



Selecting Benchmarking Partners Using Analytical Hierarchy Process Approach

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ABSTRACT

Benchmarking is a method to improve performance and improve company competitiveness. This method has been commonly practiced by large companies and has recently been extended to small and medium enterprises (SMEs). However, the implementation between large and SMEs is very different. These differences are debated as an impact of company characteristics, specifically differences in the ability to develop and improve business. Typical SMEs face tough challenges to overcome their resource constraints. This limitation affects the decisions of SMEs in choosing their comparison partners. This research was conducted to fill the research gap regarding the use of the Benchmarking method and the AHP approach to SMEs, especially in determining Benchmark partners using the AHP approach. The use of benchmarking and AHP is illustrated by using SME objects that are engaged in the fashion sector, namely UKM Cotton.Go. The problem faced by UKM Cotton.Go is marketing communication that is not effective in creating sales so it needs to be determined benchmarking partner in making improvements to marketing communication. The use of AHP in determining benchmark partners helps SMEs to find out which benchmark partners have the best marketing communication performance.

1. Introduction

The small and medium-sized enterprises (SMEs) are named after assessing their business sizes. The economists tend to divide SMEs into classes, according to the measurable quantitative indicators. The most common criteria for differentiating large and small businesses is the number of employees [1]. In the current work, a study case at *Cotton.Go* was selected. *Cotton.Go* is a small and medium-sized fashion enterprise in Bandung (Indonesia). *Cotton.Go* was established on November 24, 2015 in the city of Bandung. Presently, *Cotton.Go* does not have any outlets. Based on an interview with the owner, *Cotton.Go* has the tagline "simple things seem more meaningful". This tagline indicates that *Cotton.Go* pursues the concept of simplicity in its products. The direct competitor of *Cotton.Go* are *Collins*, *Paxta*, and *Offf.co*.

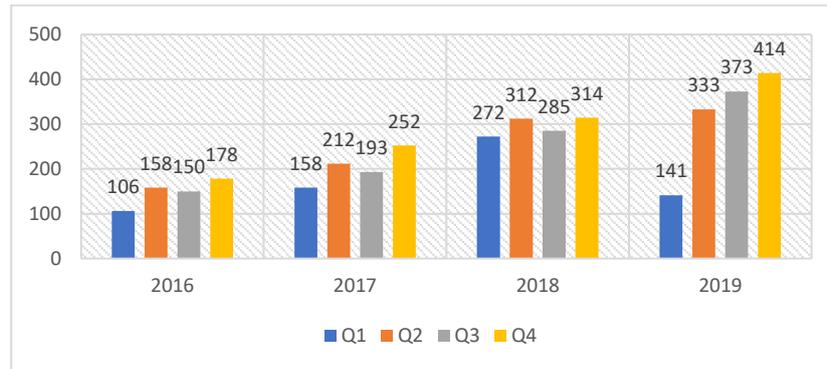


Fig. 1 – Sales of *Cotton.Go* from 2016 until 2019 (in quarterly)

Figure 1 describes the sales fluctuation of *Cotton.Go* over the years. The owner of *Cotton.Go* explained that the sales would increase significantly if the promotional activities were carried out, such as discounts in certain months (Q2 and Q4). Therefore, promotions become important in generating sales. Promotion is part of the marketing communication program mix. The integrated marketing communication program is the implementation of marketing strategies to optimize corporate brand message to consumers [2]. Integrated marketing communication is a dominant approach used by companies to plan and implement their marketing communication programs [3]. Hence, *Cotton.Go* requires better marketing communication program, that may lead to improving and stabilizing sales performances. The development of marketing communication programs is conducted using the benchmarking method. The ability and capacity of SMEs as small companies is very much different from large companies. Thus, determining the benchmarking partners becomes a vital stage in the benchmarking process of SMEs. In the case of benchmarking of SMEs, the benchmarking partner is needed to be in-par with the capacity of the SME themselves. The type of benchmarking used in this study was competitive benchmarking, which uses *Cotton.Go* competitors as the alternative benchmarking partners in designing marketing communication programs. On that basis, research was conducted to determine the appropriate benchmarking partner for *Cotton.Go* using the AHP method.

