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Residents' perception of tourism impacts in Kilimanjaro: An integration of the Social Exchange Theory

Abstract
This study aimed at examining residents' perception of tourism impacts around Mount Kilimanjaro, the highest point in Africa. Using the Social Exchange Theory as an overarching theory, economic benefits, involvement in planning and contact with tourists were used to group the residents and their perceptions compared. A structured questionnaire was in collecting data from 160 conveniently selected residents around Mount Kilimanjaro. Mann-Whitney tests were used to appraise significant differences in residents' perception between groups. The results indicate residents who derive economic benefits from tourism, having direct contact with tourists, and those who participate in tourism planning to have relatively more positive perception of tourism impacts. The findings support to the Social Exchange theory and subsumed theories under it including Dependency, Contact hypothesis, and Power/Empowerment theories. The study findings offers practical implications to Destination Management Organizations in planning and interacting with the tourists as well as finding avenues for residents to benefit economically, socially, and environmentally from tourism, and thus alleviate the rampant poverty in the areas around the mountain. Unlike previous studies this study integrated different theories in understanding residents’ perception of tourism impacts. Contextually, this study reveals findings in a relatively less researched area in Africa.

Key words: residents' perception; contact; dependency; empowerment; social exchange; Tanzania

Introduction
Advocates of sustainable tourism emphasize the role of residents’ perception in the development and management of tourism destinations (Sharpley, 2014). Tourism having potential positive and negative consequences to a destination necessitates tourism planners and managers to trace and manage the consequences in order to maximize the positive while minimizing the negative consequences in ensuring the destination is sustainable. Residents who have stayed in the destination for relatively longer time and who can be said to be the rightful owner of the destination are more likely to have observed the changes in the destinations, and thus provide more valid information on the impacts of tourism in the respective destination.

Research on residents’ perceptions of the impacts of tourism abounds and spans over three decades (Pizam, 1978; Allen, Long, Perdue & Kaiselbach, 1988; Ap, 1992; Lankford, 1994; Madrigal, 1995; Andriotis & Vaughan, 2003; Rasoolimanesh, Roldan, Jaafar & Ramayah, 2017; Ali, Hussain, Nair & Nair, 2017). Despite having abundant studies with long history, studies on residents’ perception of tourism impacts are atheoretical and some theoretical (Nunkoo, Smith & Ramkissoon, 2013); the theoretical ones tend to use different diverse theories (Harrill, 2004; Nunkoo et al., 2013) that might...
be one of the reason for the inconclusiveness of the factors to be considered under residents’ perceptions (Andereck & Vogt, 2000). Albeit the Social Exchange Theory (SET) to have been commonly used among the studies, it has been noted to provide a limited perspective of residents’ perception of tourism impacts (Sharpley, 2014). As no single theory can explain explicitly the variations in residents’ perception of tourism impacts (Easterling, 2004) there is a need for studies to integrate different theories. This study is an attempt to integrate SET with dependency, contact hypothesis, and power theories in studying residents’ perceptions of tourism impacts.

Generally, research on residents’ perception tend to have been conducted more in the developed countries with relatively longer tourism history (Sinclair-Maragh, Gursoy & Vieregge, 2015) with the results not necessarily reflecting residents’ perception in less developed countries like sub-Saharan African countries with different contextual factors including the rampant poverty. Mount Kilimanjaro, the highest peak in Africa found in Tanzania, a country in sub-Saharan Africa with tourism being one of the fastest growing industries offers an interesting research context to appraise residents’ perception of tourism impacts. In complimenting previous studies on residents’ perception, this study aimed at examining residents’ perceptions by comparing those who are involved and those who are not involved in tourism with respect to economically depending on tourism, having direct contact with tourist, and resident’s involvement in tourism decision making. Specifically, the study was undertaken in Kilimanjaro region, Tanzania where tourists climb the highest mountain in Africa.

Literature review
Residents’ perceptions of tourism impacts

Residents’ perception or attitude of tourism impacts (Lankford, 1994; Andereck & Vogt, 2000) is a concept that has been researched widely (Kayat, 2002; Latkova & Vogt, 2012) due to its fundamental importance in the development and management of sustainable tourism in a tourist destination (Sharpley, 2014). According to Andereck and Vogt (2000) residents’ perception of tourism impacts refers to residents’ feelings about the economic, social-cultural, and environmental impacts that tourism brings into their area and community. Unlike Wang and Pfister (2008) who prefer to use residents’ attitudes rather than residents’ perception, we shy away from using attitude that connote an enduring state of mind that might reflect values and personality of the residents than the changes emanating from tourism. Residents’ perception as a concept strongly relates with quality of life (Andereck & Nyauapane, 2011; Shani & Pizam, 2012) which reflects the holistic views of residents on the significance of tourism in improving their life. Since the indicators commonly used to measure quality of life within tourism context are too similar if not the same as those that have been used for residents’ perception’ of tourism impacts, this study considers the two terms to be synonym.

