

## Tourism and Economic Growth in Ethiopia and Kenya-A Comparative Analysis

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### Abstract

*This article comparatively examines the impact of tourism on the economic growth of Ethiopia and Kenya by using data from 1995 to 2020. The study used descriptive statistics and panel data regression to analyze the data. Accordingly, the result of the descriptive analysis shows that Kenya is consistently surpassing Ethiopia in terms of the amount of revenue that it generates from all tourism types and outlets. However, the average percentage yearly growth rate of Ethiopia exceeds that of Kenya's in about all of the tourism indicators. The panel data regression analysis depicts that the combined fixed effect model for Ethiopia and Kenya explains 58.29 percent of the variability in the economic growth of the two East African countries. The individual random effect model of each country also demonstrates that tourism explains 99.41 and 99.06 percent of the changeability in the economic growth of Ethiopia and Kenya respectively. The study also found that the countries are different in terms of the impact that business tourism spending, internal travel and tourism consumption expenditure, capital investment on travel and tourism, leisure tourism spending, travel and tourism total contribution to employment, and visitor exports have on their GDP. In contrast, domestic tourism spending, government spending on travel and tourism services, and outbound travel and tourism expenditure have similar impact on the economic growth of the two countries. The paper concludes that, Ethiopia can learn from Kenya strategies to improve number of visitors and tourism receipts; similarly, Kenya could learn how to enhance the growth rate of its slow-moving tourism industry from Ethiopia.*

**Key words:** Tourism, GDP, Economic Growth, Ethiopia, Kenya, Panel Regression

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### 1. Introduction

Tourism is “the activity of travelers on trips outside their usual environment with a duration of less than one year” (WTTC, 2021:24). Before the industry was hit hard by the COVID-19 pandemic, tourism had been contributing significantly for economic growth globally. In 2018 alone, the industry contributed \$8.8 trillion to the global economy, which constituted 10.4 percent of the total worldwide GDP. In addition, 319 million jobs, 10 percent of the global employment, were supported by the tourism sector. The industry also accounted 78.5 percent of the expenditure made worldwide (WTTC, 2019). After the COVID-19 pandemic, the contribution of tourism to the global GDP has been reduced from 10.4 percent to 5.5 percent in 2020. The GDP change has been affected negatively by around 50 percent in 2020 as compared to the previous year, and has decreased the industry's contribution from \$9,170 billion to \$4,671 billion resulting in a loss of \$4.5 trillion globally. The 334 million jobs that had been supported by the industry as of 2019 have also been impacted negatively with a loss of 62 million jobs by 2020 (WTTC, 2021). Research conducted by WTTC, however, shows that the negative impact of the pandemic are temporary and can be overcome in less than a year if mobility and travel is resumed back to normal (*Ibid*).

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Despite the failure of many less developed countries to capitalize from their major attractions (Frost and Tekle) due to lack of coordination in the sector (Tourism Development Policy of Ethiopia, 2009; Revised Tourism Development Policy of Kenya, 2020), tourism is still one of the fastest growing industries that is making a huge contribution for the economic growth of Ethiopia and Kenya (World Bank Group, 2012). The sector generates foreign exchange, creates direct and indirect employment opportunities, contributes for the promotion of micro and small scale enterprises, and adds substantially to the gross domestic product of the two east African countries (*Ibid*).

Regardless of the importance of the industry for the economy of Ethiopia and Kenya, there have been limited researches that comparatively show the differential impact of tourism on the economic growth of the two countries. This work also differs from earlier studies as it determines the similarity and difference between Ethiopia and Kenya with regard to the association between tourism indicators and GDP; hence, lays the ground for learning between the two countries. Moreover, unlike previous works, the paper uses a 26 years data that covers the duration from 1995 to 2020.

The research argues that Ethiopia can discover ways to improve number of tourists and tourism receipt from Kenya. Likewise, Kenya can learn strategies from Ethiopia to enhance the growth rate of its tourism industry. Kenya also benefits more from the tourism industry by identifying and addressing the causes for the negative impact of revenues generated from business tourism, leisure tourism, and visitor exports on the country's GDP.

The article is structured as follows. In section 2, the research hypotheses of the study are listed. A short summary of empirical literatures on the relationship between tourism and economic growth are examined in section 3. In section 4, the data and empirical framework used to establish the association between tourism and growth in Ethiopia and Kenya are discussed. This is followed by the result of the descriptive statistical analysis (section 5), and panel data regression analysis (section 6). The similarity and difference between Ethiopia and Kenya with regard to the relationship between tourism and economic growth are discussed in section 7. Section 8 forwards the concluding remarks of the study.

## 2. Research Hypotheses

The null hypotheses for this study are listed below. They will be tested at 5 percent level of significance.

H<sub>01</sub>: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Business Tourism Spending on economic growth.

H<sub>02</sub>: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Domestic Tourism Spending on economic growth.

H<sub>03</sub>: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Government Spending on Travel and Tourism Service on economic growth.

H<sub>04</sub>: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Internal Travel and Tourism Consumption on economic growth.

H<sub>05</sub>: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Capital Investment in Travel and Tourism on economic growth.

H<sub>06</sub>: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Leisure Tourism Spending on economic growth.

H0<sub>7</sub>: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Outbound Travels and Tourism Expenditure on economic growth.

H0<sub>8</sub>: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Business Travels and Tourism Total Contributions to Employment on economic growth.

H0<sub>9</sub>: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Visitor Exports on economic growth.

### 3. Empirical Literature Review

#### 3.1 Empirical literature on the impact of tourism on economic growth

Many research works that have been conducted in the area of tourism contribution agree that the industry has a positive impact on the economic growth of a nation. Fayissa *et al* (2007) conducted a research that evaluated the impact of tourism on economic growth and development in Africa by using a panel data of 42 African countries from 1995 to 2004. The findings demonstrate that revenue generated from the tourism sector contribute significantly to the economic growth of Sub-Saharan African countries (*Ibid*). In another study, Ekanayake and Long (2012) examined the contribution of tourism development on economic growth in 140 developing countries covering the duration from 1995-2009. Accordingly, the results show that tourism revenues contribute positively for the growth of developing countries (*Ibid*).