Literature shows that the use of AHP in the competitive benchmarking process has been conducted by Min and Min [4] on the Korean luxury hotels. Other works on the employment of AHP in benchmarking was also carried out by Chan et al.[5], Singh [6], dan Partovi [7]. Chan et al. [5] developed a benchmarking process using the AHP approach for the postal industry. In the study, a double AHP methodology was used, dividing the benchmarking process into two main parts: (1) performance evaluation and (2) continuous improvement. Singh [6] utilized AHP methodology to benchmark the quality of aviation services in India by evaluating the weaknesses and strengths of local aviation firms against their competitors. While Partovi [7] exploited AHP in developing methodologies to determine activities (objects) that are appropriate to be benchmarked in the manufacturing organizations.

Based on the results of the literature study found a research gap that is the use of the AHP method in the benchmarking process is still limited to large company objects. In addition, its use in SME objects has not yet been found. The current study aims to fill the research gap of using AHP in the benchmarking process, particularly, at the stage of determining benchmarking partners of SMEs. Research on the use of AHP in the benchmarking process is still very limited, especially on the applications to SMEs. The number of SME competitors makes the selection of benchmark partners difficult. In addition, the selection of SME benchmark partners is still very subjective, so a more accurate and objective benchmark partner selection process is needed, namely using AHP in the benchmarking process, especially at the stage of selecting benchmark partners. The focus of his research was on the stage of "determining what-to-benchmark" process.

2. Literature Study

2.1 Use of benchmarking in SMEs

Benchmarking is the process of improving performance by continuously identifying, understanding, and adapting best practices and processes found inside and outside an organization [8]. Benchmarking is also a process that facilitates companies to learn and understand the processes associated with the company[9].Benchmarking aims to study and improve business activities[10]. Benchmarking facilitates organizations to understand and develop their internal process [9]. Principally, the benchmarking process is carried out on a competitive basis and uses certain parameter values as a reference basis for making comparisons [11]. Benchmarking is practised by companies to improve their business to become larger companies than their competitors. In other words benchmarking can be utilized as a catalyst between development and innovation[12]. Benchmarking has been exercised extensively in large companies, but it has been widespread to small and medium enterprises (SMEs) [13]. Study shows that benchmarking, which has previously been commonly used in large companies, cannot be fully adopted by SMEs [13]. Therefore, some adjustments are needed in the implementations. Maire, Bronet and Pillet [13] studied how benchmarking was applied in improving SME performance. Maire, Bronet and Pillet [13] found that SMEs face difficulty in conducting the benchmarking process, particularly in the stages of describing the referenced process (referred practice). This referenced process is later to be compared to the existing process and followed by formulating the improvement steps. The stage of determining the benchmarking partner is the most important and critical step in the

benchmarking process. It is because the organization is demanded to have a good understanding of the best practice conducted by the benchmarking partners, prior to formulating the improvement plan, aiming to obtain the best benchmarking outcomes.

2.2 Analytical Hierarchy Process (AHP) in Benchmarking

Benchmarking is a process in which a company sees and learns the best practices within the industry, imitates the practices, and employs them in the company with some adjustment [14]. The benchmarking process has ten stages which are grouped into four phases: analysis, integration, and action phases [15]. The planning phase is divided into three steps: (1) identifying what will be benchmarked from the company, (2) identifying companies that will be benchmarked, and (3) collecting data. The analysis phase is divided into two stages. The first step is analyzing the gap between research objects and benchmarking partners using the key performance indicators (KPI). This step aims to determine the organizational performance aspects that are most important for current success [16]. The second step is projecting the upcoming performance. The integration phase has two stages: (1) communicating the benchmarking results, and (2) determining the company with the best practices. The main function of benchmarking is to improve business activities [10]. Benchmarking measures organizational performance against competing organizations and focus on minimizing the performance gap towards the competitors. From a customer service standpoint, competitive benchmarking can be defined as a process of improving customer service, including marketing communications [4]. Within the benchmarking process, selecting the benchmarking partners is vital, yet it is a tough decision.

