Application of Combined SWOT and Analytic Hierarchy Process (AHP) for Tourism Revival Strategic Marketing Planning: *A Case of Sri Lanka Tourism*

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Abstract: Tourism is one of the most dynamic and fastest growing global industries. However, tourist destinations are defenseless from unforeseeable disasters. Recovery shows a sluggish and delicate manner to which stepwise guidelines can not be formulated due to diverse internal and external environmental conditions. Thus, a systematic approach is inevitable for a tourism revival following a sudden disaster. This paper explains a systematic approach and analytical means for tourism revival strategic marketing planning with a combination of SWOT matrix and Analytic Hierarchy Process (AHP). SWOT technique examines both internal and external factors of tourism industry. The combination yields analytically determined priority factors and make them commensurable. The prioritized SWOT factors are used to formulate alternative recovery strategies using TOWS matrix. Ultimately a comprehensive priority for each strategic alternative with respect to SWOT factors was evaluated using strategic evaluation matrix. This method was applied for the tourism revival process of Sri Lanka following the 2004 Indian Ocean Tsunami. Results indicate that proactive communication strategy and isolation strategy with effective marketing promotional strategy were the best strategies that could have been implemented for a booming tourism revival process. The accuracy of the proposed hybrid method was established by comparing with then implemented strategies.

Key Words: *SWOT, Analytic Hierarchy Process (AHP), Strategic Marketing Planning, Sri Lanka Tourism (SLT)*

1. INTRODUCTION

Tourism is one of the most dynamic and fastest growing global industries. It has been recognized as an important economic development tools generating revenue and employments for nations' economies (Goeldner and Ritchie, 2003). However, tourism is fragile and vulnerable to external fluctuations. It is more susceptible to disasters, either natural or human-involved (Wickramasinghe and Takano, 2007; Sonmez *et al*., 1999). Recently, disasters have been increasing in numbers and the damage intensity. The consequences of disasters on tourist destinations are inescapable and profound (Sonmez *et al*., 1999).There is no destination immunity for disasters (Beirman, 2003). Recent catastrophic events (e.g., September 11, 2001, United Kingdom Foot-and-Mouth disease, SARS in 2003, 2004 Indian Ocean Tsunami, etc.) have transformed the reputation, desirability, and marketability of popular tourist destinations overnight (Beirman, 2003).

Faulkner and Russell (2000) defined a tourism disaster as a situation in which a tourist destination is confronted with sudden, unpredictable, catastrophic changes over which it has little control. Tourism disasters cause significant downturn in tourist numbers (Beirman, 2003). Similarly, Health and Wall (1992) mentioned that tourism disasters temporarily dampen the enthusiasm for international travel and undermine the economies of particular destination areas. Thus, the imminent hurdle following a tourism disaster is to regain tourists in a short time span. However, the revival process is complex as the reinstallations are based on many complex and uncertain factors: travel motivations, perception of safety and security, variable appearance and magnitude of disaster, risk absorption capacity of potential travelers, individual country condition and prior brand image of the destination. The complexity of tourism revival process necessitates a systematic approach with detailed analysis on various internal and external environment factors. However, the field of destination revival following a tourism disaster is an under-researched discipline within tourism studies (Beirman, 2003). In available literature, different decision support tools in tourism revival strategic marketing planning have been minimally applied. Mostly, common sense of decision makers had been used according to the situation. By far any systematic attempts have not been taken in global tourism sphere rather than ad-hoc tactical programs, denial strategy or adopted former successful revival projects in typical destinations such as PATA's Project Phoenix for SARS recovery in South East Asia in 2003 (Beirman, 2003). Successes of common sense decisions or implemented former project decision patterns have not always guaranteed the best outcome. Thus, a systematic and analytical means of strategic decision tool is mandatory for environment sensitive tourism industry. However the tourism literature does not show any contribution. This paper examines the combined usage of SWOT and AHP as an analytical process for tourism revival strategic marketing planning to overcome a sudden tourism disaster. Proposed hybrid method was tested in relation to the tourism revival process in Sri Lanka Tourism (SLT) following the 2004 Indian Ocean Tsunami (IOT). The validity of the method is proved by comparing the implemented and analytically obtained strategies.

The rest of the paper is organized as follows. Literature review comes in section 2 followed by a brief description of the case study area in section 3. The analysis and the results are outlined in section 4 while the discussion comes under section 5 followed by the conclusion in section 6.

2. LITERATURE REVIEW

2.1 SWOT Analysis

Strengths, Weaknesses, Opportunities, and Threats [SWOT] analysis is a commonly used instrument which scans internal strengths and internal weaknesses of a product or service industry and highlights the opportunities and threats of the external environment (Pesonen *et al*., 2000; Rauch, 2007). Generally SWOT is a list of statements or factors with descriptions of the present and future trend of both internal and external environment; the expressions of individual factors are general and brief which describes subjective views. However, SWOT is a convenient and promising way of conducting a situational assessment. Application of SWOT spreads over a wide spectrum of areas, however, only few documentation could be found in the academic tourism literature. With *et al*. (2007) carried out SWOT analysis to evaluate the current status and the potential of ecotourism in the Western Negev in Southern Isarel. Narayan (2000) perfromed a SWOT analysis on Fiji tourism industry aiming to provide an information base for poilicy decisions regarding the future growth.

Despite early advantages of SWOT in decision making, the use of conventional SWOT analysis has no means of determining the importance of each SWOT factor (Shinno *et al*. 2006). It is difficult to assess the most influencing factor in the strategic decision (Pesonen *et al*. 2000). Further, numerous criteria and interdependencies often complicate the decision process. Thus, utilization of SWOT alone in decision making process is insufficient. In this study, Analytic Hierarchy Process (AHP), and its eigen-value calculation framework is combined with SWOT analysis.

