A CONJOINT STUDY ON THE PREFERRED RESORT FACILITIES FOR DAVAO REGION

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ABSTRACT

The purpose of this research is to provide owners and latent investors of resorts, with a bulletin of preferred resort facilities–as their market research tool. This supports the posit of Tumwebaze (2015) stating, that there is a prevalent 80% MSMEs mortality rate (MMR) everywhere. Albeit a handful of grounds for high MMR, the primary reason is the non-conduct of market research of most entrepreneurship, particularly micro and small enterprises. The facilities utilized in this study emerged from the TRACER variables of the travel and tourism industry as attributes of which levels are identified through focus group discussion–leading to the generation of the Attribute-Level Frame (ALF). Out of the ALF, 20 orthogonal profiles (OPs) including holdouts are generated from the 243 total combinations. These OPs exactly form-part the survey questionnaire rated by 500 local tourists from first-class municipalities, component and highly urbanized cities of Davao Region. Using additive conjoint analysis, importance values, utilities, and probabilities of the preferred resort facilities (PRFs) are uncovered, provincially and regionally. The most PRFs of the provinces and the region are: point-to-point aircon bus, minibus, and van transport; cottages and boarding houses; budget inns; full-service catering; live bands and concerts; zipline, hiking, and camping; and, swimming pools. Further, this research recommended the following: provision of PRFs as a bulletin to stakeholders; conduct of seminal studies on: the PRFs of other provinces or regions; the amenities as inclusion in the classification and rating tool for resorts other than facilities; and, ICT- support system

Keywords: Preferred Resort Facilities, Bulletin of Preferred Resort Facilities, Government Support to the Local Tourism Industry, Additive Conjoint Analysis.

INTRODUCTION

According to surveys and Focus Group Discussions (FGDs) conducted in the year 2015 by NEDA for the Philippine Development Plan 2017-2022, the aspirations of Filipinos under the program '*AmBisyon Natin 2040*' are as follows: (1) to spend time with family, friends, and their community; (2) to enjoy a comfortable lifestyle, decent house and secure long-term tenure; (3) convenient transport; to (4) travel for vacation; to feel (5) secure about the future, wherever they are and wherever they want to go; (6) to live long and healthy; and to (7) enjoy retirement (National Economic and Development Authority (NEDA), 2016). Engaging Filipinos in aspirations one, three, four, five, and seven will inspire the dynamism of the domestic travel and tourism industry.

In its support of AmBisyon Natin 2040 program, the Department of Trade and Industry (DTI) laid down their 2017-2022 priority industries in: manufacturing; construction; services in information technology-business process management (IT-BPM), transport, logistics, travel, and tourism; and wholesale and retail (Department of Trade and Industry, 2017). Accordingly, local travel and tourism in the Philippines is a major contributor to the country's economy having a

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direct effect on real estate and other related industries. As cited by Remo (2018), according to the 2018 World Travel and Tourism Council, the travel and tourism industry in the Philippines as of 2017 contributed to 3.35 trillion pesos - equivalent to 21% of the GDP. It is expected to rise by 5.9% in 2018, and by about 5.8% yearly thereafter up to 6.24 trillion pesos by 2028. Therefore, with this huge projection, attention must be paid to put this industry in priority. Remo (2018) continued that according to Colliers International Philippines, the most attractive locations for travel and tourism developments are Cebu, Bacolod, Palawan, Davao, and Bohol. With accommodations, at least 3,400 new rooms were expected to be completed by 2018 countrywide (Remo, 2018). It is, therefore, significant to capitalize on the travel and tourism industry as the country's developmental tool-a priority in the 25-year long-term vision. In addition, the Department of Tourism raises its bar for the inclusive growth and sustainable development of tourism. It is embodied in the National Tourism Development Plan (NTDP) 2017-2022, designed to sustain the inclusive growth and development of highly competitive and environmentally sustainable tourism industry. NTDP in collaboration with MSMEs and the public sector will lead the development of new jobs and skills that will drive innovations (Department of Tourism, 2015).

Further, there is a need to expand entrepreneurship, including the travel and tourism industries to the outskirts targeting the masses to balance economic distribution. In Indonesia, small-scale, locally-owned tourism businesses and their minimum capital requirements, were a form of *'pro-poor tourism*' - a useful component of their local economic development strategies for poor communities (Hampton, 2003).

Lastly, the conceptualization in this study will guide owners and latent investors (OLIs) of the facilities to integrate into their respective resorts for their competitiveness. Resort OLIs of Davao Region must capitalize on the following data to increase their market share. First, the region's economy grew competitively at 10.9% in 2017, the second-fastest growth among the 17 regions in the country-higher than its 9.5% growth recorded in 2016; second, services, including resorts, accounted for the biggest share of Davao Region's economy at 49.6% (Philippine Statistical Authority, 2018a); and, third, it is supported by Farrant (1987) stating that, increased income proportional to the growth of the economy warrants the emergence of a widened hierarchy of resorts according to season.

