IDENTIFYING HOTEL MANAGEMENT STUDY PROGRAM MOST ENHANCE ATTRIBUTES FOR INTERNATIONAL TOURISM AND BUSINESS INSTITUTE USING CONJOINT ANALYSIS IN PANDEMIC ERA OF COVID 19

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ABSTRACT

Identifying the important attributes of a product or service are crucial activities for marketing purposes. The objectives of this research are two folds. First, to identify the important attributes of Hotel Management study Program (hereafter MPH) offered to students in the pandemic era of COVID 19. Second, based on these research findings the Manajement of International Tourism and Business Institute (hereafter ITBI) has a basis to strengthen these attributes for marketing purposes of MPH study program. To achieve those objectives primary data would be colleted with students of MPH study program semester 1 and 7 as respondents. Prior to distributing questionnaires to students a discussion with the Management of ITBI conducted in an effort to identify important attributes of MPH study program. To achieve the most enhance attributes of MPH study program conjoint analysis would be applied. This study found that overseas on the job training was the most preferred attribute of MPH study program followed by practical facilities quality.

Key words: important attributes, MPH study program, marketing purposes, overseas on the job training, and practical facilities quality.

INTRODUCTION

Consumer preferences are very strategic variables in marketing product and services in order to remain in business. Potential consumers emphasize their attentions on a bundle of interesting or meaningful attributes that signal good quality of the products and services offered by a company. Potential consumers place some expectations prior to choose a certain product or service. To be successful, a company should be able to understand well its potential customers in selecting a certain product or service. (Koo, Tao, and Yeung (1999)). A customer's

decision process is very complicated with several attributes which interact, mutually trading off each value according to relative importance. When customers select a menu item in a restaurant, this complicated decision process involves a complex cognition process. The need, therefore, is to identify the important factors affecting the decision process occurring during customers' product selection. (So Jung Lee and David A. Cranage (2007)). The potential customers therefore should relate the utility of bundling attributes embedded in the product or services with its prices (Goldberg, Green, and Wind (1984)).

To be able to analyze the preferences of potential customers a statistical tool, conjoint analysis; may be applied. Conjoint analysis is an appropriate statistical tool to measure the importance of product attributes, level, importance, and utility (Koo, Tao, and Yeung (1999)).

Scholars like Won and Bravo among others (2009) had conducted research on students' preferences to choose a certain course using conjoint analysis. In their study using students as participants in their experiment they found that most preferred courses attributes were use of a web course tool, specific course contents, equal emphasis on lectures and discussion among others.

The International Tourism and Business Institute (hereafter ITBI), one of leading private Tourism and Hotel Management Institute in Bali; offering 4 (four) study programs that last for 4 (four) year, 3 (three) study program last for 3 (three) years and 11 (eleven) short study programs. Hotel Management study Program (hereafter MPH) is one of study program offered in the ITBI that lasts for 4 (four) years. The MPH was offered for the first time in 2010. Since then number of applicants increased gradually. Table 1.1 underneath showed the movements of number of enrollments for the MPH study program.

Table 1.1
Number of MPH applicants 2017-2020

Year	Number of applicants			
	Total	**%**	**MPH**	**%**
2017	1104	100	392	35.50
2018	1181	100	421	35.65
2019	1320	100	575	43.56
2020	1060	100	275	25.94
Grand total	4665	100	1,663	35.65

Data of MPH enrollments above tell us that in four years' time, from 2017-2020 the MPH study program on average achieve 35.65 %. Stated differently, the MPH has been such an interesting program for millennial to enter labor market in the tourism and hospitality industry in Indonesia. Though number of MPH enrollment decreased significantly in 2020 due to COVID 19 pandemic; yet, the MPH was still achieved 25.94 % of total enrollments.

On the macro side, the number of direct foreign arrivals to Bali in 2020 from January to May amounted to 1,050,059 arrivals. Whereas in 2019 for the same periods amounted to 2,305,514 arrivals. There was a 54.45% decrease in direct

foreign arrivals to Bali in 2020 due to COVID 19 pandemic (https://disparda.baliprov.go.id.). Yet, this situation still encourages high school graduates to choose Hotel Management study program as a stepping stone to their future career in the tourism and hospitality industry. Table 1 above tells us that the MPH program of ITBI is still very interesting program to choose for high school graduates as their pathway to enter tourism and hospitality labor market even though faced with COVID 19 pandemic. This phenomenon led us to do an empirical research to find out what drove the high school graduates to choose MPH study program at ITBI. To the best of our knowledge there was no similar research conducted beforehand to analyze what attribute(s) attract the applicants most in choosing the MPH at ITBI.

