

CONSUMER-BASED CAVE TRAVEL AND TOURISM MARKET CHARACTERISTICS IN WEST JAVA, INDONESIA

CARACTERÍSTICAS DO MERCADO CONSUMIDOR DE ESPELEOTURISMO EM WEST JAVA, INDONÉSIA

Eva Rachmawati & Arzyana Sunkar

Department of Forest Resources Conservation & Ecotourism, Faculty of Forestry, Bogor Agricultural University – Bogor, Indonesia.

E-mail: evarachmawati@gmail.com; arzyana@yahoo.com

Abstract

Caves as destinations for geotourism, were some of the first documented geologic features that had become the object of tourism. While cave tourism development in Indonesia is still in its infancy, in line with the increasing popularity of geotourism and ecotourism, it has great prospects. The main objective of this study was to identify the current consumer-based market conditions for cave travel and tourism in West Java of Indonesia focussing on the motives and the characteristics of the visitors that include geographic, socio-demographic, behavioural, and psychographic characteristics. The sample population comprised visitors who have visited caves within the Districts of Tasikmalaya and Ciamis where most of caves in West Java were located. Visitors' characteristics were clustered based on three main motivations, specifically recreation, adventure seeking and religious purposes. Results of the study indicated that cave visitors of West Java were basically called visitors since none spent overnight at the site. They mostly originated from districts and cities that were in proximity to the caves, unmarried youth to young adult males with monthly income of less than USD 100, whom enjoyed travelling with friends, and showed great interests for intellectual benefits of caves. The caves were mostly visited during holidays, and only the adventure-seeking and cultural cave visitors stayed for more than 3 hours. The visitors had limited knowledge of the caves, although their intellectual needs proved to be the main contribution to visit caves.

Key-Words: Cave travel; Cave tourism; Cave visitors; Market segments.

Resumo

Cavernas estão entre as primeiras feições geológicas documentadas como atrativos para o geoturismo. O espeleoturismo na Indonésia ainda está em seu estágio inicial, alinhado com a crescente popularidade do geoturismo e ecoturismo, trazendo grandes perspectivas. O principal objetivo deste estudo foi identificar as condições atuais de mercado baseadas em consumo, para viagens de espeleoturismo em West Java da Indonésia, centrado sobre os motivos e as características dos visitantes (sócio-demográficas, comportamentais e psicográficas-geográficas). A amostra foi composta de visitantes que visitaram cavernas dentro dos Distritos de Tasikmalaya e Ciamis, onde a maioria das cavernas em West Java estão localizadas. Características dos visitantes foram agrupadas com base em três motivações principais, especificamente recreação, busca de aventura e fins religiosos. Os resultados do estudo indicaram que os espeleoturistas de Java Ocidental são, basicamente, excursionistas, uma vez que não pernoitam no local. A maioria deles é proveniente de distritos e cidades que estão na proximidade das cavernas, sendo jovens solteiros e jovens-adultos do sexo masculino, com renda mensal de menos de US\$ 100, que gostam de viajar com os amigos, e mostraram grande interesse em obter conhecimentos sobre o ambiente das cavernas. As cavernas foram mais visitadas durante as férias, e só os visitantes de aventura e com interesses na cultura permaneceram por mais de 3 horas. Os visitantes possuíam conhecimento limitado das cavernas, e suas necessidades de busca de conhecimentos foram compreendidas como a principal motivação para o espeleoturismo.

Palavras-Chave: Viagens em cavernas; Espeleoturismo; Espeleoturistas; Segmentos de mercado.

1. INTRODUCTION

Geotourism is defined by Newsome; Dowling (2010:4) in Dowling; Newsome (2010) as “a form of natural area tourism that specifically focuses on

geology and landscape. It promotes tourism to geosites and the conservation of geodiversity and understanding of earth sciences through appreciation and learning”. Cave is a significant component of

geodiversity (Gray, 2004) and is one of the first documented geologic feature that has become the object of tourism (Forti, 2011). In fact, some authors consider that visiting show caves is the oldest form of geotourism (Bourne et al., 2008).

Various articles on cave tourism have already been written with much emphasis on the environmental impacts of tourism in caves such as by Cigna (1993), Huppert et al. (1993), Cigna; Burri (2000) and Aley (2004). To date, there have been few studies that focus on cave visitors. Yet, consumer plays important roles in tourism planning and marketing activities. One known study of cave tourists was conducted by Kim et al. (2008) in Hwansun Cave of South Korea where they found that cave tourism has gained popularity in recent years.

Cave is a special feature within a landscape referred to as "karst". Karst sites have a particular use in tourism and human recreation, thus form the basic components of tourist attraction (Kušen, 2002 in Bočić et al., 2006). Of all the different karst types, tropical karst forms are the most distinctive and these are widespread in Southeast Asian countries including Indonesia. Considering that karst is well developed in tropical region, Indonesia apparently has huge potential to develop cave tourism.

Development of cave tourism in Indonesia is still in its infancy although Indonesian caves have long association with spiritual human activities such as through the findings of many cave paintings and current uses of caves as holy places for the pilgrims. With the rising of current tourism trend from mass tourism concept to quality tourism concept, caves offer attractions to be developed for recreation tourism as well as special interest tourism. Unfortunately, it is evident that many people do not respond well and give negative feedback such as that caves is a place of darkness, wet, often muddy, smelly and full of creepy animals. These images often pull the people away from visiting caves. Pull factors in recreation area, are attributes of an area that reflect an individual to stay away from the recreational area (Mohamed; Othman, 2012).