Studies on residents’ perception of tourism impacts have used different theoretical lenses; some of the major theories employed include the commonly used Social Exchange Theory-SET (McGehee & Andereck, 2004; Wang & Pfister, 2008; Vargas-Sanchez, Porras-Bueno & Plaza-Mejia, 2010; Nunkoo & Gursoy, 2012), Social Representation (Andriotis & Vaughan, 2003; Ritchie & Inkari, 2006), Growth Machine Theory (Martin, McGuire & Allen, 1998), Contact Hypothesis (Ward & Berno, 2011), Empowerment (Maruyama, Woosnam & Boley, 2017), Power theory (Kayat, 2002), Dependency Theory (Madrigal, 1995), Stakeholder theory (Sharma & Gursoy, 2014), and different combinations of the aforementioned theories. Albeit being the commonly used theory, SET have been noted to be limited in explaining residents’ perception of tourism impacts (Ritchie & Inkari, 2006; Vargas-Sancez, Porras-Bueno & Plaza-Mejia, 2010) as well as providing mixed empirical results (Abdollahzadeh &
Sharifzadeh, 2014; Li & Wan, 2013). Thus it is necessary for the SET to be expanded to include factors beyond the economic utility (Easterling, 2004; Wang & Pfister, 2008). For instance, Easterling (2004) indicates no one single theory like the SET can explain residents’ perception of tourism impacts completely, thus it is necessary to integrate different theories in explaining the phenomenon. Furthermore, Wang and Pfister (2008) generally indicate that research focusing on residents’ perceptions can be either economic or noneconomic (social-psychological) benefits or costs of tourism. By extension, it can be said the theories that have been used to explain residents’ perceptions can also be grouped either into economic or noneconomic value with SET being an overarching paradigm in understanding residents’ perceptions of tourism impacts. This study make use of the SET, Dependency theory, Contact Hypothesis, and Power theory with SET being considered as a paradigm in explaining the other theories. Such grandeur position of SET taken in this study is a route towards overcoming the ‘simplicity’ use of the theory (Maruyama et al., 2017) through the inclusion of relevant theoretical constructs from the other theories that can be subsumed under the SET. The other theoretical perspectives apart from the SET serve in gaining a holistic understanding of residents’ perception on top of the economic perception that dominates the literature on residents’ perceptions.

Nunkoo et al., (2013) upon reviewing residents’ attitudes to tourism studies that were conducted between 1984 to 2010 noted 76 and 64 studies to be atheoretical and theoretical respectively. Among the 64 studies identified to be theoretical, 36 utilized SET (Nunkoo et al., 2013) that indicates the popularity of the theory. The SET explains the voluntary engagement in an exchange by an individual or groups of individuals; the exchanges occur when the individual or individuals making a group perceive the value or benefits derived from that exchange to outweigh the costs involved in the exchange process (Easterling, 2004). Within the context of residents’ of a tourist destination, the residents will participate in and support the tourism industry if they perceive the benefits derived from the exchange to outweigh the costs involved in the exchange. The exchange elements can be tangible or intangible (Andriotis & Vaughan, 2003) with the former including economic benefits while the latter reflecting the non-economic (Wang & Pfister, 2008) or quality of life factors (Andereck & Nyaupane, 2011; Kim, Uysal & Sirgy, 2013) like social-cultural and psychological benefits.

