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Exploring the Determinants of Attitude of Urban Agriculture and the Moderating Role of Held Value in Kano State.

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ABSTRACT
The current economic challenges as a result of removal of oil subsidy and Urbanization trends in Kano state have with it numerous consequences among which are food insecurity, unemployment, poverty, environmental pollution among others. Urban agriculture has drawn attention of especially the urban poor as response to those challenges. With urban population reaching half the total population, these and many more problems are bound to increase hence the need to explore the factors influencing attitude towards urban agriculture as attitude translate into behavior and subsequently participation. Cross sectional data of 585 household were systematically collected via a structural questionnaire to fine how household values shape attitude towards urban agriculture. Exploratory factor analysis was use to categories value and hierarchical regression to fine the relationship between attitude and its determinants and also the moderating role of held value on those relationships The result revealed that there is statically significant relationships between households 'experience and knowledge' and 'assigned value' components with attitude which are moderated by held value in contrast to personal norms. Thus values and knowledge appear to shape household attitude towards urban agriculture in Kano state, Nigeria.
Keywords: Experience and Knowledge, Assigned value, personal Norms, Held value, Urban agriculture

INTRODUCTION

Cities and big towns are term as Urban centres which are characterized by improved public amenities, education opportunities, adequate transport, social and business interaction and better standard of living when compare to the rural settings. Economic hardship occasioned by removal oil subsidy and the desire to enjoy higher standard of living resulted to urban -rural migration in search of greener pasture that lead to high concentration of people in the urban center (Bakare, 2011) which in turn exert untold pressure to the limited opportunities in the urban setting. Kano state population was 5.8m in 2006 which increase to 9.4m in 2010 (NBS 2011). Correspondingly, unemployment rate has been on a steady increase in that it was 5.8 in 2008 and increase to above 23.9% in 2010 (NBS 2011). Mok et al. (2007) has found out that poverty and food insecurity in the urban area are increasing along with the rate of unemployment, water and air pollution. As such despite the advantages enjoyed by the urban populace, when it comes to satisfying some basic household need such as food, employment and income for other needs, the urban dwellers are at the disadvantage site (NBS 2011).

Confronted with food insecurity and risking unemployment and poverty, to achieve Sustainable urbanization, it is important to incorporate it with urban agriculture (Peters 2010). Urban agriculture can be define as " an activity that produces, processes, and markets food and other products, on land and water in urban and peri- urban areas, applying intensive production methods, and (re) using natural resources

and urban wastes, to yield a diversity of crops and livestock " (UNDP, 1996). It includes many activities such as urban beekeeping, animal husbandry, horticulture, agroforestry and aquaculture (Hampwaye et al., 2013) and can take many forms such as backyard gardens, community gardens and commercial farms.
The concerned about the impact of urban agriculture in Kano State has induced many researchers to look at the benefits and constrains (Lynch et al. 2001) of urban agriculture. However those factors influencing attitude of urban dwellers regarding this viable venture are not properly explored. Attitude translates into behaviour and subsequently participation. Households experience and knowledge on urban agriculture, the values they assigned to it couple with personal norms are important determinants in shaping attitude towards urban agriculture. However the strength of the relationship is yet to be ascertained. This study will look at the relationship between those determinants factors and attitude toward urban agriculture. The study will also look at the moderating effect of held value on those relationships

Analytical Framework

The framework for this study was based on Seymour et al. (2010) model that distinguished between assigned value (value individual attached to goods, service or physical place) and held value (principle or ideas that people hold as important to them) and the influence of those values on attitude towards environmental behaviour and activities. Apart from values and knowledge, norms were significant predictors of attitudes in that Afshari et al. (2013) has found subjective norms to be significant predictors of computer attitudes. Base on the above evidences, this research explain the relationship between assign value, experience and knowledge, personal norms and attitude towards urban agriculture and the moderating effect of held values.
The study was conducted in Kano State of Nigeria. Kano State is located in North-west part of Nigeria and is the biggest state in terms of population with about 9.4 million inhabitants (NBS 2011). The State is made up of three senatorial districts with some local government areas in each of the district. Base on the level of Urbanisation of these local governments, one is selected from each district, as such Gwale local governments area in Zone A, Dan Batta local governments area in Zone B and Wudil local governments area in Zone C were selected.
A total of 585 household were systematically selected to constitute the sample. Systematic random sampling can be use when sampling unit or residence are well arrange in blocks, rows or along a river or main road (Smart 2012). The attitudinal questionnaire was designed base on the objectives of the study and composed of 56 close-ended questions. Households were sample at an interval of 5 and all data were collected in July and August 2023. The first four parts of the questionnaire include statement regarding respondents Experience and knowledge, assigned value, personal norm and held values of urban agriculture using a seven point Likert scale were 1= strongly disagree and 7=strongly agree. Attitude in the fifth part was measured using semantic differential statements such as 'To you urban agriculture is an activity that is' 1 (least preferred) through 7 (Most preferred)

