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ANALYSIS OF TOURISTS' LENGTH OF STAY IN POKHARA, NEPAL

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ABSTRACT

Tourists' length of stay (LOS) is desired by researchers and tourism business managers because it contributes to tourism earnings. Although Pokhara is a popular tourist destination in Nepal, no previous study has empirically investigated tourists' LOS. Thus, this study investigates tourists' LOS in Pokhara, Nepal. The data for this study were collected through a survey of 275 visitors who stayed at least one night in Pokhara. Zero-truncated negative binomial and ordinary least squares regressions were used to model tourists' LOS and determinants. In general, both methods produce similar estimates. The results suggest that visit frequency, nationality, age, education level, and expenditure are major determinants of tourists' LOS. Contrary to expectations, gender and satisfaction are not statistically significant indicators. These findings have important implications for tourism managers and policymakers.

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INTRODUCTION

The tourism industry is one of the largest and fastest-growing industries worldwide (World Tourism Organization, 2017), with a significant contribution to poverty alleviation (Spenceley & Meyer, 2012) and economic development (Lee & Chang, 2008; Sinclair, 1998; Seetanah, 2011). The Nepalese economy is still based on migrant remittances (Bam et al., 2016), and it struggles to reduce poverty. Therefore, the growth of the tourism industry is beneficial (Gautam, 2011). Since the number of visitors and their length of stay (LOS) are key contributors to the income of tourism destinations (Thrane, 2012), knowledge of the driving forces behind LOS

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allows tourism destination managers to plan and implement strategies to augment tourism earnings by increasing inflow and promoting extended stays (Nicolau et al., 2018). Therefore, considering the importance of tourists' LOS to tourism destination earnings, this is an important area of interest for researchers and the tourism industry (Alegre & Pou, 2006; Barros et al., 2010; García-Sánchez et al., 2013).

Notably, studies on LOS have been conducted in a variety of tourist destinations and countries such as Spain (García-Sánchez et al., 2013), the southern coast of Portugal (Barros et al., 2010), the Atlantic Coast of the United States (Nicolau et al., 2018), Norway (Thrane & Farstad, 2012), and a mountainous destination in Italy (Brida et al., 2013). Although Pokhara, Nepal, is a popular tourist destination for sports tourism, mountaineering, hiking, and sightseeing, no previous studies have empirically investigated tourists' LOS in Pokhara. Studies conducted in different parts of the world do not represent tourists' LOS in Pokhara, as LOS and its determinants vary by tourist destination (Alén et al., 2014). In addition, earlier findings from global research on tourists' LOS may lack external validity due to cultural differences. Therefore, this study investigated tourists' LOS and its determinants in Pokhara, Nepal.

The survival model (Aguilar & Díaz, 2019; García-Sánchez et al., 2013; Gokovali et al., 2007; Peypoch et al., 2012) and zero-truncated negative binomial (ZTNB) regression (Alén et al., 2014; Nicolau et al., 2018) are two common methods that researchers have adopted to model tourists' LOS. However, Thrane (2012, 2015) criticized the survival and count regression models and proposed ordinary least squares (OLS) regression, which produces similar results to the ZTNB regression and survival models. Critics of the OLS regression argue that LOS is a strictly positive variable; a negative fitted LOS value does not have a valid meaning, and the OLS regression can produce negative fitted LOS values for shorter durations (Hateftabar & Chapuis, 2020). However, log transformation converts LOS into strictly positive values by eliminating the risk of negative fitted values (Thrane, 2015). The survival and zero-truncated count regression models do not offer any additional salient information compared with the OLS model (Thrane, 2015). In addition, the data-generating process of tourists' LOS satisfies the properties of neither the count nor the survival model (Thrane, 2012, 2015). Thus, this study estimates parameters of regressors of tourists' LOS using OLS regression and compares it with the ZTNB regression. This study provides a reference to destination managers, governments, and policymakers seeking to develop and implement policies to prolong

tourists' LOS. In addition, the findings will aid future researchers in selecting a suitable model for tourists' LOS.

