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Determinants of Household Food Security of Small Scale Farmers in Gedarif and Rahad Localities "High Agriculture Production Area" of Eastern Sudan

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ABSTRACT

The study aims to assess the determinants of small scale farmer household food security among Gedarif and Rahad localities from eastern Sudan. Data used relies heavily on the results of sample survey of 336 households in 8 villages collected during 2014. Analytical techniques employed included descriptive statistics, and multinomial regression model. The study has shown that, land, credit access; and technology using in agriculture are most factors determining household food security in the study area. In the light of the findings from the study, it is recommended that policy makers should increase effort to make micro-credit accessible to rural farmers targeting agriculture and livestock sector to create more income and food diversification, therefore using technology, extension, and training.

1. INTRODUCTION

Food insecurity in Sudan is concentrated in the rural areas. Majority of the Sudanese rural population chronically suffer from mass poverty in more severe situations than the urban dwellers. The research study is highly motivated by the fact that although Gedarif State is one of Sudan's major crop-producing there is significant evidence that there is temporary food insecurity in Gedarif that can change to chronic food insecurity. The last nutrition survey conducted in Gedarif by UNICEF and the State Ministry of Health in 2013 found in nine out of twelve localities in the state chronic malnutrition rates (stunting) among children less than five years higher than 20%. In five localities rates were higher than the state average rate of 30%, with East Galabat recording the highest, 45.5%. Likewise, the survey found very high and alarming rates of acute malnutrition, at serious levels for half of the state localities, and at critical level in three localities. The 2013 nutrition survey showed that dietary diversity is a problem throughout rural areas of Gedarif, with prevalence of households with a diverse diet at only 4.5%. This obviously shows a link between malnutrition and food insecurity in the state. As a paradox, data available on the state level indicate that Gedarif is "food secure (referring availability of food)", thus potentially foiling efforts to investigate more the food security determinants at household level. Such an investigation is necessary, though, to not only identify determinants that increase food security, but also to understand the contradiction between state-wide food security and household level food insecurity.

This is why the issue of food insecurity has become the concern of many academicians, political leaders and other professionals today. Majority of the research works that have been done so far on the issues related to food insecurity in Gedarif State are very general and consider the problem from national or regional points of view, little work has been done to understand the food security problem at the household level in specific locations/districts. Most agricultural production comes from millions of rural households. Despite the increasing global concern of improving food security, the nature and extent of food security at the household level in rural areas is not well documented. The purpose of this study was, therefore, to investigate the critical determinants of food security in Gedarif and Rahad localities "high agriculture production area" of eastern Sudan.

Moreover, most agricultural production comes from millions of rural households. Despite the increasing global concern of improving food security, the nature and extent of food security at the household level in rural areas is not well documented. The purpose of this study was, therefore, to investigate the critical determinants of food security in Gedarif and Rahad localities "high agriculture production area" of eastern Sudan.

The main objectives of the study were to:

- Determine the food security situation among households in the study area, and
- Examine the principal determinants of household food security in the study area.

2. LITERATURE REVIEW

Most of the world's poorest countries are in Africa and many of these face chronic poverty and food insecurity. Agriculture, of which 85-90 percent is rain-fed in Sub-Saharan Africa, accounts for 35 percent of the region's gross national product (GNP), 40 percent of exports and 70 percent of employment (World Bank, 2000). Clover (2003), Smith (2007), Babatunde et al. (2007),Swamina than (2008), Oriola (2009), Fayeye and Ola (2007) are some of the works that have examined food security in developing countries. The authors argue that domestic policies in many developing countries have contributed very marginally to food security especially in Africa, and that, despite the growing global food production, hunger, malnutrition and famine are prevalent in many developing countries. From their analysis it is evident that improvement in food production in Sub-Saharan Africa will boost per capita GDP, raise purchasing power and access to food. Their major conclusion is that research is needed on new technologies that are output-driven, ecologically friendly, acceptable and affordable to the resource-poor farmers. Finally, they argue that good governance and stable political governance system will provide an essential and enabling environment for food security in Sub-Saharan Africa.

Sudan like other Sub-Saharan African countries has been since late seventies experiencing an economic crisis that exhibits itself in slow growth, worsening balance of payments, deteriorating terms of trade, slow growing exports and mounting debts, as said by: (Ali, 1994; Awad, 1998). This crisis escalated with political instability, food problems and population movements from the place of shortages (rural areas) to where food security is realized (Urban areas). At the same time production constraints in Sudan are impeded by various other challenges include the wide stretch of the country poor transport and storage facilities courted with: insufficient and inadequate capital, instable prices of the agricultural products, high production costs and absence of mechanization and modern technologies.

Gedarif State has more than 10 million arable feddan, though these huge resources are not distributed evenly among people. A few well-positioned merchants and government allies

have access to huge agricultural schemes that exceed the permitted acreage. This exacerbated the problems of land shortage and blocked traditional routes that were used by pastoralists during their seasonal movements. The research study is highly motivated by the fact that although Gedarif is one of Sudan major crop producing state there are quite evidence indicating that The food situation in Gedarif was described as temporary food insecurity and able to change to chronic food insecurity (Taha, 2009).

3. DEFINITIONS and CONCEPTS of FOOD SECURITY

Food security is a concept that has evolved over time. As much literature has spiraled, many definitions and conceptual models on household food security have been presented (Smith et al.,1992). There are approximately 200 definitions and 450 indicators of food security (Hoddinott, 1999).In Africa, food crisis in the early 1970s stimulated a major concern on the part of the international donor community regarding supply short falls created by production failures due to drought and desert encroachment (Maxwell, 1992). In 1983, FAO analysis focused on food access, leading to a definition based on the balance between the demand and supply side of the food security equation: "Ensuring that all people at all times have both physical and economic access to the basic food that they need"(FAO, 1983).

Food security is indicating the ability of people to acquire their dietary intake required for a healthy productive life on a day-to-day basis. There are different concepts of food security that had been developed over time. The World Bank defined food security in 1986 as secure access by all people at all times to enough food for an active and healthy life. This definition implies that access to adequate food is subject to threats of different types and that the analysis of risk of inadequate access is an important concern.

There are two main dimensions to analyze food security issues. The first concern is the level of analysis. Food security can be analyzed at individual, household, community, regional or national level. The second direction relates to the time frame; individuals or groups of people may suffer from inadequate food consumption all of the time. The focus of the analysis in this situation is on the level of food consumption and the factors that determine it. In other circumstances the level of food consumption may be adequate when compared with some measures of need but variations imply that people do not have enough to eat some of the time. In this case the concentration of analysis concentration should be in the variability of food consumption, typically between seasons and between years, and the main consequences of this variation. A working definition of food security can only be specified when the level and time frame of the desired analysis is also specified.

In the World Bank (1986) report, Poverty and Hunger, this concept of food security is further elaborated in terms of: 'access of all people at all times to enough food for an active, healthy life. 'At the 1996 World Food Summit 182 nations agreed and adopted a still more complex definition: 'Food security, at the individual, household, national, regional and global levels. Food security is achieved when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life'(FAO, 1998).This definition integrates stability, access to food, availability of nutritionally adequate food and the biological utilization of food. As a result, a synthesis of these definitions, with the main emphasis on availability, access, and utilization, serves as working definition in projects of international organizations.

4. FOOD SECURITY COMPONENTS

Common to most definitions of food security are the elements of availability, access, utilization and stability or sustainability.

Food security has also been defined in the World Food Summit in 1996 as the situation 'when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life'. This definition encompasses four main dimensions of food security, namely physical availability of food, economic and physical access to food, ability of food utilization and stability of the other three dimensions over time.

By this definition, food security is a broad and complex concept which is determined by the interaction of a range of agro-physical, socioeconomic, and biological factors. A sustainable food security status cannot be attained unless all those four dimensions are fulfilled; they are interlinked and their multiple determinants are in a continuous dynamic, vivid state of motion. Attempts to investigate them have to come up with scientific, reliable and relevant procedures, as well as holistic and complementary methods and tools to capture all aspect of its diversity as no single indicator could provide the information needed to determine the state of food security in a given population.

4.1. Food Availability

Food availability reflects the supply side in general, the overall availability of food at national, regional and household levels which is influenced by trade and domestic food production, including local sources of agricultural food production, livestock and fisheries, as well as collected wild foods. Commercial food imports and food stocks are highly influenced by the presence of well-functioning market systems able to deliver food to the area on a consistent basis and in adequate quantity and quality. At household level it reflects the availability of food for household in local markets and shops. Food availability is influenced by many underlying determinants such as macro-economic trends and events, government policies (subsidies), the functioning of international and domestic markets, exchange rates and the state of the physical economic infrastructure.

4.2. Food Access

Food access, which represents the demand side, is considered to be achieved when a household has the opportunity to obtain food of sufficient quantity and quality to ensure a safe and nutritious diet. Food access is widely influenced by determinants such as prices and household resources that allow households to obtain their food, typically either: (a) by growing it and consuming from their own stocks; (b) by purchasing it in the marketplace; (c) by receiving it as a transfer from relatives, members of the community, the government, or foreign donors; or (d) by gathering it in the wild. Household or individual ability to access those sources of food depends mainly on "their asset endowment and the social, economic, policy, physical, and natural environments, which define the set of productive activities they can pursue in meeting their income and food security objective" (LIFT, 2013: 4).

At the same time, abundant and available food at household level does not guarantee equal share within the household because there may be a tendency to serve the highly nutritious food in larger quantities to the males in the family or working members to the disfavorur of other household members. In other words, bias in intra-household distribution patterns, such as gender inequality, can negatively influence the food security of some of the household members (Pieters et al., 2013: 13).

4.3. Food Utilization

Food utilization requires a healthy diet, a healthy body, and a healthy physical environment. It represents an individual's food consumption and the ability to absorb nutrients contained in the food that is eaten, bearing in mind the importance of both the quantity and quality of food, in addition to good health practices, food safety, food storage, food preparation, diet diversification, food preferences, proper feeding practices, proper hygiene, sanitation and clean water supply, which all indicate the importance of non-food input for meeting all physiological needs and achieving the physical and mental development of an individual. Thus food utilization requires a practical understanding of proper health care, food storage, food preparation, and feeding practices, along with the associated behaviour.

This implies that even if a household has access to a sufficient amount of food, in term of quantity, but it is not of a good nutritious quality, this diet will not provide the body with nutritional ingredients that provide the body with its energy requirements. On the other hand, if the health condition of an individual is not good, then her or his body cannot benefit physiologically even from a balanced and adequate diet.

Furthermore, if a household's income improved but knowledge about best nutritional practices and individual nutritional needs does not exist, then income will not be spent to increase food security. Intra-household decision patterns could also hinder the most vulnerable groups (children and women) from acquiring their dietary needs for a healthy and productive life, just as cultural and personal preference for various food groups could highly influence the nutritional status.

4.4. Food Stability

Since food security status has to be sustained, its fourth dimension is stability over time. Stability is ensured when households and all individuals within have adequate and preferred food at all times to maintain a healthy living, therefore adverse effects of sudden shocks, such as an economic or climatic crisis or cyclical events such as seasonal food insecurity, have to be taken account in any assessment of food security.

5. DETERMİNANTS of FOOD SECURİTY

Factors that affect household food security in various developing countries especially in Africa have been documented in some literature and these factors or determinants are most often thannot location-specific (i.e. different study areas were found to have variant attributes as food security determinants with some attributes recurring). The study conducted in Nigeria by Oluwatayo (2008)using probit model found out that sex of household head, educational level, age and income have positive influence on food security whereas household size has negative influence on household food security. Study by Sikwela (2008) in South Africa using logistic regression model showed that per aggregate production, fertilizer application, cattle ownership and access to irrigation have positive effect on household food security whereas farm size and household size have negative effect on household food security.

Babatunde et al. (2007) is another detailed work on food insecurity in Nigeria. The study utilized a three-stage random sampling technique to obtain a sample of 94 farm households and across sectional data in year 2005. Using the recommended calorie required approach; the study revealed that 36 per cent and 64 per cent of the households were food secure and food insecure respectively. The Shortfall/Surplus index showed that the food secure households exceeded their commended calorie intake by 42 per cent, while the food insecure households fell short of their commended calorie intake by 38 per cent. A logit regression model

estimated showed that household income, household size, educational status of household head and quantity of food obtained from own production were found to determine the food security status of farming households in the study area.

5. METHODOLOGY

5.1. Sampling Technique

Data were collected from 336 out of604 households[1] randomly selected as of small scale farmers all most in rural areas(owned agriculture land 20 feddans and less)through the use of household survey. Out of 235,000 households of Gedarif State according to 5th Sudanese censes in 2008, and 7,654 households out of two selected localities; which the sample represents about 8% of the households in selected localities; somewhere the data collected during April up to December 2014. The selected localities were Central Gedarif and Rahad. Eight villages were selected from each locality depending on the ecological zone, to reflect the livelihood of households in Rahad locality where the Rahad River allows household to diversify their income sources and food such as vegetables, fruits and fish, as well as in Gedarif locality the urbanization patterns are also be reflected.

Rain becomes heavier northwards, being lowest in the northern part of the state. All most of villages selected are rural areas; from Gedarif locality, the villages of Rawashda, EidElteen, Eshimliab and Ghiraigana were chosen to represent the central, northern and southern parts of the locality, respectively, and from Rahad locality, Wad Elshaeer, Borbur, Garamie and Bazoora East with the same pattern. Stratified sampling was used to select respondents randomly from each village. The total population was drawn for the 8 villages from the official statistics; the number of respondents was determined depending on the percentage within the sum of the 4 selected villages per locality. Both primary and secondary data were collected through personal interviews with the use of structured questionnaires. The questionnaire used covered the personal characteristics of the farmers, land acquisition, credit access, crops grown, livestock number and household assets. Also included in the questionnaire was the household food security scale which was used to measure the food security status of households.

Both qualitative and quantitative data analysis techniques were utilised. Food security indicators were used as first assessment of the households' situation; in addition, a correlation test was conducted to identify the relationship between food security indicator and some of its determinants, this study used the standard indicator: The HDDS assesses the quality of diets, at individual or household level, by calculating the number of food groups that are consumed on average. The standard set of 12 food groups used for this assessment are: 1) cereals, 2) fish, 3) roots / tubers, 4) pulses / legumes / nuts, 5) vegetables, 6) milk and milk products, 7) fruits, 8) oil / fats, 9) meat / poultry / offal, 10) sugar / honey, 11) eggs, 12) miscellaneous. The HDDS variable is calculated as total number of food groups consumed by the members of a household, then the average HDDS indicator is calculated for the sample population using the following formula:

1 604 HHs data are proprietor to FAO, 2014; when I was the main researcher for the study of the impact of agricultural activities on food security, in Gedarif and Rahad localities, 2014).

.

$$\text{Average HDDS} = \frac{\text{nSum (HDDS)}}{\text{Total Number of n Household}}$$

Calculate the Household Dietary Diversity category for each household. 1 = Food Secure (Diet from 1-12), 2=Mildly Food Insecure Access(Diet from1-10), 3=Moderately Food Insecure Access (Diet from 1-8), 4=Severely Food Insecure Access (Diet from 6 and less); as shown in table 1 below:

Table 1. Household Dietary Diversity Score (HDDS) Category weighted

No	Food group	Score	Weight	HDDS Category
1	Cereals	6 ≤	4	Severely food insecure access
2	Roots and tubers			
3	Vegetables			
4	Fruits			
5	Meat, poultry			
6	Eggs			
7	Fish and other seafood	+6-8	3	Moderately food insecure access
8	Pulses, legumes and nuts			
9	Milk and milk products	+8-10	2	Mildly food insecure access
10	Oils and fats			
11	Sweets	+10-12	1	Food secure
12	Spices, coffee, tea			

Source: Field Survey, 2014.

5.2. Analytical Model

The multinomial regression model was used to investigate the determinants of household food security among the study area. The Household Food Security Survey was used to disaggregate the households into food secure and food insecure households. The dependent variable in this case, food security is Household Dietary Diversity Score (HDDS).A variety of models can be used to establish the relationship between the potential determinants and food security. The study employed the multinomial regression model as follows.

HDDS= β0+β1X1+β2X2+β3X3+β4X4+β5X5+β6X6+β7X7+β8X8+ β9X9+ β10X10+ β11X11+£

Where:

HDDS= (Household Dietary Diversity Score: A dependant Variable which categorized in to 4 values, 1, 2, 3 and 4).

In this study the explanatory variables used in the model included:

X1 = Education level of Household Head (educated=1, otherwise=0).

X2 = Credit access (if yes =1, otherwise=0).

X3 =Labor age of HHH (ranged from 31-45 years).

X4 =Labor age of HHH (ranged from 46-60 years).

X5 = Livestock ownership (if yes =1, otherwise=0).

X6 =Wealth index (scale variable).

X7 = Technology used in agriculture (if yes =1, otherwise=0).

X8 =Agriculture land recoded (1=5 feddans and less, 2= 5-10 feddans, 3= 11-15 feddans and 4= 16-20 feddans).

X9 =Gedarif locality dummy (HH live in Gedarif locality = 1, otherwise = 0).

X10 = farm occupation (if yes =1, otherwise=0).

X11= Daily labour (if yes =1, otherwise=0).

However, the variable of technology used in agriculture are calculated by aggregated four types of technology used such as seed dressing, herbicide, pesticide and fertilizer in to three main production crops like millet , sorghum and sesame in addition to vegetables and fruits to categorize the technology variable in the analysis.

6. RESULTS and DISCUSSIONS

6.1. Respondent's Socio-Economic Characteristics

From our sample of 336 households considered rural and small scale farmers, table 2 indicates that 56.5% of our sample of study area are in Rahad locality, while, 43.5% are in Gedarif locality.

Table 2. Distribution of the sample by localities

Locality	Freq	Percent
Gadarif	146	43.5
EL-Rahad	190	56.5
Total	**336**	**100.0**

Source: Field Survey, 2014.

Food security in rural areas in Gadarif State is determined, in part, by land holding structures, systems of land tenure, the organization of agricultural production, availability of complementary inputs, access to credit and markets, opportunities for off-farm employment, and the accumulation of surplus value. Social relations in agriculture are in turn determined by land tenure systems. Table 3 shows, 83% of households in study area owned agricultural land for areas about five and less feddans, (84.2% in Gedarif and 82.1% in Rahad); while 17% owned land for areas about 5-10 feddans, (15.8% in Gedarif and 17.9% in Rahad). The results presented in the table indicate that, a higher percent of households owning small land size (5 feddans and less) which considered being by means of land less; with no great variation between localities.

Table 3. Distribution of Agricultural Land Owned

Land recoded	Both		Gedarif		Rahad	
	Freq	Percent	Freq	Percent	Freq	Percent
5 feddans and less	279	83.0	123	84.2	156	82.1
5-10 feddans	57	17.0	23	15.8	34	17.9
Total	**336**	**100.0**	**146**	**100.0**	**190**	**100.0**

Source: Field Survey, 2014.

Respondents' socio-economic characteristics are presented in Table 4. Educated household heads constituted minor (38.1%) of the sampled people. The labor age (46-60 year) was 40.8%, indicating that a typical farmer interviewed was economically active. There was more households used technology in agriculture (56%). Meanwhile, distribution of household heads access credit and who owned livestock revealed that not considerable of them (17.3%

and 26.2%, respectively). Only about 6.3% of household heads interviewed were engaged in daily labor activities, and majority of interviewed households (84.5%)are engaged in agriculture activities.