2.2 SWOT-AHP Methodology

The Analytic Hierarchy Process (AHP) is a commonly used multi-criteria decision making method (Saaty, 1980). AHP performs pair-wise comparisons between factors in order to prioritize them using the eigen-value calculation framework. The objective in utilizing the AHP within SWOT framework is to systematically evaluate SWOT factors and equate their intensities. AHP advantages; i.e., a systematic approach to decision problems and commensurability, are regarded as valuable characteristics in SWOT analysis. Additional value from SWOT analysis can be achieved by performing pair-wise comparisons between SWOT factors and analyzing them by means of eigenvalue technique as applied in AHP. This offers a good basis for examining the present or anticipated situation, or new strategy alternative more comprehensively (Kurttila *et al*., 2000). SWOT-AHP technique was applied in areas such as environment (Kurttile *et al*., 2000; Leskinen *et al*., 2006; Pesonen *et al*., 2000; Masozera *et al*., 2006), tourism (Kajanus *et al*., 2004), project management (Stewart *et al*., 2002), agriculture (Shrestha *et al*., 2004), and manufacturing (Shinno *et al*., 2006). To our knowledge this is the first SWOT-AHP study applied in the tourism sector. However, the mentioned literature had dealt merely with prioritization of the SWOT factors; strategies were not included based on prioritized SWOT factors. Aiming this drawback, current study used SWOT-AHP to prioritize the internal and external factors, followed by developing alternative strategies based on those factors in the form of TOWS matrix developed by Weihrich, 1982. A detailed explanation of steps involved in conventional SWOT-AHP technique is found in Penson *et al*., 2000; Shrestha *et al*., 2004; Kurttila *et al*., 2000; Masozera *et al*., 2006. However, the modifications based on reliable assumptions to the conventional SWOT-AHP methodology may increase the accuracy of the method.

2.3 Strategy formulation with TOWS Matrix

Weihrich (1982) developed TOWS as the next step of SWOT in developing alternative strategies. TOWS matrix provides means to develop strategies based on logical combinations of factors relate to internal strengths (or weaknesses) with factors related to external opportunities (or threats). TOWS matrix identifies four conceptually distinct strategic groups: Strength-Opportunity (SO), Strength-Threats (ST), Weaknesses-Opportunities (WO), and Weaknesses-Threats (WT), for creating the alternative strategies (Table1). The SO strategies use the internal strengths to take advantage of external opportunities (ideal case) and the WO strategies aim at reducing internal weaknesses by taking advantage of external opportunities. On the other hand ST strategies include utilization of the strengths in order to avoid or reduce the effects of external threats whereas WT strategies are defensive tactics aimed at reducing internal weaknesses and external threats. The primary advantage of this approach is the influence of prioritized internal and external factors embedded in alternative strategies. The main disadvantage of the TOWS matrix is that certain combinations are not considered such as SW or OT.

Table 1 TOWS Strategic Alternatives Matrix

	Internal Strengths (S)	**Internal Weaknesses (W)**
External Opportunities (O)	**SO:** *"Maxi-Maxi" Strategy* Strategies that **use strengths** to **maximize opportunities**	**WO:** *"Mini-Maxi" Strategy* Strategies that **minimize weaknesses** by **taking advantage of opportunities**
External Threats (T)	**ST:** *"Maxi-Mini" Strategy* Strategies that **use strengths** to **minimize threats**	**WT:** *"Mini-Mini" Strategy* Strategies that **minimize weaknesses** and **avoid threats**

Source: *H. Weihrich, 'The TOWS Matrix—A Tool for Situational Analysis' pp. 60.*

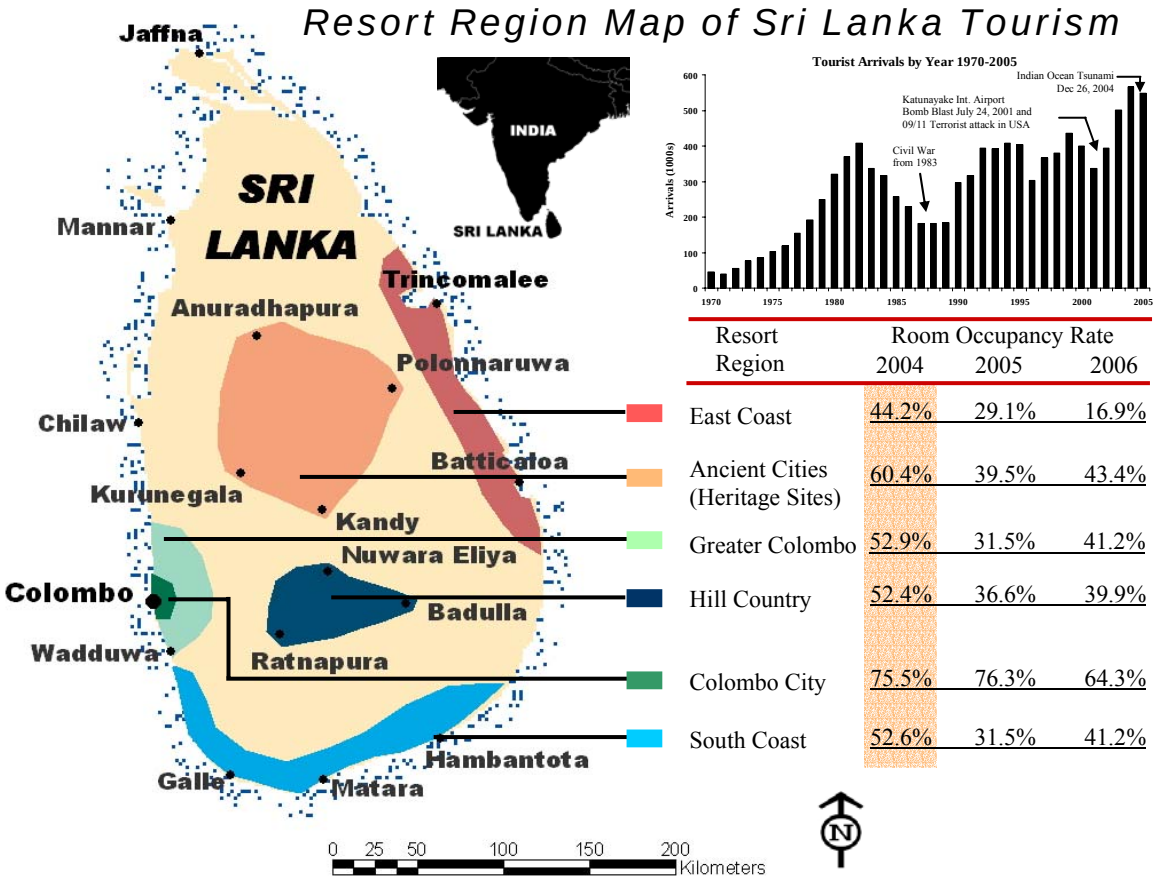
3. CASE STUDY: Sri Lanka as a Tourist Destination