Theoretical Framework

To satisfy the travel and tourism aspirations of Filipinos under NEDA-PDP's '*AmBisyon Natin 2040*', a specific component of the Travel and Tourism Industry (TTI) must be identified. The theoretical framework was anchored specifically in the definition of '*tourism SME*' by Rogerson (2008) writing about developing small tourism businesses. Rogerson (2008) emphasized that the tourism industry encompasses many Economic Activities of Small Players (EASP) and not those sectors specifically classified by the International Standard Industrial Classifications. Rogerson (2008) continued that, to improve tourism statistics worldwide, the Tourism Satellite Accounting (TSA) of South Africa provided identification of EASP based on the international standards set by the United Nations World Tourism Organization (UNWTO). The identification narrowed the distinction between the *'travel and tourism industry' (TTI) and the broader 'travel and tourism economy*' (TTE) Figure 1.

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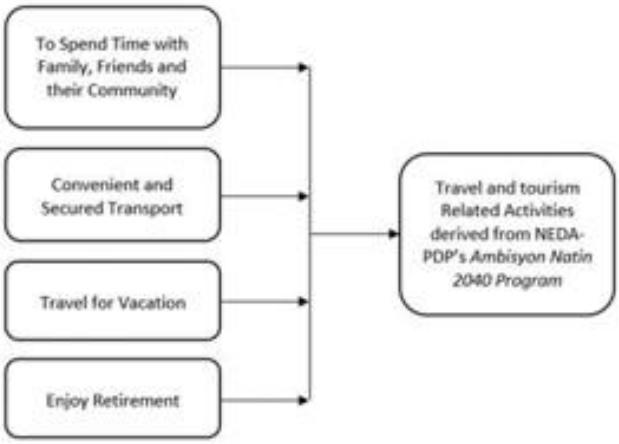

FIGURE 1
TRAVEL AND TOURISM RELATED ACTIVITIES ASPIRED BY FILIPIONS

As shown in Figure 2 of Appendix A, TTI is only a subset of TTE, which specifically includes transport, accommodation, catering, entertainment, and recreation - the TRACER, while TTE includes the TRACER and other travel-related services. To develop specific facilities of a resort, this study will focus on the TRACER as its variable. Also, according to Tumwebaze (2015), 80% of SMEs die everywhere and one of the primary factors is the absence of market research (AMR). AMR resulted in low demand for products or services offered.

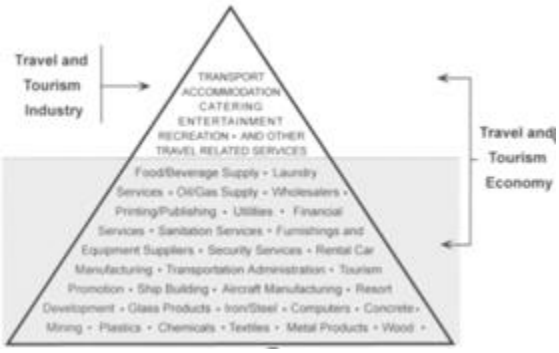

FIGURE 2
FIGURES THE BOUNDARIES OF TTI AND UNWTO-TSA

Considering the polarity between the '*worries*' caused by Tumwebaze's (2015) SMEs mortality rate and the '*inspiration*' of Rogerson's (2008) EASP, resorts as a component of the tourism industry need enhancement through the collaboration of the travel and tourism industry themselves (Philippine Statistical Authority, 2018b). This study will help develop new entrepreneurship that will generate employment and improve the GDP of the initiating local, provincial and regional units. It is validated by a government report saying that 'strong collaboration and awareness among tourism business operators is necessary with government's support towards sustainable enterprising' (Department of Tourism, 2015).

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Conceptual Framework

As discussed, in the theoretical framework, TRACER was the independent variable of this study. These variables eventually became the attributes. The corresponding levels of each attribute were processed through focus group discussion (FGD).

Purposely, this study will create the PRFs - the dependent variable to help resorts sustain their operation by surviving the following: difficulty in transport; accommodation incapacities; availability of appropriate catering services when necessary, and the limited variants of in-resort activities that completely satisfy tourist's needs. The independent variables or attributes are transport, accommodation, catering, entertainment, and recreation while the dependent variables are the PRFs of the Davao Region. The corresponding levels generated after the conduct of FGD are shown in the conceptual framework in Figure 3. It is necessary, indeed, to have a clear picture of these PRFs to guide OLIs on what are facilities to be included in their operation.

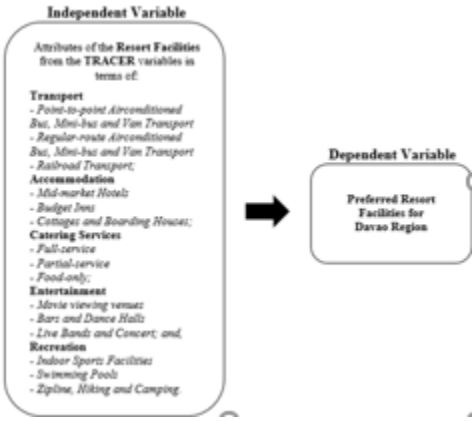

FIGURE 3
CONCEPTUAL FRAMEWORK

Statement of the Problems

This research draws preferences directly from local tourists in the identified municipal and city residents as to what are their PRFs determinately or indeterminately. These captured preferences are processed with the appropriate statistical tool for more informed data. This research answered the following specific questions as a guide to building the region's ideal resorts. Specifically, the problem statements are:

1. What is the socio-demographic profile of the study respondents in terms of gender, age, municipality or city, province, marital status, highest educational attainment, occupation, and monthly income?
2. What is the importance values generated as a general reference of the PRFs for OLIs?
3. What are the PRFs to serve: as a market research tool for OLIs; as resorts classification in terms of facilities; and, as a reference in the design of support programs by the local government?