The use of the Growth Machine theory in studying residents’ perception of tourism appears to reflect the SET (Andriotis & Vaughan, 2003) particularly considering the tangible economic aspects of the exchange within tourism. Growth Machine theory posits different stakeholders in a society who have different stakes derived from an industry will have different perceptions towards the industry as well as having different levels of support for the industry (Easterling, 2004; Madrigal, 1995). Andriotis and Vaughan (2003) consider the Growth Machine theory to be a subset of the SET that particularly emphasizes the economic aspects of exchange process (SET), whereas residents who economically gain from tourism are likely to be positively inclined towards tourism industry. The economic element of the Growth Machine Theory has made others to call it Economic Dependency (Harrill, 2004) that has been widely researched with results supporting the theory (Martin, McGuire & Allen, 1998; Andereck, Valentine, Knopf & Vogt, 2005). In expanding the literature on residents’ perception of the economic impacts of tourism, this study tested the following hypothesis:

H1.; residents receiving economic benefits from tourism have more positive perception of tourism impacts.
Contact hypothesis

The contact hypothesis or rather a theory that emanated from social-cultural interactions postulates that when individuals from different social-cultural backgrounds interact, their perceptions of the other party will improve after the interactions (Sirakaya-Turk, Nyaupane & Uysal, 2014; Carneiro, Eusebio & Caldera, 2017). The contact hypothesis suggests that residents who are in contact with tourist are likely to have more positive perceptions regarding the impact of tourism to the areas where they are residing (Andereck et al., 2005; Ward & Berno, 2011; Garcia, Vazquez & Macias, 2015). Extending the logic of this hypothesis into residents’ perception of tourism impacts, we assume that residents who are in direct contact with the tourists not only will have a better perception of the tourist but also a better perception of the impacts of tourism in the area. Andereck et al., (2005) are of the opinion that contact hypothesis is consistent with the SET; such an opinion that is also shared by Bimonte and Punzo (2016) might reflect the noneconomic exchanges that occur when residents interact with tourists that might be part of the broader exchanges that the SET explains. Such ‘contact’ benefits might reflect the cultural exposure the residents receive from interacting with the tourists as well as psychological benefits (Nunkoo & Gursoy, 2012). For a developing country like Tanzania, specifically Kilimanjaro region with residents around Mount Kilimanjaro who are relatively poor compared to the tourists, the mere interaction with the tourist might serve in associating themselves with tourists who are perceived to be of higher social status. Consequently, this study aimed at testing the following hypothesis:

H₂: residents interacting directly with the tourists have more positive perception of tourism impacts.

Power theory and residents empowerment

Residents’ involvement and empowerment in tourism is among the key factors in the development and management of sustainable tourism in a destination (Shani & Pizam, 2012). Residents’ involvement in tourism entails their participation in planning and decision making in tourism related issues (Choi & Murray, 2010) which reflects political empowerment dimension under the broader concept of resident empowerment (Maruyama et al., 2017). The power theory suggests that residents who perceive to have a say in the development of tourism in their area are more likely to have a better perception of the impacts of tourism compared to those who perceive to have no say in tourism related decisions (Kayat, 2002). The power theory can be subjugated under SET upon considering power to be a derived element in an exchange, with those having power in tourism planning to perceive it as a noneconomic benefit in the exchange (Wang & Pfister, 2008). The practical application of power theory leads into strategies and techniques that are geared towards giving the residents power through the process of empowerment. Using Arnstein’s (1969) ladder of citizen participation, residents’ empowerment in tourism context can take any of the three positions that includes non participation, degrees of tokenism, or degrees of citizen power arranged from lower to higher residents participation. The non participation level reflects manipulation and therapy strategies were the residents are involved in decision making in mere ‘rubber stamping’ to support or indicate their support in decisions. Degrees of tokenism is an empowerment strategy that occurs when the residents are informed on major decisions, when they are engaged in consultative meetings, as well as providing advice into the decision process mechanisms. The highest level of residents’ empowerment involves the resident’s full participation in tourism planning and decision making when they are active partners with authority in decision making jointly with other stakeholders (Shani & Pizam, 2012). Empirical studies appraising residents empowerment provides different inconclusive results regarding the relationship between residents’ involvement and their perceived impacts of tourism. Some studies offers positive supporting evidence to the relationship (Choi & Murray, 2010, Kayat, 2002) while others studies indicate lack of significant relationship between...
involvement and perceptions (Maruyama et al., 2017). Such inconclusiveness calls for more studies to unveil further contextual differences, especially studies in less developing tourist destination like those in sub-Saharan African countries with power sharing being questioned as well as significant number of rural residents being illiterate to participate in tourism decisions (Shani & Pizam, 2010). Basing on the power theory under the broader umbrella of the SET, this study hypothesized:

H₃: residents who participate in tourism decision making have more positive perception of tourism impacts.

