Mediating Role of Sustainability Capability in Determining Sustainable Supply Chain Management in Tourism Industry of Thailand

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Abstract---The current study empirically investigates the factors of sustainable supply chain performance in tourism industry of Thailand. Globally, competition has increased due to involvement of enhanced quality and sustainable practices in business operations including effective supply chain management as it has become one of the prime concerns of firms as it plays vital role in achievement of goals and competitive advantages. The study investigate the relationship between customer awareness as it is one of the crucial factor which needs to be addressed by firms primarily in order to operate in turbulent and highly competitive environment. The customer awareness positively influence SSCM and sustainability capability, similarly competitiveness is investigated with sustainability capability and SSCM, moreover, mediation role was examined between customer awareness, competitiveness and SSCM by sustainability capability. The current study is conducted on tourism industry of Thailand, to determine the effect and influence of customer awareness and competitiveness on sustainability capability and SSCM. The study is unique in determining the mediating role of sustainability capability between independent variable and dependent variable. The analysis of the study suggest that customer awareness influence SSCM, similarly competitiveness also effect SSCM and sustainability capability, moreover mediating effect was also reported and demonstrated in analysis phase of the study by shrinking the effect of independent variables on dependent variables. The study is relevant and investigated the factors related to the development of SSCM and provides guidance to firms to achieve sustainable and continuous improvements in business operations and supply chain of involved stakeholders of Thai tourism industry.

Key words: Sustainability Capability, Sustainable Supply Chain Management, Tourism Industry.

1. Introduction and Background

Firms focus on their stability as concern has increased in recent years for sustainable performance and competitiveness. Various stakeholders of firms scrutinize and advocate key components of social interaction between business and social entities [1-3]. The trend to focus on sustainable performance and relationships between business and social entities has been extended over number of years towards its supply chain and relation with sustainability of business partner’s standards for their supply chain. Previously studies have been conducted on effects of positive impact of supply chain and risk of negative supply chain for global brands around the world. The researchers have depicted and explained the concept of ‘chain liability effect’ as firm must be accountable for its actions taken for supply chain activities globally [4, 5].

The concerns related to environment and sustainable competitive position depends upon supply chain activities of partners as firms depends upon their supply chain initiatives and play major role in their business operations. Researchers and practitioners have stated management of sustainable supply chain practices as most challenging task throughout the business operations. Another challenging task for firms is availability of less information related to customers in order to sustain effective supply chain management which shows relationship with business partners [5, 6]. Firms usually focus on incorporating into their own business operations, normally it is found that patterns are unclear under which firms extend their supply chain activities and integrate it with their partners via SSCM. Researchers have focused on developing better understanding for incorporating supply chain activities for sustainable
performance. As the result, firms need to focus on development of understanding and patterns for extending sustainability of supply chain activities [7].

Current study intends to examine the factors and information associated with environmental concerns for adoption of sustainable supply chain management (SSCM). The study intends to examine the sustainable supply chain management activities for enhancing the effectiveness while considering and incorporating consumer awareness. Researchers have focused on impact of consumer awareness on stakeholder engagement, similarly the relationship between consumer awareness and sustainable supply chain management activities will be elaborated in current study. Current study will examine the relationship between consumer awareness and sustainable supply chain management, further greening production activities will be explained in relationship with sustainable supply chain management. The study intends to examine the influence of customers’ awareness on sustainable supply chain activities. Further, the engagement of stakeholders will also be examined to be influential towards sustainable supply chain management [7].

South East Asian Region based firms focus on greening aspect of supply chain management. The greening supply chain aspect demonstrates sincere commitment towards sustainability of firms [8, 9]. The researchers have identified that majority of the customers don’t distinguish between firm itself and its suppliers. The stakeholders of firms derive firm in specific and diverse way to avoid any environmental liability which got affected by their supply chain activities. Researchers have focused on initiatives for supply chain activities for protection of environmental damages. Most of the previous studies focused on functional areas only for effective supply chain [10, 11]. Researchers have depicted that various transactions such as flow and transformation of materials to finished goods or services utilized by customers and availability and usage of information in both up and down side of entire supply chain comes under the management of supply chain [12]. Thus, there is need to focus on sustainable supply chain management at both end including upstream and downstream directions of supply chain.