Meyer and Meyer (2015) conducted a comparative study on the role and impact of tourism on economic development. The study was conducted in South Africa by comparing two municipal areas namely *Metsimaholo* and *Emfuleni* from 2001-2013 and found out that there is a 2.2 and 7.7 percent contribution to the GDP of South Africa respectively (*Ibid*). Makochekeka also analyzed the impact of tourism on the economic growth of SADC countries (Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe). The results revealed that GDP per capita increases 0.16 percent with a 1 percent rise in tourist receipt. Likewise, GDP per capita rises by 0.29 percent for a 1 percent increase in investment that is related to tourism (*Ibid*).

Cerovic *et al* (2015) evaluated the contribution of tourism on the economic growth of Western Balkan countries (Serbia, Macedonia, Montenegro), and found out that tourism contributes modestly for the growth of the countries. Similarly, Selimi *et al* (2017) examined the impact of tourism on economic growth in the Western Balkan countries (Albania, Bosnia and Herzegovina, Croatia, FYROM, Montenegro, and Serbia). The finding illustrates that tourism contributes significantly to the economy of Western Balkan countries; GDP rises by 0.08 percent for 1 percent increase in the number of tourist arrivals (*Ibid*).

Ren *et al* (2019) also studied the influence of tourism quality on economic development and environment by taking evidence from 8 Mediterranean countries from 1995 to 2014. The result of the research reveals that the income level of tourist arrival plays a significant role in economic development. The findings also show that tourist arrival has both positive and negative impacts on economic development and environmental emissions respectively (*Ibid*). Khan *et al* (2020) examined tourism and development in Pakistan. The results of the study indicate that GDP is enhanced by 0.051 percent, foreign direct investment by 2.647 percent, energy development by 0.134 percent, and agriculture development by 0.26 percent for a 1 percent increase in tourism. This raise in tourism has also reduced poverty by 0.51 percent in the long run (*Ibid*).

The impact of tourism on economic growth in Turkey was also analyzed by Akan *et al* in 2007. The finding shows that there is a long-run positive relationship between tourism and economic growth in Turkey. Granger causality test also depicts the presence of causal relationship between tourism and economic growth that supports the tourism-led growth postulate (*Ibid*).

### 3.2 Empirical literature on the impact of tourism on the economic growth of Ethiopia and Kenya

Findings on the association between tourism and economic growth are mixed in Ethiopia. Tadesse Kidane-Mariam (2015) identified opportunities and challenges of tourism development in Ethiopia and stated that the execution of the national tourism development strategy will have a positive impact on overall development of the country in the medium and long term. Robinson and Jonker (2016) also investigated tourism in Ethiopia by using qualitative methodology with an exploratory case study. They mention that tourism has the potential to contribute vastly to the economic growth and development of Ethiopia; nevertheless, the authors acknowledged the failure of the country in tapping the opportunity from the tourism industry (*Ibid*). In addition, Minyahil Haile and Girma Megerssa (2020) examined the impact of tourism on economic growth by testing the tourism-led growth hypothesis in Ethiopia from 1995 to 2018. Contrary to the tourism-led hypothesis, the authors found out insignificant long-run impact of tourism receipt on Ethiopian economy. However, other independent variables such as foreign direct investment and domestic investment in physical capital have been found out to contribute significantly for the long-run economic growth of Ethiopia (*Ibid*).

The findings on the relationship between tourism and GDP are also inconclusive in Kenya. Kibara *et al* (2012) investigated the impact of tourism on economic development in Kenya and the results revealed that there is unidirectional long-run relationship between tourism and economic growth in the country. Another unpublished work by Erick (2016) supports Kibara's *et al* (2012) finding by emphasizing that the causality relationship between tourism and growth runs from tourism receipts to economic growth in the case of Kenya. However, contrary to the findings of Kibara's *et al* (2012) and Erick's (2016), Bitok (2020) found out that the unidirectional causality runs in the direction from economic growth to tourism development in Kenya (*Ibid*).

To sum up, this section discussed the empirical works conducted on the area of tourism and economic growth. The results show that the impact of tourism on the economic growth of countries, including Ethiopia and Kenya, is varied.

## 4. The Data and Empirical Framework

To determine the relationship between tourism and economic growth, this study used the nine World Travel and Tourism Council (WTTC) tourism indicators. The data for the World Travel and Tourism Council tourism indicators and GDP (Gross Domestic Product) are officially available from the website of the World Bank. For the independent (tourism indicators) and dependent (GDP) variables, this study used the data from 1995 – 2020 for both countries.

The study used descriptive statistics and panel data regression to analyze and compare the association between tourism and economic growth in Ethiopia and Kenya by using Stata 14 statistical software.

The nine independent variables for the study are labeled as BTS (Business Tourism Spending), DTS (Domestic Tourism Spending), GSTTS (Government Spending on Travel and Tourism Service), ITTC (Internal Travel and Tourism Consumption), CITT (Capital Investment in Travel and Tourism), LTS (Leisure Tourism Spending), OTTE (Outbound Travel and Tourism Expenditure),

TTTCE (Travel and Tourism Total Contribution to Employment), and VE (Visitor Exports). The dependent variable is labeled as GDP (Gross Domestic Product).