Research Question

Based on the phenomenon cited above, especially on the applicants' preferences in choosing the MPH study program the following research question is posed.
"Using the Conjoint analysis what are preferred attributes of the MPH study program of ITBI?"

Research Objectives

The objectives of this research are two folds. First, to investigate the attributes of MPH study program that were the most preferred by students. Second, to provide empirical results for the ITBI Management for consideration in packaging the course program.

The Urgencies of the research

The ITBI is one of leading tourism private schools in Bali. Being a private school it is compulsory to maintain its competitiveness among other similar schools in offering its study programs to potential students. Therefore, identifying important attributes for potential students are crucial for the Managment of ITBI in an effort to be a leader in the market of tourism private institute.
The urgencies of this research are of two folds.
First, for the Management of ITBI; it is hoped that the findings of this research will be considered as a strategic tool in marketing the MPH to potential students.
Second, for the Community; it is hoped that the findings of this research will widen their horizon on the quality of profesionalism of the ITBI Management in preparing the MPH study program should their children choose hotel industry as their future career.

Theory on Consumer Preferences and Conjoint Analysis.
        Theory on Consumer Preferences were already analyzed by enormous scholars like Gu and Yang (2009), Barnett and Serletis (2009) to mention a few. In this paper theory on consumer preferences was adapted and excerpted from the work of Barnett and Serletis (2009) and paper on internet in www. Toppr.com downloaded in April 7, 2020.

Consumer preferences were subject of interest in microeconomics that deals with concepts as budget line, indifference curve, and indifference map sound complex at once but are easy to understand as can be. Consumer preferences therefore is a subset of consumer behavior with focusing with product or service utility. Utility in this context refers to the ability of a product or service to serve human wants. It is the amount of satisfaction a consumer gets from the consumption of a product or service. 'Utility' can be of two types: Cardinal Utility Approach which is also known as Marginal Utility Analysis. The other one is Ordinal Utility Approach which is also known as Indifference Curve Analysis.

Cardinal utility theory states that utility is measurable in number. The unit in which utility can be measured is 'utils'. Products and services that give a consumer higher level of satisfaction will be assigned higher utils than those which give the consumer lower satisfaction. Stated differently Cardinal utility theory is a quantitative method of utility measurement.

On the other hand, Ordinal Utility Approach states that that satisfaction derivable from consumption of goods cannot be measured in numbers. It uses 'ranks' to describe different levels of utility. So, a product or service that provide a higher level of satisfaction should be assigned higher ranks than those which give the consumer lower satisfaction. Simply stated that the ordinal theory is a qualitative method of utility measurement.

There are two important terminologies that should be well understood in consumer preference in regards with utility. The first one is marginal utility and the other one is total utility. Marginal Utility is the additional satisfaction obtained from consuming one more unit of a product or service. It is the change in total utility brought about by one more unit consumption of a product or service.

Total Utility is the total psychological satisfaction obtained from consuming a given amount of a product or service. So, it is the sum of all marginal utilities obtained from consuming each successive unit of a product or service.

Law of Diminishing Marginal Utility is another crucial concept in consumer preferences. It states that as more and more of a product or service is consumed, consumers receive less and less satisfaction from its consumption. More formally, it means that the marginal utility of a product or service declines as successive units of it are consumed. A corollary of this law is that the total utility of the commodity increases at a diminishing rate.

Indifference Curve Analysis as a qualitative approach in utility are as follows.