The comparison data from the benchmarking partners, which are also the competitors, is difficult to be acquired [17]. Moreover, the acquired data are prone to be a subjective judgment, strongly influenced by the competitor's condition during observation. This limitation causes the obtained data for benchmarking is often to be a subjective judgment, solely based on the observations. Merle [18] found that most of the current application of benchmarking did not result in increased company competitiveness because companies often did not focus on what was truly important to benchmark. Therefore, an approach to reduce the subjectivity in determining and assessing the benchmarking partners is expected. One approach or method to assist companies in determining object or benchmarking partner is the analytical hierarchy process [18]. Analytical hierarchy process (AHP) is a structured technique to organize and analyze complex decisions based on mathematics and psychology [19]. Using AHP to determine the benchmarking partners facilitates the evaluation and transformation of qualitative assessments to quantitative ones [20].

Research of AHP in the benchmarking process is still very limited. Min and Min [4] employed AHP in determining the hotel with the best service attribute performance. AHP was used to synthesize customer assessments related to the overall hotel service quality. Other relevant research conducted by Chan et al. [5]. The AHP approach was used to determine the best improvement alternatives for companies in the postal industry, improving the companies competitiveness against the market leader. In addition, Singh [6] applied AHP to determine the market leader in the airline industry and later to select the benchmarked airline.

2.3 Integrated Marketing Communication

The concept of integrated marketing communication (IMC) has attracted great attention to marketing and management researchers. IMC is considered as one of the most influential marketing management frameworks for the past twenty years [21]. Company uses marketing communications as an important tool for business development and brand recognition [22]. Also, based on the theory of diffusion of new products, marketing communication and media effects influence the adoption of new products [23]. As a result, research on marketing communication is still expanding. Marketing communication is very common to use in the fashion industry. Researchers have previously studied marketing communications in the fashion industry.

Escobar-Rodríguez dan Bonsón-Fernández [24] analyzed the use of Facebook as a marketing communication channel and studied the impact of marketing communication on customer engagement performed by the company. The studied objects were fashion retailers. On the other hand, Esteban-Santos, Medina and Carey [25] examined the influence of fashion bloggers as a tool for marketing communication in influencing the buying behaviour of the Spanish millennials. The study found that the motivation to follow fashion bloggers is to seek entertainment and information. Furthermore, it was also found that the audience of fashion bloggers show an increase in purchase intention of fashion products. Based on the literature mentioned above, it can be concluded that marketing communication is an important tool for companies. In this study, formulating improvements plan of marketing communication of fashion SME (*Cotton.go*) were conducted upon performing a benchmarking process.

2.4 State of The Art

Following is Table 1 regarding State of the Art research. The table describes several relevant studies using Benchmarking and AHP methods. Based on Table 1 it can be seen that benchmarking and AHP have been used by previous researchers to identify opportunities for improvement, develop strategic plans and determine benchmark objects rationally and systematically. But its use in SMEs is very limited.

Table 1 – State of the Art

| No | Title | Year | Object | Author | Originality / Value |
|----|--|------|---------------------------------|---|---|
| 1 | Determining What to Benchmark: An Analytic Hierarchy Process Approach | 1994 | Manufacturing firm | Fariborz Y. Partovi | The methodology developed in this research can help the manager in determining benchmark objects with a rational and systematic selection process [7]. |
| 2 | Competitive benchmarking of Korean luxury hotels using the analytic hierarchy process and competitive gap analysis | 1996 | Luxury Hotel | Hokey Min, Hyesung Min | The methodology developed in the study helps hotel managers identify the superior performance of the hotel compared to its competitors. In addition, through the use of competitive benchmarking and AHP, specific comparative advantages can be identified [4]. |
| 3 | An AHP approach in benchmarking logistics performance of the postal industry | 2006 | Postal Industry | Felix Chan, T.S. Chan, H.K. Chan, Henry C.W. Lau, Ralph W.L. Ip | Framework developed can evaluate company performance compared to its competitors. In addition, the use of these frameworks can help companies to determine the best alternative improvement to be implemented by the company in order to improve performance on the weak aspects [5]. |
| 4 | Benchmarking as a Tool for Quality Improvement in College of Business Administration: An Application of AHP | 2014 | Higher Education Institutions | Abdul Malik Syed and Mohammad Naushad | The study provides a framework for applying formal benchmarking as a tool by using AHP to adapt best practices in quality enhancement in the College of Business Administration (CBAK) [26]. |
| 5 | An analytic hierarchy process for benchmarking of automobile car service industry in Indian context | 2015 | Automobile car service industry | Bhupender Singh, Sandeep Grover, Vikram Singh and Rajesh Attri | The benchmarking process developed in the study provides an effective systematic decision support tool. In addition, the method developed in this research can be implemented in other industries with some adjustments [27]. |
| 6 | Implementation of the AHP and benchmarking in Strategic Analysis of Polish Regions | 2015 | Polish public administration | Jacek Strojny | The research represents the mechanism of strategic analysis using AHP and Benchmarking (Comparative Analysis) methods [28]. |
| 7 | Competitive service quality benchmarking in airline industry using AHP | 2016 | Airline industry | Alok Kumar Singh | Competitive service quality benchmarking in the airline industry using AHP can indicate criteria that are considered important by customers based on their priority level. In addition, the use of the AHP methodology can help companies determine the company leader which is then used as a benchmark airline [6]. |
| 8 | Benchmarking Hotels: Applying Analytic Hierarchy Process | 2019 | Hospitality | Awin Jabar, Savel Kamal, Twezhar Kamal, and Cemil Top | The AHP benchmarking model developed in the study using hotel objects can be used to benchmark other service aspects. In addition, the use of benchmarking and AHP can detect weaknesses and strengths to develop a strategic plan [29]. |