Sri Lanka is an island in the Indian Ocean, close to the Southern end of Indian peninsula. Sri Lanka has much to offer for tourists; ethnic and cultural diversity, palm-fringed beaches and coral-reefs, mountainous interior with Ceylon Tea, cultural heritage sites, natural diversity, waterfalls, lush rainforest, and indigenous wildlife species makes Sri Lanka a unique destination in the global tourism sphere. These resources coupled with Sri Lankan hospitality make the island a highly imaged tourist destination especially among Western Europeans, and South Asians.

Modern commercial tourism in Sri Lanka started in mid-1960s. Sri Lanka registered only 18,969 visitor arrivals in 1966 but the number reached to 566,202 by 2004 (SLTB Annual Reports). However, tourist arrivals have not been increasing steadily rather many cycles of growth and declines mostly related to terrorism activities which have been existing since 1983 (Figure1). Nevertheless, tourism has been ranked as the nation's fourth largest industry in terms of foreign exchange since 1998. Despite the increments in tourist industry even with the long-episode of terrorism influence; it was the 2004 IOT that engulfed SLT by a natural disaster for the first time. In tourism perspective, the damage was only for beach tourism, rather cultural heritage sites, hill country, and wildlife sanctuaries were untouched. However, international media exaggerated the situation mentioning all the tourism has destroyed and no more tourism remains in Sri Lanka. The negative tourism image indirectly affected the non-beach tourism (Figure1). Promoting and attracting tourists to a destination with a completely devastated tourism image but with relatively intact infrastructure was the biggest challenge ahead of SLT professionals. The challenge was to perform the appropriate tourism revival strategic marketing planning for Sri Lanka. By far systematic approach and analytical methods are minimally used in such disaster revival strategic marketing planning. In all previous situations, SLT has used "Time will heal" or "Denial" strategy (Beirman, 2003).

The marketing of tourism in Sri Lanka is relatively centralized by world standards, with high degree of government involvement. The Sri Lanka Tourist Board (SLTB) is the statutory body for SLT. Non-absorption of private sector for tourism decision making was a significant lack in

SLTB management. However, with the promulgation of the new tourism act (Tourism Act No: 38 of 2005) from 01 November, 2007, the SLTB administration was decentralized. This new system provides more opportunities for the private sector to involve in tourism decision making and for distribution of profit in the local community.



Resort Region	Room Occupancy Rate 2004	2005	2006
East Coast	44.2%	29.1%	16.9%
Ancient Cities (Heritage Sites)	60.4%	39.5%	43.4%
Greater Colombo	52.9%	31.5%	41.2%
Hill Country	52.4%	36.6%	39.9%
Colombo City	75.5%	76.3%	64.3%
South Coast	52.6%	31.5%	41.2%

Figure 1 Occupancy rates by Resort regions in Sri Lanka Tourism

4. Tourism Revival Strategic Marketing Planning for Sri Lanka Tourism: *Application of SWOT-AHP Methodology*

The main steps followed in tourism revival strategic marketing planning for SLT with systematic approach and analytical means with AHP integrated in SWOT are shown in Appendix A.

STEP 1: Situational Assessment (SWOT Analysis)

The ultimate success of a strategic marketing planning is largely dependent on the accuracy of an effective situational assessment (Health and Will, 1992). By far literature and practitioners proved that SWOT technique is one of the best and the simplest in situational assessment. Though the outcome is more subjective and qualitative, if used carefully SWOT can provide a good basis for successful strategy formulation (Pesonen *et al*., 2000). In that, an initial questionnaire for the current study was aimed at collecting data in order to prepare a SWOT matrix for SLT giving special concern to 2004 IOT. Apart from the SWOT matrix formulation

questions, the recovery strategies adopted and those which should have been adopted, and the challenges to SLT regardless of 2004 IOT were included in the questionnaire. Data collection was carried out with an E-Survey during November-December 2007 and the respondents were the tourism professionals from SLTB and a leading private tourism establishment (Walkers Tours Ltd.) in Sri Lanka. Seven out of ten tourism professionals contacted were responded to the questionnaire. The answers of the respondents for SWOT were listed, reviewed, deliberated, and organized into meaningful small number of groups. Though it is beneficial to consider many factors, the number of pair-wise comparisons in AHP grows exponentially with the number of factors. Thus, the current process yielded 5 strengths, 6 weaknesses, 5 opportunities, and 5 threats as shown in Table 2. SWOT factors W6, O5, and T5 are identified as influences from IOT. These were later used to develop the survey questionnaire for pair-wise comparisons. The final SWOT matrix for SLT was approved by the SLTB (*detailed SWOT matrix is available on request from the authors*). It is noted that the developed SWOT matrix for SLT is applicable until the immediate relief phase of the 2004 IOT before commencing of the recovery phase.

