



(RESEARCH ARTICLE)



## Contributions of waterfall to poverty alleviation in rural communities

Tolulope Enitan OLUYEMI \* and Damola Sodiq SHITU

*Tourism and Development Programme, Department of Sustainability Studies, University of Ibadan, Nigeria.*

World Journal of Advanced Research and Reviews, 2024, 22(02), 2185–2192

Publication history: Received on 22 April 2024 revised on 29 May 2024; accepted on 31 May 2024

Article DOI: <https://doi.org/10.30574/wjarr.2024.22.2.1672>

### Abstract

This research focused on the role of Arinta Waterfall in alleviating poverty in the rural community of Ipole Iloro, Ekiti State, Nigeria, and utilised a survey-based methodology that included data collection through questionnaires. The analysis of 285 questionnaires, cleaned and processed with SPSS, revealed positive economic and infrastructure impacts due to the waterfall presence, including increased government revenue, improved road networks, the establishment of a primary health centre, and the provision of essential community amenities. To fully harness Arinta Waterfall's tourism potential, it is recommended to prioritize local infrastructure enhancement, implement more effective marketing strategies, and actively engage the community. The study employed a multi-stage sampling process, involving three randomly selected quarters from Ipole Iloro with an initial sample size of 450 residents. Purposive sampling targeted youth and the elderly, reducing the sample to 315 respondents, and ensuring a representative selection of rural dwellers.

**Keywords:** Economic development; Contributions of waterfalls; Provision of amenities; Community engagements.

### 1. Introduction

Poverty is a widespread global issue with varying prevalence and severity, affecting individuals and nations differently (World Bank, 1996). Despite fundamental necessities like food, shelter, clean water, healthcare, and education, not everyone can access these essentials due to poverty (United Nations Development Programme, 2015). Sub-Saharan African nations face some of the highest poverty levels, accompanied by violence, unrest, and low living standards (World Bank, 1996). Nigeria, despite its significant economy and population, grapples with high poverty rates and youth unemployment (Aiyedogbon & Ohwofasa, 2012).

To address these challenges, it is crucial to develop sectors like agriculture and tourism, which offer a more equitable distribution of investment returns compared to industries like oil and gas (Aiyedogbon & Ohwofasa, 2012). Tourism not only brings economic advantages but also positively impacts social lives by providing income-generating opportunities, supporting infrastructure development, and benefiting governments through various revenues (Kukoyi, 2015).

Waterfalls, as natural assets, provide functional and aesthetic benefits to people, supporting livelihoods in rural communities (Hudson, 2006). They offer opportunities for relaxation, leisure, and tourism, enhancing the collective value of the natural environment (Andereck & Nyaupane 2017).

Despite Nigeria's abundant tourism potential, including waterfalls, many resources remain underutilized (Aiyedogbon & Ohwofasa, 2012). The Arinta Waterfall in Ekiti State represents an untapped tourism destination with significant economic growth potential. Proper development of Arinta Waterfall could transform it into a recreation centre, fostering community unity and showcasing local skills and products (World Economic Forum, 2013). The tourism

\* Corresponding author: Tolulope E. OLUYEMI

industry has the potential to create millions of jobs globally, contributing to poverty alleviation (World Economic Forum, 2013). Therefore, it is essential to study how tourism activities at Arinta Waterfall have contributed to improving the standard of living among members of the Ipole Iloro community.

---

## 2. Literature review

### 2.1. Waterfalls

Waterfalls have consistently attracted tourists due to their captivating soundscape, aesthetic beauty, natural pools, and recreational opportunities. A waterfall is the result of a river or water body cascading over a rocky outcrop, creating a pool below. These mesmerizing features can also form when meltwater flows over the edge of tabular icebergs or ice shelves. Waterfalls are sometimes referred to as cascades and are shaped by the erosive action of water (Hudson, 2012a).

Ecotourism, as advocated by various scholars, seeks to explore and preserve untouched natural areas. However, many such natural sites, including waterfalls, have yet to be recognized and evaluated for their tourism potential. Assessing landscapes for tourism development should prioritize identifying and evaluating their scenic qualities. Eja, Ajake, and Effiom (2021) suggest that the underutilization of ecotourism potential in waterfalls is due to limited community awareness and a lack of positive attitudes, leading to environmental degradation in these areas.