Significance of the Study

The output will be significant to the following stakeholders: owners and latent investors (OLIs) of resorts as their market research tool; provincial, regional and national governments as inclusion in their development agenda as a support system; Davao Regional Council as its

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competitive edge with other regions; financial institutions as a guide in profiling of their financial investments; local and foreign tourists will avail of services of improved resorts; and, other researchers who will find the processes posited herein applicable to their respective research endeavors.

METHODOLOGY

Research Design

This is experimental and descriptive-correlational research, designed to establish PRFs for Davao Region. With Additive Conjoint Analysis, correlations were processed between preference profile combinations against rating using principles of ordinary least square and multiple linear regressions.

Sampling Frame

The target respondents of this study were the local tourist in the First-Class Municipalities (FCMs), Component Cities (CCs), and Highly Urbanized Cities (HUCs) of Davao Region. This study utilized purposive sampling because of its nature of identifying local tourists covering a very large respond area. Validity was important but generalization was of greater value. The researcher established direct access to the respondents and created a list of all possible cases in the population–in this case, the FCMs, CCs, and HUCs in Davao Region. Additionally, research questions were distributed to all five provinces of Davao Region. However, a numerical minority occurred especially in new provinces.

Since the study covered Davao Region including cities, and the population of the target respondents was unknown, the total sample of respondents was derived using Cochran's formula. With an estimated ratio of '*50-50'* between professional and non-professional local tourists and travelers, Z value at 95% confidence interval and with a margin of error at 5%, the respondents including provisions of non-response is 500.

Target Respondents and Market Segments

The primary respondents of this study were the local tourists that will select resorts as vacation or travel hopping options. Their rated preferences were analyzed provincially and regionally. The results of the analyses were now an integral component of the bulletin. Specifically, the bulletin will contain preferences from conjoint analysis as a guide for OLIs to organize their facilities and investment options, either inclusion or invitation of MSE investors in the travel and tourism industry.

The Identified First Class Municipalities and Cities of Davao Region

As mentioned earlier, the 500 respondents were the residents of the six cities and the 19 first-class municipalities of Davao Region. For each identified city and municipalities, at least 20 respondents were selected purposely from among the residents capturing local tourists and travelers. The identified cities and first-class municipalities (FCM) of Davao Region included is according to the 2016 Cities and Municipalities Competitive Index (NCC-Philippines, 2016). The following are the FCMs, component and urban cities of Davao Region: Jose Abad Santos and Malita of Davao Occidental; Compostela, Laak, Maco, Maragusan, Monkayo, Nabunturan,

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New Bataan and Pantukan of Compostela Valley; Baganga, Caraga, Lupon and Mati City of Davao Oriental; Asuncion, Carmen, Kapalong, Panabo City, IGACOS, Sto. Tomas and Tagum City of Davao del Norte; and, Bansalan, Davao City, Digos City and Sta. Cruz of Davao del Sur.

Attributes and Levels

The challenge of this study was the structuring of the attribute-level frame to make it friendly for the orthogonal design of the profiles as well as the construction of the questionnaire. There were five identified attributes for the study from the TRACER variables of which levels were derived from FGD.

Focus Group Discussion

FGD was conducted to design the levels of the attributes. FGD no longer was used to form the attributes since it was already conceptualized using the theoretical framework. Purposely, FGD was conducted to elicit until saturation the components needed to create the attribute-levels. A group of eight professional and non-professional local tourists and travelers were invited to discuss the attribute-levels of the TRACER variables. In the discussion, enhanced opportunities on the variables were emphasized to establish the appropriate travel and tourism facilities and applied as the preference levels for resorts.

Before the conduct of FGD, invitation letters were sent to prospective participants with an attached individual schedule of activities and the TRACER topics for discussion. Participants were qualified according to their address, their travel, and tourism activities, disregarding if they were professional or not. However, the researcher assured that the composition of the participants was balanced. The participants came from diverse places of Baganga, Manay and Mati City of Davao Oriental, Maco and Mawab of Compostela Valley, and Davao City of Davao del Sur. The listings of attributes were attached to the invitation letters sent to the discussants. In the discussion proper, the participants individually introduced themselves. During their individual introduction, what emerged as part of their TRACER activities were as follows: recreational activities in volleyball, badminton, swimming in beaches and swimming pools; entertainment in movies, shows, pageants, live bands; and attendance of catered services on birthdays, weddings, anniversaries, acquaintance party, meetings, training, and seminars.