Table 2 SWOT Matrix for Sri Lanka Tourism (considering the combined Pre- and Immediate Post-Tsunami time frame)

STRENGTHS *What strengths can we build upon*?	**WEAKNESSES** *What weaknesses do we need to address*?
S1: Destination Characteristics: scenery, bio-diversity, & natural environment, monarchical heritage destinations, distinctive Sri Lankan culture and hospitality **S2: Geographical Location and Historical Value:** island with inherent diversity, colonial connection, famous trade-port in ancient-era **S3: Living Standards:** English usage, cosmopolitan country**,** open economy **S4: Profile and Status of Tourism Industry:** 4th largest foreign earner, resilient industry, diverse and unique tourism products **S5: Cultural and Religious Events:** religious festivals and cultural events year around, mediation programs, MICE tourism, ayurveda/health tourism	**W1: Limited Accessibility:** limited international airlines and single international airport **W2**: **Under-developed Tourism and related facilities:** under-developed surface transportation, infrastructure and public facilities, lack of int. renowned airlines and hotels **W3**: **Inadequate Marketing Promotion**: absence of proper marketing promotion strategies make a low brand image **W4**: **Poor Coordination among tourism authorities:** lack of public-private involvement in strategic decision makings **W5**: **Un-structuralized Tourism Management:** outdated tourism law, ad-hoc investments, unsecured jobs and incentives **W6**: ***Lack of preparation for a calamity:** lack of a priori disaster mgt. framework or warning system, remaining debris
OPPORTUNITIES *What opportunities can we use*?	**THREATS** *What threats do we need to be aware of*?
O1: **Geographical settings of the Island destination:** not marked as disaster zone destination, '*transit point*' to East and West, varying climatic zones compactness with variety **O2**: **Potential for Tourism Development:** rich natural and cultural resources concentrated to a small island, long coastline **O3**: **Growing International Tourism Market:** new markets (Middle-East, Russia, China) interested on Sri Lanka **O4**: **International Reputation/Fame:** branded tourism products (Tea, Gem, Batik), sports awareness (cricket) **O5**: ***International Awareness following Tsunami Attack:** uncover the tourism prospects with tsunami media campaign, new segment of tourists	**T1**: **Regional Competitive Destinations & Resources:** increasing competitor destination marketing, Maldives white sandy beaches, Buddhist tourists attract to Nepal **T2**: **Negative perception regarding safety and security/ Political Instability:** adverse security situation in the country **T3**: **Lack of Active Tourism Controlling Authority:** lack of tourism development plans, illegal encroachers to tourism **T4**: **Complex Immigration Procedures:** increment of tourist tax, only short-term VISAS- long process to long term VISA **T5**: ***Perception of Potential Travelers:** psychological impact, tsunami contamination, termination of international service and product, warning messages from foreign ministries

* *Influence of 2004 Indian Ocean Tsunami for Sri Lanka Tourism*

STEP 2: Hierarchical Structure

Figure2 shows the hierarchical structure used in the study. Top level is the Goal: develop the best sustainable tourism revival strategic marketing plan for a destination affected by a sudden calamity. The lowest level contains the SWOT factors assigned to each SWOT group. In normal circumstances, the lowest level in AHP hierarchical structure must be alternatives (Saaty, 1980). However, the alternative level can be eliminated in such cases where the evaluation is carried out with either rating scale or absolute value approach with respect to upper level factors (SWOT factors in this case) rather than pair-wise comparisons. In the conventional analysis, the factor with the highest priority value of each SWOT group is selected for pair-wise comparisons to link the SWOT groups to the goal. The main drawback is that the objectives of the process are not incorporated into the AHP hierarchical structure at any level. The uniqueness of the hierarchical structure of the combined SWOT and AHP in the current study is the inclusion of more quantifiable strategic evaluating criteria or tourism priority issues. In that context, three tourism priority issues; (1) Effective Communication (2) Increase Visitor Satisfaction, and (3) Increase High Spending Travelers, ascertained by tourist experts involved in SLT were inserted to the hierarchical structure as shown in Figure2.

