RESIDENTS' ATTITUDES, INTENTIONS AND ACTUAL ENGAGEMENT IN CONSERVATION OF BUILT HERITAGE: EXAMINING THE MODERATING EFFECT OF LEVEL OF TOURISM DEVELOPMENT IN TANZANIA

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Abstract
This study investigated factors influencing local residents' engagement in the conservation of the built heritage. It proposed a theoretical extension of the theory of planned behaviour by adding to the socio-psychological theory the tourism situational factor of "level of tourism development at the destination". A questionnaire survey was conducted with local households in Zanzibar Stone Town (N = 151) and Pangani Town (N = 88) in Tanzania. The former town is more developed in terms of tourism than the latter. The results of the structural equation modelling demonstrate that attitudes to conservation relate positively to intention to conserve, which, in turn, relates positively to (actual) engagement in conservation. The results also show that the mentioned relationships are stronger among local residents in Zanzibar Stone Town than those in Pangani Town. The survey data were triangulated by in-depth interviews with 12 local residents, which showed the importance of socio-cultural contexts in explaining the effect of tourism development. The study supports the extension of socio-psychological models with the inclusion of tourism development as an important contextual factor in the built heritage setting. The study discusses theoretical and managerial implications.

Key words: *Tanzania's heritage, tourism, conservation, Zanzibar, Pangani.*

JEL Classification: *L83;O15;Q30;Q56;Z32*

I. INTRODUCTION

The importance of local residents' engagement in conservation in achieving sustainable management and conservation of heritage resources has attracted many scholars to examine the factors that influence their engagement (Abrahamse and Steg, 2011; Ashley, Osmani et al, 2015; Barr and Gilg, 2007; Garrod, Bjarnadottir et al, 1996; Tonglet, Phillips et al, 2004). The most noted factors emanates from internal and external to an individual (Barr and Gilg, 2007; Kollmuss and Agyeman, 2002; McDonalds, 2014). Factors emanating from internal to an individual include socio-psychological variables such as attitudes, perceptions, emotions and values (Kaiser, Schultz et al, 2007; Stern, 2000), whereas external factors include the managerial, socio-cultural and economic context of conservation areas (Aas, Ladkin et al, 2005; Stem, Lassoie et al, 2003). A few studies (e.g. Kaiser, Schultz et al, 2007; Stronza, 2007; Radzuan, Fukami et al, 2014) have considered that either internal or external factors cause local residents to engage in conservation, but this appears to provide a limited understanding of engagement in conservation, which has been noted to be influenced by internal factors as well as external factors. Interestingly, despite the fact that conservation areas are inherently tourist destinations, the role of tourism development in explaining local residents' engagement in conservation has received limited research attention.

This study attempted to fill the knowledge gap by integrating internal factors, especially attitudes and intentions, which have been acknowledged as influencing behaviour (Armitage and Conner, 2001; Ajzen, 2013), and external factors, especially the level of tourism development at the destination to gain a better understanding of local residents' engagement in conservation. By borrowing ideas from the theory of planned behaviour (TPB) and an incentive-based integrated conservation and development model (ICDM), a conceptual model was developed and tested with the attitudes to conservation as antecedents of intention to conserve, and intention as an antecedent of actual engagement in conservation. The level of tourism development was treated as a moderating variable in the framework, amplifying the previously mentioned relationships, thereby reflecting findings from a nature conservation-based study by Stem et al. (2003), and anecdotal evidences from cultural heritage management studies.

Within the ICDP framework, studies in natural tourism destinations (e.g. Stem, Lassoie et al, 2003) found that tourism development provides economic incentives for conservation of heritage attractions. Yet, the Doxey's (1975) model presents the counter-argument that, at the extremes of tourism development local residents are openly antagonistic towards tourism, and implicitly, conservation for tourism.

Since there are still contradictions in explaining the relationship between tourism development and conservation, the current study sought to contribute to the empirical evidence about this relationship particularly from the built heritage destination setting. An insight into the contribution of tourism development, in line with the socio-psychological model, may reveal alternative strategies to heritage and tourism managers as they work on achieving sustainable heritage destinations by stimulating and fostering local residents' engagement in conservation. In seeking to fill the knowledge gap, this study was guided by the following research questions. What is the relationship between attitudes to conservation and intention to conserve? What is the relationship between intention to conserve and (actual) engagement in conservation? How does the level of tourism development at the destination affect the relationship between attitudes to conservation and intention to conserve on the one hand, and intention to conserve and (actual) engagement in conservation on the other? Theoretically, the answers to these questions may contribute to the body of knowledge about local residents' engagement in conservation and the development of sustainable destination community. By doing this, the study adds to the empirical evidence of the tourism-conservation relationship that has been limitedly studied (e.g. McKercher, Ho et al, 2005), and the controversial intention-behaviour relationship, from the point of view of the built heritage. In addition, it contributes to the examination of reasons for local residents' engagement in conservation in Tanzania, where people's attitudes to the built heritage and their socio-cultural and economic situations tend to vary from those of developed economies.