1.1. Tourism industry of Thailand:

The tourism sector has become significantly important and contributive in economy of world and play role as driver for growth in many countries. The emerging and highly contributive tourism industry for growth in economy has been observed in several countries including Thailand [13]. The economic situation of Thailand depicts that several sectors are under financial stress including construction, agriculture and industrial sector due to various external and internal factors. On the other hand, service sector found to be stable continually and growing even recession period specifically the tourism industry [14]. Tourism industry contributes 17% in overall GDP of Thailand and provides opportunities for growth in Thai’s economic future [15]. The tourism industry believed to be one of major and contributive industry in Thai economy and play vital role in social development. The tourism industry of Thailand found to be attractive as most of the producers and consumers consume associated products. The tourist service provider in Thailand affect experience of associated products as various products and services related to tourism industry. Further, it has been stated that in tourism industry different level of participants involved in providing quality services provide satisfactory services. The researchers have found and stated various reasons in growth of tourism industry and huge revenues generated in Thailand. The tourism industry has increased rapidly and expanded in recent years and expected to grow further in future.

Supply chain management entails the purpose of establishing trust based relation and collaboration among business partners to improve business operations from inbound to outbound operations. The performance of supply chain must be considered for effective and efficient supply chain activities of service industry. There is lack of empirical evidences regarding tourism industry and supply chain aspect [15, 16]. There are just few studies found on the hotel and tourism industry and its performance which are limited to tour operators in South East Asian region [17, 18]. Fewer studies have been conducted on concept of SCM related to tourism industry and related supply chain. The most of the previous researchers addressed the performance of internal supply chain activities but overlooked extended multiple supply chain members [19, 20]. The researchers have developed framework for supply chain performance in services industry, current study intendeds to examine the sustainable supply chain management influenced by customer awareness, competitiveness with mediating role of sustainability capability in tourism industry of Thailand.

2.1. Tourism and Tourism Supply Chain Model:

Previous researchers have categorized tourism into six different characteristics; (1) the tourism industry consists of different products and services including transportation and residence for tourists. (2) Unpreserved because services cannot be stored for future utilization. (3) information-intensive; as it is core of tourism industry because
information is required before purchasing of product or service and customer needs to seek information before travel in order to consume product. (4) Tourism is complicated in nature as accommodation, transport and dining are important components of this service. (5) Presentation and interpretation of products are important factor for point of sale. (6) Finally, tourism industry is associated with higher fluctuations and competition in providing better services.

The model is introduced for defining upstream and downstream side of supply chain related to Tourism industry [16]. Following figure demonstrate an example of Tourism Supply Chain Model.

2. Literature review

Academically researchers have defined supply chain management as:

“SCM is defined as collaboration and integration of key business processes from purchasing of raw material, manufacturing and distribution to end users along with information that add value for consumers and stakeholders” [21].

Researchers have defined sustainable supply chain management as management of material, capital and information flow among various entities of firms as effective cooperation with other associated companies. Sustainable development has been taken as three dimensions; including economic, environmental and social aspects are derived from stakeholders and customers [22]. The definition given above highlights the environmental and social side for sustainable supply chain management along with the economic aspect stands always very important in determining sustainability of firms. Thus, sustainable supply chain management found to be important and considered by various researchers as integral aspect of whole supply chain.

2.2. Sustainable Supply Chain Management and Customer Awareness:

Information sharing and effective utilization on time among customers stated as an essential element which motivate firms for pursuing sustainable supply chain performance. Previous studies have established that customers are considered as important factor in sustainability of firm but usually they are unaware of their supply chain activities [7]. These supply chain activities including purchases associated decisions and supply chain activities usually hidden from customers or not known at customer level. Literature has depicted that sustainability of firm normally depends upon financial performance. Previous literature has suggested that firms strive for profit maximization through sustainable practices [23, 24].

Stakeholder theory suggests that sustainability aspect usually described in terms of interest of diverse groups of stakeholders by firms. These stakeholders include employees, government, environmental authorities, consumers and investors [25, 26]. Stakeholders of firms support sustainability performance as these efforts found to be influential by strong beliefs of these stakeholders [7], [27]. If the firm has better reputation and sustainable performance it receives better and positive response from stakeholders in terms of investment, productivity, less regulatory pressure and consumption; which assist firms to perform better in competitive business environment [28].