Research methodology

Study area

This study was conducted in areas surrounding the Kilimanjaro National Park (KINAPA). Mount Kilimanjaro is the highest peak in Africa standing at 5,895 metres above the seal level and is located 3 degree south of the equator. The Mountain, which is the only free standing mountain in the world, has two dominant volcano peaks (Kibo and Mawenzi) which are surrounded by dense forest consisting of varieties of flora and fauna. Tourists climbing the Mountain have the option to choose between the six routes to climb the mountain including Machame, Marangu, Rongai, Lemosho, Shira, or Umbwe routes. In terms of percentage of climbers, Machame accommodates 45% climbers followed by Marangu 40%, Lemosho 8%, Rongai 5% Shira 1%, and Umbwe less than 1% (Ultimate Kilimanjaro, 2017). Over the years, the number of tourists climbing the mountain has increased with annual average being more than 44,000 tourists per annum (Table 1). Majority of Mount Kilimanjaro climbers are tourists as indicated in recent statistics that shows 41,038 of the climbers in 2015 to be non-residents (tourist) with only 3,328 to be residents. With more than 92% climbers being non-residents, it can be said that tourism in the area to be foreign oriented, and thus rendering a suitable area to appraise residents’ perception of tourism impacts including social-cultural impacts. Moreover, from the fact that most of the studies that have been undertaken to appraise residents’ perceived impacts of tourism were in developed countries compared to the current one in a typical developing African country were poverty is wide-spread, the area offers a fresh empirical insights.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009/10</td>
<td>46,856</td>
</tr>
<tr>
<td>2010/11</td>
<td>52,641</td>
</tr>
<tr>
<td>2011/12</td>
<td>64,467</td>
</tr>
<tr>
<td>2012/13</td>
<td>53,254</td>
</tr>
<tr>
<td>2013/14</td>
<td>55,231</td>
</tr>
<tr>
<td>2014/15</td>
<td>44,366</td>
</tr>
</tbody>
</table>


Methods

This study used a structured questionnaire as a data collection instrument. The questionnaires were conveniently distributed in the study area during June/July, 2016 that coincided with beginning of high tourism season thus making it easier for the residents to vividly appraise the impact of tourism.
(Vargas-Sanchez, Porras-Bueno & Plaza-Mejia, 2014) rather than relying on their memory if the study was conducted during the low tourism season. The questionnaires were distributed directly to the local residents in their place of residence to ensure only those who resided in the communities were included in the study. Only those who were available in their places of residence and who were willing to participate in the study were asked to respond to the questionnaire. Due to the possibility of having some respondents being illiterate and thus unable to fill in the questionnaire, interview was opted for to avoid embarrassing some residents. To facilitate accessing the residents as well as creating a rapport, a formal letter was obtained from local government authorities in the respective areas and in certain situations the ten cell leader/local administrator introduced the researcher to the different households.

The questionnaire had three sections; the first section captured demographic variables while the second section had questions for involvement in tourism industry and decision participation. The third section included items for tourism impact perceptions, satisfaction, and overall evaluation of the cost-benefit of tourism in line with the SET. The demographic questions were at nominal and ordinal levels of measurements were the respondents were supposed to select the appropriate responses reflecting their status. Involvement questions (Sharma & Dyer, 2009; Ribeiro, do Valle & Silva, 2013) and decision participation questions were also measured at nominal level were the respondents were required chose yes or no to indicate their involvement and decision participation in the tourism industry. Eighteen (18) Likert-types item scales for tourism impacts were adapted from the literature (Andriotis & Vaughan, 2003; Abdollahzadeh & Sharifzadeh, 2014; Sharma & Dyer, 2009; Ritchie & Inkari, 2006) were included in the third section with 1 indicating strongly disagree and 5 indicating strongly agree; the mid-point of the scale (3) indicated neither agree nor disagree. The residents’ perception of tourism impacts included the three dimensions of sustainable tourism, specifically economic, social-cultural, and environmental aspects. Three (3) and two (2) items also framed in Likert-type scale were include to capture residents’ level of satisfaction with tourism in their area and overall evaluation of tourism respectively.

Out 180 questionnaires that were distributed to the residents’ households in the area, a total of 160 questionnaires were dully filled and were used for data analysis. The data was subjected to descriptive analyses that also served in exploring the nature of the sample with respect to normality. The data indicated Skewness and Kurtosis for some items to be above ± 2 indicating the sample not to follow normal distribution (Field, 2013), and thus the non parametric tests were used. Specifically, Mann-Whitney tests were used to compare the perception mean scores of the residents with respect to the different levels of involvement in tourism industry, and their decision participation. Prior to testing mean differences, multiple items for involvement and decision participation were collapsed into single composite items for the respective dimension using conditional logic. Using SPSS transformation menu, ‘if’ conditional logic was used to group those who were involved and participated in tourism decision making by instructing the system to code 1 for cases with the respective items for the dimensions having ‘yes’ responses.