The study used panel regression model. This is because panel data regression analysis takes in to account the individual heterogeneity of Ethiopia and Kenya (Torres-Reyna, 2007). Hence, the Fixed Effect and Random Effect panel regression data models are used to calculate the regression estimate. In order to select the better model that explains the relationship between tourism and GDP, Hausman Test was applied. The data are also converted to logarithmic panel data so as to make them more interpretable. The Fixed Effect and Random Effect panel regression models are depicted as follows:

**a) Fixed Effect Model**

$$\ln GDP_{it} = \beta_0 i + \beta_1 \ln BTS_{it} + \beta_2 \ln DTS_{it} + \beta_3 \ln GSTTS_{it} + \beta_4 \ln ITTC_{it} + \beta_5 \ln CITT_{it} + \beta_6 \ln LTS_{it} + \beta_4 \ln OTTE_{it} + \beta_5 \ln TTTCE_{it} + \beta_6 \ln VE_{it} + uit$$

**b) Random Effect Model**

$$\ln GDP_{it} = \beta_0 i + \beta_1 \ln BTS_{it} + \beta_2 \ln DTS_{it} + \beta_3 \ln GSTTS_{it} + \beta_4 \ln ITTC_{it} + \beta_5 \ln CITT_{it} + \beta_6 \ln LTS_{it} + \beta_4 \ln OTTE_{it} + \beta_5 \ln TTTCE_{it} + \beta_6 \ln VE_{it} + i + uit$$

Where:

- lnGDP<sub>it</sub>*: the natural logarithm of gross domestic product for country i during the period t;
- lnBTS<sub>it</sub>*: the natural logarithm of business tourism spending for country i during the period t;
- lnDTS<sub>it</sub>*: the natural logarithm of domestic tourism spending for country i during the period t;
- lnGSTTS<sub>it</sub>*: the natural logarithm of government spending on travel and tourism service for country i during the period t;
- lnITTC<sub>it</sub>*: the natural logarithm of internal travel and tourism consumption for country i during the period t;
- lnCITT<sub>it</sub>*: the natural logarithm of capital investment in travel and tourism for country i during the period t;
- lnLTS<sub>it</sub>*: the natural logarithm of leisure tourism spending for country i during the period t;
- lnOTTE<sub>it</sub>*: the natural logarithm of outbound travel and tourism expenditure for country i during the period t;
- lnTTTCE<sub>it</sub>*: the natural logarithm of travel and tourism total contribution to employment for country i during the period t;
- lnVE<sub>it</sub>*: the natural logarithm of visitor exports for country i during the period t;
- i*: the random error for each country;
- uit*: the random error from the regression model

**5. Result of the Descriptive Statistical Analysis**

This part describes the data on tourism indicators and compares the result between Ethiopia and Kenya. In order to facilitate the comparison of the two countries, the real prices that are adjusted to inflation and the US dollar currency have been used. In addition, for every tourism indicator, an average of a 26 year time series data which runs from 1995 to 2020 is utilized. The subsequent discussion presents a descriptive analysis based on table 1 (Appendix A).

- a) Travel and tourism direct contribution to GDP consists the amount of money that is gained from industries that deal with tourists directly such as airlines, hotels, restaurants, travel agents, leisure industries, and other transport services. The average direct contribution of tourism to the GDP of Ethiopia is \$1.33 billion per year. On average, this amount directly covers 3.34 percent of the total GDP of the country and is growing at an average rate of 9.99 percent per year. On the other hand, Kenya generates \$2.17 billion from tourism which accounts 4.3 percent of its GDP and is increasing at an annual rate of 3.29 percent. Comparatively, Kenya earns almost double of Ethiopia from tourism; however, the rate of growth of Ethiopia's receipt from tourism triples Kenya's average percentage growth.
- b) Total contribution of travel and tourism to GDP involves all the direct, indirect, and induced impacts of tourism on a nation's economic growth. Accordingly, the total contribution of tourism to Ethiopia's economy is on average \$3.19 billion per year. This amount covers 7.98 percent of the country's yearly GDP and is growing at a rate of 10.47 percent per year. On average, Kenya also generates \$5.67 billion from the total tourism industry per year. It covers 11.25 percent of Kenya's GDP and is increasing at a rate of 3.55 percent per year. Relatively, Kenya generates roughly twice of Ethiopia's yearly receipt from the total tourism industry; nevertheless, the average rate of growth of Ethiopia's earning from the total tourism industry triples that of Kenya's.
- c) Travel and Tourism direct contribution to employment involves the number of direct jobs created in the tourism industry. On average, 535 thousand jobs have been created in the tourism industry in Ethiopia. This amount constitutes 2.85 percent of the total employment within the country and is growing at an annual rate of 5.52 percent. The tourism industry has also generated a direct employment opportunity for around 370 thousand Kenyans with a percentage share of 3.96 out of the total employment in the country and an average annual growth rate of 2.21 percent. As compared to the total employment within a country, tourism has given more employment opportunity in Kenya than Ethiopia; however, the percentage share growth rate of tourism jobs in Ethiopia more than doubles that of Kenya's.
- d) The direct, indirect, and induced contribution of the tourism industry in the generation of employment opportunity is known as the total contribution of the tourism industry in the creation of employment. On average, the total tourism industry has created 1.3 million jobs in Ethiopia and 983 thousand in Kenya. The job opportunity constitutes 7 percent of the total employment in Ethiopia and 10.5 percent of Kenya. Tourism's total contribution to employment is growing at a rate of 5.94 and 2.47 percent in Ethiopia and Kenya respectively. Comparatively, the percentage share of the employment opportunity generated from the total tourism industry is higher in Kenya than Ethiopia. However, the rate of growth of tourism's total contribution to employment in Ethiopia is more than twofold of Kenya.
- e) Business tourism spending involves spending by residents and international visitors who are on business travel within a country. Ethiopia stands to gain \$0.39 billion from this tourism type whereas it is \$1.12 billion for Kenya. Business tourism spending also constitutes 0.67 and 1.2 percent of Ethiopia's and Kenya's GDP and is growing at an annual rate of 10 and 8.11 percent respectively. Comparatively, Kenya's receipt from business tourism triples that of Ethiopia's though Ethiopia has a better annual average percentage growth.