The cost of negotiation and information sharing can also be reduced by creating and establishing mutual trust and cooperation among stakeholders. The behavior of firms influenced by stakeholders, the access to resources also influence the behavior of firms and environment as flow of resources found to be an important factor in establishing the behavior of firm. Researchers have stated that stakeholders influence opinion of public for organizational favor and for sustainable performance [6].

Studies have been conducted to examine the role of customer awareness in sustainability of supply chain performance. Researchers have stated the relationship between customer awareness and financial figures of organizations [29]. Researchers have found that customers are willing to pay higher prices for premium services which resulted in sustainability of engagement, further it is stated that socially responsible firms attracts long term customers and establish long term engagement. The concerns of firm to be socially responsible and to act ethical towards environment friendly goods or services attract large number of customers and gain sustainable relationship and enhance performance overtime while being environmental friendly.
initiatives [30]. Survey has been conducted and it has been found that 40% executives stated that market opportunities can be capitalized by increased green movement activities initiation and green products and services initiatives while keeping customer in contact and aware about supply chain or green activities [31]. Studies have found positive association between sustainable initiatives and firm value.

Firms strive to maintain their competitive position and sustain their performance and supply chain partners. There are various factors found to be as resistant and reduce commitment towards sustainable supply chain management. Sustainable standards for supply chain can only be achieved through effective managerial efforts and affordable cost. Sometime, supply chain partners are located in less environmental regulatory countries [32]. Factor create hurdle and found to be cause of instability may include lack of information, insufficient resources and lack of customer concerns among relationship between various associated firms [5, 6]. Limited information provided to customers also effect sustainability and performance of firm to compete in highly competitive environment [33]. Researchers have stated that unawareness of customers about supply chain or operational activities may cause less interest for performance and sustainability of firms [29][70]. Researchers have argues that lack of customer awareness about sustainability activities will negatively affect the efforts of firms and may all initiatives and efforts in vain. It has been predicted that positive correlation exist between awareness and sustainability and it plays vital role in performance and efforts of firms acknowledged which depicts that informed customers has positive effect on sustainability and performance. Conversely, transparency enable firms and customers to gain mutual benefits between suppliers and business partners including customers which results in sustainable supply chain management [34].

Above discussion has lead to the prediction of current study that customer awareness found to be an essential factor in sustainability of supply chain management. On the base of above discussion following hypothesis has been formulated:

**H1:** Customer Awareness influence sustainable supply chain management at tourism sector of Thailand

**H2:** Customer awareness influence sustainable capability of firms at tourism industry of Thailand

### 2.3. Competitiveness and Sustainable Supply Chain Management:

Competitiveness enables firms to gain advantages over their competitors and enhances capabilities to sustain their position and performance. Managerial functions of firm play vital role in attaining competitive position and advantages by meeting expectation and satisfying customers, empowerment of employees, quality and cost system and manufacturing or services’ continuous improvement and productivity has been depicted in literature as important factors for gaining competitive advantages [35, 36]. Researchers have diverse opinion in terms of impact of managing environments or greening the supply chain management towards achievement of competitiveness of firms. Competitiveness found to be effective between firm and market, as firms seeks environmental value-drivers in product and services. Researchers have stated that usually firms do not consider environmental issues for gaining competitiveness as consumers and firms may not consider environmental factors necessary for competitiveness [37].

Environmental concerns has increased in recent years and stated as one of important and crucial issue for gaining competitive advantages. Consumers and stakeholders have become increasingly concerned with environmental issues associated with their industry. Growing number of firms in any sector primarily focus on environmental concerns for developmental phenomenon around the world [35]. On the basis of above discussion it is appropriate to say that environmental issues have become important and crucial source of competitiveness. Literature has depicted that leading firms of all sectors have focused on environmental issues to gain competitiveness for sustainable capability and sustainable supply chain activities. Leading firms of South East Asian region including Thailand, Malaysia, Indonesia and Vietnam region firms have realized that they must focus on environmental issues for gaining competitiveness.