3. Research Methodology

3.1 Data Collection

Data collections were conducted qualitatively and quantitatively. Qualitative methods were employed to capture the problems encountered by the investigated subjects and to understand the interactions between the researcher and the investigated case. Primary data was gathered by conducting interviews with the respondents on their view on Cotton.Go and its competitors. Another set of primary data was acquired by observing the marketing communication of Cotton.Go. Secondary data, such as number of SMEs in Bandung, product information, sales data (Jan 2016 - Dec 2019) and the marketing communication data of Cotton.Go was exploit to support the analysis. The marketing communication mix, developed by Kotler and Keller [30] was used as the basis to formulate the marketing communication mix program of the company. It comprises (1) advertising, (2) sales promotion, (3) public relations and publications, (4) direct marketing and databases, (5) online marketing and social media, (6) events and experience, (7) mobile marketing and (8) personal sales. A quantitative method by distributing AHP questionnaires was conducted to capture the comparison of marketing communication practise between the company and the potential benchmarking partners. The questionnaire respondents were asked to rate the marketing communication attributes of the company over that of the benchmarking partners, using an interest scale that shows how important an attribute as compared to other attributes. The scale used in this study was the fundamental scale proposed by Saaty, a scale from 1 to 9.

3.2 Design and Distribution of Questionnaires

The questionnaire was designed to collect comparative data on the importance of marketing communication criteria and the marketing performance of the alternative benchmarking partners. The questionnaire was designed as a pairwise comparison. The comparisons were made using an absolute rating scale that represents how much more one element dominates another with respect to the given attribute [19]. The questionnaire consisted of specific questions and related to marketing communications of the benchmarking partner. The purposive sampling was selected as the sampling technique, where respondents answer questions based on their knowledge. Thus, effective research data acquisition could be obtained. In purposive sampling, stakeholders can be applied as samples because the research requires stakeholders perspectives on issues where stakeholder knowledge is needed[31].

The stakeholders of this research object were the consumers and the competitors of *Cotton.Go*. As many as 30 respondents who know the competitors of *Cotton.Go* (i.e. *Collins*, *Paxta*, and *Off.co*) were selected as the samples. The main respondents were fashion observers or consumers who understand the marketing communications used by *Cotton.Go* competitors as the alternative benchmark partners.

3.3 Data Processing Method

AHP is a structured technique used to organize and analyze complex decisions based on mathematics and psychology[19]. AHP was first introduced by Saaty in 1980 [4]. In the research conducted by Min and Min[4] , AHP was used to determine the best hotel based on service quality criteria, and later the result was used as a reference in the benchmarking process. While Partovi[7] exploited AHP in developing a methodology to determine activities (objects) that are appropriate to be benchmarked in manufacturing organizations. In the study, AHP was used as a method for determining the benchmarking partners. By applying AHP, it is easier to compare and illustrate the qualitative assessments of quantitative values[20]. In addition, the use of AHP in this study aims to determine the priority sequence of marketing communication alternatives and to determine the benchmarking partners, selected from the available alternative partners. Prior to performing the AHP data processing, a reliability test was conducted on the acquired data.

