



## Interaction Effects of the Demographic Factors on Tourism Sector Development in Nigeria: A Case Study of Anambra State.

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### Abstract

*Nigeria's quest to diversify her economy into tourism over the years out of being a mono product economy have not recorded any significant success in respect of tourist arrivals and revenues despite implemented policy targets. The extent to which the policy targets can accomplish the objective of developing tourism sector depends on the level and sincerity of governments' partnership with private individuals. Currently, there is little or no partnership, and marketing and promotion which targeted private individuals (locals and foreigners) have not been significantly successful. While the locals are constrained by some demographic factors including health quality of life, gender, socioeconomic status and educational level to demand for tourism services or invest in the sector, the foreigners are not motivated to buy Nigeria's tourism services due to unattractive and poorly developed destination in Nigeria. The policy makers in government are yet to understand fully how the aforementioned demographic factors jointly influence tourism sector development as a result of dearth of studies of Nigerian background in this regard, especially in respect of Anambra state. Therefore, the study investigated the demographic factors and their joint effect on tourism sector development in Nigeria: case study of Anambra state, using propensity to invest and participate in tourism sector development as mediating variable. About 400 subjects were constituted for the study using multi stage sampling from sampling units in Anambra state. The study employed a generalized univariate model multiple regression to analyze the within and between subject effects of health quality of life, gender, socioeconomic status and educational level on propensity to invest and participate in tourism sector development. Results indicated among others that: (1) There is significant joint effect of health quality of life and gender on tourism sector development. (2) There is significant joint effect of gender, socioeconomic status and educational level on tourism sector development. (3) There is significant joint effect of health quality of life, socioeconomic status and educational level on tourism sector development. It was recommended inter alia that Anambra state should partner with private individuals in the area of healthcare, gender inclusiveness, education and financial capital to develop tourism sector in Anambra state and this can be replicated by all states in Nigeria and the federal government.*

**Key Words:** Demographic factors, Joint influence, Tourism Sector Development in Nigeria, Anambra State.

### Introduction

Abamara (2024), defined it as the process that has to do with people traveling within a country or to other destination countries abroad or foreigners coming into a country to engage in picnic and recreation activities in special amusement parks, attend and participate in unique sporting



events, attend outstanding religious events and carry out a comprehensive wildlife research in zoos, game reserves and national geographical wild in line with international best practices. Other activities undertaken by tourists may include travel to accomplish business related activities like visiting state of the art shopping malls for shopping, patronizing hospitality industry like 5-star hotels for academic conferences, cultural events, cocktail parties, entertainment activities and idea sharing events. It may equally include the exploration of natural environment including water-falls, landforms, beaches, rivers, lakes, seas, caves, mountains or travel to access medical services from the state of the art medical facilities where high quality health care professionals are available for medical and healthcare intervention (Abamara, 2024). People can travel for religious activities (religious tourism), sporting activities (sports tourism), medical treatment and medical related activities (medical tourism), participation in conferences, exhibitions, seminars, idea sharing events, club activities, cocktail parties and shopping activities (business tourism). At times tourists can travel for sightseeing, picnic, leisure, excursions, academic industrial training and research to unique natural environment like in Geo tourism/ecotourism or to visit national geographical wild, zoos or game reserve (wildlife tourism). Walton (2019), described tourism as the act and process of spending time away from home in the pursuit of recreation, relaxation and pleasure, while making use of the commercial provisions of services.

Tourism has become a major source of revenue for several nations all over the world and according to Pratheep (2017), tourism sector represent an important revenue generating source among many countries, and increased leisure time, changes in lifestyle and consumption have given renewed importance to tourism. The level of tourism sector development in these countries is what determines whether tourism constitute a major source of revenue or not. World Travel and Tourism Council (2020), defined tourism sector development as closely related to high per-capita income in the majority of the countries that place a bet on it. It is a dynamic activity that requires close cooperation and strong support from various non-governmental establishments including local communities and tourism related enterprises and from government establishments to promote tourism industry, (Kozak & Kosak, 2015). The Nigeria's tourism sector have not been developed and is still in involvement stage or in elementary stage or infancy stage. According to Ebifeya (2021), Nigerian tourism is still under developed and in an infancy level, despite the commitment of successive governments in Nigeria to place the industry on the natural economic map. The economic activities in Nigeria that is associated with tourism have not contributed a significant percentage to the real GDP, as at 2023 quarter three, and the contribution is below that of mining and quarrying as well as agriculture. The National Bureau of Statistics (2023), released a report on the contributions of some economic activities associated with tourism, and in the report, arts, entertainment and research, transport and storage, human health and social services, administrative and support services and other services jointly contributed 3.95 percent to the real GDP 2023, quarter three, which is lower than that of agriculture 29.31 per cent as well as that of mining and quarrying 5.64 per cent. The failure of our political leaders and successive governments in Nigeria to restructure the country have made many states in Nigeria to neglect their tourism resource endowments and human resource potentials, and continue to depend on the federal government for the sharing of revenues accruing from the oil sector. Ejumudo and Ikenga (2021), posited that the failure of the Nigerian state to embrace option of restructuring the country, have connection with dependency mentality of the federating units and poor generating capacity. This dependency mentality discourages many states including Anambra from utilizing the opportunity of exploiting their tourism resource endowment and human resource potentials by



partnering with the private individuals to develop the tourism sector. Public-private partnership is very important, as far as tourism sector development is concerned and according to Franco and Estevao (2010), it plays an important role in regional development of tourism. Cheng, Yang, Gao, Tao, and Xu (2018), posited that public-private partnership is popular in the sustainable development of tourism around the world.

