties to determine business risks and opportunities. Enterprise sustainability can be pursued through many different ways of thinking;(i) influence the eco-efficiency concept to both demand side and supply side, (ii) utilize the modern technology to enhance operational excellence, productivity, and response to receivers of output behavior (iii) better understanding how can create the happiness environment for employees, and (iv) co-create with interested parties to innovate products, processes, and new business models.

TCE and Diary Home understood the importance of external stakeholders that influence from suppliers, customers, partners, communities, and regulators in the 21st century. Uncertainty from external contexts forces enterprises to realize new approaches to business through implementing significant changes to operations and achieving important benefits in terms of win-win or win-win-win situations. Sustainability strategy development is one of the key success factors of this transformation. Enterprises can demonstrate how economic and environmental sustainability can be integrated to create sustainability value propositions through strong engagement with customers, employees, suppliers, and communities; going beyond just traditional business. As a result, companies can better addresses new mainstream manufacturing business models in the developing world. Companies are looking to a new approach to transform their enterprises to incorporate industrial sustainability. The flagship initiatives such as “Green Technology for Sustainability” ,“Good Health with Clean Water”, “Good Health with Organic Products”, and “Life after work retirement” aim to develop communities and business partner sustaining in their business and living. A couple of important observations gained from these case studies are that top management and management team members have well-

educated from aboard (USA or Europe Universities) and ever experienced with large or international company. They have body of knowledge of sustainability and social responsibility through the sustainability articles.

As the results, the key success factor of the case study is leadership. The result was aligned with the previous study. It can concluded that leadership was a major driver for developing the sustainability direction, strategies, measurement, and initiatives. Additionally, leadership was strongly supported by the valuable information from anticipation and concern process including the sustainability challenges and the results from stakeholder engagement.

5) RECOMMENDATION

The practical adoption of enterprise sustainability in Thailand leads to important considerations and implication for policy makers, consultants, academics, teachers, researchers and manufacturing practitioners in the real world. In order to achieve enterprise sustainability, corporations, policy makers, researchers, practitioners, and academics must determine and develop enterprise sustainability roadmap, framework and standard guidelines to assist enterprise in implementation phase, assess sustainability performance, report their performance to the public and set up a reward program to recognize leaders in sustainable practices (Tonelli *et al*., 2013). Secondly, the immediate need is for paradigm shift from existing systems to enterprise sustainability in Thailand by learning about key success factors from some of the leaders, both locally and internationally. This suggests that academia professionals as well as educators must improve the understanding of how sustainability can be formulated at the strategic level for operational execution. Based on the findings of this practical research, a number of recommendations have been developed for future study for each group of interested parties as follows:

5.1) Sustainability management consultants and academics:

- Develop foresight management courses and/or trainings that promote attainment of sustainable business objectives;
- Extend graduate level courses on research methodologies for both academics and practitioners;
- Offer consultancy training modules that incorporate sustainability principles and their relationships to enterprise productivity,

environmental preservation, and societal development at the local, national and global levels;

- Develop specialized instruction on specific components of enterprise sustainability to include strategic planning, innovation and creation, closed loop management systems, ecological and biological factors along the supply value chains, assessment of current sustainability performance frameworks, as well as evaluation and use of international management system standards, such as GRI, CERES, ISO 14001, ISO 14064, ISO 14046, ISO 50001, ISO 26000 designed to ensure enhanced levels of sustainability;
- Collaborate with manufacturers that have demonstrated growth through socially responsible business practices and enhanced sustainability performance;
- Develop instructional materials that include contextually relevant case studies;
- Participate with SMEs, international manufacturers and best-in-class sustainability manufacturers such as P&G, Unilever, etc. to offer opportunities for virtual, as well as real-life observations of successfully employed sustainability practices.

5.2) Researchers:

- Encourage ongoing enterprise sustainability research among SMEs and larger scaled enterprises in Thailand;
- Continue development of enterprise sustainability models for SMEs that encourage radical change;
- Include all sectors of local enterprise in sustainability research;
- Explore and evaluate methods of sustainability measurement that *exceed* recognized international sustainability standards and guidelines;
- Improve upon standards, guidelines and metrics used in sustainability measurement;
- Expand the scope of sustainability research to include workforce sustainability.

5.3) Industrial practitioners:

- Work with academics and researchers to develop sustainability performance models that are industry-specific;
- Integrate sustainability concepts into business strategies and thought processes;
- Include supply chains in strategic alignments.

5.4) Policy makers:

- Design roadmaps that meet sustainability objectives and lead SMEs to eventual sustainability;
- Form a public database that discloses enterprises along with degrees of compliance with implementation guidelines;
- Recognize and reward organizations that comply with national enterprise sustainability protocol;
- Make provisions for sufficient community infrastructure improvements prior to insistence on increased enterprise sustainability performance;
- Encourage policy that shifts enterprise focus toward sustainability;
- Support ongoing workforce education that yields measurable increases in both sustainability awareness and performance;
- Develop sustainability management standards that are contextually realistic and provide built-in support and guidance to enterprise.

6) RESEARCH LIMITATIONS/IMPLICATIONS

This paper presents preliminary results from an enterprise sustainability project in Thailand. As a consequence of this, it is limited in terms of case study analyzed and content covered (only two business cases of enterprise sustainability are reviewed). The structure of the questionnaire and interview are carried out to assure that the quality of the case study are accepted. Consequently, the findings will be expanded and supported in the future by other studies. A need for additional cases on sustainable SME companies is required in order to further expand the body of knowledge on sustainability approaches for other areas of service enterprises such as tourisms, education, and health enterprises that might be targeting enterprise sustainability in implicit ways.

7) RELEVANCE/CONTRIBUTION

The paper will be valuable to scholars working in the fields of enterprise sustainability or those interested in identifying future areas of research. The topic of enterprise sustainability is one of the current business mega trends, and this paper based on quality case studies represents a positive contribution for expanding the body of knowledge. Furthermore, knowledge gained from this case is particularly relevant for both scholars and practitioners interested in the topics of sustainability in service industry in

regards to how SMEs successfully transform businesses through the new paradigm of "enterprise sustainability".

NOTE:

This paper is a revised and expanded version of a paper entitled 'Transformation to Enterprise Sustainability: Case Studies of Manufacturing and Service Enterprise in Thailand' presented at Proceeding of Management Knowledge and learning Joint International Conference, Timisoara, Romania, 25–27 May 2016.

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Sustainable Tourism Development in Cambodia: The Case of Kep Province Coastal Zone

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ABSTRACT

This study conducted on PEST factors, that it is, a method and techniques used by external environment management factors to monitor in operation system, and scanning component of strategic management. It is a part of the external factors when doing market research. Therefore, PEST factors (Political, Economic, Social, and Technology) conducted as main tools that are influencing sustainable tourism development in Cambodia (STDC). The research objectives: 1. to investigate the level of external environment factors on STDC-KPCZ. 2. To examine the external environment factors that are influencing on STDC-KPCZ. 3. To develop new model of sustainable tourism development (STD) regarding on STDC-KPCZ. Quantitative method was used in this study, using quantitative survey with random sampling from two categories of study field. The questionnaire comprises of two parts including: 1. demographic characteristic, and 2. PEST factors are influenced on sustainable tourism development in Cambodia (STDC). The case study focused on only Cambodian officials as the main target population for researching conducted in the key sample categories comprised: 238 respondents of Officers from Ministry of Tourism in Phnom Penh city, and 90 respondents from Kep province's Officials. The data analysis were descriptive statistics including: frequency, percentage, mean, standard deviation (SD), and multiple regression analysis (MRA). The findings indicate that level of STDC are good on social, and technology within STDC. However, interestingly of among the PEST factors, there are two factors (political and economic) that cannot be used to examine with STDC. Therefore, there are only two factors that can be used to examine and develop new model of STD on STDC-KPCZ.

Keywords: Coastal Zone, External Environment Factors, PEST Factor, and Sustainable Tourism Development.

1) INTRODUCTION

Kingdom of Cambodia recently need developing more along tourist sites to attract tourist to visit in Cambodia more and more, that developing must be sustainable tourism will be pro-poor for local people. Therefore, sustainability of tourism is more important for strategy implementation of tourism.

In this regards, the purpose of this research, need to find out the problems and gaps that obstacle for STDC at the Kep province. There are several problems and the gaps between Coastal tourism and association activities, along with the immense scope of the development of sustainable tourism in the region. Economic growth and external environment that is a result of the conflict between society and nature system with the interaction of human activity and knowledge of the local people still be determined on the tourism industry awareness that it's hard in order to sustainable tourism development in KPCZ. This research involves sustainable tourism development "STD" that will be focused on the case of Kep Province Coastal Zone "KPCZ". There is a need for proper method with a view to maintain the sustainability of coastal tourism sector, with sustainable economic growth and factors outside the coastal tourism sector, as a potential sector. Therefore, as these mention, Kep Province is the part of tourism coastal zone from four province along coastal area in the Kingdom of Cambodia. It is a small province compared to other three provinces. Moreover, comparing to other tourism facilities for supporting tourism industry, is lack of full services for tourism hospitalities are facing of some issues including with external environment management factor that it's related with political, economic, socio-culture, technology, environmental that being big market share and high service quality for extend tourism industry in this area (MOT, 2012).

However, Kep province (KP) is not widely known to potential visitor's destination, and also some tourists are not really confident for visiting at KP in getting be good tourism hospitalities because tourism facilities, service quality, and their operations are not spread widely, especially through social media and the website. Otherwise, KP is facing intense competition both domestic and international tourists. Therefore, in order to identify solutions for dealing with these problems of KPCZ. This study will focus on external environment management factors to answer the research question "What are the external environment factors influencing on sustainable tourism development in Cambodia of Kep province coastal zone (STDC-KPCZ)?" By the way is adapted these applications for the context of Ministry of Tourism,

Cambodia. It has adopted policies and strategies to develop these areas (Kara, Esbah, & Deniz, 2013). On the other hand, refer to MOT (2012), Cambodia's coastal shoreline is 440 Kilometer length. Coastal areas includes four Province: Koh Kong, Kampong Som, Kampot, and Kep Province. The areas are described geographically as seashore and the wetland part. The tropical climate of the area is depended on Southwest and Northeast monsoons, the heavy rain of about 2,500-3,750 mm/y is influenced by Southwest monsoon starting from mid of May to mid of October that affects the tourism activities of the region. The coastal has an area of 19,622 square kilometer (km^2). The number of population in four provinces is estimated at 844,861 or 7% of the country, the density is 43 persons per square kilometer (km^2).

2) LITERATURE REVIEW

This chapter reviews on STDC that relevant the case of Kep Province Coastal Zone "KPCZ". It would be addressed to the concept of tourism comprised: 1. sustainable tourism development. 2. Kep province coastal zone. 3. PEST factors operational (Political, Economic, Socio-culture, and Technological), and research hypotheses within conceptual framework.

Tourism

Base on activities of persons traveling, and staying in a places outside of their usual environment for a specified period. It is not more than one consecutive year for leisure, entertainment, business, and any other legal purpose of tourism, (MOT, 2012).