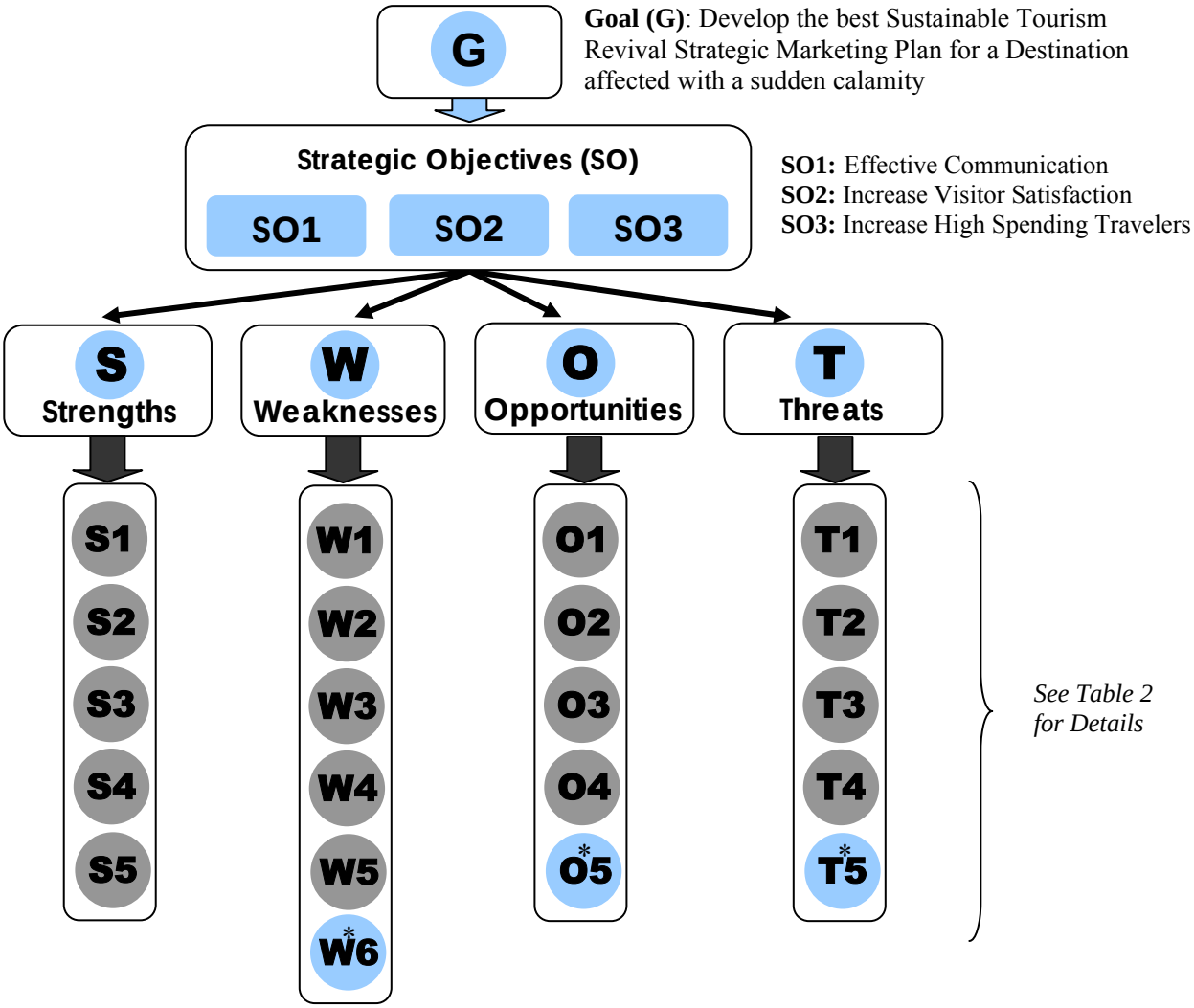


Figure 2 Hierarchical Structure to Prioritize the SWOT factors of Sri Lanka Tourism

Step 3: Pair-wise comparisons

Another questionnaire was carried out to evaluate pair-wise comparisons. An E-survey was performed again among eight respondents; SLTB personals and tourist experts involve in SLT. Initially, pair-wise comparisons between SWOT factors were carried out within every SWOT group. For pair-wise comparisons, the question style consisted of two parts; (1) comparing the two factors to with respect to develop a best sustainable tourism revival strategic marketing plan (Goal), the most governing factor (in the case of strength and opportunity) or the least favourable factor (in the case of weakness and threat), (2) how much more. Each question included a rating scale of one to nine to weigh each factor relatively. With these comparisons as the input, relative local priorities of the factors were computed using the eigen-value calculation method described by Saaty, 1980 (*see Appendix B for details*). Similarly, three control criteria (SO1, SO2, and SO3) were subjected to pair-wise comparisons. Next, the SWOT groups (Strengths, Weaknesses, Opportunities, and Threats) were rated using control criteria with respect to five intensity ratings: Very High, High, Medium, Low, and Very Low introduced by Saaty, 1996. Combining rating scale and eigen-values, each SWOT group was prioritized (*see Appendix C for details*). Finally, the global priority of each SWOT factor was calculated as a product of local priority and the scale of each SWOT group as shown in Table3. Global priorities of all the factors are summed into one.

Table 3 Factor priority scores and overall (global) priority scores of SWOT factors

SWOT GROUPS	Scaling Factor	SWOT Factors		Local Priority	Global Priority
Strengths (S)	0.2153	S1: Destination characteristics	[1]	0.5569	0.1199
		S2: Geographical location and historical value	[2]	0.1992	0.0429
		S3: Living standards	[5]	0.0300	0.0065
		S4: Profile and status of tourism industry	[4]	0.0569	0.0123
		S5: Cultural and religious events	[3]	0.1571	0.0338
Weaknesses (W)	0.2622	W1:Limited Accessibility	[5]	0.0580	0.0152
		W2: Under-developed Tourism and related facilities	[1]	0.4136	0.1084
		W3: Inadequate Marketing Promotion	[2]	0.2744	0.0719
		W4: Poor Coordination among tourism authorities	[4]	0.0601	0.0158
		W5: Un-structuralized Tourism Management	[6]	0.0340	0.0089
		W6: Lack of preparedness for a calamity	[3]	0.1598	0.0419
Opportunities (O)	0.3000	O1: Geographical settings of the Island destination	[3]	0.1150	0.0345
		O2: Potential for Tourism Development	[2]	0.3251	0.0975
		O3: Growing International Tourism Market	[5]	0.0660	0.0198
		O4: International Reputation/Fame	[1]	0.4045	0.1214
		O5: International Awareness following Tsunami Attack	[4]	0.0893	0.0268
Threats (T)	0.2225	T1: Regional Competitive Destinations & Resources	[3]	0.1902	0.0423
		T2: Negative perception with safety & security/ Political Instability	[1]	0.4451	0.0990
		T3: Lack of Active Tourism Controlling Authority	[4]	0.0428	0.0095
		T4: Complex Immigration Procedures	[5]	0.0324	0.0072
		T5: Perception of Potential Travelers	[2]	0.2895	0.0644

Step 4: Strategy formulation using TOWS matrix

The underlying objective of strategy formulation is to transform current conditions or re-establishment of the broken image in the region into desired situations. In practice, tourism sector can propose diverse tourism revival marketing strategies; however, limited financial and other

resources or internal and external environment conditions deprive to put all proposed strategies in action. Thus, it is imperative to choose which tourism strategies should receive priority, and which should be scaled down. SWOT-AHP method presents this process in most simple and transparent manner. For drawing out SMART strategies, the SWOT table has to be searched for logical combinations. The formulation of alternative strategies starts with finding those combinations. The TOWS matrix, developed by Weihrich (1982), draws four different strategy types (or logical combinations): (1) SO-strategies: internal strengths can be used to realize external opportunities (ideal case), (2) WO-strategies: reduce internal weaknesses or develop missing strengths to realize external opportunities, (3) ST-strategies: internal strengths are used to minimize external threats, and (4) WT-strategies: reduce the internal weaknesses to avoid external threats (only defensive strategy, worst case scenario). The alternative strategies were developed with experts' guidance, tourism theories and industry experiences in the past. The advantage of this approach is the influence of internal and external factors that are embedded in derived alternative strategies. The disadvantage is that certain combinations are not considered such as SW or OT. The numbers of formulated strategies are many, thus, a reasonable technique to screen the redundant is essential. In that, combined consensus of tourism experts was followed in this study. For each evolved strategy, SWOT combinations were listed in order to create a rational comprehensible result (e.g., S1/O3 means that strength number 1 and opportunity number 3 have been considered mainly). To further simplify the analysis, only first two strategies of each strategy block is selected and shown in the TOWS Matrix (Table4). Due to that simplification, a particular strategy can be supported or influenced by other SWOT factors apart from the two respective groups (e.g., flexible marketing promotion strategy on WT-strategies can receive support from Strengths and Opportunities to a lesser degree than Weaknesses and Threats).