Research results
The demographic profile of the respondents is presented as Table 2. More than half of the respondents (56.3%) were males. Majority of the respondents were married (61.3%) and had an education level of primary school (61.3%). Very few (4.4%) indicated to be employed while majorities (67.5%) were self-employed. About half of the respondents (49.4%) were born in the respective areas under the study.
Table 2
Demographic profile of respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>90</td>
<td>56.3</td>
</tr>
<tr>
<td>Female</td>
<td>70</td>
<td>43.8</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>37</td>
<td>23.1</td>
</tr>
<tr>
<td>Married</td>
<td>98</td>
<td>61.3</td>
</tr>
<tr>
<td>Others</td>
<td>25</td>
<td>15.7</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal education</td>
<td>9</td>
<td>5.6</td>
</tr>
<tr>
<td>Primary school</td>
<td>98</td>
<td>61.3</td>
</tr>
<tr>
<td>Secondary school</td>
<td>36</td>
<td>22.5</td>
</tr>
<tr>
<td>Vocational training</td>
<td>14</td>
<td>8.8</td>
</tr>
<tr>
<td>Degree</td>
<td>3</td>
<td>1.9</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>7</td>
<td>4.4</td>
</tr>
<tr>
<td>Self-employed</td>
<td>108</td>
<td>67.5</td>
</tr>
<tr>
<td>Unemployed</td>
<td>41</td>
<td>25.6</td>
</tr>
<tr>
<td>Pensioner</td>
<td>4</td>
<td>2.5</td>
</tr>
<tr>
<td>Duration of residence in the area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not a resident</td>
<td>10</td>
<td>6.3</td>
</tr>
<tr>
<td>Less than 5 years</td>
<td>21</td>
<td>13.1</td>
</tr>
<tr>
<td>5-10 years</td>
<td>50</td>
<td>31.3</td>
</tr>
<tr>
<td>Since birth</td>
<td>79</td>
<td>49.4</td>
</tr>
</tbody>
</table>

To keep up with the theoretical foundations in this study, particularly the contact hypothesis, growth machine theory, and power theory, items reflecting the theories were included in the questionnaire with the results shown as Table 3. Generally, the results indicate residents to be relatively less involved in tourism industry with respect to economic, interaction with tourists, and planning and decision making. Compared to other types of involvement, residents in the study area are more economically involved in tourism as almost 50% indicate to earn a living from the industry.

Table 3
Local community involvement in tourism

<table>
<thead>
<tr>
<th>Involvement variable</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct contact with tourist as part of work</td>
<td>59</td>
<td>36.9</td>
</tr>
<tr>
<td>Earn a living from tourism</td>
<td>79</td>
<td>49.4</td>
</tr>
<tr>
<td>Tourism as main source of income</td>
<td>52</td>
<td>32.5</td>
</tr>
<tr>
<td>Household member gets income from tourism</td>
<td>60</td>
<td>37.5</td>
</tr>
<tr>
<td>Opinion raised in tourism planning</td>
<td>29</td>
<td>18.1</td>
</tr>
<tr>
<td>Involved in tourism meetings</td>
<td>36</td>
<td>22.5</td>
</tr>
<tr>
<td>Informed on major tourism decisions</td>
<td>27</td>
<td>16.9</td>
</tr>
</tbody>
</table>

Table 4 presents the descriptive statistics for the scale items used to capture residents’ perceptions, satisfaction and index for the Social Exchange. The Kolmogorov-Smirnov Z scores are also presented in the table with their respective levels of significance to indicate the general perception of the sample. Out of the 18 items capturing residents’ perception of tourism impacts, 5 items were evaluated negatively. On appraising the items that were negatively evaluated, the item reflects economic aspects of tourism and adoption of foreign culture by locals. Items for satisfaction (3) and those for overall benefits/costs (2) were summated and average scores were used for further analyses. Overall satisfaction with tourism
in the area and the grand SET were significantly scored on the higher side indicating the locals to be satisfied as well as perceiving the benefits derived from tourism to outweigh the costs.