II. LITERATURE REVIEW

2.1 Theory of Planned Behaviour

The theory of planned behaviour (TPB) provides an explanatory perspective on an individual's engagement in a particular act. The theory assumes that the stronger the intention to engage in an act, the more likely its performance (Ajzen, 1991). The intention is defined as willingness to act in a particular way (Fishbein and Ajzen, 1975). The TPB maintains that attitude towards behaviour positively relate to intention. Attitudes towards behaviour refer to the degree to which a person has a favourable or an unfavourable evaluation of the act in question (Ajzen, 1991). The TPB has however been criticized for focusing on a person's cognitive evaluation of the phenomenon that limits its scope for explaining behaviours (Ajzen, 2013). Consequently, studies (e.g. Davis, Phillips et al, 2006; Tang, Chen et al, 2011) proposed that additional variables should be included in the TPB, in line with Ajzen's (1991:199) idea that the theory "is open to the inclusion of additional predictors". Therefore, it is increasingly being acknowledged that situational factors have to be considered when explaining conservation acts (McDonald, 2014), but these factors relating to tourism have barely been added to the TPB.

2.1.1 Engagement in Conservation and Intention to Conserve

Defining "engagement in conservation of the built heritage" requires a prior understanding of conservation as applied in the field of heritage management. The Burra Charter published by the Australian International Council of Monuments and Sites (ICOMOS, 1999) defines conservation as all activities intended to look after a place so as to retain its cultural significance. The definition emphasizes on the maintenance to prevent deterioration, but with as few alterations to the original façade, fabric and setting as possible. Thus, "engagement in conservation" can be defined as deliberate actions that contribute to the maintenance of the fabric, structure and setting of the built heritage so as to retain its cultural significance. Consequently, intention to conserve refers to a person's willingness to engage in actions that contribute to the maintenance of the fabric, structure and setting of the built heritage.

The seminal work by Stern (2000) argued that the concept of engagement in conservation can be expressed by focusing on the person's actions related to environmental activism, public-sphere environmentalism, and private-sphere environmentalism. Environmental activism refers to active kinds of environmental citizenship, including active involvement in conservation organizations and demonstrations. Public-sphere environmentalism refers to non-activist actions in the public-sphere context, including approval of conservation regulations. The private-sphere environmentalism refers to conservation actions in the individual's private sphere, including the purchase of household goods and services that are environmentally significant in their impact. These categories informed the operationalisation of the concepts of engagement in conservation, and intention to conserve in the study.

The relationship between intention and engagement has remained a contentious issue to the extent that other scholars (e.g. Tang, Chen et al, 2011; Tudor, Barr et al, 2006) ignored the intention variable when studying engagement in conservation. Barr and Gilg (2007) concluded that the role that intention plays in predicting a person's engagement in recycling is fairly small. Yet Kaiser, Schultz et al, (2007) found a positive relationship between intention and engagement in conservation. A general meta-analytical review of the influence of the TPB conducted by Armitage and Conner (2001) found that intention is positively related to behaviour. Overall,

studies (e.g. Barr and Gilg, 2007; Kaiser, Schultz et al, 2007) agree on the existence of a positive relationship. Unfortunately, there is limited (if any) empirical evidence for the intention-engagement in conservation relationship from the built heritage setting. Nevertheless, it can generally be hypothesized that;
HI There is a positive relationship between intention to conserve and engagement in conservation.

2.1.2 Attitudes to Conservation

Attitude, as a person's evaluation of a particular phenomenon such as conservation, is widely known to reflect both instrumental (e.g. rewarding-unrewarding) and experiential (happy-unhappy) facets (Ajzen, 2006). Thus, this study focused on both facets of attitude. Several empirical studies (e.g. Abrahamse and Steg, 2011; Barr and Gilg, 2007; Kaiser, Schultz et al, 2007; Tonglet, Phillips et al, 2004) agree that attitudes to conservation relate positively to intention to conserve. From the built heritage perspective in sub-Sahara Africa, a qualitative study by Kankpeyeng (2009) found that local residents with positive attitudes conformed to the village conservation norms. In the United Kingdom, Garrod, Willis et al, (1996) found that people's attitudes related positively to their willingness to pay additional municipal tax for conservation purposes. Based on these observations, the following hypothesis is posited;
H2 There is a positive relationship between attitudes to conservation and intention to conserve.

2.2 Incentive-based Integrated Conservation and Development Model

Integrated conservation and development model (ICDM) is an approach by Wells, Brandon et al, (1992), which assumes that people will conserve resources when they have an incentive to do so. People may attach intrinsic values to heritage resources, but the ICDM assumes that they must receive tangible benefits in order to conserve resources (Stem, Lassoie et al, 2003). The ICDM is based on the incentive theory (Skinner, 1981), which posits that a person's engagement in a particular act is driven by incentives that include both economic and non-economic, which motivate a particular course of action. Thus, the more an individual receives incentives, the more likely she or he is to engage in conservation (Radzuan, Fukami et al, 2014). Ma and Hassink (2013) argued that, the destination with a relatively well developed tourism produces positive "lock-in" effects characterised by residents' support for tourism. This is because, being part of inter-destination linkages that are "locked in", residents are overwhelmed by the socio-economic incentives that tourism generates (Gill and Williams, 2011). At some point in the future, some individuals may feel that switching to other economic activities would be of greater benefit, but remain mired in the tourism sector (Liebowitz and Margolis, 1995). Tourist attractions, the built heritage among them, form a critical component of the tourist industry and why tourists visit (Lwoga, 2011). Local residents' support for tourism is therefore linked to support for the maintenance and care of heritage attractions (Walpole and Goodwin, 2001).