Statistical Analysis

Descriptive analysis was used to explain the socio-demographic profile of the respondents and reliability analysis was run to ensure internal consistency by measuring Cronbach's alpha. In addition explanatory factor analysis and hierarchical regression analysis were performed to measure the interaction effect of held value on the relationship between dependent variables (Attitude) and its predictor independent variables (Experience and knowledge, assigned value, personal norm).

RESULT AND DISCUSSION

The Cronbach's alpha was measured to test the consistency and reliability among all the variables in the questionnaire. The value of Cronbach's alpha was 0.907 which indicates consistency among the proposed model's construct.

Socio Demographic information

The socio-demographic profile of the respondent is as presented in the table below

Table 1 Sociodemographic Profile of Respondents (n=585)

characteristics		Frequency	Percentage
Gender	male	381	65.1
	Female	204	34.9
Age	Below 20	26	4.5
	20-40	399	68.2
	41-60	154	26.3
	Above 60	6	1
Marital Status	Single	198	33.8
	Married	387	66.2
Household size	1-5	340	58.1
	6-10	180	30.8
	Above 10	65	11.1
Educational level	Non formal	68	11.6
	Primary	65	7.7
	Secondary	124	21.2
	Diploma	76	13.0
	Bachelor	116	19.8
	Others	158	26.7
Income Per Month (Naira)	Below 20,000	55	9.4
	20,000-30,000	289	50.9
	30,001- 40,000	123	18.6
	Above 40,000	109	21

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of sampling Adequacy		0.829
Bartett's Test of Sphericity	Approxi Chi-square	2578.641
	d.f	136
	Significance	0.000

Dimensions of Respondent's Attitude towards Urban Agriculture

Exploratory factor analysis was use to group the variables into major factors that influence attitude towards urban agriculture. To identify weather factors can be obtained and the reliability of the scale before performing factor analysis, Kaiser-Meyer-Olkin(KMO) measure of sampling adequacy and Bartlett's test of sphericity were performed. KMO statistics was 0.829 and is significant at <0.001 indicating the appropriateness of factor analysis for the study.

After varimax rotation on household response to 48 items on the scale concerning their Experience and knowledge, assigned value, personal norm and held value on urban agriculture, factor loading revealed 5 factors which account for 60.305 of the total variance were extracted. Only factors with eigenvalues of 1 and above are considered. This show that households in Kano State place high value on their food safety and food security, other benefits like recreation (hobby), personal norms and their 'knowledge and

experience' on other diverse benefits of urban agriculture such as improving the economy to shape their attitude towards urban agriculture.

Dimensions of Respondent's Attitude towards Urban Agriculture

Items	Factor loading				
	F1	F2	F3	F4	F5
Knowledge and Experience					
To my experience Kano state has become less dependents on others by practicing urban agriculture	.809				
I know that practicing urban agriculture can contribute to economic growth	.802				
I have theoretical experience attending urban agricultural course	.798				
I have knowledge that land value is greatly enhance by urban agriculture	.788				
To my knowledge, urban agriculture means going green	.773				
Variance Explained	22.254				
Personal Norm					
I would be willing to sign a petition in support of urban agriculture		.784			
I would be willing to join any association that promote urban agriculture		.748			
I feel morally obliged to practice urban agriculture		.649			
Variance Explained		10.388			
Assigned Value(individual safety and security)					
I like to practice urban agriculture because it promotes food security			.761		
I believe that practicing urban agriculture gives extra income			.741		
To me, Consuming home based product is safer for me and my family.			.656		
Variance Explained			9.884		
Held Value					
Urban agriculture Can promote healthy eating				.779	
Urban agriculture can build an innovation driven economy				.682	
Urban agriculture can increase food security level				.664	
Variance Explained				9.642	
Assigned Value(Individual benefits)					
I believe urban agriculture reduces crime by engaging youth					.830
I believe i can practice urban agriculture in free time					.717
Variance Explained					8.138
Total Percentage of variance					60.303

Relationships and moderating role of held value on attitude toward urban agriculture

Hierarchical regression is the statistical technique employed in this study to find the relationship between attitude towards urban agriculture (dependent variable) and its predictors (Experience and knowledge, assigned value, personal norm) and to predict moderating effect of held value on those relationships. Average value was use for attitude and factor scores from factor analysis (eigenvalues>1) was use for the predictors and the moderator variable.