LITERATURE REVIEW

Tourists' Length of Stay

Although tourists' LOS is not a new concept, it has increased attention since 2006 (Rodriguez et al., 2018). Knowledge of tourists' LOS allows destination managers to decide on service types and product demands (Gokovali et al., 2007) so that tourist planners can motivate tourists to stay longer. Although the findings are mixed, tourists' longer stays generally increase their spending on tourist destinations (García-Sánchez et al., 2013). Longer tourist stays improve tourists' familiarity with the products and services of the destination, which increases the likelihood of spending and expands the multiplier effect of tourism income (Gokovali et al., 2007). Longer tourist stays also generate more business and job opportunities at tourist destinations (Alen et al., 2014). Wang et al. (2018) argued that tourist expenditure increases with LOS up to a certain time point (21 days) and declines as LOS rises. Nevertheless, these studies suggest the importance of the LOS variable in tourism earnings. Thus, it is important to investigate the determinants of tourists' LOS.

Furthermore, LOS studies differ in terms of geographical location, influencing variables, and methodologies (Hateftabar & Chapuis, 2020). Previous studies have covered several geographical locations, as discussed in the introduction section; they include Spain, the southern coast of Portugal, the Atlantic coast of the United States, Norway, and the mountains of Italy. In addition, various methodological approaches, such as survival analysis (Aguilar & Díaz, 2019; Hateftabar & Chapuis, 2020), count regression (Nicolau et al., 2018), OLS regression (Thrane, 2015), and logit regression (Alegre & Pou, 2006) have been adopted to model LOS. Studies have divided the influencing variables of tourists' LOS into three broad categories: tourist profiles, trip characteristics, and destination attributes (Hateftabar & Chapuis, 2020). Nationality (Barros & Machado, 2010; Gokovali et al., 2007; Thrane & Farstad, 2012), age (Barros & Machado, 2010; Hateftabar & Chapuis, 2020), gender (Hateftabar & Chapuis, 2020; Mortazavi & Cialani, 2017), and education level (Barros & Machado, 2010; Hateftabar & Chapuis, 2020) are some personal profile variables that are salient LOS determinants. Visit frequency (Gokovali et al., 2007; Hateftabar & Chapuis, 2020; Thrane & Farstad, 2012) and expenditure (Alegre & Pou, 2006) are other salient influencing factors of LOS, categorised as trip

characteristics. Destination attributes such as hospitality services (Barros et al., 2010; Hateftabar & Chapuis, 2020) and visual attraction (Rodriguez et al., 2018) have influenced LOS. In addition, tourist satisfaction is a salient determinant of tourists' LOS (see De Menezes et al., 2008; Thrane, 2012). While there is no specific theory behind the selection covariates of LOS variables (Hateftabar & Chapuis, 2020), based on the findings of the above discussion, nationality, visit frequency, age, gender, education level, expenditure, and satisfaction are considered as relevant regressors of LOS in this study.

Studies have consistently found that nationality is one of the strongest predictors of tourists' LOS (Gokovali et al., 2007; Thrane, 2012). However, since visitors' nationality influences their choice of destination (Jönsson & Devonish, 2008), the group of tourists may vary from one destination to another (Hateftabar & Chapuis, 2020). Tourists' age is another important determinant of LOS. Most studies have found that older adults stay longer than younger individuals (Chen et al., 2015; Thrane, 2012). They have presented various reasons for the longer stays of older adults, including that they have fewer family responsibilities, less stress, and less work (Wells & Gubar, 1966). As retirement brings more freedom (Wells & Gubar, 1966), they are more likely to stay longer than younger people (Chen et al., 2015). Although some studies, as discussed above, have found a positive relationship between age and LOS, Adongo et al. (2017) and Jacobsen et al. (2018) reported a negative relationship.

Studies also consider gender to be a significant predictor of LOS, although the relationship between gender and LOS varies across studies. For example, Adongo et al. (2017), Barros et al. (2010), and Salmasi et al. (2012) argued that female visitors stay longer than male visitors, whereas Hateftabar and Chapuis (2020), Santos et al. (2015), and Thrane (2015) found the opposite, whereas Wang et al. (2012) reported no gender effect. There are also mixed findings regarding the relationship between educational level and LOS. Barros and Machado (2010) and Wang et al. (2012) stated that better-educated visitors stay longer; however, Adongo et al. (2017), Martinez-Garcia and Raya (2008), and Gokovali et al. (2007) did the opposite.

Regarding visit frequency, research has reported mixed findings. De Menezes et al. (2008), Adongo et al. (2017), and Hateftabar and Chapuis (2020) found that re-visitors have a shorter LOS than first-time visitors; however, Bavik et al. (2021), Gokovali et al. (2007), Jacobsen et al. (2018), Thrane and Farstad (2012), and Wang et al. (2012) found the opposite.