Table 4. Scio economic characteristics of the study area

Scio economic characteristics		N	Marginal Percentage
Education level of HHH	.00	208	61.9%
	1.00	128	38.1%
Credit access of HHH	.00	278	82.7%
	1.00	58	17.3%
Labor age (31-45)	.00	264	78.6%
	1.00	72	21.4%
Labor age (46-60)	.00	199	59.2%
	1.00	137	40.8%
Livestock ownership	.00	248	73.8%
	1.00	88	26.2%
Wealth index	.00	256	76.2%
	1.00	80	23.8%
Technology used in agriculture	.00	148	44.0%
	1.00	188	56.0%
A agriculture land recoded	.00	279	83.0%
	1.00	57	17.0%
Gedarif locality as a dummy	.00	190	56.5%
	1.00	146	43.5%
Farmer employment of HHH	.00	52	15.5%
	1.00	284	84.5%
Daily labor of HHH	.00	315	93.8%
	1.00	21	6.3%
Valid		336	100.0%

Source: Field Survey, 2014.

6.2. Food Security Measure

To better reflect a quality diet, the number of different food groups consumed is calculated, rather than the number of different foods consumed. Knowing that households consume, for example, an average of four different food groups implies that their diets offer some diversity in both macro- and micronutrients. This is a more meaningful indicator than knowing that households consume four different foods, which might all be cereals. The following set of 12 food groups is used to calculate the HDDS. Table 5 shows the average food groups consumed by household, which reflect the household food security situation; apparent Gedarif is better compare to Rahad locality in most of food groups consumed.

Table 5. Household Dietary Diversity Score (%)

No	Food group	Both	Gedarif	Rahad
1	Cereals	100.0	100.0	100.0
2	Roots and tubers	99.7	99.3	100.0
3	Vegetables	100.0	100.0	100.0
4	Fruits	99.1	97.9	100.0
5	Meat, poultry	77.1	91.1	66.3
6	Eggs	10.4	17.1	5.3
7	Fish and other seafood	25.3	4.8	41.1
8	Pulses, legumes and	51.5	67.1	39.5

	nuts			
9	Milk and milk products	14.6	19.2	11.1
10	Oils and fats	96.7	95.2	97.9
11	Sweets	97.6	98.6	96.8
12	Spices, coffee, tea	98.8	99.3	98.4

Source: Field Survey, 2014.

As shown in Table 6, 21.4% of household in the study area was found to be food secures (25.3% in Gedarif and 18.4% in Rahad locality); (33.3%) were found to be mildly food insecure access (45.2% in Gedarif and 24.2% in Rahad); (36.3%) were found to be moderately food insecure access (21.9% in Gedarif and 47.4% in Rahad) ,and only 8.9% were severely food insecure access (7.5% in Gedarif and 10% in Rahad). Gedarif locality exhibits better food security compared to Rahad. This result attributed to the fact that Gedarif locality characterized by off-farm opportunity labor which has a significant impact of reducing food insecurity, compared to Rahad locality which characterized by agricultural activities by means of low earning.

Table 6. Food Security Measure

HDDS Category	Both		Gedarif		Rahad	
	Freq	Percent	Freq	Percent	Freq	Percent
Food secure	72	21.4	37	25.3	35	18.4
Mildly food insecure access	112	33.3	66	45.2	46	24.2
Moderately food insecure access	122	36.3	32	21.9	90	47.4
Severely food insecure access	30	8.9	11	7.5	19	10.0
Total	336	100.0	146	100.0	190	100.0

Source: Field Survey, 2014.

6.3. Determinants of Food Security

Table 7 below provides the parameter estimates for the linear regression model. From (OLS) estimates of the model, the R2 was 0.57 which implies that about 57% of the household being food secure is strongly explained by the independent variables. The marginal effects of the independent variables were estimated because they are very important forpolicy and decision making. Among the 11 variables considered in the model, three were found to have significant impact on household food security. They included access land, credit access, using technology. With the exception of wealth index and education of household head all the explanatory variables had the expected signs.

Agriculture land was negatively (-1.464) and significantly related to the probability of a household being food insecure. Agriculture land is significant at 5%.The coefficient infavour of mildly household food insecure access decreases by the factor (-1.464) when the area under cultivation is increased by one feddan. Credit access was found to be significant at 1% positively related to food security in the study area. Farmers' access to credit will decrease the mildly and moderately food insecurity access of his household by the factor (-2.194 and -2.092), respectively. This may be due to the fact that households which have the opportunity to receive credit would build their capacity to produce more through the use of improved seeds and the adoption of improved technologies. This finding is also consistent with the findings of Bogale (2009) in his study in Ethiopia. However, a household using technology was positively(1.347) and significantly at 1% related to the probability of a household being food secure, so increase productivity through using of technology it is significant policy that

might increase food security in the area of study. According to Van Der Veen (2010), food production can be increased extensively through expansion of areas under cultivation. With large farm size households can produce more and also diversify. Thus, land and credit access; and technology using in agriculture are most factors determining household food security in the study area, consistent with the fact that Gedarif state comprised high agriculture area, where the agriculture activities engaged more than 80% of population in rural area get hold of their income and hence manipulate household food security. Furthermore, education of household head and household wealth are insignificant impact the household food security in the study area.

Table 7. Parameter Estimates Of Determinants Of Household Food Security

Independent variables		B	Sig.
Food secure	Intercept	3.722	.074
	Education of HHH	-.192	.766
	Credit access of HHH	-1.351	.228
	Labor age of HHH(31-45)	-.423	.500
	Labor age of HHH(46-60)	-.063	.905
	Lives stock ownership of HHH	.382	.478
	Wealth index of HH	-1.139	.135
	Technology used in agriculture	1.347	.019
	Land recoded	-1.378	.093
	Gedarif dummy variable	.496	.533
	Farmer occupation of HHH	-.648	.400
	Daily labor of HHH	-.676	.516
Mildly food insecure access	Intercept	4.774	.019
	Education of HHH	.459	.460
	Credit access of HHH	-2.194	.041
	Labor age of HHH(31-45)	-.093	.881
	Labor age of HHH(46-60)	-.525	.292
	Lives stock ownership of HHH	.219	.664
	Wealth index of HH	-.815	.263
	Technology used in agriculture	.637	.252
	Land recoded	-1.464	.067
	Gedarif dummy variable	-.903	.237
	Farmer occupation of HHH	-.970	.195
	Daily labor of HHH	.439	.688
Moderately food insecure access	Intercept	3.500	.082
	Education of HHH	1.316	.034
	Credit access of HHH	-2.092	.049
	Labor age of HHH(31-45)	-.344	.567
	Labor age of HHH(46-60)	-.243	.618
	Lives stock ownership of HHH	-.004	.993
	Wealth index of HH	-.556	.466
	Technology used in agriculture	.456	.407
	Land recoded	-1.176	.141
	Gedarif dummy variable	-.123	.871
	Farmer occupation of HHH	.036	.962
	Daily labor of HHH	.973	.347

Severely food insecure access	Intercept	-3.722	.074
	Education of HHH	.192	.766
	Credit access of HHH	1.351	.228
	Labor age of HHH(31-45)	.423	.500
	Labor age of HHH(46-60)	.063	.905
	Lives stock ownership of HHH	-.382	.478
	Wealth index of HH	1.139	.135
	Technology used in agriculture	-1.347	.019
	Land recoded	1.378	.093
	Gedarif dummy variable	-.496	.533
	Farmer occupation of HHH	.648	.400
	Daily labor of HHH	.676	.516
Model Fitting Information	Model Fitting Criteria		Pseudo R-Square
	-2 Log Likelihood		Cox and Snell=.567
Intercept Only	713.648		Nagelkerke=.486
Final	623.023		McFadden=.432

Dependent Variable: Household Dietary Diversity Score (HDDS)
Source: Field Survey, 2014.

7. CONCLUSION and RECOMMENDATIONS

The study aims to assess the determinants of household food security among Gedarif and Rahad localities "high agriculture production area" from eastern Sudan. Data used relies heavily on the results of sample survey of 336 households as of small scale farmers (agricultural land holding 20 feddans and less) in 8 villages collected during 2014. Analytical techniques employed included descriptive statistics, and multinomial regression model to examine the determinants of food security among the households surveyed. The study has shown that agriculture land was significantly related to the probability of a household being food secure in favour of mildly household food insecure access decreases by the factor (-1.464). Credit access was found to be significant at 1% positively related to food security in the study area. Farmers' access to credit will decrease the mildly and moderately food insecurity access of his household by the factor (-2.194 and -2.092), respectively, allow households to have opportunity to receive credit would build their capacity to produce more through the use of improved technologies. However, a household using technology was positively (1.347) and significantly at 1% related to the probability of a household being food secure, so increase productivity through using of technology it is significant policy that might increase food security in the area of study.

Thus, land and credit access; and technology using in agriculture are most factors determining household food security in the study area, consistent with the fact that Gedarif state comprised high agriculture area, where the agriculture activities engaged more than 80% of population in rural area get hold of their income and hence manipulate household food security. In the light of the findings from the study, it is recommended that efforts to improve access to land and credit by small scale farmers to improve the household food security situation in rural areas. Policies that will make micro-credit from government and non governmental agencies accessible to rural farmers to improve household food security in Gedarif State. Policy makers should make high efforts in agriculture and livestock sector to

create more income and food diversification such as vegetables, fishes and fruits to decrees food insecurity, therefore using technology, extension, training are also be recommended. Policy makers should target the food insecure household groups to combat directly food insecurity and reduces their vulnerability, especially through fitting policies targeting the agricultural sector wherein most of the populations engaged with their livelihoods.

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Appendix

Household Dietary Diversity Score (HDDS)

Please describe the foods (meals and snacks) that you or anyone else in the household ate <u>yesterday</u> during the day and night, whether at home or taken outside the home, starting with the first food eaten in the morning. ***Note: Exclude foods purchased and eaten outside the home			
on	**Food group**	***Examples***	***1=yes 0=no***
1	**Cereals**	***Any foods made from wheat/millet sorghum grain/flour, rice, maize, , …etc.Kisra, bread, …***	|___|
2	**Roots and tubers**	***potatoes, pampay...etc***	|___|
3	**Vegetables**	***vegetables, including wild vegetables***	|___|
4	**Fruits**	***all fruits, including wild fruits***	|___|
5	**Meat, poultry,**	***beef, lamb, goat, chicken, other birds …***	|___|
6	**Eggs**	***eggs obtained from all poultry***	|___|
7	**Fish and other seafood**	***fresh or dried fish, shellfish***	|___|
8	**Pulses, legumes and nuts**	***beans, peas, lentils, nuts, seeds or foods made from these***	|___|
9	**Milk and milk products**	***milk, cheese, yogurt, ghee, or other milk products***	|___|
10	**Oils and fats**	***oil, fats or butter added to food or used for cooking***	|___|
11	**Sweets**	***sugar, honey, sweetened soda or sugary foods such as, sweets or candies***	|___|
12	**Spices, coffee, tea**	***tea (green, black, herbal), coffee, salt, black pepper, mint, saffron, coriander, cilantro, cardamom…***	|___|
13 Did you or anybody else in the household eat anything (meal or snack) prepared outside of the home yesterday?		**seY= 1**	**oN=2**
		|___|	|___|

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The Potential of Bilateral Trade Between Egypt And Nile Basin Countries: A Gravity Model Approach

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ABSTRACT

This research aims at determining the factors affecting the agricultural bilateral trade flows of Egypt with the Nile Basin countries using the gravity model. Basic and Augmented models have been estimated for both Egyptian agricultural exports and imports. The growth of Egyptian exports to the Nile Basin countries is affected by GDP of both sides. There's a great chance for Egypt to increase the exports to Nile Basin countries by increasing GDP. Distance has a negative impact due to the poor and insufficient transportation infrastructure of Nile Basin countries. Which give more attention to the development of roads and Nile shipping to increase bilateral trade between Egypt and Nile basin countries.

1. INTRODUCTION

Nile River is considered the longest rivers in the world. It crosses the borders of 11 African countries; Uganda, Kenya, Ethiopia, the Democratic Republic of Congo, Tanzania, Burundi, Rwanda, Eritrea, South Sudan, Sudan and Egypt (Faten, 2013). As the Nile is the only source of surface water for Egypt, Nile Basin countries are considered of a national and strategic importance for Egypt. Thus, there are trends to foster bilateral trade between Egypt and the African countries in general and Nile basin countries in particular.

However, the volume of trade exchange between Egypt and the Nile Basin countries is noted as unsatisfactory in comparison with the strategic importance of these countries in Egypt. Egypt's total exports to the Nile basin countries amounted to 1.01 billion US dollars at an annual average of the period 2010-2015, and represented about 3.7% of the total value of Egyptian exports. Imports from these countries reached about 412 million dollars at an annual average during the same period, and represented only 0.62% of the total value of Egyptian imports from the world (International Trade Centre, 2017).

Despite the strategic importance of Nile basin countries for Egypt and being a promising market of Egyptian exports and imports. Moreover, the majority of these countries besides Egypt, are members of COMESA agreement which facilitates the African intra-trade, the

total volume of trade exchange is still limited to 1.52% of the total Egypt's trade with the world.

In this respect, this paper uses the gravity model approach to determine the factors that influencing trade flows between Egypt and the Nile basin countries through investigating; an overview of the Nile basin Countries Intra-trade.

2. NILE BASIN COUNTRIES INTRA-TRADE OVERVIEW

2.1. Egypt's Bilateral Trade with Nile Basin Countries

The value of Egyptian exports to Nile basin countries was steadily increasing during the period 2001-2015 as shown in table 1. It's also shown that the relative importance of Egyptian exports to Nile basin countries to the total Egyptian exports increased from 1.51% in 2001 to 4.89% in 2015. As shown from growth equations in table 2, Egyptian exports to Nile basin countries increases by an annual growth of 22.5% during the period of 2001-2015.

The value of Egyptian imports from Nile basin countries has increased from 0.17 billion US dollars in 2001 to 0.36 billion US dollars in 2015 as shown in table 2. It's also shown that the relative importance of Egyptian imports from Nile basin countries of the total Egyptian imports has decreased from 1.33% in 2001 to 0.48% in 2015. As it is shown from growth equations in table 2, Egyptian imports from Nile basin countries increases by an annual growth rate of 11.5% during the period of 2001-2015.

Table 1. Development of Egypt's bilateral trade with Nile basin countries 2001-2015, (in billion US dollars)

Year	Egypt's Total Exports	Egypt's Total Imports	Egypt's Exports to Nile Basin Countries	% of Egypt's Total Exports	Egypt's Imports from Nile Basin Countries	% of Egypt's Total Imports
2001	4.14	12.72	0.06	1.51	0.17	1.33
2002	4.66	12.50	0.06	1.27	0.21	1.67
2003	6.16	10.89	0.11	1.86	0.12	1.09
2004	7.68	12.84	0.14	1.89	0.09	0.67
2005	10.65	19.81	0.27	2.52	0.09	0.47
2006	13.72	20.59	0.26	1.93	0.09	0.43
2007	16.17	27.03	0.27	1.67	0.10	0.38
2008	25.97	52.75	0.78	3.01	0.27	0.51
2009	24.18	44.91	0.84	3.46	0.27	0.60
2010	26.33	53.00	1.00	3.79	0.27	0.51
2011	31.58	62.28	1.03	3.27	0.41	0.66
2012	29.42	69.87	0.98	3.34	0.46	0.66
2013	28.78	66.67	1.05	3.65	0.43	0.65
2014	26.81	71.34	0.92	3.43	0.54	0.76
2015	21.97	74.36	1.07	4.89	0.36	0.48
Average	**18.55**	**40.77**	**0.59**	**2.77**	**0.26**	**0.72**

Source: www.trademap.org

Table 2. Growth equations of Egypt's bilateral trade with Nile Basin countries during the period 2001-2015

Item	Equation	T	R^2	F
Egypt's Exports to Nile Basin Countries	**$Y= 4.17 x^{0.225}$**	(9.2)**	0.86	(85)**
Egypt's Imports from Nile Basin Countries	**$Y= 4.46 x^{0.115}$**	(4.4)**	0.57	(19.4)**

** Significant at level (0.01)
Source: calculated from table 1.

2.2. Nile Basin Countries Intra- Trade

Common boarders potentially increase bilateral trade between Nile basin countries. Table 3 shows that about 45%, 30% and 28% of Uganda, Kenya and Rwanda's total export, respectively, go to neighboring Nile basin countries. As for imports, it's found that about 23%, 19% and 14% of Rwanda, Burundi and Uganda's total imports sourced from Nile basin countries. As for Egypt, it is noticed that its bilateral trade with Nile Basin countries is lower compared to its total trade with the world. Egyptian exports to Nile Basin countries represent about 3.6% of Egypt's total exports at an annual average of the period 2010-2015, while imports are as low as 0.58% of the total Egyptian imports from the world during the same period.

Noticeably, there is a relatively strong trade relation between some of Nile Basin countries, especially those with common borders such as Sudan, Uganda, Kenya and Congo. The presence of road throughout these countries facilitates the flow of products through the borders. The total value of intra-exports of Nile basin countries is about 9.6% of its exports to the world during the average period of 2010-2015, while the total value of its intra-imports represents only about 4.4% of its imports from the world during the same period.

3. RESEARCH METHODOLOGY

3.1. Theoretical Review

Apparently, the gravity model takes its name from the law of gravity of Newton, which is due to the attraction of two bodies to their mass and negatively to the distance between them. Tinbergen (1962) and Linnemann (1966) were the first to explain the flow of international trade based on the physical principles of gravity where the two opposite forces determine the volume of bilateral trade between two countries or economic blocs.

Anderson et al (2003) indicated the factors affecting the volume of bilateral trade as following; the level of economic activity, income, and the barriers to trade. The latter include in particular transportation costs, trade policies, uncertainty, cultural differences, geographical characteristics, limited overlap in consumer preference schemes, regulatory bottlenecks, and common borders.

Various combinations of macroeconomic variables, such as GDP and population with geographic distance, are powerful predictors of trade potentials. Hence, gravity equations use these variables and have been used extensively in the empirical literature on international trade (Bayoumi et al, 2007).

The model is widely used in the empirical literature to evaluate the determinants of bilateral trade. It explains a trade-related dependent variable, by the combination of macroeconomic variables, such as country size, income, exchange rates, prices etc., for both countries.

Moreover, indicators of transportation costs between the two countries and more general market access variables are commonly added (Said et al, 2014).