In the discussion proper, what emerged with transport were regular route and point-to-point buses and vans travel media, while with accommodation, discussants preferred mid-market hotels, budget inns, and boarding houses. Luxury hotels were considered with accommodations, however, they no longer belonged to MSEs. With catering, instead of specifying catered services, what emerged were ‘must be registered’ caterers classified in terms of service levels. The basis was that; caterers do not serve specific events only such as birthdays or weddings but they were willing to serve any form within bound of their logistics. Thus, the classifications were registered and regulated: full-service, partial, and food-only catering services. With entertainment, most recommended movies, bars, concerts, live bands, and disco houses while with recreation were resort with swimming pools; resort with zipline, camping and trekking; beach resort with recreational facilities; and indoor sports facility.

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The Attribute-Levels Frame

The attribute-levels frame (ALF) was derived from the thematic analysis of the FGD results. During FGD, the moderator has driven the order of conversation to hover the necessary levels of the TRACER attributes. Shown in Table 1 is the attribute-levels frame considered for the study.

Table 1
ATTRIBUTES AND LEVELS FRAME

ATTRIBUTE	LEVEL
Transport	Point-to-point air-conditioned bus, mini-bus, and van transports
	Regular route air-conditioned bus, mini-bus, and van transports
	Railroad transport system
Accommodation	Mid-market hotels for semi-luxury accommodations
	Budget inns for economy accommodations
	Cottages and boarding houses for cheaper accommodations
Regulated Catering Services	Full-service catering (venue, decorations, F&B Service & alcohol)
	Partial-service catering (decorations, F&B Services & alcohol)
	Food-only catering with minor beverages
Entertainment	Movie Viewing Venue
	Bars and Dance Halls
	Live bands and Concerts
Recreation	Indoor sports facility
	Swimming pools
	Zipline, hiking, and camping

Profile Generation

According to Hair et al. (2014), the minimum number of profiles (MNOP) can be computed according to the total number of levels and attributes as follows:

MNOP=total number of levels-total number of attributes +1, thus, in this study: MNOP=15-5+1=11. Out of the attribute-level frames of Table 2, 20 representative combinations were orthogonally selected out of the total profile combinations (TPC) of 243. Since 11 was the MNOP and we will deal with a large profile combination of 243, a standard orthogonal profile of 20 including holdouts (greater than 14) seeded profiles is qualified. Table 2 shows the orthogonal combinations ready for the design of the questionnaire.

Table 2
ORTHOGONAL PROFILE GENERATED FROM THE ALF

Card ID	Transport	Accommodation	Catering	Entertainment	Recreation
1	Regular-route Aircon Bus, Mini-bus and Van transport	Cottages and Boarding Houses	Full-service Catering	Movies	Swimming Pools
2	Point-to-point aircon bus, mini-bus, and van transport	Mid-market Hotels	Full-service Catering	Movies	Indoor Sports Facilities
3	Railroad Train Transport	Cottages and Boarding Houses	Food-only catering	Live Band and Concerts	Indoor Sports Facilities

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4	Point-to-point aircon bus, mini-bus, and van transport	Mid-market Hotels	Partial-service catering	Live Band and Concerts	Swimming Pools
5	Railroad Train Transport	Mid-market Hotels	Partial-service catering	Movies	Zipline, Hiking, and Camping
6	Railroad Train Transport	Budget Inns	Full-service Catering	Movies	Swimming Pools
7	Point-to-point Aircon Bus, mini-bus and Van transport	Budget Inns	Full-service Catering	Live Band and Concerts	Zipline, Hiking, and Camping
8	Regular-route Aircon Bus, Mini-bus and Van transport	Mid-market Hotels	Full-service Catering	Live Band and Concerts	Indoor Sports Facilities
9	Point-to-point aircon bus, mini-bus, and van transport	Budget Inns	Food-only catering	Movies	Indoor Sports Facilities
10	Regular-route Aircon Bus, Mini-bus and Van transport	Budget Inns	Partial-service catering	Bars and dance halls	Indoor Sports Facilities
11	Point-to-point Aircon Bus, mini-bus and Van transport	Mid-market Hotels	Food-only catering	Bars and dance halls	Swimming Pools
12	Railroad Train Transport	Mid-market Hotels	Full-service Catering	Bars and dance halls	Indoor Sports Facilities
13	Point-to-point Aircon Bus, mini-bus and Van transport	Cottages and Boarding Houses	Full-service Catering	Bars and dance halls	Zipline, Hiking, and Camping
14	Point-to-point Aircon Bus, mini-bus and Van transport	Cottages and Boarding Houses	Partial-service catering	Movies	Indoor Sports Facilities
15	Regular-route Aircon Bus, Mini-bus and Van transport	Mid-market Hotels	Food-only catering	Movies	Zipline, Hiking, and Camping
16	Point-to-point Aircon Bus, mini-bus and Van transport	Mid-market Hotels	Full-service Catering	Movies	Indoor Sports Facilities
17	Point-to-point Aircon Bus, mini-bus and Van transport	Budget Inns	Partial-service catering	Live Band and Concerts	Zipline, Hiking, and Camping
18	Regular-route Aircon Bus, Mini-bus and Van transport	Cottages and Boarding Houses	Full-service Catering	Bars and dance halls	Indoor Sports Facilities
19	Point-to-point Aircon Bus, mini-bus and Van transport	Cottages and Boarding Houses	Full-service Catering	Movies	Swimming Pools
20	Railroad Train Transport	Cottages and Boarding Houses	Partial-service catering	Movies	Swimming Pools

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Data Collection Method

The researcher utilized a survey questionnaire as the data gathering tool capitalizing on malls, 24-hour convenient stores such as 7-11, and the like: food courts; parks; snack bars; department and grocery stores; public markets; and, bus terminals, as the station to intercept the target respondents of the study. The target respondents were recruited based on their responses to a question: '*Do you happen to avail any resorts within Davao Region?*' or '*Do you want to avail the resorts within Davao Region?*' Positive responders were requested to spend time completing the questionnaire.