Um; Crompton (1990) concluded that image and attitude dimensions of a place are very critical in making up a destination choice. In similar line, Lancaster (1966) suggests that consumers are rather influenced by their perceptions in choosing goods. Place attachment is an important indication of tourists' affective identification and dependence toward a destination (Cheng et al., 2012). Place is therefore one of the most important key element in tourism marketing. A place of interest can be developed into a tourist destination that attracts people with specific

characteristics. Hence, understanding the needs and wants of visitors is the starting point for tourism marketing. However, there is heterogeneity in the purchasing patterns of the consumer living in urban, semi-urban, and rural areas that place importance on market segments (Kasali, 2005). It is therefore central to identify markets characteristics based on visitors motivations. Such market characteristics will provide references for the promotion and marketing of cave tourism, as it is one of the main problems in the development of geotourism in Indonesia (Kemenbudpar, 2010).

2. METHODOLOGY

2.1 Area of Study and Study Population

Karst areas in Java Indonesia are densely populated and threatened by limestone conversion and many other human activities. Geotourism is seen as an alternative means of reducing negative impacts on these karst landscapes. The Indonesian karst classification based on the Ministerial Decree of Energy and Mining Resources No. 1456 of 2000 on Karst Management Guidelines, has classified karst into three classes, namely Class I, II and III:

1. **Class I** karst area is intended for conservation where mining is absolutely prohibited. Class I karst areas can only be used for (1) the development of ecotourism based on nature, ecosystems, and or culture, (2) research and development of science and (3) development of water resources that are not for commercial use.
2. **Class II** karst areas can be mined under strict conditions. Class II karst areas can be used as an area for (1) the development of ecotourism based on nature, ecosystems, and or culture, (2) research and development of science, (3) development of water resources, (4) development of agriculture and animal husbandry on a limited basis; and (5) excavation and mining under a very strict conditions.
3. **Class III** karst area can be used for the activities referred to the other two classes above and may also be used for other activities. Only the Class III karst areas can be mined.

This study is focused on karst regions in West Java of Indonesia. West Java karst areas are distributed in 11 districts where Tasikmalaya and Ciamis are the districts with the largest karst coverage as shown in Figure 1. Figure 1 also indicates that the two districts were mostly comprised of Class I karst regions, which placed significant importance on the development of cave tourism especially for conservation purposes.

Therefore, the two districts formed the locations of the study. Both developed and undeveloped caves in both districts were visited.

Data were collected from September – December 2012.

2.2 Data Collection

The research is descriptive and explorative. The descriptive character of the research is a consequence of trying to gain insight into cave visitors market demand based on similar characteristics. The research also has an explorative character because it tries to understand visitors’ needs and motivations to conduct cave tourism. These characteristics were shown as variables comprising data collected for this research (Table 1).

2.3 Survey sample

One method that can be used to classify and acquire tourist demand segmentation is a *priori segmentation method*. In a priori segmentation, the type and number of segments is determined prior to data collection (Wind, 1978 in Kazbare et al., 2010). Setiadi (2003) states that a priori segmentation is important to be conducted when we want to throw a product into the market while there is no similar product in the market that can be used as a reference in designing marketing program.