Table 3. Trade matrix of Nile Basin countries intra- trade as average of the period of 2010-2015, (in million US dollars)

	Egypt	**Sudan**	**Kenya**	**Ethiopia**	**Eritrea**	**Uganda**	**Congo**	**Rwanda**	**Burundi**	**South Sudan**	**Tanzania**	**Total intra-exports**	**Total exports to world**	**%**
Egypt	-	506	246.9	68.16	56.7	44.83	24.4	17.87	11.52	-	33.4	1009.8	27482	3.6
Sudan	50.24	-	5.03	89.6	-	2.46	0	0.69	0.094	3.23	0.003	151.3	8488	1.7
Kenya	.2764	230.6	-	58.4	4	736	.2049	157.1	69.74	203	488.2	2428.2	5713	30.4
Ethiopia	31.4	138.4	2.82	-	0	2.76	0.041	0.93	0.058	3.17	1.37	181	3768	4.7
Eritrea	.46	-	0.002	0	-	-	-	-	-	-	0.43	5	385.1	1.2
Uganda	2.9	352.6	159.9	0.57	-	-	201.6	211.4	46.22	126.15	34.41	1135.8	2179	44.8
Congo	20.52	0.98	13	0.019	-	7.03	-	14.84	3.78	-	0.671	60.8	7100	0.8
Rwanda	0.62	6	7.94	0.017	-	8.03	104.5	-	10.72	2.5	75.9	216.3	498.4	27.7

Burundi	0.27	0.62	2.37	0.006	-	2.12	14.42	4.91	-	-	3.66	28.4	170	14.5
South Sudan	-	0.001	4.75	0.251	-	2.3	-	0.001	-	-	-	7.3	-	-
Tanzania	4.15	1.04	162.5	2.74	0.206	56.05	263.7	76.5	63.74	-	-	630.6	5051	12.5
Total intra-imports	391.1	1236	605.3	219.8	60.9	861.6	813.6	484.3	205.9	338	638	5854.6	60833	9.6
Total imports from world	66253	9419	16145.6	15340	481.2	5626.4	6062.6	1758	748.3	-	11806	133639	-	-
%	0.58	13.1	2.71	1.41	12.6	14.3	9.1	23.2	19	-	5.4	4.4	-	-

Source: www.trademap.org

3.2. Model Specification

Gravity Model is estimated using the time series data regression. The gravity model depends on Newton's theory of gravity that the attractive force between two objects is positively related with their masses and negatively related to the square of distance (Anderson, 2016). Based on Newton's theory of gravity, a similar functional relation that explains the flow of international trade can be proposed as the following (Tinbergen, 1962):

$Fij = G\ Mi\alpha\ Mj\beta / Dij\theta \quad (1)$

Where,

Fij: Volume of trade between two countries i and j.

Mi(j): Relevant economic size of country i(j).

Dij: Distance between the countries i and j.

The flow of trade between two countries is positively related to the GDP of two countries and negatively related to the geographical distance between capital of those two countries or major cities. The model can be expressed using the following exponential equation:

$Yij = \beta 0\ GDPi\beta 1\ GDPj\beta 2\ Distij-\beta 3$ (2)

Where,

Yij: Volume of trade between two countries.

GDPi and GDPj: Gross Domestic Product of the countries i and j.

Distij: Distance between the countries i and j.

This exponential equation can be converted into a function. By taking the logarithm of the two sides, it can be converted into a double logarithmic function as shown in equation (2)

$lnYij = \beta 0 + \beta 1 lnGDPi + \beta 2 lnGDPj - \beta 3 lnDistij + £ij$ (3)

Where £ ij represents the random error. This equation is called the Basic Gravity Model (BGM). The population variable of the two countries within the model is added into the equation (3) and it is called the Augmented Gravity Model (AGM) as follows:

$lnYij = \beta 0 + \beta 1 lnGDPi + \beta 2 lnGDPj + \beta 3 lnPci + \beta 4 lnPcj - \beta 5 lnDistij + £ij$ (4)

In this paper, beside the Basic Gravity Model (BGM) and the Augmented Gravity Model (AGM), variables to be used such as Foreign Direct Investment (FDI) and dummy variables (Djt) such as common borders, common language and trade agreements so the equation will be as follows:

$lnYij = \beta 0 + \beta 1 lnGDPi + \beta 2 lnGDPj + \beta 3 lnPci + \beta 4 lnPcj - \beta 5 lnDistij + \beta 6 lnIi + \beta 7 lnIj + Dij + £ij$ (5)

Where,

i: Egypt

j: Nile basin countries

Yij: Trade exchange whether exports or imports between country i and country j.

GDPi and GDPj: GDP of countries i and j.

PCi and PCj: Per capita GDP of countries i and j.

Ii and Ij: Foreign direct investment in countries i and j.

Distij: Geographical distance between the capital of two countries or the most important commercial cities.

Dij: Dummy variable represent (having common borders, language and trade agreements).

£ij: Random error.

B0, 1, 2, n: Constants of proportionality.

Ln: natural logarithm.

3.3 Variables Included in the Model

The data included in the model are time series from 2001 to 2015. Data for total exports and imports were obtained from Trade statistics of the international trade center UNCTAD/WTO (ITC). Data for Gross Domestic Product GDP, per capita GDP, and Foreign Direct Investment FDI were obtained from World Development Indicators database (WDI) of the World Bank. Distances between countries were obtained from the Distance website (www.distancefromto.net/countries.php) and presence of common borders was obtained from Google Maps website (www.maps.google.com).

4. FINDINGS

Data for the variables included in the model has been processed four times and generated four models. The first one is estimated on the basis of Egypt as an exporting country towards the 9 Nile Basin partners; Tanzania, Rwanda, Burundi, Democratic Republic of Congo, Kenya, Uganda, Ethiopia, Eritrea, Sudan (North + South), where it is consisted of the Basic Gravity Model (BGM) and the Augmented Gravity Model (AGM). The other one is estimated on the basis of Egypt as an importing country from the same countries, where also it is consisted of the (BGM) and the (AGM). The model includes the GDP variables of Egypt and the Nile Basin countries, the geographical distance between Egypt and each of Nile basin countries, the volume of foreign investments in Egypt and the Nile Basin countries (FDI), and some dummy variables such as the existence of common borders, common language and the presence of countries within COMESA. Dummy variable takes value 1 in case of the existence of common borders, common language and the presence of countries within COMESA and value 0 in case of not. The Stepwise Regression model was used to determine the most significant variables and to exclude those non-significant.

4.1. Exports' Model

4.1.1. Basic Gravity Model (BGM)

The outcomes shown in Table 4 indicate that the most significant variables affecting Egypt's exports to the Nile basin countries are GDP and geographical distance between Egypt and these countries, where the rest of the variables were excluded from the Stepwise regression for non-significant effect. The results indicate that the increase of Egypt GDP (GDPi) by 10% leads to an increase of 17.5% in the Egyptian exports to the Nile Basin countries. The increase of GDPj for Nile Basin countries by 10% leads to an increase of 9.9% in the Egyptian exports to these countries. The results also showed that the increase of geographical distance (Distij) between Egypt and these countries by 10% leads to a decrease of Egyptian exports by 24.8%. The significant variables explain about 81.5% of the changes occurring in Egyptian exports as the R2 of the model is 0.815, and the model is statistically significant at a significant level of 0.01 according to F test.

Table 4. Estimated Results of Exports' Gravity Model

Variables	Exports' Gravity Model	
	Basic Gravity Model	**Augmented Gravity Model**
Equation	$\ln Y_i = 11.13 + 1.75 \ln GDP_i + 0.99 \ln GDP_j - 2.48 \ln Dist_{ij}$	$\ln Y_i = -7.75 + 1.3 \ln PC_i + 2.1 \ln PC_j - 1.5 \ln Dist_{ij}$
GDP_i	1.75 T= (9.7)**	-
GDP_j	0.99	-

	T= (14.3)**	
Distance	-2.48 T= (-9.9)**	-1.5 T= (-4.98)**
Per Capita GDP_i	-	1.3 T= (4.5)**
Per Capita GDP_j	-	2.1 T= (11.1)**
R^2	0.815	0.754
F	(198.2)**	(137.8)**
N	135	135

Source: Results obtained through processing of data using SPSS 18

4.1.2. Augmented Gravity Model (AGM)

As it is shown in Table (4), the most significant variables affecting Egypt's exports to the Nile basin countries are Per Capita GDP and geographical distance between Egypt and these countries, where the rest of the variables were excluded from the Stepwise regression for non-significant effect. The results indicate that the increase of Per Capita GDPi in Egypt by 10% leads to an increase of 13% in the Egyptian exports to these countries, the increase of Per capita GDPj for Nile Basin countries by 10% leads to an increase of 21% in the Egyptian exports to these countries and the increase of geographical distance Distij between Egypt and these countries by 10% leads to a decrease of Egyptian exports by 15%. The significant variables explain about 75.4% of the changes occurring in Egyptian exports as the R2 of the model is 0.754, and the model is statistically significant at a significant level of 0.01 according to F test.

4.2. Imports' Model

4.2.1. Basic Gravity Model (BGM)

The results in Table (5) indicate that the factors affecting Egypt's imports from the Nile Basin countries are the GDPj of the Nile Basin countries, the geographical distance between Egypt and these countries, and the existence of the common borders with these countries. The rest of the variables entered in the model were excluded from Stepwise regression because their non-significant effect. The results indicate that the increase of GDPj of the Nile Basin countries by 10% leads to an increase of Egyptian imports from these countries by 27%, while the results showed that the increase of the geographical distance (Distij) between Egypt and these countries by 10% leads to a decrease of Egyptian imports by 51%, and that the existence of a common border between Egypt and these countries reduces imports by 36%. It is illogical to note that the existence of a common border has a negative sign, this can be explained that the most Egyptian imports from the Nile Basin countries, with the exception of Sudan that has a common border with Egypt, freight whether by ships or aircrafts as is the case of Tanzania, Kenya and Uganda. The significant variables explain about 59% of the changes occurring in Egyptian imports as the R2 of the model is 0.59, and the model is statistically significant at 0.01 levels according to F test.

Table 5. Estimated Results of Imports' Gravity Model

Variables	**Imports' Gravity Model**	
	Basic Gravity Model	**Augmented Gravity Model**
Equation	$\ln yj = 35 + 2.7 \ln GDP_j - 5.1 \ln Dist_{ij} - 3.6 \ln D_{ij}$	$\ln Y_j = -24.14 + 4 \ln PC_j$
GDPi	-	-

GDPj	2.7 T= (12.78)**	-
Distanceij	-5.1 T= (-5.1)**	-
Borderij	-3.6 T= (-3.1)**	-
Per capita GDPi	-	-
Per capita GDPj	-	4 T= (9.54)**
R2	0.591	0.402
F	(65.5)**	(91)**
N	135	135

Source: Results obtained through processing of data using SPSS 18

4.2.2. Augmented Gravity Model (AGM)

As it is shown in Table (5), the factors affecting Egypt's imports from the Nile Basin countries are only the Per Capita GDP of the Nile Basin countries. The rest of the variables entered in the model were excluded from Stepwise regression because their non-significant effect. The results indicate that the increase of the Per Capita GDP of the Nile Basin countries by 10% leads to an increase of Egyptian imports from these countries by 40%. The significant variables explain about 40% of the changes occurring in Egyptian imports as the R2 of the model is 0.40, and the model is statistically significant at 0.01 levels according to F test.

5. DISCUSSION AND POLICY IMPLICATION

According to the results showed by Exports' gravity model; the growth of Egyptian exports to Nile Basin countries is expected to be affected by both Egypt and Nile Basin countries' GDP, the value of the coefficient on log of GDPi (1.75), while it is (0.99) for GDPj. That's mean There's a great chance for Egypt to increase the total exports to Nile Basin countries by increasing the GDP, which is a factor that can be handled internally.

Distance between Egypt and Nile Basin countries has a negative sign for the coefficient on log of Distij in both Exports and imports' gravity model, which can be explained that the main transportation system used in exporting and importing between Egypt and Nile Basin countries is poor and insufficient where the majority of Nile Basin countries are suffering from the absence of infrastructure that capable of cross-border trade. Which give more attention to the development of roads and Nile shipping to increase bilateral trade between Egypt and Nile basin countries.

The FDI in Egypt and Nile Basin countries is excluded from Stepwise regression because their non-significant effect. It has no impact on the intra-trade between Egypt and Nile Basin countries.

Borders according to the basic gravity model of imports have a negative sign for the coefficient. Although it is expected that the existence of common borders between Egypt and Nile Basin countries would increase the intra trade (common borders are expected to have a positive sign). However, this might be explained that the most of Egyptian imports from Nile Basin countries are transferred using air cargo or sea cargo.

Many studies have been investigating the determinants of the Egyptian bilateral trade with the Arab countries, EU countries, and COMESA countries. The results of the study are consistent

with most of other related studies. Ata (2010) refers to the positive impact of GDP in Egypt and other countries and the negative impact of distance on the Egyptian exports to COMESA. Shehata (2011) and Molouk (2012) indicated that there is a positive impact for GDP on the Egyptian agricultural exports to COMESA and the Arab countries.

6. CONCLUSION AND RECOMMENDATION

Although the strategic importance of Nile basin countries for Egypt and being a promising market for Egyptian exports and imports. Nevertheless, intra-trade between Egypt and these countries still unsatisfactory in comparison with Egypt's foreign trade with world. It is indicated that Egypt can increase its intra- trade with Nile basin countries by enhancing Egyptian GDP.

It is also implied that short distances between Cairo and other capital cities of Nile basin countries positively increase the Egyptian exports and imports. The basic gravity model of imports has shown unexpected result of the impact of having a common border, this means that the government of Egypt and Nile basin countries too, must give much attention to invest in roads between Egypt and the neighboring countries such as Sudan that can be taken as a crossing gate for exports and imports with Nile basin countries.

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Weighted Average Information Criterion for Selection of an Asymmetric Price Relationship

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ABSTRACT

This study evaluates the performance of the recently developed model selection criteria (WIC) against commonly used alternatives (AIC and BIC) in terms of their ability to recover the true asymmetric data generating process. Monte Carlo simulation results indicate that the performance of the model selection methods depends on the sample size, the difference in asymmetric adjustment parameters and the amount of noise in the model used in the application. WIC outperforms AIC and BIC under stable conditions such as a large sample and small noise levels. Additionally, WIC outperforms AIC and BIC as the difference between asymmetric adjustment speeds increases. These results suggest that WIC is a very reliable and useful criterion in asymmetric price transmission model selection.

1. INTRODUCTION

Many competing models have been developed to measure asymmetric price transmission. Researchers modelling asymmetric price transmission are therefore faced with the decision of choosing an appropriate model among a set of competing asymmetric price transmission models. This leads to the problem of model selection. Asymmetric price transmission model selection problem involves using a model selection criteria to select the most appropriate model among computing models.

Existing criteria widely used in asymmetric price transmission model selection include Akaike Information Criteria (AIC) of Akaike (1973) and Bayesian Information Criteria (BIC) of Schwarz (1978). For example, Acquah (2010) evaluates the relative performance of AIC and BIC in discriminating among competing price transmission models. Acquah (2010) notes that AIC performed well in small samples whilst BIC, in contrast, appears to perform relatively poorly in small samples but is consistent and its performance improves with large sample size. In effect, AIC is efficient and BIC is consistent.

Wu and Sepulveda (1998) recently proposed a new model selection criteria, Weighted Average Information Criteria (WIC) which draws on the strengths of corrected AIC and BIC. WIC is noted to perform better than AIC and BIC in empirical applications. For example, Chen, Wu and Wang (2008) noted that WIC performs better than AIC and BIC in signal processing applications. However, little is known about the performance of WIC in asymmetric price transmission modelling context. A fundamental question which remains unanswered in asymmetric price transmission model selection is how well will the newly

developed WIC perform when compared with commonly used AIC and BIC in asymmetric price transmission model selection. Will WIC point to the correct asymmetric price transmission model in price transmission analysis. In order to address these issues, this paper conducts a Monte Carlo study to evaluate the relative performance of the recently developed model selection criteria (WIC) against commonly used criteria (AIC and BIC) in terms of their ability to recover the true asymmetric data generating process.

The rest of the paper proceeds as follows. In the following section, an introduction of the model selection criteria is presented. This is followed by a brief description of asymmetric price transmission models. A practical application in which the performance of the model selection methods in selecting the correct asymmetric model are evaluated via Monte Carlo experimentation is presented. Finally, the study ends with conclusions.

2. MATERIALS AND METHODS

2.1. Model Selection Using Information Criteria

Information criteria is an important tool for model selection. Information theoretic model selection criteria are made up of two components. The first term is a measure of goodness of fit of the candidate model to data and the second term serves as penalty for model complexity. Fundamentally, various information criteria may differ in the way in which they penalise complexity.

2.1.1. Akaike Information Criterion (AIC)

Akaike (1973) proposed the Akaike Information Criteria (AIC) to estimate the expected Kullback- Leibler distance between the model generating the data and fitted candidate model. AIC can be expressed as:

$$AIC = -2\log(L) + 2p \quad (1)$$

Where (L) is the maximised log-likelihood of the data given the model parameter estimates and p is the number of parameters in the model. AIC is asymptotically efficient. However, the main problem with AIC is that it is not consistent. AIC chooses the best-approximating model to the data generating process. Models with minimum AIC values are preferred. AIC chooses the more complex model when the sample size is large.

2.1.2. Bayesian Information Criteria (BIC)

In order to overcome the over estimation problem of AIC, Schwarz (1978) proposed the Bayesian Information Criteria (BIC). BIC was derived using a Bayesian perspective and it selects the model with the maximum posterior probability for a given prior probability. BIC can be expressed as:

$$BIC = -2\log(L) + p\log(n) \quad (2)$$

Where the (L) is maximised log-likelihood of the data given the model parameter estimates, p is the number of parameters in the model and n is the sample size. The equation of BIC differs from AIC in terms of the penalty term which is greater in BIC. BIC chooses simpler models and it is consistent. It assumes that the candidate models contain the true model and subsequently selects the true model. Notably, models with minimum BIC are preferred.

2.1.3. Weighted-Average Information Criterion

Wu and Sepulveda (1998) recently introduced a novel model selection criteria, Weighted-Average Information Criterion (WIC) that combines the strength of corrected AIC and BIC. WIC is expressed as:

$$WIC = -2\log(L) + \frac{[2np/(n-p-1)]^2 + (p\log n)^2}{2np/(n-p-1) + (p\log n)} \quad (3)$$

Where the (L) is maximised log-likelihood of the data given the model parameter estimates, p is the number of parameters in the model and n is the sample size. Models with minimum WIC are preferred.

2.2. Asymmetric Price Transmission Models

An asymmetric price transmission model in which asymmetries specified affect the direct impact of price increases and decreases is proposed in Houck (1977) and can be represented as follows:

$$\Delta y_t = \beta_1^+ \Delta x_t^+ + \beta_1^- \Delta x_t^- + \varepsilon_t \qquad \varepsilon_t \sim N(0, \sigma^2) \quad (4)$$

Where Δx_t^+ and Δx_t^- are the positive and negative changes in the price series x_t Asymmetry is tested by establishing whether the coefficients (β_1^+ and β_1^-) are identical (that is $H_0 : \beta_1^+ = \beta_1^-$). The Houck's model assumes that the price series involved are not co-integrated.

In a context where the price series are co-integrated, Granger and Lee (1989) proposes the Error Correction Model which can be represented as follows:

$$\Delta y_t = \beta_1 \Delta x_t + \beta_2^+ ECT_{t-1}^+ + \beta_2^- ECT_{t-1}^- + \varepsilon_t \quad (5)$$

Where the price series x and y are co-integrated and the long run equilibrium relationship between them is denoted by the Error Correction Term (ECT) which is decomposed into positive and negative component. Asymmetries specified in the error correction model affect the positive and negative components of the error correction term. Symmetry in equation (5) is tested by determining whether the coefficients (β_2^+ and β_2^-) are identical (that is $H_0 : \beta_2^+ = \beta_2^-$).

