

**IMPACT OF TOURISM IN SOCIO-ECONOMIC
DEVELOPMENT OF NEPAL: A MULTIVARIATE APPROACH**



**A THESIS SUBMITTED TO THE
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**BY
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DECLARATION

This thesis entitled “**IMPACT OF TOURISM IN SOCIO-ECONOMIC DEVELOPMENT OF NEPAL: A MULTIVARIATE APPROACH**” which is being submitted to the Central Department of Statistics, Institute of Science and Technology (IOST), Tribhuvan University, Nepal for the award of the degree of Doctor of Philosophy (Ph.D.), is a research work carried out by me under the supervision of Prof. Dr. Azaya Bikram Sthapit, Central Department of Statistics, Tribhuvan University and co supervised by Prof. Dr. Shankar Prasad Khanal, Central Department of Statistics, Tribhuvan University.

This research is original and has not been submitted earlier in part or full in this or any other form to any university or institute, here or elsewhere, for the award of any degree.

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RECOMMENDATION

This is to recommend that **Basanta Kumar Dhakal** has carried out research entitled “**Impact of Tourism in Socio-economic Development of Nepal: A Multivariate Approach**” for the award of Doctor of Philosophy (Ph.D.) in **Statistics** under our supervision. To our knowledge, this work has not been submitted for any other degree.

He has fulfilled all the requirements laid down by the Institute of Science and Technology (IOST), Tribhuvan University, Kirtipur for the submission of the thesis for the award of Ph.D. degree.

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ABSTRACT

Tourism being one of the major foreign exchange earnings and job providing sectors in local level is a growing service industry in Nepal. It significantly plays an important role in social and economic development of nation. Keeping in view of this reality, the objectives of this study are to examine the relationship between tourism benefits towards economic development process of the nation by using VEC model, to assess the residents' attitudes towards economic impact of tourism in Nepal, and to assess the residents' perceptions towards social impact of tourism in Nepal using EFA. This study is an attempt to apply different statistical methods/ models using two different sets of data namely secondary time series data and primary data. Vector error correction (VEC) model has been applied to analyze the secondary data from the period of 1990/91 to 2014/15 tourism data of Nepal provided by Ministry of Tourism and Civil Aviation for examining the relationship between tourism benefits towards economic development process of the nation. For analyzing the residents' attitudes and perceptions towards economic and social impacts of tourism respectively, Exploratory Factor Analysis (EFA) has been used based on primary data through face to face field survey of 601 respondents from three tourist destinations with response rate 91.76%. A set of questionnaire was developed to collect the data, and the respondents' level of agreement has been measured by five point Likert scale.

In order to investigate the long run relationship, VEC model has been used, and it indicated that the role of average length of stay towards increasing GDP is greater than number of international tourist arrival in Nepal. The results of Granger causality analysis have also illustrated that the increasing average length of stay of tourist plays positive role to increase GDP and vice versa (p value <0.001) and large number of international tourist plays the affirmative role to increase their average length of stay (p value <0.001). Similarly, in order to look into Nepal's foreign exchange earnings through tourism with an analysis of the international tourists' arrival and the duration they spent in Nepal. The empirical result from the VEC model has concluded that the role of average length of stay towards increasing earnings from tourism is greater than number of international tourist. The findings from Granger causality analysis have also demonstrated the large number of international tourist and their average length of stay play positive role to increase foreign exchange earnings (p value <0.001). Similarly, the large number of international

tourist plays the affirmative position to expand their average length of stay and vice versa (p value <0.001).

Likewise, in order to explore long run relationship between number of international visitors and their length of stay towards their average expenditure in Nepal, the result of VEC model has indicated that the role of average length of stay towards increasing expenditure per tourist is greater than number of international tourists' arrivals in Nepal. The results of Granger causality analysis have depicted that the increasing average length of stay of tourist takes part in affirmative position to increase expenditure of visitor and vice versa (p value <0.001). The large number of international tourist plays the positive role to increase their average length of stay (p value <0.001). In order to examine long run relationship of foreign exchange earnings from tourism and average expenditure of international tourists towards share of GDP of Nepalese tourism, the result of VEC model has shown that the role of average expenditure per visitor towards increasing GDP is greater than foreign exchange earnings from tourism. The results of Granger causality analysis have also depicted that increasing expenditure per visitor plays positive role to increase GDP and vice versa (p value <0.001). Similarly, foreign exchange earnings also facilitate the expansion of GDP (p value <0.001).

The EFA found that 67.84% total variance has been explained by positive economic factors of tourism and 59.39% total variance has been explained by negative economic factors of tourism illustrating both positive and negative impacts of tourism from the respondents. Tourism, apart from being perceived as an economic factor, is also a social component and it prevails subjectively and intangibly in the community. It is found that 56.3% total variance has been explained by positive social factors of tourism and 60.4% total variance has been explained by negative social factors of tourism indicating the both negative and positive perceptions towards social impacts of tourism from respondents. It shows that tourism industries of Nepal are not still well planned and controlled but it has great potentiality for further development. So, effort should pay critical and sustained attention towards promoting cultural and natural resources, improving the infrastructure of tourism industry and employing the tourism marketing skills to optimize the economic benefits and social betterment for the quality of life of people through the tourism development.

Keywords: *Factor analysis, Ganger causality, Long run relationship, Vector error correction.*

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LIST OF ACRONYMS AND ABBREVIATIONS

ADF	Augmented Dickey Fuller
AIC	Akaike Information Criteria
AIDS	Almost Ideal Demand System
ARDL	Autoregressive Distributed Lag Model
ARIMA	Autoregressive Integrated Moving Average
AVLS	Average Length of Stay
CFA	Confirmative Factor Analysis
EARN	Earnings from Tourism
EFA	Exploratory Factor Analysis
ECT	Error Correction Terms
EXPV	Expenditure per Visitor
GDP	Gross Domestic Product
IMF	International Monetary Found
IOM	Input Output Model
KMO	Kaiser-Meyer-Olkin
LM	Lagrange Multiplier
MOTCA	Ministry of Tourism and Civil Aviation
NIE	Negative Impact of Tourism on Economic Sector
NIS	Negative Impact of Tourism on Social Sector
OECD	Organization and Economic Cooperation and Development
PIE	Positive Impact of Tourism on Economic Sector
PIS	Positive Impact of Tourism on Social Sector
SBIC	Schwartz Bayesian Information Criteria
SMC	Squared Multiple Correlation
TOUR	Number of International Tourist
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organization
USA	United States of America
VAR	Vector Auto Regressive

VDC	Village District Committee
VEC	Vector Error Correction
WTO	World Tourism Organization
WTTC	World Travel and Tourism Council

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