The perception that heritage is the generator of development is the norm for residents living in a highly developed destination (Lundberg, 2015). On the other hand, for residents living in less developed destinations, tourism has not yet become the major generator of development. These residents remain sceptical about tourism and, implicitly, about conserving the built heritage (Lundberg, 2015). One of the values of heritage relates to the development of tourism and the generation of socio-economic benefits (Stem, Lassoie et al, 2003). In this regard, individuals who are in a highly developed tourist destination are more likely to be aware of and to appreciate the socio-economic value of the built heritage and support conservation than those who are not. Stem et al. (2003) supported this logic from the point of view of nature conservation. They found that the level of tourism development at the destination stimulates one's decision to engage in conservation. Garrod, Willis et al, (1996) found that local residents were willing to conserve because they related the built heritage to local tourism development.

The inconsistency of the above argument appears when explaining the relationship between tourism and conservation from the point of view of Doxey's (1975) model. Doxey (1975) argued that when tourism begins to develop, there is enthusiasm among local residents who hope to gain promised benefits. Once tourism development is underway and consequential expansion has taken place, tourism is taken for granted and seen as a source of profit-making. As tourism development approaches saturation point, the local residents can no longer cope with the higher levels of developments including increasing number of hotels and tourists. Tourism is now seen as a source of problems, including those related to the conservation of their heritage. At this point, local residents are openly antagonistic towards tourism (Doxey, 1975). This means that, instead of stimulating people's engagement in conservation, higher levels of tourism development may discourage engagement in conservation. However, from the fact that most destinations in Tanzania are still limitedly developed for tourism (Lwoga, 2011), the idea that tourism development in this region has reached the extent of making local residents reject conservation for tourism purposes can be questioned. It is therefore expected that the positive relationship between attitudes to conservation and intention to conserve on the one hand, and intention to conserve and engagement in conservation on the other, to be

stronger to local residents who reside in highly developed tourism destination than to those who reside in less developed tourism destination. The following hypotheses are generally posited;

H3a The relationship between attitudes to conservation and intention to conserve is stronger to those living in highly developed destination than to those living in less developed destination

H3b The relationship between intention to conserve and engagement in conservation is stronger to those living in highly developed destination than to those living in less developed destination

The reviewed models and past empirical research culminates into the conceptual framework (Fig. 1). The framework indicates the hypotheses explained earlier, as well as the direction of the relationship among variables.

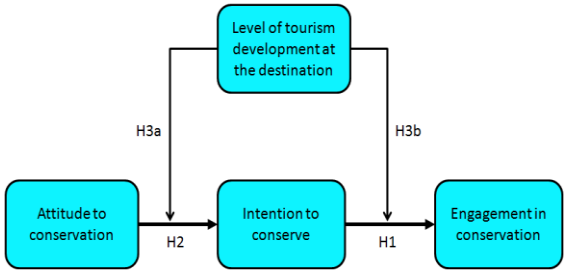


Figure 1 - Conceptual framework

III. METHODOLOGY

3.1 Study Area

Data were gathered from local households in Zanzibar Stone Town and Pangani Historic Town in Tanzania (Fig. 2) in 2015. Zanzibar Stone Town is a world cultural heritage site situated in the west of Zanzibar Island. It is the commercial and political centre of Zanzibar Island. The main economic activities in the town centre are cultural tourism, fishing and the port (Zanzibar Commission for Tourism [ZCT], 2014). Tourism directly employs about 15,000 people (ZCT, 2014). The conservation and development of the built heritage are under the Stone Town Conservation and Development Authority (STCDA), which is supported by the Stone Town Conservation and Development Authority Act of 2010. On the other hand, the Pangani historic town is located in the southern part of Tanga Region (Fig. 2). The major economic activities in order of importance are agriculture, livestock keeping, natural resources, trade, tourism and small industries (Pangani District Council, 2010). The heritage in Pangani has attracted conservation support from organizations such as the Ministry of Natural Resources and Tourism, and the American and German embassies in Tanzania. It has internationally attracted the attention of the World Monument Fund and the United Nations World Tourism Organization (UNWTO).



Figure 2 - Study areas *Source: Google Map*

The towns were purposefully selected because they are rich in terms of built heritage evidencing the African, Arabic, Asiatic and European cultures they nurtured over the centuries. Both towns are also gazetted as conservation areas and recognized by national and international authorities as historic towns. The towns are live with a diverse pattern of local residents living in or using the built heritage, and their involvement in conservation is evident (Lwoga, Anderson et al, 2015). In addition, the towns form a part of key tourism destination in Tanzania. The towns have a similar socio-cultural context. They have been at the crossroads of the old Indian Ocean trading networks where the cultures of Arabia, the Persian Gulf, India and African mainland merge, thereby assimilating the cultural legacies of migrants from these regions to form the Swahili civilization. The majority of the inhabitants in the towns are Muslims, who have preserved their ancient cultures that are associated with collectivism and close-knit communities. However, the historic towns differ in terms of tourism development. Zanzibar Stone Town is relatively a more developed destination than Pangani.

3.2 Research Design

This study used a cross-sectional mixed-research design. A questionnaire survey was used as the main research strategy to address the research hypotheses. Next, qualitative interviews were employed to provide the contextual understanding of the factors behind engagement in conservation. Thus, qualitative

interview was used as a supporting tool to aid the interpretation of the quantitative results.

3.2.1 Questionnaire Survey

The target population was local households in Zanzibar Stone Town and Pangani Historic Town. Pangani had 2,199 households and Zanzibar Stone Town had 2,396 households, making a total population of 4,595 (United Republic of Tanzania [URT], 2013). Based on Krejcie and Morgan's (1970) sample size determination matrix, the 4,595 households correspond to a sample size of approximately 362. Stratified random sampling was applied to obtain the respondents. Household registers were used to pick households from each ward using simple random sampling.