Alternatively, a complex asymmetric price transmission model in which asymmetries specified affects the direct impact of price increases and decreases, as well as positive and negative components of the error correction term, is proposed in Cramon-Taubadel and Loy (1996).

$$\Delta y_t = \beta_1^+ \Delta x_t^+ + \beta_1^- \Delta x_t^- + \beta_2^+ ECT_{t-1}^+ + \beta_2^- ECT_{t-1}^- + \varepsilon_t \quad (6)$$

Where Δx_t^+ and Δx_t^- are the positive and negative changes in x_t and ECT_{t-1}^+ and ECT_{t-1}^- are the positive and negative components of the error correction term. The test for

asymmetry using the above equation is: $H_0 : \beta_1^+ = \beta_1^-$ and $\beta_2^+ = \beta_2^-$. In this case, a joint F-test can be used to detect symmetry or asymmetry of the price transmission process.

3. RESULTS AND DISCUSSION

3.1. A Comparison of the Performance of Information Criteria

Monte simulation studies are conducted to evaluate the relative performance of a new model selection criteria (WIC) against commonly used alternative model selection criteria (AIC and BIC) in recovering the true asymmetric data generating process (DGP) under conditions of different sample sizes, levels of asymmetry and noise levels. For each Monte Carlo experiment, the data generating process is simulated from the standard error correction model as follows:

$$\Delta y_t = 0.7\Delta x_t - 0.25(y_t - x_t)^+_{t-1} - 0.75(y_t - x_t)^-_{t-1} + \varepsilon \quad (7)$$

The assignment of model parameters draws from the experimental designs of Holly et al. (2003). Subsequently, the value of β_1 is set to 0.7 and $(\beta_2^+, \beta_2^-) \in (-0.25, -0.75)$ are considered for the coefficients of the asymmetric error correction terms in the true model.

Equation 7 consists of the prices y and x that are generated as I (1) nonstationary variables that are co-integrated and the positive and negative deviations from the equilibrium relationship between y and x.

The different asymmetric price transmission models are fitted to the simulated data and the ability of the model selection methods to recover the true model was measured and defined as the model recovery rates. The recovery rates were derived using 1000 Monte Carlo simulations. The frequency with which each model selection criteria selects the true model provides the basis for comparison. The relative performance of a new model selection criteria (WIC) and the commonly used alternative model selection criteria (AIC and BIC) are compared in terms of their success rates or ability to recover the true asymmetric data generating process (DGP) across various sample size conditions and noise levels (i.e. Model Recovery Rates). For the sake of brevity, the standard asymmetric error correction model, the complex asymmetric error correction model and the Houck's model in first differences are denoted by SECM, CECM, and HKD respectively.

The performance of the model selection methods is evaluated in terms of their ability to select the true model among a set of competing models. The results in Table 1 indicate the frequency with which each model selection criteria selects the true model.

The model selection methods studied performed reasonably well in identifying the true model, though their ability to recover the true asymmetric data generating process (DGP) increases with increase in sample size. This is consistent with previous studies (Acquah 2013; Tan & Biswas 2012; Al-Marshadi, 2009; Markon & Krueger, 2004; Bozdogan, 1987; Atkinson, 1980) which noted that model selection methods empirically do point to the true model. Generally, model selection performance of WIC, BIC, and AIC improved as sample sizes increased. In small samples (upper part of Table 1), the model selection methods recovered at most 81.8 % of the true data generating process. When the sample size was large (lower part of Table 1), the model selection methods recovered at most 100.0 % of the true model. AIC performs well in small samples, but is inconsistent and does not improve in

performance as sample size increased whilst WIC and BIC, in contrast, are consistent and improves performance in large sample size.

Recovery rates of Weighted Average Information Criteria strongly depended on sample size for the true data generating process (DGP). It increased from 37.7 percent to 100.0 percent when the sample size was increased from 50 to 500. Similarly, recovery rates of Bayesian Information Criteria also strongly depended on sample size for the true data generating process (DGP). It increased from 81.8 percent to 99.1 percent when the sample size was increased from 50 to 500. On the other hand, recovery rates of AIC increased from 78.7 percent to 85.0 percent for the true asymmetric data generating process (DGP) when the sample size was increased from 50 to 500. Though AIC performed well in the small samples, it did not make substantial gains in recovering the true model as the sample size increased. This is consistent with the empirical findings of Seghouane and Lathauwer (2003) in signal processing modeling which indicates that AIC performs better in small samples.

The results are generally consistent with trends suggested by previous studies (Acquah 2010) which indicated that the ability of AIC to select a true model rapidly increased with sample size but at larger sample sizes it continued to exhibit a slight tendency to select complex models whilst BIC, in contrast, is consistent and improves in performance as sample size increased. Chen, Wu, and Tang (2008) note that WIC performs similarly to BIC and outperforms other criteria when the sample size is large. Generally, these results are confirmed in the Monte simulation results presented in Table 1.

. Table 1. Relative performance of the model selection methods across sample size

Experiment criterion		**Model fitted**		
	Methods	**CECM (%)**	**HKD (%)**	**SECM (DGP) (%)**
$n=50$ $\sigma=1$	AIC	16.2	5.1	78.7
	BIC	5.2	13	81.8
	WIC	0	62.3	37.7
$n=150$ $\sigma=1$	AIC	15.6	0	84.4
	BIC	3.2	0	96.8
	WIC	0	2.8	97.2
$n=500$ $\sigma=1$	AIC	15	0	85
	BIC	0.9	0	99.1
	WIC	0	0	100

Note: Recovery rates based on 1000 replications.

In order to illustrate the effects of noise level on model selection, this study considers three error sizes (σ) ranging relatively from small to large and corresponding to 1.0, 2.0 and 3.0. Using 1000 replications, data is generated from equation (7) with the different error sizes and a sample size of 150. The data fitting abilities of competing models are compared in relation to the true model as the error in the data generating process was increased systematically.

Table 2 shows the percentage with which each model selection criteria selects the true model (i.e. SECM) among competing models as the amount of noise in the data generating process

was increased. Generally, the model selection performance declined with increasing amount of noise in the true asymmetric price transmission data generating process.

Recovery rates of Weighted Average Information Criteria decreased from 97.2 percent to 3.0 percent when the error size was increased from 1 to 3. Similarly, recovery rates of BIC decreased from 96.8 percent to 42.8 percent for the true data generating process (DGP) when the error size was increased from 1 to 3. Recovery rates of AIC also decreased from 85.0 percent to 65.1 percent for the true asymmetric data generating process (DGP) when the error size was increased from 1 to 3. Except for high noise levels, WIC outperforms AIC and BIC.

Table 2. Relative performance of the selection methods across error size

Experiment criterion		**Model fitted**		
	Methods	**CECM (%)**	**HKD (%)**	**SECM (DGP) (%)**
$n=150 \quad \sigma=3$	AIC	12.1	22.8	65.1
	BIC	1.6	55.6	42.8
	WIC	0	97	3
$n=150 \quad \sigma=2$	AIC	14.5	4.8	80.7
	BIC	2.1	18.2	79.7
	WIC	0	82.4	17.6
$n=150 \quad \sigma=1$	AIC	15.6	0	84.4
	BIC	3.2	0	96.8
	WIC	0	2.8	97.2

Note: Recovery rates percentages based on 1000 replications.

Simulating the effects of sample size and stochastic variance concurrently affirms that a small error and large sample improves recovery of the true asymmetric data generating process and vice versa as illustrated in Table 3.

With a small sample of 50 and an error size of 2.0, the true data generating process was recovered at least 4.1 percent of the time by the model selection criteria as illustrated in the upper part of Table 3. On the other hand, with a relatively large sample of 150 and error size of 0.5, at least 84.4 percent of the correct model was recovered across all the model selection methods as indicated in the lower part of Table 3. The model recovery rates of the model selection methods are derived under combined conditions of a small sample size of 50 and large error size of 2 (i.e. Unstable conditions), and a relatively large sample size of 150 and a small error size of 0.5 (i.e. Stable conditions). Under stable conditions, model selection performance or recovery rates improved. Notably, WIC outperforms the AIC and BIC under stable conditions.

Table 3. Effects of sample size and stochastic variance on model recovery

Experiment criterion		**Model fitted**		
	Methods	**CECM (%)**	**HKD (%)**	**SECM (DGP) (%)**
$\sigma=2 \quad n=50$	AIC	10.8	37.5	51.7
	BIC	2.3	56.5	41.2
	WIC	0	95.9	4.1
$n=150 \quad \sigma=0.5$	AIC	15.6	0	84.4
	BIC	3.2	0	96.8
	WIC	0	0	100

Note: Recovery rates based on 1000 replications.

The results are generally consistent with trends suggested by previous Monte Carlo Experimentation (Acquah, 2010) which suggest that the recovery rates of the true data generating process decrease with increasing noise levels and small sample size in asymmetric price transmission regression models.

In order to illustrate the effects of level of asymmetry on model selection, this study simulated data of sample size 150 and error size 1 from the standard error correction model and asymmetry values of $(\beta_2^+, \beta_2^-) \in (-0.25, -0.50)$ or $(-0.25, -0.75)$ are considered for the coefficients of the asymmetric error correction terms. Subsequently, the effect of the increase in difference of asymmetric adjustment parameters on model recovery is examined. An increase in the difference in the asymmetric adjustment parameters from 0.25 to 0.5 culminates in an increase in model recovery of the true asymmetric data generating process as illustrated in Table 4.

Recovery rates of the Weighted Average Information Criteria respond more strongly to increases in the difference between the asymmetric adjustments parameters than other criteria (AIC and BIC).

Similarly, Cook et al. (1999) without regards to the concept of information criteria notes that the increases in the difference in asymmetric adjustments parameters from 0.25 to 0.50 have positive effects on the test for asymmetry. Importantly, the performance of the model selection methods in recovering the true data generating process depends on the difference in asymmetric adjustment parameters or speeds.

Table 4. Effects of the level of asymmetry on model recovery

Experiment criterion	**Model Fitted**			
	Methods	**CECM (%)**	**HKD (%)**	**SECM (DGP) (%)**
$\beta_2^+ - \beta_2^- = 0.25$	AIC	15.7	0	84.3
	BIC	2.9	1.4	95.7
	WIC	0	34.6	65.4
$\beta_2^+ - \beta_2^- = 0.50$	AIC	15.6	0	84.4
	BIC	3.2	0	96.8
	WIC	0	2.8	97.2

Note: Recovery rates percentages based on 1000 replications

3. CONCLUSIONS

This study investigated the ability of the recently developed model selection criteria (WIC) and commonly used criteria (AIC and BIC) to clearly identify the correct asymmetric price transmission model out of a set of competing models via Monte Carlo experimentation. The Monte Carlo simulations results indicated that the sample sizes, difference in asymmetric adjustment parameters and noise levels are essential in the selection of the true asymmetric price transmission model. Large sample sizes or low noise levels improve the ability of the model selection methods to identify the correct asymmetric price data generating process. Generally, WIC outperforms AIC and BIC under stable conditions such as a large sample and small noise levels. WIC performs poorly at small sample sizes but improves with increasing sample size to eventually choose the correct asymmetric price transmission model with perfect probability. Thus performing better than AIC and BIC in large samples. As the difference in asymmetric adjustment parameters increases, WIC outperforms AIC and BIC. These results suggest that WIC, which combines the strengths of AIC and BIC is a very reliable and useful criterion in asymmetric price transmission model selection.

The comparison provided contributes to knowledge and understanding of the relative performance of recently developed WIC against commonly used AIC and BIC in an asymmetric price transmission modelling framework. Additionally, the study contributes to literature on asymmetric price transmission modelling by drawing the attention and interests of asymmetric price transmission researchers to adopt more recent statistical model selection criteria, such as WIC, in asymmetric price transmission model selection problems.

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Yabancı Turistlerin Destinasyon Seçimine Sığınmacıların Etkisi: Türkiye'ye Yönelik Bir Araştırma[1]

The Effect of Asylum Seekers on Foreign Tourists' Destination Choices: A Study Related to Turkey

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Anahtar kelimeler:

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Destinasyon
Destinasyon Seçimi

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ÖZET

Bu araştırmanın amacı Türkiye'yi bir destinasyon olarak seçmek isteyen yabancı turistlerin, ülkedeki sığınmacıların varlığından nasıl etkilendiklerini belirlemektir. Bu kapsamda destinasyon seçimini etkileyen itici-çekici faktörler esas alınarak seyahat alışkanlığına sahip yabancı uyruklu bireylere uygulanmak üzere dokuz senaryo hazırlanmıştır. Nisan-Mayıs 2017 aylarında uluslararası seyahat siteleri aracılığıyla, çevrimiçi olarak hazırlanan anket formuyla ve kolayda örnekleme yöntemiyle 412 geçerli veri toplanmıştır. Bulgular, fiziksel ihtiyaçlarını karşılamak amacıyla ve doğal, tarihi ve kültürel çekicilikleri görmek amacıyla seyahat etmek isteyen bireylerin destinasyon tercihlerinde sığınmacıların varlığından olumsuz olarak etkilendiğini göstermektedir. Ayrıca snobizm etkisiyle, fiyat odaklı olarak, sosyal arayış ve keşif amaçlı, alış-veriş olanaklarından yararlanmak amacıyla ve güçlü imaja sahip bir destinasyona seyahat etmek isteyen bireylerin destinasyon tercihlerinde destinasyondaki sığınmacıların varlığından olumsuz olarak etkilenmedikleri belirlenmiştir.

Keywords:

Turkey
Migration
Asylum Seeke,
Destination
Destination Choice

ABSTRACT

The purpose of this study is to determine how foreign tourists who have chosen Turkey as a touristic destination are affected from the presence of asylum seekers. In this concept, nine scenarios are created to apply foreign nationality owners with habits of traveling, in the basis of attractive and bothering factors that affect destination selection. Through international traveling websites between April and May 2017, 412 valid data have been gathered with online prepared survey form and convenience sampling. Findings reveal that individuals who travel to attend their physical needs and to see natural, historical and cultural beauties are affected negatively from the presence of asylum seekers in terms of destination selection. Additionally, it is determined that with influence of snobbism, individuals who travel as price-oriented, for social wondering and pleasure, and to benefit from shopping opportunities, and like to select a destination with a strong image are not affected negatively from the presence of asylum seekers.

[1]Bu makale Volkan ARATİMUR'un Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü'nde yazılan "Turistlerin Destinasyon Seçimine Sığınmacıların Etkisi: Türkiye'ye Yönelik Bir Araştırma" başlıklı yüksek lisans tezinden üretilmiştir.

1. GİRİŞ

Turizm, turistlerin sürekli konakladığı yerleşim yerlerinin dışında bir destinasyonda geçici süre konaklamasını kapsadığı için destinasyon turizm faaliyetlerinin odağında yer almaktadır (Cooper ve Hall, 2008:112).Turizm alan yazında turistlerin destinasyon seçimine etki eden faktörler sınıflandırılırken itici ve çekici faktörler yaklaşımının kullanımı genel olarak kabul görmüştür. İtme faktörleri kişileri seyahate yönelten içsel nedenleri açıklamak için; çekme faktörleri kişileri gidilecek yerin sahip olduğu özelliklerin bireye cazip gelmesi ve bireyi destinasyona çekmesi olarak tanımlanabilir (Dann, 1981).Turistlerin satın alma kararlarında ve tercihlerinde psikolojik, kültürel, sosyal ve kişisel faktörler önemli rol oynamakta ve kişilerin algıladıkları destinasyon imajı etkili bir unsur olup kişilerin satın alma tercihleri ve yönelecekleri destinasyona karar verme sürecinde kilit rol oynamaktadır (Karakaya, 2010:53). Destinasyon imajı algısı; destinasyonun sahip olduğu turistik çekiciliklere arz ve talep doğrultusunda, turist zihninde oluşan duygu ve düşüncelerin bütünüdür. Destinasyon imajı algısı birçok unsurdan oluşabilir ve etkilenebilir. Doğal kaynaklar, fiziksel özellikler, destinasyonun alt yapı ve üst yapı olanakları, güvenlik durumu, savaş, göç, doğal afet gibi pek çok durum destinasyona olan talebi ve destinasyonun imajını etkilemektedir(Yavaş ve Zengin, 2015:56).

Sosyal ve ekonomik bir olay olan göçler, göç eden bireylerin yaşamlarını etkiledikleri gibi, bireylerin ayrıldıkları destinasyonlarda ve içine girdikleri destinasyonlarda sosyal, kültürel ve ekonomik olarak birtakım değişimlere neden olmaktadır (Bahar ve Korkmaz, 2010:44). Göçlerin yarattığı bu değişimler destinasyonlar üzerinde ekonomik ve toplumsal bazı etkiler yapmaktadır. Toplumların kültürel olarak zenginleşmesini, turizm ürünlerinin güçlenmesini ayrıca seyahat, turizm, konaklama ve yeme içme hizmeti sunan işletmelere işgücü sağlar. Ayrıca vergi gelirinin düşüşü, fiyatlarda düşüş gibi ekonomik etkileri ve sosyal gerginlik gibi etkilerinden de söz etmek mümkündür. Bu gerginlikler destinasyon imajını etkileyerek, turistlerin algısı ve seyahat niyetleri üzerinde negatif yönde etki yaratabilmektedir(Li, 2008).

1945'den bu yana tahmini olarak 50 ila 60 milyon arasında insan gönüllü veya istem dışı olarak vatanlarını ve evlerini terk zorunda kalmıştır. Evlerinden kaçan sığınmacıların bir kısmı gördükleri zulüm ve ayrımcılıktan, bir kısmı ekonomik olarak daha iyi koşullara ulaşmak için, bir kısmı ise kendi topraklarındaki savaş ve darbelerin kurbanı olmamak için ülkelerini terk etmektedir. Birçok kişi, geçici kamplarda ya da dar alanlarda saklanmak için dost bir ülkeye sığınmayı tercih ederken; diğer bir kısmı ise yasa dışı yollarla yurtdışına kaçmaktadırlar(Whittaker, 2006). Dünyanın en büyük mülteci krizi ve nüfus hareketi olarak 15 Mart 2011 tarihinde Suriye'de başlayan iç savaşın sonucunda patlak veren milyonlarca insanın zorunlu olarak göç ederek sığınmacı konumuna düşmesine neden olan Suriye krizidir(Altundeğer ve Yılmaz, 2016). Son beş yıl içerisinde yaklaşık olarak Türkiye'ye göç eden sığınmacıların sayısı 3.5 milyonu geçmiştir(Hasan, 2017).