Waterfalls have a universal appeal, as evidenced by the multitude of books, travel literature, and tourist guidebooks that feature these natural wonders. People of all ages, from children to seniors, have a deep appreciation for waterfalls worldwide. This widespread enjoyment, coupled with advancements in transportation and the growth of leisure activities, has led to a surge in visitors to waterfalls, with some enthusiasts being referred to as "waterfall lovers," "waterfall buffs," or "waterfall fans" (Hudson, 2012). Some individuals even study "waterfall-ology" and engage in "waterfalling," earning them the title of "waterfall collectors" (Hudson, 2013).

This appreciation for waterfalls has contributed to the development of several popular tourist destinations, such as Niagara Falls, Victoria Falls, Iguassu Falls, Yosemite National Park, Yellowstone National Park, Switzerland, Iceland, Norway, and New Zealand, where waterfalls are significant scenic attractions (Hudson, 2012a, 2013). Many of these well-liked waterfalls have undergone development, including the addition of dining establishments and accommodations. Visitors to these sites can enjoy a variety of dining options, from casual eateries to fine dining, and lodging choices that range from campgrounds to luxury hotels. The accessibility of tourism information and advancements in technology continue to draw more visitors to these enchanting natural features.

### 2.2. Poverty

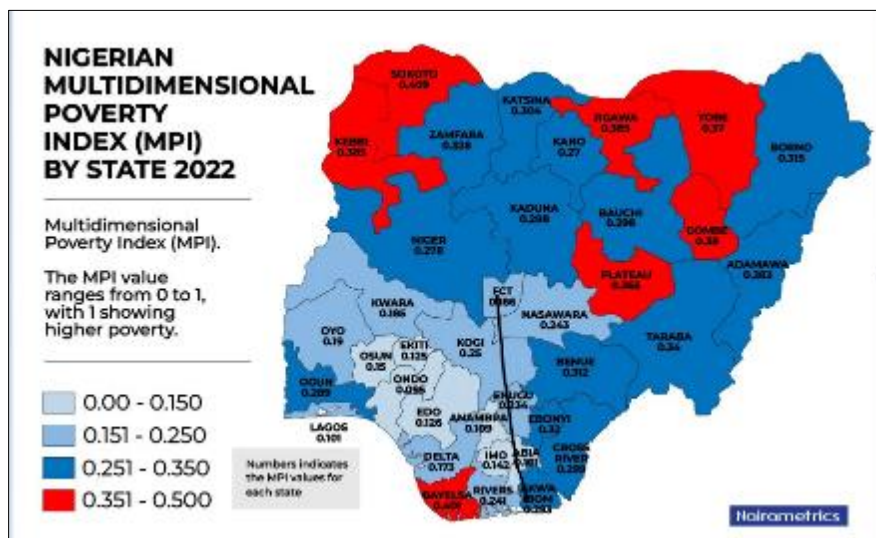
Poverty is a complex and multifaceted concept that encompasses various aspects of human life and cannot be reduced to a single dimension. At its core, poverty denotes the absence of specific material possessions or financial resources. It extends beyond mere material lack and includes the deprivation of fundamental human necessities such as food, clothing, shelter, access to safe water, health, adequate housing, education, the opportunity for a fulfilling life, freedom, the ability to voice one's concerns, participation in society, dignity, self-esteem, empowerment, representation, personal security, and respect from others, as outlined by Zhao and Ritchie (2007). While poverty is commonly associated with underdeveloped countries and the "South," including regions in Africa, Asia, and Latin America, it remains a global concern.

In discussions regarding sustainable development, poverty is a focal policy issue. Development goals such as the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs) emphasize the need to reduce or eradicate poverty in all its dimensions (MDG report, 2015; UNWTO and UNDP, 2017). To gain a comprehensive understanding of poverty's contemporary existence, Lines' (2008) perspective is helpful, as it underscores the importance of comprehending its root causes. While there is widespread empathy for individuals living in poverty, defining poverty remains a subject of debate. Some argue that poverty should be defined primarily by the absence of financial resources, while others advocate for a broader definition that includes social exclusion, marginalization, vulnerability, political repression, and victimization (Andrew, 2013). Poverty has been examined through various lenses, including political, economic, cultural, historical, and societal processes. Moreover, moral principles, religious beliefs, and political ideologies influence how society perceives poverty as a "problem" and its societal impact (Andrew, 2013).