Reliability test is conducted to find out whether the research data is consistent. If the reliability test of the obtained data of this study was unsuccessful, it is necessary to recollect the data until the data is proven reliable. There are several steps to determine the consistency of data, the steps are as follows [19]:

1. Finding the consistency value of each alternative. To get the consistency value of each alternative, a matrix multiplication operation to be performed between the alternative comparison matrix and the priority vector.

$$\text{matrix } x \text{ priority} = \begin{bmatrix} A_1/A_1 & A_1/A_2 & A_1/A_n \\ A_2/A_1 & A_2/A_2 & A_2/A_n \\ A_n/A_1 & A_n/A_2 & A_n/A_n \end{bmatrix} \begin{bmatrix} P_1 \\ P_2 \\ P_n \end{bmatrix} = \begin{bmatrix} X_1 \\ X_2 \\ X_n \end{bmatrix} \quad (1)$$

let,

- A_n = alternative-n
- P_n = *Priority vector* alternative-n
- X_n = multiplication of matrix and priority vector of the alternative-n
- n = 1,2,3,...,n

- Finding the consistency level

$$\text{Consistency of the alternative } - n = \frac{X_n}{\text{priority vector of alternative } - n} \quad (2)$$

- Finding the maximum eigenvalue.

$$\lambda \text{ maks} = \frac{\sum \text{consistency of the alternative}}{n} \quad (3)$$

- Defining the *Consistency Index* (CI)

$$CI = \frac{\lambda \text{ maks} - n}{n - 1}$$

- Random Consistency Index* (RI) value was determined by the alternative summation in AHP, as shown in Table 2

Table 2 – Average Random Consistency Ratio

| <i>Average Random Consistency Index (RI)</i> | | | | | | | | | | |
|--|---|---|------|-----|------|------|------|------|------|------|
| <i>n</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| RI | 0 | 0 | 0.58 | 0.9 | 1.12 | 1.24 | 1.32 | 1.41 | 1.45 | 1.49 |

- Computing the *Consistency Ratio* (CR)

$$CR = \frac{CI}{RI}$$

Consistency Ratio (CR) defines the consistency of data. If $CR < 0.1$, the data is consistent. Whereas, if $CR > 0.1$, the data is not consistent and requires re-collection until it proven to be consistent [31]

4. Result and Discussion

4.1 AHP Structure Design

The AHP assessment process is carried out based on a marketing communication program carried out by alternative benchmark Cotton.Go partners. AHP structure in this study is illustrated in Figure 2.