- f) Domestic tourism spending comprises spending on business and leisure trips within a country by its residents. The average amount for Ethiopia is \$0.81 billion per year while Kenya generates \$1.8 billion. This amount consists of 2.1 and 3.13 percent of the total GDP and is increasing at an annual percentage growth rate of 8.79 and 8.62 in Ethiopia and Kenya respectively. Relatively, Kenya surpasses Ethiopia by amassing an average yearly receipt from domestic tourism that is more than twofold of Ethiopia's. The larger income for Kenya from this segment of tourism might be, according to Kihima (2015), the adoption of domestic tourism policy by the Kenyan government that encourages Kenyan residents to travel locally (*Ibid*). Although this area of tourism has a significant contribution on the GDP of Ethiopia, the actual amount the country is earning from domestic tourism is more than twice lesser than that of Kenya's. This may be due to the low level of attention given to domestic tourism by the government of Ethiopia and because of the difficulty to track it than international tourism (Bayih and Singh, 2020; Yechale, 2020).
- g) Government spending on social and physical infrastructures such as museums and national parks that are directly related to visitors could be taken as an example for public expenditure on travel and tourism services. The average spending of government on tourism services that are directly linked to tourists is \$0.01 and \$0.07 billion in Ethiopia and Kenya respectively. This amount comprises 2.34 percent (Ethiopia) and 7 percent (Kenya) of total tourism expenditure. The average government expenditure on tourism related infrastructures is also growing in Ethiopia (10.18%) and Kenya (4.18%). When the two countries are compared, the government of Kenya is spending 7 times more than the government of Ethiopia on tourism services. The rate of growth of government spending in Ethiopia, however, is more than two times than that of Kenyan government's expenditure on tourism service that are linked to visitors.
- h) Internal travel and tourism consumption includes revenues that are generated within a country by industries that deal with tourists. Industries that are linked to tourists gain on average \$2.21 billion in Ethiopia and \$3.80 billion in Kenya; this constitutes 4.39 percent of Ethiopia's and 5.78 percent of Kenya's GDP. Relatively, industries that deal with tourists in Kenya are generating approximately twice as much revenue as industries in Ethiopia; yet, the average percentage growth of revenue by Ethiopian industries almost triples Kenyan industries.
- i) Capital investment in travel and tourism embraces expenditures that are made by industries that are directly involved in tourism or other industries on tourism assets such as hotels, visitor accommodation, transport equipment, restaurants and other related facilities that are specifically meant for tourism use only. Ethiopia spends an average of \$0.51 billion on capital investment in the travel and tourism industry whereas it is \$0.87 billion for Kenya; this amount constitutes 4.8 percent of Ethiopia's and 11.18 percent of Kenya's exports. However, the average percentage growth of capital investment in the tourism industry in Ethiopia (13.89%) almost quadruples that of Kenya's (3.77%).
- j) Leisure tourism spending is made by residents and international visitors on leisure travel that is meant for relaxation or enjoyment within a country. On average, Ethiopia earns \$1.82 billion and constitutes 2.65 percent of its GDP. On the other hand, Kenya generates \$2.63 billion from leisure tourism and comprises 3.03 percent of the country's annual GDP. Comparatively, Kenya earns more from leisure tourism than Ethiopia; however, the average percentage growth of Ethiopia's earning nearly quadruples that of Kenya's.

- k) Outbound travel and tourism expenditure is incurred by residents outside their country on all journeys including passenger fee. Accordingly, Kenyan tourists abroad incur \$0.34 billion on average; in contrast, it is \$0.21 billion for Ethiopians. However, the outbound tourism expenditure is increasing at an average percentage growth rate of 12.33 percent in Ethiopia while it is decreasing at a rate of -1.11 percent per annum in Kenya.
- l) Visitor exports consists all spending within a country by international tourists, but excludes international expenditure on education. In other words, it is total inbound tourism expenditure. The contribution of visitor exports for the Ethiopian economy is averaged as \$1.40 billion per annum though it is \$1.95 billion for Kenya. This amount constitutes 21.41 and 30 percent export of Kenya and Ethiopia respectively. When the two countries are compared, Kenya earns more from visitors export than Ethiopia; however, the average percentage growth rate of Ethiopia's earning from foreign spending (9.92%) is more than eight times larger than that of Kenya's (1.20%).
- m) Foreign visitor arrivals consists all overnight or same-day tourists to a country. On average, Kenya is visited by 1.3 million tourists per annum while it is only 400 thousand for Ethiopia. Comparatively, Kenya's number of visitors is more than three times that of Ethiopia's; this might have been the reason why Kenya is consistently outperforming Ethiopia with regard to tourism receipt.

The descriptive analysis shows the presence of association between the tourism indicators and the GDP of Ethiopia and Kenya. However, the analysis does not demonstrate which tourism indicators have significant connection with the GDP of the countries. As a result, panel regression model will be used to identify the tourism indicators that have significant relationship with GDP.

## **6. Result of the Panel Regression Analysis**

The impact of tourism on the economic growth of Ethiopia and Kenya for the period covering 1995 to 2020 has also been explained by using panel data regression analysis and the results are presented in this section. The output of the unit root test is portrayed first, followed by the combined and separate Fixed Effect and Random Effect models for Ethiopia and Kenya.

### *6.1 The unit root test*

The first step in panel regression is checking if the panel data are stationary or not. In order to ensure that the data are stationary, the panel unit root test was conducted. The study used the Common and Individual Unit Root Tests.

The null hypothesis for the test is that there is a unit root while the alternative is there is no unit root. Table 2 (Appendix B) depicts the result of the test. Accordingly, at a significance level of 5 percent, all the variables are stationary at their first difference level (the p-values are in parenthesis). Therefore, based on the result of the test, it is possible to reject the null hypothesis and proceed to apply panel regression to determine the association between tourism and GDP.

### *6.2 Results of the Fixed Effect and Random Effect Models*

The panel data regression analysis on the impact of tourism on the economic growth of Ethiopia and Kenya was carried out by using Fixed and Random effect models. Stata 14 statistical software was used to examine the relationship between the tourism indicators and GDP. Table 3 (Appendix C), table 4 (Appendix D), and table 5 (Appendix E) present the Fixed Effect and Random Effect models.