Turistler destinasyon seçimlerine karar vermeden önce gidecekleri destinasyon hakkında bazı kaynaklardan bilgi toplama ve değerlendirme imkânı bulabilmektedirler. Eğer turist gideceği destinasyonu daha önce ziyaret etmemiş ise yakın çevresinden, ticari veya ticari olmayan çeşitli kaynaklardan elde ettiği bilgiden büyük ölçüde etkilenmektedirler (Tunç, 2001). Bu bağlamda sığınmacıların ülke içerisinde yaşadıkları ve yaşattıkları sorunlar hem yerel hem de uluslararası basında yer almaktadır. Basında yer alan bu haberlerden ve çevresindeki diğer kaynaklardan edindikleri bilgilerin, seyahat kararını veren insanların destinasyon hakkındaki tutumunu etkileyebileceği düşünülmektedir.

Bu çalışmanın amacı Türkiye'ye seyahat etmek isteyen insanların destinasyon seçimlerini, Türkiye'deki sığınmacı varlığının nasıl etkilediğini belirlemektir. Ulusal alan yazında sığınmacıların turizme etkisini belirleyen bir araştırmanın olmaması ve uluslararası alan yazında ise sınırlı sayıda çalışmaya rastlanması nedeniyle yapılan bu araştırmanın alan yazına katkı sağlaması beklenmektedir. Ayrıca bu araştırmanın sığınmacıların bulunduğu destinasyonlardaki turizm işletmelerinin ve yerel yöneticilerin pazarlama stratejilerine önemli katkılarının olacağı düşünülmektedir. Bu bağlamda çalışmada öncelikle destinasyon tercihine etki eden nedenler itici ve çekici faktör kuramına bağlı olarak irdelendikten sonra alan araştırmasının yöntemine ilişkin bilgi verilmiştir. Devamında bulgular ve sonuç bölümü ile çalışma tamamlanmıştır.

2. ALANYAZIN TARAMASI

2.1. Destinasyon ve Turistlerin Destinasyon Tercihi

Alanyazında destinasyon ile ilgili yapılmış farklı tanımların olduğu görülmektedir. Türk Dil Kurumu yayınladığı Türkçe sözlükte destinasyon kavramını "varılacak olan yer" olarak tanımlanmıştır (Türk Dil Kurumu, 2006). Destinasyon kavramı turizm alan yazınında "Turizm Mahalli", "Turizm Bölgesi", "Turizm İstasyonu", "Turizm Alanı" veya "Turizm Merkezi" olarak da kullanılmaktadır (Akbulut, 2014:12). Coltman (1989:4) destinasyonu turizmin kalbi ve turizmin ayrılmaz bir parçası olarak yorumlamış; ayrıca destinasyonu doğal güzellikleri içinde barındıran, özellikleri ve çekicilikleri ile talep oluşturan, yaşamlarını orada ikamet ettiren kişiler dışındaki turist ve günübirlikçilerin hizmetine sunulmuş mekânlar olarak tanımlamıştır. Turistlerin bir destinasyonu neden tercih ettiğini veya tercih ettiği destinasyonun diğer destinasyon seçenekleri arasından nasıl seçtiğini anlamaya yönelik araştırmalar turizm alan yazınının önemli bir kısmını oluşturmaktadır (Ustasüleyman ve Çelik, 2015).

Destinasyon seçimi bireylerin motivasyonlarına, algılarına, geçmiş deneyimlerine tutum ve niyetlerine dayalı olarak (Heung vd., 2001: 259) ihtiyaç ve beklentilerini karşılayacak şekilde farklı alternatifler arasından kendileri için en uygun destinasyona karar vermeleridir (Hsu vd., 2009:289). Turistleri harekete geçiren, onları bir tercih yapmaya iten önemli faktörlerden biri de seyahat motivasyonudur. Seyahat motivasyonu faktörleri, destinasyon seçimi ile ilgili olarak alan yazında itici (içsel) ve çekici (dışsal) faktörler olmak üzere iki başlıkta incelenmektedir (Dann 1981; Crompton 1979). Geleneksel olarak itme faktörleri bireyleri seyahate yönelten psikolojik bir güç olarak kabul edilmekte ve bireylerdeki seyahat etme arzusunu açıklamaktadır. Rahatlama, dinlenme ve kaçma isteği itme faktörlerinden bazılarıdır. Çekme faktörleri ise destinasyonda bulunan çevresel özellikler olarak kabul edilmekte ve bireyi destinasyona çeken unsurları açıklamaktadır. Destinasyonun sahip olduğu doğal ve kültürel özellikler ve boş zaman tesisleri çekici faktörler arasında yer almaktadır (Dann, 1977, 1981; Crompton, 1979). Hsu vd. (2009:291) itme faktörlerini psikolojik faktörler, fiziksel faktörler, sosyal etkileşim ve arayış keşif olarak; çekme faktörlerini ise maddi (kişisel güvenlik, ulaşım, altyapı, fiyat konaklama tesisleri vb.) ve maddi olmayan (destinasyon imajı ve fayda, beklentiler)faktörler olarak sınıflandırmıştır.

Literatürde rutinden kaçmak, dinlenmek ve rahatlamak, macera arayışı, farklı yaşam ve kültürleri tanımak, aile ve arkadaşlarla vakit geçirmek, yeni insanlarla tanışmak, turistin seyahat arzusu, snobizm itici faktörler olarak ele alınmıştır. Emniyet, güvenlik, ulaşılabilirlik, tarihi ve kültürel değerler, iklim, doğal güzellik, alışveriş imkânlarının çeşitliliği, restoranlar,

özel etkinlikler, gece hayatı, konaklama seçenekleri, yerel halkın turistlere karşı tutumu ve fiyat politikası ise destinasyon tercihini açıklamada en çok kullanılan çekici faktörler olmuştur (Paker ve Vural, 2015). Jang ve Cai (2002:129) İngiliz turistleri seyahat yapmaya yönelten çekici faktörleri yaptıkları araştırmada "güvenlik", "temizlik", "ulaşım olanakları" "ekonomiklik" ve "atmosfer ve egzotiklik" beş başlık altında toplamışlardır. Mauritius'da yapılan başka bir araştırmada destinasyon seçimindeki itici faktörler sırasıyla "dinlenme ve rahatlama", "geçmişe özlem (nostalji)", "kaçış", "yenilik", "sosyal etkileşim", "kendini gerçekleştirme", "tanıma ve prestij" olarak sıralanmıştır(Kassean ve Gassita, 2013:7).

Turistler destinasyon seçimlerine karar vermeden önce gidecekleri destinasyon hakkında bazı kaynaklardan bilgi toplama ve değerlendirme imkânı bulabilmektedirler. Eğer turist gideceği destinasyonu daha önce ziyaret etmemiş ise yakın çevresinden, ticari veya ticari olmayan çeşitli kaynaklardan elde ettiği bilgiden büyük ölçüde etkilenmektedirler (Tunç, 2001). Bu bağlamda kişinin zihninde bir destinasyon algısı oluşur ve bu algı birçok unsurdan etkilenebilir. Doğal kaynaklar, fiziksel özellikler, destinasyonun alt yapı ve üst yapı olanakları, güvenlik durumu, savaş, göç, doğal afet gibi pek çok durum destinasyona olan talebi ve destinasyonun imajını etkilemektedir (Yavaş ve Zengin, 2015). Destinasyon imajı, turistlerin seyahat öncesinde satın alma kararını vermesine, destinasyondaki deneyimine, bu deneyimin değerlendirilmesi ile seyahat sonrası davranışlarının ve niyetlerinin şekillenmesine yardımcı olur. Bu sebep ile destinasyon seçim sürecinde imaj turistin tutum ve davranışını etkilemektedir (Chen ve Tsai, 2007:1115).

Beerli ve Martin (2004:265) destinasyon imajının algılanmasında ölçü olan unsur ve nitelikleri dokuz başlıkta toplamıştır. Bunlar: doğal kaynaklar, genel altyapı, turistik altyapı, turistik boş zaman ve rekreasyon(destinasyonun alışveriş olanakları, destinasyon içerisinde yer alan temalı parklar, hayvanat bahçeleri, kumarhaneler, yürüyüş alanları, spor alanları vb.), kültür, tarih ve sanat (yerin kültürü, dini yapısı, gastronomisi, müzeler, heykeller ve tarihi binalar, festivaller ve konserler), doğal çevre(şehrin temizliği, güzelliği, trafik durumu, kalabalıklığı ve sakinliği), sosyal çevre (yerel halkın misafirperverliği cana yakınlığı, dil bilgisi, yaşam kaliteleri), mekân atmosferi (mistik, moda, lüks rahatlatıcı, sıkıcı, eğlenceli vb.), politik (politik istikrarsızlıklar, politik gerginlikler, güvenlik, göç alımları, fiyatlar) ve ekonomik faktörlerdir.

2.2. Göç Kavramı

2.2.1. Göç ile İlgili Temel Kavramlar

Göç bireylerin ekonomik, politik, dini, siyasi ve sosyal nedenlere bağlı olarak bulundukları yerlerden başka yerlere yerleşmek amacıyla hareketleridir. Siyasi istikrarsızlık, insan hakları ihlali, baskıcı rejimler, iç savaşlar, etnik çatışmalar, ekonomik sıkıntılar, coğrafi koşulların yetersizliği ve can güvenliği gibi sorunlardankaçan insanlar daha insanca yaşayabilecekleri, karınlarını doyurup geçimlerini sağlayabilecekleri, daha iyi yaşam koşulları içerisinde yaşamlarını sürdürebilecekleri ülkelere göç etmek zorunda kalmaktadırlar (Deniz, 2014:178).

1951 yılında Mültecilerin Hukuki Statüsüne İlişkin Cenevre Sözleşmenin birinci maddesine göre mülteci "Ocak 1951'den önce meydana gelen olaylar sonucunda ve ırkı, dini, tabiiyeti, belli bir gruba mensubiyeti, veya siyasi düşünceleri yüzünden, zulme uğrayacağından haklı sebeplerle korktuğu için vatandaş olduğu ülkenin dışında bulunan ve bu ülkenin korunmasından yararlanamayan, ya da söz konusu korku nedeni ile, yararlanmak istemeyen; yahut tabiiyeti yoksa ve bu tür olaylar sonucu önceden yaşadığı ikamet ülkesinin dışında

bulunan, oraya dönemeyen veya söz konusu korku nedeni ile dönmek istemeyen şahıs(lar)dır" (Mültecilerin Korunması El Kitabı'ndan aktaran Barkın, 2014:334). Sığınmacı ise çeşitli nedenlerle ülkelerinde kendilerini baskı altında hissettiği için ülkelerini terk etmek zorunda kalan, uluslararası korunma ihtiyacında olan ancak statü bakımından henüz mültecilik hakları resmi olarak verilmemiş kişilerdir.

2.2.2. Dünyada ve Türkiye'de Sığınmacıların Dağılımı

2016 yılının ilk yarısında Dünyada mülteci ve benzeri durumda bulunan kişilerin ülkelere göre dağılımında 2.773.800 kişi ile Türkiye ilk sırada, Pakistan 1.576.800 kişi ile ikinci sırada, Lübnan 1.035.700 kişi ile üçüncü sırada, İran 978.100 kişi ile dördüncü sırada, Mısır 742.700 mülteci ile beşinci sırada yer almıştır (UNHCR, 2016). 2016 yılının ilk yarısına kadar yerlerinden edilen veya ülkelerini terk eden mültecilerin geldikleri ülkelere göre dağılımında ise yaklaşık 5.3 milyon kişi ile Suriye ilk sırada, Afganistan yaklaşık olarak 2.1 milyon kişi ile ikinci sırada yer almıştır. Bu ülkeleri sırasıyla Somali ve Güney Afrika takip etmiştir. Ayrıca 2016 yılı itibariyle 441.900 kişi ile Almanya en fazla sığınma talep edilen ülke olmuştur. 172.700 başvuru ile ABD ikinci sırada yer alırken, ABD'yi İtalya ve Türkiye takip etmiştir(UNHCR, 2016).

Türkiye'de toplamda 3.1 milyon sığınmacı bulunmaktadır. Sığınmacıların geldikleri ülkeler incelendiğinde ilk sırada 2.963.636 kişi ile Suriye yer alırken; bunu Irak, Afganistan, İran, Somali ve diğer ülkeler izlemektedir (Çoğalan, 2017). AFAD (2017) verilerine göre; Türkiye-Suriye sınırına yakın Türkiye'nin güney doğusundaki 10 ilde yer alan 22 geçici barınma merkezinde 256.038kişi barınmaktadır. Ayrıca bunların dışında 2016 yılında 69.755 Suriyeli, 31.360 Afgan ve 30.947 Iraklı düzensiz göçmen[2] yakalanmıştır.

2.3. Bir Turizm Destinasyonu olarak Türkiye ve Sığınmacılar

Son 25 yılda turizm faaliyetleri tüm dünyada gelişme eğilimindedir. Türkiye'de özellikle 1980'li yıllardan itibaren yapılan yaptırımlar, teşvikler, izlenen politikalar sayesinde gelişme gözlemlenmiş ve bu gelişme günümüzde ekonomik, sosyal ve kültürel alanlarda Türk turizmine önemli katkı sağlamıştır. Türkiye tarihi, kültürel, doğal güzellikleri ile turizm açısından önem arz eden bir destinasyon niteliğindedir. Yıl boyunca dört mevsimi yaşaması, üç tarafının denizlerle çevrili olması, temiz plajları, bol güneşli günleri ile önemli bir turizm potansiyeline sahiptir. Ayrıca birçok medeniyetin bu topraklarda hüküm sürmesi, eşsiz mutfak kültürü, misafirperverliği ile Türkiye uluslararası bir çekim merkezi haline gelmiştir (Zengin, 2010:103).

Türkiye'nin jeopolitik konumunun neden olduğu göç gibi olumsuzluklar, Türkiye ekonomisindeki her sektörü etkilediği gibi turizm sektörünü de etkilemiş ve sektörde krizlerin yaşanmasına neden olmuştur (Tunç, 2001). Özellikle Suriyeli sığınmacı sayısının artması Türkiye'yi farklı yönlerden etkilemiştir. Ortadoğu Stratejik Araştırmalar Merkezinin (ORSAM) Suriyeli sığınmacıların Türkiye'ye etkileri raporunda Suriyeli sığınmacıların Türkiye'ye etkileri toplumsal, ekonomik, siyasi ve güvenlik, temel hizmetler olmak üzere dört başlıkta ele alınmıştır(Oytun ve Gündoğar, 2015). Bu çalışmada da ORSAM raporuna

[2]Düzensiz göç gidilen (hedef) ülkeler için yasal yollarla gelip, çıkış süresi içerisinde çıkmayan kişilerin yaptığı göçü ifade ederken; kaynak ülkeler için ise ülkesini terk ederken gerekli yasal koşulları sağlamadan ülkesini terk eden kişilerin yaptığı göçü ifade etmektedir (İç İşleri Bakanlığı Göç İdaresi Genel Müdürlüğü, 2016).

bağlı olarak sığınmacıların Türkiye'ye etkileri toplumsal etkiler, ekonomik etkiler, çevresel etkiler, güvenlik ile ilgili etkiler olarak incelenmiştir.

Toplumsal Etkiler: Sığınmacılar ile yerel halk arasında dil, kültür, yaşam tarzı farklılıklarından doğan sorunlar destinasyonda yaşayan yerel halkın tepkisine ve devamında destinasyonda bir kargaşanın ortaya çıkmasına neden olmaktadır(Oytun ve Gündoğar, 2015). Ayrıca ülkelerini terk etmek zorunda kalan kamp dışındaki mülteciler inşaat, hammallık vb. işlerde düşük ücretler ile çalışmaktadırlar. Bazı sığınmacılar ise yaşamlarını sürdürebilmek için dilenciliğe yönelmiş durumdadır. Başka bir toplumsal sorun ise bulaşıcı hastalıkların yayılma olasılığıdır.

Ekonomik Etkiler: Sığınmacı sayısının artması destinasyonlarda önemli ekonomik kayıplara neden olmaktadır. Söyler ve Ertaş (2015:881) Suriye'deki savaşın, Türkiye- Suriye sınırında bulunan turizm işletme belgeli konaklama tesislerinin doluluk oranlarının düşmesine ve rezervasyonların iptal edilmesine neden olduğunu belirlemişlerdir. Bu nedenle de işletmelerin konaklama ücretlerini aşağıya çekmek zorunda kaldıklarını ve sınır illerinde faaliyet gösteren konaklama işletmelerinin ekonomik durgunluk yaşadıklarını tespit etmişlerdir.

Çevresel Etkiler: Sığınmacıların oluşturduğu çevresel sorunların başında barınma sorunu gelmektedir. Kamp dışındaki sığınmacıların bazıları park, bahçe, şehir meydanları ve plajlarda barınma ihtiyaçlarını karşılamaktadırlar.

Güvenliğine İlişkin Etkiler: Yerel halk ile sığınmacılar arasında yaşanan gerginlikler önemli bir güvenlik sorunudur. Bunun örnekleri neredeyse Suriye sınırına yakın her ilde görülmektedir. Bunun yanında yerel halkın bu tepkilerinin sonucunda sığınmacıların örgütlenerek kendi adalet ve güvenliklerini sağlama çabasına girme ihtimali de ayrı bir risk oluşturmaktadır.

3. YÖNTEM

3.1. Evren ve Örneklem

Araştırmanın evreni Türkiye'ye seyahat etme eğiliminde olan yabancı turistlerden oluşmaktadır. Bu bağlamda araştırma evreni sınırsız olarak kabul edilmiştir. Sınırsız evren büyüklüğünde ve 0.95 güven aralığında örneklem büyüklüğü 384 olarak hesaplanmıştır (Ural ve Kılıç, 2006). Ana kütleyi oluşturan kişiler belirli olmadığı için olasılığa dayalı olmayan örnekleme tekniklerinden kolayda örnekleme yöntemi tercih edilmiştir.

3.2. Veri Toplama Aracı ve Veri Analizi

Araştırmada veri toplamak için iki bölümden oluşan bir veri toplama formundan yararlanılmıştır. Bu formun ilk bölümde katılımcıların demografik ve sosyo-ekonomik özelliklerini belirlemeye yönelik sekiz adet soru; ikinci bölümünde ise araştırmacıların hayal gücüne dayalı olarak oluşturulan senaryolar yer almaktadır. Senaryolar mantıklı, tutarlı ve akla yatkın olarak doğaçlama mantıklar senaryo yöntemine (Hsu vd., 2009:291) göre itme ve çekme faktörleri (Dann, 1979) esas alınarak destinasyon seçimine etki eden faktörleri belirlemek amacıyla hazırlanmıştır. Bu süreçte senaryolar ile ilgili kısa hikâyeciklerin oluşturulmasına yönelik olan vignette yöntemi tercih edilmiştir. Vignette, gerçek yaşamdan alınan bir olayın meydana gelişinin canlı ve güçlü bir portresi olarak tanımlamaktadır. Bu portre olayın gerçek zaman diliminde meydana gelişinin doğal aşamaları ile ilgili tüm ayrıntıları içerir. Bu şekilde hazırlanan bir vignette, örneklemde olayı yaşamış gibi veya olay

anında oradaymış gibi bir his uyandırır (Erickson, 1986'dan aktaran Kaya ve Kaya, 2013:132). Vignette yönteminde gerçek yaşamla ilgili bilgilerin ilgili kişilere ulaştırılması amaçlanmaktadır (Bilim vd., 2007).