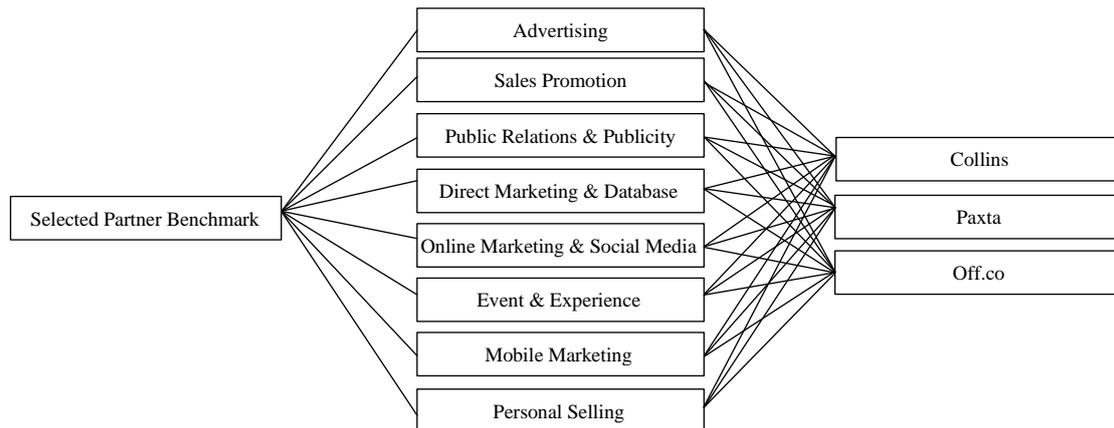


Fig. 2 - Structure of AHP in this current study

Figure 2 shows the AHP structure design of this study, the process of selecting benchmark partners. The selection process for benchmark partners is carried out in 2 stages. The first stage is weighting the importance of the criteria for selecting benchmark partners. Benchmark partner criteria are a mix of marketing communications, namely advertising, sales promotion, public relations and publicity, direct marketing and social media, events and experience, mobile marketing and personal sales. The second stage is the assessment of satisfaction of marketing communication mix criteria for each alternative benchmark partner namely Collins, Paxta, and Off.co.

4.2 Comparison matrix of the marketing communication alternatives

Comparison matrix of the marketing communication alternatives is resulted from processing the comparison questionnaire of marketing communication alternatives, which include advertising, sales promotion, public relation and publicity, direct marketing and database, online marketing and social media, events and experiences, mobile marketing and personal sales. The priority ranking of the marketing communication alternatives by the priority vector value is presented in Table 3.

Based on Table 3, it can be concluded that the order of importance of the marketing communication criteria (highest to lowest) were mobile marketing, sales promotion, online marketing and social media, events and experience, direct and database marketing, public relations and publicity, advertising, and personal sales. Mobile marketing, sales promotion, as well as online marketing and social media were the three criteria with the highest priority vector value. Benchmarking partners with good performance on these criteria have a greater chance of being selected as benchmark partners.

Table 3 – Importance Level of The Marketing Communication Criteria

| Criteria | Priority vector | Rank |
|-----------------------------------|-----------------|------|
| <i>Mobile Marketing</i> | 0.229 | 1 |
| Sales promotion | 0.155 | 2 |
| Online marketing and social media | 0.136 | 3 |
| Events and experience | 0.123 | 4 |
| Direct marketing & Database | 0.104 | 5 |
| Public relations and publications | 0.099 | 6 |
| Advertising | 0.084 | 7 |
| Personal sales | 0.070 | 8 |

Three marketing communication mix with the highest priority vector level are Mobile Marketing, Sales Promotion, Online Marketing and Social Media. Mobile marketing becomes the marketing communication mix criteria with the highest priority vector value. This is supported by the increasing number of smartphone and tablet users. The development of mobile communication provides many services that can improve the quality of human life making mobile marketing users increasingly [32]. Sales promotion ranks second in the most important marketing communication mix criteria. Sales promotion on brands with high similarity can produce high sales in the short term, but does not apply in the long term [30]. The third rank for the most important communication mix criteria is online marketing and social media. Online marketing and social media are very popular media among young people and their use is very easy. The use of online marketing and social media is increasing along with the development of business tools using social media data analytics that enable businesses to make their marketing programs more efficient and effective [33].

4.3 Alternative Benchmarking Partners Comparison Matrices

Comparison matrix of the alternative benchmarking partners is the outcomes of processing the returned questionnaires from the alternative benchmarking partners. In this study, the alternative benchmarking partners (i.e. Collins, Paxta, dan Offf.co) were compared on their marketing communication practice.

In spite, this study did not assess the respondent satisfaction on the marketing communication criteria of public relations and publicity. It was due to the benchmarking partners of Cotton.Go do not use the marketing communication mix of public relations and publicity as tools for marketing their business. Table 4 and Table 10 compile the respondent's satisfaction on marketing communication criteria of the benchmarking partners.

Table 4 – Satisfaction Level of The benchmarking Partner (Advertising)

| Benchmarking partners | Priority vector | Rank |
|-----------------------|-----------------|------|
| <i>Collins</i> | 0.429 | 1 |
| <i>Offf.co</i> | 0.338 | 2 |
| <i>Paxta</i> | 0.233 | 3 |

Table 5 – Satisfaction Level of The benchmarking Partner (Sales Promotion)

| Benchmarking partners | Priority vector | Rank |
|-----------------------|-----------------|------|
| <i>Collins</i> | 0.442 | 1 |
| <i>Offf.co</i> | 0.343 | 2 |
| <i>Paxta</i> | 0.215 | 3 |