Table 3 provides the combined Fixed Effect and Random Effect model for Ethiopia and Kenya, table 4 presents the Fixed Effect and Random Effect models for Ethiopia, and table 5 depicts the Fixed Effect and Random Effect models for Kenya.

Table 3 depicts the panel regression result of the combined fixed and random model. In addition, the hausman test was conducted to choose between the fixed and random effects model. The result of the test shows that the fixed effect model is preferred as compared to the random effect model in order to determine the impact of tourism on GDP. The combined fixed effect model for Ethiopia and Kenya shows that the tourism indicators have a positive association with GDP. The nine tourism indicators explain 58.29 percent of the variability in the GDP of the two east African countries combined.

It can be observed from the result of the fixed effect model on table 3 that, two tourism indicators - Domestic Tourism Spending, and Internal Travel and Tourism Consumption – are positively associated with GDP at a statistically significant level. The finding from the fixed effect model also shows that there is a statistically significant but negative relationship between Travel and Tourism Total Contribution to Employment and GDP. In addition, three of the tourism indicators - Government Spending on Travel and Tourism Service, Capital Investment in Travel and Tourism, and Outbound Travel and Tourism Expenditure – have positive but insignificant relationship with GDP. However, the remaining three indicators - Business Tourism Spending, Leisure Tourism Spending, and Visitor Exports – have an insignificant negative association with the GDP of the two east African countries.

Table 4 portrays the panel regression result of the fixed and random effect models for Ethiopia. Hausman test was carried out to choose between the fixed and random effects model. The test result illustrates that the random effect model is preferred to determine the impact of tourism on the GDP of Ethiopia. The random effect model for Ethiopia shows that the tourism indicators have a positive relationship with the GDP of the country. The nine tourism indicators describe 99.41 percent of the changeability in the GDP of Ethiopia.

As can be observed from the result of the random effect model on table 4, three tourism indicators - Domestic Tourism Spending, Visitor Exports, and Outbound Travel and Tourism Expenditure – are positively linked with GDP in a statistically significant way. The results from the random effect model also demonstrate that there is a statistically significant but negative relationship between two indicators - Travel and Tourism Total Contribution to Employment, and Internal Travel and Tourism Consumption - and GDP. Moreover, Business Tourism Spending and Leisure Tourism Spending have a positive but insignificant relationship with economic growth. Finally, Government Spending on Travel and Tourism Service, and Capital Investment in Travel and Tourism have negative but statistically insignificant connection with economic growth in Ethiopia.

Table 5 describes the panel regression result of the fixed and random effect models for Kenya. The hausman test was also conducted to identify the suitable model between the fixed and random effects model. The result points up that the random effect model is better to determine the impact of tourism on the economic growth of Kenya. The random effect model for Kenya demonstrates that the tourism indicators generally have a positive association with GDP. The nine tourism indicators capture 99.06 percent of the variability in the GDP of the country.

It can be seen from result of the random effect model on table 5 that, Domestic Tourism Spending, Internal Travel and Tourism Consumption, and Outbound Travel and Tourism Expenditure are

positively and significantly related with economic growth in Kenya. The results from the random effect model also reveal that there is a statistically significant but negative relationship between three factors - Business Tourism Spending, Capital Investment in Travel and Tourism, and Leisure Tourism Spending - and the GDP of Kenya. Furthermore, Government Spending on Travel and Tourism Service, Travel and Tourism Total Contribution to Employment, and Visitor Exports have negative but statistically insignificant link with the GDP of Kenya.

## 7. Hypothesis Testing

The following discussion is made based upon the output of table 6 (Appendix F) that tests the null hypothesis and shows the similarity and difference between Ethiopia and Kenya concerning the impact of the tourism indicators on their economic growth. The table depicts the null hypothesis, the decision status of the null hypothesis, and the probability values and coefficients of the independent variables for both Ethiopia and Kenya.

The similarity and difference between Ethiopia and Kenya with regard to the contribution of tourism on their economic growth is discussed as follows:

- a) There is difference between Ethiopia and Kenya in terms of the impact that Business Tourism Spending has on their GDP. Business Tourism Spending has a statistically significant but negative impact on the GDP of Kenya. In contrast, although it is insignificant, Business Tourism Spending has a positive influence on the economic growth of Ethiopia. This is an anomaly with the result of the descriptive statistics which shows that Kenya's receipt from business tourism triples that of Ethiopia with an average of \$1.12 billion while it is only \$0.39 billion for Ethiopia.
- b) There is similarity between Ethiopia and Kenya with regard to the contribution of Domestic Tourism Spending on economic growth. The result of the inferential statistics reveals that Domestic Tourism Spending has a statistically significant positive impact on the GDP of both Ethiopia and Kenya. It can also be seen from the descriptive statistics section that the average earning of Ethiopia from this area of tourism is \$0.81 billion per year while Kenya generates \$1.8 billion.
- c) There is no difference between Ethiopia and Kenya concerning the impact of Government Spending on Travel and Tourism Service on economic growth. The descriptive analysis portrays that the government of Kenya spends 7 times more than the government of Ethiopia on tourism services though the rate of growth of the government spending in Ethiopia is more than two times than that of Kenyan government's expenditure on tourism services. The result of the inferential statistics shows that both Ethiopia and Kenya are being affected negatively but insignificantly by their respective government's spending on travel and tourism services. According to Mo (2007), however, a 1 percent government consumption share increase on GDP results in reduction of GDP growth rate by 0.216 percent; contrary to this, a 1 percent increase of government investment expenditure results in raising the GDP growth by 0.167 percent. Therefore, re-allocation of 1 percent of government consumption to investment raises the GDP growth rate by 0.38 percent (*Ibid*).
- d) There is dissimilarity between Ethiopia and Kenya over the impact of Internal Travel and Tourism Consumption expenditure on economic growth. It is obvious from the large negative coefficient that investment on tourism consumption hurts the Ethiopian economy severely; it can be interpreted as for every 1 unit shift in internal travel and tourism consumption expenditure,

while holding the other independent variables in the model constant, there will be more than 21 unit opposite direction shift in the GDP of Ethiopia. In contrast, the Kenyan economy benefits the most from tourism consumption expenditures as it is evidenced with the large positive coefficient. The descriptive statistics also illustrates that, comparatively, industries that deal with tourists in Kenya are generating approximately twice as much revenue as industries in Ethiopia; yet, the average percentage growth of revenue by Ethiopian industries almost triples Kenyan industries.