### Table 4
**Descriptive statistics for residents' perception items**

<table>
<thead>
<tr>
<th>Perception item</th>
<th>Mean</th>
<th>Std. dev</th>
<th>Kolmogorov-Smirnov Z</th>
<th>Asymp. sig (2 tailed)</th>
<th>Perception status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improves household standard of living</td>
<td>2.7375</td>
<td>1.59594</td>
<td>2.805</td>
<td>0.000</td>
<td>-ve</td>
</tr>
<tr>
<td>Create more jobs for foreigners than local</td>
<td>3.8625</td>
<td>1.12986</td>
<td>3.459</td>
<td>0.000</td>
<td>-ve</td>
</tr>
<tr>
<td>Provide market for farm products</td>
<td>3.1875</td>
<td>1.25987</td>
<td>3.425</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Tourism brings in economic benefits only few people</td>
<td>3.9938</td>
<td>1.29584</td>
<td>3.740</td>
<td>0.000</td>
<td>-ve</td>
</tr>
<tr>
<td>Increase price of goods and services</td>
<td>2.4188</td>
<td>1.40293</td>
<td>3.856</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Preserve the culture and encourages local handicrafts</td>
<td>4.2625</td>
<td>0.69579</td>
<td>3.674</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Local community adopt bad foreign culture</td>
<td>3.4500</td>
<td>1.15905</td>
<td>2.940</td>
<td>0.000</td>
<td>-ve</td>
</tr>
<tr>
<td>Provide culture exchange and education</td>
<td>4.2563</td>
<td>0.54075</td>
<td>4.914</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Improvement of infrastructure and public service</td>
<td>3.7813</td>
<td>1.28695</td>
<td>3.700</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Community friction between local residence and tourist</td>
<td>1.1875</td>
<td>0.42244</td>
<td>6.279</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Further tourism development improve economic status</td>
<td>4.8188</td>
<td>0.47413</td>
<td>6.231</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Tourism development in general keep on improving year after year</td>
<td>3.2938</td>
<td>0.90836</td>
<td>2.692</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Income from tourism has improved over year</td>
<td>2.3813</td>
<td>1.09815</td>
<td>4.089</td>
<td>0.000</td>
<td>-ve</td>
</tr>
<tr>
<td>Tourism lead to greater protection of natural environment</td>
<td>4.7313</td>
<td>0.67032</td>
<td>5.765</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>More rubbish and improper waste disposal</td>
<td>1.4438</td>
<td>0.84487</td>
<td>4.905</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Construction of tourist facilities lead to the destruction of natural environment</td>
<td>1.8938</td>
<td>0.84375</td>
<td>4.584</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Local community awareness of environmental conservation</td>
<td>4.6688</td>
<td>0.74159</td>
<td>5.660</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Because of tourism there is now less agriculture land</td>
<td>2.3250</td>
<td>1.06724</td>
<td>4.280</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Grand satisfaction</td>
<td>4.1104</td>
<td>0.54654</td>
<td>2.515</td>
<td>0.000</td>
<td>+ve</td>
</tr>
<tr>
<td>Grand SET</td>
<td>3.1656</td>
<td>1.25858</td>
<td>2.977</td>
<td>0.000</td>
<td>+ve</td>
</tr>
</tbody>
</table>

Using Mann-Whitney test, comparison of local residents' perception basing on economic benefits, involvement, and contact with tourist was performed with the results shown as Table 5 Under economic benefits derived from tourism, eleven out of twenty items indicates to differ statistically between those who derive economic benefits from those who do not derive economic benefits from tourism. All the items with the exception of 'local community adopting foreign culture' and 'local community awareness of environmental conservation' had higher mean ranks for those who derived economic benefits from tourism compared to those who do not derive economic benefits from tourism. On comparing the mean ranks between those who participated in tourism decision making and those who do not, the items that indicate significance difference (8 out of 20 items) between the two groups indicates those who participate in tourism decision making to have more positive perception of tourism impacts. On comparing residents who directly interact with tourists and those who do not, the results indicate those who interact with tourist to have significant positive perceptions on ten items out of twenty with one item (local community adopt bad foreign culture) being significantly higher for those who interact with tourists.
Table 5
Mann-Whitney tests for economic benefits and involvement