Data were collected through a researcher-administered questionnaire for 7 weeks from January to February 2014. The survey involved one member from each selected household, preferably the household head. In case of either inability to participate or absence of the household head, another permanently resident adult aged 18 and over was involved. The residents were approached by the researcher and trained research assistants during the day while they were in their homes, some were contacted in their businesses and some residents using historic buildings as shops and restaurants. After introducing themselves and the study objectives, the potential respondents' consent to participate in the study was sought, and once granted the researcher interviewed the respondents.

The questionnaire captured attitudes to conservation, intention to conserve, level of tourism development at the destination, and demographic characteristics such as age, gender, income, education and occupation. All items, with the exception of the demographic items and level of tourism development, employed a 5-point Likert-type scale (Appendix). Attitudes to conservation items were adopted from Tang, Chen et al, (2011) and Tonglet, Phillips et al, (2004). Items measuring intention to conserve were adopted from Barr and Gilg (2007) and Garrod, Willis et al, (1996). Level of tourism development was studied using dummy measures as in Lundberg (2015) and Stem, Lassoie et al, (2003). As indicated in Table 1, in terms of tourist flows and the number of tourist amenities, Zanzibar Stone Town is much more developed than Pangani. Thus, the variable "level of tourism development at the destination" was measured by noting the name of the destination where the survey was conducted. If Pangani was the destination, it was inferred that the respondent resided in a less developed tourist destination and was coded 1. If the Zanzibar Stone Town was the destination, it was inferred that the respondent resided in a highly developed tourist destination and was coded 2.

Table 1. Tourist numbers and tourism amenities

Criteria	PHT	ZST
Tourist visits per year	< 1000[a]	>150,000[b]
Number of hotels and guest houses	5	56[c]
Local Tour operators	1	177
Restaurants	-	19

Source: Zanzibar Commission for Tourism (ZCT) (2015), Tanga City Council (2011)

Note:

PHT = Pangani Historic Town, ZST = Zanzibar Stone Town

[a] as per tourist statistics available at the PCCTP for 2012. The information is limited to tourists who pass by PCCTP for tourist information inquiry and guiding services.

[b] tourist flows in 2013 as per ZCT (2014)

[c] Zanzibar Stone Town Heritage Society (n.d.)

The questionnaire items that were originally in English were translated into Swahili and then back-translated into English by professional translators. The items were refined by sending the questionnaire to 11 experts. Next, a pilot test was undertaken.

Quantitative data analysis used 239 useful questionnaires, 151 from Zanzibar Stone Town, and 88 from Pangani Town. It involved data cleaning to check missing data and outliers. Descriptive analyses including measures of Kurtosis and Skewness were conducted to describe the data, and assess their adherence to criteria (e.g. normality) required for multivariate analyses. Exploratory factor analysis (Principal Component Analysis) using orthogonal methods, specifically, varimax rotation, was conducted to simplify and summarize the data in a much smaller number of concepts. Confirmatory factor analysis was then conducted to validate the measurement model. Structural equation modelling was conducted to examine the relationships raised in the conceptual framework, and therefore, test the hypotheses. A multi-group analysis (SEM) was specifically employed to examine the moderation-related hypotheses (H3a and H3b). Validity and reliability of data was checked by employing several measures including average variance extracted, and Cronbach's alpha.

3.2.2 Qualitative Interviews

Purposive sampling was used to select the interviewees who were local residents permanently living in the town. In addition, the interviewees were either the owner or direct user of the built heritage and known by conservation officials to support conservation activities. To select the appropriate interviewees, conservation officials and chairpersons of local conservation groups were contacted, were then provided with the criteria, through which a list of interviewees which matched them was drawn up. With assistance from Village Chairpersons and "Shehas", the interviewees were located at their homes and contacted to further explain the purpose of the study and to schedule the interviews. Once it became

obvious that further interviews provided little or no new information, it was concluded that saturation point had been reached, and the researcher stopped the interview exercise. Overall, 12 interviews were conducted, 7 in Zanzibar Stone Town and 5 in Pangani Historic Town (Table 2).

Table 2. Profile of interviewees

		Sex	Age	Education	Occupation
01	P	M	21– 40	Primary	Self-employed
02	P	M	> 60	College	Volunteer
03	P	F	41– 60	Secondary	Self-employed
04	P	M	41 - 60	Secondary	Self-employed
05	Z	M	41 - 60	Secondary	Self-employed
06	Z	M	21 - 40	Secondary	Self-employed
07	Z	M	21 - 40	Not gone to school	Self-employed
08	Z	F	41 - 60	College	Employed in private sector
09	Z	M	> 60	Primary	Self-employed
10	Z	M	21 - 40	Secondary	Employed in private sector
11	Z	M	41 - 60	Primary	Self-employed
12	P	M	41 - 60	Secondary	Self-employed

Z = Zanzibar, P = Pangani, M = Male, F = Female

In-depth interviews were guided by topics designed so that they were open-ended and easy to understand by the interviewees. The interviews sought to triangulate and further explain findings from the questionnaire survey. They specifically addressed the question of how the level of tourism development at the destination amplify or diminish the relationships between attitudes to conservation and intention to conserve, and between intention to conserve and (actual) engagement in conservation.