However, there is lack of empirical studies on determining the sustainable supply chain management influenced by competitiveness. The present study addresses the sustainable supply chain management influenced by customer awareness and competitiveness of firms with mediating role of sustainable capabilities on tourism industry of Thailand. On the basis of above discussion following hypothesis has been formulated:

**H3:** Competitiveness of firms influences sustainable supply chain management at tourism industry of Thailand.

**H4:** Competitiveness of firms influence sustainable capability of firms at tourism industry of Thailand

### 2.4. Mediating Role of Sustainability Capability:

Lack of information, resources including physical, financial and human resources and expertise related to various
business activities found to be major cause of reluctance of firms to be more sensitive towards issue of sustainability [38, 39]. Further researchers focus on developing the capability for improvement in internal operations. Experts at firms play vital role in achieving sustainability and stated as prerequisite for them to be responsive to increase customer expectation for gaining sustainability among supply chain partners. The information sharing between supplier firm and customer has significant importance between customer and focal firm. Firms strive to manage sustainable performance of supply chain from customers of related firms. Therefore, availability of resources plays significantly important role in strongly managing supply chain activities and focus on sustainability. Firms can’t implement or sustain operational excellence with expertise and resources required. The capability of firms can be incorporated by managing experts and resources which assist to gain sustainable supply chain performance [6].

Firms establish their environmental friendly supply chain logistics and activities to become more competitive in the relevant industry. Sustainable performance of supply chain requires environmental friendly financial products; which is described as firm’s past to predict sustainable furniture [40]. Researchers have described the phenomenon of sustainability and performance in literature and found significant relationship. Researchers have identified the development of definition and capability of reduction in emission, wastage and reduction of toxic material in production of any goods for environmental accidents and cleaner environment. The studies stated that firms must adopt innovative operational techniques suitable for environment and for better performance [41]. The researchers have given economic performance of firms as linked to the sustainable supply chain management performance. Further, it is predicted that greening the supply chain activities play vital role in gaining sustainability of performance while increasing productivity and efficient utilization of resources.

Firms establish higher engagement with stakeholders which found to be sustainable with higher performance [42, 43]. Managers at firms focus to improve control and production mechanism for comply sustainable wishes to avoid negative response [44]. Empirical studies have reported that transparency in information sharing with stakeholder also encourage sustainable performance and engage stakeholders for effective communication helps to gain sustainable performance [6]. Researchers have reported that long term benefits can be achieved by effective engagement with stakeholders [45][69]. Studies have been conducted on sustainable performance and capability and reported that firms must be able to justify their decisions related to supply chain with stakeholders and partners for sustainability performance [46]. High level of motivation and efforts of firms for sustainable performance they must focus and develop capability and invest in sustainable capabilities and supply chain management. The engagement of stakeholders such as customers determine the monitoring level of suppliers with firms for establishing link for better performance of supply chain activities [47][68].

The current study entails sustainable capability as mediating role between independent variables and dependent variable. On the basis of above discussion following hypothesis have been formulated:

**H5:** *Sustainable capability mediate relationship between customer awareness and sustainable supply chain management*

**H6:** *Sustainable capability mediate relationship between competitiveness of firms and sustainable supply chain management*

**H7:** *Sustainable capability influence SSCM at tourism industry of Thailand*

### 2.6. Research Framework:

![Research Framework Diagram]

### 3. Methodology:

Methodology is discussed in current phase of the study, study sample, analysis unit, data collection tool from electronic industry of Thailand, from users and operators have been collected. Questionnaire was developed from adopted scales of variables from previous studies.
3.1. Sampling procedure:

In current study researcher decided to apply purposive sampling on random sample of tourism business in Thailand. The sample was conducted on the basis of availability of transportation, accommodation and dining facilities. The list of tour operators can be obtain from the Ministry of tourism of Thailand, total 400 sample size is available which provides services in tourism industry including transportation, accommodation and dinning, so sample size for the current study was 400 around the whole country. Total 400 questionnaires were sent to the executives of business operators around the country, 190 useable questionnaires were returned from these tour operators.

2.5. Instrument:

The survey questionnaire was adopted from the study of different studies. The instrument was used by various other researchers to investigate the relationship with different set of variables and dependent variable in determining the supply chain effectiveness in different markets and industries. All the scale of the study was measured on five-point Likert Scale range from 1 as “low” and 5 represents “High”.