We have seen bundles that give more satisfaction to a consumer are 'preferred' to other bundles. But what happens when some bundles give the same level of satisfaction to a consumer? The consumer becomes indifferent between such bundles and does not prefer one over another. A diagrammatic representation of all such bundles between which the consumer is indifferent is called an indifference curve. It depicts various combinations of two goods that give a consumer the same level of satisfaction. A collection of indifference curves is called an indifference map.
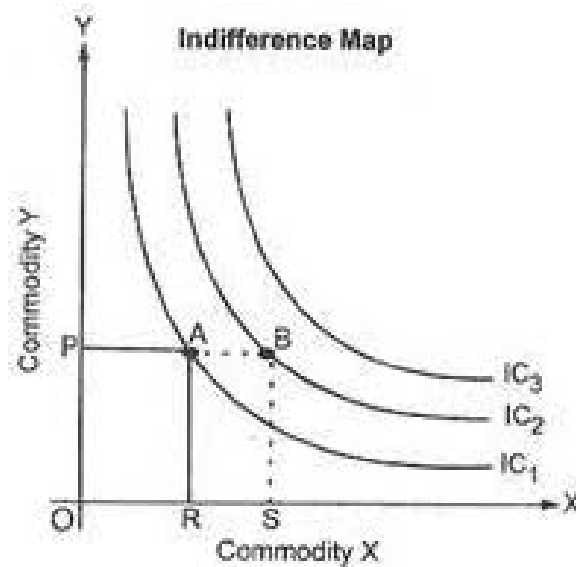
Figure 2.1. Indifference map

Theory on Conjoint analysis were excerpted from the work of Hari Wijayanto et al. (2007) and Franklin Fernando Vaca Moran (2014). The word conjoint in marketing research stands for joined together or cooperative amongst variable under analysis. Conjoint analysis is a multivariate approach applied to understand consumer preferences on a product or service emphasizing on utility and relative importance of each attribute. Conjoint analysis was first introduced by Luce and Tukey in 1964. Since then, this approach has undergone significant development. Nowadays, there are four common methods in conjoint analysis namely: Self explicated model, Adaptive conjoint analysis (ACA), Conjoint value analysis (CVA), and Choice Based Conjoint (CBC).

In Self explicated model respondents are guided to judge important attributes of a product or service. Adaptive conjoint analysis (ACA) was the development of Self explicated model. In ACA utility value was predicted using ordinary least square (OLS). In CVA, individual utility could be predicted on each level of its attributes. In CBC respondents were given all attributes to choose in small or bigger ones. Data analysis in CBC consists of two method namely counting CBC and multinomial logit. There are several crucial terminologies in conjoint analysis: level, value importance level, and value relative importance. Level in this research stands for specific value of a factor variable commonly consists of two or more level. Value importance level stands for important value of a level relative to another one. Value relative importance stands for relative importance of one attribute to the other ones.

Research on Consumer Preferences using conjoint analysis

Won and Bravo (2009) conducted research in course design for sport management with the objectives to gain insight of students in choosing a course programs and designing a conjoint model that could be applied in decision model in the context of sport management course. They argued in their study that students choose courses that meet their needs the most. Yet, in determining the chosen

courses students rank their preferences. Quoting of Fishbein and Ajzen multi attribute model, Won and Bravo then determined in their study of sport management courses into six attributes with three levels each. With 502 students of sport management this study found that courses covering specific content, field trips, internet as communication tool, and individual and group projects were preferred the most. While on the hand, lectures without guest speakers of field trips, and group assignment only were least preferred by students. Won and Bravo applying conjoint analysis as their analytical tool in their study.

Perceived value on hotel industry was shaped prior to choose a hotel or in the pre purchase phase. It happened since potential guests search a hotel product and service offered via its brochures, soft copy or hard one; prior to book hotel rooms. They already judged the product and services offered by the hotel in this phase via the quality of information in the hotel brochures (Garcia et al (2014)). Hotel guest preferences occur by balancing out the expected utility and perceived value in the form price charged. Due to these two variables, expected utility and perceived value; are not directly observable, Garcia et al (2014) applied proxy variables in their research. Conjoint analysis i.e., choice based was applied in analyzing these variables in an effort to identify which attributes of each variables preferred the most by potential guests. Consumer preferences consist of a set of attributes that create value that could be broken down to two factors. One factor that satisfies consumer's needs and the other one decreases consumer's costs (Tartu (2003)). In restaurant business conjoint analysis was applied to segment restaurant customers based on a bundle of restaurant attributes (Koo et al (1999)). Another research in restaurant business conducted by Lee and Cranage (2007) found that by applying conjoint analysis the relative importance of restaurant's attributes was solved. Hence, these findings could be applied in formulating marketing strategy for restaurant products and services.