Interviews were conducted in Swahili language in March 2014. Each interview lasted about 80 minutes. At the outset of every interview, the following issues were addressed: obtaining the permission of the interviewees, booking the interview time, making the inquiry's purpose clear, ensuring that interviewees' information was kept confidential and obtaining permission to record the interview. With the help of a trained research assistant who took field notes, the researcher used an audio recorder to capture the actual words and a notebook to capture body language. At the end of each day, the researcher and assistant researcher transcribed the words verbatim. The trustworthiness of qualitative data was ensured by selecting interviewees who had rich information about conservation issues, and by asking the interviewees to validate the transcripts immediately in the field. Because the interviews were conducted in Swahili language, back translation was used to minimise inaccuracies in the translation.

The thematic analysis method by Yin (2010), involving compiling, disassembling and reassembling stages, was adopted to analyse the data. At the compiling stage, the researcher re-read the words and re-listened to the audio recording. Data were then imported into the Nvivo software (version 8), which compiled the transcripts and audio recorded data. At the disassembling stage, the researcher broke down the compiled data into smaller fragments (selected words) which were assigned codes. At the reassembling stage, the researcher reorganized and recombined disassembled codes into substantive categories (themes).

IV. FINDINGS

The respondents were well spread across age, sex, education level, occupation and income. Some 47.7% of the respondents were aged between 21 and 40 and 38.7% were aged between 41 and 60. These two categories perhaps represent people who are more likely to be working and operating businesses and day-to-day activities in the town. The sample, in terms of sex, involved a third of females, as they represented 32.9 percent of all the respondents. Most respondents, 41.2%, had no more than a primary education followed by those with no more than secondary education (37.2 percent). The majority, 64.8%, had an income of 1 – 500,000 Tshs per month, but some had no income at all, while a few had an income of more than two million Tshs. With reference to occupation, the majority were self-employed in fishing, agriculture and trading activities involving tourism-related businesses. Respondents with no income at all, probably correspond to those who were unemployed and some retired individuals.

Data were screened. There were no measurement items which violated the skewness and kurtosis thresholds (Table 3). An investigation of normal-probability plots and residual scatter plots showed no violations of multivariate normality and linearity. SPSS was used to test reliability and validity. Table 3 shows the factor loading of the measurement items on the three factors after Varimax rotation. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.846 which is above the threshold of 0.6 (Hair et al., 2014). Table 3 also indicates that Cronbach's Alpha (α) values of all factors were approximately 0.7 and above, that is, all constructs were reliable (Hair, Black et al, 2014).

Table 3. Rotated factor matrix results

	Item		Component			M	SD	α
AC	AC1	Conservation of built heritage is good	884			4.54	.585	.942
	AC2	Conservation of built heritage is useful	919			4.51	.647	
	AC3	Conservation of built heritage is rewarding	882			4.39	.695	

	AC4	Conservation of built heritage is sensible	874			4.44	.618	
	AC5	Built heritage must be protected	858			4.48	.621	
BV	BV1	Spending my money in activities related to the conservation of built heritage		784		2.51	.344	.801
	BV2	Helping others to learn about values of built heritage		735		2.62	.317	
	BV3	Reporting to the conservation authorities any unsympathetic activity on built heritage		834		2.61	1.527	
	BV7	Volunteering in works related to built heritage conservation		747		2.81	.439	
BI	BI1	Willingness to spend my money in activities related to the conservation of built heritage			678	3.87	.910	.697
	BI2	Willingness to help others to learn about values of built heritage			781	4.14	677	
	BI3	Willingness to report to the conservation authorities any unsympathetic activity on built heritage			730	4.10	800	

Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .846 (p = 0.000), Total Variance Explained = 71.061%.
AC=Attitude to conservation, BV=Engagement in conservation, BI=Intention to conserve, M = Mean, SD = Standard deviation, α = Cronbach's alpha.

A Confirmatory Factor Analysis (CFA) was conducted. Items BI1 and AC4 were found to be associated with high values of modification indices, and were therefore omitted from further analysis. The measurement model reasonably fit the data (χ^2 = 71.465, *df* = 32, $p < .01$, RMSEA = .072, CFI = .968), and standardized loadings were all above 0.6 and significant, Table 4 and Fig. 3. As indicated in Table 4, the Average Variance Extracted (AVE) values surpassed the cutoff of .50 (Hair et al., 2014). The squared correlation between a pair of variables was less that the AVE values. Thus, convergent and discriminant validity were established.

Table 4. Correlations and measurement model results

	Item	BV	BI	AC
BV	3	1		
BI	2	.477**[a] (.28[b])	1	
AC	4	.173** (.03)	.582** (.34)	1
AVE		.506	.505	.768
Fit indices: χ^2 = 71.465 (*df* = 32, $p < .01$), RMSEA = .072, CFI = .968, TLI = .955, NFI = .945				

[a] Correlations, [b] Squared correlations, EC = engagement in conservation, IC = intention to conserve, AC = attitudes to conservation.