Anambra state, which is a typical case for consideration in this study, is endowed with sufficient natural, artificial and human resources necessary for the development of centers of tourist attraction and if harnessed, it will stimulate growth and development of tourism.

Abamara (2024), stated that Anambra state is endowed with human resource potentials and diverse tourist attraction centers, both natural and artificial including Ogbunike cave, Omambala river, Agulu lake and resort, Nanka waterfalls, Zik Mausoleum, river Niger, high profile shopping malls, microsoft village, Nnewi golf and sports club, Ifeanyi Uba football club, Stanel utility destination, high profile hotels and holiday resorts and rich cultural heritage etc. But a considerable number of private individuals who make up the human resource potentials in the state may either be influenced by the interaction of some demographic factors to invest and participate in tourism sector development or constrained by the interaction of those factors from doing so. Therefore the study investigated these demographic factors and their interaction or joint influence on tourism sector development using propensity to invest and participate in tourism sector development as mediating variable. These demographic factors include: health quality of life, gender, socioeconomic status and educational level.

### **Objectives of the Study**

The broad objective of the study is to evaluate the joint effects of selected demographic factors on tourism sector development in Anambra state. Specific objectives are to:

- Determine the joint effects of health quality of life, gender, socioeconomic status and educational level on tourism sector development.

### **Research Hypotheses**

H<sub>0</sub>: There is no significant joint effects of health quality of life, gender, socioeconomic status and educational level on tourism sector development.

H<sub>1</sub>: There is significant joint effects of health quality of life, gender, socioeconomic status and educational level on tourism sector development.

### **Scope and Limitation to the Study**

The study was delimited to Anambra state, as the study did not cover the entire southeast geopolitical zone and other geopolitical zones in Nigeria. It covered the responses of people from sampling frame which cuts across gender, socioeconomic status and educational level in Anambra state. The limitations to the study was low response rate from a cross section of participants, especially the business community (or market people). But however, the researcher managed to get the consent of a reasonable number of them to serve as participants, after much pleading and humble persuasion.

### **Literature Review**

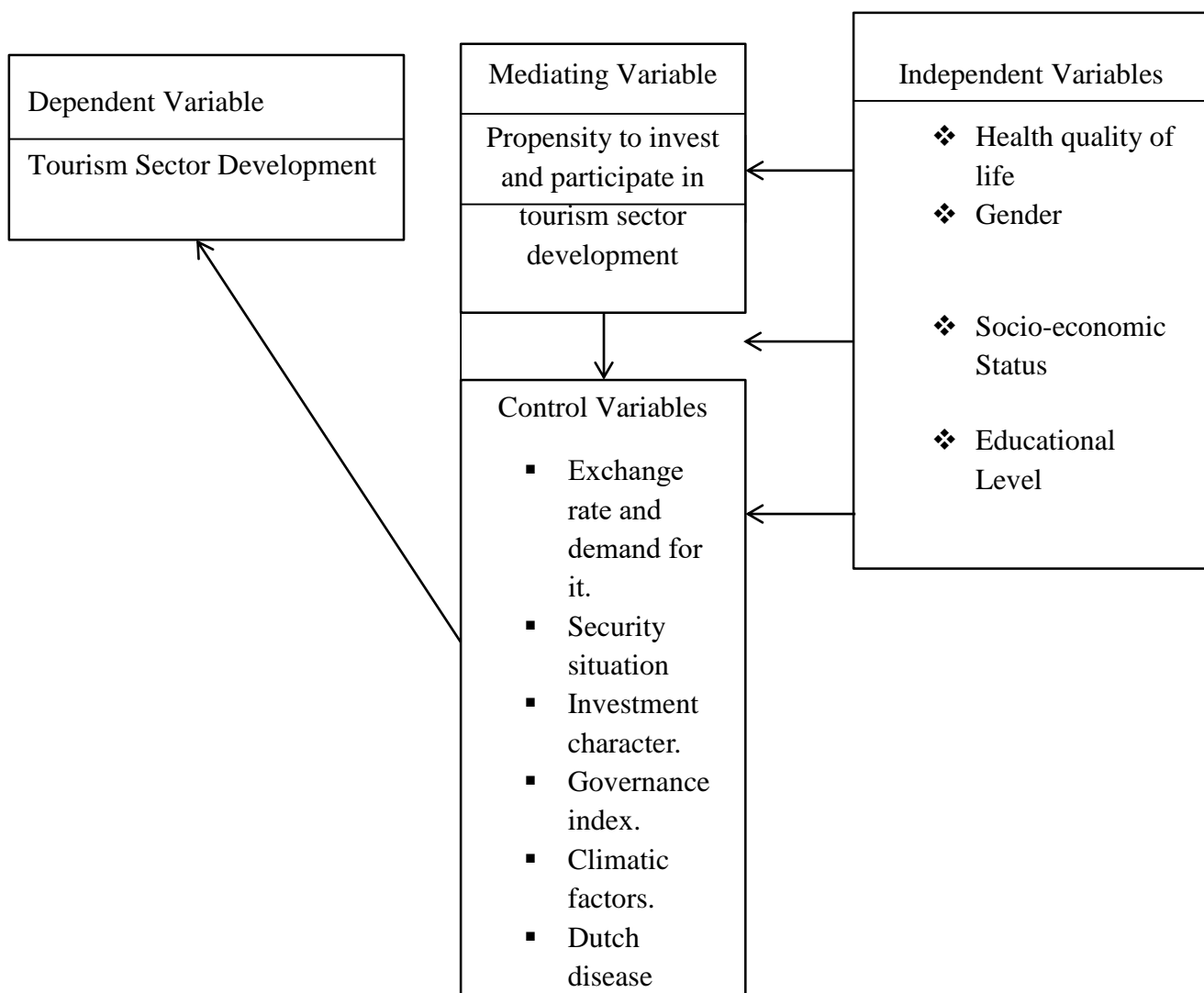
1. Conceptual Issues
  - a. Conceptual Framework