Table 6 – Satisfaction Level of The benchmarking Partner (Direct Marketing and Database)

| Benchmarking partners | Priority vector | Rank |
|-----------------------|-----------------|------|
| <i>Offf.co</i> | 0.497 | 1 |
| <i>Collins</i> | 0.350 | 2 |
| <i>Paxta</i> | 0.153 | 3 |

Table 7 – Satisfaction Level of The benchmarking Partner (Online Marketing and Social Media)

| Benchmarking partners | Priority vector | Rank |
|-----------------------|-----------------|------|
| <i>Offf.co</i> | 0.505 | 1 |
| <i>Collins</i> | 0.326 | 2 |
| <i>Paxta</i> | 0.170 | 3 |

Table 8 – Satisfaction Level of The benchmarking Partner (Event and Experienece)

| Benchmarking partners | Priority vector | Rank |
|-----------------------|-----------------|------|
| <i>Collins</i> | 0.539 | 1 |
| <i>Offf.co</i> | 0.287 | 2 |
| <i>Paxta</i> | 0.175 | 3 |

Table 9 – Satisfaction Level of The benchmarking Partner (Mobile Marketing)

| Benchmarking partners | Priority vector | Rank |
|-----------------------|-----------------|------|
| <i>Collins</i> | 0.447 | 1 |
| <i>Offf.co</i> | 0.321 | 2 |
| <i>Paxta</i> | 0.232 | 3 |

Table 10 – Satisfaction Level of The benchmarking Partner (Personal Selling)

| Benchmarking partners | Priority vector | Rank |
|-----------------------|-----------------|------|
| <i>Paxta</i> | 0.416 | 1 |
| <i>Collins</i> | 0.330 | 2 |
| <i>Offf.co</i> | 0.254 | 3 |

Based on the data presented in Table 4 to Table 10 it suggests that *Collins* owned the highest satisfaction value on advertising, sales promotion, event and experience, and mobile marketing criteria. *Off.co* achieved the highest satisfaction on direct and database, online marketing and social media criteria. Finally, *Paxta* possessed the highest satisfaction value in personal sales marketing communication criteria. High satisfaction level value is shown from the acquisition of high ranking. A high satisfaction value indicates a good marketing communication mix performance so that alternative benchmark partners with the highest satisfaction value can be used as a benchmark source so that from the data in Table 4 to Table 10 it can be seen that the benchmark partners can be used as a benchmark source per marketing communication mix criteria. *Collins* can be used as a benchmark source for the marketing communication mix of (1) advertising, (2) sales promotion, (3) events and experience and (4) mobile marketing. *Collins* has the highest priority vector value in the four marketing communication mix. On the other hand, *Off.co* has the highest priority vector value in the (1) direct marketing and database marketing communication mix and (2) online marketing and social media so that *Off.co* can be used as a benchmark source for the two marketing communication mix. *Paxta* can be used as a benchmark source for personal selling.

4.4 Reliabilty Test

Reliability test is conducted to find out whether the research data is consistent. If the reliability test of the obtained data of this study was unsuccessful, it is necessary to recollect the data until the data is proven reliable.

Table 11 – Reliability Test Result of The Alternative Marketing Commuication

| λ maks | CI | RI | CR |
|----------------|--------|------|-------|
| 8.168 | 0.0234 | 1.41 | 0.017 |

Based on Table 11, the reliability test shows that the alternative data of marketing communication proved to be reliable because the CR value was less than 0.1 [34]. Rajasekhar et.al [34] in his study stated that the main principle for evaluating the order of comparison is to use a Consistency Ratio (CR) value, a CR value that exceeds 0.1 indicates that the pairwise comparison matrix needs to be changed. Additionally, the reliability test result of every marketing criteria of the alternative benchmarking partners is depicted in Table 12. Table 12 presents the reliability test result of every marketing communication criteria with CR value less than 0.1, suggesting reliable data.