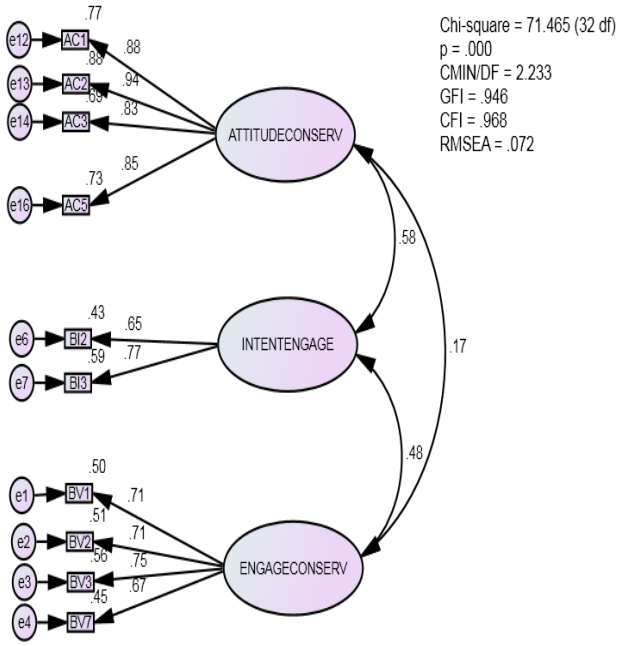


Figure 3 - A Measurement model (standardized estimates)

Hypotheses 1 and 2 were tested using a Structural Equation Modelling (SEM) with a maximum likelihood estimation method, which accounted for measurement errors, as well as the interrelationships between constructs. Results verified the fit of the model to the data (χ^2 = 73.929, *df* = 33, $p < .01$, RMSEA = .072, PCLOSE = 0.05, CFI = .967, TLI = .955, NFI = .943, GFI = .944), Fig. 4. The hypotheses were supported in that significant relationships were found between intention to conserve and engagement in conservation ($\beta = .45$, $p < .001$), and between attitude to conservation and intention to conserve ($\gamma = .56$, $p < .001$). While intention accounted for 20% of the total variance for actual engagement in conservation, attitude to conservation accounted for 31% of the total variance for intention to conserve (see Fig. 4).

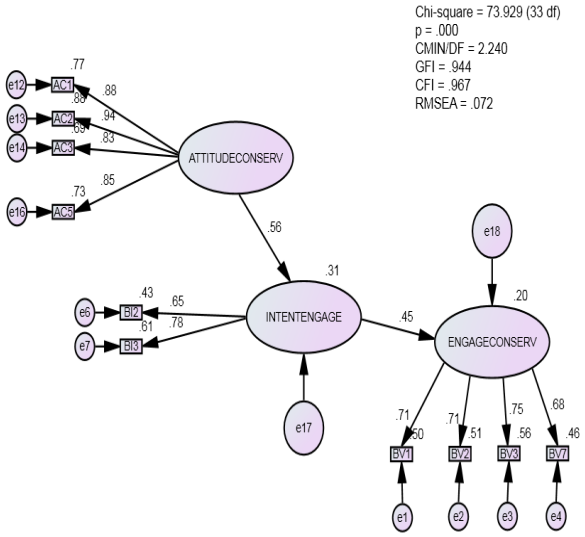


Figure 4 - Structural model (standardized estimates)

Before testing the moderation effect of level of tourism development, grouping [residents in high developed destination (Zanzibar Stone Town, 151 cases) and in less developed destination (Pangani Town, 88 cases)] was first done. Next, a measurement invariance test was done. Non-constrained models showed a good fit to the data (χ^2 = 112.668, *df* = 64, *p* < .01, RMSEA = .057), Table 5. The model was compared with constrained model in which all path estimates (factor loadings) were fixed to be equal. As shown in Table 5, the chi-square difference between the models ($\Delta\ \chi^2$) is 18.019 with seven degree of freedom. The difference is not significant (*p* > .05), indicating that constraining the path estimates to be equal between groups did not cause significant changes in model fit. The result reveal that the full-metric invariance was supported ($\Delta\chi^2(7)$ = 18.019, *p* > .01).

Table 5. Results of measurement invariance

Models	χ^2	*df*	RMSEA	CFI	NFI	TLI
Non-constrained model	112.668	64	.057	.960	.914	961
Constrained model	130.687	71	.060	.951	.901	938

Chi-square difference test: $\Delta\ \chi^2$ (7) = 18.019, *p* > .05 (insignificant) (metric invariance is supported)

To test the moderating role of level of tourism development at the destination, a structural invariance test was conducted. A two-group structural model was set up as previously done on the measurement model. A baseline model was generated by adding paths among variables rooted in full-metric invariance model. The baseline (non-restricted) model demonstrated the adequate fitness to the data (χ^2 = 121.421, *df* = 66, *p* < .01, RMSEA = .060), Table 6. The non-constrained model was also estimated and showed acceptable fit indices, and was compared to the constrained model. As indicated in Table 6, the chi-square difference between the models ($\Delta\ \chi^2$) is 20.533 with nine degree of freedom. The difference is significant (*p* < .01), indicating that constraining the path estimates to be equal between groups in the structural model produces worse fit. Therefore, the unconstrained model in which the paths are freely estimated in both groups is supported. The result suggests that the level of tourism development at the destination significantly moderates relationships in the structural model. Specifically, as indicated in Table 6, the positive relationship between attitudes and intention to conserve is slightly stronger among respondents living in Zanzibar Stone Town (γ = .78, *p* < .001) than among those living in Pangani Town (γ = .76, *p* < .001). The positive relationship between intention to conserve and actual engagement in conservation was also slightly stronger to respondents living in Zanzibar Stone Town (β = .58, *p* < .001) than to those living in Pangani Town (β = .50, *p* < .001). Thus, the H3a and H3b were supported. See Fig. 5 and Fig. 6 for the structural models for Zanzibar Stone Town and Pangani Town groups.

Table 6. Results of structural invariance

Models	χ^2	*df*	RMSEA	CFI	NFI	TLI
Non-constrained model	121.421	66	.060	.955	.908	.938
Constrained model	141.954	75	.061	.945	.892	.934
	Zanzibar Stone Town			Pangani Town		
EC <--- IC	.78***			.76***		
IC <--- AC	.58***			.50***		

Chi-square difference test: $\Delta\ \chi^2$ (9) = 20.533, *p* < .01 (significant) (paths across two groups are significantly different), *** *p* < 0.001.