- e) There is difference between Ethiopia and Kenya concerning the contribution of Capital Investment in Travel and Tourism on economic growth. Contrary to tourism consumption expenditure, tourism capital investment expenditure affects the economy of Kenya significantly in a negative direction. On the other hand, tourism capital investment expenditure does not have a significant association with the economy of Ethiopia. Looking at the interpretation given above, Kenya's GDP benefits more from tourism consumption expenditure while Ethiopia is better off with the tourism capital spending. The descriptive statistics shows that, on average, Ethiopia spends \$0.51 billion on capital investment in the travel and tourism industry whereas it is \$0.87 billion for Kenya; but, the average percentage growth of capital investment in the tourism industry in Ethiopia almost quadruples that of Kenya's.
- f) There is no similarity between Ethiopia and Kenya with regard to the impact of Leisure Tourism Spending on GDP. Even though it is insignificant, there is positive association between leisure tourism spending and economic growth in Ethiopia; while there is a significant negative relationship between leisure tourism expenditure and economic growth in Kenya. However, the result of the descriptive analysis shows that Kenya earns on average \$2.63 billion from this type of tourism; whereas, it is \$1.82 billion for Ethiopia. When the two countries are compared, Kenya earns more from leisure tourism than Ethiopia though it is affecting the country's economy negatively.
- g) There is no difference between Ethiopia and Kenya on the impact of Outbound Travel and Tourism Expenditure on economic growth. Outbound Travel and Tourism Expenditure affects the economy of both countries positively and significantly. The descriptive statistics depicts that, Kenyan tourists on average spend \$0.34 billion abroad whilst it is \$0.21 billion for Ethiopians. Nevertheless, the outbound tourism expenditure is increasing at an average percentage growth rate of 12.33 percent in Ethiopia whereas it is decreasing at a rate of -1.11 percent per annum in Kenya.
- h) There is difference between Ethiopia and Kenya in terms of the relationship between Travel and Tourism Total Contribution to Employment and economic growth. As can be seen from the descriptive analysis section, the total tourism industry has created 1.3 million jobs in Ethiopia and 983 thousand in Kenya. The result of the inferential analysis portrays that the association between tourism total contribution to employment and economic growth is negative but insignificant in Kenya; on the other hand, the relationship is negative and statistically significant in Ethiopia.
- i) There is dissimilarity between Ethiopia and Kenya in terms of the contribution of Visitor Exports on economic growth. The inferential statistics shows that there is a positive and statistically significant relationship between Visitor Export and economic growth in Ethiopia; whereas, the association between these two variables is negative but insignificant in Kenya. Nevertheless, the

result of the descriptive statistical analysis shows that the contribution of visitor exports for the Ethiopian economy is averaged at \$1.40 billion per annum though it is \$1.95 billion for Kenya. In addition, Kenya's average number of visitors is three times more than that of Ethiopia's.

To summarize, Ethiopia and Kenya are different in terms of the impact that business tourism spending, internal travel and tourism consumption expenditure, capital investment on travel and tourism, leisure tourism spending, travel and tourism total contribution to employment, and visitor exports have on their GDP. On the other hand, domestic tourism spending, government spending on travel and tourism services, and outbound travel and tourism expenditure have similar impact on the economic growth of the two east African countries.

## **8. Conclusion**

Tourism is the activity of travelers on journeys outside of their familiar living and working environment for a length that is less than one year. It plays a vital role for the economic growth of a nation by creating job opportunities, generating foreign currency, promoting small and medium enterprises, and contributing positively for the gross domestic product of a nation. However, the smokeless industry has been underutilized and its contribution unappreciated in most of the developing world. This paper, therefore, works under the philosophy that third world countries can learn from the successes and failures of each other. Consequently, the study comparatively examined Ethiopia and Kenya to see the success of their tourism development policy in the creation of an industry that contributes positively for the economic growth of the two East African countries.

Accordingly, Kenya is consistently surpassing Ethiopia in terms of the amount of revenue that it generates from business tourism, domestic tourism, internal travel and tourism consumption, leisure tourism, outbound travel and tourism, and visitors export earnings due to the large visitor number arrivals. In addition, the direct and total contribution of tourism to GDP is higher in Kenya than Ethiopia. The direct and total contribution of tourism to employment is also higher in Kenya. Moreover, the government of Kenya spends more on travel and tourism services that are directly linked to visitors such as museums and national parks. Furthermore, capital investments in travel and tourism are higher in Kenya than Ethiopia. Comparatively, Kenya is outperforming Ethiopia unequivocally in all of the tourism indicators. However, the growth of the tourism industry in Kenya is sluggish as compared to Ethiopia. In almost all of the tourism indicators, the average percentage yearly growth rate of Ethiopia doubles, triples, and quadruples the growth rate of Kenya's tourism.