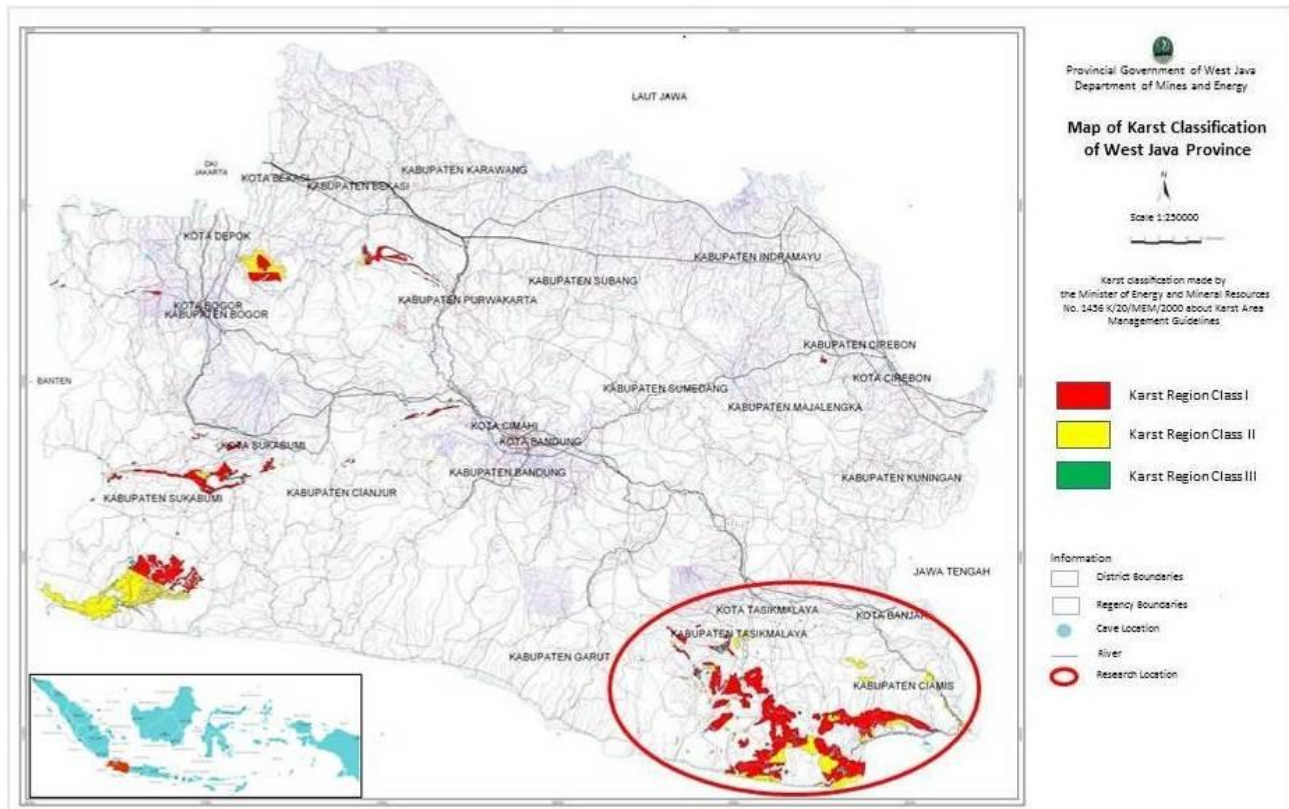


Fig. 1 - Distribution of Karst Areas in the Province of West Java and Location of Study

Table 1 - Data Collected and Methods

No.	Parameters	Variables	Data collection method/technique
1	Visitors’ socio-demographic characteristics	Origin, age, gender, education, occupation, income and marital status	Questionnaire
2	Preferences and pattern of visits	Purpose of visit, benefits sought, activities, travel companions, expenditures, time, duration and type of visits.	Questionnaire
3	Visitors’ perception, satisfaction, and expectation	Perceptions about caves, cave tourism, satisfaction, willingness to revisit, and expectations	Questionnaire
4	Use of caves	Caves for pilgrims, caves with religious historical values, show caves	Literature study, interview

A priori segmentation approach in this study was used to identify cave visitors segments. Market segmentation is the process by which people with similar needs, demands and characteristics are grouped together to provide greater precision in serving and communication with its chosen consumer. Based on a research by Prastiwi (2012), it was found that visitors' motives to visit caves in West Java were based on recreation, adventure and religious purposes. Unlike other research on cave tourism which very often resulted in the cluster or typology of visitors/tourists such as that of Kim et al. (2008), this research started by taking the already existed typology (clustering) by Prastiwi (2012) and look into the visitors characteristics within each cluster. Therefore, the visitors were divided into three segments, namely for the purpose of recreation, religion and adventure. These would be termed recreation, cultural and adventure seeker cave visitors.

The survey design involved a cluster sampling method. The respondents for this research comprised of cave visitors within the Districts of Tasikmalaya and Ciamis that visited the developed and undeveloped caves. Developed/show caves were selected through literature reviews on caves that have met the requirements of a developed site, *i.e.*, have managers, ticketing and built facilities. The developed caves were then divided into caves with mass tourism and caves with religious historical values. The undeveloped caves, on the other hand, were selected based on direct interviews with the Caving Communities within the two districts. Caves used as pilgrimage sites were not considered as part of this research, since the presence of researcher would be regarded as disturbance to the pilgrims. Within each cluster, 30 respondents were selected randomly.

To evaluate personal characteristics of the visitors and to find out their motives of visiting caves, questionnaires were used. The questionnaire had three separate parts, of which the first is designed to evaluate the socio-demographic characteristics of the cave visitors. The second part was designed to collect information on visitors' preferences and travel pattern to evaluate visitors' behaviour and the third part was design to evaluate the perceptions and attitudes toward cave and cave tourism (Table 1).

2.4 Data Processing and Analysis

The next step was to process and analyze data through the following steps:

1. Editing examines the collected raw data for their accuracy. The completed questionnaire is checked for overall accuracy, completeness and general usability;
2. Coding were given in field notes, observations, and data from documentation and answers given by the respondents, to categorized data under broad headings;
3. Tabulating, this is the stage of entering data on certain tables and arrange the figures to be easily analyzed. It is simply counting the number of responses in various data categories.

The analysis used in this research is descriptive qualitative analysis to describe the characteristics of the visitors in question and using a priori segmentation approach for segmenting visitors based on purpose of visits. Qualitative analysis in this study is used to analyze the data obtained from the results of the questionnaire. This analysis is expected to provide an overview of the characteristics of the actual demand for cave tourism as well as the management of cave tourism objects.

3. RESULTS AND DISCUSSION

3.1. Cave Tourism Market Segments

A considerable amount of literature has been published on tourist motivation in recent decades and it is ubiquitous in tourism studies (Singh, 2008). However, it is apparent that previous tourism studies pay scant attention to the issue of why people travel to certain geosites. Yet, literature reviews revealed that motivation theories and studies play a vital role in developing different types of tourism demand. Without motivation in tourism, demand will not exist (Sharpley, 2006).

Following Maslow's Hierarchy of Needs (1943), motivation is the driving force behind all behaviour and in tourism it is reflected in both travel choice and behaviour. It influences people's expectations which in turn determine the perception of experiences. Motivation is therefore a factor in satisfaction formation (Gnoth, 1997). In the case of cave tourism, motivations were affected by the needs that one placed to a cave. According to Bočić et al. (2006), people visit caves out of aesthetic-emotional, recreational, educative and sometimes medical reasons, whereas Prastiwi (2012) concluded that cave visitors comprised of recreational, cultural and adventure-seeker cave visitors. Based on motivation factors, Kim et al. (2008) clustered cave tourists in Hwansun Cave of South Korea as those seeking escape, knowledge, novelty or socialization.

Visitors can be split into groups based on the place of origin, which arguably represents the most common market approach in tourism and socio-demographic variables where a destination may attract people with specific socio-demographic characteristics (Dolnicar; Kemp, 2009). Overall, the socio-demographic characteristics of cave visitors in West Java are presented in Table 2.