<table>
<thead>
<tr>
<th>Perception item</th>
<th>Economic benefit</th>
<th>Decision participation</th>
<th>Contact with tourist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean rank</td>
<td>Mann-Whitney U</td>
<td>Mean rank</td>
</tr>
<tr>
<td>Household standard of living is higher</td>
<td>69.90 [128.38]</td>
<td>511**</td>
<td>78.14 [105.07]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>678.00**</td>
<td>54.43 [125.13]</td>
</tr>
<tr>
<td>Create more jobs for foreigners than local</td>
<td>84.70 [61.53]</td>
<td>1,349.50*</td>
<td>83.12 [53.21]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>640.00*</td>
<td>86.73 [69.83]</td>
</tr>
<tr>
<td>Provide market for farm products</td>
<td>72.86 [115.00]</td>
<td>899.00**</td>
<td>78.50 [101.32]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>730.50</td>
</tr>
<tr>
<td>Tourism brings in benefits only few people</td>
<td>83.55 [66.74]</td>
<td>1,500.50</td>
<td>82.37 [61.00]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>749.00</td>
</tr>
<tr>
<td>Increase price of goods and services</td>
<td>72.85 [115.03]</td>
<td>8,98.00**</td>
<td>77.27 [114.14]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>551.00**</td>
</tr>
<tr>
<td>Preserve the culture and encourages local handicrafts</td>
<td>77.13 [95.74]</td>
<td>1,457.50</td>
<td>79.90 [86.75]</td>
</tr>
<tr>
<td>Local community adopt bad foreign culture</td>
<td>75.00 [105.36]</td>
<td>1,178.50**</td>
<td>80.49 [80.61]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,020.50</td>
</tr>
<tr>
<td>Provide culture exchange and education</td>
<td>79.73 [83.98]</td>
<td>1,796.50**</td>
<td>81.20 [73.21]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>920.00</td>
</tr>
<tr>
<td>Improvement of infrastructure and public service</td>
<td>75.68 [102.28]</td>
<td>1,268.00**</td>
<td>79.43 [91.64]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>866.00</td>
</tr>
<tr>
<td>Community friction between local residence and tourist</td>
<td>79.98 [82.84]</td>
<td>1,831.50</td>
<td>79.68 [89.07]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>902.00</td>
</tr>
<tr>
<td>Further tourism development improve economic status</td>
<td>80.15 [82.10]</td>
<td>1,853.00</td>
<td>80.47 [80.82]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,017.50</td>
</tr>
<tr>
<td>Tourism development in general keep on improving year after year</td>
<td>77.39 [94.55]</td>
<td>1,492.00</td>
<td>77.67 [110.00]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>609.00</td>
</tr>
<tr>
<td>Income from tourism has improved over year</td>
<td>73.83 [110.62]</td>
<td>1,026.00**</td>
<td>76.09 [126.54]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>377.50**</td>
</tr>
<tr>
<td>Tourism lead to greater protection of natural environment</td>
<td>81.95 [73.95]</td>
<td>1,709.50</td>
<td>81.09 [74.36]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>936.00</td>
</tr>
<tr>
<td>More rubbish and improper waste disposal</td>
<td>80.65 [79.84]</td>
<td>1,880.50</td>
<td>80.85 [76.82]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>970.50</td>
</tr>
<tr>
<td>Construction of tourist facilities lead to the destruction of natural environment</td>
<td>77.24 [95.24]</td>
<td>1,472.00**</td>
<td>82.54 [59.18]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>723.50**</td>
</tr>
<tr>
<td>Local community awareness of environmental conservation</td>
<td>83.25 [68.09]</td>
<td>1,539.50**</td>
<td>80.60 [79.43]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,007.00</td>
</tr>
<tr>
<td>Because of tourism there is now less agriculture land</td>
<td>81.09 [77.84]</td>
<td>1,822.50</td>
<td>83.50 [49.18]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>583.50**</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>74.07 [109.55]</td>
<td>1,057.00**</td>
<td>77.87 [107.93]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>638.00**</td>
</tr>
<tr>
<td>Grand SET</td>
<td>73.65 [111.45]</td>
<td>1,002.00**</td>
<td>78.54 [100.96]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>735.50</td>
</tr>
<tr>
<td>Note: [values represent those who said Yes], * Sign&lt;.05, ** Sign&lt;.001</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conclusions
The finding of this study indicates residents surrounding the Kilimanjaro national park to have both positive and negative perceptions regarding the impacts of tourism in their areas. Overall, the residents are satisfied with tourism in their area as well as perceiving tourism to have more benefits compared to costs. Relatively, residents who derive economic benefits from tourism are more compared to those who are involved in tourism decision making in their respective areas. On comparing groups of residents between those who derive economic benefits and those who do not, those who participate and those
who do not participate in tourism decision making, and those who directly interact with tourists and those who do not interact with tourists, the results indicate residents' perception of tourism impacts to be relatively higher for those who derive economic benefits, participate in tourism planning, and those who are in contact with tourist compared to those who are not involved in tourism with respect to the three dimensions.