Swaen and George (2022), explained that conceptual framework expresses the expected relationship between variables and defines the relevant objectives for research process and maps out how they come together to draw coherent conclusions. It is often represented in a visual



format and illustrates cause and effect relationships. In the present study, the conceptual framework was illustrated diagrammatically with a mediating variable to show how it relates with the independent variables and the dependent variable, and the control variables were also included. Mediating variable links the independent variables and dependent variable, allowing the relationship between them to be better explained, (Swaen & George, 2022). The independent variables (demographic factors including health quality of life, gender, socioeconomic status and educational level) impact the mediating variable (propensity to invest and participate in tourism sector development) which in turn impact the dependent variable (tourism sector development).

**Figure 1: Diagrammatic Illustration of Conceptual framework**



#### **b. Concept of Tourism Sector Development**

Abamara (2024), defined tourism sector development as modernization of destinations and tourism related enterprises to international standard through substantial investment in the sector to attract a greater number of local and international tourists into a country to generate revenue, reduce poverty and create jobs. The outcome of tourism sector development will be determined



not by macro concepts, but by the will and dedication of those working directly to channel development into productive and beneficial outcomes, (World Travel and Tourism Council 2020). And these people include private individuals and households who invested in tourism or participate in tourism as tourists and those who have the propensity or tendency to invest in tourism or demand for tourism. The private individuals and their likely behavior in respect of propensity to invest and participate in tourism sector development constitute human resource potentials necessary for tourism sector development. Kozak and Kozak (2015), described tourism sector development as a dynamic activity that requires close cooperation and strong support from various non-governmental establishments including local communities and from government establishments to promote tourism industry. This implies that tourism development can be accomplished through public-private partnership.

### **Concept of Health quality of life**

This has connection with the people's ability to have access to quality healthcare services, people's perception about how healthy the physical environment in a destination is, psychological health and healthy relationship of the people. Health quality of life may likely determine the tendency or propensity of the people to demand for tourism or invest in the sector. Couto (2020) observed that health crisis adversely affected tourism demand in Portugal. Oruonye and Ahmed (2020) posited that health crisis affected every aspect of human life in Nigeria including tourism and related enterprises during the COVID-19 era. Wu, Zhong, Law and Zheng (2020), discovered that poor health quality of life during the health crisis adversely affected the demand for hotel services especially 4 and 4.5 star hotels (tourism related enterprises). Stone, Mogomotsi and Mogomotsi (2020), reported that tourism in Botswana came to a standstill as a result of poor health quality of life. Finally, Geitona and Sarantopoulos (2015), stated that high quality health care services and healthy environment may strongly support a country in being a target destination for medical tourism.

### **Concept of Gender**

Gender means the sex of an individual (i.e either male or female), especially when considered with reference to social and cultural differences rather than biological ones. Gender may likely determine the propensity for tourism demand and investment. Odjugo (2010), discovered that male participation rate in tourism was higher than female participation rate. Perovic, Stanovcic, Moric and Pekovic (2012), posited that gender do not affect tourists' satisfaction and participation in Montenegro. Palikhe (2018), observed that the proportion of women that own hotels, lodges, resorts, travel and trekking agencies (tourism related enterprises), was higher than that of men. Apollo, Mostowska, Legut and Maciuk (2023), posited that women participated in competitive adventure sports tourism more than men in Poland. Frinwei (2016) revealed that women are constrained by financial capital to demand for tourism or invest in the sector, otherwise they may likely have high propensity to participate or invest in the sector.