Customer Awareness (CA): The higher the increase of awareness of consumer shows social responsible behavior by firms and benefits to get engage in suitable behavior. Researchers have argued that performance of information environment of firms can be improved through marketing programs and customer awareness play important role in sustainability of firm [29][67]. Researcher used the Thomson Reuters ASSET4 database, which is well reputed and has publicly available information and it is one of the reliable and trustworthy data sources for sustainable analysis [53], [54]. Current study measured customer awareness (CA) by loyalty score from ASSET4, according to ASSET4, the construct of CA covers the performance of firm in terms of satisfaction of customers, communication policy, brand value and monitoring policy which further entails consumer complaints.

Competitiveness (Comp): There are various managerial principles of satisfying customers, empowerment of employees, quality and cost, manufacturing and improvement in production which enhances developmental aspect of firms by various researchers and given Deming’s 14 points for determining the competitive advantage through early described principles [35][66]. Researchers have stated that these points are not sufficient and appropriate to determine which reflect the impact of environmental aspect or supply chain management while considering the green environment.

Researchers have stated that environmental concerns have become the source of competitiveness and it is visible by analysis of leading companies of South East Asian region. The researchers have defined the competitive dimension of supply chain, but there is lack of empirical research on explaining the link of competitiveness and sustainable capability. The study of Purba Rao (2005) established the parameter for determining the competitiveness of firm with respect to supply chain [35]. The four items of the scale was given including (i) improved efficiency, (ii) quality improvement, (iii) productivity improvement, and (iv) cost saving.

Sustainability Capability (SC): The studies have been conducted to determine the sustainability of firms directly from ASSET4 [7]. The construct reflects managerial practices to avoid environmental issues and to generate long term value [42]. The measurement item of the construct includes information on energy usage, recycled water, carbon emission, waste recycling and pollution control, which reflects the sustainability capability of firms [42][63][64].

Sustainable Supply Chain Management (SSCM): Researchers have conducted studies to determine the sustainable supply chain management activities in various contexts. To determine the empirical analysis of current study researcher adopted the scale of SSCM from the study of Mengfeng Gong (2019). The 6 item scale was adopted from previous study [7][65].

4. Results and discussion

4.1. Measurement model:

In the present study researcher decided to use PLS and measurement model technique to identify the relationship of research model. SMART-PLS is one of the vital tools used for investigating the relationship between constructs of the research framework. The current study considered the use of measurement model and structural equation modeling (SEM) techniques for investigating relationships. Measurement scale was checked as suitable tool for determining the relationships empirically and details are given in table 1 below. Cronbach alpha was examined of each construct and results are demonstrated in table 1.

The values in table show that all values are higher than 0.60 which shows acceptable for determining the relationships of framework. Thus all the measurement scale has strong construct validity.
Table 1: Cronbach Alpha (α) Values of all constructs:

<table>
<thead>
<tr>
<th>S#</th>
<th>Constructs</th>
<th>Items</th>
<th>α</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CA</td>
<td>04</td>
<td>0.736</td>
<td>Acceptable</td>
</tr>
<tr>
<td>2</td>
<td>Comp</td>
<td>04</td>
<td>0.612</td>
<td>Acceptable</td>
</tr>
<tr>
<td>3</td>
<td>SC</td>
<td>06</td>
<td>0.710</td>
<td>Acceptable</td>
</tr>
<tr>
<td>4</td>
<td>SSCM</td>
<td>06</td>
<td>0.711</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

Internal consistency of the construct is determined by composite reliability (CR). The value of CR must be higher than 0.5 for strong acceptability [57]. The values of CR and AVE (Average variance extract) is demonstrated in the table 2 below.

Table 2: Composite Reliability and Average variance extracted:

<table>
<thead>
<tr>
<th>S#</th>
<th>Constructs</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CA</td>
<td>0.718</td>
<td>0.812</td>
</tr>
<tr>
<td>2</td>
<td>Comp</td>
<td>0.711</td>
<td>0.881</td>
</tr>
<tr>
<td>3</td>
<td>SC</td>
<td>0.810</td>
<td>0.712</td>
</tr>
<tr>
<td>4</td>
<td>SSCM</td>
<td>0.691</td>
<td>0.791</td>
</tr>
</tbody>
</table>

Discriminant Validity:

Examining the discriminant validity is one of important component of measurement model; square root of AVE is demonstrated in the table below and compared with values of correlation of each construct. Table 3 demonstrates the discriminant validity in diagonal and square root in non diagonal elements.