Tourism Industry Theory

Tourism industry, it is one of the most important that expanding of sectors, and major source of foreign exchange earnings for many developing countries in the world economy. In addition, it has been become a big industry, a lot of effects that can be felt, and seen throughout the world with the effect that all forms of life. The impact of these effects can be useful, but they can cause a lot of drawbacks and bring benefit to the positive effects on society and the natural environment of the region and reduce the negative impact, (Chanin, Chanthong, & Sriprasert, 2013).

Moreover, tourism is as a system that has been identified as a priority sector in the rectangular strategy of the royal government of Cambodia. Tourism sector role-plays an important in contributing to socio and economic development, job creation, revenue generation, the improvement of people's livelihood and poverty alleviation (MOT, 2012).

Sustainable Tourism Development

It is characterized by long-term perspective. To evaluate of tourism development goals, it is a criteria setting which will be set up, and serves as a frame to define the restructuring and target different aspects of sustainable tourism, (Aggtelek, Babia Góra, and Sumava, 2007).

Tourism Development Strategy at Coastal Zone

Sustainable tourism shown the growing popularity with destination along the coastal zone that a part of tourism-oriented government such as in Kenya and Greece have adopted this development seems to have no limits as a result of coastal planning (Kibicho, and Andriotis, 2010).

Moreover, Cambodia coastal zone should be developed with great attention, clear plans, and practical mechanisms to avoid negative impacts like other countries. Security, Safety, and well-being must be paid attention to make the coastal zone become a tourism hub at the international level, proving itself as a qualified member of the most beautiful beaches in the world (MOT, 2012).

PEST Factors Operational

Previous research pointed out that PEST with sustainable tourism, refer to Moutinho, 2010 said that the government continues to adjust themselves throughout Eastern Europe, the former Soviet Union and other parts of the world tourism industry will face great challenges. On the one hand, democratization has brought tremendous opportunities for growth.

The other day, increasing gaping between the rich and the poor, and changes in political alliances can put policy makers in the tourism business of a serious risk analysis. Planning strategies will need to become more adept at "mapping regional instability, based on population and poverty forecasts and evaluations other vulnerability indicators that influence the level of risk that is associated with the tourism investment. Therefore, PEST factors operational that was comprised into four independent variable with sub independent variable (Political “4”, Economic “5”, Social “9”, and Technology “8”) that shown in research hypothesis was conducted in this study.

3) RESEARCH HYPOTHESES

This part is from the conceptual framework and it is also essential for the research in quantitative methodology. These hypotheses of this study conducted by PEST factors that are developed based on the conceptual framework that researcher identifies four hypotheses to be tested for the confirmation is illustrated. PEST factors is the framework of the macro-environment is used in the external environmental scanning component of strategic management. It is part of the external factors when analyzing strategy or do market research and provides an overview of the different macro-environmental factors that must be taken into consideration. In addition, it is a strategic tool that is useful for understanding market growth or decline in business, potential and direction for operations, (Johnson, et al. Fréry, 2014). The importance of ecological or environmental factors, in the first decade of the 21st century has given rise to green business and encourage widespread use of the updated version with PEST framework. It is really essential and necessary to do PEST factors in the STDC decision-making process, (Johnson, et al. Fréry, 2014). Therefore, all of factors in the PEST factors are basic information need to be considered on STDC-KPCZ that is shown in the Figure 1 on PEST factors. As mentioned, Researchers have been set up for the first time, which means hypothesis PEST factors included:

H_1: There is a positive relationship between Political factor and STDC.

Previous research, Political factor be based on whether government intervention in the social-economy including: (1) tax policy, (2) regulation on priority area, (3) competition regulation on tourism market, and (4) environment Law, Moutinho (2010). It could include goods and services that the government intends to provide or be provided (merit goods) and those who do not want to be provided (demerit goods or merit bad), the government impact on health, education and infrastructure (Johnson, et al. Fréry, 2014).

H_2: There is a positive relationship between Economic factor and STDC.

Refer to Moutinho (2010), Economic factor comprised: (1) tourism employment opportunities, (2) level of tourism activity, (3) high quality natural resources, and (4) number of non-resident visitors, lodging occupancy rates, and low taxes. These factors greatly affect does the company/organization operate and make decisions. Moreover, (5) economic growth and community economic stability included interest rates affect the

company's cost of capital, and therefore as a business grows and expands. Exchange rates can affect the cost of exports and the supply and prices of imports in economic (Johnson, et al. Fréry, 2014).

H_3: There is a positive relationship between Social factor and STDC.

Social factor include the cultural aspects and health consciousness, population growth rate, age distribution, career attitudes and emphasis on safety. In addition, high trends in social factors affect the demand for a developing and how that company/organization operates, so the company can change strategies management to adapt with the trend of social causes (Johnson, et al. Fréry, 2014). Otherwise, social factor is the most important for tourism development to sustainable including: (1) changes in lifestyle, (2) attitudes toward work/ spare time, (3) education levels, (4) health concerns, (5) changes in income distribution, (6) media pressure, (7) liveliness of the place, (8) language, local customs, folklore, and (9) Way of life, (Dwyer, Forsyth & Dwyer, 2010).

H_4: There is a positive relationship between Technology factor and STDC.

Previous research, refer to (Johnson, et al. Fréry, 2014), Technological factor, it includes such aspects (1) R & D activity, automation, (2) technology incentives and the rate of technological change. In addition, the spreading of and breakthrough in new technology (3), (4) technology incentives, technology level in tourism industry. These can bring tourism industry by sustaining of tourism development (Moutinho, 2010). Moreover, (5) information communication and technology (ICT) changes, (6) access to newest technology, (7) internet infrastructure, and (7) penetration. These can set barriers to entry, a minimum level of efficiency and affect the production outsourcing decision to the changes will affect the cost of technology, quality and lead to innovation, (Dwyer, Forsyth & Dwyer, 2010). Therefore, to examined the difference in perception between the variables depend on sustainability indicators and variable capacity independent to carry capacity as should be framework processing on hypotheses between dependent variable (STDC-KPCZ) and independent variable “H1, H2, H3, and H4” below:

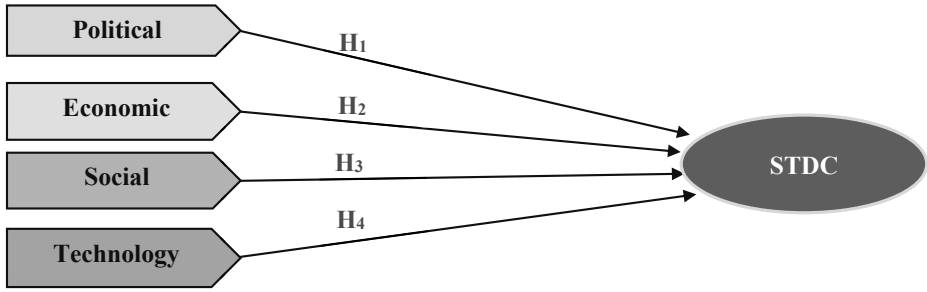


Figure 1: *The Conceptual Framework*

In Figure 1, this model shown the observed variables used in order to investigate and examined the latent constructs PEST factors are influencing on STDC-KPCZ.

As would be described in the following section, the observed variables were chosen based on previous research that also used multiple regression analysis (MRA) is one of the most prevalent methodologies in business research (Hopkins & Ferguson, 2014).

4) METHODOLOGY

This study conducted on PEST factors for external environment analysis of this research, it is a tool for doing marketing research in order to find out solution and the result that proposed in this study comprised: (1) to investigate the level of external environment factors "PEST factor" on STDC-KPCZ; (2) to examine the external environment factors "PEST factor" that are influencing on STDC-KPCZ, and (3) to develop new model of sustainable tourism development (STD) regarding on STDC-KPCZ. Researcher selected PEST factor as analysis tool from different reference for each items of PEST factors because it more critical research and clearly to get the STDC. Otherwise, in this study, the main topic focus on developing sector, so should be more idea to sum up in one factor in order to get be good successful and good implementation plan for future research and sustainable tourism development in this area "KPCZ". Quantitative method was used in this study, using quantitative survey with random sampling from two categories of study field. This study conducted 7-point Likert scale of the rankings of the potential items for measuring of result. 7-point Likert scale was ranging 1-7 point that mean from 1- strongly disagree to 7- strongly agree of 7 point, (Wu & Cheng (2013). This study research had decided to use this scale because it consists of detail answers; therefore, it was required the respondents to use more critical thinking to be filling of questionnaire.

Moreover, the respondents won't to be able identify participates answers by without careful thinking. For example, basically once Likert scale is used, he/she respondents could identify the middle answer easily which it is rang of number. Conversely, Point of 7 is Likert scale would not that easy, (Wu & Cheng, 2013). In addition, the 7-point Likert scale allows the respondents the variety of options for evaluating each suggested statement.

4.1) Instrumentation Research

The questionnaire consists of two parts include: (1) demographic characteristics, and (2) would be used from the different concept of indicators of different authors that base on PEST factors are influencing on STDC-KPCZ. Moreover, this part conducted within STDC on KPCZ.

According to Demoska, T. & Petrevska, B. (2012), sustainable tourism development means applying the concept of sustainability in the field of tourism, it is an idea economically viable, ecologically sustainable as well as socially equitable. Therefore, the way out is detected in indicators assessment. With regards to application of sustainable tourism development indicators, various problems occur towards numerous criterions comprised: (1) Nature and surroundings, (2) Personal security, (3) Service on the roads, (4) Comfort in accommodations, (5) Quality of services in restaurants; (6) Quality of services from personal; (7) Possibilities for excursions; (8) Quality of PPT connections, and (9) Ecological value. Therefore, this paper attempts to estimate sustainable tourism development indicators in Cambodia. This study field, researcher conducted random size of group people from different place that divided in two categories of this study. (1) Officials of Ministry of Tourism, and (2) Officials of Kep province. The sample size was limited to the group mentioned because there is for expert involvement and opinion on STDC policy mechanism, the need examine possible resultant effects on the officials from Kep province coastal zone, to come up with recommendation which in line with the government tourism development initiative. Therefore, according to MOT (July 2016), total amount of MOT's officials are 588 officials. Moreover, according to Kep province report (2016), shown that statistic of Kep province officials have total amount 116 officials. Therefore, sum up of sample size "YAMANE formula" that it shown on the respondent's amount 328 sample size was conducted in this study.

4.2) Significance of the Study

This study focused on the case study of Kep province coastal zone, Cambodia. Time line for data collection was from October to December 2016. This study research would be necessary on STDC. It's in order to enhance living standard for local people is better than in the previous time, and get more tourist attractive visit in this area also. As part of the coastal resort newly emergent in the southern of the Cambodia, Kep province has the benefits of learning from the previous experience, advertising, development of coastal particularly quickly, this resulted from the impact on external environmental factors and participation for local people. For instance, according to Skopje, 2010, research in Macedonia, STD can result with many positive impacts directly and indirectly on economic growth such as preservation of natural and cultural resources, economic viability and social justice, measured in terms of natural surroundings, 80%, personal security, 70%, service on the road, 38%, possibilities for excursions, 52%, ecological value 85% in Macedonia.