### **Concept of Socioeconomic Status**

Socioeconomic status have connection with income level of the people and their employment status. It may likely be a motivation for or a hindrance to tourism demand or tourism investment. Odjugo (2010), posited that participation in tourism depends on the income of tourists. Ayeni (2013), stated from his findings that sustainable development of tourism depends on income level of tourists. Rogerson and Rogerson (2014), reported from his findings in South Africa that income levels of customers was an important factor in generating demand for urban tourism. Mongare (2019), discovered that income level was a major factor in domestic tourism





consumption in Kenya. Finally, Alegre, Liorene and Maria (2018), stated that unemployment increases the probability of not going on holidays, as there is no means of earning an income.

### **Concept of Educational Level**

This refers to an individual's level of educational attainment. Educational level may induce tourism sector development. Joao-Paulo (2014), observed that tourism demand was mainly driven by the role of tertiary education. Molina, Kucel and Raya (2015), reported from their findings that higher levels of education increase the likelihood of entrepreneurship in tourism. Illinka, Jelena, Ivana and Milan (2020), revealed that educational level have not influenced residents on tourism development impacts. Amalu, Ajake and Okpara (2012), posited that the lower the level of education, the lower the residents' commitment to tourism. Finally, Ibanescu, Stoleriu, Munteanu and Latu (2018) revealed that educational tourism especially in respect of international students' tour to a destination creates new entrepreneurial opportunities.

## **2. Theoretical Framework**

### **• Social Exchange Theory**

The theoretical framework is anchored on social exchange theory. This theory was developed by George Homans in 1958. It is an economic theory that studies the social behaviour in the interaction of two parties that implement a cost-benefit analysis to determine risks and benefits. This theory occurs when each party has goods or services the other party or parties value. It states that the demand and supply of goods or services depends on cost- benefit analysis. Demand and supply of goods or services is the dependent variable, while cost-benefit analysis is the independent variable. The theory predicts that if costs are higher than the benefits (rewards), such a transaction between the two parties will be jettisoned. Applying this theory to the study in respect of the demand side, if the cost of tourism services is very high, the potential tourist weighs the cost against the benefits (rewards) he or she stands to gain. If the expected reward of buying the tourism services is higher than its cost, he or she will demand for the services especially when the services are necessities and the potential tourist don't have any option. For instance, tourism in respect of wild- life tourism, geotourism, ecotourism, film tourism for postgraduate research studies and other educationally induced tourism which are necessities fit into this. On the supply side, if the cost of providing tourism services (investment in tourism related enterprises) is very high, the potential investor will then weigh the expected costs against the expected benefits (rewards) he or she stands to gain. If the expected reward of the investment is higher than the expected cost of the investment, the potential investor will go on with the investment. The strength of this theory lies on the fact that it identifies excess reward over cost as motivation for demand and supply of goods/services and excess costs over reward as disincentive for demand and supply of goods/services. For instance the long run benefit of self-actualization and better standard of living in the future, motivates postgraduate student tourists to participate in wild- life tourism, geotourism, ecotourism, film tourism and other educationally induced tourist visits to conduct research to earn bachelors, masters and doctorate degrees, despite the cost of the tourism services. Also the long run benefit of earning a fortune and super profit in the future, motivates tourism providers (investors) to embark on such investment despite the cost. The weakness associated with this theory is that the suppliers of goods or services may be induced by the plan to earn super profit in the future, exploit the buyers through price hike. This theory represent the framework or the basis of this study in the sense that it explains the motivation for propensity to invest in tourism (supply) and propensity to participate in tourism (demand). Therefore the theory is relevant to the study.



### **3. Empirical Review**

#### **a. Health Quality of Life and Tourism Sector Development**

Bouarar, Mouloudj and Mouloudj (2020) conducted a study on the impacts of health crisis on tourism sector in some countries of the world. It was a sample survey e.g (personal interview, self-administered). Judgmental sampling was adopted to select 450 subjects from countries with the best worldly organized touristic destinations. It was an analytical study in which scale of analysis was of international level. Result indicated that countries featuring high dependency on tourism revenues were affected most by health crisis. The strength of the study is that it was carried out during the period of health crisis and is highly reliable. The weakness implicit in the study is that it was an analytical study and this method may not be reliable. The study has healthcare policy implication and is relevant to the present study in respect of health crisis which is associated with health quality of life.

Stone, Mogomotsi and Mogomotsi (2021), investigated the impacts of health quality of life on nature based tourism in Botswana. The study was a sample survey study and involved personal interviews, self-administered. Purposive sampling was adopted as sampling technique. Qualitative document analysis, one-way ANOVA and t-test was adopted as method of data analysis. Result indicated that tourism in Botswana came to a standstill as a result of poor health quality of life. The strength of the study lies on the fact that it was conducted during health crisis and is highly reliable. The study has healthcare policy implication and is related to the present study in lieu of health quality of life and nature based tourism.