### 2.3. Poverty in Nigeria

Poverty, as stated by the World Bank in 2009, is a widespread issue that impedes economic growth, making income equality and poverty reduction essential development objectives. Approximately 2.8 billion individuals worldwide survive on less than \$2 per day, with 1.4 billion living on less than \$1 per day, as per global estimates. The Sub-Saharan African region has witnessed a concerning increase in poverty rates, raising concerns among policymakers, both domestic and international. Nigeria, situated in this region, grapples with a significant poverty problem, with the National Bureau of Statistics reporting an alarming rise in poverty from 68.0% to 84.5% between 2010 and 2014. In 2023, Nigeria ranked 37th out of 169 nations in the Global Poverty Ranking Index, boasting a Human Development Index (HDI) of 0.423, categorizing it among nations with high poverty rates. With a GDP per capita of USD 2,156 and a life expectancy at birth of 48.4 years, the nation faces considerable challenges. In the same year, Nigeria's Multidimensional Poverty Index (MPI) stood at 0.368, further underscoring the depth of poverty. According to the United Nations Human Poverty Index (UNDP, 2015), Nigeria was listed among the 33 poorest countries globally in 2014. The National Bureau of Statistics highlighted that the situation was particularly alarming, with objective and absolute measures of poverty reaching 60.9% and 93.9%, respectively, in 2004. The poverty rate surged to 92.5% in 2009, with the North-West and North-East regions of Nigeria experiencing the highest poverty rates at 77.7% and 76.3%, respectively, while the South-West had the lowest rate at 59.1% in 2010. Sokoto State recorded the highest poverty incidence at approximately 86.4%, while Niger State had the lowest at 43.6% (NBS, 2014).

However, the National Bureau of Statistics 2022 report indicates that Nigeria still grapples with poverty, with an index of 0.257, signifying that 133 million Nigerians live in poverty. States like Jigawa, Sokoto, and Bayelsa have the highest poverty rates, totalling 14.18 million individuals living in poverty. Factors such as insecurity, educational challenges, and limited access to healthcare contribute significantly to the country's poverty levels, according to their analysis.



Source: National Bureau of Statistics, 2022

**Figure 1** Nigerian Multidimensional Poverty Index by State

The high rate of poverty in Nigeria is undeniably caused due to unemployment, diseases and lack of access to credit and finances, hunger, poor road network, and lack of quality healthcare centres. Akande *et. al*(2021), opines that due to the nation's wealth being concentrated in the hand of a few people is the reason why poverty is found at the doorsteps of many citizens.

### 2.4. Tourism and poverty alleviation

Tourism is recognized as a tool for enhancing the quality of life and reducing poverty in both industrialized and developing countries. Major international organizations, including the World Tourism Organization (WTO) and the International Monetary Fund (IMF), allocate resources to combat poverty through tourism development. The United Nations underscores the severity of the global poverty situation, with over 2 billion people lacking reliable electricity, 1.2 billion lacking clean water, and nearly 2.5 billion lacking sanitation facilities.

International studies emphasize that poverty is central to sustained economic progress, with a balanced approach to economic growth and well-executed macroeconomic policies being essential for benefiting the poor (Croes & Rivera, 2015). The sectoral distribution of growth is crucial in determining the extent of poverty reduction (Njoya & Seetaram, 2017). Labour-intensive, low-skilled businesses in tourist destinations can lead to significant income redistribution, benefiting the underprivileged.

Tourism offers numerous opportunities for poverty reduction by fostering local economic development and positively impacting communities' social and physical environments. The "pro-poor tourism" approach aims to direct tourism benefits to disadvantaged communities, involving them in product development and narrowing the gap between tourism enterprises and marginalized populations. Pro-poor tourism strategies encompass measures such as increasing local employment, facilitating consultation channels, and integrating small businesses into tourism networks.

There are various channels through which tourism helps reduce poverty which include income generation through direct or indirect employment in the tourism sector, which benefits low-income families. Tourism also expands the tax base, enabling investments in social infrastructure. The cost channel is associated with price effects on goods consumed by the poor due to increased demand for locally produced items. The extent of the poor's consumption of tourism-related goods and services determines how the price channel affects them. Lastly, the risk channel encompasses long-term dynamic factors, with tourism's impact on regional economic development having both positive (e.g., funding for biodiversity conservation and cultural resources) and negative aspects (e.g., environmental resource depletion and pollution).