To address on STDC. Cambodia has tried in order to put with the strategic planning and sustainable programs for its target, even if you seem to be a little of evaluation with implementation of the availability, and effectiveness of it, (MOT, 2012).

4.3) Data collection

Questionnaires divides two parts comprised: (1) demographic characteristics: Gender; Age; Education; Position, and Working experience. (2) With suggestion of the respondent's participates on sustainable tourism development in Cambodia (STDC), the case of Kep province coastal zone (KPCZ).

Therefore, this part conducted with the different concept of indicators of different authors that including with four main factors (PEST) are Political "4 items", Economic "5 items", Social "9 items", Technology "8 items", and STDC "9 items" of KPCZ. Total amount of this questions have 40 items of questionnaires.

4.4) Reliability

According to Joseph A & Rosemary R, 2003, reliability of Cronbach alpha typically range between 0 and 1, however, is no lower limit to this coefficient. This alpha coefficient closer Cronbach 1.0 internal stability, greater in scale. Moreover, refer to George, D., & Mallery, P. (2003) provided the following rules of thumb for evaluation: "_ > .9-Excellent, _ > .8-Good, _ > .7-Acceptable, _ > .6-Questionable, _ > .5-Poor, and _ < .5-Unacceptable". Therefore, as the result of pilot testing from 30 respondents, while increasing the value of alpha is partially dependent upon the number of items in the scale, so it should be noted that an alpha of 0.8 is a reasonable goal. Thus, researcher could conduct of each item of the questionnaire for data collection from 328 respondents.

In this regarding, the result of Cronbach's alpha reliability of this questionnaire is good, value of alpha is nearly high value that it is good internal consistency of the items in the scale.

5) RESULTS

It conducted three research objective are: (1) to investigate the level of PEST factors on STDC-KPCZ, and (2) to examine the PEST factors that are influencing on STDC. After that identified also the research questions in this study was using "What are the PEST factors influencing on STDC-KPCZ. Therefore, in order to answer of this question, the objective 3 should be answered of this question that (3) to develop new model of sustainable tourism development (STD) regarding on STDC-KPCZ. To get the result of objective 3, researcher uses IBM SPSS version 20 software to descriptive statistics on mean, frequency, percentage and standard deviation (SD). Simultaneously, multiple regression analysis (MRA) was used as the analysis tool by running in SPSS to get the result.

5.1) Result of Demographic Characteristics

In Table 1 shows 328 respondents, there are about 55 % of males. The majority (about 43%) officers age between twenty five and thirty years; approximately 69% were studied Bachelor degree; and 38% of majority as officers. Almost 19% of respondents were at chief of bureau, and about 31% working experience more than five years.

Table 1: Frequencies and percentage of demographics characteristic of 328 respondents

Variables	Options	Frequency	Percentage
Gender	Male	179	54.6
	Female	149	45.4
Age	< 24 years old	72	22.0
	25 - 34 years old	140	42.7
	35 - 44 years old	93	28.4
	45 - 54 years old	23	7.0
Education	Bachelor degree	227	69.2
	Master degree	101	30.8
Position	Director	6	1.8
	Assistant Director	22	6.7
	Deputy Director	59	18.0
	Chief of Bureau	62	18.9
	Deputy Chief of Bureau	56	17.1
	Official	123	37.5
Working Experience	< 1 years old	44	13.4
	1 - 3 years old	102	31.1
	3 - 5 years old	79	24.1
	≥ 5 years old	103	31.4

Result of objective 1

To investigate the level of PEST factors and STDC on KPCZ. Therefore, answers of this objective, descriptive statistic shows in Table 2 were used including mean and standard deviation (SD) of all variables demonstrating the performance of STDC-KPCZ. Moreover, Table 3, 4, 5, 6 & 7 were shown detail all of each variables including: mean and standard deviation (SD).

In Table 2 shows the summary of all variables for 328 respondents from Cambodian officers' evaluation of MOT and Kep province. The result of mean shown that the Good range of mean calculated 5.55-5.78. Respondents in all criteria; Political, Economic, Social, Technology, and STDC are in the good level.

Table 2: Means and Standard Deviation (SD) of all variables (n = 328)

Variables	Mean	SD	Agreement level	Performance
Political	5.62	0.60	Agree	Good
Economic	5.57	0.55	Agree	Good
Social	5.55	0.51	Agree	Good
Technology	5.62	0.50	Agree	Good
STDC	5.78	0.55	Agree	Good

Table 3 shows political factor, the level of agreement of the 328 respondent's evaluation on each item within this factor. The result of political factor shows that the average mean score of each variables which can be meaning that "Good". The total of average mean score of political is 5.62 that can be meaning that "Good". Therefore, mean score of the four items of political factor are which mean that "Good of the performance of STDC-KPCZ".

Table 3 Means and SD of Political (n = 328)

Political factors	$\overline{X}$	SD	Meaning
1. Tax policy (rates and incentives)	5.63	.81	Good
2. Regulation on priority area for STD	5.46	.99	Good
3. Competition regulation on tourism market	5.55	.94	Good
4. Environmental Law	5.84	.99	Good

Table 4 Means and SD of Economic (n = 328)

Economic factors	$\overline{X}$	SD	Meaning
1. Community economic stability	5.55	.78	Good
2. Tourism employment opportunities	5.59	.87	Good
3. Level of tourism activity	5.55	.88	Good
4. High quality natural resources	5.63	.91	Good
5. Number of non-resident visitors	5.52	.86	Good

Table 4 shows the level of agreement of the 328 respondent's evaluation on each item within this factor. The result of economic factor shows that the average mean score of each variables which can be meaning that "Good". The total of average mean score of political is 5.57 that can be meaning that "Good". Therefore, mean score of the five items of economic factor are which mean that "Good of the performance of STDC-KPCZ".

In Table 5 shows that to indicate the level of agreement of the respondents on social factor. The average mean score of all nigh items is 5.55 which was meaning of level that "Good" of the performance of STDC on social factor. The result of social factor shows that the average mean score of each variables which can be meaning that "Good". However, there are only S9 "Way of life" is average mean score 5.26 (Somewhat good) on the all item of social factors.

As the result, mean score of the nigh items of social factor are which mean that “Good of the performance of STDC-KPCZ”.

Table 5: Means and SD of Social (n = 328)

Social factors	$\overline{X}$	SD	Meaning
1. Changes in values/ attitudes	5.62	.83	Good
2. Changes in lifestyle	5.71	.89	Good
3. Attitudes toward work/ spare time	5.62	.92	Good
4. Education levels	5.70	.90	Good
5. Health concerns	5.51	.96	Good
6. Changes in income distribution	5.48	.91	Good
7. Liveliness of the place	5.51	.83	Good
8. Language, local customs, folklore	5.58	.89	Good
9. Way of life	5.26	.81	Somewhat Good

Table 6 shows means and SD of technology from each variables of technology factor. According to Table 6 shows the level of agreement of the 328 respondent’s evaluation, as the result of social factor shows that the average mean score of each variables which can be meaning that “Good”. The average mean score of all eight items is 5.62 which was meaning of level that “Good” of the performance of STDC on technology factor. Therefore, mean score of the eight items of technology factor are which mean that “Good of the performance of STDC-KPCZ”.

Table 6**:** Means and SD of Technology (n = 328)

Technology factors	$\overline{X}$	SD	Meaning
1. Spreading and breakthrough in new technology	5.55	.68	Good
2. Rate of technological change	5.45	.78	Good
3. Spending on research & development	5.67	.90	Good
4. Technology incentives	5.64	.86	Good
5. Technology level in tourism industry	5.64	.73	Good
6. Information Communication and Technology (ICT) changes.	5.57	.82	Good Good
7. Access to newest technology	5.58	.84	Good
8. Internet infrastructure and penetration	5.85	.89	Good

Refer to Table 7 shows the level of agreement of the 328 respondents on STDC factor. In this Table 7, the average of mean score of all nigh items is 5.78 that was meaning of level is “Good” of the performance of STDC-KPCZ. The highest mean score of the nigh items is item STDC1 within mean 6.21 that illustrating of the performance of STDC-KPCZ on the statement is “Nature and surroundings in coastal area” that it mean score is “Very good”. Therefore, mean score of the nigh items of STDC factor are which mean that “Good of the performance of STDC-KPCZ”.

Table 7: Means and SD of STDC (n=328)

STDC	$\bar{X}$	SD	Meaning
1. Nature and surroundings in coastal area.	6.21	.94	Very good
2. Personal security at the beach convenient	5.72	.85	Good
3. Services on the roads provide service politely, well-behaved.	5.95	1.10	Good
4. Comfort in accommodations satisfies	5.82	1.01	Good
5. Quality of services in restaurants provide service politely/well-behaved.	5.55	1.01	Good
6. Quality of services from personnel is able to perceive and realize my demand from my manner.	5.81	.96	Good
7. Possibilities for excursions is able to communicate using English.	5.77	1.11	Good
8. Quality of PPT connections of their equipment are available to use.	5.76	1.01	Good
9. Ecological value still be nice conservation and diversity.	5.44	.96	Good

Result of objective 2

The second objective of study is to be examine the PEST factors that are influencing on STDC-KPCZ. Therefore, in order to answers this objective, descriptive statistic on multiple regression analysis (MRA) was run by using the data from 328 respondents. Before analyzing the MRA, researcher was checking the Pearson's correlation coefficients (r), and VIF within the both X and Y variables "X is PEST factors and Y is STDC", it is the most important to make sure that all of variables do not have too close correlations within each other. Table 8 shows the Pearson's correlation coefficients (r) between all variables, and Table 9 shows about multiple regression analysis (MRA) that as the result of regression coefficients of important variable in order to examine the PEST factors are influencing on STDC-KPCZ below:

Table 8: Pearson's correlation coefficients (r) between all variables

Pearson's correlation "Variable"	Y STDC	X_1 Political	X_2 Economic	X_3 Social	X_4 Technology
Y	1	.013*	-.071*	.170	-.138*
X_1	-	1	.090	-.004*	.154
X_2	-	-	1	.168	.101
X_3	-	-	-	1	.050
X_4	-	-	-	-	1

: significant at the .05 level

The Pearson's Correlation Coefficients illustrate the relationship between all variable included political, economic, social, technology (PEST factor), and sustainable tourism development in Cambodia (STDC). Correlations were

considered strong for r > 0.7, moderate for 0.5 < r < 0.7, and weak for r < 0.5 (Ansorge et all., 2012). According to Table 8 shown that the relationship between STDC and PEST factor are on weak relationship. However, there are only one factor in this Table 8 has strong correlation coefficients is X_3 (Social) that r > 0.7 within the r score 0.170 that has correlation coefficients within the STDC. In this regarding, X_1 (Political); X_2 (Economic), and X_4 (Technology) have weak correlation coefficients within the STDC with the r score ranked from (-0.71) to (-0.138).