Loanna (2022), carried out a study on the impacts of health quality of life on tourism: evidence from system generalized method of moments estimates, using times series data (e.g panel data from 39 and 44 developed and developing economies respectively). Generalized method of moments (GMM) estimation in 2 panels of 44 developing and 39 developed economies, was the method of data analysis. Results indicated that health quality of life has a significant effect on international tourism receipts and that tuberculosis death rate in developing countries has a negative impact on international tourism receipts. The strength of the study can be traced to the fact that it was conducted during health crisis and is highly reliable. The study has a healthcare policy implication and is related to the present study in respect of health quality of life and tourism.

Finally Xong and Tang (2023), investigated the effects of health crisis and disasters on international tourism: an empirical study, using time series data. The study adopted the systematic generalized methods of moments (GMM-SYS) estimation, as method of data analysis. They reported from their findings that: (1) In the short run, health disasters and crisis negatively and significantly affected tourism. (2) Death due to health disasters and crisis indicate that 1% increase in deaths reduced the tourism by 0.07%. (3) In the long run, the coefficient of health disasters and crisis was also significant at 5%, which showed that 1% increase in deaths by health crisis reduced international tourism by 0.02%.

#### **b. Gender and Tourism Sector Development**

May and Mehmet (2015), investigated the gender differences in tourism vacation behavior among the people of Norway, using sample survey (e.g self administered personal interview). The sampling technique was convenience sampling adopted to select 867 participants for the study. The study employed t-test and one-way ANOVA for data analysis. They reported from their findings that: (1) Women placed higher importance on vacation motivations relating to



mental relaxation, escape, physical activity and learning about places and culture. (2) Women value the tourism company attributes of price, products and hygiene higher than men do. (3) In terms of destination attributes, women value restaurant options, price level at destinations and climate higher than men do. (4) Women are more prone to participate in activities that are culturally oriented than men. (5) Men exhibited more interest in fishing and boating than women. In a nutshell, the findings of this study revealed that women are more prone to participate in most tourist related activities than men, especially those of high price, culturally oriented and of hygienic environment. But most times women are constrained financially, religiously and by customs and value systems from embarking on such tourist activities. The study has gender policy implication and is related to the present study in respect of gender and tourism vacation.

Molina, Kucel and Raya (2015), conducted a study on the determinants of entrepreneurship in tourism in a developing country: case study of Mexico, using time series data on Mexican Central Census Survey Data from Mexican Central Statistics Office. Standard logit model was adopted for the analysis of data and the result indicated that: (1) Entrepreneurship in the tourism sector were closely related to gender and informal economy. (2) The female gender dummy interaction with tourism sector dummy revealed that women were consistently found to be less likely to enterprise across all the models. The study has gender policy implication and is relevant to the present study in respect of gender.

Kara and Mkwizu (2020), carried out a study on demographic factors and travel motivation among leisure tourists in Tanzania using sample survey (eg self administered personal interview). Convenience sampling was employed to select 420 participants for the study. The method of data analysis involved descriptive statistics including frequency and percentages, t-test, ANAOVA (and or SPSS). They reported from their findings among others that: (1) gender significantly influenced travel motivation among local and international leisure tourists. (2) Male tourists prefer to travel for business and sports as they may have greater interest in business agenda while female tourists travel for a variety of reasons including family visits, vacations and education. The study has a gender policy implication. Since the study investigated gender and travel motivation among leisure tourists (which have nexus with tourism demand), therefore it is related to the present study.

Finally, Jorge, Santiago, Juan-Carlos and Jorge (2023), conducted a study on gender differences in adventure tourists who practice kayaking in Extremadura, Spain, using sample survey. (e.g self administered personal interview). Judgmental sampling was adopted to select 511 participants for the study. Data was analysed using Man-Whitney u-test in continuous variables, Pearson's chi-square test in categorical variables. Result indicated that males with certain predominant profiles participate more in kayaking than females with such predominant profiles. The predominant profiles included: Spanish, married, employed and university degree, among others. The weakness inherent in this study is that it investigated only an integral aspect of tourist related activities (kayaking). The study has gender policy implication and is relevant to the present study in respect of gender and kayaking (tourist related activity)

### **Socioeconomic Status and Tourism Sector Development**

Chaiboonsiri, Siriboonjit, Chaitip and Sriboonchitta (2010), investigated the factors influencing major source markets for tourism such as Malaysia, Japan, South Korea, Singapore, China, and Taiwan on Thailand tourism demand. The study employed a combination of survey (e.g online





interview) and time series data set for the study. Judgemental sampling was adopted to select samples of 750 subjects across the Asian Tiger countries mentioned above through online. The data was analysed using panel analysis. Result indicated that higher income levels of tourists will stimulate tourism demand in Thailand, in addition to other findings. The strength of this study is that it covered 6 countries as potential source of Thailand's tourism demand, and this indicated a reliable spread among countries that are mostly Asian Tigers. The study has income policy implication and since it investigated tourists' income level which is associated with socioeconomic status, it is quite relevant to the present study.