Table 4 TOWS Matrix for Sri Lanka Tourism

	STRENGTHS	***WEAKNESSES***
OPPORTUNITY	*SO Strategies: Maxi-Maxi* **[ALT-1]Isolation Strategy:** Marketing destination areas unaffected by the disaster; positioning the unaffected destination with either available marketing mix or product innovation (S1/S2/S4/S5/S3/O4/O2/O3/O1/O5) **[ALT-2] Strategy of Differentiated Approach:** Provide a different or same marketing mix with a different way than competitive destinations (S1/S2/S5/O4/O2)	*WO Strategies: Mini-Maxi* **[ALT-3] Strategy of stake-holder inclusion to tourism development:** Incorporate private-public stakeholders for decision making, enhance product quality and exceptional customer care culture, reform new policy environment to develop tourism (W2/W3/W6/W4/W5/W1/O4/O2/O3) **[ALT-4] Distribution channel diversification strategy:** Distribution channels or travel intermediaries have the power to influence 'when', 'where', and 'how' people travel; to some extent control how many tourists get to a destination (W3/W2/W5/W1/W6/O4/O2/O1/O4/O5)
THREATS	*ST Strategies: Maxi-Mini* **[ALT-5] Focused/segmented marketing with strategy of product modification:** Segmentation identifies specific categories with homogenous desires among tourists. Together add niche market products and launch flagship projects (S1/S2/S5/S4/S3/T2/T5/T1) **[ALT-6] Pro-active communication Strategy:** avert the negative image created in the minds of potential visitors; should be centralized, honest, transparent, and informative (S4/S1/S2/T5/T2)	*WT Strategies: Mini-Mini* **[ALT-7] Launch an effective/flexible marketing promotional strategy:** restore confident in target markets: road shows, special events, billboards, trade fairs, TV programs, public relations, advertising are best promotion tactics (W3/T5/T2/T1) **[ALT-8] Organizational interrelationships and cooperate for team work:** Tourism is a collection of many services by a network of many parties; develop a network among organizers (W2/W1/W3/W6/T2/T1/T5)

Step 5: Strategic Evaluation Matrix

It is assumed that defined tourism revival strategic marketing alternatives with TOWS matrix do not provide any feedback to improve SWOT factors; one of the basic assumptions in AHP. These defined strategic alternatives were evaluated to check which one of them is the most effective in concerning all SWOT factors. Consequently, the defined strategies were rated using a 'relationship matrix' (strategic evaluation matrix in this case study) and the highly prioritized strategies are put into practice (Appendix D).

The rating scale mechanism developed by Saaty (1996) was used in order to appraise the strategic relationship between the SWOT factors and the developed SMART tourism revival strategic marketing alternatives from TOWS matrix in Step4. The strategic relationship represents the contribution from factors (in the case of Strengths and Opportunities) to implement the strategy and the expected improvements to factors (in the case of Weaknesses and Threats) once a particular strategy is implemented. The used intensities of the rating scale are shown below the Table in Appendix D and assigned strategic relationships are expressed as graphic symbols in the strategic evaluation matrix. The assigned relationships between SWOT factors and the strategies allow ranking of strategies that yields the selection of the applicable in practice. With these relationships as inputs, the "***desirability index***" (D_i) for the developed strategies are computed. The equation for the D_i is defined by;

$$D_i = \sum_{j=1}^{n} G_j R_{ij} \tag{1}$$

where G_j : Global weight of the j^{th} SWOT factor

R_{ij} : Degree of relationship between i^{th} strategy and j^{th} SWOT factor

n : Number of SWOT factors

The final step of AHP (i.e., synthesis of priorities**)** consists of multiplying the criteria-specific priority of the alternative (in this case R_{ij}) with the corresponding criterion weight (in this case G_j) and summing up the results to obtain the final composite priorities with respect to the goal stated at the top level of the hierarchy. Thus, the '*desirability index*' introduced under equation (1) should be linear in nature.

The strategic alternative with the largest desirability index should be the immediate revival strategic project. Further, a complete tourism revival strategic marketing planning framework can be developed by linking the following strategies. The particular advantage of this methodology is that each step is transparent and the outcome highly represents the internal and external environment conditions.

5. DISCUSSION

This paper intended to introduce a simple, acceptable, systematic, and transparent methodology for tourism revival strategic marketing planning. The ultimate success of a strategic tourism revival process is, to a large extent, dependent on the accuracy of an effective situational assessment (i.e., external and internal environment). SWOT is a convenient way of conducting a situational assessment (Health and Wall, 1992). However, SWOT does not analytically determine the importance of factors or assess the fit between SWOT factors and decision alternatives. To

eliminate these drawbacks, SWOT is combined with AHP which prioritizes the factors with pair-wise comparisons and absorbs uncertainties. This study endeavors to explain the tourism revival marketing strategies for SLT combining SWOT with AHP. Validity of the methodology is proved by comparing the theoretically developed strategies and practically implemented strategies in the revival process of SLT following the 2004 IOT devastation.

Consequently, proactive communication strategies and isolation strategy followed by flexible marketing promotion strategy should have adopted according to then existed internal and external environment. Obviously, the initiative in the revival process following such a huge tourism disaster must be by eliminating negative perception of potential travelers that is caused by bad media coverage. Thus, the communication strategy becomes the priority. In that SLT accomplished several items though with doubtful outcome. A good communication package includes advertising, developing marketing collateral and public relations activities such as developing media campaigns, writing press releases, media and trade familiarization (FAM) trips, trade show participation, e-communication etc. Yet, the SLTB might have not identified the correct blend and target groups properly. Following potential fear elimination, unharmed other destinations can be marketed: 'Isolation Strategy', until affected destinations are revived. This strategy was not followed by SLT rather attempted at boosting the whole-country tourism. Hill country, bio-diversity, and cultural heritage sites could have supported for new diversified marketing mix and to reestablish the tourism industry. The SLT promotion was carried out under "Bounce Back Sri Lanka" campaign which was heavily depended on media based campaigns. Discounting (two-for-one), special events (e.g., the World of Music Arts and Dance-WOMAD, spice festivals), global television campaign ('*Rediscover Sri Lanka*') were few promotions to name with; rather personal selling, word-of-mouth, and e-marketing could have been also implemented.