5.2) Hypothesis testing

According to the result shown in Table 9, the multiple regression analysis of the four factors and STDC only for the factors that appeared as significant in the tests. Moreover, the multicollinearity problem for the different independent variables was examined using VIF. The highest VIF values of the different independent variables were all acceptable, being less than five "_< 0.05", (Hossain Academy, 2012). Thus, there is no collinearity associated with the independent variables.

Table 9: Result of the Regression Coefficients of important variable

	Unstandardized Coefficient		Standardized Coefficient	t-Test	p-value	Collinearity Statistics	
Variable	Coefficient	S.E	**Beta**			**Tolerance**	**VIF**
(Constant)	52.258	5.000	-	10.452	.000*		
Political	.093	.114	.045	.819	.413^{ns}	.970	1.031
Economic	-.169	.100	-.093	-1.685	.093 ^{ns}	.957	1.045
Social	.211	.060	.193	3.528	.000*	.970	1.031
Technology	-.182	.069	-.145	-2.650	.008*	.967	1.034

*ns: not significant (p-value > .05); *****: significant at the 0.05 level; F (4, 323) = 5.168*

In Table 9 illustrates the regression coefficients of the four factors of the PEST factor that are influencing on STDC-KPCZ. The findings show that there are two factors including social, and technology that can be used to examine the PEST factor with the statistical significance at .05 level. Therefore, the result of examine equation between dependence and independence variable from predictor. As the result, refer to Table 8, the correlations of scores that shown on four factors include: political (0.013), economic (-0.071), social (0.170*), and technology (-0.138). The findings show that are all on weak correlations with STDC with the score lower than 0.7 (< .7). However, there were one factor "social" has strongly correlation with STDC within the score higher than 0.7 (> .7).

Therefore, the hypothesis (H_1, H_2, H_4) are unsupported, and hypothesis (H_3) is supported by the results. Other hand, according to Table 9 shown that there are two factors would be might to use in order to examine the PEST factor that are influencing on STDC-KPCZ. As the result of these hypotheses shows as summary in Table 10.

Table 10: Summary of the result of hypotheses testing

	Hypotheses	Results
H_1:	There is a positive relationship between Political and STDC.	The H_1 (political) is not supported
H_2:	There is a positive relationship between Economic and STDC.	The H_2 (economic) is not supported
H_3:	There is a positive relationship between Social and STDC.	The H_3 (social) is supported
H_4:	There is a positive relationship between Technology and STDC.	The H_3 (technology) is supported with negative relationship

As the results, Table 10 shows on hypotheses testing of this study. Therefore, as the results of examine positive relationship between the external environment management factor (PEST) for sustainable tourism development in Cambodia (STDC) that are influencing on STDC-KPCZ, two hypotheses were unsupported by analyzing Regression Coefficients as the statistical testing. However, there were two hypotheses were supported by analyzing Multiple Regression Coefficients as the statistical testing.

6) DISCUSSION

The results show only two factors can be examine within relationship between PEST factor and STDC of KPCZ. Tourism industry representatives view sustainability from a very broad perspective, suggestion that tourism development in more of a means to an end than an end in itself where sustainability concept applied to tourism have generally been neglected (Stephen F. McCool. 1998).

The finding of this wellbeing study that were discussed based on PEST factors of tourism.

1. Political contributions on sustainable tourism

This research failed to reveal the positive relationship between Political and STDC that are influencing on STDC-KPCZ. Political was not supported with research hypothesis, so this factor was not significant of this study. According to Chen et al., (2008), political is an obstacle to sustainable tourism,

while the government has recognized that tourism valuable strategic development. It is important for government policies and to understand the core and weaknesses of the country as a tourist destination and to develop strategies. Framework regulations currently make it difficult in the implementation of regulations to protect the property, tourism and environment (Reimer and Walter, 2013). Other hand, Ministry of Tourism, Cambodia is supported by bilateral/multilateral loans often deny how tourism can be inserted into the lifestyle change. Moreover, the failure to be include with tourism sector that it is considering alternative livelihoods in developing the movement of other industrial property damage tourism, which makes it increasingly difficult to establish in sustainable tourism business (Bill; Sokhom; Rourke; & Pearce. 2015).

2. Economic contributions on sustainable tourism

The finding of result shows that economic factor was not supported within this study, which it for the case of economic (Beta = -0.093), and also p-value was not significant at the 0.01 level. Therefore, economic factor are not influencing on STDC-KPCZ.

Otherwise, according to Catherine, G.H (2010), there are four different types of local cash income "economic" related to four different types of people that not relevant with sustainable tourism development as below:

- Formal wage job: to get a secure footing, but only a minority of the population and not the poor.

- Revenue from sales - or simply: can be quite small, but spread more widely, and may be enough to cover school fees for one or more children, for example.

Dividends and profits arising from enterprises owned by local investors.
May include profits from the enterprise community dividend from private sector partnership and land rental paid by investors.

3. Social contributions on sustainable tourism

Socio-culture is the most important for STDC-KPCZ that it was focus on culture value of lifestyle, and expression of action creative of the local people, (Catherine, G.H. 2010).

As a result of this study, in order to sustainable tourism development in Cambodia should be considered clearly on positive impact that developing of country has strong advantage for sustaining tourism. According to Catherine, G.H (2010), has been noticed on sustainable tourism development can be positive affect such as below:

- Traditional culture: Local cuisine, and living standard for local people, and community organizations.

- Values and participates in conservation cultural and natural heritage. Collective tourism planning and promotion tourism destination by the community.

- Passing knowledge of cultural and natural heritage to the next generation.

Therefore, social factor was supported with this study that might be contribution on sustainable tourism, will be developing the new model of sustainable tourism development on STDC-KPCZ.

4. Technological on sustainable tourism

In this section, technology is the most important for tourism that as a part of sustainable tourism development in Cambodia because it might be too convenient to tourists from other countries in the world in order to visit in Kingdom of Cambodia.

Other hand, Information and communications in the tourism (ICT) sector is a key part of modern tourism, while it was in the world of technology. We have no other choice but to understand and manage the changes. It's the technology changed all about tourism development to ensure the responsible and sustainable contemporary world (Johnson, et al. Fréry, 2014).

Otherwise, in the group of tourism products today a new technology that has given rise to a new business model using a new sales and distribution system. Electronic distribution has led to significant structural changes, including replacing the existing traditional sales channels. Technology has also led to increasing integration between different sectors of the industry. It has spurred the growth of larger organizations covering many aspects of tourism, creating new industries (Moutinho, 2010).

However, the finding shows a negative relationship with STDC-KPCZ for the case of technology (Beta = -0.145). As the result, this negative relationship shows that much as technological advancement would improve on STDC, STDC-KPCZ would still be achieved with limited application of advanced technology.

7) LIMITATION AND FUTURE RESEARCH RECOMMENDATION

As the results presented in this study need to be quantitative in study filed of several limitations.

First, the study was conducted during working time of Government's officials, thus findings were limited of the respondents. Officials who work in different position may form different opinions generalizability of tourism research findings, and should always be taken into consideration in the interpretation stage of survey. Therefore, in order to overcome this limitation, future researchers could conduct similar surveys in different areas. The survey results can be compared to identify similarities and differences in them. Further, the population of this study was limited to visitors of a tourist destination in the Kep province coastal zone. Therefore, the results from this study may not be generalized beyond this population.

Secondly, this study, researcher conducted quantitative method for master study. Therefore, for future research should be apply qualitative method to more clear and confirm this study research.

Thirdly, in this study, researcher conducted only quantitative method. Thus, in the future research should be apply to conduct mix method including, quantitative and qualitative method. For qualitative method won be conducted on in-depth interview within the respondents that the most important for value information.

Fourthly, the results of study, was used multiple regression analysis (MRA). Thus, in the future study should be analyzed using confirmatory factor analysis (CFA).

Lastly, since the survey was conducted by the officials working at different place such as officials of MOT, and officials of KP, it was sure that all respondents would have been enjoy to complete their opinion and experience that the respondents was returned by 100% of questionnaire.

8) CONCLUSION

This section is the overall of researcher's opinion that was conducted of this study. The study of objective is to investigate the level of external environment management factors (PEST factors) for STD on STDC-KPCZ. PEST factors were identified and used to examine on STDC-KPCZ. Quantitative approach was applied in this research that the questionnaire was conducted and developed from the literature reviews on PEST's operational definitions of the external environment factors and STDC. As the final result, researcher was developed the sustainable tourism development (STD) on STDC-KPCZ for potential academic contribution and tourism business development.

In this regards, in order to data collection, researcher distributed questionnaire to all of participates that divided into two categories of sample size including, officials of MOT in Phnom Penh city, and officials of KP. The total questionnaires was used for the data analysis were 328 questionnaires. The findings show that PEST factors on STDC-KPCZ are good (Political, Economic, Social, and Technology). In addition, the most important, Cambodia is practicing on coastal zone tourism management action plan, (MOT, 2012).

Moreover, the results indicate of PEST factors have only two factors are positive relationship within STDC for KPCZ. Therefore, there are only social and technology factors are good that can be used to examine to the PEST factors on STDC-KPCZ. Furthermore, the findings illustrate that have two factors unsupported and two factors are supported within the literature reviews.

Finally, refer to Figure 2 shows on managerial implication diagram that researcher proposed and suggested from this study was conducted with both this objective to gain on new model of strategy management on STDC "tourism coastal zone" in order to put into practice for achieving the sustainable tourism development in Cambodia, the case of Kep province coastal zone.

Therefore, the findings, researcher would like to explain the process of the managerial implication that shows on diagram (Figure 2). STDC should be considering in implementing in the KPCZ including: First, researcher has been analyzed to the findings identify the problems and gap to investigated and examined on external environment management factors focus on PEST

factors as strategy management. Second, the findings as the result, to gain on developing new model of strategy management on STDC “tourism coastal zone” throughout conceptual framework as detailed in the literature review. Therefore, this study shown as the result PEST factors is a method and techniques used by external environment management factors to monitor in operate system, and scanning component of strategic management. PEST factors conducted as main tools to lead to sustainable tourism management in Cambodia “STMC” to get on STDC-KPCZ.

Third, the quantitative data were analyzed to answer two objective on the model, as the results shown that PEST strategy on STDC-KPCZ is doing well. However, the findings from multiple regression analyzed have only two factors (social and technology) were supported for launch to be new model of STDC-KPCZ. Therefore, the findings also indicate that there are only two factors that can be used to examine within STDC. Those two factors and STDC are considered the most critical factors respectively, involved with KPCZ. Lastly, the results are sharing on potential academic contribution with new model for practicing as tourism business development on STDC-KPCZ should be achieved the good result in the future.