Araştırmada katılımcıların cevapları frekans ve yüzde dağılımları esas alınarak yorumlanmıştır. Yapılan analizlerin nicel olmasına bağlı olarak bu araştırma nicel bir araştırma olarak kabul edilmiştir. Analiz sürecinde öncelikle veri toplama formunda yer alan senaryoların geçerlilik ve güvenirliği sorgulanmıştır. Geçerlilik verilerin derinliğine, kapsamına, katılımcıların yaklaşımına ve araştırmacıların nesnelliğine bağlı olarak yorumlanmıştır. Hammersley (1992) araştırmalarda geçerliğin sonuçların araştırmacının iddialarından bağımsız ve sonuçların güvenilir olması durumunda sağlanabileceğini belirtmektedir. Bu araştırmada da geçerlilik sağlanması amacıyla öncelikle hazırlanan senaryolar ile ilgili olarak üç uzmandan görüş alınmıştır. Uzmanların görüşlerine bağlı olarak ifadelere bazı eklemeler (senaryoya seçenek eklenmesi gibi) ve ifadelerde bazı değişiklikler (cümle yapısının değiştirilmesi gibi) yapılmıştır. Devamında verilerin iç ve dış geçerliliği kontrol edilmiştir. Senaryolar ile elde edilecek bulguların sığınmacıların turizme etkisini belirleme konusunda yeterli olacağı öngörüsü ile iç geçerlilik, bulguların sığınmacıların bulunduğu diğer ülkelere doğrudan genellemesinin mümkün olmamasına rağmen dolaylı olarak genellemesi mümkün olacağı için dış geçerlilik sağlandığı söylenebilir.

Ölçümlerin güvenirliği ise içeriğin gerçek hayat ile uyumlu olması, duruma özel ve özgün olması, kapsamlı, ayrıntılı olması; yanıtların araştırmaya katılan kişiler için anlamlı ve katılımcıların dürüst olmaları ile sağlanır (Cohen vd., 2007:149). Ölçümlerin güvenirliği ile ilgili olarak iç güvenirlik ve dış güvenirlik üzerinde durulmuştur. Araştırma sonuçlarının benzer ortamlarda aynı yöntemle elde edilmesi mümkün olduğu için dış güvenirlik; araştırmayı yürüten araştırmacılar birbirinden bağımsız olarak aynı veriyi kullanarak yaptıkları analizlerde aynı sonuçlara ulaştıkları için ise iç güvenirliğin sağlandığı söylenebilir.

Veri toplama formunun uygulanması 2017 yılının Mart ve Nisan aylarında gerçekleştirilmiştir. Form 2016 yılında Türkiye'ye gelen turistlerin dağılımları esas alınarak İngilizceye ve Rusçaya dil uzmanları tarafından çevrilmiştir. Veri toplama süreci elektronik ortamda çevrimiçi olarak gerçekleşmiştir. Google dokümanı (Çevrimiçi çok amaçlı soru formu) haline getirilen form Facebook ve Twitter gibi sosyal medya sitelerinde bulunan birçok (Travel bloggers, I Want to Travel the Word, Share Your Travel Blog vb.) seyahat sayfası ve bloğunda gün aşırı güncellenerek paylaşılmıştır. Veri toplama süreci 412 kullanılabilir soru formuna ulaşıldığında sonlandırılmıştır.

4. BULGULAR

Katılımcılar tarafından cevaplanan senaryo soruları yüzde ve frekans dağılımları esas alınarak yorumlanmıştır. Araştırmaya katılan 412 kişinin bilgileri Tablo 1'de yer almaktadır. Katılımcıların %70'i(290 kişi) 18-35 yaş aralığında ve %54'ü (221 kişi) kadın ve %75'i (309 kişi) bekârdır. Katılımcıların %74'ü (303 kişi) çocuk sahibi olmadığını, %73'ü (298 kişi) lisans ve üzeri eğitim aldığını, %64'ü (265 kişi)3000$'ın altında ortalama aylık gelire sahip olduklarını belirtmiştir. Katılımcıların %61'i (252 kişi) daha önce hiç Türkiye'de bulunmadığını belirtmişlerdir. Katılımcıların uyruklarına göre dağılımları incelendiğinde %14'ünün (56 kişi) Alman, %16'sının (65 kişi) Amerikalı, %15'inin (61 kişi) İngiliz, %16'sının (66 kişi) Rus vatandaşı olduğu görülmektedir.

Tablo 1. Katılımcılara İlişkin Bilgilerin Dağılımı

Değişken	Grup	Sayı (n)	Yüzde (%)	Değişken	Grup	Sayı (n)	Yüzde (%)
Çocuk Durumu	Var	109	27	Cinsiyet	Kadın	221	54
	Yok	303	74		Erkek	191	46
Uyruk	Alman	56	14	Medeni Durum	Bekâr	309	75
	Amerikalı	65	16		Evli	103	25
	İngiliz	61	15	Eğitim Düzeyi	İlköğretim/Lise	70	16
	Rus	66	16		Ön Lisans	44	11
	Ukraynalı	30	7		Lisans	151	37
	İtalyan	23	6		Lisansüstü/Uzm.	147	36
	Afrikalı	13	3	Türkiye'de Bulunma Durumu	Hayır	252	61
	Fransız	22	5		Evet	160	39
	Diğer Asya	33	8	Yaş	18-35	290	70
	Diğer Avrupa	43	10		36-49	79	19
Aylık Gelir	1000$ ve altı	147	36		50 ve Üstü	43	10
	1001 - 3000$	118	28				
	3001 - 5000$	69	17				
	5001$ ve üzeri	78	19				

Günümüzde insanlar dünyanın değişik yerlerinde yaşayan insanlar ile birlikte olmayı, onlar gibi yaşamayı veya kendisine örnek aldığı insanların gittiği destinasyonlara gitmeyi arzulamaktadırlar. Örneğin; komşusunun veya arkadaşının yaz tatilinde belirli turizm merkezine gittiğini öğrenen bir kişi daha sonraki dönemde kendisi de aynı destinasyona seyahat etmek isteyebilmektedir (Kozak vd., 2010). Bu bağlamda araştırmanın ilk senaryosu insanların psikolojik güdülerle gerçekleştirmek istedikleri seyahatlerde, seyahat kararlarına

sığınmacıların etkisini belirlemek amacıyla kurgulanmıştır. Bu senaryoda itici bir faktör olarak psikolojik bir faktör olan snobizm (taklitçilik) ele alınmış ve senaryo şu şekilde ifade edilmiştir.

Çok yakın bir arkadaşınız 2016 yılında tatil için Türkiye'yi tercih etmiştir. Siz elinizde olmayan sebeplerden dolayı 2016 yılında tatilinizi gerçekleştiremediniz. Arkadaşınızın gidip sizin gidemediğiniz Türkiye, sizde içten içe bir kıskançlık ve merak duygusu oluşturmuştur. 2017 yılında elinize bir fırsat geçmiş ve tatil için Türkiye'ye gitme fırsatı yakaladınız. O dönemde Türkiye'nin yaklaşık üç milyon sığınmacıya ev sahipliği yaptığını öğrenmeniz durumunda tercihiniz ne olurdu?

Senaryo 1'e ilişkin sunulan seçeneklere verdikleri cevapların dağılımı Tablo 2'nin ilk bölümünde sunulmuştur. Senaryo 1'e katılımcıların %55'i (227 kişi) sığınmacılardan rahatsız olmayacağı için Türkiye'ye gideceğini; %24'ü (98 kişi) merak ettikleri için Türkiye'ye gideceğini fakat tatillerini kısa tutacağını; %21'i (87 kişi) Türkiye'ye gitmeyerek tatil için başka destinasyonları tercih edeceğini belirtmiştir.

Tablo 2. Senaryo 1 ve Senaryo 2'ye İlişkin Bulgular

Senaryo 1 Bağımsız Değişken	**Sayı (n)**	**Yüzde (%)**
Sığınmacılardan rahatsız olmadığım için Türkiye'ye giderim.	227	55
Merak ettiğim için Türkiye'ye giderim. Fakat tatilimi kısa tutarım.	98	24
Türkiye'ye gitmek yerine diğer ülkelere gitmeyi tercih ederim.	87	22
Senaryo 2 Bağımsız Değişken	**Sayı (n)**	**Yüzde (%)**
Basından öğrendiklerimi esas alarak Türkiye'ye gitmekten tamamıyla vazgeçer, başka ülkelere giderim.	107	26
Arkadaşlarımın görüşlerini esas alarak Türkiye'ye gitmeme rağmen kalacağım süreyi azaltırım.	226	55
Türkiye tatilini ülkedeki sığınmacı sorunu çözülene kadar ertelerim.	56	14
Tatilden vazgeçerim.	23	5

Araştırmanın ikinci senaryosu destinasyon seçimine etki eden itici bir faktör olarak fiziksel nedenlerle dinlenme ve iş stresini atmak amacıyla turizm faaliyetlerine katılacak kişilerin destinasyon seçim kararlarına sığınmacıların etkisini belirlemek amacıyla kurgulanmıştır. Fiziksel motivasyonlar dinlenme, rahatlama ve günlük iş stresinden uzaklaşma gibi ihtiyaçlarını karşılamak için yürüyüş, kayak ve golf gibi aktiviteler gerçekleştirme; sıcak ve

güneşli bir kumsalda dinlenme gibi aktivitelere katılmayla ilgilidir (Middleton ve Clarke, 2001:72). Bu bağlamda Senaryo 2 şu şekilde kurgulanmıştır.

Yoğun olarak çalıştığınız için hem zihinsel hem de fiziksel olarak kendinizi yorgun hissediyor ve ilk fırsatta tatile çıkmak istiyorsunuz. Uzun zamandır gitmeyi planladığınız Türkiye için hem tanıdıklarınızdan hem de internetten bilgi toplamaya başladınız. İnternette Türkiye'de o dönemde yaklaşık üç milyon sığınmacı olduğunu öğrendiniz. Daha önce Türkiye'ye giden arkadaşlarınız ise Türkiye'de çok sayıda sığınmacı olmasına rağmen rahatsız olmadıklarını belirttiler. Bu durumda tatil için tercihiniz ne olurdu?

Katılımcıların Senaryo 2'ye ilişkin sunulan seçeneklere verdikleri cevapların dağılımı Tablo 2'nin ikinci bölümünde yer almaktadır. Senaryo 2'ye katılımcıların %26'sı (107 kişi) basından öğrendiklerini esas alarak Türkiye'ye gitmekten tamamıyla vazgeçerek başka ülkelere gideceğini; %55'i (226 kişi) arkadaşlarının görüşlerini esas alarak Türkiye'ye gitmelerine rağmen kalacakları süreyi azaltacaklarını; %14'ü (56 kişi) Türkiye tatilini ülkedeki sığınmacı sorunu çözülene kadar erteleyeceğini; %5'i (23 kişi) ise tatilden vazgeçeceğini belirtmiştir.

İnsanların yeni yerler görmek, yeni şeyler yapmak veya farklı insanlar tanımak gibi ihtiyaçları vardır. Macera ve sosyal arayış, keşif amaçlı seyahatler itici faktörler kapsamında yapılan seyahatler arasında yer almaktadır(Lee ve Crompton, 1992:735). Araştırmada itici bir faktör olarak macera ve sosyal arayış veya keşif amaçlı seyahate çıkacak bireylerin destinasyon seçim kararlarına Türkiye'deki sığınmacıların yarattığı güvenlik sorununun etkisini ölçmek amacıyla Senaryo 3 kurgulanmış ve şu şekilde ifade edilmiştir.

Üye olduğunuz macera tutkunları kulübü, üyeler arasındaki sosyalleşmeyi artırmak ve yeni yerler keşfetmek amacıyla her yıl düzenli olarak tatil organizasyonu yapmaktadır. Gidilecek yer konusunda ise macera kulübü sosyal medya aracılığıyla üyelerinden bir yıl öncesinden önerileri toplamakta ve buna göre rezervasyonları yapmaktadır. 2017 yılı için kulüp tarafından Türkiye'ye gidilmesi planlanmasına rağmen tatilinize iki ay kala Türkiye'de çok fazla sığınmacının olduğunu ve bu nedenle güvenlik sorunları yaşayabileceğinizi öğreniyorsunuz. Bu durumda tercihiniz ne olurdu?

Katılımcıların Senaryo 3'e ilişkin sunulan seçeneklere verdikleri cevapların dağılımı Tablo 3'ün ilk bölümünde yer almaktadır. Senaryo 3'e katılımcıların %54'ü (220 kişi) Türkiye tatiline kulüp arkadaşları ile gideceğini ve kulübün tatil planına uyacağını; %27'si (113 kişi) Türkiye'ye merak ettiği için gideceğini fakat tatilini kısa tutacağını; %19'u (79 kişi) kulüp arkadaşları gitse bile Türkiye'ye gitmeyeceğini belirtmiştir.

Tablo 3. Senaryo 3 ve Senaryo 4'e İlişkin Bulgular

Senaryo 3 Bağımsız Değişken	**Sayı (n)**	**Yüzde (%)**
Türkiye tatiline kulüp arkadaşlarımla birlikte gider, kulübün tatil planına uyarım.	220	54
Türkiye tatiline kulüp arkadaşlarımla birlikte giderim ama tatilimi kısa tutarım.	113	27
Kulüp arkadaşlarım gitseler bile ben Türkiye'ye gitmem.	79	19

Senaryo 4 Bağımsız Değişken	**Sayı (n)**	**Yüzde (%)**
Türkiye'ye tatili hediye olduğu için gider, tatil programına uyarım.	242	59
Türkiye'ye giderim. Fakat tatilimi kısa tutarım.	109	26
Türkiye'ye gitmem tatilden vazgeçerim.	61	15

Alışveriş ve eğlence her türlü turist aktivitesinin önemli bir parçasıdır. Alışveriş ulusal ve uluslararası seyahatte en önde gelen aktivitelerden biri iken, eğlence amacıyla seyahat eden turistlerin de seyahat deneyimleri içinde yer almasını istediği önemli bir unsurdur (Özdemir, 2007: 60). Günümüzde turistler sadece alışveriş amaçlı bile destinasyonları ziyaret ettikleri için (Pekyaman, 2008: 19) destinasyonların sahip oldukları alışveriş olanakları çekici faktörler kapsamında incelenmektedir. Bu kapsamda Türkiye'nin sahip olduğu alış-veriş olanaklarının yabancı turistler üzerindeki çekiciliğinde, sığınmacıların etkisini belirlemek amacıyla kurgulanan Senaryo 4 şu şekilde ifade edilmiştir.

Alışveriş yapmayı çok seven birisiniz. Bir alışveriş merkezindeki mağazada yapılan çekilişte, alışveriş merkezleri ve eğlence olanaklarıyla ünlü Türkiye'de iki kişilik bir tatil kazandınız. Basında Türkiye hakkında araştırma yaparken Türkiye'de çok sayıda sığınmacının olduğunu, alışveriş merkezlerinin yakınlarında dilendikleri ile ilgili haberleri gördünüz. Bu durumda tercihiniz ne olurdu?

Katılımcıların Senaryo 4'e ilişkin önerilen seçeneklere verdikleri cevapların dağılımlarının yer aldığı Tablo 3'ün ikinci bölümü incelendiğinde katılımcıların %59'unun (242 kişi) Türkiye tatili hediye olduğu için Türkiye'ye gideceği ve tatil programına uyacağı; %26'sının (109 kişi) Türkiye'ye gideceği fakat tatilini kısa tutacağı; %15'inin (61kişi) ise Türkiye'ye gitmekten vazgeçeceği görülmektedir.

Destinasyonun sahip olduğu doğal ve kültürel değerler çekici faktörler arasında yer almaktadır. Doğal çevre turistik zenginliklerin en önemlisidir. Her destinasyonun kendine özgü özellikleri ve doğal yapısı vardır. Doğal çevre destinasyonu cazip hale getiren ve görülmeye değer kılan bir faktördür (Pekyaman,2008: 13). Bunun yanında bir yörenin çekiciliği tarihi ve kültürel verilere bağlıdır (Kutvan ve Kutvan, 2013:162).Çekici bir faktör olarak doğal, tarihi ve kültürel bakımdan zengin bir destinasyona seyahat etmek isteyen kişilerin destinasyon tercihine destinasyonda bulunan sığınmacıların etkisini belirlemek amacıyla Senaryo 5 kurgulanmış ve şu şekilde ifade edilmiştir:

2016 yılında tatilinizi geçirmek için gidilebilecek ülkeler hakkında bilgi almak için bir seyahat acentesine gittiniz. Acente görevlisine tarihi ve doğal güzelliklerin bir arada olduğu, ayrıca deniz, kum ve güneş üçlüsünden de yararlanılabileceğiniz bir ülkeyi tercih etmek istediğinizi belirttiniz. Görevli, istekleriniz doğrultusunda Türkiye'nin de içinde yer aldığı üç ülke önerdi. İnternet üzerinden Türkiye hakkında yaptığınız araştırmada, Türkiye'de sığınmacıların olduğunu; park, bahçe, plajlarda konakladıklarını ve Türkiye'yi transit bir bölge olarak kullanıp botlar ile kaçak yollarla başka ülkelere göç ettiklerini öğrendiniz. Bu durumda tercihiniz ne olurdu?

Katılımcıların Senaryo 5'e ilişkin sunulan seçeneklere verdikleri cevapların dağılımının yer aldığı Tablo 4 incelendiğinde katılımcıların %42'sinin (174 kişi) sığınmacılar olmasına rağmen Türkiye'ye gideceği; %35'inin (143 kişi) Türkiye'ye gideceği fakat sığınmacıların az olduğu bölgeyi tercih edeceği; %23'ünün (95 kişi) Türkiye'ye gitmeyip önerilen diğer ülkelerden birini tercih edeceği görülmektedir.

Fiyat ekonomik bir faktör olarak turistlerin satın alma kararlarına yön veren bir unsurdur. Bir turizm ürününe olan talebi ürün fiyatının bir fonksiyonu olarak görmek mümkündür. Buna göre diğer koşullar sabit kalmak koşuluyla (ceteris paribus) fiyatların düşmesi turizm talebini arttırıcı, fiyatların yükselmesi ise turizm talebini azaltıcı bir etki yaratmaktadır (Bahar ve Kozak, 2013:119). Araştırmada hizmet fiyatlarında yapılan indirimlerin destinasyonlarda sığınmacıların bulunması durumunda insanların destinasyon tercihinin nasıl etkileneceğini belirlemek amacıyla Senaryo 6 kurgulanmış ve şu şekilde ifade edilmiştir:

Tatil için gidebileceğiniz ekonomik bir ülke araştırırken; Türkiye'de sığınmacıların yoğun olması nedeniyle işletmelerin turizmi canlandırmak için ulaşım ve konaklama fiyatlarında önemli oranlarda indirim yaptıklarını gördünüz. Bu durumda tercihiniz ne olurdu?

Senaryo 6 ile ilgili sunulan seçeneklere katılımcıların %68'i (281 kişi) fiyatların uygun olmasını göz önünde bulundurarak sığınmacılar olmasına rağmen Türkiye'ye gideceği; %32'si (131 kişi) daha az masraflı olmasına rağmen sığınmacılardan rahatsız olacakları için Türkiye'ye gitmeyeceği ve alternatif ülkeler arasından seçim yapacağı şeklinde yanıt verdikleri Tablo 4'de görülmektedir.