Concerning satisfaction, most studies report a positive relationship between satisfaction and LOS (see De Menezes et al., 2008; Machado, 2010; Thrane, 2012), whereas Soler et al. (2018) found no significant satisfaction effect on LOS.

This discussion establishes that LOS and the direction of the relationship between predictors vary depending on the tourist destination type and attributes. For example, a study conducted at a tourist destination may not necessarily apply to others. Thus, studies conducted globally may not apply to Pokhara, Nepal. Therefore, it is important to study the determinants of tourist LOS in Pokhara.

Methodological Review

Generalised linear models, such as the Poisson regression, negative binomial regression, logit regression, logistic regression, survival models, and general linear models, including the OLS regression, are major tools adopted to model tourists' LOS and its determinants in many studies. The use of survival models to model tourists' LOS has been criticised by Thrane (2012) because of the complexity and data-generating process. According to Thrane (2012), the LOS of a tourist is pre-fixed and not right censored; thus, survival analysis is not a valid approach for modeling tourists' LOS. Similarly, Thrane (2015) criticised count regression models because the data-generating process of LOS does not follow the properties of a Poisson distribution. Thrane (2015) further highlights that count variables measure the number of times an event occurs within a certain time interval; therefore, tourists' LOS does not fulfill the properties of a count variable.

Thrane (2012, 2015) proposed the OLS regression, which produces similar results in survival analysis and count regression models. The researcher further argued that using a simpler model instead of a complex one is a wise decision when both models produce similar results because a simple model is easy to understand by non-statistically minded readers. Hateftabar and Chapuis (2020) averred that the LOS variable is not normally distributed; thus, normality assumptions may be violated if the OLS regression is applied. In addition, Hateftabar and Chapuis (2020) criticised the transformation technique of fixing normality issues because of interpretation-related challenges after log transformation. However, Thrane (2012, 2015) presented a strong justification for using the OLS regression to model LOS through log transformation. Thus, this study compares the OLS regression with ZTNB regression and selects the best

model to analyse tourists' LOS. The selected model is applied to answer the following research questions:

Research Question 1: Does the visitor's profile (i.e., nationality, age, gender, and education level) explain LOS?

Research Question 2: Do the visitor's visit frequency and expenditure explain LOS?

Research Question 3: Does the visitor's overall satisfaction explain LOS in a tourist destination?

METHODOLOGY

Variables and Instrument

The data for this study were obtained from a mini-research project titled 'Factors affecting tourist satisfaction and revisit intention to Pokhara', supported by the Pokhara University Research Council. The participant visitors were required to indicate their agreement level with each indicator item using a 5-point scale (1 = 'strongly disagree' to 5 = 'strongly agree') to measure overall satisfaction (Cronbach's α = 0.81). The sample items for satisfaction were, 'It was a wise decision to visit Pokhara', 'I had an enjoyable time at Pokhara', and 'I am attracted by the beautiful scenery of Pokhara'. The sum of the scores of satisfaction items was a predictor of LOS. Visit frequency (first, second, and third or more times) measured the number of times tourists visited Pokhara. Expenditure (below $48 and $48 and above) measured the daily expenses of tourists. The average expenditure of tourists in Nepal in 2017 and 2018 was $48 (Nepal Tourism Statistics, 2017, 2018). Thus, two expenditure levels were created based on the national average expenditure of tourists in Nepal. Tourists with expenditures below $48 were considered in the low-expenditure group, whereas tourists with $48 or higher expenditures were in the high-expenditure group. Gender (male and female), education level (high school and below, undergraduate, and graduate), age (below 25, 25–64, and 64 and above), and nationality (Chinese, Indian, and other) were the other regressor variables of tourists' LOS. LOS was measured as the number of days tourists stayed overnight in Pokhara during their current trip.