Potential Contribution

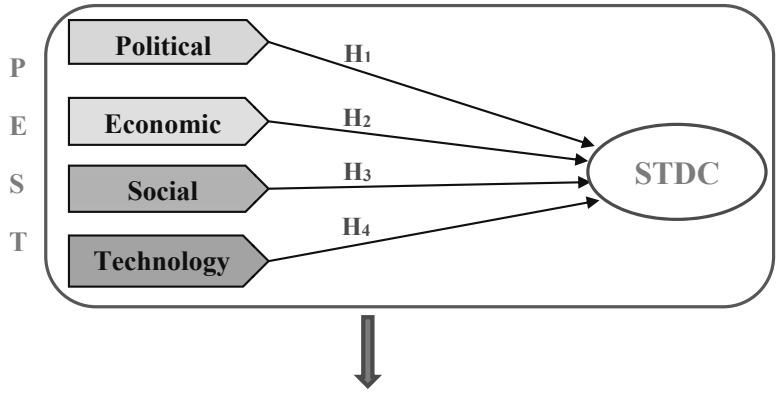
(1) To investigate the level of external environment factors on STDC-KPCZ.

(2) To examine the external environment factors that are influencing on STDC-KPCZ.

(3) To develop new model of sustainable tourism development (STD) regarding STDC-KPCZ.

To gain on new model of strategy management on STDC "tourism coastal zone"

Conceptual framework of STDC-KPCZ



New model of STD for STDC-KPCZ

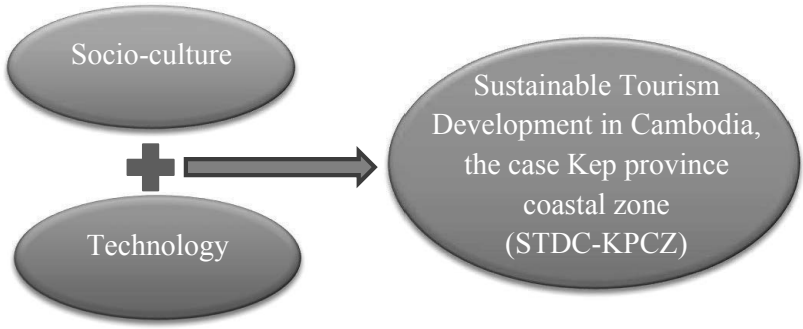


Figure 2: Managerial Implication Diagram

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The Influence of Terrorism on Tourist Decision Making: The Case Study of Kampala –Uganda.

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ABSTRACT

The purpose of this research study was to examine the influence of terrorism on decision making of international tourists who have visited Kampala. To achieve this purpose, the study examined the level of influence of terrorism components on tourist decision making. The terrorism components included media coverage of terrorism, terrorism risk perception, social interaction regarding terrorism, terrorism awareness and terrorism attack and how they relate with tourist decision making. The study adopted the descriptive research design for the collection and analysis, data from 110 usable cases was analyzed using Multiple Regression Analysis to verify the hypotheses and presented using tables from the statistics.The study revealed that terrorism components are significant with tourist decision making but with a positive influence and only terrorism risk perception indicating a negative influence on the decision of the tourists. Implications for practice and research are discussed.

Keywords: Terrorism, Tourist, and Tourist Decision Making.

1) INTRODUCTION

Over the years tourism in Uganda and world over has progressively become an important industry and instrumental in socio economic development of the country through generation of employment and wealth creation in the services directly and indirectly involved in tourism related business. According to World Tourism Organization report, 2012, the year 2012 recorded the best tourism performance with worldwide tourist arrivals exceeding the one billion mark for the first time. In that year international tourist receipts reached US$ 1,075 billion worldwide and this is in agreement with (Poirier, 2000) who pointed out that tourism today is second only to oil as the world's leading export commodity accounting for global earning of more than $ 300 billion dollars or nearly 25% of total world Gross National Product (GNP) in the last decade. Obviously, tourism growth and its resultant effect on economic fortunes of nations globally are not uniform. Uganda realized a total contribution of UGX 6,395.5bn, equivalent to 9.9% of the country's GDP from Travel & Tourism which was an upward increase from the year 2013 which recorded UGX5, 619bn, equivalent to 7.9% of GDP and is forecast to rise by 6.6% pa to UGX13, 083.2bn (10.2% of GDP) in 2025, (2015 SECTOR STATISTICAL ABSTRACT, ministry of tourism Uganda). Tourism has also become Uganda's single largest export earner and generator of foreign exchange at US$ 1,039 million per annum (UBOS, 2014) and visitor exports generated UGX 3,549.3billion which is equivalent to US$1,366million1, accounting for 26.0% of Uganda's total exports in 2014, (WTTC, 2015) and it also generated direct employment opportunities to 247,100 people in the same year with additional 345,000 in indirectly and induced opportunities (WTTC, 2015).

Table 1: Key performance indicators between 2013 and 2014

Indicator	Year		
	2013	2014	% increase
Total contribution of tourism to GDP	5,619b	6,395b	9.9
Direct contribution of tourism to GDP	2,402b	2,762.5b	4.3
Direct number of employees	227,500	247100	3.6
Total contribution of tourism to employment (direct and indirect)	551,100	592500	8.6

Source: Tourism sector statistical abstract, MOT 2015.

Although Uganda has registered an improvement in the tourism, the sector still faces major terrorism related challenges. For example, the impact of media coverage of Kony 2012 video (Brianne C. Busey, 2014), already viewed by over 100 million people worldwide, threatens to overshadow the

accolades and reinforce negative images already in the minds of many potential visitors which still affects their decisions to visit Uganda, Brianne C. B. (2014). Tourism in Uganda has suffered from a 40 year legacy of violence through many violent conflicts throughout its history and is still struggling against many conflicting sources within the country, indeed being a developing country (Brianne C. B. 2014).

Uganda is faced with various terrorism related acts, for example, the terror attacks in Uganda in September 2010 that left 80 people dead which worsened the situation, the political insurgencies caused by the Allied Democratic Force (ADF) and Lord's Resistance Army (LRA) and rebel groups operating in the west and northern part of the country, increase awareness by tourists and potential tourists about terrorism and social interaction among tourists regarding terrorism and political demonstration by opposition parties have made the country vulnerable to security threats which could cause tremendous negative impact on tourist arrivals.

While current studies have principally investigated the impact of terrorism on global tourism, there are very few researches done in Uganda and none has attempted to focus on its impact in Kampala which is one of the biggest tourist attractions after the national parks. More so, there is still no study on the influence of terrorism on tourist decision making in choosing Kampala as a preferred destination and this has been noted as a gap in the study. Therefore, the influence of the components of terrorism (media coverage of terrorism, terrorism risk perception, social interaction regarding terrorism, terrorism awareness and terrorism attack) on tourist decision making to visit Kampala is remarkably important to be achieved in that gap, thus, the interest of the researcher on "The influence of terrorism on tourist decision making", the case study of Kampala, Uganda.

1.1) SCOPE AND SIGNIFICANCE OF THE STUDY

This research was conducted in Kampala-Uganda due to its central location in the capital of Uganda and the numerous attraction sites and being prone to terrorist attacks and terrorism threats, it was conducted between October and November 2016.

This research will be useful to policy makers from the tourism sector to have their viewpoints on the existing policy gaps in security of tourists within the country and how to improve it and also be able to understand tourist perception on terrorism and its resultant impact on their decision making

processes and develop possible strategies to realize favorable destination image among international tourists.

The study will assist the tourism business stakeholders in assessing the likelihood of terrorism impact on their businesses which will help them formulate and implement strategic plans aimed at improving destination marketing in order to maintain high tourist demand for their services.

High institutions of learning, especially those offering tourism courses will greatly benefit from this research as a reference and it will also add up to the few literatures available to researchers on the influence of terrorism on tourist destination decision making.

This research will help international companies to assess the impact of terrorism on their companies mainly in the short run for those involved service and tourism related businesses and in the long run for companies involved the manufacturing channels and as a result develop risk management strategies in cases of such incidents.

2) LITERATURE REVIEW

2.1) Tourist decision making process

The tourist decision making process assumes three essential stages, namely, the pre-decision, decision and post-purchase evaluation stages (Antónia Correia & Adriano Pimpão, 2008,Bentler&Speckart, 1979; Correia, 2002)

According to Antónia Correia and Adriano Pimpão (2008), the pre-decision stage often occur on products, such as tourist destinations, that are intangible or invisible before or at the time of purchase, often times involving decision making from a range of competing alternatives. The decision stage includes the evaluation of perceptions through which consumers base their decisions in terms of time and budget constraints, conditioning factors that restrict choice. Given the time interval between purchase and use, the former represents a transitory process.

Destination choice and associated factors that form part and parcel of any holiday planning involve a group of complex decisions that take up time and energy. However, most tourists take pleasure in this process (Crouch & Jordan 2004). (Edwards, 1954; Von Neumann & Morgenstern, 1944) claims that people collect and analyze information, eventually selecting an optimal

solution from a range of alternatives (the 'choice set'). They do so by evaluating the advantages and disadvantages of each possible outcome, choosing the one most appropriate to achieve their desired objective, hence the focus of this research. The constructs that constitute decision making are further summarized in table 2.

Table 2: Tourist decision making constructs from previous studies

Motivation	An individual's need to adopt a certain behavior in order to satisfy the motivational condition AntóniaCorreia and Adriano Pimpão, (2008). Motivation theories describe a dynamic process of internal psychological factors (needs, desires and goals) which generate a level of tension in an individual and influence him or her towards purchase Fodness (1994). The characteristics or attributes of a destination allow the tourist to create expectations in terms of satisfying motivational needs, after which the tourist enters the learning stage and searches for the destination capable of yielding satisfaction and fulfillment
Learning process	The process whereby the consumer acquires knowledge about a product and subsequent consumption experience when considering future behaviors. Highly involved travelers tend to be more receptive to information concerning the travel product or destination, and disseminate information willingly. Perception building towards destinations is part of the learning process. Jamrozy (1996)
Perception	The perceived value of a product (Correia and Crouch, 2004).This concept develops from cognitive and behavioral perspectives, resulting from the learning and motivational processes rendered by the tourist. Internal and external motivations to travel lead to different perceptions about the destination, Baloglu (1997)
Behavior intention	A function of the attitude towards behavioral and social norms. Expectations affect attitude; expectations include, the possibility of adopting certain behavior and the evaluation of how the consumer feels about engaging in the behavior (Fishbein & Ajzen 1980)

Source: Antónia Correia and Adriano Pimpão, 2008

2.2) Concept of terrorism

According to Albu, Elena, 2016 & Servier, 2002, the term "terrorism" derives from the term of Latin origin "terror" meaning "physical violence, fear, dread deliberately generated by public violent acts, the premeditated use of certain means capable of bringing about collective peril". Terrorism comprises the violent acts committed by one or more individuals against randomly chosen victims with the scope of maintaining a power, a will of domination by fear and dread that quickly become contagious for the entire population.

Terrorism is a form of communication, of both the threat or reality of violence and the political message, Richter and Waugh in Medlik,1991, Gilham, 2001 mentioned six major goals that terrorist attacks may be designed to achieve which include (1) to act as a catalyst for a more general aim, (2) to force issues, (3) to influence political behavior, (4) to make demands, (5) to provoke reaction (or overreaction) and (6) to publicize a cause. Enders and Sandler, 2001 explicate that 'terrorists choose their targets to appear to be random so that everyone feels at risk, when getting on a plane, entering a federal building, or strolling a market square' because people tend to over respond to unlikely catastrophic events while ignoring more likely daily dangers, terrorists succeed in achieving society -- wide anxiety with minimal resources.