Table 2 - Socio-demographic Characteristics of Cave Visitors in West Java

No.	Variables	R	C	A	Total	R%	C%	A%	Total%
		N = 30	N = 30	N = 30	N = 90				
1	Age Group								
	12-18	0	1	10	13	0	3	33	12
	19-21	10	1	10	39	33	3	33	23
	22-35	20	11	10	11	67	37	33	46
	36-59	0	17	0	7	0	57	0	19
2	Gender								
	Women	16	13	3	32	53	43	10	36
	Men	14	17	27	58	47	57	90	64
3	Origin								
	City of Tasikmalaya	0	1	23	24	0	3	77	27
	Ciamis	2	11	0	13	7	37	0	14
	City of Banjar	2	16	0	18	7	53	0	20
	Garut	1	0	0	1	3	0	0	1
	Bandung	19	0	5	24	63	0	17	27
	Cimahi	1	0	0	1	3	0	0	1
	Sumedang	1	0	1	2	3	0	3	2
	Kuningan	1	0	0	1	3	0	0	1
	Jakarta	2	2	0	4	7	7	0	4
	Tangerang	0	0	1	1	0	0	3	1
	Jogjakarta	1	0	0	1	3	0	0	1
4	Education								
	Elementary	1	2	0	3	3	7	0	3
	Junior high school	1	7	1	9	3	23	3	10
	High school	20	11	17	48	67	37	57	53
	University	8	10	12	30	27	33	40	33
5	Occupation								
	Students	26	1	21	48	87	3	70	53
	Private	0	3	4	7	0	10	13	8
	Self-employed	3	4	5	12	10	13	17	13
	Civil servants	1	11	0	12	3	37	0	13
	Housewives	0	7	0	7	0	23	0	8
	Farmers	0	2	0	2	0	7	0	2
	Others	0	2	0	2	0	7	0	2
6	Monthly income								
	< USD 100	27	10	22	59	90	33	73	66
	USD 100 - USD 200	2	8	4	14	7	27	13	16
	USD 201 - USD 500	1	12	4	17	3	40	13	19
7	Marital Status								
	Unmarried	27	6	29	62	90	20	97	69
	Married with no children	2	2	0	4	7	7	0	4
	Married with children	1	21	1	23	3	70	3	26
	Single mother	0	1	0	1	0	3	0	1

Note: R = recreation; C = cultural; A = adventure

3.1.1. Geographic variable

3.1.1.1. Place of origin

Visitors to the caves were originated from various cities and provinces (Table 2); to be specific from 11 cities and districts in 4 different provinces, namely Tangerang, Jakarta, West Java (Kuningan, Sumedang, Cimahi, Bandung, Garut, city of Banjar, Ciamis, city of Tasikmalaya) and Jogjakarta.

Table 2 indicated that most of the visitors seeking adventure seeker originated from the City of Tasikmalaya. These adventure cave visitors were generally associated with caving community who deliberately came to look for challenges. This was due to the existence of Caver Community based in the City of Tasikmalaya who spent their leisure time by conducting challenging activities in the caves and providing the city's youth communities with cave outreach and caving training programmes.

Another category of cave visitors were those with religious purposes who were dominated by those originated from Eastern Priangan Region (Ciamis, Tasikmalaya City and Banjar) apart from Jakarta. The Eastern Priangan communities were very well known as religious communities. Within the District and City of Tasikmalaya itself, as many as 853 religious boarding schools were established within the region with hundreds of thousands of students (Tamam, 2009). The proximity of this region to the locations of the caves also resulted in less travel time hence did not require much effort and expenses to be incurred. This is in line with the statement by Widyaningrum (2010) that prospective visitor domicile and accessibility to a destination site would determine the hustle and frequency of visits to such sites.

Unlike the previous two types of special interest visitors, the number of visits for cave visitors with recreational purposes was dominated by cave visitors originated from Bandung. Bandung is the biggest metropolitan city in West Java with a density of 14,255 people per km². The high population density has been the push factors to conduct recreational activities away from the hustle of a crowded city. Push factors according to Mohamed; Othman (2012) are associated with visitors and their environments that predispose the individual to visit a recreational area. The caves that were mostly visited by such mass visitors are mostly located on natural surroundings, quiet, unpolluted and scenic surrounding, hence able to provide refreshing atmosphere for those who wanted relief from everyday stress.

3.1.2. Socio-demographic variables

Demographic segmentation consists of dividing the market into groups based on demographic variables such as age, gender, marital status, education level, employment status and income. Whereas geographic segmentation looks at where people from, demographics looks at a number of aspects of who people were. Demographic variables are important to market segmentation for hospitality marketing (Aksöz, 2013).

3.1.2.1. Age Group

The cave visitors' age ranged between 12-59 years old which could be classified into youths (12-18), young adults (19-21), mature adults (22-35) and middle aged adults (36-59) (Table 2). Youth to young adults dominated cave visitors with recreational purposes and middle-aged adults dominated cave visitors with cultural purposes, while no specific age group seemed to dominate visitors with adventure seeking purpose, although Table 2 suggested that none of the middle-aged visitors visited caves for adventure seeking purposes.

Nurchasanah (2005) mentions that age indirectly effected the decision for recreation. Furthermore, Sumarwan (2004) states that various age structures will result in various forms of products or services they consumed. If the middle-aged visitors chose cave tourism for cultural purposes to satisfy their spiritual needs, the young to mature adults were more likely to visit caves for recreational purposes and adventure seeking to relieve boredom and escape from daily work-days loads.