---

### 3. Methodology

The research methodology for this study is survey research. Data for the study were collected from primary and secondary sources; this was carried out through questionnaires administration.

#### 3.1. Study Area

Arinta Waterfalls is located in Ekiti West Local Government Area (LGA) of Ekiti state. Ekiti West's population comprises 179,892 based on the 2006 population (NPC, 2007). The LGA has an area of 366 km<sup>2</sup> and a density of 669.1/km<sup>2</sup>. The waterfall is located 6km northwest of Ikogosi warm spring. The waterfall is one of the most popular and visited tourist attractions after Ikogosi in Ekiti state (Adeyeye, Fagbohun, and Odeyemi, 2008). Arinta Waterfalls is bounded by Erin-Ijesha to the East, Ikeji-Ile to the Southeast, Effon Alaaye to the North, and Ikogosi/Erijiyan to the East. It lies within latitudes 7°32'N and 7°36'N of the equator and longitudes 4°55'E and 4°57'E of the Greenwich meridian.

#### 3.2. Sampling Techniques

A multi-stage sampling approach was employed in this study. Initially, three out of the six quarters in Ipole Iloro were randomly selected, each containing approximately 50 households. This resulted in an initial sample size of 250 individuals per quarter. To focus on the potential of Arinta Waterfall, purposive sampling targeted youths and the elderly, narrowing the sample to 150 residents in each of the three quarters, totalling 450 individuals. A subsequent simple random sampling process randomly selected 70% of rural dwellers from each selected quarter, resulting in a final sample of 315 respondents who participated in the study. Data from 285 questionnaires were analyzed after cleaning.

#### 3.3. Method of Data Analysis

Data collection involved the administration of questionnaires, followed by coding and analysis using the Statistical Package for Social Science (SPSS). The analysis utilized descriptive statistical methods, including mean calculations, percentages, and frequency distributions, to examine and interpret the collected data.

---

## 4. Results and discussion

The table summarizes the socio-demographic characteristics of respondents, encompassing gender, age, religion, marital status, education, occupation, and income. Notably, 67.8% were male, with 32.2% female, and 64.1% were married, while 31.9% were single. Age-wise, the largest group (25.8%) fell in the 20-29 age bracket, followed by 50-59 (21.8%). In terms of religion, 50.3% were Christians, 43.6% Muslims, and 6.0% traditional worshippers. Regarding education, most (36.2%) had OND/NCE qualifications. Occupation-wise, traders constituted the majority (26.8%), and income-wise, 53.0% earned between ₦31,000 and ₦50,000.

**Table 1** Socio-Demographic Characteristics of Respondents

S/N		Variable	Grouping	Frequency (N=298)	Percentage (%)
1.		Sex	Male	202	67.8
			Female	96	32.2
			TOTAL	298	100.0
2		Age	Below 19	32	10.7
			20-29yrs	77	25.8
			30-39 yrs	65	21.8
			40-49 yrs	35	11.7
			50-59yrs	60	20.1
			60 and above	29	9.7
			TOTAL	298	100.0
3		Religion	Christianity	150	50.3
			Islam	130	43.6
			Traditional	18	6.0
			TOTAL	298	100.0
4		Marital Status	Single	95	31.9
			Married	191	64.1
			Widow	12	4.0
			TOTAL	298	100.0
5		Educational Background	None	20	6.7
			Primary Education	49	16.4
			SSCE	108	36.2
			OND/NCE	45	15.1
			HND/BSC	72	24.2
			Post Graduate	4	1.3
			TOTAL	298	100.0
6		Occupation	Public Servant	62	20.8
			Farming	38	12.8
			Trader	80	26.8
			Artisans	62	20.8
			Students	20	6.7
			Self-Employed	36	12.1
			TOTAL	298	100.0
7		Income	30,000 and below	52	17.4
			31,500 – 50,000	158	53.0
			51,000 – 100,000	68	22.8
			100,000 and above	16	5.4
			Total	298	100.0