Higher amount of tourism receipt and expenditure does not guarantee a positive impact on the economic growth of a nation. When the combined effect of tourism on the GDP of Ethiopia and Kenya is scrutinized, domestic tourism spending, and internal travel and tourism consumption are positively related with GDP of the two countries at a statistically significant level. There is also a statistically significant but negative relationship between travel and tourism total contribution to employment and the GDP of Ethiopia and Kenya. The separate random effect model for Ethiopia shows that domestic tourism spending, visitor exports, and outbound travel and tourism expenditure are positively linked with the GDP of the country in a statistically significant way. There is a statistically significant but negative relationship between travel and tourism total contribution to employment, and internal travel and tourism consumption and economic growth in Ethiopia. On the other hand, though the descriptive statistics portrays the success of Kenya in all tourism indicators, it is only domestic tourism spending, internal travel and tourism consumption, and outbound travel and tourism expenditure that have a positive and significant association with the economic growth of the country. Behind their superficial appearance of success, business tourism spending, capital

investment in travel and tourism, and leisure tourism spending have a significant but negative impact on the GDP of Kenya.

In general, to improve the impact of tourism on the economic growth of Ethiopia and Kenya, both countries could learn from each other. Ethiopia can learn strategies from Kenya in order to improve number of visitors and tourism receipts. On the other hand, Kenya can improve the growth rate of its sluggish tourism industry by discovering ways from Ethiopia. Furthermore, Kenya benefits its economy if the country identifies and resolves the reason why the country's relatively huge amount of income from business tourism, leisure tourism, and visitor exports are affecting the economy negatively.

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### Appendix A

Table 1: Comparison of tourism industry's contribution between Ethiopia and Kenya

Comparison Factor		Country	
		Ethiopia	Kenya
Travel and Tourism direct contribution to GDP	Average contribution	1.33	2.17
	Average percentage share of total GDP	3.34	4.30
	Average percentage growth	9.99	3.29
Travel and Tourism total contribution to GDP	Average contribution	3.19	5.67
	Average percentage share of total GDP	7.98	11.25
	Average percentage growth	10.47	3.55
Travel and Tourism direct contribution to employment	Thousands of jobs	535	370
	Percentage share of total employment	2.85	3.96
	Average percentage growth	5.52	2.21
Travel and Tourism total contribution to employment	Thousands of jobs	1.325	983
	Percentage share of total employment	7.03	10.50
	Average percentage growth	5.94	2.47
Business Tourism Spending	Average contribution	0.39	1.12
	Average percentage share of total GDP	0.67	1.20
	Average percentage growth	10	8.11
Domestic Tourism Spending	Average contribution	0.81	1.80
	Average percentage share of total GDP	2.10	3.13
	Average percentage growth	8.79	8.62
Government Spending on Travel and Tourism service	Average contribution	0.01	0.07
	Average percentage share of total tourism expenditure	2.34	7
	Average percentage growth	10.18	4.18
Internal Travel and Tourism Consumption	Average contribution	2.21	3.80
	Average percentage share of total GDP	4.39	5.78
	Average percentage growth	9.17	3.19
Capital Investment in Travel and Tourism	Average contribution	0.51	0.87
	Average percentage share of total exports	4.80	11.18
	Average percentage growth	13.89	3.77
Leisure Tourism Spending	Average contribution	1.82	2.63
	Average percentage share of total GDP	2.65	3.03
	Average percentage growth	9.87	2.64
Outbound Travel and Tourism Expenditure	Average contribution	0.21	0.34
	Average percentage share of total GDP	0.55	0.77
	Average percentage growth	12.33	-1.11
Visitor Exports	Average contribution	1.40	1.95
	Average percentage share of total exports	30	21.41
	Average percentage growth	9.92	1.20
Foreign Visitor Arrivals	Average number of arrivals per year	402625	1332417

Source: Own compilation.

### Appendix B

Table 2: Summary of the panel unit root test

Variable	The Common Unit Root Test	The Individual Unit Root Tests		
	Levin, Lin & Chu t	Im, Peasaran and Shin W-stat	ADF-Fisher Chi-Square	PP – Fisher Chi-Square
lnGDP	-3.94772 (0.0000)	-4.84376 (0.0000)	27.3752 (0.0000)	49.2155 (0.0000)
lnBTS	-1.98575 (0.0235)	-2.90170 (0.0019)	15.6945 (0.0035)	27.2626 (0.0000)
lnDTS	-3.04721 (0.0012)	-3.95155 (0.0000)	22.2516 (0.0002)	29.3705 (0.0000)
lnGSTTS	-3.16218 (0.0008)	-3.34457 (0.0004)	18.7312 (0.0009)	33.5931 (0.0000)
lnITTC	-2.86401 (0.0021)	-2.65417 (0.0040)	14.2975 (0.0064)	28.2766 (0.0000)
lnCITT	-3.31264 (0.0005)	-3.42009 (0.0003)	18.7536 (0.0009)	23.3381 (0.0001)
lnLTS	-2.84664 (0.0022)	-2.79630 (0.0026)	15.1147 (0.0045)	29.5347 (0.0000)
lnOTTE	-4.57458 (0.0000)	-4.32205 (0.0000)	24.1996 (0.0001)	39.7753 (0.0000)
lnTTTCE	-3.40057 (0.0003)	-4.47883 (0.0000)	25.1260 (0.0000)	98.5429 (0.0000)
lnVE	-3.06382 (0.0011)	-2.87764 (0.0020)	15.6008 (0.0036)	30.0852 (0.0000)

### Appendix C

Table 3: The combined fixed and random effect models summary for Ethiopia and Kenya