Terrorism in both the generating and destination regions influence travel propensity in a negative way. The facets of terrorism include civil wars, coups, riots and political protests or social unrest and strikes as summarized by Hall and O`Sullivan, 1996. Since 1950 to date, terrorism and civil wars have impacted negatively on the global tourism industry and this has been affected more by terrorism acts such as media coverage, risk perception among tourists, social interactions and increased awareness by tourists and terrorism attacks as asserted by researchers below;

2.3) Media coverage of terrorism

Mansfield &Pizam, (2005) confirm that the guarantee of tourists' personal safety is perhaps the most important prerequisite for any aspiring tourism destination decision making. This assertion is further supported by Anson, (1999) who stated that incidents of terrorism, crime, natural disasters and epidemic outbreaks all negatively impact on place image and pose major challenges to the tourism industry, especially as the global media reinforce such security fears. Güres et al. (2011) stated that the perception of safety varies according to nationality, with foreign tourists often feeling less safe than natives. This may be due to the high visibility of violent terrorist attacks, which usually make the front pages on the world's media, and there is undependable evidence that reality is often different from media-generated perceptions.

Terrorism and terrorism acts, even though do not always command the same level of media scrutiny, has lingering effects and can effectively impede travel to affected areas and create an enduring barrier to international tourism and as a result destinations may be eliminated from the decision

making process due to their potential costs or perceived risks attached to that destination which is associated with negative media images of terrorist threats (Sonmez & Graefe, 1998). Thus it is hypothesized that;

H1: Media coverage of terrorism has negative influence on tourist decision making.

2.4) Terrorism risk perception

According to Asami, 2015, Sonmez and Graefe 1998, risk perception in tourism is associated with the issue of safety in travel and results in an impact on tourists travel decision and destination choice. Terrorism risk has been singled out as one of the major concerns for international travelers and therefore, the need for safety is an innate trait of human nature (Maslow, 1954) and concern for safety has been shown to deter travel to specific destinations (Crotts, 2003). Researchers agree that there are very few destinations or even none in the world that are immune to terrorism risks. In recent years, some of the terrorism risks that have affected travel and tourism include the 2005 tsunami in the Indian Ocean, suicide bombings of hotels in the Middle East and the abduction of a tourist in Aruba (Metin Kozak, John C. Crotts& Rob Law, 2007), these further caused more concerns among international tourists on levels of safety and security in countries with history and prevalence of terrorism acts.

Sonmez, (1998) stated that tourism suffers when prolonged terrorist attacks affect tourist perceptions and when terrorist organizations specifically target the industry. This research therefore focuses on the measure to recover from such events through getting information from international tourists who visit Kampala and will also aim to identify the segments of travelers who are likely to travel to Kampala regardless of the nature of their perceived terrorism risks. Therefore, is hypothesized that;

H2: Terrorism risk perception has negative influence on tourist decision making.

2.5) Social interaction regarding terrorism

Social interaction refers to the idea that individual's behavior is influenced by their reference group and it is confirmed to have important influence on tourist destination choice by the fact that tourists tend to obtain information from their peer and conform to the group norms (Fodness and Murry, (1999),

Moutinho, (1987) and Wu Lingling, (2012). Jackson (1991) pointed out that interpersonal influence plays a significant role in a tourist's travel intention which is in agreement with Lam and Hsu (2006) who found social norm to be an important factor in influencing tourists' intention to visit a particular destination. In their research, Cook and Sellitz, 1955 sited social interaction as a personal association taking place under certain circumstances and covers a wide range of behaviors from observation of members of the other group without any communication. It occurs in different situations which may be at work, home, neighborhood, during a journey or any group outing and this often affects the tourist decision. The purpose is to engage in conversation and exchange views and experience among tourists and potential tourists which may occur during travels, stays in hotels, during visits to attractions, shopping, night clubs, conversation with tour guides and many others (Yvette Reisinger, 2009).

Researchers agree that although contemporary debates over tourism development in such countries associated with terrorism acts have shifted from a focus on economic to sustainable development, forging a variety of new approaches (for example, pro-poor, responsible, community-based and ethical tourism), there is definitional confusion, expectations are unrealistic and guidance over practical implementation is inadequate, Meyer, 2011; Mitchell & Ashley, 2010. For instance, while tourism is included as a possible pathway to prosperity in over 80% of low-income countries' poverty reduction strategies, there is an evident implementation gap, which has led to a world map of the poorest countries dotted with ''well-intentioned community-based tourism projects, delivering small benefits to few people'' Mitchell & Ashley, 2009. This implementation gap is even wider in countries regarded as 'situations of fragility', due to their weak capacity, problematic state-society relations, deep social divides and/or the legacy of violent conflict Engberg-Pedersen et al., 2008.

Tourists will therefore make decisions basing on the kind of information provided to them by their friends and families (Wu Lingling, 2012), and this will greatly affect their choices in cases of terrorism risks provided in the information. Thus hypothesized that;

H3: Social interaction has negative influence on tourist decision making.

2.6) Terrorism awareness

It is possible for potential tourists to acquire definite information about terrorism or political problems at or near the chosen destination after booking a vacation, resulting from media coverage, travel advisories, or social interaction and will determine the final destination choice (Sonmez ,1998, Howar 1963/1977, Mansfeld, 1992, Um and Crompton, 1990). Such information has tremendous impact on the outcome of the decision by tourists in selecting a preferred destination. Different levels of concern for safety by different tourists may influence the evaluation process and this will affect the individual perception about the destination as safe or unsafe from terrorism which will also determine the travel decision depending on the resultant level of terrorism awareness. Awareness of terrorism in any destination will affect the destination choice which results into selection of the most desirable alternative from among those considered safe. Potential tourists select the destination which best matches their needs by offering the most benefits for the least cost or risk (Sonmez (1998). Thus, it is hypothesized that;

H4: Terrorism awareness has negative influence on tourist decision making.

2.7) Terrorism attack

Terrorism attack is a damaging demonstration of instability and can cause a tremendous decline in visitor arrivals which may in some cases take an extended period (Richter & Waugh, 1986; Sonmez, 1998). The threat of danger that accompanies terrorism attack intimidates tourists more severely than any other natural or human-caused disaster and this fear of terrorism may exist due to factors of past experiences with terrorist attacks, conflict proximity and negative tourist destination image (Seabra et al., 2007).

Asami, (2015) further points out that People planning their holidays are less likely to choose a destination with higher threat of terrorist attacks. Host countries providing tourism services which can be easily substituted are therefore negatively affected by terrorist attacks to a substantial extent (Frey et al., 2004). It is probable that tourists may postpone their visit until the situation appears to have calmed down but most likely the activity will be redirected to alternative destinations which appear to be safer (Asami, 2015). Thus hypothesized that;

H5: Terrorism attack has negative influence on tourist destination decision making.

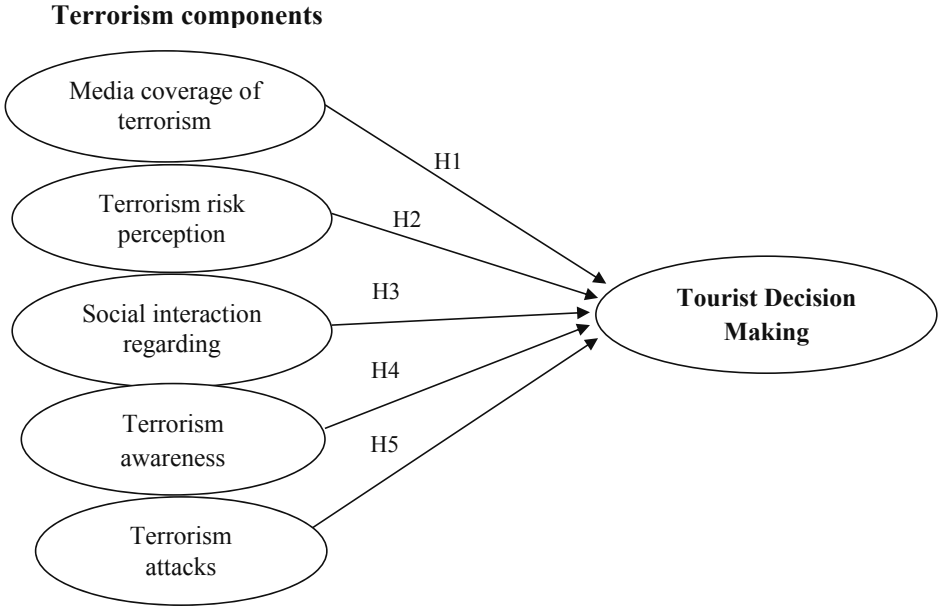

Figure 1: Conceptual framework

S*ource: Asami, (2015); Sonmez &Graefe (1998); Viscusi and Zeckhauser (2003)*

3) METHODOLOGY

To test the hypotheses proposed in this research, convenience sampling was used for collecting data through self-administered questionnaires to the respondents. The questionnaire was prepared in English and was tested for content validity with three experts; two from Thai Tourism Authority and one from Uganda Wildlife Authority. The population in this study comprised of 1,245,735 international tourists who were registered by ministry of tourist, Uganda (MOT 2015). Sample size was calculated using YAMANE (1973) and sub-sample of 120 tourists was then arrived at using 30% of the sample (sekara 2003; Asami 2015), which was used for this study. The questionnaires were given to tourists in 5* and 4* hotels (retrieved after 2 days), and also to tourists at the attraction sites in Kampala (which were retrieved on the same day) during 2nd October – 30th November 2016. A follow up email was sent to non-responsive participants from the hotels, every after two days of receiving the questionnaire. A total of 120 questionnaires were received and 110 were usable for data analysis, yielding

a response rate of 92 per cent. This number of sample size would be reasonable for the multiple regression technique as suggested by Green (1991). Data was analyzed using descriptive statistics, and regression analysis.

3.1) Measurement

Terrorism components were assessed with the use of 41 statements adopted from Asami (2015) and by the researcher and there examined for the validity reliability and tests.

These items were constructed in a random manner and respondents were asked to rate each item using a five-point Likert scale where (1) corresponds to 'Strongly Disagree' and (5) corresponds to 'Strongly Agree'.

3.2) Construct validity

Construct validity of the five terrorism components was performed using Index of Item-Objective (IOC) verification whose score ranged from -1 to 1, where (-1 = incongruent, 0 = Questionable and 1 = Congruent) after sending the constructs to three tourism experts from Thai Tourism Authority and Uganda Wildlife Authority. The responses were calculated using a minimum average score of 0.5 for each construct to be considered for the study.

3.3) Construct reliability

Construct reliability of the five terrorism components was assessed using Cronbach's alpha coefficient (Cronbach 1951) using the data collected from 30 respondents who were selected through convenience sampling from Kampala during august 2016, (Nusair & Hua 2010). The results as reported in Table 3 revealed that all the variables indicated the coefficient alphas slightly higher than the acceptable cut-off point of 0.70 (Peterson, 1994), ranging from 0.706 to 0.739.