Source: Field Survey, 2023

## Social Impacts of Arinta Waterfall on the Resident's Standard of Living

**Table 2** Arinta Waterfall has led to the development of infrastructures

	Frequency	Percentage
Strongly Disagree	-	-
Disagree	9	3.0
Agree	144	48.3
Strongly Agree	145	48.7
Total	298	100.0

Source: Author's Compilation, 2023

The table indicates that a small percentage of respondents, specifically 3.0%, disagreed, while 48.3% agreed, and 48.7% strongly agreed that the existence of Arinta Waterfall has led to the infrastructural development of the local community. Additionally, 23.2% of the respondents strongly disagreed that the constant inflow of tourists to Arinta Waterfall increased their source of income. In contrast, a small percentage of respondents, specifically 3.0%, disagreed, while 34.6% agreed, and 41.9% strongly agreed with this statement.

**Table 3** Arinta Waterfall has led to the provision of quality and affordable healthcare services

	Frequency	Percentage
Strongly Disagree	8	2.7
Disagree	-	-
Agree	78	26.2
Strongly Agree	212	71.7
Total	298	100.0

Source: Author's Compilation, 2023

In terms of access to quality and affordable healthcare services, 2.7% of the respondents strongly disagreed, 26.2% agreed, and a significant majority of 71.1% strongly agreed that Arinta Waterfall has provided such access.

**Table 4** The influx of tourists to Arina Waterfall has positively affected my income

	Frequency	Percentage
Strongly Disagree	69	23.2
Disagree	1	0.3
Agree	1.3	34.6
Strongly Agree	125	41.9
Total	298	100.0

Source: Author's Compilation, 2023

23.2% of the respondents strongly disagreed that the constant inflow of tourists to Arinta Waterfall increased their source of income. In contrast, a small percentage of respondents, specifically 3.0%, disagreed, while 34.6% agreed, and 41.9% strongly agreed with this statement.

**Table 5** Arinta Waterfall has contributed to good road networks

	<b>Frequency</b>	<b>Percentage</b>
Strongly Disagree	1	0.3
Disagree	14	4.7
Agree	75	24.2
Strongly Agree	208	69.8
Total	298	100.0

Source: Author's Compilation, 2023

In terms of the need for good road networks, a negligible percentage of respondents, specifically 0.3%, strongly disagreed, while 4.7% disagreed, 24.2% agreed, and a significant majority of 69.8% strongly agreed.

## 5. Conclusion and Recommendations

Based on this study, Arinta Waterfall serves as both a natural attraction and a catalyst for socio-economic development in its surrounding community. Tourism activities at the waterfall generate substantial revenue and employment opportunities, bolstering the local economy. Through entrance fees, accommodation, food, and souvenir purchases, visitors contribute to the influx of funds into the community. Additionally, direct and indirect employment opportunities emerge, ranging from tour guiding to retail, fostering economic growth. Also, the waterfall fosters community cohesion by encouraging interaction among residents through collaborative efforts in hospitality services, cultural events, and environmental conservation. It also acts as a cultural heritage site, allowing locals to showcase their traditions and practices to visitors, thereby preserving and celebrating their identity. Revenue generated from tourism can be reinvested in cultural preservation initiatives, further enhancing the community's cultural heritage.

Moreover, the economic benefits derived from tourism translate into improvements in residents' quality of life. Higher-income levels, enhanced job opportunities, and improved access to infrastructure contribute to better living standards. Residents enjoy increased access to education, healthcare, and leisure activities, leading to heightened well-being and satisfaction within the community.

Arinta Waterfall serves as a distinctive platform for involving the local community in ways that endorse sustainable tourism practices and meet their developmental needs. By implementing participatory approaches to decision-making, facilitating capacity development for Indigenous entrepreneurs, and forging alliances with community-based entities, meaningful engagement can be cultivated to guarantee the equitable distribution of tourism advantages.

**Engagement in Decision-Making:** Involving residents in decision-making processes empowers them to express their perspectives and concerns regarding tourism advancement. Through community gatherings and dialogues, locals can contribute valuable insights on matters such as infrastructure, environmental preservation, and cultural initiatives at the waterfall site.

**Entrepreneurial Capacity Building:** Strengthening the skills and abilities of local entrepreneurs through educational and mentoring initiatives enables them to seize opportunities within the tourism sector. By enhancing proficiency in areas such as hospitality and agricultural tourism, these efforts foster economic expansion, employment generation, and sustainable livelihoods within the community.