Hierarchy regression analysis summary is presented in the Table below. The first step in the first model shows that 3.2% of the variance in attitude is explained by experience and knowledge and the relationship is statistically significant. In the second step by adding held value into the model, the adjusted R^2 value increase to 0.305. The interaction term in the last model appear to improve the relationship by making it stronger (R2 = 0311, $p<0.05$). This shows that knowledge may positively influence attitude and hence closely related to urban agriculture. From this finding, there is evidence to suggest that the existence of held value has moderates the relationship between 'experience and knowledge' and attitude towards urban agriculture. This result is consistent with all the clumps of assigned value in the second and third models in which food security and safety are found to be positively associated with attitude. The statistical significant result is not surprising in that Mad Nasir et al. (2014) has maintain that attitude towards urban agriculture appears to be associated with concern for safety and security and other benefits of urban agriculture such as hobby while Lockwood (1999) emphasis the influence of held value on assigned value and attitude. The last model shows that the relationship between personal norm and attitude is not significant .However by adding held value it become significant even though the interaction term (personal norm*held value) does not moderate the relationship.

Model Summary of Hierarchical Regression

Step	Variable entered	Beta			R^2	Model F (or Δ F)	ΔR^2
		1	2	3			
1	Exp and Knowledge	0.180***	.175***	0.183***	0.032	1.485	0.032
2	Held Value		0.522***	0.521***	0.305	228.335	0.273
3	Exp and Knowledge× Held Value			0.078**	0.311	5.064	0.006
1	Indivi dual benefits	0.106*	0.105**	0.114**	0.011	6.586	0.011
2	Held Value		0.523***	0.521**	0.285	222.628	0.274
3	Individual benefits× Held Value			0.092**	0.294	6.898	0.008
1	Individual safety & security (AV)	0.181***	0.176***	0.183***	0.033	1.463	0.033
2	Held Value		0.523***	0.520***	0.306	228.891	0.273
3	Individual safety & security ×Held Value			0.119**	0.320	12.021	0.014
1	Personal Norm	0.070	0.079*	0.075*	0.005	2.909	0.005
2	Held Value		0.525***	0.529***	0.281	223.122	0.276
3	Personal Norm ×Held Value			0.055	0.284	2.420	0.003

Note. Variables are standardized (Z-scores) and beta coefficients are non-standardized N=585

*p<0.05. **p<0.01. ***<p<0.001

SUMMARY AND DISCUSSION

This research aimed at finding those latent factors that shape public attitude towards urban agriculture and examine the role of held value in improving the relationship between the factors and attitude. The extracted factors that explained the dimension of public attitude towards urban agriculture are experience and knowledge, individual safety and security (assigned values), individual benefits (assigned value), personal norms and held value. Out of these five factors, 'experience and knowledge' has the largest effect. The result shows a positive relationship between 'experience and knowledge' and attitude which is

in line with the finding of White (2010) that knowledge may underpin a positive attitude and therefor is closely related to urban agriculture practice. Previous research (McClintock, 2013) has established link between urban agriculture practice and knowledge. Attitude towards urban agriculture appear to be shaped by assigned value as indicated by the positive association between assigned value components (individual benefits, safety and security) and attitude. This may reflect the beneficial attributes of urban agriculture and shows that urban households in Kano State have assigned high range of food security and health values to urban agriculture. This result is consistent with Mad Nasir et al. (2014) who maintained that a residence involvement in urban agriculture is closely related to food security and health issues. Personal norms play a lesser role in shaping attitude towards urban agriculture in that it is only significant with held value. Furthermore, hierarchical regression result has shown that held value has a significant role in moderating the relationship between assigned value, 'experience and knowledge' and attitude. This finding is consistent with other studies ((Brown 1984; Seymour et al. 2010; Lockwood 1999) that established the influencing role of held value on assigned value and attitude. The study has concluded that attitude towards urban agriculture is shaped by the above mentioned factors.

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