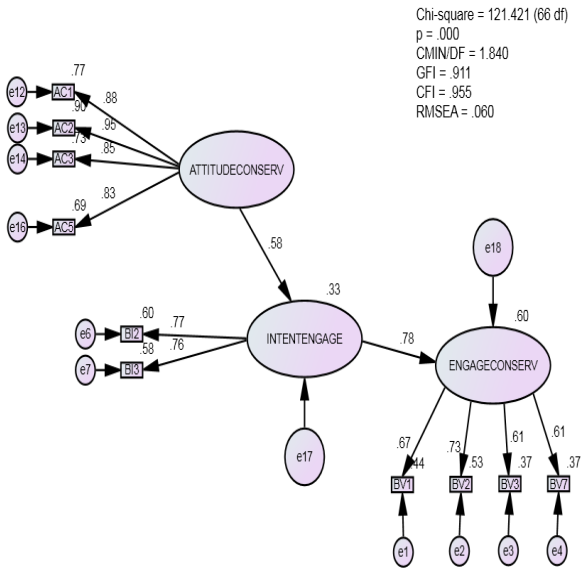


Figure 5 - Structural model for Zanzibar Stone Town (standardized estimates)

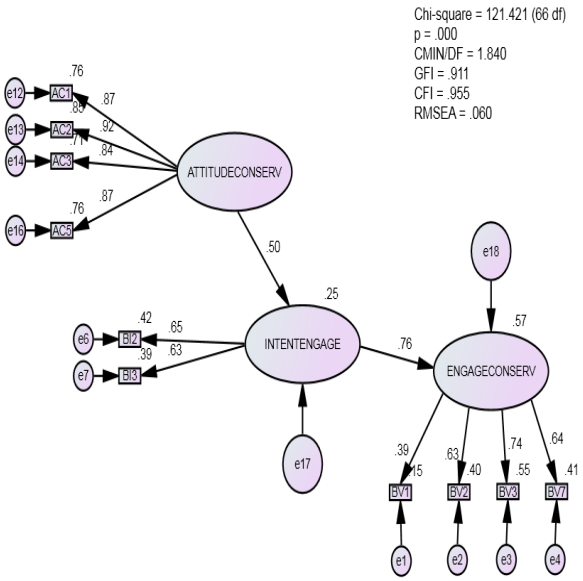


Figure 6 - Structural model for Pangani Town (standardized estimates)

V. DISCUSSION

In contrast to the past research, this study examined the relationships between local resident's actual engagement in conservation and intention to conserve, and between intention to conserve and attitudes to conserve, with the level of tourism development at the destination as a moderator of the relationships from a built heritage setting. As expected, the study found that intention to conserve had a significant positive relationship to actual engagement in conservation, and attitudes had a significant positive relationship to intention to conserve, thereby supporting the first and second hypotheses. Admittedly, the fact that intention relates to behaviour has received some criticism because of inconsistencies in explaining behaviour. The positive relationships can be attributed to the presence of several conservation initiatives which have helped local residents in terms of funding, know-how, and promoting usage of the built heritage for various purposes. In both towns, there are local non-governmental organizations (e.g. *UZIKWASA* "Live through Arts" and Conservation Task Force in Pangani, and Zanzibar Stone Town Heritage Society) which provide conservation training and mobilises funds from various stakeholders, and through conservation task forces support the repair and rehabilitation of the built heritage. These initiatives help in closing the psychological gap between individual's intentions to conserve and (actual) engagement in conservation.

The findings suggest that the more favourable the attitude a local resident has towards conservation, the more likely she or he will have the intention to conserve. According to the study, attitudes to conservation involve an individual's judgement that conservation is good, useful, rewarding and sensible, and that the built heritage must be protected. The mean scores on these items of attitude were all above 0.4 (refer to Table 3), thereby indicating that, generally, local residents favour conservation. It was observed that the promising growth of cultural tourism and its benefits, and the prevailing initiatives to involve local residents in conservation and tourism, help to make the attitudes to conservation more favourable. There are also public conservation forums, such as workshops and exhibitions and conservation-based organizations, which disseminate information about the benefits of conservation. This information is been important for fostering a positive attitude to conservation, and thus the intention to conserve. When interviewed about their attitudes to conservation, some respondents reported that: "…conservation is good because it keeps our streets clean and attractive. That building [pointing to the Bwanga house] was in a very poor state, it was a ruin. Some doors had been stolen and even windows and coral stones had been taken. But now we are seeing it being improved and it has even changed the street as it brings visitors and it is attractive" (Interviewee label 03). "…conservation is beneficial; I support it because I know that the society and I will benefit from visitors who will visit our town if it is properly conserved..." (Interviewee label 02). The qualitative findings show that the communication campaigns and participatory strategies have been successful in shaping local residents' perceptions of the environmental and economic benefits of conservation. These benefits have been important for fostering a positive attitude to conservation, and thus the intention to conserve the built heritage.