3.1.2.2. Gender

Cave visitors were predominantly males (58%). The cultural and adventure seeking cave visitors were dominated by male with 57% and 90% respectively. On the contrary, cave visitors with recreational purposes was slightly dominated by female visitors (53%) (Table 2).

Cave tourism for cultural and adventure purposes on the other hand is categorized as special interest tourism. It is a form of travel where visitors visited a place because he/she had an interest or a specific purpose toward an object or activity that could be conducted within the location or the destination (Kemenbudpar, 2004). In cave tourism for cultural purposes, visitors came solely for the historical value that is attached to the caves and for

worship. Caves for cultural purposes were often caves with certain historical and or religious values, such as the Safarwadi Cave, which around the 17th century AD, was the residence of Sheikh Abdul Muhyi, a Muslim scholar and missionary who came from East Java.

Cave visitors seeking adventures, generally came to experience challenging and adrenaline boosting activities in nature. Unlike the cultural cave tourism, adventure seeking cave tourism took place in caves with difficult level of terrain that required special skills and equipments to conduct exploration. Such exploration required the visitors to be able to move actively like climb, bend, crawl, creep, lying face down, lying face up, swim and even dive (Belantara Indonesia 2012). Hence, such type of cave tourism is more attractive to men who instinctively like to explore their masculinity such as adventure, competition, self-actualization and challenging (Cohen, 1972).

Cave tourism for recreational purpose is considered as a mass tourism, where visitors carried out activities during their leisure time. In a recreational activity, there was no specific goal to be achieved and mostly conducted just for fun (Kemenbudpar, 2004). This type of cave tourism did not require special skills or prime physical condition since generally the terrain is easy to be passed by various groups with a variety of age groups. Such activities very much related to female-based activities as stated by Mehmetoglu (2007) who identifies that women preferred activities associated with pleasure seeking (entertainment and fun), non-physical, and cultural. Therefore, composition of female visitors in cave tourism for recreational purposes was slightly higher than that of male visitors.

3.1.2.3. Marital status

Status is one of the factors affecting tourism demand because someone's status is closely linked to family responsibilities that determine the size of the income set aside for tourism activities. The greater the disposable income, the more likely a person will travel (Yoeti, 2008). The majority of recreational cave visitors (90%) and adventure cave visitors (97%) had unmarried status. On the contrary the majority of cultural cave visitors are married with children (Table 2). The cultural cave tourist often use family gatherings to visit caves having historical value, thus very often they travelled in with families.

Recreational and adventure seeking cave tourism activities implied fun, self-actualization and leisure pursuits, which were synonymous with

unmarried status. In contrast, cave tourism for cultural purposes went beyond pleasure seeking that was more toward finding peace of mind and getting closer to the Creator.

Results in Table 2 indicated that the absence of a husband for a single mother formed the pull factor. This is in line with the research result by McCreedy et al. (1992) that showed the fact the absence of a husband delays travel for single mother and that they are not as well-off as their married counterparts.

3.1.2.4. Education

The level of education of the cave visitors was relatively diverse as shown in Table 2 from elementary school to university. Majority of the cave visitors had high school (48) and university backgrounds (30%), followed by junior high (9%) and elementary school (3%). Visitors with junior high degree were housewives and farmers, while visitors with higher education degree were generally employees, both civilian and private.

The adventure seeker cave visitors were dominated by visitors with higher education background, such as high school and university. This was related to the fact that they belong to the caving community and that at these psychological development stages of age, high school (15-18) and university (19-21), they still like to be free.

3.1.2.5. Employment status

The majority of cave visitors were students which formed as much as 48%. They dominated the recreational and adventure seeker visitors. Widyaningrum (2010) states that school and university students have longer leisure time, unemployed, nor have dependents, hence they would likely to choose natural areas which provide low-cost tourism activities but something to bring out their self pride. Show caves in Indonesia basically offer relatively affordable ticket, for example in Pananjung Pangandaran the entrance fee was only USD 7. Furthermore, most of the adventure caves were still unmanaged hence no admission fees were required. Consequently, many students chose recreational and adventure seeking cave tourism.

Self-employed and civil servants cave visitors formed the next segments based on percentage. The self-employed had relatively free and flexible day jobs and working hours. Qomariah (2009) states that self-employed visitors dominance is due to cost and leisure factors that encourage the desire to fill their

spare time by conducting activities in nature. Whereas the civil servants proved to be mostly engaged with cultural cave tourism activities.

Cultural cave visitors were dominated by civil servants and housewives (Table 2). They usually visited the caves with family, work colleagues and religious community gathering so that their activities were relaxing and provided peace of mind. As mentioned previously, the majority of cultural cave visitors were mature to middle-age adults groups. At these age classes, a person's showed greater attention to religion and sometimes their interests and attentions towards the religion were based on personal and social needs. According to Deaton (2009), it is almost universal that the elderly and women are more religious, and they are more likely to be married, to have supportive families and friends.

3.1.2.6. Monthly income

Monthly income was closely related to occupation. The monthly income for the visitors ranged from <USD 100 - USD 500 (Table 2). Parthana (1995) states that income level and leisure time are important factors in the analysis of recreation demand, especially in deciding to travel to suit the ability and desire of a person. Income is related to the ability of a person to purchase something. The monthly income for the recreational and adventure seeking cave visitors were dominated by the amount of <USD 100, since such cave tourism were dominated by students, in line with the results of occupation. The cultural cave visitors had generally higher monthly income as seen from Table 2, because the majority were employees.