Thien, Puah, Hassan, and Arip (2015), conducted a study on real income, transport cost and exchange rate as determinants of Thailand tourist demand on Malaysia, using time series data. Panel analysis was used to analyze the data collected. They reported from their findings that higher incomes of tourists will discourage them from traveling to Malaysia. The study is relevant to the present study in respect of income level (which have connection with socioeconomic status) and tourist demand which is associated with propensity to participate in tourism sector development.

Lopez (2019), carried out a study on unemployment and growth of tourism sector in Mexico: revisiting the growth rate version of Okun's law, using sample survey (e.g self administered personal interview). About 500 subjects was constituted as participants via cluster sampling, for the study. Data collected was analysed using different version of Okun's law and multiple regression utilizing SVAR model. The result indicated that tourism was sensitive to economic crisis and that unemployment (low socioeconomic status) affected tourism sector negatively. The study was embarked upon to validate the growth rate version of Okun's law and this represents the strength of the study. The study has unemployment policy implication and is relevant to the current study through unemployment which has connection with low socioeconomic status.

Jong, Puah and Arip (2020), estimated tourism demand in Sabah using gravity model. It was a time series study and the data was analysed using panel analysis and gravity model. The result indicated consistent positive association of the income levels in origin and destination countries towards tourism demand. The study has income policy implication. Income has connection with socioeconomic status and tourism demand has connection with propensity to participate in tourism sector development. Therefore the study is relevant to the present study.

Finally, Nyasha and Odhiambo (2021), investigated the key determinants of tourism development in South Africa, Brazil and Vietnam during the period (1995 to 2018), using time series data. The data collected was analysed using augmented auto regression distributed lag bounds test for co integration. Overall, the result indicated that the positive drivers of tourism in these countries were tourist disposable income (socioeconomic status), among other factors. The study has income policy implication, and is relevant to the present study, since it investigated disposable income which have connection with socioeconomic status as well as tourism sector development (dependent variable in the current study).

### **Educational Level and Tourism Sector Development**

Omare (2016), conducted a study on the factors that impact domestic tourism in Mombasa, Nairobi and Nakuru in Kenya with about 600 subjects constituted via purposive sampling. It was a sample survey study e.g (self administered personal interview). Multiple regression utilizing auto regression model was adopted for data analysis. He reported from his findings



that the level of education was among the key determinants of expenditure on domestic tourism. The study has educational policy implication and is related to the current study in lieu of educational level (one of the independent variables in the current study) and domestic tourism. Szopinski and Staniewski (2016), investigated the effect of educational level and socioeconomic factors on e-tourism in European Union member states using online survey via local online panels as well as time series data. In respect of online survey, they used representative sampling to select participants for the study. For each 32 benchmarked countries, a sample of internet users were selected. Data collected was analysed using coefficient of correlation and CATI approach. Result indicated among others that there was significant joint effect of educational level, gender and age of tourists on frequency of use of e-tourism. One weakness inherent in this study is that at times online survey may not be reliable. The study has educational and gender policy implication and have connection with the present study with regards to educational level and gender interaction.

Mongare (2019), conducted a study on educational and socioeconomic factors hindering domestic tourism consumption in Kenya using sample survey (e.g. self-administered personal interview). 600 subjects were constituted via purposive and stratified random sampling for the study. The data was analysed using percentages, descriptive and inferential statistics. Result indicated that: (1) Educational level has positive influence on participation in domestic tourism in Kenya. (2) Those with higher levels of education were more likely to participate in domestic tourism than those with lower levels of education. The study has educational policy implication and have connection with the current study with regards to educational level and tourism consumption.

Finally Azam (2022), investigated the microeconomic determinants of domestic tourism expenditure in India, using census survey (e.g. nationally representative household census survey). Unconditional quantile regression model and 2-part (hurdle) model was adopted for data analysis. Result indicated that level of education was an important determinant of tourism participation and trip expenditure decisions together. This is in addition to other findings. Census survey is more reliable than sample survey and this constitutes the strength of the study. The study has educational policy implication and is related to the current study with regards to educational level and tourism participation and trip expenditure decisions which is associated with tourism sector development.

### **Research Method, Design, Instruments and Data Analysis Technique**

This is a survey study and the method of data collection was through sample survey (e.g. self-administered personal interview). The design was ex-post facto design. The instruments used in data collection were two different questionnaires including the questionnaire on propensity to invest and participate in tourism sector development developed by the present researcher and the World Health Organization (WHO)'s health quality of life scale-bref developed by WHO (1996), Medical Outcomes Trust (1997) and Kuyel (1994) in collaboration with 15 international centers. The questionnaires have a section that revealed personal information about participants' gender, socioeconomic status and educational level. Generalized univariate linear model multiple regression was used to analyze the data collected.