It was also hypothesized that the positive relationships mentioned above are positively moderated by level of tourism development at the destinations. As expected, the study found that the positive relationships between intention and engagement in conservation on the one hand, and between attitudes and intention on the other, are stronger among local residents in Zanzibar Stone Town than those in Pangani Town. According to the study, level of tourism development at the destination in these destinations considered the number of tourist visits and the amount of tourist amenities, such as hotels and guesthouses, restaurants and local tour operators. It is evident that Zanzibar Stone Town is more developed in terms of tourism than Pangani. While the tourist facilities may be targeted at serving tourists, it was observed that they are mostly run by local residents, and are also utilized by local residents (e.g. Forodhani Park in Zanzibar Stone Town).

In-depth interviews with local residents on how tourism development influences their engagement in

conservation, however, indicated the dissatisfaction on the way tourism development, especially hotel development, is negatively affecting actual conservation of built heritage. "Tourism development, yes, it gives us employment and income which motivate us to care and maintain the built heritage attractions. However, the same tourism development, for instance, the construction of hotels at *Mambo Msiige* area, does not adhere to conservation principles, and somehow discourages us…some people have started demonstrating over wrong tourism development activities in the town" (Local resident in Zanzibar Stone Town). In fact, the hotel development at the *Mambo Msiige* site drew the attention of UNESCO World Heritage Centre which threatened to drop the town from the list of world heritage sites. "Tourism sector has a lot of socio-economic benefits that provide incentives to local residents to support conservation of the very heritage tourism attractions. However, because it continues to utilize built heritage attractions as hotels, modernize the town and displace local residents who sell off their buildings to hotel investors, I see it as the source of poor conservation, and moreover, it discourages my efforts to spend money repairing my old building using expensive traditional materials. I am also thinking of modernize my building for tourism purposes" (owner of old building in Zanzibar Stone Town). These findings mean that tourism in Zanzibar Stone Town might have reached to a point where it does not provide incentives for conservation to some local residents. Caution must therefore be taken in interpreting the quantitative results because tourism development might have begun to cause gentrification of Zanzibar Stone Town, and the marginalization and displacement of the local residents. This context explains why some local residents are discouraged by the prevailing tourism development situation; a situation that fosters antagonism towards conservation for tourism.

Overall, the findings support previous exploratory research on the built heritage in sub-Saharan Africa (e.g. Kankpeyeng, 2009; Mapunda, 2013; Ndoro, 2005), and research on conservation by Kaiser et al. (2007), Lim, Khoo et al, (2014), Radzuan, Fukami et al, (2014), Tang, Chen et al, (2011) and Tonglet, Phillips et al, (2004). Thus, they confirm the past exploratory findings and provide further empirical evidence of the relationship between intention to conserve and (actual) engagement in conservation, and of the relationship between attitudes to conservation and intention to conserve in the built heritage setting. However, the findings add to past research on the importance of considering tourism development situation in explaining engagement in conservation.

VI. CONCLUSION

Conservation of the built heritage presents a serious challenge in sub-Saharan African countries, including Tanzania (Timothy and Nyaupane, 2009). Local residents' engagement in conservation is key to sustainable conservation; however, to achieve this, a thorough understanding of the factors behind their engagement is required. Integrating socio-psychology and incentive-based perspectives with a sample of households in Zanzibar Stone Town and Pangani has provided valuable insights into the factors which encourage engagement. The results indicated that engagement in conservation is a function of intention to conserve. In turn, intention to conserve is a function of attitudes to conservation. In addition, the results showed that the level of tourism development positively moderates the mentioned relationships. Thus factors internal and external to an individual are crucial in fostering individual's engagement in conservation.

This study has made two important contributions to the heritage and tourism literature. First, it has extended the socio-psychological (attitude) models by considering the tourism development factor in the model. It has shown the relevance of the extended model by studying engagement in conservation in the built heritage context. In this way, the study confirms the anecdotal evidences raised in past research in the built heritage setting about the importance of tourism in heritage management and conservation. Second, the study's emphasis on conservation of the built heritage with local residents as the focal point contributes to providing an understanding of the sustainability of heritage resources. This is an important contribution since the majority of previous studies focused on visitors, and ignored the connection between local residents and conservation of the built heritage. The findings of this study could be instrumental in engendering conservation-responsible societies and cultural sustainability in the historic towns of Tanzania and related countries.

Managerially, the study calls for the heritage managers to create conditions that stimulate local residents' positive attitudes to conservation. One strategy for doing this would be through the generation of conservation benefits and channelling them to local residents, and through effective communication campaigns. The cultural heritage policy of 2008 (URT, 2008), the national tourism policy of 1999 (URT, 1999) for mainland Tanzania and the tourism policy of 2005 for Zanzibar put a lot of emphasis on awareness-raising programmes. While raising awareness is important, this study calls on policy makers to emphasize changing attitudes to conservation through benefit sharing initiatives. In addition, the study has demonstrated that tourism

development amplifies the positive relationship between people's attitudes to conserve and intention to conserve, and the relationship between intention and (actual) engagement in conservation. This implies that heritage and tourism managers should develop the built heritage for tourism. However, at its extreme of development, tourism may discourage local residents to conserve. Thus care should be taken to develop tourism that adhere to conservation principles, and that does not gentrify the towns and marginalize local residents. This can be done through the employment of stakeholder's collaborative management approach towards tourism development. This is where key stakeholders of built heritage, including local residents and cultural heritage management actors, collaborate and participate in the development of heritage tourism.

Finally, it should be noted that despite the interesting conclusions and implications drawn, the study was limited to attitudes as socio-psychological factors and the tourism development as the destination situational factor. Further investigation is therefore required to ascertain the influence of other socio-psychological and destination-contextual factors in other parts of Tanzania and sub-Saharan Africa.

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VIII. References

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