Statistical Treatment

The processing of the data was done using Additive Conjoint Analysis (CA). The key characteristic of CA was its trade-offs that can evaluate jointly several important attributes. The application of CA now extends beyond marketing uses such as environmental science and management. Alrickson & Oberg (2008) discovered 84 studies in different fields evaluated by CA in the areas of: agriculture; ecosystem management; energy; environmental evaluation; forestry; land management; pollution; products; recreation; environmental risk analysis and waste management. Alrickson & Oberg (2008) further projected in their study that new areas of CA application could be in the field of environmental communications and expert elicitation.

With additive CA, responses could be captured using ranking or rating. According to Hanley et al. (2001), respondents could be asked to rate all the alternatives independently on a predetermined scale. The different alternatives do not need to be compared, and therefore the rates were not directly comparable. This study used rating to capture the preferences of the respondents in terms of their PRFs for their respective provinces. A scale of 5-1 was used instead of ranking because it is difficult to rank large profiles, say 20 in this case. However, the rating could be converted to ranking and could be utilized to validate results with the rating if necessary. The rating scale is shown below.

Most preferred | 5 | 4 | 3 | 2 | 1 | Least Preferred

For the validity assessment of the CA model, Pearson's R and Kendall's Tau association values were used (Sorenson & Bogue, 2005) due to the following reasons: Pearson R correlation coefficient was a robust parametric statistic that could measure the strength of association between two variables even when mathematical assumptions appear violated (Smith & Albaum, 2004). Kendall's Tau, however, was a non-parametric measure of association that does not assume frequency distribution (Field, 2003). Kendall's Tau was also used to determine how holdouts consistently affected the prediction of the CA model (SPSS, 2001). The correlations must have high values to indicate a strong predictive utility for the CA model.

However, in the presence of unacceptable choices especially in the final orthogonal design of the profiles, results appear to be unaffected. It is supported by a conjoint study asserting that the accuracy of results was unaffected even with the presence of unacceptable choices. According to a study wherein, the choices contained a 15% unacceptable attribute-level, the results indicated some inconsistency between the judgment and the choices. However, the overall accuracy of choice predictions was unaffected by the initial unacceptable levels (Klein, 1987), because respondents will never choose unacceptable levels in case it occurs in the options.

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Further, to avoid validity and reliability problems in a conjoint study, especially with a large number of responses for evaluation, a rating scale should be used (Sorenson & Bogue, 2005).

Validation of Results

To validate the results of CA utilities, preference probability was utilized using the maximum utility, Bradley-Terry-Luce, and Logit estimates. This was done by taking representative profiles (RPs) of the provinces and overall, as simulators, which was not included in the orthogonally generated profile. The RPs are the following:

Profile 21 (P21): point-to-point aircon bus, mini-bus, and van transport; cottages and boarding houses; full-service catering; live bands and concerts; and, zipline, hiking, and camping.

Profile 22 (P22): point-to-point aircon bus, mini-bus, and van transport; cottages and boarding houses; full-service catering; live bands and concerts; and, ***swimming pools***.

Profile 23 (P23): point-to-point aircon bus, mini-bus, and van transport; ***budget inns***; full-service catering; live bands and concerts; and, zipline, hiking, and camping.

Ethical Considerations

Ethical consideration is an important objective of every research, from literature review to data gathering and analysis. This study draws the community's contribution to the success of what should be delivered without harming them. Together, the parts of this study from the introduction to the methodology were created from the literature that was properly cited to recognize their contribution to the conceptualization and analysis of the deliverables – the knowledge projected and expressed herein.

In the data gathering, respondents were treated ethically, particularly their rights and dignity. Although they were pre-qualified through a question, their submission to answer questionnaires was voluntary as part of an ethical research process. Based on informed consent, the candidate introduced himself and the purpose of the survey. The researcher proceeded to the next prospective respondents in case the former refused. Also, the process did not capture the names of the respondents for anonymity and as much as possible consume less of their time in responding to the survey. The respondents were dealt with the utmost respect, privacy, and confidentiality.

FINDINGS

The findings of this study are discussed according to the following order: demographic profile of the respondents; conjoint results in terms of importance values, utilities and total utilities, probabilities, and CA model fit. Discussions are in aggregate form from regional and provincial findings.