3.1.3. Behavioural variables

Understanding tourism demand required evaluation of the consumer behaviour. Behavioural segmentation divides customers into groups based on the way they respond to, use or know a product.

3.1.3.1. Expenditures

Costs incurred by the visitors were varied. The majority of cave visitors spent <USD 100 (Table 3). The low expenses were influenced by many factors, such as monthly income, duration of visit, and mileage. As stated previously, the cave visitors were dominated by students with monthly income <USD 100. The low monthly income affected the visitors' decisions on how to spend money on the destination site. Visitors with relatively low incomes would be more efficient in

spending their money because their travel budget is definitely lower when compared with higher-income visitors.

The low expenses incurred by the majority of visitors were also caused by the duration of visit. Most visitors generally spent in 1-3 hours in the area. Short duration of visit resulted in low spending. Visitors usually spent money to pay for parking, entrance fees, guides, flashlight/lamp rental, use the bathroom and buy food/soft drinks.

The recreational visitors mainly spent 2 hours while the cultural and adventure seeking visitors spent more than 3 hours but none of the cave visitors spent overnight (Table 3). The majority of cave visitors (62%) were originated from the Districts of Ciamis and Tasikmalaya which is in proximity to where the caves were located. With a relatively close distance, visitors did not require a long time to reach the location of the cave. Trip commute could be reached in less than a day so they did not need to pay any amounts on lodging.

3.1.3.2. Travelling companions

Visitors came to the caves very often accompanied by others. Table 3 showed that 75% of cave visitors came with friends. Out of this, 90% of the recreational cave visitors came with friends. Furthermore, travelling with friends reached 100% for those visitors who were seeking adventure in caves. The adventure seeking cave visitors were mainly teens and early adulthood. Hamm (2000) states that adolescents choose friends who were similar psychologically and shared similar passions such as having common hobbies, interests, attitudes, values, and personality. The cultural cave visitors visited caves with families.

3.1.3.3. Benefit sought

The responses provided by the respondents addressed similar reasons that influenced their satisfaction feelings towards caves. The benefits derived from cave tourism were quite varied, which could be classified into five categories, namely spiritual, physical, intellectual, personal, and prestige benefits. Spiritual benefits include gaining inner peace and feeling closer to the Creator. Physical benefits eliminate stress and physical fatigue. Intellectual benefits add insight and knowledge. Personal benefits enhance personal relationships with family, friends, and/or colleagues, and prestige enhance the dignity of having been to a place that has been considered by the community as having prestige.

Table 3 - Behavioral Characteristics of Cave Visitors in West Java

No	Variables	R	C	A	Total	R%	C%	A%	Total%
		N = 30	N = 30	N = 30	N = 90				
1	Motivation								
	Recreation	30			30	33			33
	Culture		30		30		33		33
	Adventure			30	30			33	33
2	Benefits								
	Spiritual	0	3	0	3	0	10	0	3
	Physical	7	2	2	11	23	7	7	12
	Intellectual	22	24	26	72	73	80	87	80
	Personal	1	0	2	3	3	0	7	3
	Prestige	0	1	0	1	0	3	0	1
3	Activities								
	Marvel God's creation	0	2	2	4	0	7	7	4
	Pray	0	11	0	11	0	37	0	12
	Enjoying cave attractions	18	14	21	53	60	47	70	59
	Wildlife watching	3	2	3	8	10	7	10	9
	Photography	9	0	4	13	30	0	13	14
	Others	0	1	0	1	0	3	0	1
4	Travel companions								
	Friends	27	18	30	75	90	60	100	83
	Families	3	12	0	15	10	40	0	17
5	Expenditures								
	< USD 100	22	13	19	54	73	43	63	60
	USD 100- USD 200	6	9	5	20	20	30	17	22
	USD 201- USD 500	2	7	2	11	7	23	7	12
	USD 501-Rp 1.000	0	0	0	0	0	0	0	0
	> USD 1.000	0	1	0	1	0	3	0	1
	Abstain	0	0	4	4	0	0	13	4
6	Time of visit								
	Long holidays	18	6	10	34	60	20	33	38
	Weekend	1	13	12	26	3	43	40	29
	Weekday	11	6	3	20	37	20	10	22
	Others	0	5	5	10	0	17	17	11
7	Duration of visit								
	< 1 hour	6	9	0	15	20	30	0	17
	1 hour	5	3	3	11	17	10	10	12
	2 hours	19	5	4	28	63	17	13	31
	3 hours	0	2	10	12	0	7	33	13
	> 3 hours	0	11	13	24	0	37	43	27
	Overnight	0	0	0	0	0	0	0	0
8	Type of Visit								
	First timer	21	19	7	47	70	63	23	52
	Repeater	9	11	23	43	30	37	77	48

Note: R = recreation; C = cultural; A = adventure

The majority of respondents felt that caves offered a high value and benefits experiences for them especially as places to observe and be close to nature (72%), relieve from stress (11%), social space (3%), peaceful & quiet (3%), and prestige (1%) (Table 3). The visitors felt that their visits to the cave could improve their knowledge and provided

insight into the history, condition, and culture of the places they visit. Spiritual benefits were felt only by cultural cave visitors conducting religious activities while physical benefits were obtained the most by recreational cave visitors.

3.1.3.4. Activities

Cave seeing was the most common activity undertaken by the visitors (Table 3). Other activities undertaken by the cave visitors, among others, include photography, cave fauna observation, worship, or simply marvel God's creation. The beauty and uniqueness of form, texture, and colour of the cave ornaments attracted the visitors. This has resulted in the most activities conducted by visitors with recreational purpose. The beauty and uniqueness of cave ornaments were the main attractions for this type of cave visitors.