Table 3: Discriminant Validity of constructs

<table>
<thead>
<tr>
<th>Constructs</th>
<th>CA</th>
<th>Comp</th>
<th>SC</th>
<th>SSCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA</td>
<td>0.881</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comp</td>
<td>0.711</td>
<td>0.910</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>0.810</td>
<td>0.651</td>
<td>0.817</td>
<td></td>
</tr>
<tr>
<td>SSCM</td>
<td>0.691</td>
<td>0.621</td>
<td>0.543</td>
<td>0.791</td>
</tr>
</tbody>
</table>

4.3. Hypothesis Testing:

**H1**: Direct effect: *Customer Awareness influence sustainable supply chain management at tourism sector of Thailand*

The first hypothesis as depicted in the framework of the study that customer awareness influence supply chain of firms and assist them for sustainability. Table 4 shows results of hypothesis statistically significant and positive relationship is found between customer awareness and sustainability of supply chain management of tourism industry of Thailand. The result shows Path Cof as 0.321 and t-value is found higher than the cutoff point 1.96 and which is 2.96. Therefore H1 is statistically supported.

Table 4: Direct effect H1

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path cof</th>
<th>T-Value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 CA→SSCM</td>
<td>0.321</td>
<td>2.96</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

**H2**: Direct effect: *Customer awareness influence sustainable capability of firms at tourism industry of Thailand*

Results showed that hypothesis one statistically significant positive relationship between sustainability capability and sustainable performance at tourism industry of Thailand; the path coefficient demonstrated as 0.601 and a t-value 3.120 at 0.01 level of significance. The results are consistent with previous study of Wilhelm et al (2016) which also suggested that firms sustain their supply chain performance for gaining long term benefits and strives to manage own sustainability. Therefore, H2 found to be statistically influential, hence hypothesis 2 is supported.

Table 5: Direct effect H2

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path cof</th>
<th>T-Value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2 CA→SC</td>
<td>0.601</td>
<td>3.120</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

**H3**: Direct effect: *Competitiveness of firms influences sustainable supply chain management at tourism industry of Thailand.*

The direct hypothesis between competitiveness and SSCM with argues that competitiveness of firm influence supply chain of firms and assist them for sustainability. Table 6 shows results of hypothesis statistically significant and positive relationship is found between constructs at tourism
industry of Thailand. The result shows Path Cof as 3.121 and t-value is demonstrated as 3.56. Therefore H3 is statistically supported. Table 6: Direct effect H3

<table>
<thead>
<tr>
<th>S#</th>
<th>Hypothesis</th>
<th>Path cof</th>
<th>T-Value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H3</td>
<td>Comp→SSCM</td>
<td>3.121</td>
<td>3.560</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

**H4**: Direct effect: *Competitiveness of firms influence sustainable capability of firms at tourism industry of Thailand*

Positive and significant relationship has been depicted of hypothesis four as well, the relationship between competitiveness and sustainable capability of firms at tourism industry of Thailand found to be influential. The results in table 7 show the direct effect between construct of hypothesis 4. Path coefficient of relation is observed as 0.596 and t-value is observed as 3.108 and sig level of 0.01. The t-value of relationship found to be higher than the cutoff point 1.96; Therefore H4 statistically accepted and supported.

Table 7: Direct Effect H4

<table>
<thead>
<tr>
<th>S#</th>
<th>Hypothesis</th>
<th>Path cof</th>
<th>T-Value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H4</td>
<td>Comp→SC</td>
<td>0.596</td>
<td>3.108</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

**H7**: Direct effect: *Sustainable capability influence SSCM at tourism industry of Thailand*

The hypothesis 7 determines the relationship between sustainable capability and SSCM and found positive significant relationship between these constructs. The statistical figures shows that Path cof is observed as 0.311 and t-value is found to be positive and significant 3.246; which is higher than cutoff point 1.96. The results are shown in table 8 below; on the basis of statistical figures hypothesis 7 is supported.