Table 3: Results of Cronbach's Alpha Reliability Coefficients for the Constructs

n = 30

Item of components	Cronbach's Alpha (α) reliability	Number of items
Media coverage of terrorism (McT)	.706	8
Terrorism risk perception (TrP)	.728	8
Social interaction regarding terrorism(SiT)	.739	7
Terrorism awareness (TAw)	.727	6
Terrorism attack (TA)	.737	7
Tourism Decision (TD)	.715	5
Total	.759	41

4) FINDINGS

4.1) Demographic profile

A total of 110 questionnaires were usable for the analyses. The response rate was 92%, making it adequate to present the research findings. Table 4 shows the socio-demographic characteristics of the respondents. It shows the sex of the respondents, age, education, nationality and occupation.

The finding shows that majority of the respondents were male, representing 60% and female 40%: Age - 25.5% of the respondents were below 30 years, 47.3% were between 31-40 years, 20.9% were between 41-50 years and 6.4% were 50 years-and-above: Education level - 22.7% respondents' education were lower than bachelors, 41.8% had bachelor's degree and 35.5%more than bachelor's level: Occupation - 40.9% of the respondents were entrepreneurs, 15.5% were employees, 16.4% were government officials, 19.1%). were others (students, church workers, gospel preachers, housewives) and 8.2% did not indicate their occupation and Nationality, 18.1% of the respondents were American, 45% were Africans, 25.5% were Europeans and 10.9% were Asians.

Table 4: Demographic characteristics of the respondents

Background information	Category	Frequency	Percentage
Sex	Male	66	60
	Female	44	40
Age	Below 30 years	28	25.5
	31-40	52	47.3
	41-50	23	20.9
	50 years and above	7	6.4
Education	Lower than Bachelor's	25	22.7
	Bachelor's	46	41.8
	More than bachelor's	39	35.5
Occupation	Entrepreneur	45	40.9
	Employee	17	15.5
	Government official	18	16.4
	Others	21	19.1
	Unknown	9	8.2
Nationality	American	20	18.1
	Kenyan	18	16.3
	British	11	10
	Canadian	09	8.2
	Sudanese	15	13.6
	Somalis	23	20.9
	Nigerian	04	3.6
	German	05	4.5
	Norwegian	03	4.5
	Asians	12	10.9
	Total	110	100

Source: Field data, 2016

4.2) Travel information of the respondents.

From table 5, the finding shows that majority of the respondents, 63.6% had visited Kampala before, and 36.4% had never been to Kampala. 56.4% had visited Kampala at least once, and 34.5% had visited 2-4times and 9.1% more than 5 times. The findings also reveal that 18.2% had travelled alone, 43.6% with families, 9.1% had travelled with friends and tour groups, 10.9% with business partners, 18.2% other like education purposes, with churches to preach the gospel. Furthermore, the findings show that 29.1%had known Kampala through friends and relatives, 50.9% through internet, 20% through other means like social media, tourism guide books, schools, etc. and finally, 41.8% had visited for purposes of vacation, 3.6% traveled to visit relatives

and friends, 10.9% for education purposes, 20% for charity support, 21.8% for business and conference, 1.8% other reasons .

Table 5: Travel information of the respondents

Have you visited Kampala before?					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Yes	70	63.6	63.6	63.6
	No	40	36.4	36.4	100.0
How many times have you visited Kampala?					
Valid	Once	62	56.4	56.4	56.4
	2 – 4 Times	38	34.5	34.5	90.9
	More than 5 times	10	9.1	9.1	100.0
With whom did you travel?					
Valid	Alone	20	18.2	18.2	18.2
	With family	48	43.6	43.6	61.8
	Friends and tour group	10	9.1	9.1	70.9
	With business partners	12	10.9	10.9	81.8
	Other (please specify)…..	20	18.2	18.2	100.0
How did you get to know about Kampala?					
Valid	Friends and relatives	32	29.1	29.1	29.1
	Internet	56	50.9	50.9	80.0
	Others	22	20.0	20.0	100.0
What is the main reason for your visit to Kampala-Uganda?					
Valid	Vacation	46	41.8	41.8	41.8
	Visiting relatives and friends	4	3.6	3.6	45.5
	Education	12	10.9	10.9	56.4
	Charity support	22	20.0	20.0	76.4
	Business and conference	24	21.8	21.8	98.2
	Others	2	1.8	1.8	100.0
	Total	110	100.0	100.0	

4.3) HYPOTHESES TESTS

Table 6 shows the results of the multiple regression analysis of the components of terrorism for the factors that appeared as significant in the tests. In addition, auto correlation problems were tested using Durbin-Watson. As shown in Table 6, the Durbin-Watson value of 1.621 for the determinants was found which demonstrates that there is no auto correlation problems in the data used in this study (Hair et al., 2006). The model tested and the estimated coefficients are shown in Table 6, only significant variables are shown.

Table 6: Results of the Regression Model

Variables regressed	**Adjusted R Squared**	**F**	**Sig.**	**Durbin-Watson**
Decision making Vs Terrorism	.532	25.523	.000	1.621

	Unstandardized Coefficients		Standardized Coefficients		
Coefficients	B	Std. Error	Beta	t	Sig.
(Constant)	1.516	.346		4.381	.000
Media coverage of terrorism	.352	.146	.195*	2.410	.018
Terrorism Risk perception	-1.012	.181	-.914**	-5.581	.000
Terrorism Awareness	.764	.163	.983**	4.696	.000
Terrorism Attack	.219	.092	.292*	2.378	.019

*** significant at 0.01 level; * significant at 0.05 level*

The results in table 6 indicated that terrorism significantly influences tourist decision making at 0.01 level (P =.000, F=25.523), still it indicates that terrorism significantly influences tourist decision making at a rate of 53.2% and this was indicated by the adjusted R Squared of .532. Results from the coefficients section indicated varying results and these are as below:

4.3.1 Media coverage of terrorism

The finding indicates that media coverage of terrorism has statistical significance at the 0.05 level (*P* =.018) on predicting tourist decision making with a positive influence (Beta = .195*). This shows that much as the media coverage of terrorism may not stop tourists from travelling to Kampala, it has a significant influence decision making of these tourists which could result in postponement of the intended trip. Therefore hypothesis (H1) was supported with a positive influence

4.3.2 Terrorism risk perception

The finding indicates that terrorism risk perception has statistical significance at the 0.01 level (*P* = .000), predicting decision making with a negative influence of (*Beta* = -.914**). This shows that risk perception significantly has a negative influence on tourist decision making and it also accounts for the highest influence on tourist decision to visit Kampala. Therefore hypothesis (H2) was supported.

4.3.3Terrorism awareness

The finding indicates that terrorism awareness has statistical significance at the 0.01 level (*P* = .000), with a positive influence (*Beta* = .983**). This shows that awareness of terrorism acts has significant influence on tourist decision making but may not necessarily result in stopping tourists from visiting Kampala. Therefore hypothesis (H4) was supported with a positive influence.

4.3.4 Terrorism attack.

The finding also indicates that terrorism attack has statistical significance at the 0.05 level (*P* =.019) predicting decision making with a positive influence (*Beta* = .292*). This also shows that incidences of terrorism attacks in Kampala significantly influences tourist decision making, however the tourists would still consider visiting the destination. Therefore hypothesis (H5) was supported with a positive influence Results of hypothesis testing are summarized in table 7.

Table 7: Summary of results of Multiple Regression analysis

Hypothesis	Result
H1: Media coverage of terrorism has negative influence on tourist decision making	The H1 is supported with positive influence.
H2: Terrorism risk perception has negative influence on tourist decision making	The H2 is supported.
H3: Social interaction regarding terrorism has negative influence on tourist decision making	This is not supported
H4: Terrorism awareness has negative influence on tourist decision making.	The H1 is supported with positive influence.
H5: Terrorism attack The H1 is supported with positive influence.	The H1 is supported with positive influence.

5) DISCUSSION

5.1) Media coverage of terrorism

The result of the research indicated that media coverage of terrorism was a significant predictor of terrorism but with a positive influence on tourist decision making. This means that the information that tourists get from the media influences their travel decision making, however it would not result into cancelation of their travel plans to Kampala by approximately 19% level. This is in line with finding that the tourists hardly depend on the information from the different media forms like (Television, Radio, Newspapers) and also that the tourists do not use social media more frequently than print media to get information. This further means that the respondents still do not highly rely on social media as a source of information which is in support of the earlier research by Sonmez (1998) who found out that, depending on the reason for travel and tourism, tourists may choose to seek information about the destination either by actively searching for information through travel professional sites, literature or advisories which is likely to depend on either previous experience or risk perception (Sonmez1998).

Furthermore, the study also found that the tourists knew about Kampala through the internet, meaning that tourists are more increasingly using internet as their source of information about their planned destination, much as the gathered information would not prevent them travelling, this is mainly because the majority of the respondents were from African countries which have been previously affected with such incidents like the Nairobi Westgate attack (2013) and the Garissa university attack (2015) in Kenya and they

also have strong belief that the media always overestimates the reports of such incidents (low level of influence from the statement that the media does not overestimate the level of terrorism acts in Kampala, 1.96), however continued media reports on terrorism acts in Kampala would increase on the negative influence on the destination decision making of the tourists. This is further in support of the findings by Jenkins (1988) who mentioned that It has been suggested that the public will witness more terrorism in the future than ever before, as a result of the news media's improved ability and willingness to cover it. However, On a more positive note, the fight against international terrorism has increased cooperation among nations in counter-terrorism activities, law enforcement, and intelligence gathering (sonmez 1998), and this is evident from the Uganda's deployment of the peace keeping mission team in Somalia, joined by other countries from the horn of Africa including Kenya and Ethiopia to contain the Al-shabaab terror group in this Country.

5.2) Terrorism risk perception

The results of this research also indicated that terrorism risk perception is a significant predictor of terrorism on tourist decision making and it accounted for the highest level of influence on the decision of the tourists. The study found that tourists perceived Kampala to could be associated with acts of terrorism due to the frequent terrorism alerts issued by the security organs and also could not be very safe for tourists. Tourists always perceive acts of terrorism such as political demonstrations; crimes associated with ADF rebel groups in and around Kampala to be of high risk to tourists who could end up being targets and these have negatively influenced their perception about safety in Kampala. This is in support of the findings by Huan (2006) who analyzed risk perception of tourists and found that crime, disease, terrorism, political instability and natural disasters were the main identified risk factors affecting destination choice. Furthermore, Sonmez and Graefe (1998) and Seabra (2014) argue that the terrorist activity in a certain destination will be perceived as more risky than a safer destination without that threat.

In addition, the research also found out that tourists would not travel to Kampala due to the prevalence of terrorism threats, this is in support of the Prospect theory developed by Kahneman and Tversky (1979) who proposed that risky decision-making occurs in two stages where prospects are narrowed down to several alternatives and evaluated before the best option is selected with those considered undesirable eliminated. This involves evaluating destination alternatives according to safety from terrorism threats

before choosing one and eliminating risky others. According to the theory, individuals' perceptions of risk influence the attractiveness of prospects being evaluated and Choices involving gains indicate a risk averse personality whereas choices involving losses indicate risk-seeking behavior where; Risk averse individuals (psychocentrics) are likely to choose destinations perceived as safe, whereas risk seekers (allocentrics) are likely to show less concern about choosing destinations based on safety factors Kahneman and Tversky (1979).