METHODOLOGY

Research location

The location of this research would be at the ITBI campus in Denpasar. The ITBI curriculum closely link and match with hospitality and tourism industry requirements. The ITBI campus is equipped with practical facilities for hospitality and tourism management students in an effort to support the link and match strategy. Briefly, each study program in ITBI has its laboratory for practical purposes in achieving skill standards stipulated by hotel and tourism industry.

Types and Source of data

To be able to answer the above research question, primary data were needed. A questionnaire that covering MPH study program attributes and its levels were distributed to MPH students. MPH students in semester 1, and 7 were chosen as samples with the following considerations. First, for MPH student semester 1; they got information on MPH study program through ITBI flyers and direct information from ITBI marketing staffs. Second, for MPH student semester 7; beside having information on MPH study program through flyers, they have undergone industrial hotel training/ on the job training either domestic or abroad. Prior to conducting

research survey, a thorough discussions with the Management of the ITBI were conducted to determine the appropriate MPH program attributes and its levels. The proposed MPH attributes and levels are presented underneath.

Table 3.1
Proposed MPH program attributes and levels

Attributes	Levels
International on the job training	USA
	Singapore
Domestic on the job training	Bali
	Outside Bali
In campus practical training	Good
	Moderate
Academic and student affairs services	Good
	Moderate

Conjoint analysis would be used to obtain the utility of each attribute and the proportion of each to overall attributes' importance.

Conjoint Analysis method
To achieve the aforementioned objectives, Conjoint analysis techniques would be applied. This technique would be used since it allows us to calculate the structure of individual preferences of each MPH study program student of the ITBI. The model of Conjoint analysis is (Wijayanto Hari et al. (2007)):

$$U(X) = \sum_{i=1}^{m=1} \sum_{j=1}^{k=1} \beta ij xij \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where:
U(X) = Total Utility.
βij = *Part worth* or preferences level j to attribute i
Xij = Dummy variable of attribute i to level j. (1=level exist; 0=no level)

To measure the value relative importance (VRI) of an attribute the following formula will be applied (Wijayanto Hari et al. (2007)):

$$VRI = \frac{Uh - Ul}{\sum_{j=1}^{k}(Uh - Ul)} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where:
VRI = Value Relative importance of attribute i
U_h = highest level of attribute i
U_l = lowest level of attribute i

Data collection method
Questionnaires covering the aforementioned attributes and levels in table 3.1 above were distributed to MPH student semester 1 and 7. Due to COVID 19 pandemic and in line with health protocols, the questionnaire will be distributed on line using google doc templates. Two weeks was allocated to complete the

questionnaire and submit them to researchers.

Sample size

Using sample size table from the research Advisors (https://www.research-advisors.com/tools/SampleSize.htm), the number of students as sample in this research amounted to 206 students. This amount was achieved with 95% confidence level; 5 % margin of error.

Table 3.2
Sample size

Population of MPH student semester 1 and 7	Confidence level 95 %	Margin of error 5%	Number of students as sample
448	yes	yes	196

Result of sample size in table 3.2 was excerpted from sample size table from research advisors where its full table was included in appendix of this research. Only 65 completed questionnaires were submitted after two weeks. This amount is equal to 15% of the population of MPH student semester 1 and 7.

RESULT AND DISCUSSION

Underneath will be presented the empirical results for the profiles of research sample, preferences in on the job training locations, perceptions on practical facilities and academic services, Value of Relative Importance of attributes, Utility total analysis, dan correlation results,

The profiles of research sample
Table 4.1
Details of sample

	Male	%	Female	%	Total	%
Gender	37	57	28	43	65	100
	Bali	%	Others	%	Total	%
High School Province origin of students	50	77	15	23	65	100
	Semester 1	%	Semester 7	%	Total	%
Semester	39	60	26	40	65	100

The number of MPH students participating in this research was 65 students, consist of 37 male students and 28 female ones. Male students were dominating in participating due to number of female students outnumbered by male ones. Female students showed their enthusiasm in participating in this study.
From the view of high school origins of participating students, mostly their high

school origin from Bali province; other province like west Java, west Kalimantan, and other provinces of Indonesia also participating in this study though the number of participating not that high compared to Bali province origins.
First semester students of MPH program were more enthusiastic in participating in this study compared to their senior in sixth semester.