With the next identified strategy: 'distribution channel diversification strategy'; communication and regaining of tourists while eliminating the negative perception of potential travelers could have been achieved. Next is the segmented marketing strategy which was hardly ever implemented in SLT. The new Strategic Marketing Plan for 2008-2010 preparing by SLTB is however paying a deep concern to segmentation marketing strategy. Geographically, UK, Germany, Italy, and India should have been the immediate targets as past records show many repeat travelers from those destinations. Among the remaining strategies from the study, strategy of stake-holder inclusion for tourism decisions has come into action for SLT from 01 November 2007 with the release of the new tourism act: Tourist Act No: 38 (SLTB). Other identified strategies are strategy of differentiated approach and strategy of organizational interrelationships and cooperate for team work. All above strategies are related with both internal and external environment. Comparison of diagnosed strategies with the implemented proves the validity and effectiveness of the proposed methodology, for tourism revival strategic marketing planning.

The uniqueness of this analysis over other SWOT-AHP studies in various disciplines can be explained as follows: AHP hierarchy structure adds a strategic criteria level in order to link SWOT groups to the goal. Furthermore, elimination of alternatives from the bottom level of the hierarchical structure by using a rating-scale approach, and development of strategies using TOWS matrix have not been performed previously. Another unique feature is evaluation of the fit between alternative strategies derived with TOWS matrix and SWOT factors, and the ranking of those alternatives based on a defined 'Desirability Index' in the strategic evaluation matrix.

Both AHP and SWOT are commonly used in decision making and relatively simple. The combined method can be performed even with a small sample of individuals or groups who are knowledgeable with the issue under investigation (Kurttila *et al*., 2000; Ananda and Herath, 2003). Ability to perform in a limited time frame, less data requirement, transparency of the procedure, and capturing the uncertainties of subjective answers are few advantages of the proposed combined method. Considering only few factors (less than 10) under each SWOT group is the major deficit. However, this induces the user to avoid overlapping and carelessness when constructing the SWOT matrix. This approach does not capture the interdependencies and feedbacks between levels since AHP lacks this feature; this can be averted by replacing AHP with Analytic Network Process (ANP). Further, performing the prioritization of alternatives with pair-wise comparisons may capture the inconsistency of subjective views. However, evidence shows this method is simple, transparent, systematic, and fast; thus ideal to be used in situations with limited data availability, limited time frames like post-disaster situation.

6. CONCLUSION

This study brings up a systematic approach and analytical means for tourism revival strategic marketing planning, a yet under developed research area in tourism literature. Combined SWOT and AHP, was applied in the revival process of SLT following the 2004 IOT disaster. The outcome was the grading of developed marketing strategies. Pro-active communication strategy and isolation strategy followed by flexible marketing promotional strategy are the utmost importance in the revival process. In addition, strategy of distribution channel diversification, segmented marketing with strategy of product modification, and strategy of stake-holder inclusion for tourism decisions are also found important to implement with above mentioned strategies. However, strategy of differentiated approach and organizational interrelationship are not significant according to the desirability index, which is related with internal and external environment. The comparisons of outcome results (i.e., prioritized marketing strategies) with implemented strategies and experts' judgments have proved the accuracy of the proposed method. Simplicity of the procedure, limited data requirement, minimum complications in the analysis and transparency of the final outcome with internal and external environment make the proposed hybrid method unique among other decision making tools. Yet, further modifications and simplifications are possible. Inability to access dynamic environment situations precisely, ignorance of interdependencies, and negligence feedback among hierarchy levels due to AHP usage are the main drawbacks. Despite such drawbacks, the attained outcomes are still proved effective. Combined application of evaluated strategies could have recovered the tourism disaster shortly much than it had taken with ad-hoc nature decisions.

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Appendix A: Flow chart to the proposed new methodology for strategic marketing planning with combined SWOT and AHP

STEPS	Step 1 Situational Assessment (SWOT)	Step 2 Hierarchical Structure	Step 3 Pair-wise Comparison (AHP)	Step 4 TOWS Matrix and Strategy Development	Step 5 Strategy Evaluation Matrix
ACTIVITIES	• SWOT analysis is carried out (Determining the Strengths, Weaknesses, Opportunities, and Threats)	• Top-down hierarchical structure for the pair-wise comparisons of SWOT factors and groups. To link the goal to SWOT groups, strategic criteria level can be added (optional)	• Pairwise comparisons are carried out within SWOT factors in each group • SWOT groups are prioritized with a rating scale • Overall (Global) priorities are calculated for each SWOT factor	• Prioritized SWOT factors are placed in the TOWS matrix • Develop strategies considering two SWOT groups at a time (SO, ST, WO, WT strategies) • Eliminate the redundant strategies and keep only SMART* alternative Strategies	• Relate the SMART* alternative strategies linking to SWOT factors with a rating scale • Depending on the rating scores, rank the strategies using *Desirability Index*
OUTPUT	• SWOT Matrix	• Hierarchical Structure	• Local and Global priorities for the SWOT factors	• Feasible SMART* Strategies for revival operation	• Build the tactical program based on the ranks of strategies • Validation of proposed methodology

Appendix B: Pair-wise comparisons matrices for SWOT factors

Strengths	S1	S2	S3	S4	S5	Local weights
Destination characteristics **(S1)**	1	5	9	7	5	0.5569
Geographical location and historical value **(S2)**		1	7	7	1	0.1992
Living standards **(S3)**			1	1/3	1/7	0.0300
Profile and status of tourism industry **(S4)**				1	1/3	0.0569
Cultural and religious events **(S5)**					1	0.1571
λ_{max}= 5.399	CI= 0.100		CR= 0.089			