### **Sample Size, Sampling Technique and Distribution of Sample.**

Out of an estimated population of Anambra state which stood at 5,953,500 according to 2022 projection (National Bureau of Statistics, 2022), 400 subjects were constituted for the study.



through multi-stage sampling from sampling frame in Anambra state. About 504 copies of each of the questionnaires attached together, were distributed to the participants out of which 400 correctly filled questionnaires were returned for the study. From the World Health Organization (WHO)'s health quality of life scale-bref, correctly filled and returned, those with high and low health quality of life were identified and classified. The sample comprised of 173 participants with high health quality of life, 227 low health quality of life, 231 males and 169 females, 59 high socioeconomic status, 213 low socioeconomic status, 128 medium socioeconomic status, 156 high education and 244 low education. Those that are employed, but with income level below N50, 000 and those that are unemployed were categorized as low socioeconomic status and those that were within the income range of N50,000 to N199,999 were medium socioeconomic status, while those with income of N200,000 and above were of high socioeconomic status.

### **Empirical Model Specification and Estimation Technique**

The generalized univariate linear model is expressed as follows:

$$Y = F(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4) + \epsilon$$

Where: Y represents a single column dependent variable that is intended to be explained by weighted linear combination of regression coefficients:  $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$  and independent variables:  $X_1, X_2, X_3, X_4$ .

Applying the model, we have:

$$TSD = F(\beta_0 + \beta_1 HQOL + \beta_2 GEN + \beta_3 SES + \beta_4 EDL) + \epsilon$$

Where: TSD = Tourism Sector Development

F = Functional Relationship

HQOL = Health Quality of Life

GEN = Gender

SES = Socioeconomic status

EDL = Educational Level

$\epsilon$  = Error Term.

### **Empirical Model Specification for Joint Test of Significance**

The generalized univariate linear model is expressed mathematically in respect of joint or interaction effect as follows:

- $Y = F(\beta_0 + \beta_1 X_1 + \beta_2 X_2) + \epsilon$
- $Y = F(\beta_0 + \beta_3 X_3 + \beta_4 X_4) + \epsilon$
- $Y = F(\beta_0 + \beta_1 X_1 + \beta_3 X_3) + \epsilon$
- $Y = F(\beta_0 + \beta_2 X_2 + \beta_4 X_4) + \epsilon$
- $Y = F(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3) + \epsilon$
- $Y = F(\beta_0 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4) + \epsilon$
- $Y = F(\beta_0 + \beta_1 X_1 + \beta_3 X_3 + \beta_4 X_4) + \epsilon$
- $Y = F(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_4 X_4) + \epsilon$
- $Y = F(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4) + \epsilon$

Where: Y represents a single column dependent variable that is intended to be explained by weighted linear combination of regression coefficients:  $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$  and explanatory variables (independent variables):  $X_1, X_2, X_3, X_4$ .

The above model expression is just for joint or interaction test of significance. This can be applied as:

$$TSD = F(\beta_0 + \beta_1 HQOL + \beta_2 GEN) + \epsilon$$

$$TSD = F(\beta_0 + \beta_3 SES + \beta_4 EDL) + \epsilon$$



$$\text{TSD} = F(\beta_0 + \beta_1\text{HQOL} + \beta_3\text{SES}) + \varepsilon$$

$$\text{TSD} = F(\beta_0 + \beta_2\text{GEN} + \beta_4\text{EDL}) + \varepsilon$$

$$\text{TSD} = F(\beta_0 + \beta_1\text{HQOL} + \beta_2\text{GEN} + \beta_3\text{SES}) + \varepsilon$$

$$\text{TSD} = F(\beta_0 + \beta_2\text{GEN} + \beta_3\text{SES} + \beta_4\text{EDL}) + \varepsilon$$

$$\text{TSD} = F(\beta_0 + \beta_1\text{HQOL} + \beta_3\text{SES} + \beta_4\text{EDL}) + \varepsilon$$

$$\text{TSD} = F(\beta_0 + \beta_1\text{HQOL} + \beta_2\text{GEN} + \beta_4\text{EDL}) + \varepsilon$$

$$\text{TSD} = F(\beta_0 + \beta_1\text{HQOL} + \beta_2\text{GEN} + \beta_3\text{SES} + \beta_4\text{EDL}) + \varepsilon$$

Where:  $\varepsilon$  represent a disturbance or error term which captures all other sources of variability, both systematic and random that are responsible for variation in the dependent variable (Tourism Sector Development (TSD)).