Data Collection

Pokhara is a famous tourist destination for sightseeing, hiking, sports tourism, and mountaineering. The city is surrounded by the beautiful

Himalayan range of Mount Annapurna and several lakes (Bam & Kunwar, 2020). Pokhara covers approximately 35% of the tourists who have visited Nepal in the last ten years (Bam & Kunwar, 2020). The data for this study were collected from tourists who visited Pokhara and stayed there for at least one night. The target population for this study was tourists who arrived in Pokhara. Random sampling was adopted to select the samples. Approximately 400 questionnaires were distributed to tourists visiting Pokhara who stayed at least one night. Only 280 respondents completed and returned the questionnaires. Participants whose LOS exceeded six months were excluded. Therefore, the sample size of this study was 275. Based on the G-power, for the OLS regression with seven regressors, at least 264 samples are required to achieve a power of 90% and a small effect size (0.05) at the 1% significance level. Thus, the sample size of 275 was sufficiently large to represent the population. Among them, 50% were male, and 50% were female. Furthermore, 43% of the participants were Chinese, followed by Indians (38%) and visitors from other locations (19%). Additionally, 78% of the visitors were first-time visitors, followed by 13% representing second-time visitors, and the rest were visiting for the third time or more. In addition, 32% of the participants were below 25 years old, 67% were between 25 and 64 years old, and the rest were above 64 years old. Approximately half of the travellers had undergraduate degrees, 23.5% had high school certificates and below, and the rest had graduate degrees. Approximately 63% of the visitors belonged to the low-expenditure group and the rest to the high-expenditure group.

Regression Models

Ordinary Least Squares (OLS) Regression

Let $\widehat{\log(Y_i)}$ denote the estimated log number of night tourists, i staying overnight in a tourist destination, and x_{ij} be the value of the j^{th} regressor variable for the i^{th} observation. The regression model used to estimate the regression parameters is as follows:

$$\widehat{\log(Y_i)} = \beta_0 + \sum_{j=1}^{k} \beta_j x_{ij} \text{ , i= 1,2 …. n} \quad (1)$$

where β_j is the estimated regression coefficient of the j^{th} regressor variable and β_0 is the estimated intercept of the regression model.

The least-squares estimation method is commonly used to estimate the unknown parameters of the regressors. Since the OLS regression model violates the normality assumption without log transformation, log transformation was used to stabilise it. Critics of log transformation

(Hateftabar & Chapuis, 2020) believe that this complicates the interpretation of the coefficient. Simplifying the following simple regression model helps understand the interpretation of the estimated model parameters:

Let

$$\widehat{log(Y)} = \beta_0 + \beta_1 X \quad (2)$$

be a simple linear regression of the log-transformed dependent variable with only one independent variable X with the estimated regression coefficient β_1. Let $\log(Y_{new})$ be the value of Y after a one-unit positive change in X. Now

$$\log(Y_{new}) = \beta_0 + \beta_1(X + 1)$$

$$\log(Y_{new}) = \beta_0 + \beta_1(X) + \beta_1$$

$$\log(Y_{new}) = \log(Y) + \beta_1$$

$$\log(Y_{new}) - \log(Y) = \beta_1$$

$$\frac{Y_{new}}{Y} = exp(\beta_1)$$

$$100 \times \left(\frac{Y_{new}}{Y} - 1\right) = 100 \times (exp(\beta_1) - 1)$$

$$100 \times \left(\frac{Y_{new} - Y}{Y}\right) = 100 \times (exp(\beta_1) - 1)$$

Thus, $100 \times (exp(\beta_j) - 1)$ is the percentage change (factor change %) in Y for a one-unit change in X_j for the j^{th} continuous independent variable. For the categorical independent variables, the percentage difference (factor change %) between the baseline and other categories. This proves that interpreting the estimated parameters of the OLS regression after log transformation of the response variables is straightforward.

ZTNB Regression

The data-generating process of LOS only considers visitors who stayed at least one night in Pokhara. Table 1 shows that the variance in LOS was more than fourfold higher than the mean LOS. Although count data regression was criticised by Thrane (2015), a ZTNB regression was presented for comparison purposes. According to Grogger and Carson (1991), the ZTNB probability mass function is expressed as follows:

$$\Pr(Y_i = y_i | y_i > 0) = \frac{\left(\Gamma(y_i + \alpha^{-1}) / y_i!\Gamma(\alpha^{-1})\right)\left(\alpha^{-1} / (\alpha^{-1} + \mu_i)\right)^{\alpha^{-1}}\left(\mu_i / (\alpha^{-1} + \mu_i)\right)^{y_i}}{1 - (1 + \alpha\mu_i)^{-\frac{1}{\alpha}}}, \text{ i= 1,2,3… (3)}$$

where

$$\log(\mu_i) = \beta_0 + \sum_{j=1}^{k} \beta_j x_{ij} \text{ , i= 1,2 …. n, j = 1,2 …k} \quad (4)$$

is the ZTNB regression model; where μ_i is the estimated number of overnight stays of the ith tourist, y_i is the observed number of overnight stays of the i^{th} tourist, β_0 is the parameter estimation of the intercept, β_j is the estimated regression coefficient of the j^{th} regressor, and x_{ij} is the value of the jth regressor variable for the ith observation. α is the overdispersion parameter. The likelihood estimation method is a common approach for estimating the model parameters of a ZTNB regression.