Tablo 4. Senaryo 5 ve Senaryo 6'ya ilişkin Bulgular

Senaryo 5 Bağımsız Değişken	**Sayı (n)**	**Yüzde (%)**
Sığınmacılar olmasına rağmen Türkiye'ye giderim.	174	42
Türkiye'ye giderim. Fakat sığınmacıların az olduğu bölgeyi tercih ederim.	143	35
Türkiye'ye gitmem diğer ülkeler arasından seçim yaparım.	95	23
Senaryo 6 Bağımsız Değişken	**Sayı (n)**	**Yüzde (%)**
Fiyatların uygun olmasını göz önünde bulundurarak sığınmacılar olmasına rağmen Türkiye'ye giderim.	281	68
Daha az masraflı olmasına rağmen sığınmacılardan rahatsız olacağım için Türkiye'ye gitmem ve alternatif ülkeler arasından seçim yaparım.	131	32

Destinasyon imajı, destinasyon seçim sürecinde çekici bir faktör olarak etkili olmaktadır. Turizm alanyazınında destinasyon imajı ile ilgili yapılan çalışmalar imajın tatil yeri seçim sürecini açıklamakta önemli bir değişken olduğunu göstermektedir (Üner vd., 2006:191).

Pozitif bir imaj algısına sahip destinasyonda sığınmacıların bulunması durumunda, bu destinasyona gitmek isteyen insanların destinasyon seçim kararlarının ne yönde etkileneceğini belirlemek amacıyla Senaryo 7 kurgulanmış ve şu şekilde ifade edilmiştir:

Türkiye'nin güzel bir iklime ve önemli tarihi eserlere sahip olduğunu biliyor, Türklerin misafirperver olduklarını düşünüyorsunuz. İş için daha önce Türkiye'ye gelmenize rağmen yoğunluğunuz nedeniyle Türkiye'nin tadını çıkaramadınız. Bu nedenle Türkiye sizin için gidilmesi gereken ülkeler listesinde ilk sıralarda yer alıyor.2017 yılında tatile çıkmak için bir fırsat yakaladınız ve bu tatilinizi Türkiye'de geçirmeyi düşünüyorsunuz. Birçok haber kaynağından Türkiye'nin çok sayıda sığınmacıya ev sahipliği yaptığını öğrendiniz. Bu durum destinasyon tercihinizi nasıl etkiler?

Senaryo 7'yi katılımcıların %31'i (128 kişi) Türkiye'yi yardımsever bir ülke olarak düşünüp Türkiye'ye gideceğini, %42'si (171 kişi) algısında olumlu veya olumsuz bir değişiklik olmayacağı için Türkiye'ye gideceğini, %18'i (75 kişi) Türkiye hakkında kafalarında soru işareti oluştuğu için Türkiye tatilini erteleyeceğini, %9'u (38 kişi) algısının olumsuz olarak etkileneceği için Türkiye'yi gidilecek ülkeler listesinden çıkartacağını belirterek yanıtlamışlardır (Tablo 7'in ilk yarısı).

Tablo 5. Senaryo 7 ve Senaryo 8'e ilişkin Bulgular

Senaryo 7 Bağımsız Değişken	**Sayı (n)**	**Yüzde (%)**
Türkiye'nin yardımsever bir ülke olduğunu düşünürüm ve Türkiye'ye giderim.	128	31
Algımda olumlu veya olumsuz bir değişiklik olmaz ve Türkiye'ye giderim.	171	42
Türkiye hakkında kafamda soru işaretleri oluşur. Türkiye tatilimi ertelerim.	75	18
Algım olumsuz olarak etkilenir ve Türkiye'ye gidilecek ülkesinden çıkartırım.	38	9
Senaryo 8 Bağımsız Değişken	**Sayı (n)**	**Yüzde (%)**
Türkiye'yi tekrar tatil seçeneklerim arasına alırım.	308	75
Sığınmacı sayısı azalsa da tatil için Türkiye'yi gitmeyi tercih etmem.	104	25

Türkiye'deki sığınmacıların Türkiye'yi terk etme haberlerinin destinasyon tercihinde bulunacak katılımcıları ne yönde etkileyeceğini ölçmek amacıyla Senaryo 8 kurgulanmış ve şu şekilde ifade edilmiştir:

Daha önceki yıllarda Türkiye'de tatil yapmak istemenize rağmen; Türkiye'de sığınmacı sayısı fazlalığı ve barınma, dilenme gibi çevresel sıkıntılar nedeniyle Türkiye'yi gidilecek ülkeler listesinden çıkartarak tatilinizi başka ülkelerde geçirmeyi tercih etmiştiniz. Son zamanlarda sığınmacıların büyük bir kısmının Türkiye'yi terk ettiklerini haberlerden öğrendiniz. Bu durumunda destinasyon tercihinizi nasıl etkiler?

Senaryo 8'e ilişkin sunulan seçeneklere katılımcıların %75'inin (308 kişi) Türkiye'yi tekrar tatil seçenekleri arasına alacağı; %25'inin (104 kişi)sığınmacı sayısı azalsa bile tatil için Türkiye'ye gitmeyeceği yönünde cevap verdikleri belirlenmiştir.

Türkiye'deki sığınmacıların yerel/merkezi yönetimler tarafından kamplara toplanması haberlerinin insanların destinasyon tercihlerini ne yönde etkileyeceğini belirlemek amacıyla Senaryo 9 kurgulanmış ve şu şekilde ifade edilmiştir:

Daha önceki yıllarda Türkiye'de tatil yapmak istemenize rağmen; Türkiye'de sığınmacı sayısı fazlalığı ve bu nedenle yaşanabilecek sorunlar nedeniyle Türkiye'yi gidilecek ülkeler listesinden çıkartarak tatilinizi başka ülkelerde geçirmeyi tercih etmiştiniz. Fakat sığınmacıların turistik bölgelerin dışındaki yaşam alanlarında (kamplarda) barınmaları için ülke yöneticilerinin yasal düzenlemeler yaptıklarını basından öğrendiniz. Türkiye'ye tatile giden arkadaşlarınızdan da bu bilgiyi teyit ettiniz. Bu durum destinasyon tercihinizi nasıl etkiler?

Katılımcıların Senaryo 9'a ilişkin sunulan seçeneklere verdikleri yanıtlar incelendiğinde; %76'sının (311 kişi) Türkiye'yi tekrar tatil seçenekleri arasına alacakları, %24'ü (101 kişi)risk çok düşük olsa bile bu riske girmek istemedikleri için Türkiye'ye gitmeyecekleri belirlenmiştir.

5. SONUÇ ve ÖNERİLER

Bu bölüm kuramsal çıktılar ve teorik çıktılar olarak ifade edilmiştir. Kuramsal çıktılar başlığında, sığınmacıların destinasyondaki etkisini belirlemeye yönelik daha önce yapılan bir araştırmanın bulunmaması nedeniyle alan yazın karşılaştırılması yapılamamış ve sadece bulgular sınıflandırılmıştır. Teorik çıktılar başlığında ise çıkarımlar işletme yöneticilerine ve kamu yöneticilerine olmak üzere iki alt başlıkta ele alınmıştır.

5.1. Kuramsal Çıktılar

Bu araştırma kapsamında destinasyondaki sığınmacıların, destinasyon tercihinde bulunacak bireylerin kararlarını nasıl etkilediğini belirlemek amacıyla dokuz senaryo kurgulanmıştır. Bu senaryolar itme ve çekme faktörleri kuramına dayandırılarak oluşturulmuştur. Bu faktörlere ilişkin bulgular sosyal arayış ve keşif amaçlı seyahat etmek isteyen, destinasyondaki alış-veriş olanaklarından yararlanmak için seyahat etmek isteyen, snobizm etkisiyle seyahat etmek isteyen; fiyat odaklı olarak seyahat etmek isteyen, pozitif imaja sahip bir destinasyona seyahat etmek isteyen bireylerin destinasyon seçimlerine destinasyondaki sığınmacıların genel olarak olumsuz bir etkisinin olmadığını göstermektedir.

Araştırmanın bulguları itici bir faktör olarak fiziksel ihtiyaçlarını karşılamak amacıyla seyahat etmek isteyen bireyler üzerinde destinasyondaki sığınmacıların olumsuz etkisinin bulunduğunu ve turistlerin birçoğunun Türkiye'ye gitmek yerine başka bir destinasyonu tercih edeceklerini; çekici bir faktör olarak destinasyonun sahip olduğu doğal, tarihi ve kültürel çekicilikleri görmek için seyahat etmek isteyen bireylerin destinasyon tercihlerinde sığınmacıların olumsuz etkisinin bulunduğunu göstermektedir.

Ayrıca bu araştırmanın bulguları itici ve çekici faktörlerden bağımsız olarak sığınmacıların ülkelerine dönerek destinasyonu terk etmeleri veya destinasyon yöneticileri tarafından turistik alanlar dışındaki kamplara toplanmalarının söz konusu destinasyonun tekrar tatil tercihleri arasındaki yerini almasında olumlu etkilerinin olacağını da göstermektedir.

5.2. Uygulamaya Yönelik Çıktılar

5.2.1. İşletme Yöneticilerine Yönelik Çıktılar

Bu araştırmada itici bir faktör olarak snobizm ve sosyal arayış etkisiyle seyahat etmek isteyen bireyler üzerinde sığınmacıların önemli bir caydırıcı etkisinin olmadığı belirlenmiştir. Bu nedenle işletme yöneticilerinin kıt olan kaynaklarını daha verimli kullanabilmek için tutundurma faaliyetlerini snobizm ve sosyal arayış odaklı destinasyon kararını verecek bireylere yöneltmelerinin öncelikli olmadığını söylemek mümkündür.

Çekici bir faktör olarak yeterli alış-veriş olanaklarına ve güçlü bir destinasyonun imajına sahip turizm bölgelerinde sığınmacıların varlığı genel olarak bireylerin destinasyon tercihi üzerinde olumsuz bir etkiye sahip değildir. Bu nedenle işletme yöneticilerinin pazarlama çalışmalarında destinasyonun sahip olduğu güçlü imajı ve alış-veriş olanaklarını vurgulayan tutundurma faaliyetleri gerçekleştirmeleri işletmeye olan talebi artırabilir. Ayrıca işletme yöneticilerinin sığınmacıların varlığı nedeniyle hedef kitlelerini farklılaştırmaları gerekiyorsa hem içsel (snobizm ve sosyal arayış) hem de dışsal (alış-veriş isteği ve destinasyon imajı algısı) motive edici unsurları göz önünde bulundurarak destinasyon kararı veren kitlelere yoğunlaşmalarının ve pazarlama karmalarını bu kitlelere göre uyarlamalarının kaynakların etkin kullanılması için gerekli olduğu söylenebilir.

Satın alma davranışları çoğu zaman fiyatın bir fonksiyonu olarak ortaya çıkmaktadır. Bu araştırma sığınmacıların varlığı nedeniyle düşen talebi canlandırmak için hizmet fiyatları düşürülerek talebin artırılmasının mümkün olduğunu göstermektedir. Hizmetin stok edilememesi nedeniyle sığınmacıların var olduğu dönemlerde ortaya çıkan atıl kapasiteyi değerlendirmek için işletme yöneticileri farklı arayışlar içinde olabilmektedirler. İşletme yöneticilerinin fiyat indirimleri sığınmacılardan rahatsız olduğu için destinasyona gelmek istemeyen bireylerin ikna edilmesini sağlayabilir. Özellikle erken rezervasyon dönemlerinde yöneticilerin fiyatlarını belirlerken sığınmacılardan rahatsız olan fakat fiyata duyarlılığı yüksek olan bu kitleleri talebe dönüştürebilmek için uygulayacakları indirimleri stratejik bir güç olarak kullanmaları gerekmektedir.

Dinlenmek, rahatlamak ve stresten uzaklaşmak gibi fiziksel ihtiyaçlarını karşılamak amacıyla seyahat edecek turistler destinasyon tercihi yaparken sığınmacıların varlığından olumsuz olarak etkilenmektedir. Bu nedenle işletme yöneticilerinin pazarlama faaliyetlerini bu turistlere yoğunlaştırmaları gerekmektedir. Bu bağlamda işletme yöneticilerinin yurt dışı turizm fuarlarında, kitle iletişim araçları ve sosyal medyayı kullanarak yapacakları tanıtma, ikna etme ve bilgi verme faaliyetlerinde sığınmacıların bulunmasına rağmen Türkiye'nin güvenli, sakin ve her türlü fiziksel ihtiyaca yönelik hizmet alt yapısına sahip olduğunu vurgulayan mesajlar vermeleri yararlı olacaktır.

Doğal, tarihi ve kültürel değerleri görmek amacıyla seyahat etmek isteyen turistler destinasyon seçimlerinde sığınmacıların varlığından olumsuz olarak etkilenmektedirler. Bunun temel nedeninin bu turistlerin doğal, tarihi ve kültürel değerleri görmek için konaklama tesislerinin dışında yerel halkın da bulunduğu mekânlarda bulunmaları olduğu söylenebilir. İşletme yöneticilerinin meslek odaları veya birlikler kanalıyla yerel yönetimleri etkileyerek söz konusu faktörlerin etrafındaki sığınmacı sayısının azaltılması ve güvenliklerinin artırılması sağlanabilir. Destinasyonlar daha güvenli hale geldikten sonra işletme yöneticileri pazarlama faaliyetlerine odaklanarak turistleri ikna edebilirler.

5.2.2. Kamu Yöneticilerine Yönelik Çıktılar

Araştırmada fiyata karşı duyarlı olan turistlerin, destinasyonda sığınmacılar olsa bile fiyatların uygun olması durumunda Türkiye'ye gelecekleri belirlenmiştir. Bu bağlamda sığınmacıların yarattığı sorunlardan dolayı ekonomik durgunluk yaşanan dönemlerde merkezi yönetim tarafından özellikle turizm işletmelerinden alınan vergilerde yapılacak indirimler ve işletmelere yönelik uygulanacak teşvikler ile işletmelerin maliyetlerinin düşürülmesi mümkün olacaktır. Böylelikle işletmeler de maliyetlerde meydana gelen düşüşü hizmet fiyatlarında indirim yaparak turistlere yansıtacak ve daha fazla turistin ülkeye gelmesi sağlanabilecektir.

Turizmin özellikle istihdam ve gelir artırıcı etkisi göz önünde bulundurulduğunda Türkiye'nin turizmden elde ettiği kazanımları koruması hatta artırması gerekmektedir. Bu nedenle varlık ve değerlerin koruması için yerel ve merkezi yönetimler tarafından gerekli önlemlerin alınması gerekir. Bu kapsamda yerel yönetimlerin söz konusu varlıkların bulunduğu bölgeleri sık denetlemeleri, bu bölgelerdeki sığınmacılara alternatif bölgeler göstermeleri yararlı olabilir. Destinasyon imajının güçlendirilmesi için ise destinasyonun güçlü yönlerine vurgu yapan bir mesaj Kültür ve Turizm Bakanlığı, ilgili meslek odaları ve temsilcilikler ve diğer paydaşların katılımı ile belirlenebilir. Belirlenen bu mesaj özellikle uluslararası turizm fuar ve etkinliklerinde tur operatörleri ve potansiyel turistlerle paylaşılmalıdır. Bu kadar büyük bir pazarlama çalışmasının hem gerektirdiği organizasyon hem de bütçe nedeniyle turizm işletmelerinden ziyade kamu yönetimi tarafından gerçekleştirilmesi gerekmektedir.

5.3. Çalışmanın Kısıtları ve Yapılacak Çalışmalara İlişkin Öneriler

Araştırmanın ilk kısıtlılığı kullanılan örnekleme yöntemidir. Ana kütle hakkında hem detaylı bilgi olmaması hem de ana kütleye ulaşmak mümkün olmadığı için bu araştırmada örnekleme yöntemi olarak kolayda örnekleme yöntemi tercih edilmiştir. Araştırmanın diğer bir kısıtlılığı ise zaman ve maddi olanakların sınırlılığı nedeniyle verilerin elektronik ortamda online toplanmasıdır. Bunun yanında daha önce sığınmacılar ile turistlerin destinasyon seçimine etki eden itici ve çekici faktörler kuramı kapsamında yapılmış bir çalışmanın olamaması sonuç bölümünde teorik olarak karşılaştırma yapılamamasına neden olmuştur.

Bu araştırmaya bağlı olarak gelecekte yapılacak çalışmalar için de birtakım öneriler geliştirmek mümkündür. İleride yapılacak çalışmalarda senaryolar yurt dışına çıkılarak potansiyel turistlerle yüz yüze uygulanabileceği gibi mülakatlarla derinlemesine bilgi de toplanabilir. Ayrıca sığınmacı varlığının destinasyon üzerindeki etkisi sığınmacıların bulunduğu diğer turizm destinasyonlarına yönelik de (Yunanistan gibi) belirlenerek, sığınmacıların destinasyonlara etkisi ile ilgili karşılaştırma yapılabilir.

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Determinants of Choice of Market Outlet Among Smallholder Poultry Farmers in Oyo State, Nigeria

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ABSTRACT

The study examined the factors that influence choice of market outlet among smallholder poultry farmers in Oyo state, Nigeria. Primary data were collected using structured questionnaires. A multistage sampling technique was used to select 200 poultry farmers from two Agricultural Development Zones in Oyo state Nigeria. Multinomial logit results showed that household size, contractual agreement, road condition and total number of birds on the farm influenced the choice of local market outlet while years of formal education, years of poultry farming experience, price information and access to extension officers influenced the choice of urban market outlet. The study recommends that extension officers should provide market information to the poultry farmers regularly to enhance smallholder farmers' commercialization

1. INTRODUCTION

1.1. Background of the study

Commercial agricultural production most times result in welfare improvements through the realization of comparative advantages, economies of scale, and from vibrant technological, institutional and organizational change effects that arise from the flow of concepts owing to exchange-based interactions (Romer 1993,1994). The main goal of agricultural commercialization is to achieve food self-sufficiency by the long transformation process from subsistence to semi-commercial and then to a fully commercialized agriculture (Pingali and Rosegrant, 1995). Haddad and Bouis (1990) pointed out that agricultural commercialization embraces the shift from subsistence farming to increased market-oriented production. In addition, it is commonly measured as the ratio of percentage value of marketed output to total farm production (Haddad and Bouis, 1990; Omiti et al. 2006). Also, commercialization of agriculture is the increased participation in the output market by farmers. Market-oriented production involves improvement of systems, which depends heavily on the intensification of production methods, adoption of new technology and farm mechanization (Omiti et al. 2006).

According to von Braun and Immink (1994), the level of participation in the output market is the conventional way to determine agricultural commercialization.

Several policy makers and development economists have stressed the relevance of marketing in agricultural and economic development. Agricultural and food marketing is the major determinant of agricultural growth and contributes to overall development (Timmer 1997; Gani and Adeoti 2011). The key to increasing agricultural output such as poultry products in most developing countries is improving the farmers' productivity and ensuring the poultry farmers have access to markets regularly to sell their products. Poultry means a wide variety of feathered animals species raised for their products that are nutritionally and economically useful to man. Examples of poultry birds include chickens, duck, geese, turkey, guinea fowls, and pigeons. Normally, poultry production is about twice as effective as producing pork and three times more than producing beef due to its very short cycle, thus making it easy for producers to respond to the circumstances of the day. Little wonder, that poultry is a common kind of meat in many places around the world including Nigeria (Ad Bal, 2011).