**Collaboration with Community-Based Organizations:** Establishing partnerships with grassroots organizations enhances community participation and ensures that initiatives are aligned with local priorities. Leveraging their networks and expertise, stakeholders can advocate for cultural conservation, environmental sustainability, and community-driven tourism projects, thereby ensuring a fair distribution of benefits and amplifying community voices in decision-making processes.

Arinta Waterfall has positively contributed to poverty reduction in Ipole Iloro by offering accessible healthcare, aiding infrastructure development, and creating job opportunities. These benefits have improved the community's social and economic well-being. To further enhance these advantages, it is recommended that both public and private investors increase funding for local tourism development. Additionally, promoting the waterfall's social benefits through

community events, cultural festivals, and educational programs is essential. Regular monitoring and evaluation of Arinta Waterfall's poverty alleviation initiatives should also be conducted to ensure their sustained effectiveness and make necessary adjustments based on feedback.

---

## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest is to be disclosed.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

---

## References

- [1] Aiyedogbon, J. O., & Ohwofasa, B. O. (2012). Poverty and youth unemployment in Nigeria, 1987–2019. *International journal of business and social science*, 3(20).
- [2] Akande, O. A., Akande, K. P., Rowland, V., & Olusina, O. P. (2021). Contributions of Ikogosi Warm Springs to Poverty Alleviation in Ikogosi Community, Ekiti State, Nigeria. *African Journal of Sustainable Development*, 11(3), 43-67.
- [3] Andereck, K. L., and Nyaupane, G. P. 2017. Exploring the Nature of Tourism.
- [4] Andrew, H. (2013). *Tourism, Poverty and Development*. Routledge Publication, New York.
- [5] Croes, R., and Rivera, M. (2015). *Poverty Alleviation through Tourism Development. A Comprehensive and Integrated Approach*. Waretown, NJ: Apple Academic Press.
- [6] Eja, E. I., Ajake, A. O., Effiom, V. A. (2021). Assessment of community perception of participation in Eco-tourism: Cross River State National Park Scenario, *British Journal of Humanities and Social Sciences*, 3(3), 1-11.
- [7] Hudson, B. (2012a) *Waterfall: Nature and Culture*. Reaktion Books Ltd, London, UK.
- [8] Hudson, B. (2013). Waterfalls, Tourism and Landscape. *Geography* 90.1: 3-12. *Journey to 2030, Highlights*. Spain: World Tourism Organization (UNWTO).
- [9] Kukoyi, I. (2015). Careers and Prospects of the Hospitality and Tourism Industry. Text of Speech Delivered at the 2015 annual HOTSAs week celebration at the Federal University of Agriculture, Abeokuta, Nigeria.
- [10] Lines T.J (2008) in Andrew Holden (2013). *Tourism, Poverty and Development*. Routledge.
- [11] MDG Report 2015. Assessing progress in Africa toward the Millennium Development Programme. Addis Ababa, Ethiopia: United Nations Economic Commission for Africa. Retrieved from [http://www.undp.org/content/dam/rba/docs/Reports/MDG%20Report%202015\\_ENG.pdf](http://www.undp.org/content/dam/rba/docs/Reports/MDG%20Report%202015_ENG.pdf)
- [12] National Bureau of Statistics, N. (2015). *Nigerian Poverty Profile 2015*, 1–30.
- [13] NBS. (2014). National Bureau of Statistics. *National Bureau of Statistics Publication*, (March).
- [14] Njoya, E. T., & Seetaram, N. (2017). Tourism Contribution to Poverty Alleviation in Kenya: A Dynamic Computable General Equilibrium Analysis. *Journal of Travel Research*, 57(4), 513–524. <https://doi.org/10.1177/0047287517700317>
- [15] Poverty Reduction in Tanzania, 5 (14), 1–15.
- [16] UNDP. (2015). *Human Development Report 2015. Work for Human Development*.
- [17] United Nations World Tourism Organisation (UNWTO); United Nations Development
- [18] World Bank (1996). *Nigeria: Poverty amid Plenty. The Challenge of Growth with Inclusion*.
- [19] Zhao and Ritchie (2007). Pro-poor Tourism: Who Benefits? Perspectives on Tourism and Poverty Reduction.