Some caves had historical religious values, such as Safarwadi Cave that was instrumental in the spread of Islam in East Priangan. People believed that by visiting the caves, they will acquire blessings and intercession of the clergy who was instrumental in spreading Islam in East Priangan. Hence their activities in the cave focused more on worship, such as pray. Such activity was only conducted by the cultural cave visitors. On the contrary, none of the cultural cave visitors were into photography.

3.1.3.5. Time of visit

Peak season in cave tourism in West Java occurred during holidays, especially long holidays such as school holidays. The volume of visits during the holidays reached up to 34%, while on weekend reached 26%, weekdays 20%, and other times 10%. Table 3 indicated that show caves were mostly visited during holidays and adventure cave and religious cave were more crowded during weekends (Saturday-Sunday).

Recreational cave visitors were mainly students who generally had more free time in the holidays, resulted in many more visits during holidays. This is in line with the opinion of Qomariah (2009) who states that school holidays were frequently used by the students to get together and do activities with their friends, while weekends were more widely used for family gatherings and recreation. So the short term weekend can be used to travel with friends or family.

3.1.3.6. Duration of trip

Durations of cave trips were quite varied. The majority of recreational visitors spent 2 hours to enjoy caves, while the majority of adventure and cultural cave visitors spent over 3 hours in the caves (Table 3). The length of time it takes the visitor to be in the cave is closely related to the activities carried out in the cave. Recreational cave visitors

came to the area solely for fun. Visitors came to see the beauty and uniqueness of the scenery in the caves. Having satisfied with what they saw, they would immediately leave the area, forming relatively short visits. The cultural cave visitors were indeed deliberately came for worship. So the time of their visits were relatively much longer than visitors who are just merely come for fun. The adventure visitors come to seek adventure and thrilling experiences in caves which were rarely explored by other visitors, thus spending more time than the recreational visitors.

3.1.3.7. Types of visit

Based on their type of visits, the cave visitors could be classified as first timer and repeater. The proportion of first-timers and repeaters were not so much different with 52% being first timers. Korah (1995) states that the frequency or pattern of visits to natural attractions is influenced by the quality of experience, taking the appeal and component facilities offered by a natural attraction. If visitors are satisfied, then the quality of the journey can be said to be good so they tend to want to come back to the attraction.

Most of the adventure cave visitors were repeaters (Table 3). They came from caving clubs/associations that had an interest to spend free time by conducting challenging activities with friends. Such community is actively conducting outreach and training programs to the youth around the town of Tasikmalaya. Such activities led to many repeaters for adventure cave visitors. First timer among adventure cave visitors were usually a new member of the caver community who were still in junior high school

Recreation and religious pilgrim cave visitors were mainly first timers. They often came after hearing about the place from a friend or media. The cultural cave tourists often came back if they get satisfaction after first visits, such as obtaining calmness and inner peace.

3.1.4. Psychographic variables

Psychographic segmentation divides the market into groups based in personality characteristics. It is based on the assumption that the types of products and brands an individual purchases will reflect that persons characteristics and patterns of living. Psychographic segmentation of the cave tourists in West Java (Table 4) focused on attitudes, values and beliefs of consumers.

Table 4 - Psychological Characteristics of Cave Visitors in West Java

No.	Variables	R	C	A	Total	R%	C%	A%	Total %
		N = 30	N = 30	N = 30	N = 90				
1	Perception on caves								
	Don't know	17	9	11	37	57	30	37	41
	Dark	3	0	4	7	10	0	13	8
	Scary and mysterious	0	10	0	10	0	33	0	11
	Historical and scientific	3	5	4	12	10	17	13	13
	Must be protected	0	0	2	2	0	0	7	2
	Challenging	0	1	1	2	0	3	3	2
	Attractive and unique	0	1	2	3	0	3	7	3
	Place to socialize	0	0	1	1	0	0	3	1
	Scenic and natural	7	4	5	16	23	13	17	18
2	Likes about cave								
	Don't know	5	8	1	14	17	27	3	16
	Cave ornaments	18	8	13	39	60	27	43	43
	History & myth	3	2	0	5	10	7	0	6
	Species	2	0	1	3	7	0	3	3
	Cave atmosphere	2	5	2	9	7	17	7	10
	Strengthen friendship	0	0	2	2	0	0	7	2
	Able to see light again	0	0	2	2	0	0	7	2
	Challenging	0	0	7	7	0	0	23	8
	Darkness	0	0	2	2	0	0	7	2
	Water droplets	0	7	0	7	0	23	0	8
3	Dislikes about caves								
	None	10	3	10	23	33	10	33	26
	Difficult access	0	1	1	2	0	3	3	2
	Dark, humid and stuffy	3	7	2	12	10	23	7	13
	Vandalism	0	0	3	3	0	0	10	3
	Smelled	0	1	8	9	0	3	27	10
	Slippery	0	9	1	10	0	30	3	11
	Dirty and full of rubbish	4	4	2	10	13	13	7	11
	Lack of facilities	3	0	0	3	10	0	0	3
	Misuse of cave	2	3	0	5	7	10	0	6
	Difficult passages	6	1	1	8	20	3	3	9
	Others	2	1	2	5	7	3	7	6

Note: R = recreation; C = cultural; A = adventure

3.1.4.1. Motivational factors

Visitors had extremely diverse opinions about caves from positive to negative perceptions. Positive perceptions include aesthetic, natural, historical, and sources of knowledge while negative perceptions include creepy, mystical, and dark. The recreational cave tourists thought of caves as beautiful and natural (23%), has historical value and are source of knowledge (10%). However, the majority of visitors

(57%) could not reveal their perceptions, since they were mostly dominated by first-timers.