Data Analysis

Data entry was completed using the SPSS software. Frequency was used to check for errors and inconsistencies in the data. Once data entry was performed and confirmed to be error-free, the percentage of missing values and a matrix plot were created to check the pattern of missing values and whether the percentage of missing values exceeded 10%. Descriptive statistics (i.e., mean, median, standard deviation, minimum, and maximum) were then calculated. The OLS regression was used to investigate the strength and direction of the relationship between LOS and the regressors: visit frequency, gender, nationality, age, education level, expenditure, and satisfaction. The results of the OLS regression were compared to those of the ZTNB regression. Robust standard errors and p-values for each model were obtained. Outliers were detected using standardised residuals, Cook's distance, and leverage values. Residual plots were examined to check for normality and equal variance assumptions. The mean absolute deviation (MAD), mean absolute percentage error (MAPE), root mean square error (RMSE), Akaike information criterion (AIC), and Bayesian information criterion (BIC) were used to compare the models. The model with the smallest MAD, MAPE, RMSE, AIC, and BIC values was selected as the best model. In addition, the model specifications were examined using Ramsey's test of misspecification. Data analysis was conducted using R 4.0.1, whereas, for the ZTNB regression, robust standard errors were obtained using STATA 16.

RESULTS

The total missing percentage is 0.17%, with the most missing values for the expenditure variable. Thus, median imputation was applied to replace the missing values. As shown in Table 1, the average LOS of tourists in Pokhara

was approximately 9 days, with a standard deviation of 13.4 days. The average LOS of Chinese tourists was higher than that of Indian and other tourists. Females have longer LOS than males. Younger tourists have a longer average LOS than older tourists. The average LOS for first-time visitors was less than that for frequent visitors. Graduates have longer LOS than non-graduates. On average, the low-expenditure group of tourists stays longer than the high-expenditure group. For further details, see Table 1.

Table 1. *Descriptive statistics of the study's variables*

Variables	***M***	***SD***	***Median***	***Min***	***Max***
Length of stay	9	13.4	4	1	90
Length of stay across nationality					
Indian	4	3.83	3	1	30
Chinese	14.25	17.81	7	1	90
Others	7.82	9.96	5	2	60
Length of stay across gender					
Male	8.1	11.77	3.5	1	90
Female	9.98	14.81	5	2	90
Length of stay across education level					
High school and below	7.5	13.33	3	1	90
Undergraduate	9.4	11.28	4	2	60
Graduate	9.7	16.68	4	1	90
Length of stay across age groups					
Below 25	9.4	12	5	1	80
25–64	9	14.2	4	1	90
Above 64	2.8	1	2	2	4
Length of stay across frequency of visit					
First time	7.1	9.51	4	1	90
Second time	17.13	21.32	7	2	80
Third time and more	15.09	21.62	7	2	90
Expenditure					
Low expenditure group (Below $48)	10		4	1	90
High expenditure group ($55 and above)	8		5	2	60
Satisfaction	12.85	2.11	13	3	15

Table 2 presents the results of the OLS and ZTNB regressions. While fitting the regression models, seven outliers (observation numbers 2, 3, 5, 11, 31, 183, and 275) were dropped based on the leverage values, Cook's distance, and standardised residuals. Both models were updated after removing the outliers. The model assumptions of the updated OLS and ZTNB regressions were examined. The Pearson-type residual was used for

the residual analysis of the ZTNB regression. Both models satisfied all the assumptions.