Respondent's Demographic Profile in the Region and the Provinces

There are five provinces in Davao Region and the demographic profile of the respondents of these provinces are: more female; with ages ranging from 21-49; composed of single and married; with an income of 20,000.00 pesos and below. The combined percentage of graduates in high school, technical-vocational, and degree courses range from half of Davao Oriental to as high as three-fourths of Davao Occidental. With courses, Davao del Norte respondents and the

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entire region are more engaged in studies with information and communications technology (ICT), business finance and accounting (BFA), education (ED), and engineering (ENGG). The rests of the provinces have respondents who are engaged in studies with: BFA for Davao del Sur; ICT, BFA, and tourism for Davao Oriental; ED, ICT, and BFA for Compostela Valley; and, a distributed course profile for Davao Occidental. For the respondent's sources of income, four provinces namely, Davao del Norte, Davao Oriental, Davao del Sur, Compostela Valley, and the entire region, are common with entrepreneurship and workers in sales, services, and government. However, for Davao Occidental, respondents are most entrepreneurs. With income level, most of the respondent's earnings are within the range of 20,000.00 pesos and below. Table 3 describes the commons and differences of the respondent's demographic profiles in the provinces, including the region.

Regional Importance Value (IV)

According to SPSS 17.0 - Software Documentation (1993-2007), the range of utility values (highest to lowest) for each factor provides a measure of how important it was to the overall preference. Factors with greater utility ranges play a more significant role than those with smaller ranges. Davao Region importantly valued closely catering (C), accommodation (A), transport (Tr) and entertainment (E) while least with recreation (R). The importance value pattern is C-0.104A-0.164Tr-E-5R.

Table 3 shows the summary of the importance value (IV) pattern reflecting what is more, less, and least importantly valued resort attributes in the provinces of Davao Region. Generally, most of the provinces and the Region valued recreation less by the respondents but it does not mean neglect because of a positive IV of 15.586.

Table 3
IMPORTANCE VALUES IN THE PROVINCES

Provinces	Importance Value Pattern	The province importantly valued:
Davao del Norte	C-Tr-A-E-3R	Closely catering, transport, accommodation and entertainment and less in recreation
Davao del Sur	A-0.146C-E-2Tr-5R	Accommodation and catering very closely followed by Entertainment, Less of Transport and least of recreation;
Davao Oriental	Tr-A-C-E-4R	Transport, accommodation, catering, entertainment very closely and least of recreation;
Compostela Valley	A-0.407C-0.212Tr-E-5R	Accommodation, catering, transport very closely, followed by entertainment and least in recreation; and,
Davao Occidental	A-0.462E-C-0.183Tr-5R	Accommodation and entertainment very closely followed by catering and transport and least in recreation.

Utilities and Total Utilities

Conjoint Analysis (CA) was utilized to uncover the preferred resort facilities (PRFs) in the provinces of Davao Region and overall, for the benefit of the stakeholders. These stakeholders are the owners and latent investors (OLIs) of resorts, government agencies, and financial institutions. The order of the presentation of the CA findings in the aggregate form is as follows: importance and utility values; preference probabilities and the summary of the model fit.

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Regional Utilities

Since utilities are all expressed in a common unit, they can be added together to give the total utility of any combination (SPSS 17.0 - Software Documentation, 1993-2007). Referring to Figure 4, the total utilities for Davao Region is: 0.304 (point-to-point aircon bus, mini-bus and van transport) +0.137 (cottages and boarding houses) +0.308 (full-service catering) +0.229 (live band and concerts) +0.133 (zipline, hiking and camping) +2.797=3.908.

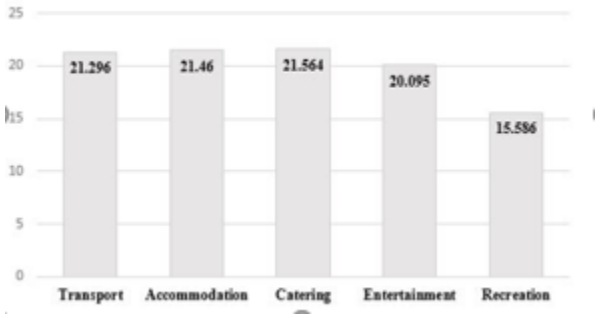

FIGURE 4
IMPORTANCE VALUE OF DAVAO REGION

Provincial Utilities

Table 4 shows the total utilities of the provinces of Davao Region and the region in aggregate. The following acronyms are considered throughout this study to provide short presentations of the utilities as follows: P2P–point-to-point aircon bus, mini-bus, and van transport; CBH–cottages and boarding houses; FS – full-service catering; LBC–live bands and concerts; ZHC–zipline, hiking, and camping; BI–budgets inns; and, SP–swimming pools

Table 4
TOTAL UTILITIES

Provinces	Total Utilities
Davao del Norte	0.296P2P + 0.093CBH +0.364FS + 0.202 LBC + 0.197ZHC + 2.685 = **3.837**
Davao del Sur	0.263P2P + 0.159BI + 0.317FS + 0.284LBC + 0.197ZPC + 2.888 = **4.029**
Davao Oriental	0.447P2P + 0.109CBH + 0.328FS + 0.239LBC + 0.043SP + 2.907 = **4.073**
Compostela Valley	0.284P2P + 0.163CBH + 0.276FS + 0.208LBC + 0.141ZHC + 2.811 = **3.883**
Davao Occidental	0.213P2P + 0.231CBH + 0.183FS + 0.274LBC + 0.129ZHC + 2.735 = **3.765**
Davao Region	0.304P2P + 0.137CBH + 0.308FS + 0.229LBC + 0.133ZHC + 2.797 = **3.908**

Note: all provinces and the region itself are almost similar with their utilities (P2P-CBH-FS-LBC-ZHC) except for Davao Del Sur preferred BI for accommodation and Davao Oriental with SP in recreation Figure 5.