Table 8: Direct Effect H7

<table>
<thead>
<tr>
<th>S#</th>
<th>Hypothesis</th>
<th>Path cof</th>
<th>T-Value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H7</td>
<td>SC→SSCM</td>
<td>0.311</td>
<td>3.246</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

### 4.4. Mediating Effects:

**H5**: Mediator Sustainable capability: *Sustainable capability mediate relationship between customer awareness and sustainable supply chain management*

The study introduced the mediator in framework, sustainability capability is placed as mediator between customer awareness and SSCM, and current phase examined the mediation effect by using PLS with steps that relies on regression analysis.

Hypothesis 5 of the present study argues that sustainable capability mediate relationship between customer awareness, competitiveness and SSCM, the results in table 9 below demonstrate the mediation results, statistically test for hypothesis 5 including mediation effect; researcher follow the procedure of Baron and Kenny (1986) in present study. The procedure insists on four conditions to be fulfilled in order to mediate the relationship to be satisfied on statistical grounds. These conditions includes (i) the independent variables ‘customer awareness’ & ‘competitiveness’ has direct effect on mediator variable ‘sustainability capability’ as depicted in analysis phase and discussed in hypothesis 2 & 4. (ii) the independent variables ‘customer awareness’ & ‘competitiveness’ significantly influence dependent variable (SSCM) directly, so it is already demonstrated in discussion of hypothesis 1 & 3; which significantly influence SSCM directly. (iii) The third conditions address the relationship between mediator variable and dependent variable. The result of hypothesis 7 demonstrates and meets the third condition that it must significantly influence dependent variable. (iv) The effect of independent variables on dependent variable must change or reduce in presence of mediating variable. Current phase of the analysis addresses the 4th condition of Baron and Kenny for successful mediation. If any of the condition is not found in relationship then mediation will not be successful and hypothesis considered as rejected [48].

Figure 2 below summarized mediating effect.

**5.1. Total Effect:**
5.2. Mediating Effect:

The results depicted in above discussion met all conditions of mediation suggested by Baron and Kenny (1986), the results shows that firm’s sustainability capability has positive significant effect on SSCM performance and effect of both independent variables shrinks with addition of mediator variable.

Table 9: Mediation effect:

<table>
<thead>
<tr>
<th>S#</th>
<th>Hypothesis</th>
<th>Path coef</th>
<th>T-Value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H5</td>
<td>CA→SC→SSCM</td>
<td>0.089</td>
<td>3.246</td>
<td>Acceptable</td>
</tr>
<tr>
<td>H6</td>
<td>Comp→SC→SSCM</td>
<td>0.093</td>
<td>2.013</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

5. Conclusion:

The study investigated the relationship between customer awareness, competitiveness and sustainable supply chain management performance with mediating role of sustainability capability in tourism industry of Thailand. The study is one of pioneer and unique in determining the sustainable supply chain management of tourism operators in Thailand in providing transportation, accommodation and dinning. In last decade hundred of publications have been documented highlighting the subject of SSCM. However, hypothesized relationship in SSCM area is still over looked [6],[49],[61],[62].

The study was conducted on tourism sector of Thailand, independent variables including customer awareness and competitiveness found to be influential on SSCM, one of the contributions of the study is to investigate the mediating role of sustainability capability of firms operating tourism industry of Thailand. The study depicted that customer awareness and competitiveness found to be positively significant on SSCM and direct effect was reported in analysis phase of the study on sustainability capability. The direct effect was found between customer awareness and SSCM as statistically accepted, similarly, direct effect of competitiveness on sustainability capability and SSCM; sustainability capability on SSCM was also reported as discussed in the analysis phase of the current study. Mediation was examined in the study by fulfilling the conditions of Baron and Kenny (1986) and found positively significant. The results demonstrated that effect of customer awareness and competitiveness was higher on SSCM directly as compare to involvement of mediating variable by shrinking the effect size. Therefore, all the hypothesis of the study was accepted and supported statistically.

The results of the study are important for managerial implications for adopting best practices for sustaining effective supply chain management performance at tourism industry of Thailand. Firms strive to utilize best of their resources in respond to need of customers and to become competitive which further effect and influence sustainability capability and SSCM as demonstrated in the analysis phase of the present study. When firms develop knowledge for enhancing capability and competitiveness in their business operations and supply chain management, they successfully gain better positions and appropriate place in market and support their firms to be competitive and sustainable over longer time frame.

References:


