

Analysis of Smokeless Industry on Poverty and improving Community Participation: Evidences from three clusters of Tigrai, Ethiopia

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Abstract: *Nowadays, countries have been exercising and allocating huge budgets to expand and utilize more from the smokeless industry. This article presents the impact of smokeless industry on poverty and improving local community's participation evidenced from Aksum, Wukro and Mekelle clusters of Tigrai, Northern Ethiopia. Simple random sampling, purposive and convenient sampling technique were used to collect data from 460 respondents; and poverty measure of FGT and income distribution tool of Gini index and growth rate measures were employed in the analysis. 15.6% of the households were living below the poverty line with income shortfall of 3% and poverty severity index of 1 % which varies across the community members' sector involvement, gender and education level. Number of visitors (both domestic and international) has increased through time and 29566 tourists were visiting the tourist endowments in Tigrai in 2005. At an average growth rate of 12.67% per annum, number of visitors has grown and reached 70427 in 2013 yet the average days of stay of 1.65 was very low. Moreover, on average, about 51535 tourists were visiting Tigrai for the last nine years. The income from the smokeless industry was so low but improvements were observed since 2008 onwards. Having average income growth rate of 27.77% from the sector, in 2012/ 2013 more than 94.7 million birr was collected in which 34.9 and 55.3 million Birr were obtained from local and international tourists, respectively. Different sectors of the economy has enjoyed the revenue from the sectors and 60.14% was collected by the hotel sector, followed by tour operators and transporters (15.84%). 13.26% is shared among the handicrafts, arts shops and related owners, and churches (the St. marry church, Abreha we Atsbeha, AbuneAregawi and AbuneYemataa) has collected 4.62% of the total income. In addition, tour guides and Culture and Tourism Agency of Aksum, Wukro and Mekelle cluster got revenue share of 4.4% and 1.74%, respectively. Limited community involvement and awareness, professionalism and promotion problems, shortage of tourism related investment, poor infrastructure and utilities and poor access for training and capacity building were affecting the performance of the industry in Tigrai. Standardization and grading of hotels, capacity building on service delivery, food preparation and language, women empowerment and awareness creation and discussions with communities are expected to be handled to increase the flow of tourists and income from the sector.*

Keywords: Cluster, Gini index, Income, Poverty and Smokeless Industry

1. Introduction

Ethiopia is an ancient country with a remarkably rich linguistic and cultural diversity. This diversity includes tangible and intangible heritage with both traditional and modern cultural expressions, languages, and centuries old know how in handicraft production. In fact, Ethiopia's cultural industry is perhaps one of the oldest in the world and is exceptionally diverse. The other intangible heritage of Ethiopia is equally rich with an exceptional variety including ceremonies, festivals, celebrations, rituals, and other living expressions. Moreover, nine of Ethiopia's cultural and natural heritage sites are listed on UNESCO'S World Heritage Site attesting to the outstanding universal value of Ethiopia's heritage.

Ethiopia is one of the developing countries that show continuous economic growth in the world and it was the fastest-growing non-oil-dependent African nation in 2007 and 2008(Bureau of African Affairs, 2009). Ethiopia is the multicultural nation with more than 80 nations and nationalities each with its own distinct language and culture. The cultural landscape composed of rich and varied tangible and intangible cultural heritage is further enriched by the diverse religions practiced in Ethiopia including Christianity, Islam, Judaism, and numerous traditional religions. The peaceful coexistence of diverse ethnic and religious communities for centuries is a great testament to

Ethiopia's social cohesion. The long-standing social interactions between the various ethnic and religious communities have resulted in shared values and practices including values regarding tolerance for diversity and respect for nature. Moreover, Ethiopia is a land endowed with immense biodiversity. Safeguarding and harnessing these assets would enable Ethiopia to capitalize on this rich heritage for the socio economic wellbeing of the Ethiopian people (Araya M., etal, 2011).

Tigray National Regional State is one of the newly structured regional states under the Federal Democratic Republic of Ethiopia. Tigray is situated between 12° 15'N and 14° 57' latitude and 36° 27'E and 39°59' longitude. It has an area of 53, 638 km² which accounts for about 6% of Ethiopia's total area. Tigray is endowed with a rich collection of artifacts, megaliths, tombs and rock-hewn churches along with a unique landscape.

Because of the economic improvements in the region, establishment of new universities and their spread effects, tourism potential and the good governance different investors have been attracted to invest more on the smokeless industry. To improve the tourism service delivery, the national regional government of Tigrai has considered Aksum to be one of the fast growing towns in the region due to historical potential for tourism sector (BoFED, 2008).

In line with this, the regional government considers the Wukro cluster (Eastern zone) as the second tourist destination area and expected to contribute to improve the economic situation of the local communities due to the rock hewn churches and mosques (Derih of Seid Ahmed Al Nejashi). In addition, the regional government has passed a decision Meskel (the finding of the truth cross) to be colorfully celebrated in Adigrat (Zonal town) at a region level since 2010. Further, Mekelle being the center of the region for economy and politics, the flow of tourists for different purposes is considered as an allied sector for its growth. In Ethiopia, despite the growing interest on tourism industry, few research works have been carried out with respect to poverty, socio-economic contributions of tourism development on tourist destination areas of the northern route (Ibid).

Poverty situation in urban areas (Tigray) reduces from time to time, as measured by the Head Count Index were about 0.464 in 1995, 0.428 in 2000 and 0.344 in 2005. Despite the reduction in the number of poor in the region, the income inequalities, as measured by the Gini coefficient, in the stated years, were 0.29, 0.35 and 0.49 respectively¹ (Tassewetal, 2008 cited in Araya M., etal,2011).

Tourism as an engine of the world economy, it is expected to play its role to reduce the prevalence of poverty and income inequality in Tigray, particularly the tourist destination areas of the central and eastern zones (BoFED, 2007). The number of local and international tourists visiting the centers has increased from time to time. On average, from 2005 onwards, the number of tourists flown has increased by 12.8% accompanied by 11.8 % booms in revenue (Tigray Tourism Bureau, 2011).

The potential of tourism development as a tool to contribute to economic growth and poverty reduction is derived from several unique characteristics of the tourism system (UNWTO, 2002). As a result, many developing countries have managed to increase their participation in the global economy through development of international tourism. Tourism development is increasingly viewed as an important tool in promoting economic growth, alleviating poverty, and advancing food security.

Tourism is arguably the world's largest and fastest growing industry, accounting for about five percent of the world's Gross National Product and six percent of the employment. Most governments encourage tourism for its ability to spread economic development and reduce inequalities in income distribution by providing jobs (Glasson *et al*, 1995).

The tourism industry in Ethiopian is constantly changing which has grown at an average annual rate of 13 percent over the last few years (OECD, 2007). It generated approximately \$ 132 million in 2005 regarding in-country expenditure revenues from a base of about 150,000 foreign visitors travelling around Ethiopia. Number of visitors grew from 81,581 in 1997 to 227,398 in 2005. 19% of international tourist arrivals in 2005 came for holidays. 81% came to Ethiopia for business, transit, and conferences, visiting relatives or other reasons (World Bank, 2006).

Despite the increment of the tourists flow and revenue generation from this smokeless industry, it remains poor to

contribute more to the national economy and considered as one feature of Ethiopia's Poverty Reduction Strategy Paper, that aims to combat poverty and encourage economic development.

Reports shows that, tourism in Ethiopia accounted for 5.5% of the country's gross domestic product in 2006, having barely increased 2% over the previous year. The government is proving its commitment and willingness to develop tourism through a number of initiatives. Various developments related to tourism can be seen over the past decade. Transport facilities, infrastructural development, increasing accommodations, number of tour-operators, trade missions and security around tourist destinations are improved significantly (MTC, 2009).

In recent years, tourism has been increasingly recognized for its economic potential to contribute to the reduction of poverty in developing countries. Its geographical expansion and labor intensive nature support a spread of employment and can be particularly relevant in remote and rural areas, where live three quarters of the two billion people under extreme poverty conditions. However, there is little understanding and no consensus on what impact tourism has had on poverty in Tigray national regional state. The objective of this research was to examine what is already known about the poverty-reducing impacts of tourism and to answer the following questions:

- What looks like the incidence of poverty & income inequality in the areas?
- What factors are influencing the flow of tourists?
- What kind of roles is expected from the local community?
- What looks like the flow of tourists and revenue from the sector?

2. Methodology of the Study and Data Analysis

2.1 Sample Size and Instrument of Collection

Three tourist destination zones have been selected purposefully based upon the rate of tourist flow, and the nature and capacity for tourist attractions, Aksum cluster, Wukro cluster and Mekelle cluster. At the same time, purposefully, Aksum and Tourist areas around Wukro, Abreha we atsbeha and Hawzen(Abuneyemaeta) and AbuneAregawi were selected . Mekelle city administration was also included in the study as one zone of tourist destination. Moreover, the sample site distribution among the three clusters was carried out in proportion to the type of the household class involved in and their availability in the clusters.

The study focused on five target groups: tour operators, guides, business owners, tourists and local community. A total of 460 respondents were included in the study. Five types of questionnaires were developed to each type of target population and systematic, purposive, convenient, random sampling techniques were employed to select the respondents depending on the nature and composition of the respondents. The sample size from the community was determined using the minimum sample size formulae of Fowler (2001) cited in Esubalew A. (2006) and Araya etal(2011).

Let take the urban poverty head count index is $0.164 = P$, in 2012, MoFED,(2012) the two-tailed critical value at 95 percent confidence interval given by $\frac{Z \alpha}{2}$ is (1.96)and

M_r is marginal error between the sample and population size (0.05)

Then, the sample size, n is given:

$$n = \left[\frac{\left[\frac{Z \alpha}{2} \right]^2 P (1 - P)}{(M_r)^2} \right]$$

$$n = \left[\frac{[1.96]^2 0.164 (1 - 0.164)}{(0.05)^2} \right] = 209.3 = 210$$

Moreover, the sample size of the participants of hotels, art shops, guides and tour operators was determined by the means of Slovin's sampling formula with 90 percent confidence level represented by

$$n = \frac{N}{1 + N(e)^2}$$

where

n is sample size, N is the total population of household participating in business related with tourism and

e is the margin of error at ten percent

Based on the former tourist flow rate, the availability of tourist related investments and existence of tour operators and guides 60 percent of the sample was allocated to Aksum cluster and the remaining was allocated to wukro(15%) and Mekelle clusters(25%).

3. Poverty and Income Distribution Analysis

3.1 Poverty Analysis

We analyzed the poverty situation of the study areas using, the expenditure approach¹, the one developed by Foster, Greer, and Thorbecke (1984) known as FGT Index which is commonly applied for poverty analysis (Fredu, 2008). The three measures of poverty in the FGT index are the Head Count Index (P_0) which depicts number of population who are poor, Poverty Gap Index (P_1) which measures the extent to which individuals fall below the poverty line (the poverty gaps) as a proportion of the poverty line and Poverty Severity Index (P_2) that demonstrates not only the poverty gap but also the inequality among the poor (WBI, 2005).

Let Z is the poverty line, Y_i is the actual Expenditure or income (adult equivalent) of individuals below the poverty line, n is number of people, q is the number of poor people normally those below the poverty threshold, α is poverty aversion parameter² (Fredu, 2008, Tassew et al, 2008, Tesfaye (2006) and WBI, 2005).

¹The rationale for adopting the Expenditure approach to analyze the poverty is due to the fact that consumption is believed to vary more smoothly than income, It is based on long term perspectives not on short term ways and consumption is more readily observed, recalled and measured than income and people hesitate to expiating their income(WBI,2005).

² α is value given by researchers(0, 1, or 2) to determine the degree to which the measure is sensitive to the degree of deprivation for these below

Then, the FGT or P_α is given by:

$$P_\alpha(Z, Y) = \frac{1}{n} \sum_{i=1}^q \left[\frac{Z - Y_i}{Z} \right]^\alpha$$

Therefore, if the value of $\alpha = 0$, the FGT or the P_α becomes the Head Count Index (P_0) yet when α has value 1, P_α is the Poverty Gap Index (P_1).

3.2 Income Inequality

We analyzed the income inequality in the study area using the popular measure of inequality, Gini coefficient (GC)³. Let X_i be a point on the cumulative percentage of population that lies on the horizontal or (X-axis) and Y_i is a point of cumulative percentage of expenditure plotted on the vertical or Y-axis, then the Gini coefficient(GC) is given by the formula(WBI(2005), Tesfaye(2006) and Tassewetal(2008).

$$Gini (GC) = 1 - \sum_{i=1}^N (X_i - X_{i-1})(Y_i + Y_{i-1})$$

Where X_i is value on the cumulative percentage of population

Y_i is value of cumulative percentage of expenditure

N is sample size

4. Discussion and Data Analysis

4.1 Demographic Characteristics of Respondents

The study comprised of two kinds of respondents. 310 households from the three clusters and 150 international tourists were included in the study.

The 310 respondents were from different social and economic stratum, i.e, 45.7 percent of the respondents were from the community, 8.7 percent were guides, 5.4 percent were hotel owners, 5.4 percent also Arts and Traditional works shop owners and the remaining 2.2 percent was the share of Tour and Travel operators. The 150 tourists were selected conveniently from Aksum (83.3%), Wukro(9.6%) and Mekelle(7.03%).

The respondents (community members) were selected from all the three clusters, Aksum, Wukro and Mekelle with a proportion of 80%, 14% and 6%, respectively. 100 percent of the guides, 50% of tour operators and 98 percent of the souvenir and art shops and 85 percent of the hotels were from Aksum cluster. The remaining percentages of all the components were allocated to Mekelle and Wukro cluster equally, except, the remaining percentage of tour operators were from Mekelle cluster.

the poverty line and higher values of α shows greater weight is placed on the poorest section of the society.

³The Gini coefficient (GC) is derived from the Lorenz curve, which sorts the population from poorest to richest, and shows the cumulative proportion of the population on the horizontal(x- axis) and the cumulative proportion of expenditure (or income) on the vertical(Y- axis). It has values 0-1 which shows perfect equality (GC=0) and perfect inequality (GC=1)

The rationale to employ the Gini coefficient as a measure of inequality is due to the fact the it satisfies the basic criteria of a good inequality measure like Mean and population size independence, symmetry,Pigou-Dalton Transfer sensitivity(WBI,2005)

Moreover, 74.4 percent of the respondents were male headed and the remaining 25.6 percent share was covered by female headed households. Furthermore, the respondents fall in five marital status categories in which the 59 percent of the respondents were married, 18 percent unmarried, 11.7 widowed, 8.3 percent of divorced and separated households comprised of 3 percent of the share. Education wise, 24 percent of them were illiterate, 21.7 percent of the respondents were high school(9-12), Diploma(10+3,12+2) comprised of 20 percent of the total,13.7 percent of the respondents have first degree and above, 11.3 percent of the share was covered by primary (1-6) and the least percentage(9.3%) belonged to secondary(7-8) level of education.

4.2 Level of Poverty and Income Distribution

4.2.1 Poverty and Participation

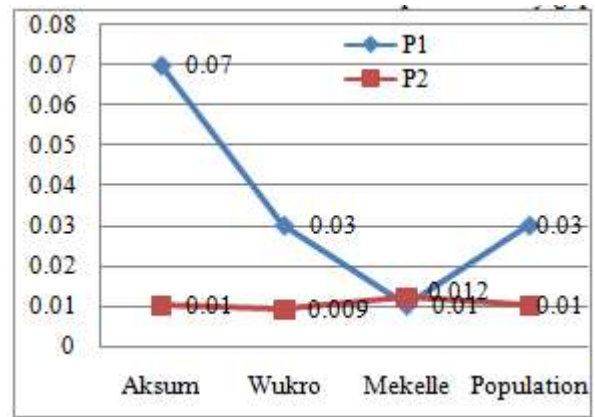
Significant number of research works focusing on tourism revealed that tourism industry has positive contribution to reduce poverty as it has the power to influence the employment and income. The incidence of poverty in the study areas was studied using the poverty line Birr 312⁴ per adult equivalent. As indicated in table 1, the incidence of poverty in area was 0.156 with income short fall rate of 0.03 and poverty severity index of 0.01. It is likely important to say that poverty is highest (47%) in the community group and zero level of poverty was recorded in the, hotel owners and Tour and Travel operators. In addition, 1 percent of the respondents participating in selling Arts and traditional works are living in poverty with income gap level of 0.07 and squared poverty gap level of 0.01. The level of poverty in the guides group is around 0.12 with gap level of 0.01 and poverty severity index of 0 percent.

Table 1: Incidence of poverty by economic and social classification

Group	Po	P1	P2	P.L(Br.)
Community	0.47 (0.03)	0.15(0.01)	0.07 (0.01)	312
Guides	0.12(0.07)	0.01(0.00)	0.00(0.00)	312
Hotel	0.00(0.00)	0.00 (0.00)	0.00(0.00)	312
Souvenir and Art shops	0.13(0.10)	0.07(0.03)	0.02(0.01)	312
Tour and travel operator	0.00 (0.00)	0.00(0.00)	0.00(0.00)	312
Population	0.156(0.02)	0.03 (0.01)	0.01(0.01)	312

Values in brackets are standard errors
Source: Own survey and computation,2013

Taking cluster as a focus group for discussion, poverty is highest in Wukro cluster (21 percent), followed by Aksum cluster (18 percent), Mekelle with head count index of 10 percent. Highest poverty gap index 7 percent has registered in Aksum cluster follow by Wukro and Mekelle clusters with indices of 3% and 1%, respectively. Moreover, having 1 percent poverty severity index in the stud areas, the lowest index (0.009) was observed in Wukro, followed by Aksum (1 %) and Mekelle(1.2%).



Graph 1: Poverty gap and poverty severity curves by cluster

Source: Own survey and computation, 2013

4.2.2 Income Inequality

Fair distribution of income among the citizens is a good indication of healthy benefit sharing; improve sense of nationality and integration. Income inequality indicates the extent to which individuals or households are far away from the equi- distribution line. It is wide in least developed countries than the advanced countries. In fact, variations are there with respect to the economic policy of the respective nations and countries with highest income inequality giving rise to less level of welfare among the citizens (Anthony et al., 2009).

In Tigray, despite the fact that poverty is being reduced from year to year, income inequality has dramatically been increasing with average Gini index change of 0.14 and reached 0.49 in 2004/5(Tassewet et al, 2008). Households in study areas depend on various means of generating income. Based up on nature of source of income, the source is divided into four classes. Accordingly, table 2, households' employments take the largest share (79.3 percent), followed by remittance (11.7 percent), rent of asset, particularly house, (5 percent) and others (aid, support and business profit) comprises 4 percent of the means.

Table 2: Source of income of households

Source of income	Number	Percent
Employment(private, daily labour, Government, NGO)	238	79.3
Remittance	35	11.7
Rent of asset	15	5
Others(aid, supports, savings)	12	4

Source: own survey and computation

Computed result of income, chart 2, shows that there is high income inequality (0.519) in Tigray measured in gini coefficients.

⁴ This poverty line was developed from the works of Araya M.,etal,2011, and inflation was treated

Chart 1: Gini index in Tigray



Source: Own survey and computation, 2013

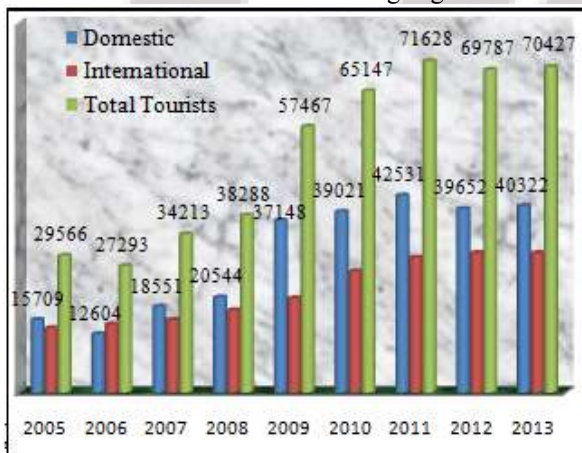
As indicated in chart 1, zero gini indexes is observed in households participating in Tour and Travel works followed by hotel operators (0.204), guides (0.225), Arts and traditional work operators (0.341) and community (0.372). From this we can infer that lowest income inequality is observed in respondents participating directly in tourism service sector. It is also important to measure income inequality based upon some household variables and make inferences. Thus, despite there is no statistically significant difference between gini indexes of male and female headed households, there is high income inequality (0.540) in female headed households and male headed households also suffering from 0.507 level of inequality.

4.3 Analysis on Tourist Flow and Revenue

43.1 Tourist Flow

Worldwide, there is an increment in the number of tourists moving from one country, and/ or continent to others for business, private, leisure, conference and other related purposes. The same phenomenon has been observed in Ethiopia and Tigray with respect to the tourists flow. In spite of Tigray is a great tourist destination area in the Northern part of the country, there were ups and downs in the number of tourists (domestic and international) visiting the environs.

Chart 2: Number of Tourists Visiting Tigray since 2005

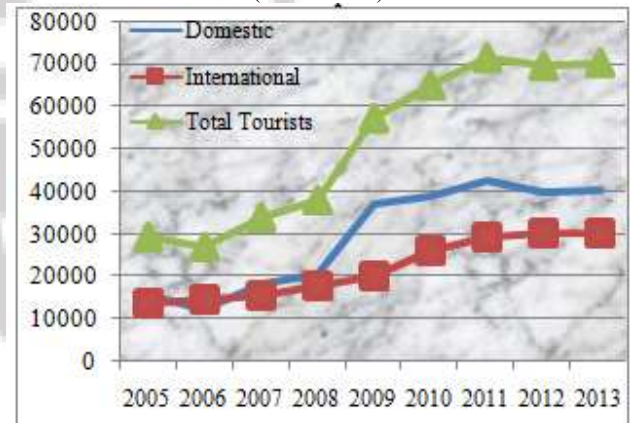


Source: Documents survey and computation (2013)

In 2005, 29566 tourists were visiting the historical places of the region and this number has been increased at an average

growth rate⁵ of 12.67% per annum and reached 70427 in 2013. Moreover, on average, about 51535.5 tourists were visiting Tigray in the last nine years⁶. As indicated in chart 2, since 2005 tourists flow boom in Tigray was observed in 2009 that showed a 50.09% increment rate followed by 25.35% growth rate in 2007. The growth rate of both international and domestic tourists was varied from year to year. With an average growth rate of 10.48 percent, in 2010 highest growth rate of international tourist flow rate (28.58%) in Tigray was recorded and the lowest was observed in 2013(-0.1%). Despite this, in 2012 and 2006 the smallest rate of growth of 3.5 % and 6 %, respectively, was achieved. These lowest growth rates might be due to the critical financial crisis and unemployment boom occurred in the western world, particularly the dominant tourist sending countries of Europe and USA. Furthermore, the average growth rate of international tourists flow was 10.48%. Moreover, statistical abstracts show that international tourists coming from Europe took the lead followed by North America and Asia.

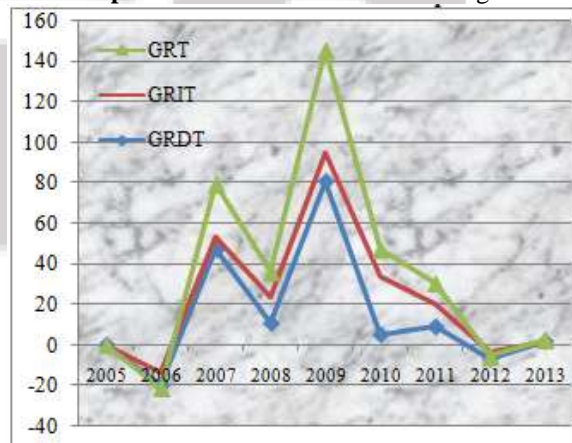
Graph 2: Trend of International & Domestic Tourists flow (2005-2013)



Source: Documents survey and computation (2013)

Numerical findings on domestic tourists flow show that 2009 was considered as a year of domestic tourist boom in Tigray; about 80.82% growth rate was recorded following 47.18% growth in 2007.

Graph 3: Growth rate of tourists in Tigray



Source: Own survey and computation, 2013

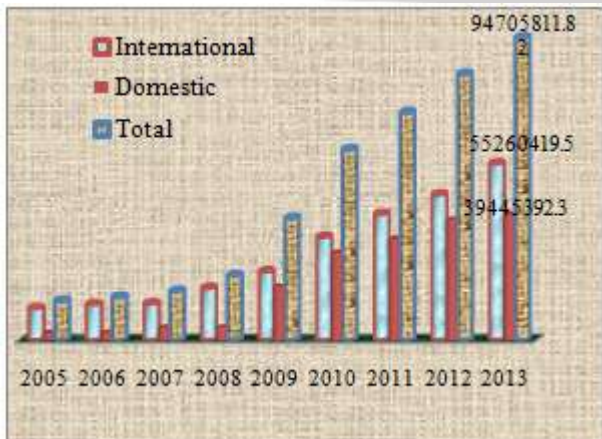
⁵Growth rate = $\left(\frac{\text{Number of tourists in Year} - \text{number of tourists in year-1}}{\text{Number of tourists in year-1}} \right) * 100$
⁶The data used for this study focuses from 2004/ 2005-2012/2013

Taking 2005 as a base year for this study, the smallest growth rate of domestic tourist (-19.77%) was observed in 2006; and on average, domestic visitors flown to Tigray was growing at rate of 15.99% which is equivalent to 29564.67 tourists per annum.

4.3.2 Analysis on the Income from Tourism

Countries have made huge investments to increase the flow of tourists and revenue from the smokeless industry, tourism. In Ethiopia, the same is true yet the amount and intensity of investments varied with the level and nature of regions' endowments, government priorities and investment policy, business profitability etc. The contribution of the service sector in Ethiopia GDP is increasing from time to time. The role of the service sector in the Ethiopian economy consists almost entirely of tourism sector. The Ethiopian government is working to enhance the contribution role of the tourism sector in the national economy. The contribution of tourism in Tigray as source of income has a wide spread effect and reach the whole community via its direct and indirect routes⁷. The level of income from the sector has risen throughout despite the rate of growth has shown a kind of ups and downs.

Chart 3: Revenue from Tourists since 2005-2013



Source: Documents survey and computation (2013)

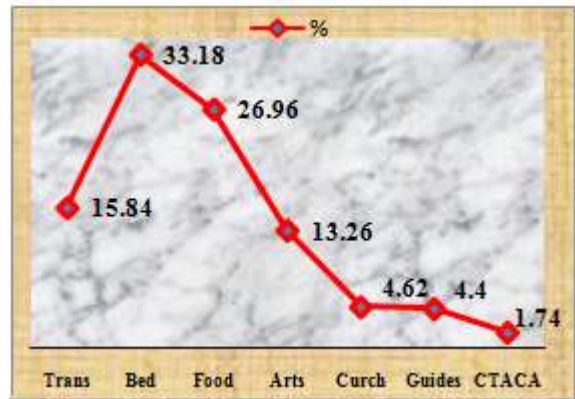
Based up on the estimated spending of tourists for accommodation, food, transports, entrance tickets and other purchases, nine years income is computed. As indicated in chart 4, regardless of the rate of increment in revenue is low till 2008; dramatic increments were observed onwards⁸. Moreover, chart 4, achieving average annual growth rate of income of 27.7 percent per annum, in 2012/2013, enjoying more than 39.4 million birr contribution from the local tourists, about 55.3 million birr was generated from the sector⁹.

⁷ In this study business owners(hotels, transport service providers, arts shops, guides), Culture tourism agency Aksum and churches (St. Mary church, AbuneAregawi and AbuneYemata) are included

⁸ The high inflation rate facing the Ethiopian economy has significant effect on the magnitude of revenue and all the computed revenue is an average value and inflation was adjusted and treated

⁹ On average the number of days that an international and local tourist stays in Aksum is 1.5 and 1.2 days, respectively

Graph 4: Share of revenue by sector for 2012/13



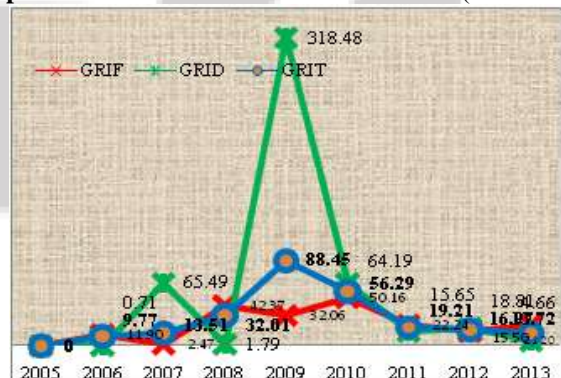
Source: Documents survey and computation (2013)

Revenue flown to different service renders depend on the nature of the service provides. As indicated in graph 5, major share of the revenue (60.14%) is collected by the hotel sector, followed by Tour agents or transport service providers (15.84%). 13.26% is shared among the handcrafts, arts shops and related owners, and the churches (St. marry church has, Abreha we Atsbeha and AbuneAregawi, AbuneYemata) the capacity to utilize 4.62% of the income. In addition, tour guides and Tourism Office (Culture and Tourism Agency Cluster of Aksum, Wukro and Mekelle) got revenue share of 4.4% and 1.74% respectively.

Graph 5 revealed the cyclical movement in the growth rate of income from the tourism sector in the region. The highest rate of growth (88.45%) was achieved in 2009 followed by 56.29% in 2010 and 32.01% in 2008. However, low growth rate of revenue (9.77%) were registered in 2006 which was highly influenced by the growth rate of revenue (0.71%) from the inland visitors.

Therefore, the rate of growth of revenue stated above is the result of changes in the growth rate of tourists flow. Taking 2005 as a base year of study, highest growth of rate of tourist flow (50.09%) was observed in 2010, followed by 25.35 % and 13.36 % in 2007 and 2010, respectively. In this study, low rate of tourist flow was recorded in 2006 and 2012 with change rate of -7.69 % and -2.57%, respectively.

Graph 5: Growth rate of Income and Tourists (2005-2013)¹⁰



Source: Documents survey and computation (2013)

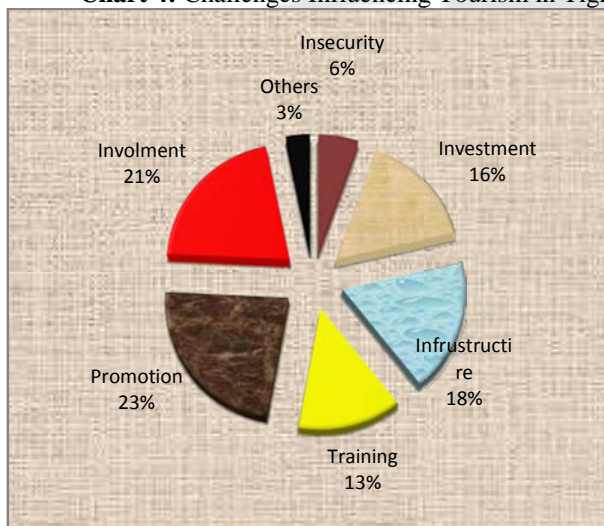
¹⁰GRIF growth rate of income from international tourist; GRID growth rate of income from domestic tourist and GRIT is growth rate of total income from tourist

In addition, due to the Ethiopian Millennium celebration, income from international and local tourists had increased by about 32.01%. Moreover, on average 12.67% growth rate in flow of tourists, Tigrai enables to enhance its income at a rate of 27.77% that helped us to infer the growth rate of income is positively correlated with the flow rate of tourists and the price of products and services in tourist destination areas¹¹.

4.4 Challenges Influencing Tourism In Tigrai

Tourism is a sector which is influenced by multitude of factors. The development and contribution of tourism in Tigrai, like its development in the whole nation, does not reflect the availability of tourist attraction units. From the study made, the researchers have identified the following factors as the determinants that hamper the development of the sector and to contribute less to the region and are presented in a certain clusters¹².

Chart 4: Challenges Influencing Tourism in Tigrai



Source: Own survey and computation (2013)

✓ **Professionalism and promotion problems**

Tourism as independent sector needs tourism knowledge and professionalism. However, there is poor role of this sector to support the economy because of lack of tourism knowledge and professionalism, poor public promotion and mass media exposure and other related factors. Technical capacity that the people have to sell the endowments they own is quite poor. It is believed that the region is highly endowed with such tourist environs but sensible and incessant promotional activities carried out to promote to the world is inadequate. As depicted in chart 4, among the factors affecting tourism in Tigrai lack of professionalism and promotion takes the largest share which is 23 percent.

✓ **Low participation of the Community and sense of ownership**

Community participation in the sector and the sense of ownership of these tourist sites is very insignificant.

Majority of the community considers tourism as a sector for specific service providers. The second most important hindering factor for tourism development in Tigrai is trivial participation of the local community with little knowledge and awareness. As shown in the above chart, it accounts for 21 percent. Moreover, some of the community members even though they are participating in the tourism sector, they have little knowledge about the tourist sites and also have language related problems. As indicated in table 3, from all the 310 respondents, only 34.3 percent of the respondents have made a visit to all the tourist sites found in Tigrai. 41 percent of the respondents have visited some of the sites which are easily accessible. Furthermore, 10.3 percent of them have visited very few tourist environs particularly Aksum cluster (the obelisks and St. Marry church), Wukro cluster (the churches during religious days) and Mekelle cluster (Yohannes IV palace and martyr monument) for some special events like having guests, marriage ceremony and meeting.

Table 3: Rate of tourism site visit

Site visit	Frequency	Percent	Cumulative Percent
All	106	34.3	34.3
Some	127	41	75.3
very few	32	10.4	85.7
None	45	14.5	100.0
Total	310	100.0	

Source: Own survey and computations, 2013

Surprisingly, 14.3 percent of the respondents who are living in the study areas for more than twelve years did not visit the tourism endowments in their locality. Having this, when we try to investigate the reasons behind the poor site visiting behavior of respondents, 81.7 percent of the respondents put poor interest and carelessness as a reason for not visiting the assets followed by easily accessibility (13.4 %) and 4.9 percent of the respondents raised lack of information, religious attitude and adaptability¹³ as a cause for not visiting the sites.

✓ **Poor infrastructure and low tourism related investment**

Despite tourists' flow rate has increased to this archeological and historical site of the Northern Ethiopia, there are few hotels with full accommodations, lodges and other recreational areas with open air that increase leisure to tourists. This might be because investment projects in tourism are regarded as high risk investments in Tigrai that limits the investment activities to focus mainly on hotel investments.

¹¹ Inflation rate in the economy can affect the real return from the tourism sector

¹² The values are rounded to one decimal place

¹³ They think as only belong to Christian(orthodox church)

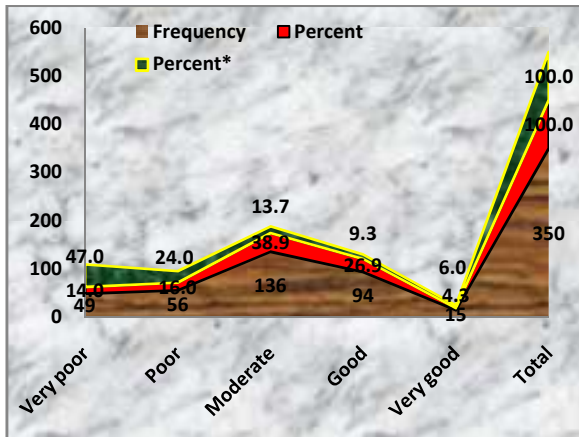


Chart 5: Rate of tourists' facilities

*for foreigner tourists

Source: Own survey and computation, 2013

With regard to hotel investment, 98.7 percent of the owners' have invested in the area because of the tourism attraction nature of the region. The remaining 2.3 percent have invested here because of other motives (family pressure, to support the region and the likes). Among the respondents, 17 percent agreed there is a poor hotel standard in sanitation, availability of modern and traditional dishes and drinks. Moreover, there are infrastructural problems like accommodations, telephone, internet and other facilities have been classified into five rates.

Chart 4 shows that, 68.9 percent of the respondents rated the utilities as moderate and below. If we look at this variable only for the international tourists, the rate has increased to 84.7 percent. The over rate of the facility is rated as moderate but majority of the international tourists (47%) rate it as very poor and 24 percent of them rate it as poor. Only 4.3 percent of all the respondents and 6 percent of the international tourists rated the facilities as very good. Moreover, infrastructural development (18%) as key instrument for tourists' attraction and retention in Tigray does not work properly due to its fragile nature and being it is at its lowest level.

There is no sufficient infrastructure and utilities necessary for the growth of a successful tourism development that increases the welfare of tourists during their stay. Among others, poor road networks, transportation, electricity and communication are less. Tourists as they depart from their permanent place, family and community, they need fast and immediate communication with their respective members for family and business purposes. Due to the low communication system, poor internet service, fax, telephone and others, they need to leave the tourist sites in a short period of time. This shortens the number of days that a tourist can stay in the region; this in return, also affects the total income of the region from the tourism sector.

✓ Poor access for training and capacity building

Service delivery by its nature demands continuous follow ups, timely capacity building activities and fast diffusion of modern innovations. However, the service delivery system in the region is evaluated as poor. Majority of the service providers, hotels, tour guides and operators and others are in need of upgrading their current status focus on hotel

management, sanitation, customer treatment, ethics¹⁴, entrepreneurship, psychology, language and the likes so as to improve the service they provide that enables them to generate better income from the tourism sector. In addition, there are illegal guides (not licensed) that lacks the professional ethics of tour guides, have poor knowledge on the historical explanation of the sites and participate in some banned acts. Information collected from such kind of guides may confuse tourists and reduce the truth worthiness and values of the tourist attraction sites. As indicated in chart 3, 13.4% of the respondents of the study confer that the poor access for training for hotel owners and worker, tour related participants and stakeholders is a factor for the poor performance of the sector.

✓ Insecurity or theft of tourists

In all the tourism clusters of Tigray, tourists are faced difficulties to communicate easily with the local community. This might be due to language barrier they have, become new to adopt the customs and traditions of the community, and the safety problems observed (information) on other tourist destination areas. Furthermore, tourists also feel insecure not only because of theft in rural areas of the localities but also influenced by beggars in urban areas of the tourist sites.

Therefore, they need freedom in all their walks to tourist sites, restaurants and shopping. From the total challenges faced, 5.4 percent of the respondents feel that such activities deteriorate the quality of 'respecting guests' and image that can contribute tourists to have bad insight on Tigray. Last but not the, the remaining 3 percent is from personal biasness of the tour operators, individual guides and people.

5. Conclusion and Recommendations

5.1 Conclusion

Nowadays tourism, the smokeless industry, becomes as a main source of income to nations of the world economy. Tourism industry in LDCs like Ethiopian shows great change on average annual rate of 13 % over the last few years (OECD, 2007). It also generates about 132 million dollar in 2005 regarding in-country expenditure revenues from a base of about 150,000 foreign visitors travelling around Ethiopia. The number of visitors grew from 81,581 in 1997 to 227,398 in 2005 (World Bank, 2006).

The study shows that the number of visitors both domestic and international increases from time to time. To begin with tourists flow, 29566 tourists (both foreigners and domestic visitors) were visiting Tigray and its endowments in 2005. This number has been increased, on average growth rate of 11.26% per annum. Number of visitors has shown continuous increment throughout and reached 70427 in 2013. Moreover, on average, about 51535 tourists were visiting the tourist sites found in Tigray for the last nine years.

Finding shows that 2009 as a year of domestic tourist boom in Tigray and about 80.82% growth rate was recorded followed by 47.18% growth rate in 2007. The international

¹⁴ Illegal acts and mistreatment of tourist is observed in some guides

tourism flow boom in 2010 at growth rate of 28.58 % and the lowest was achieved in 2013 at a growth rate of -0.1%.

The Ethiopian government is giving due focus to tourism hoping that the sector will contribute employment and income to citizens of the country. In the study area, Tigray, up until 2007 the revenue or income generated from tourism was so low. Dramatic increments were observed since 2008 and in 2013 about 39.4 and 55.3 million Birr were obtained from local and international tourists, respectively, for a total of 94.7 million Birr from the sector.

Major share of the revenue obtained from tourism in the study area (60.14%) is collected by the hotel sector, followed by Tour agents or transport service providers (15.84%). 13.26% is shared among the handicrafts, arts shops and related owners, and the St. marry church has the capacity to own 4.62%. In addition, tour guides and Culture and Tourism Agency Cluster of Aksum, Wukro and Mekelle got revenue share of 4.4% and 1.74% respectively.

The highest growth rate (88.45%) was achieved in 2009 followed by 56.29% in 2010 and 32.01% in 2008. However, low growth rate of revenue (9.77%) were registered in 2006. Thus, the growth rate of revenue mentioned earlier is the result of changes in the growth rate of tourists flow. Taking 2005 as a base year of study, highest growth of rate of tourist flow (50.09%) was observed in 2009, followed by 25.35 % and 13.36% in 2007 and 2010 respectively. Low rate of tourist flow was recorded in 2006 and 2012 with change rate of -7.69% and -2.57%, respectively. Having these figure, the international tourist flow growth rate was highest in 2010 (28.58%) and the lowest was recorded in 2013 (-0.1%). The domestic tourist growth rate boom was recorded in 2009 (80.82%) and the lowest was recorded in 2006 (-19.77%). Further, the frequency of coming of the tour and travel operators is very low with average rate of 31.3 and standard deviation rate of 15.5.

People have different reasons for their poor participation in the sector; among poor interest, accessibility and carelessness are taking the lead. In addition, the infrastructural, utilities and accommodations provided to tourists are rated as moderate and below. Only insignificant percentage considered and rated the facilities as good and very good.

Lastly, based on the research findings, the researchers have attempted to examine factors that hinder tourism development in Tigray. Poor community involvement, knowledge and awareness (21%), lack of technical know-how and promotional intensity (23%), lack of tourism related investments (16%), infrastructural development (18%), shortage of timely and continuous training for service renders (13.4%), obstacles on the free movement of tourists and insecurity or theft (5.4%) and others are among the determinants of tourism development in Tigray national regional state.

5.2 Recommendation

Based on the findings, the researchers are in a position to make some possible recommendations:

Tourism is greatly influenced by the advancement of the world economy and technology. Hence, capacity building programs aiming at increasing the awareness of service providers is highly imperative.

Service provision by hotels, guides, tour operators, shops and other are lacking certain ingredients to say quality service provision is there in the tourist sites. Trainings should be given focusing on customer handling, language proficiency, general history, psychology, ethics, data management, entrepreneurship, business management and food preparation are worthy enough to improve the quality of service provision. Hotel standardizing and grading can increase the competition among service providers and this by itself is a good tool to force owners to upgrade the standard of hotels. Moreover, continuous capacity development programs and follow-ups are mandatory in the tourism sector so as to move in line with the changing environment.

Tour and travel operators have imperative role in increasing the tourist flow and income from the sectors. Thus, the poor travel agents frequency of visit of the sites has to be improved. To this end a kind of incentive packages and recognition days has to be organized to motivate the influential tour and travel operators for their contribution of tourism facilities; Ministry of culture, Regional Culture and Tourism Agency, Culture and Tourism Agency Cluster of Aksum, Wukro and Mekelle, Zonal and woreda administration has to take the lead responsibility.

Huge investments on lodges and recreational areas can bring a real change to increase the number of days that tourists can stay in Tigray. On top of that, government should organize youths on fostering investment activities carried out on traditional houses (clubs) with traditional vocal instruments; ethnographic works, traditional clothing events. Culture sharing nights are important opportunities to exploit more from the sector. As these kinds of investments need huge capital, profitability and comparative investment analysis, it is crucial to have public-private partnership form and Universities found in the region having tourism and heritage management department are expected to have the lion's share, Investment office, woreda administration, culture and tourism agency and other partners.

Tourism endowments are gifts and assets of the community which are expected to benefit the mass, through their direct and indirect participation. Tourism development has a power to reduce the extent of poverty as it has the ability to link different sectors of the economy and become source of employment.

In Tigray, the role of the community in the sector is very restricted. To increase the participation of the community in the tourism development, awareness creation activities has to be organized. It is timely valid to build responsible community, has sense of ownership, that has a concern to solve the problems in the sector so as to attract tourists and increase its contribution. Involvement of the community is ensured if it has a key role as supplier, promoter, demander or stakeholder of tourism wealth of the region. Community participation is realized, therefore, through trainings focusing on the contribution of tourism to local community,

role of community and mechanisms of protection and conservation of historical sites, ways of marketing tourism environs and the likes are exceedingly critical.

Infrastructural development in the tourist sites is not as expected and demanded by visitors. There are poor road networks, light and seat problem in tourist sites and internet access and speed. Step ups in infrastructure, certainly, improve the welfare of tourists as it enables to easily communicate with their families and run their permanent works. Therefore, different stakeholders, the community and Culture and Tourism Agency of Aksum, Wukro and Mekelle have to take measure to improve the road networks, the internet and other utilities in order to increase the average stay of tourists.

Healthy competition is highly recognized technique needed to increase efficiency and effectiveness of firms. There are symptoms in the existence of unhealthy competition in the survivor and handcraft shops resulting from the blocked movement of tourists by some tour operators. Off course, 'the survival of the fittest' principle is appreciated in the free market economy; however, some illegal acts may contribute to deteriorate the well-functioning of the system. Therefore, CTAT and Trade and industry office have to work to increase the level of competition. To this end, introducing noticed boards at all tourist sites can increase the knowledge of tourists on the availability of different shops that enable tourists to move freely and to bring fair distribution of revenue and tourists can purchase materials they need comparing their quality and price. Next, it is important to establish associations and solve problems of ex- association, designers of traditional arts and owners, and reward them further trainings in order to increase their bargaining power.

Tourists' movement is influenced by tour guides, beggars and kids that sell certain materials. It is good to ensure the free movement of tourists through establishing marketing sites, association and recruiting supervisory guards. There are some illegal (non- licensed) guides that have significant contribution to disturb the free movement of tourists. In addition, few licensed guides who are working independently also contributing their shares in it. Therefore, as the government is in favor of association (governed by rules and internal bylaws) and then the CTAT & Trade and industry office has to work hard to establish different guides' associations to increase the comfort of tourists.

The researchers recommend that further and detailed research activities on effectiveness of tourism rules and regulations, conflict resolution and nature of competition have to be carried out to speak more about the impact of tourism. At last but not list, regular meeting among the CTAT and other stakeholders and the service providers is crucial to solve problems at their infant stages. It is highly important to establish and develop a kind of motivation schemes for tour and travel operators so as to increase the number of trips to visit the tourist sites. In addition, tourism committees from the CTAT, local community, service providers, Woreda administration, Mekelle, Aksum and Adigrat Universities and other partners have to be established and be more responsible to investigate difficulties in the sector, put tourism development directions and consult the concerned body for improvement.

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