The findings of this study offer support to the SET as well as the sub-set theories of Power, Contact, and Economic Dependency theories indicating that residents to engage in mental calculation of benefits and costs of tourism in shaping their overall perception of tourism impacts. With most of the items having the same directional movement with the SET items and satisfaction with tourism, such findings reinforces the elevated position of the SET over the other theoretical lenses in understanding residents’ perception of tourism impacts (Maruyama et al., 2017). This implies that the use of other theoretical lenses should emanate from the SET. Surprisingly, for one item (local community adopt bad foreign culture) was significantly rated higher for those who economically depend on tourism as well as those who have direct contact with the tourist. This indicates that albeit residents deriving economic benefits from tourism, they also feel the negative aspects of tourism onto their communities. Such a finding indicates the importance of integrating the different theoretical lenses in understanding residents’ perception of tourism impacts. Through such theoretical integration, conflicting findings like those of McGehee and Andereck (2004) with some aspects are supporting and others not supporting the SET can be logically explained using the theoretical lenses under the broader SET. The fact that the percentage of those who benefit from tourism economically is relatively higher than those who have been empowered to participate in tourism planning indicates the level of empowerment of the residents under the study to be moderate, particularly in the second step of degree of tokenism (Arnstein, 1969). In developing a sustainable tourism, ideally, the those who earn their living solely from tourism could have been empowered at least to the degree of tokenism for them to be informed of what is happening and thus to know what the industry has to offer them in the future.

The results of this study offer several practical implications for destination management organizations including both public and private organizations. For public organizations like government bodies and local governments that are responsible in planning and developing policies guiding tourism, they should ensure the residents are included in the planning processes not only for the residents to assume ownership of the tourism industry but also for them to air their concerns that can improve and minimize the positive and negative tourism impacts respectively. Furthermore, the government can enact a policy or regulation to guide tourism employment that will facilitate and ensure the locals have the right qualifications and are given priority in employment under different categories ranging from porter, guide, tour operator, and owning tourism related businesses. For instance, it has been reported that each tourist climbing Mount Kilimanjaro in any of the routes requires an average of 2 porters that translate into about 88,000 porters needed per annum, if majority of these were residents of the area, then the number of residents involved in tourism will increase and thus will serve in improving their perception of tourism which is in line with sustainable tourism principles. In improving the employability of the residents in tourism, the government in collaboration with the private sector can start tourism vocational centres around the Mountain routes that can offer training to residents on different aspects of mountain tourism. The private sector players like tour operators and accommodation centres can make a point of offering more employment opportunities to the local residents that will further enhance the residents’ perception of positive benefits of tourism in their areas and thus ensuring the longevity and profitability of the business in the area. Such strategies are likely to reduce the levels of poverty in the areas as well as improving the general
living conditions. Emanating from the confirmation of the contact hypothesis, both the public and private organization can find avenues for the locals to mingle with the tourist. For instance, creation of cultural tourism groups among the local residents can offer greater contact with tourist and thus having more positive perception of tourism. Basing on the percentage of residents who earn a living directly from tourism (49%) as well as the industry being the main source of income (32%), it can be extrapolated that if more residents are integrated into tourism directly then the respective areas might succumb into dependency syndrome by abandoning or neglecting other means of economic and social development like agriculture that is the main industry in the areas.

This study had several limitations that can be taken up by further research to extend knowledge on residents’ perception of tourism impacts. Albeit complimenting much previous research on residents’ perception of tourism impact in non-mountainous context, this study focused mountain tourism in Tanzania particularly Kilimanjaro implying the results might not be wholly applicable in different contexts. With the possibility of residents’ perception to change depending on tourism season (Vargas-Sanchez et al., 2014) and level of tourism development over the years (Lundberg, 2015), future studies can further add to the body of knowledge by embarking on a longitudinal study to appraise the changes of residents’ perception with season as well as over the years. Furthermore, future studies can embark in identification of the reasons that hinder residents to fully participate in tourism using a qualitative approach that can provide deeper and contextual understanding of resident’s involvement in tourism.

References


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