Table 12 – Reliability Test Result of Every Marketing Criteria of The Alternative Benchmarking Partners

| Criteria | Advertising | Sales promotion | Direct marketing & Database | Online marketing & social media | Events and experiences | Mobile Marketing | Personal sales |
|----------------|-------------|-----------------|-----------------------------|---------------------------------|------------------------|------------------|----------------|
| λ maks | 3.010 | 3.000 | 3.042 | 3.017 | 3.001 | 3.000 | 3.028 |
| CI | 0.005 | 0.000 | 0.0214 | 0.009 | 0.000 | 0.000 | 0.0142 |
| RI | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 |
| CR | 0.009 | 0.000 | 0.037 | 0.015 | 0.001 | 0.000 | 0.024 |

4.5 Benchmarking Partner Selection

In selecting the benchmarking partner, the ranking was ordered by multiplying the priority vector of the marketing communication criteria with the alternative value of the benchmarking partners. Benchmarking partners were selected from the highest-ranking of the alternative benchmarking partners.

Table 13 – Benchmarking Partners Ranking

| Criteria | Priority vector | Rank | Collins | Paxta | Off.co |
|-----------------------------------|-----------------|------|---------|-------|--------|
| Advertising | 0.084 | 7 | 0.429 | 0.233 | 0.338 |
| Sales promotion | 0.155 | 2 | 0.442 | 0.215 | 0.343 |
| Public relations and publications | 0.099 | 6 | - | - | - |
| Direct marketing & Database | 0.104 | 5 | 0.350 | 0.153 | 0.497 |
| Online marketing and social media | 0.136 | 3 | 0.326 | 0.170 | 0.505 |
| Events and experiences | 0.123 | 4 | 0.539 | 0.175 | 0.287 |
| Mobile Marketing | 0.229 | 1 | 0.447 | 0.232 | 0.321 |
| Personal sales | 0.070 | 8 | 0.330 | 0.416 | 0.254 |
| Total | | | 0.377 | 0.196 | 0.328 |
| Rank | | | 1 | 3 | 2 |

Table 13 presents the benchmarking partners ranking, showing *Collins* as the selected benchmarking partners with total priority vector of 0.377. *Off.co* was placed at the second position with a total priority vector of 0.328, and the last position was given to *Paxta* with total priority vector of 0.196. This data also points out that *Collins* is the competitor of *Cotton.Go* with the best customers marketing communication performance, and it is proven to be attractive for the customers. Therefore, in designing the marketing communication program, *Cotton.Go* is suggested to nominate the marketing communication program of *Collins* as reference (benchmarking partner).

5. Managerial Implication

Based on the obtained results, *Collins* was chosen as the benchmarking partner with the highest level of satisfaction on three criteria: (1) events and experience, (2) direct marketing and databases and (3) mobile marketing. However, comparing with the importance level of marketing communication criteria for customers, it was found that the criteria (1) mobile marketing, (2) sales promotion and (3) online marketing and social media were the three criteria with the highest priority vector value. The higher the value of the priority vector in marketing communication criteria, the higher the level of importance of those criteria to customers. The selected benchmarking partner (*Collins*) did not reach the highest satisfaction value in sales promotion, online marketing and social media. Hence, to evaluate the company performance by these criteria, the alternative benchmarking partner who had the highest priority vector values of online marketing and social media could be selected (i.e. *Off. Co*). Nonetheless, *Collins* did not gain the best satisfaction level under the sales promotion criteria, yet it was still the highest among the rest.

This case can be concluded that other alternative benchmarking partners can be selected as the benchmark in evaluating and refining the criteria deemed important to the customer. The selection can be made by using the priority vector value and the satisfaction value as a basis for determining the alternative benchmarking partners, while the previously selected benchmarking partner does not perform well on certain criteria.

6. Conclusions

Based on the findings, this study is concluded that AHP can be used to determine the closest competitors with the best marketing communication performance from SMEs consumers' perspectives. There are some adjustments in applying AHP to the process of determining benchmark partners. First, the weighting is done based on the assessment of consumers who know the marketing communications used by *Cotton.Go* competitors. Second, the criteria are evaluated based on the level of satisfaction of the respondents with the criteria not based on the level of importance. The use of AHP at the stage of determining benchmark partners can reduce company subjectivity in choosing benchmark partners as the basis for improving marketing communication programs. In addition, the use of AHP in Benchmarking helps SME to determine priority criteria that need to be improved, so that SMEs can allocate their resources to the right target. Despite that, this study highlights a limitation. It is believed that the subjectivity of the respondents to perceive the investigated object contributes to the bias effect in comparing the SMEs.

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