### Decision Rule

If the P-value in the summary table of analysis is less than ( $<$ ).05, that is  $P < .05$ , we reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_1$ ), otherwise we accept the null hypothesis

### Evaluation of Estimates

This is based on determining whether the estimated coefficients are theoretically meaningful and statistically satisfactory. Some economic theories stipulates the demand for services or goods is a function of health and income of the consumers and this study may conform with this, but if it does not conform with that, it is then an abnormal or exceptional case or that the consumer have propensity to save his income, because most people save greater portion of their income and significantly reduce their propensity to consume. Increase in demand for tourism services can attract investment in tourism. Also economic theory says that demand for services (including tourism services), may likely depend on the status of the consumer. Therefore educational level may induce people to consume tourism services and attract investment in tourism related enterprises producing the services they are demanding for. If the findings deviate from economic theory, it is then an exceptional or abnormal situation. An evaluation based on statistical criteria (first order test) is associated with determining  $R^2$ /Adjusted  $R^2$  and testing for joint or interaction effect of the independent variables on dependent variable.

### Test of Research Hypothesis

The generalized univariate model summary table of analysis is presented below:

**Table 1: Generalized Univariate Model Summary Table of Analysis**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Squared	Eta
Corrected Model	37245.636 <sup>a</sup>	23	1619.375	20.497	.000	.556	
Intercept	1585705.897	1	1585705.897	20070.386	.000	.982	
<b>Gender</b>	<b>3163.451</b>	<b>1</b>	<b>3163.451</b>	<b>40.040</b>	<b>.000</b>	<b>.096</b>	
<b>QoL</b>	<b>5486.804</b>	<b>1</b>	<b>5486.804</b>	<b>69.447</b>	<b>.000</b>	<b>.156</b>	
SES	166.983	2	83.492	1.057	.349	.006	
EDU	36.458	1	36.458	.461	.497	.001	
<b>Gender * QoL</b>	<b>372.285</b>	<b>1</b>	<b>372.285</b>	<b>4.712</b>	<b>.031</b>	<b>.012</b>	
Gender * SES	201.478	2	100.739	1.275	.281	.007	
Gender * EDU	.450	1	.450	.006	.940	.000	
QoL * SES	98.126	2	49.063	.621	.538	.003	
QoL * EDU	73.420	1	73.420	.929	.336	.002	
SES * EDU	241.435	2	120.718	1.528	.218	.008	



Gender *QoL * SES	33.706	2	16.853	.213	.808	.001
Gender *QoL * EDU	83.254	1	83.254	1.054	.305	.003
<b>Gender *SES * EDU</b>	<b>802.349</b>	<b>2</b>	<b>401.174</b>	<b>5.078</b>	<b>.007</b>	<b>.026</b>
<b>QoL *SES * EDU</b>	<b>505.579</b>	<b>2</b>	<b>252.789</b>	<b>3.200</b>	<b>.042</b>	<b>.017</b>
Gender *QoL * SES *EDU	66.756	2	33.378	.422	.656	.002
Error	29706.724	376	79.007			
Total	3699026.000	400				
Corrected Total	66952.360	399				

H<sub>0</sub>: There is no significant joint effects of health quality of life, gender, socioeconomic status and educational level on tourism sector development.

H<sub>1</sub>: There is significant joint effects of health quality of life, gender, socioeconomic status and educational level on tourism sector development.

From the summary table of analysis (i.e table 1), the independent factorial interactions, that is joint or interaction of independent variables effect on dependent variable which were printed in thick ink were significant while those not printed in thick ink were not significant. The interaction of the independent variables that have significant effect on the dependent variable included the following:

- There is significant joint or interaction effect of health quality of life and gender on tourism sector development.  $F(23,399) = 4.7; P < .05$ .
- There is significant joint effect of gender, socioeconomic status and educational level on tourism sector development.  $F(23,399) = 5.078; P < .05$ .
- There is significant joint effect of health quality of life, socioeconomic status and educational level on tourism sector development.  $F(23,399) = 3.2; P < .05$ .

### Discussion of Findings

The finding of this study indicated that there is significant joint effect of health quality of life and gender on tourism sector development. But all the earlier studies reviewed focused on the individual independent variables of interest i.e the individual demographic factors and their effects on tourism sector development. Also this study revealed that there is significant joint effect of gender, socioeconomic status and educational level on tourism sector development. This finding partially corroborates with the research report of Szopinsk and Staniewski (2016). They reported from their findings that there is significant joint effect of educational level, gender and age of tourists on frequency of use of e-tourism.

Finally, the study indicated that there is significant joint effect of health quality of life, socioeconomic status and educational level on tourism sector development. All the findings of the present study reveal that educational level of participants (respondents) alone cannot induce them to invest in tourism or demand for tourism services, but can only be influenced to do so by high socioeconomic status or high income level and high health quality of life, but subject to gender constraints.

### Conclusion and Recommendation

Conclusively, the current wave of cross border movement across nations has provided a boost to the growth of tourism sectors in several countries of the world. Only those countries that can harness their tourism resource endowments and human resource potentials by partnering with private individuals to develop tourism sector, can actually attract significant increments in tourist arrivals and tourism revenues.





The researcher recommends that Anambra state government need to partner with private individuals to a great extent in the area of healthcare, gender inclusiveness, education and financial capital to develop tourism sector in Anambra state. This can be replicated by all states in Nigeria and the federal government.

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