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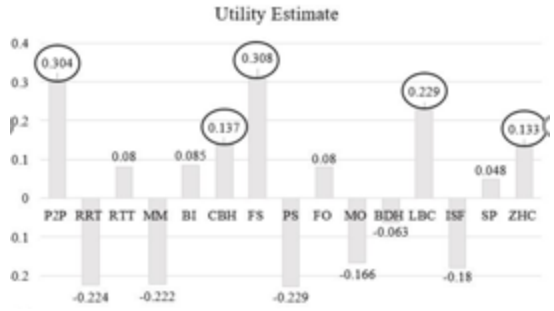

FIGURE 5
GRAPH OF THE REGIONAL UTILITY ESTIMATES

Probable PRFs for the Entire Region

Both the maximum utility and Logit are pointing to P23 as the most probable facilities while Bradley-Terry-Luce is P21. Thus, the description of the most probable PRFs for regional resorts are point-to-point aircon buses, mini-bus, and van transport; both cottages and boarding houses, and, budget inns for accommodation; full-service catering; live bands and concerts for entertainment; and, swimming pool, zipline, hiking and camping for recreation. These probable PRFs validated the results in the provincial and regional utilities of Table 5.

Table 5
PROBABILITY SIMULATIONS OF THE ENTIRE REGION

Card Number	ID	Maximum Utility	Bradley-Terry-Luce	Logit
1	21	30.0%	**33.7%**	33.5%
2	22	32.5%	33.1%	32.3%
3	23	37.5%	33.2%	34.2%

Aggregate for the CA Model Fit

To measure correlations between observed and estimated preferences, Pearson's R and Kendall's Tau can provide it. Holdouts were rated but not used by conjoint procedures in estimating utilities; instead, SPSS computes the correlation between observed and predicted responses (SPSS 17.0 Software Documentation, 1993-2007) Table 6.

Table 6
CONJOINT ANALYSIS MODEL FIT

Province	Pearson's R	Kendall's Tau	Kendall's Tau (holdout)	Significant P Values
Davao del Norte	1.000	0.975	1.000	0.000; 0.000; 0.021
Davao del Sur	1.000	0.970	1.000	0.000; 0.000; 0.021
Davao Oriental	1.000	0.962	1.000	0.000; 0.000; 0.021
Compostela Valley	1.000	0.987	1.000	0.000; 0.000; 0.021
Davao Occidental	1.000	0.996	0.667	0.000; 0.000; 0.087
Davao Region	1.000	0.996	1.000	0.000; 0.000; 0.021

Most of the correlations of the responses and their significance at 0.05 levels in the provinces of the region are all good except in the Kendall's Tau for holdouts (0.667) and

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significance value (0.087) of Davao Occidental. Table 7 shows the model fit of the provinces of the region. The primary attribute to the failure of Kendall's Tau correlations for holdout and P values for Davao Occidental is the number of respondents (less than 100) due to the lesser qualified FCMs, CCs, and HUCs in the province.

Table 7
TOTAL COEFFICIENTS OF THE IMPORTANCE VALUE PATTERNS

Provinces	Importance Value Patterns	Pattern Values
Davao del Norte	C-Tr-A-E-3R	7.0
Davao del Sur	A-.146C-E-2Tr-5R	8.146
Davao Oriental	Tr-A-C-E-4R	8.0
Compostela Valley	A-.407C-.212Tr-E-5R	7.619
Davao Occidental	A-.462E-C-.183Tr-5R	7.645
Davao Region	C-.104A-.164Tr-E-5R	7.268

ANALYSIS AND INTERPRETATION OF RESULTS

Based on the findings, it is posited that the objectives of the study were served particularly in: the establishment of the importance values and their pattern, utility estimates, total utilities, and its validation projects of the PRFs of the provinces and the region through conjoint analysis.

Conjoint Results: Importance Values and their Pattern

With six importance values (IVs) including overall, although they belong to the same region, displays distinct behaviors of valuing importantly the attributes at the provincial and regional level. For provincial OLIs of resorts, they must consider how their constituents value the attributes to elevate their business success. For example, Davao Oriental must consider prioritizing the presence of: *transport; accommodation; regulated catering; entertainment, and recreation*. If the project will cater to regional resort goers, they must consider catering, accommodation, transport, entertainment, and recreation.

In addition, another potential observation is the sum of coefficients in each pattern. The least sum could be equal to or lesser than the number of attributes. This means that the lesser the value, the closeness is the gap, and the attributes are closely valued. Inversely, the larger it goes extending a magnitude greater than the number of attributes, indicates greater gaps between the IVs. For the resorts of the provinces and the region, they must prioritize the first four PFRs namely, catering, transport, accommodation, and recreation. If their budget warrants, then, recreation will be an added feature of their resorts.