Table 2. *Estimation results of the ZTNB and OLS regressions*

	ZTNB			**OLS**		
Variable	**B**	**R.SE**	**Factor Change (%)**	**β**	**R.SE**	**Factor Change (%)**
First time	Visit frequency reference group					
Second time	0.381**	0.177	46.37	0.321**	0.157	37.85
Third time and more	1.042***	0.217	183.48	0.819***	0.127	126.82
Female	Gender reference group					
Male	0.013	0.119	1.30	0.034	0.094	3.45
Chinese	Nationality reference group					
Indian	-1.412***	0.123	-75.63	-1.046***	0.107	-64.86
Others	-0.637***	0.198	-47.11	-0.580***	0.149	-44.01
Below 25	Age reference group					
25–64	-0.432***	0.129	-35.07	-0.329**	0.104	-28.03
Above 64	-1.040***	0.205	-64.65	-0.559***	0.163	-42.82
High school and below	Education reference group					
Undergraduate	0.403***	0.131	49.63	0.218**	0.095	24.35
Graduate	0.638***	0.166	89.27	0.351***	0.129	42.04
Low expenditure	Expenditure reference group					
High Expenditure	-0.385	0.143	-31.95	-0.32***	0.118	-27.38
Satisfaction	-0.001	0.023	-0.099	-0.009	0.021	-0.895
Constant	2.35***	0.324		2.25***	0.295	
Ln(α)	-0.570***	.1181				
Log-likelihood	-737.99					
F-statistic				F (11, 256) =13.57***		
Wald Chi Square	$\chi^2(11)$ = 243.21***					
RMSE	9.04			12.85		
MAD	3.72			3.88		
MAPE	88.44			62.47		
AIC	1501.99			596.74		
BIC	1548.68			643.42		

Note. **p<0.05; ***p<0.01; R.SE = Robust standard error

Considering MAPE, AIC, and BIC, the OLS regression performs better than the ZTNB regression, whereas considering RMSE and MAD, the ZTNB regression is better than the OLS regression. The coefficient of determination of the OLS regression model was 36.82%, and the adjusted R-square was 34.11%. Based on Ramsey's test of misspecification, there was no issue with the model specification of the OLS regression model, F (1, 255) = 0.0526, p = 0.8187, or the ZTNB regression model, F (1, 255) = 0.6844, p = 0.4089. While both models produce similar estimated coefficients, the OLS regression is simpler; thus, it was used to answer the research questions.

Regarding Research Question 1, visitors' nationality, age, and education level, but not gender, were important determinants of tourists' LOS. Regarding Research Question 2, visit frequency and expenditure were salient determinants of tourists' LOS. Regarding Research Question 3, tourists' overall satisfaction was not a significant determinant of LOS.

DISCUSSION

Based on this study's results, visit frequency is a salient determinant of tourists' LOS in Pokhara. The expected LOS of more frequent visitors is longer than that of first-time visitors. Visit frequency familiarises tourists with the tourist destination, activities, and cultures (Gokovali et al., 2007), broadening their variety of planned activities (Soler et al., 2018). Thus, repeated visitors can extend their LOS. Contrary to this study's findings and those of Gokovali et al. (2007) and Soler et al. (2018), some studies (e.g., Jacobsen et al., 2018; Nicolau et al., 2018; Thrane & Farsted, 2012) found a negative visit frequency effect on LOS. The latter group of studies believes that tourists seeking new experiences might be willing to stay longer to enjoy the new destination. Both justifications have valid logic; however, in the Pokhara context, only the logic of the former group is reasonable. Pokhara boasts several activities such as sightseeing, sports tourism, hiking, and mountaineering. The first visit familiarises tourists with various attributes; thus, they plan longer trips after the first visit to explore all amenities. However, not all tourist destinations worldwide have similar attributes. Some destinations may have several tourism activities, whereas others may not. Thus, tourists who visit places such as Pokhara (where there are many tourism-related activities) may stay longer after their first visit. However, future studies are needed to test the interaction effect between the destination and visit frequency.

This study also reveals significant differences in LOS among people of different nationalities visiting Pokhara. The Chinese stay longer than the Indians and other tourists. This finding concurs with Rosyidi (2018), who found that Chinese tourists stay longer in Indonesia than tourists from other Asian countries. The findings of this study are also consistent with those that report a significant nationality effect (e.g., Gokovali et al., 2007; Thrane, 2012) on LOS. Tourists' age is another determinant of LOS. The findings show that younger tourists stay in Pokhara for a longer duration than older tourists. This study's findings are similar to those of Jacobsen et al. (2018), despite the differences in age group classification, and contradict those of Chen et al. (2015), and Thrane (2012). Pokhara is a famous tourist

destination for mountaineering, hiking, and sports tourism (e.g., zip flying and paragliding). These activities may not be major attractions for older adults, and even if they are attracted, they are less likely to spend more time than younger people.