The cultural cave visitors had negative perceptions about caves, such as creepy and mysterious (33%). Such negative perception could arise from the guide's explanations that only convey the mystical side of the cave without giving scientific explanation of the process of formation of the caves. Nevertheless, some other visitors had

positive perception, which were related to historical and source of knowledge (17%) as well as aesthetic and naturalness (13%).

Meanwhile, the majority of adventure seeking cave visitors (60%) had positive perceptions of the cave. Since they belong to caving community, they generally had acquired knowledge about the cave so that they no longer see the caves as a creepy and mysterious, but as a source of knowledge which required the caves to be preserved.

3.1.4.2. Attitudes toward cave: likes and dislikes

Visits to tourism sites would leave impressions for visitors, both positive and negative impressions. Positive impression arose because of the things that were considered interesting or liked by visitors (push factors). Whereas negative impressions often arose due to visitors' experience of things he/she did not like or felt discomfort from the area (pull factors). Although as many as 14% visitors could not relate their feelings towards caves, results in Table 4 indicated that respondents had a great satisfaction towards the beauty of cave ornaments (39%) as well as influenced by the atmosphere in the cave (9%), water droplets (7%), and the challenges that exist (7%). It is clear that cave ornaments formed the main attraction of a cave. The micro condition of cave that is associated with water such as wet and water droplets had given some cooling and refreshing feeling, where in previous research, they are two psychological benefits of water that influence people to visit a recreational area (Chiesura, 2004 in Mohamed; Othman, 2012).

Table 4 revealed that only the cultural cave tourists that liked the droplets of water, since water in the cave believed to give blessings to those who drink it. Furthermore, the sound of the droplets and movement of water have given soothing feeling for peace and quiet, related to the spiritual benefits that they sought. Likewise, only the adventure seeking cave visitors are the ones who liked the existing challenges and the darkness of the caves. These were related to their background which were cavers and that the majority were males who had more interests and passions in the things that are adventurous and challenging.

Things that have been the pull factors related to cave tourism were mostly related with the natural condition of caves such as darkness, humid and stuffy conditions in the caves (12%), slippery conditions in the cave (10%), area hygiene such as loads of garbage (10%), the smell of bat droppings (9%), etc. (Table 4). What was interesting was the fact that out of all the dislikes that the respondents

shown towards caves, a great majority said there was nothing to dislikes.

Out of the expectation, Table 4 showed that the cultural cave visitors were the ones that mostly complaint about the conditions of the caves, that they were wet dark, hot, and stuffy (23%) and slippery (30%). Considering that caves are used for holy places and religious activities, it was expected that the cultural cave visitors were the one who should be able to accept the natural condition of the caves. However, at Safarwadi Cave, which is a cave with religious value, no visitor management efforts were implemented. Therefore, sometimes crowding occurred especially during holidays. Very often, these visitors travelled with families and within a group size that could not be called small, hence conditions inside the cave were always crowded resulted in stuffy feeling.

On the contrary, the recreational cave tourists were the ones that least dissatisfied with the natural condition of the caves although mobility in the caves became their main interest as they were the ones that mostly disappointed with the difficult cave passages. Visitors felt disappointed that they must struggle down the narrow and rocky passages. Whereas their motivation to visit the caves were basically to seek pleasures and eliminated physical fatigue due to daily routines.

The adventure seeking cave visitors mostly did not like the smell of bat droppings and only they who showed great interest in preserving the cave, where out of all the cave visitors, only this type that were worried about vandalism found in the caves. This makes sense since this type of visitors was generally individuals who appreciate nature. Caving activities they performed were always based on caving ethics. Thus, they were not very fond of and against the destruction of cave ornaments (vandalism).

4. CONCLUSIONS

This study provided insights into the consumer based variables that influenced people's choice for cave tourism in West Java of Indonesia. This research presents a framework for simultaneously evaluating multiple travel choices and empirically identifies factors that appear to influence visitors' decision to participate in cave tourism. Empirical results showed that upper-income visitors did not select cave as a tourism destination, while proximity to the location of caves positively influenced the decision to participate in cave tourism. It can be concluded that the factors that influenced or pushed the visitors to visit caves were

associated with the cave elements related to attractiveness, microclimate and challenges. The values and benefits that the visitors sought such as peaceful and quietness, relieve from stress and get close to nature were also associated with their feeling of satisfaction. As for pull factors that influenced the visitors' satisfaction towards caves were clearly the unsafe and not well maintained surroundings which were giving negative impacts to the visitors' satisfaction. The visitors had limited knowledge of the caves as most were first-timer suggesting they were mostly not interested to come back to the site although their intellectual needs proved to be the main contribution to visit caves.

The caves were mostly visited during holidays, and only the adventure-seeking and cultural cave visitors stayed for more than 3 hours. Results of the study indicated that cave visitors of West Java basically can only be called visitors since none spent overnight at the site. The cave visitors were mostly originated from districts and cities that were in proximity to the caves, where they are mostly comprised of unmarried youth to young adult males with monthly income of less than USD 100,

whom enjoyed travelling with friends, and showed great interests for intellectual benefits of caves.

Such consumer-based characteristic revealed that cave tourism in Indonesia is not well developed and still uninterested for many, since the majority of the visitors came from proximity areas. The regional government need to consider these study results to take cave tourism into a higher level that would attract other visitors and tourists from further areas. Care should also be taken with regard to the sensitivity nature of caves for recreational tourism.

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