The finding s from this research show that majority of the respondents were risk averse and would not visit Kampala due to the risk prevalence. This is further in support of prior research by other Asami)2015); Mawby (2000) who found that the presence of risk, whether real or perceived, negatively influences the travel decision making process and destination like Kampala is not exceptional to effect due to the past negative history about the country which is associated terrorism acts.

5.3) Terrorism awareness

From the research, terrorism awareness was found to be a significant predictor of terrorism but with a positive influence on tourist decision making. This means that awareness of terrorism acts in the planned destination would significantly and an impact on tourist decision making, however this would not result into cancelation of tourists' travel plans especially in the cases of risk seekers (allocentrics) tourists who are likely to show less concern about choosing destinations based on safety factors Kahneman and Tversky (1979). This is because the majority of the respondents were male and from African countries and they are not very sensitive to terrorism risks because of the African cultures which are of low uncertainty avoidance and hence are risk takers. This is in line with Seddighi (2001) who stated that risk perception generated from terrorism awareness which is associated with international tourism varies according to nationality of tourists. Furthermore, in Hofstede's (2001) dimensions of culture, that is, power distance, individualism, masculinity, and uncertainty avoidance are the most widely used; where uncertainty avoidance and power distance influence differences in risk taking among different cultures (Money & Crofts 2003), individuals from a low uncertainty avoidance cultures are risk tolerant meaning they are more comfortable with situations involving uncertainty and risk whereas high uncertainty avoidance cultures are more risk avoiding. Therefore, visitors from high uncertainty avoidance national

cultures are more worried about perceived risk of terrorism (Kozak et al., 2007).

Similarly, the study found that the tourists would travel to a foreign country where they have knowledge about the risks of terrorism acts and also that the majority of tourists had visited Kampala at least once and they were on return visit. This is in line with the earlier findings from Asami (2015) who found that tourists would visit a foreign destination again despite the acts of terrorism ; Sonmez and Graefe (1998) and Weaver (2007) who argued that once a destination has been visited, travelers are more likely to return in the future despite the risks. This is mainly because the destination is perceived to be safer than one that travelers have not visited before.

5.4) Terrorism attack.

The research also indicated that terrorism attack has statistical significance on decision making of the tourists but this was with a positive influence. This also shows that incidences of terrorism attacks in Kampala significantly influences tourist decision making, however the tourists would still consider visiting the destination mainly because terrorist attacks have not been frequent in Kampala since the eminent attacks that took place in 2010. Similarly, the study revealed that there is no prevalence of terrorism attacks in Kampala because there have been no such attacks reported since 2010; however, threats of attacks have been reported several times, this accounted for the positive influence on the decision because the tourist would still consider travelling to Kampala even though have been previous reports about terrorism attacks.

Also, the study found that tourists would neither cancel nor visit a foreign place affected by terrorism attack, implying that the chances of cancelling or visiting destinations affected by terrorism attack are the same but the research found that tourists would not visit a foreign place soon after acts of terrorism. These findings are supported by earlier work done by Mansfield and Pizam (2005) who confirmed that the guarantee of tourists' personal safety is perhaps the most important prerequisite for any aspiring tourism destination decision making. Similarly, this assertion is further supported by Anson (1999) who stated that incidents of terrorism, crime, natural disasters and epidemic outbreaks all negatively impact on place image and pose major challenges to the tourism industry, especially as the global media reinforce such security fears.

However, this research failed to reveal the influence of social interaction regarding terrorism on tourist decision making. This factor did not appear to play any significant role in decision making in this research. This is be discussed next;

5.5) Social interaction regarding terrorism

Social interaction regarding terrorism was not significant to tourist decision making and this means that tourists did not perceive social interactions regarding terrorism to be an important issue in decision making. This did not confirm the earlier studies presented by Fodness and Murry (1999); Moutinho (1987) and Wu Lingling (2012) that found that tourists are influenced by their reference group and it is confirmed to have important influence on tourist destination choice by the fact that tourists tend to obtain information from their peer and conform to the group norms. Moreover, the study found that the information that the tourists get about places they visit is not accurate and reliable. The tourists did not believe that the information they get about the places they would visit are accurate and reliable.

6) CONCLUSION AND IMPLICATION

6.1) Managerial implications

The major contribution of this study to the research in terrorism influence is that this research might be one of the first studies that have examined the level of terrorism influence on tourist decision making in Kampala using media coverage, risk perception, social interaction, awareness and attack to examine which terrorism predictor has a major influence in destination decision.

The results of this study will provide support for the policy implementation framework by suggesting that media coverage of terrorism, terrorism risk perception, terrorism awareness and terrorism attack are significant influential factors in the decision making of international tourists when choosing a destination with preference to Kampala but at different levels. In addition, the significant influence of each component with different levels of influence suggests the uniqueness of their impact on tourist decision making. Therefore the tourism policy makers need recognize the negative contribution of these factors on tourist decision making and aggressively work to promote the culture of sustainability of security and safety in Kampala and Uganda in order to win total bit from the tourism stakeholders.

6.2) Conclusions

The study concludes that there are terrorism threats against Kampala with different levels of influence on the decision making among international tourists and is also highly dependent on the different components that constitute terrorism. This has resulted in continued tourist arrival especially from African countries (MOT 2015), however from the findings, there is a growing negative perception among international tourists which could result in a decreasing growth of tourist arrivals especially European, American and Asian countries which are sensitive to safety at a destination and also as a result for increased global need for improved global tourism related risk research, importance of the media in travel and tourism safety and security and need for local networks for visitor and resident safety and security (Midgley. D. F. & Dowling. G. R.1995). This further concludes that even though acts of terrorism do not always command the same level of media scrutiny, has lingering effects and can effectively impede travel to affected areas and create an enduring barrier to international tourism and as a result destinations may be eliminated from the decision making process due to their potential costs or perceived risks attached to that destination, especially if associated with negative media images of terrorist threats (Sonmez & Graefe 1998).

7) RECOMMENDATIONS

There is need for peace and stability in Kampala and the territories of Uganda so as to bit for a positive percept among the international tourists which will in turn boost arrivals and its resultant indicators like tourism business growth, increased investments in tourism and employment of the local communities.

Development and adoption of safety measures and practices (appropriate documentation and information on tourism safety), adequate protection by tourism law enforcement bodies in tourism facilities and sites, ensure their observation by operators and other stakeholders to realize more confidence from the tourists concerning their safety and security in order to further boost the perception of tourists in Uganda.

8) LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

There were some limitations in this study. Firstly, the selective choice of independent variables tends to pose certain limitations to the study. Secondly, the study sample size of 120 international tourists was not a large enough sample to better detect the level influence of terrorism on tourist decision making due to low statistical power (Hair et al., 2006). The results of this study serve as a preliminary step towards a better understanding of the impact of terrorism acts on tourist decision making.

For future research, there are several directions that may be developed from this study. Therefore, in order to generalize the concepts, future research should be extended to incorporate other stakeholders of the travel industry such as the local communality, tours and travel companies so that the unique needs and problems related to the travel industry in relation to acts of terrorism can be appropriately addressed and the findings generated from different sectors can be compared in the context of developing an appropriate promotion model for sustainable travel and tourism in Uganda. Second, future research may replicate this study by including other sources of the population to verify the research findings.

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13. Headings must be short, with a clear indication of the distinction between the hierarchies of headings. The preferred format is for headings to be presented in bold format, with consecutive numbering.
14. Notes or Endnotes should be used only if absolutely necessary and must be identified in the text by consecutive numbers, enclosed in square brackets and listed at the end of the article.
15. Each Figure should be supplied separately (i.e. not within the article itself). All Figures (charts, diagrams and line drawings) and photographic images should be of clear quality, in black and white and numbered consecutively with Arabic numerals. Figures created in MS Word, MS PowerPoint, MS Excel, etc. should be saved in their native formats. Electronic figures created in other applications should be copied from the origination software and pasted into a blank MS Word document or saved and imported into a MS Word document by choosing "Insert" from the menu bar, "Picture" from the drop-down menu and selecting "From File…" to select the graphic to be imported. For figures which cannot be supplied in MS Word, acceptable standard image formats are: .Pdf. If you are unable to supply graphics in these formats then please ensure they are .tif, .jpeg (.jpg), or .bmp at a resolution of at least 300dpi and at least 10cm wide. To prepare screenshots, simultaneously press the "Alt" and „Print screen" keys on the keyboard, open a blank Microsoft Word document and simultaneously press "Ctrl" and "V" to paste the image. (Capture all the contents/windows on the computer screen to paste into MS Word, by simultaneously pressing "Ctrl" and "Print screen".) Photographic images should be saved as .tif or .jpeg (.jpg) files at a resolution of at least 300dpi and at least 10cm wide. In the text of the paper the preferred position of all tables, and figures should be indicated by typing on a separate line the words "Take in Figure (No.)" or "Take in Table (No.)".
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    - *For books*: Surname, Initials (year), *Title of Book*, Publisher, Place of publication. e.g. Tapscott, D. (2009), *Grown Up Digital. How the Net Generation is Changing Your World*, The McGraw-Hill Companies, New York, NY.
    - *For book chapters*: Surname, Initials (year), "Chapter title", Editor's Surname, Initials (Ed.), *Title of Book*, Publisher, Place of publication, pages. e.g. King, B.C. (2005), "Supply Chain Management", in Roonth, R. (Ed.), *Management*, Beck, New York, NY, pp. 230-290.
    - *For journals*: Surname, Initials (year), "Title of article", *Journal Name*, volume, number, pages. e.g. Phusavat, K., and Kanchana, R. (2008), "Competitive priorities for service providers: perspectives from Thailand", *Industrial Management & Data Systems*, Vol. 108 No. 1, pp. 5-21.
    - *For published conference proceedings*: Surname, Initials (year of publication), "Title of paper", in Surname, Initials (Ed.), *Title of published proceeding which may include place and date(s) held*, Publisher, Place of publication, Page numbers. eg Rodak, C., and Borlant, E. (2010), "Management Information Systems Effectiveness", in *Technology Innovation and Industrial Management 2010 Proceedings of the International Conference in Pattaya, Thailand, 2010*, Kasetsart University, Bangkok, pp. 670-695.
    - For working papers: Surname, Initials (year), "Title of article", Working Paper [number if available], Institution or organization, Place of organization, date. e.g. Chadam, J., Pastuszak, Z. (2005), "Financial Performance and Management of Groups of Companies in Poland", Working Papers, No. 52, University College London, SSEES, Social Sciences Department, London, May.
    - For newspaper articles (authored): Surname, Initials (year), "Article title", Newspaper, date, pages. E.g. Lutek, W. (2010), "Green logistics", Rzeczpospolita, 1 June, pp. 2-3.
    - For newspaper articles (non-authored): Newspaper (year), "Article title", date, pages. e.g. Gazeta (2010), "Big to Good", 1 March, p. 10.
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