Conjoint Results: Utility Estimates

While IVs generally provided what is valued importantly at different extents, utility estimate provides the specific utilities to be considered as PRFs. With utilities, almost all provinces similarly preferred point-to-point aircon buses, mini-bus, and vans for transport; cottages and boarding houses for accommodation; full-service catering; live bands and concerts for entertainment; and, zipline, hiking, and camping for recreation (Table 7). The only variations with utility estimates are: Davao del Sur prefers budget inns over common accommodations of cottages and boarding houses while Davao Oriental with swimming pools over common

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recreation of zipline, hiking, and camping. However, Davao del Sur and Davao Oriental share similar preferences in point-to-point aircon buses, mini-bus and van transport, full-service catering, and live bands and concerts, like the region and other provinces.

Conjoint Results: Total Utilities

Table 8 shows the utility pattern, estimates, and total utilities in the last column.

Table 8
UTILITY PATTERN ESTIMATES (UPE) AND TOTAL UTILITIES (TOTUTIL)

Province	UPE	TOTUTIL
Davao del Norte	0.296P2P + 0.093CBH + 0.364FS + 0.202LBC + 0.197ZHC + 2.685	3.837
Davao del Sur	0.263P2P + 0.143BI + 0.317FS + 0.284LBC + 0.118ZHC + 2.888	4.013
Davao Oriental	0.447P2P + 0.109CBH + 0.328FS + 0.239LBC + 0.043SP + 2.907	4.073
Compostela Valley	0.284P2P + 0.163CBH + 0.276FS + 0.208LBC + 0.141ZHC + 2.888	3.883
Davao Occidental	0.213P2P + 0.231CBH + 0.183FS + 0.274LBC + 0.129ZHC + 2.735	3.765
Davao Region	0.304P2P + 0.137CBH + 0.308FS + 0.229LBC + 0.133ZHC + 2.797	3.908

TOTUTIL as Resort Classification Tool

To classify resorts according to their facilities using Davao del Norte as the guide, the following are the applicable classifications:

Class A – complete PRFs and TOTUTIL of 3.837
Class B – without any 1 of the PRFs (say P2P) and TOTUTIL of 3.541
Class C – without any 2 of the PRFs (say P2P & CBH) and TOTUTIL of 3.448
Class D – without any 3 of the PRFs (say P2P, CBH & FS) and TOTUTIL of 3.084
Class E – without any 4 of the PRFs (say P2P, CBH, FS & LBC) and TOTUTIL of 2.882
Class F or basic – without any 5 of the PRFs and TOTUTIL of 2.865

TOTUTIL of Class B to E are derived by switching PRF to zero if absent and 1 if present in the resort.

As a guide for the local government in their support system, resorts with lower TOTUTIL are coordinated very well for their awareness of the PRFs. They will be endorsed properly to appropriate government agencies and funding institutions in case financial assistance is necessary.

CONCLUSION

Based on the results and discussions, the conclusions of the study are:

1. All the provinces and the region in aggregate, valued, more importantly, *transport, accommodation, catering, and entertainment* than *recreation*.
2. For OPIs targeting regional customers**,** the PRFs are *point-to-point aircon buses, mini-bus, and van transports; cottages, boarding houses, and budget inns for accommodation; full-service catering; live bands and concerts for entertainment; and, swimming pool, zipline, hiking, and camping for recreation.*
3. The identified provincial PRFs as a bulletin for OPIs and local government's guide in their classification and formulation of their support programs respectively are:

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Davao del Norte, Compostela Valley, and Davao Occidental: point-to-point aircon bus, mini-bus, and van transports; cottages and boarding houses; full-service catering; live bands and concerts; and, zipline, hiking, and camping;
Davao del Sur: point-to-point aircon bus, mini-bus, and van transports; budget inns; full-service catering; live bands and concerts; and, zipline, hiking, and camping;
Davao Oriental: point-to-point aircon bus, mini-bus, and van transports; cottages and boarding houses; full-service catering; live bands and concerts; swimming pools.

The identified PRFs are also a guide for provincial OPIs in their respective operations. Also, the total utilities of the PRFs are recommended by this study to serve as a tool in classifying resorts in terms of facilities only for the provincial and regional tourism agencies (PRTAs). These PRFs are culturally customized for Davao Region consumption only and not for other regions.

RECOMMENDATION

For implementations, recommended are:

1. Provision of the PRFs to major stakeholders such as OLIs of resorts, the provincial and regional governments, and financial institutions; and,
2. Total utilities as a local classification guide for resorts in the provinces in terms of facilities only, to monitor their development and identify funding assistance.

For seminal studies, recommended are:

3. Future research to include facilities other than the TRACER variable to enhance the market research tool for the entire resort industry;
4. Conduct of preference study describing amenities of the PRFs established in this study;
5. A study recommending an IT system that links all transport owners, caterers, and entertainers for OLIs that cannot provide some of the facilities; and,
6. Conduct the same study with another region to validate similarities or differences with the utility patterns established in this study.

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