According to this study's findings, tourists with higher educational levels stay longer than those with lower qualifications, consistent with Barros and Machado (2010) and Wang et al. (2012). However, Adongo et al. (2017), Martinez-Garcia and Raya (2008), and Gokovali et al. (2007) reported contradictory findings. Based on this study's findings, the high-expenditure group of tourists stays for a shorter duration than the low-expenditure group, consistent with Barros and Machado (2010), Mortazavi and Cialani (2017), and Thrane (2012). Although several previous studies have established a significant effect of gender (Hateftabar & Chapuis, 2020) and satisfaction (Thrane, 2012) on LOS, this study did not find such a significant effect. Considering gender; the current study's findings are similar to Wang et al. (2012). Most visitors to Pokhara were groups and couples, which may explain the insignificant gender effect on LOS. Regarding satisfaction, this study's findings align with Soler et al. (2018). Based on the descriptive statistics of satisfaction, over 75% of the tourists' satisfaction scores were 12 or higher, indicating that tourists were consistently satisfied in Pokhara. Thus, satisfaction had no significant effect on LOS because of the low variability in satisfaction scores.

This study provides a salient reference for tourism planners in launching new business strategies. Nationality, visit frequency, age, expenditure, and educational level are important determinants of tourists' LOS in Pokhara. Tourism managers might attract a group of tourists who have significantly longer overnight stays and try to motivate them to extend the stays of those with a significantly shorter LOS. Additionally, tourism business managers, local people, the government, and planners should preserve the natural beauty of Pokhara, plan a better nightlife for tourists, and enhance the cultural environment to increase their LOS, as these factors also play a positive role in increasing tourists' LOS (Gokovali et al., 2007). Along with planning to increase the population of tourists in Pokhara, tourism planners should properly evaluate their capacity to accommodate the extra volume of incoming tourists. Future studies are necessary to identify the current capacity to accommodate incoming visitors and the possibilities for expansion without undermining the natural beauty of Pokhara.

According to Thrane (2012), most count models are built based on modelling counts within a specified time interval; however, LOS is not necessarily measured as a count within specified time intervals. The survival model is suitable when researchers are interested in the probability of tourists changing their LOS or the time, they spend at a tourist destination because most tourist visits are attraction-inclined, with no specific timeline in mind (King, 2021). Thus, neither the count model nor the survival model is statistically valid for modelling the LOS of tourists. Moreover, the count and survival models are more complex than the OLS regression model. The findings show that the OLS regression presents results similar to the ZTNB regression, strengthening Thrane's (2012) and Mortazavi and Cialani's (2017) arguments. Thus, there is no reason to abandon the OLS regression model favouring complex survival or count models. However, this finding does not discourage identifying new and innovative modelling approaches to model tourists' LOS.

CONCLUSIONS

Modelling tourists' LOS and its determinants have important implications for tourism business planners to know which group of tourists stays longer and who needs the motivation to extend their stay. This study employed the OLS and ZTNB regression models to investigate tourists' LOS and its determinants. The findings showed that visit frequency, nationality, age, education level, and expenditure are important determinants of LOS. This study shows that Chinese tourists, more frequent tourists, those 25 years old and under, more educated visitors, and the low-expenditure group of tourists stay longer in Pokhara. The OLS regression produced results similar to the ZTNB regression; thus, there is no reason to abandon the former. This conclusion fully agrees with Thrane (2012, 2015), who advocated using OLS instead of the more complex survival and count models.

Limitations

Although these findings offer important insights into tourists' LOS in Pokhara and its determinants, there are some limitations. First, tourists' LOS may be influenced by seasonal effects. This study did not consider seasonal effects due to the cross-sectional nature of the data. Thus, further studies are needed to consider the seasonal effects by collecting data over time. Second, this study is based on a frequentist parameter estimation approach. Bayesian approaches to parameter estimation and model

identification are more robust than frequentist approaches (Assaf et al., 2018); thus, future studies can use Bayesian approaches to model tourists' LOS. Several other regressors exist, such as motive for travel reasons, travel party, and visual attraction, which could be salient LOS determinants. Future researchers are called upon to include these variables as regressors of LOS.

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