Variables	Fixed Effect Model				Random Effect Model			
	Cofnt	Std.err	t-test	p-value	Cofnt	Std.err	t-test	p-value
lnBTS	-1.532675	.8174495	-1.87	0.069	-4.28251	.670014	-6.39	0.000
lnDTS	1.133866	.4369318	2.60	0.013	1.964564	.4870059	4.03	0.000
lnGSTTS	.1724682	.1727562	1.00	0.325	-.3554902	.156267	-2.27	0.023
lnITTC	6.403094	3.054822	2.10	0.043	15.39495	2.846494	5.41	0.000
lnCITT	.0215185	.0916935	0.23	0.816	-.0461783	.1111624	-0.42	0.678
lnLTS	-4.002722	2.788128	-1.44	0.160	-11.95322	2.656387	-4.50	0.000
lnOTTE	.1078813	.0957159	1.13	0.267	.1781855	.1160552	1.54	0.125
lnTTTCE	-.6526609	.2717104	-2.40	0.021	.0441206	.2748083	0.16	0.872
lnVE	-.3722401	.7403328	-0.50	0.618	.0930341	.9009143	0.10	0.918
Cons	25.15136	2.994334	8.40	0.000	13.60365	1.913365	7.11	0.000
	<b>Model Summary Fixed Effect</b>				<b>Model Summary Random Effect</b>			
R <sup>2</sup>	0.5829				0.9688			
F	199.45				1178.35			
P-value	0.0000				0.0000			
<b>Summary of the Hausman Test</b>								
<b>Chi-Sq. Statistic</b>				<b>Chi-Sq. d.f.</b>		<b>Probability</b>		
20.55				9		0.0148		



**Appendix D**

Variables	Fixed Effect Model				Random Effect Model			
	Cofnt	Std.err	t-test	p-value	Cofnt	Std.err	t-test	p-value
lnBTS	-.731433	1.285689	-0.57	0.581	.8164422	1.204117	0.68	0.498
lnDTS	5.487753	2.675628	2.05	0.065	9.185624	2.309613	3.98	0.000
lnGSTTS	.0839781	.15313	0.55	0.594	-.0272714	.163588	-0.17	0.868
lnITTC	-7.906877	9.11027	-0.87	0.404	-21.56307	7.336891	-2.94	0.003
lnCITT	.2198786	.21389	1.03	0.326	-.0893518	.1781217	-0.50	0.616
lnLTS	-1.576856	3.56488	-0.44	0.667	1.838351	3.617065	0.51	0.611
lnOTTE	.1517686	.1857102	0.82	0.431	.3908844	.1679015	2.33	0.020
lnTTTCE	-.8260651	.4318643	-1.91	0.082	-1.468511	.3504001	-4.19	0.000
lnVE	6.080701	4.403056	1.38	0.195	12.11204	3.825294	3.17	0.002
Cons	36.45304	8.56927	4.25	0.001	49.83926	6.599988	7.55	0.000
	<b>Model Summary Fixed Effect</b>				<b>Model Summary Random Effect</b>			
R <sup>2</sup>	0.9872				0.9941			
F	56.74				2005.10			
P-value	0.0000				0.0000			
<b>Summary of the Hausman Test</b>								
<b>Chi-Sq. Statistic</b>			<b>Chi-Sq. d.f.</b>			<b>Probability</b>		
4.59			9			0.8686		

Table 4: Fixed and random effect models summary for Ethiopia

**Appendix E**

Table 5: Fixed and random effect models summary for Kenya

Variables	Fixed Effect Model				Random Effect Model			
	Cofnt	Std.err	t-test	p-value	Cofnt	Std.err	t-test	p-value
lnBTS	-3.569031	1.295626	-2.75	0.015	-3.267009	1.234299	-2.65	0.008
lnDTS	2.024566	.5446608	3.72	0.002	2.000362	.5390457	3.71	0.000
lnGSTTS	-.5939055	.5813082	-1.02	0.323	-.4531295	.551985	-0.82	0.412
lnITTC	12.37466	4.944873	2.50	0.024	10.97445	4.617789	2.38	0.017
lnCITT	-.2337853	.3017552	-0.77	0.451	-.4330346	.1868518	-2.32	0.020
lnLTS	-8.6127	4.134164	-2.08	0.055	-7.401192	3.843354	-1.93	0.054
lnOTTE	.381443	.1623135	2.35	0.033	.3788555	.1608338	2.36	0.018
lnTTTCE	-.4227543	.4160532	-1.02	0.326	-.2851251	.3794807	-0.75	0.452
lnVE	-.3039716	.7836781	-0.39	0.704	-.4383097	.7605491	-0.58	0.564
Cons	17.29691	3.614919	4.78	0.000	17.46117	3.577426	4.88	0.000
	<b>Model Summary Fixed Effect</b>				<b>Model Summary Random Effect</b>			
R <sup>2</sup>	0.9898				0.9906			
F	33.78				1684.74			
P-value	0.0000				0.0000			
<b>Summary of the Hausman Test</b>								
<b>Chi-Sq. Statistic</b>			<b>Chi-Sq. d.f.</b>			<b>Probability</b>		
0.71			9			0.9999		

### Appendix F

Table 6: Test result of the null hypothesis for both Ethiopia and Kenya

Null hypothesis	Decision	Defense <i>Significant at 5% only</i>			
		Ethiopia		Kenya	
		P-value	Cofnt	P-value	Cofnt
H01: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Business Tourism Spending on economic growth.	Reject the null hypothesis	0.498	0.8	0.008	-3.26
H02: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Domestic Tourism Spending on economic growth.	Accept the null hypothesis	0.000	9.18	0.000	2.00
H03: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Government Spending on Travel and Tourism Service on economic growth.	Accept the null hypothesis	0.868	-0.027	0.412	-0.45
H04: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Internal Travel and Tourism Consumption on economic growth.	Reject the null hypothesis	0.003	-21.56	0.017	10.9
H05: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Capital Investment in Travel and Tourism on economic growth.	Reject the null hypothesis	0.616	-0.089	0.020	-0.43
H06: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Leisure Tourism Spending on economic growth.	Reject the null hypothesis	0.611	1.83	0.054	-7.4
H07: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Outbound Travel and Tourism Expenditure on economic growth.	Accept the null hypothesis	0.020	0.39	0.018	0.38
H08: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Travel and Tourism Total Contribution to Employment on economic growth.	Reject the null hypothesis	0.000	-1.4	0.452	-0.29
H09: There is no significant difference between Ethiopia and Kenya in terms of the contribution of Visitor Exports on economic growth.	Reject the null hypothesis	0.002	12.11	0.564	-0.44