Weaknesses	W1	W2	W3	W4	W5	W6	Local weights
Limited accessibility **(W1)**	1	1/5	1/7	1	3	1/5	0.0580
Under-developed tourism and related facilities **(W2)**		1	3	7	7	3	0.4136
Inadequate marketing promotion **(W3)**			1	5	5	3	0.2744
Poor coordination among tourism management **(W4)**				1	3	1/3	0.0601
Un-structuralized tourism management **(W5)**					1	1/5	0.0340
Lack of preparedness for a calamity **(W6)**						1	0.1598
λ_{max}= 6.445	CI= 0.089		CR= 0.072				

Opportunities	O1	O2	O3	O4	O5	Local weights
Geographical settings of the Island destination **(O1)**	1	1/3	3	1/5	1	0.1150
Potential for tourism development **(O2)**		1	5	1	3	0.3251
Growing international tourism market **(O3)**			1	1/5	1	0.0660
International reputation/fame **(O4)**				1	5	0.4045
International awareness following tsunami attack **(O5)**					1	0.0893
λ_{max}= 5.145	CI= 0.036		CR= 0.032			

Threats	T1	T2	T3	T4	T5	Local weights
Regional competitive destinations and resources **(T1)**	1	1/5	5	7	1	0.1902
Negative perception regarding safety & security/political instability **(T2)**		1	9	9	1	0.4451
Lack of active tourism controlling authority **(T3)**			1	2	1/9	0.0428
Complex immigration procedures **(T4)**				1	1/7	0.0324
Perception of potential travelers **(T5)**					1	0.2895
λ_{max}= 5.307	CI= 0.077		CR= 0.069			

Priority Tourism Issues (Control Criteria/ Strategic Objectives)	SO1	SO2	SO3	Local weights
Effective communication **(SO1)**	1	3	9	0.6716
Increase visitor satisfaction **(SO2)**		1	5	0.2654
Increase high end travelers while decrease seasonality effect **(SO3)**			1	0.0629
λ_{max}= 3.029	CI= 0.015	CR= 0.025		

Appendix C: Ratings of Control Criteria

SWOT groups	Effective communication (SO1) 0.6716	Visitor satisfaction (SO2) 0.2654	High end travelers (SO3) 0.0629	Normalized Priority
Strengths **(S)**	Medium (0.16)	High (0.26)	Medium (0.16)	0.2153
Weaknesses **(W)**	High (0.26)	Medium (0.16)	Medium (0.16)	0.2622
Opportunities **(O)**	High (0.26)	High (0.26)	High (0.26)	0.3000
Threats **(T)**	Medium (0.16)	High (0.26)	High (0.26)	0.2225

Intensities; Very High (0.42); High (0.26); Medium (0.16); Low (0.10); Very Low (0.06)

Appendix D: Strategic Evaluation Matrix for SLT

SWOT GROUPS	Wt.	SWOT Factors		Local Wt.	Global Wt.	Strategies							
						SO-Strategy		*WO-Strategy*		*ST-Strategy*		*WT-Strategy*	
						ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6	ALT 7	ALT 8
Strengths (S)	0.2153	S1	[1]	0.5569	0.1199	☺	▲	---	☼	☺	▲	▲	---
		S2	[2]	0.1992	0.0429	▲	▲	---	●	▲	▲	▲	---
		S3	[5]	0.0300	0.0065	☼	☼	---	---	●	▲	☼	---
		S4	[4]	0.0569	0.0123	▲	☼	---	☼	▲	☺	▲	☼
		S5	[3]	0.1571	0.0338	☼	▲	---	☼	▲	☼	▲	---
Weaknesses (W)	0.2622	W1	[5]	0.0580	0.0152	---	---	☼	☼	☼	---	☼	▲
		W2	[1]	0.4136	0.1084	---	---	▲	☼	---	---	☼	☺
		W3	[2]	0.2744	0.0719	---	☼	☺	☺	▲	---	▲	▲
		W4	[4]	0.0601	0.0158	---	---	☺	☼	---	☺	▲	▲
		W5	[6]	0.0340	0.0089	●	---	▲	☼	---	●	☼	☼
		W6	[3]	0.1598	0.0419	☼	---	▲	☼	---	▲	☼	▲
Opportunities (O)	0.3000	O1	[3]	0.1150	0.0345	▲	●	●	▲	☼	---	---	---
		O2	[2]	0.3251	0.0975	☺	▲	▲	▲	▲	▲	▲	---
		O3	[5]	0.0660	0.0198	▲	---	▲	▲	▲	▲	☼	●
		O4	[1]	0.4045	0.1214	☺	☺	☺	☺	▲	▲	▲	●
		O5	[4]	0.0893	0.0268	☼	✖	●	▲	●	▲	●	●
Threats (T)	0.2225	T1	[3]	0.1902	0.0423	☼	☼	▲	☼	▲	▲	▲	▲
		T2	[1]	0.4451	0.0990	●	▲	▲	☼	▲	☺	▲	▲
		T3	[4]	0.0428	0.0095	---	---	▲	---	---	---	●	☼
		T4	[5]	0.0324	0.0072	---	☼	●	---	---	☼	---	☼
		T5	[2]	0.2895	0.0644	▲	☼	●	☼	▲	☺	▲	▲
Desirability Index (D_i)						**0.222**	**0.191**	**0.215**	**0.222**	**0.219**	**0.225**	**0.223**	**0.16**
Normalized (D_i)						**0.133**	**0.114**	**0.128**	**0.132**	**0.131**	**0.134**	**0.133**	**0.095**
Ranking						***2***	***7***	***6***	***4***	***5***	***1***	***2***	***8***

Intensities for rating scale (Saaty, 1996):

Very High ☺	High ▲	Medium ☼	Low ●	Very Low ✖	Nil ---
0.42	0.26	0.16	0.10	0.06	0.00