Preferences in on the job training locations

Table 4.2
On the job training location

	USA	%	THAI	%	JAPAN	%	Total	%
Overseas OJT	52	80	4	6	9	14	65	100
	Bali	%	Others	%			Total	%
Domestic OJT	42	65	23	35			65	100

OJT: On the Job Training

Although the cost to get hotel training in the US was the most expensive one in terms of transportation, insurance, and other relating expenses; it is still the most favorite country to have hotel training abroad perceived by participating students. One possible explanation may be due to students could improve their English proficiency in the US. Another explanation may that success story from their senior that all expenses could be recovered with one-year hotel training in the US. So, in choosing the US as OJT abroad, MPH students believed that they could achieve better English proficiency while on the other side covering the expenses incurred.

Perceptions on practical facilities

Table 4.3
Practical facilities quality

	Good	%	Mod	%	Bad	%	Total	%
Practical facility quality	59	91	6	9	0	0	65	100

Mod: moderate

Concerning the practical training facilities quality for MPH study program, the students perceived that all practical facilities in the campus of ITBI were good quality; in line with their expectations.

Perceptions on academic services

Table 4.4
Academic services quality

	Good	%	Mod	%	Bad	%	Total	%
Academic services quality	55	85	10	15	0	0	65	100

Mod: moderate

The MPH study program has delivered good academic service quality as presented in table 4.4 above. Most of MPH students in this study perceived that MPH study program Management has delivered their academic service quality to their students.

Value of Relative Importance of attributes
Applying formula (2) in the previous page, the value of relative importance of attributes overseas OJT:

> VRI OJT overseas: 27 %.
> VRI OJT domestic: 26 %.
> Practical facility quality: 25 %.
> Academic service quality: 22 %.

The Value of Relative Importance (VRI) of attributes are relatively close to each other, although the US VRI is still the highest amongst others. This finding indicates that the Management of MPH program and ITBI have met the expectations of their potential students.

> **Utility Value.**
> Utility overseas OJT = 27%-2%= 25%.
> Utility domestic OJT = 26%-11%= 15%.
> Utility Practical facility quality = 25%-3%= 22%.
> Utility Academic service quality: 22 %- 5%= 17 %

Total utility = 25% overseas OJT + 15 % domestic OJT+ 22 % Practical facility quality+ 17 % Academic service quality = 79 %

In terms of total utility value, all attributes in this study have met high standard of expected satisfactions for MPH students. The highest utility contributed by overseas OJT. This is due to that overseas OJT widen students' horizons in hotel industry for international exposures. While on the contrary domestic OJT contributed the least compared to the other three attributes. For domestic OJT, it would be worthwhile if the management of MPH study program and ITBI management reformulate the program of domestic OJT in order to make it more attractive and meaningful for the MPH students.

Correlation analysis of overseas OJT countries

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Table 4.5

Correlations among overseas OJT countries

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	USA	THAI	JAPAN
USA	1	-0.539**	-0.788**
THAI	-0.539**	1	0.094
JAPAN	-0.788**	0.094	1

**: significant a 1%

Table 4.5 indicating that USA and Japan have strong correlation for overseas OJT in reverse direction and statistically significant. This means that the US and

Japan were competing countries for overseas OJT countries perceived by students of MPH study program. This finding also directs the Management of MPH program and ITBI to prepare and package this two countries in the same fashion for the students. While Thai and Japan were complemented each other yet statistically insignificant.

CONCLUSION

Based on the data analysis from the previous pages conclusions are drawn as follows.
First, that students of MPH study program emphasize that overseas OJT was contribute with highest utility when choosing MPH study program. This conclusion was drawn due to having overseas OJT students having exposure to international experience in hotel industry, while on the other hand they improve their English or Japanese proficiency. The high cost of having overseas OJT would be recovered by hourly paid in the hotel where the OJT takes place. Second, practical facility provided for MPH students were considered meet their expectations. In other words, all practical facilities were in good quality. Third, the Management of MPH program and ITBI should repackage for domestic OJT that make it will be more worthwhile. Fourth, the Management of MPH program should increase the quality of academic service to their students.

This study has the following limitations. First, number of students taken as sample did not meet as required. This study only got 65 MPH students participating in this research. Second, only MPH study program was chosen as the sample of this research.

Based on those limitations it is strongly suggested to conduct a similar research with bigger number of students as sample and all study program in ITBI should participating in the research to find out which attribute attract them most in choosing the ITBI.

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