Poultry is a major sub-sector in the livestock industry and the investment in poultry production is about eighty billion naira (₦80 Billion) in Nigeria which makes it an essential livestock commodity (Omotosho, 2013). The poultry sub-sector offers the quickest returns to investment outlays in livestock enterprise due to its short gestation period, excellent feed conversion rate alongside being one of the cheapest, common and a good source of animal protein in the country (Ojo, 2002; Akintunde and Adeoti, 2014). Poultry production is the most efficient and cost-effective way of increasing the accessibility of high-protein food such as eggs known to provide people a perfectly balanced food containing all the essential vitamins, amino acids, and minerals (Branckeart et al, 2000).

Nweke, Spender and Lynam (2002) defined smallholder farmers as farmers that have a small farm size and produce mainly for home consumption (subsistence) and the surplus for sales. Smallholder farmers are the people who make up the great bulk of the population of farmers in most part of African countries (Hungwe, 2006). Akinwumi (1980) classified poultry farmers who keep 5000 birds and above as large-scale producers, between 500 and 4999 as medium-scale producers and less than 500 as small-scale producers. Smallholder poultry farmers are defined in this study as poultry farmers that have a small farm size and the flock of birds they raised is less than 500 birds. The poultry farmers focused on in this study are those engaged in chicken rearing especially layers and broilers.

Long distance to markets and lack of good roads is a source of major concern for rural smallholder farmers in developing countries. In addition, difficult market access leads to subsistence rather than market-oriented production systems and consequently restricts opportunities for income-generation (IFAD, 2003). Barret (2008) affirmed that market access has been identified as one of the serious factors affecting the performance of smallholder agriculture in developing countries, and in particular, least developed countries. The farmers face difficulties in transporting their produce to the markets which often force them to sell at the farm gate. Consequently, a large percentage of African smallholder farmers still produce largely for subsistence needs, producing small marketable surpluses and faces thin markets (Akinlade et al, 2013). Moreover, remoteness, scarce and poorly maintained roads, inadequate transport and storage facilities, and difficulties in accessing reliable information on products and prices prevent the smallholder farmers from participating in competitive markets, often restricting them to non-contestable markets controlled by a few, dominant

purchasers (World Bank, 2008; Osmani and Hossain, 2015). Mostly, very few smallholder farmers commercialize their products in formal markets (Bongiwe and Micah, 2012). The issue of why most smallholder farmers who happen to make the greater percentage of the poor in developing countries self-select themselves out of the remunerative markets remains mostly unanswered (Zamasiya et al, 2014). In Nigeria, poultry production is still relatively low to meet the demand of the fast-expanding population. This is basically because most poultry farmers operate on a small scale with little opportunity for expansion and insurance (Adejoro, 2000).

This study will help us to know the factors affecting the preferred choice of market outlet among livestock farmers especially poultry farmers in Oyo State, Nigeria which may be farm gate, local market or urban market. In addition, the information from this study will give better insights to extension officers in order to help the smallholder poultry farmers to increase their profitability and sustainability. Policy makers would also use this information to formulate or improve existing policies in an effort to develop poultry production and marketing as well as motivate farmers to access high-value market where they can get greater prices for their products. Poultry farmers will find the information from this study valuable when deciding on which market outlet to sell poultry products for profitable marketing which will improve their level of income, decrease their malnutrition problems and ultimately reduce their level of poverty. This study will contribute to existing knowledge by providing factors that affect commercialization and choice of market outlet among livestock producers especially poultry farmers. In addition, this study will be relevant in providing vital information for holistic market planning and innovation in marketing. Researchers that want to explore the area of marketing will find this study relevant. It will also help in identifying interventions to unlock the welfare benefits associated with market driven agriculture and useful in institutional innovation in markets. The purpose of this study was to determine the factors influencing choice of preferred market outlet among the smallholder poultry farmers in Oyo State, Nigeria.

2. MATERIAL AND METHODS

2.1. Study area

The study was carried out in Oyo state, Nigeria. The state is situated in the Southwestern part of Nigeria. Ibadan is the capital city of Oyo state which is the largest city in West Africa. The state covers a total of 35,743 Km2 of land mass and located within latitude 7°31 and 9°121 North of the Equator and longitude 2°471 and 4°231 East of the Meridian (NPC, 2006). Oyo state is located on the west coast of Nigeria and bounded in the north by Kwara State, in the east by Osun State, in the south by Ogun State, and in the west, it is partly bounded by both Ogun State and Republic of Benin. The State has 33 Local Government Areas (LGA) organized into four (4) agriculture zones under the Oyo State Agricultural Development Programme (OYSADEP). The four agricultural zones are Saki, Ogbomoso, Oyo and Ibadan Zones. There are two distinct ecological zones in Oyo state, the Rainforest in the south and Guinea Savannah in the North. The state enjoys tropical climate which can be divided into dry and wet seasons with relatively high humidity. The dry season lasts from November to March while the wet season begins from April and ends in October (NPC, 2006).

2.2. Source of data, sampling procedure and sample size

Primary data used in this study were obtained from a cross-sectional survey of smallholder poultry farmers in the study area. Data collection involved the use of structured questionnaires to obtain information on demographic and farm characteristics such as age, gender, household size, size of land, marital status, poultry farming experience, years of formal education and choice of market outlet as well as constraints faced by the smallholder farmers with respect to commercialization during the production cycle.

A multistage sampling technique was employed in selecting the poultry farmers in the study area. At the first stage, two Agricultural Development Programme (ADP) Zone in Oyo state were randomly selected, which are Ibadan (Ibarapa) Zone and Oyo Zone. The second stage was executed by the random selection of two Local Government Areas (LGAs) from each of the two ADP Zones in which Egbeda and Lagelu LGAs were chosen from the Ibadan (Ibarapa) Zone while Afijio and Oyo East LGAs were chosen from Oyo Zone. The third stage was the random selection of two villages from each of the four Local Government Areas. The final stage involved the random selection of 74 poultry farmers from Egbeda LGA, 61 poultry farmers from Lagelu LGA, 49 poultry from Oyo East LGA, and 36 poultry farmers from Afijio LGA respectively proportionate to the size of the selected villages. 220 questionnaires were distributed to the smallholder poultry farmers. Only 200 questionnaires were eventually provided and used due to the incomplete information provided by some of the poultry farmers.

2.3. Analytical techniques

The analytical tools that were used based on the- objectives of this study include: descriptive statistics, multinomial logit analysis and mean analysis.

2.3.1. Descriptive statistics and likert scale

Descriptive statistics such as frequency distribution table, percentages, means and standard deviation were used to analyze demographic characteristics of smallholder poultry farmers.

2.3.2. Multinomial Logit Model

The choice of market outlet among smallholder poultry farmers was assessed by employing Multinomial Logit model following Sigei, Hillary and Lawrence (2014).

The multinomial logit model for choice of market outlet among the poultry farmers was specified as;

$$P_{ij} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + \varepsilon_i$$

β_i are parameters to be estimated

$\varepsilon_i = N(0, \delta^2)$ where:

$P_{ij} =$ Choice of market outlets among poultry farmers

(Farm Gate = 0 (Reference category), Local Market = 1, and Urban Market = 2)

The explanatory (independent) variables are:

X1 = Sex (Male = 1, Female = 0)

X2 = Years of Formal Education (Years)

X3 = Household Size (Headcount)

X4 = Group Marketing (Yes = 1, No = 0)

X5 = Vehicle Ownership (means of transport) (Yes = 1, No = 0)

X6 = Contract Marketing (Yes = 1, No = 0)

X7 = Farming Experience (Years)

X8 = Access to Price Information (Yes = 1, No = 0)

X9 = Access to Extension Officer (Yes = 1, No = 0)

X10 = Distance to Market (Km)

X11 = Road network (Good = 1, otherwise = 0)

X12 = Land Size (Hectares)

X13 = Number of birds produced (Headcount)

X14 = Access to credit (Yes = 1, No = 0)

The independent variables that determine choice of market outlet among poultry farmers were selected based on the studies carried out by Kuma et al. (2013), Mutai et al. (2013), Sigei et al. (2014), and Magogo et al. (2015).

To estimate the model, there is a need to normalize one category which is referred to as the "Reference State or Base Category". The reference state chosen for this study is the "Farm Gate" option which is the common market outlet among all smallholder poultry farmers.

Multinomial logistic regression was used because it permits the analysis of decisions across more than two categories, allowing the determination of choice probabilities for different categories (Wooldridge, 2002).

2.3.3. Likert scale analysis using mean score

A five-point Likert scale using mean analysis was used to identify the major constraints that hinder commercialization of smallholder poultry farmers in the study area by ranking them. The five-point Likert scale was used to analyze farmers' perception of the severity of each of the identified constraints by ranking them accordingly.

The scale was used as follows:

5 = Very severe; 4 = Severe; 3 = Uncertain; 2 = Not severe; 1 = Not very severe

3. RESULTS AND DISCUSSION

3.1. Demographic and farm characteristics of smallholder poultry farmers

Table 1 revealed that majority (80%) of the poultry farmers were male while a small number (20%) were female. This shows that poultry farming is mostly dominated by males. This finding is consistent with the studies of Akintunde and Adeoti (2014) as well as Bamiro et al, (2013) where it was reported that poultry farming was predominantly a male occupation. The

highest proportion (42%) of the poultry farmers spent 13-18 years in school while very few (7%) of the poultry farmers spent 6 years and below in school. This suggests that majority of the poultry farmers were educated. Most of the poultry farmers (84%) were between 30 - 59 years of age and younger and a minority of the poultry farmers were above 60 years of age. The mean age was found to be approximately 44 years. This shows that majority of the poultry farmers were in their active and productive years. The result agrees with the findings of Akintunde and Adeoti (2014) that majority of the poultry farmers were below 50 years with an average age of 45 years. Similar findings were reported by Bamiro et al. (2013) that majority of the poultry farmers were within the age range of 41-50 with an average age of 40 years. Majority (58%) of the poultry farmer had a household size of 5 and above. The average household size of the poultry farmers in the study area was approximately 5 persons per household. The mean household size which is relatively large will serve the purpose of the family labor for the smallholder poultry farmers. This is in consonance with the findings of the study of Akintunde and Adeoti (2014) who reported that the mean household size was 5 members.

Table 1 results also revealed that the highest proportion (43.5%) of the poultry farmers had a size of farmland within the range of 0.010 – 0.040 hectares. The mean farmland size was 0.06 hectares which indicates that the poultry farmers were smallholders of land. Majority (73%) of the poultry farmers had a farm distance to the market within the range of 0-5 kilometers, suggesting that many of the poultry farmers must cover a long distance while transporting poultry products from their farms to the market. Also, different combination of poultry enterprises was ventured into by the farmers engaged in the poultry business. Most (51%) of the poultry farmers were involved in the production of layers only 25% of the poultry farmers were involved in the production of broilers only, while 24% of the poultry farmers were involved in the production of both layers and broilers. Just a few (24.5%) of the poultry farmers had contact with livestock extension officer who provided adequate information on current market prices as well improved farming techniques while most (75.5%) of the poultry farmers had no contact with livestock extension officer. This could be as a result of the negligence of duty on the part of the extension officers who did not visit the poultry farmers or could be attributed to the paucity of extension officers in Oyo State. The result is not in agreement with the study of Akintunde and Adeoti (2014) where most (73.9%) of the poultry farmers had access to livestock extension officers who provided advisory services and adequate information.

Table 1. Selected demographic and farm characteristics of the smallholder poultry farmers

Variables	Frequency	Percentage (%)	Mean	Standard Deviation
Sex				
Male	160	80.0		
Female	40	20.0		
Total	200	100		
Years of Formal Education				
≤ 6	14	7.0		
7 – 12	55	27.5		
13 – 18	84	42.0		
≥ 19	47	23.5		
Total	200	100		
Age (Years)				
Below 30	29	14.5	43.7	9.83
31- 40	43	21.5		
41 – 50	70	35.0		
51 – 60	55	27.5		
≥ 60	3	1.5		
Total	200	100		
Household Size				
2 – 4	84	42.0		
5 – 8	111	55.5		
9 – 12	5	2.5		
Total	200	100		

Table 1. Continued

Farmland Size (Hectares)				
0.010 – 0.040	87	43.5	0.06	0.03
0.041 – 0.070	82	41.0		
> 0.070	31	15.5		
Total	200	100		
Distance from Farm to Market				
0 – 5	146	73.0	4.76	4.01
6 – 10	44	22.0		
11 –15	6	3.0		
16 – 20	4	2.0		
Total	200	100		
Poultry Enterprise				
Broilers only	50	25.0		
Layers only	102	51.0		
Both Broilers and Layers	48	24		
Total	200	100		
Access to Extension Officer				
Yes	49	24.5		
No	151	75.5		
Total	200	100		

Source: Field Survey, 2015.

3.2. Preferred choice of market outlet of the poultry farmers

From Table 2, 20% of the poultry farmers sell their output at the farm gate, 41% of the poultry farmers sell their output in the local markets while the remaining 39% of the poultry farmers sell their output at the urban markets. This implies that majority of the poultry farmers sell their output at the local markets. Although, the price offered at the local market is not too high, many poultry farmers opt for this market outlet because it is nearer to their farms, convenient to sell them at that place and to an extent guarantee a competitive market price for the poultry farmers which could serve as an incentive for commercialization. The

result is contrary to the findings of Akinlade et al. (2013) and Adeoti et al, (2014) where farm gate was the most patronized market outlet of the farmers.

Table 2. Distribution of the poultry farmers based on choice of market outlet

Market Outlet	Frequency	Percentage (%)
Farm gate	40	20
Local market	82	41
Urban Market	78	39
Total	**200**	**100**

Source: Field Survey, 2015.

3.3. Determinants of the choice of market outlet among the smallholder poultry farmers

Table 3 present the results of the Multinomial Logit model estimation of the factors determining the choice of local market outlet as compared to the farm gate option among smallholder poultry farmers in Oyo state, Nigeria. The result reveals that the log likelihood was -173.22451 and the Chi-square value was 75.42 implying that the likelihood ratio statistics were highly significant at 1% suggesting that the model had strong explanatory power as well as indicating the model had a good fit to the data.

The result reveals that out of the fourteen variables included in the model, four variables significantly influence the choice of local market outlet as compared to the farm gate option. The significant variables were household size, contract agreement, road condition and the total number of birds on the farm.

Household size was significant at 5% and had a negative relationship with the choice of local market outlet for commercialization. The lower value of the odds ratio of 0.745 shows that as household size increases the likelihood of poultry farmers participating in a local market outlet was lower when compared to the farm gate option. The poultry farmers would prefer to sell their output at the farm gate instead of the local market outlet. This could have been so because a large household size increases domestic consumption requirements and may render households more risk averse. Furthermore, the farmer needs to supply household consumption before he/she sells and they only sell a little surplus at the farm gate rather than sell at the local market. The result is in dissonance with a priori expectation and not in accordance with the findings of Magogo et al, (2015) where an increase in the household size by one member increases the likelihood of selling the African Indigenous Vegetables (AIVS) at the local market because large households are able to produce more AIVs and provide manpower in carrying them to the local market to earn more income for their basic needs.

Contractual agreement (marketing) was significant at 10% and had a positive influence on the choice of local market instead of the farm gate option for commercialization. The high odds ratio of 2.515 suggests that poultry farmers who were under contract marketing had a higher likelihood of selling at the local market than at the farm gate. The result is in accordance with the findings of Jari and Fraser (2009), where households tend to increase in formal market participation with the availability of contractual agreements and contrary to the work of Sigei et al, (2014) who found that farmers who were under contract in marketing had a higher probability of selling their pineapples at farm gate and they opt to sell at farm gate to incur zero transaction cost.

Road condition was significant at 10% and had a positive influence on the choice of local market. The high odds ratio of 2.591 in table 3 means that poultry farmers who had access to good road network from their farms to the market had a higher likelihood to sell their output at the local market where they will get competitive and high prices for their output rather than sell them at the farm gate which attracts lower prices. This result is consistent with the findings of Mutai et al. (2013) who argued that good road network reduces the cost of transportation for the farmer and hence makes it easy and cheaper for the farmer to access local town market which has better market conditions in terms of the large population of buyers and sellers.

The total number of livestock on the farm was significant at 5% and has a positive relationship with the choice of local market. The odds ratio of 1.004 in table 3 implies that smallholder poultry farmers who had a large number of livestock on the farm will more likely sell their output in the local market instead of the farm gate option. The increase in the number of livestock on the farm will make the farmer sell more birds in the local market which has a larger population of consumers and will result to increase his chances of selling most or all the livestock that was offered for sale and will be marketed at higher prices than the farm gate. This agrees with the study of Sigei et al. (2014) who found that an increase in the weight of pineapple yields by one kilogram increases the likelihood of selling at local market as compared to farm gate. Similarly, the result concurs with that of Chalwe (2011) who found more of the beans produced are sold to the private traders in the marketplaces than to the other households at the farm gate.

Table 3 also presents the results of the Multinomial Logit model estimation of the factors determining the choice of urban market outlet as compared to the farm gate option among smallholder poultry farmers in Oyo state, Nigeria. The result reveals that out of the fourteen variables included in the model, four variables significantly influence the choice of urban market outlet as compared to the farm gate option. The significant variables are years of formal education, years of experience in poultry farming, price information and access to extension officers.

Years of formal education was significant at 1% and had a negative influence on the choice of urban market outlet for output commercialization. The odds ratio of about 0.828 suggests that the smallholder poultry farmers who had more years of formal education will not likely sell their birds at the urban market outlet as compared to the farm gate. This could be attributed to the fact that an educated smallholder poultry farmer could be practicing subsistence farming and sell only the surplus birds or lack the means of transportation such as vehicle hence the farmer will prefer to sell at the farm gate so that he will not incur transportation cost (transaction cost). This finding is not in agreement with the study of Magogo et al. (2015) that since education level comes with knowledge, farmers are able to make informed decision and choose a lucrative marketing outlet for the commonly grown African Indigenous Vegetables (AIVS) which offers a higher marketing margin.

Years of experience in poultry farming was significant at 5% and had a negative relationship with the choice of urban market outlet. The low odds ratio of 0.812 shows that more years of poultry farming experience did not increase the likelihood of a smallholder farmer in choosing an urban market instead of farm gate option. Hence, a farmer with more years of experience in poultry farming will more likely choose the farm gate as compared to the urban market outlet. This could be so especially if the poultry farmers are still engaged in

subsistence farming for family consumption due to lack of resources such as land, labor, capital and only a little surplus is sold at the farm gate. The result is contrary to a priori expectations and does not concur with the studies of Kuma et al. (2013) where the likelihood of accessing cooperative (urban) milk market outlet was higher for farmers who had been in dairy farming for many years when compared to accessing individual consumer milk market outlet. Magogo et al. (2015) found that households with more experience in Agro-pastoralism are more exposed and venture into commercial activities like African Indigenous Vegetables (AIVs) in lucrative markets like urban markets as experience is formed with knowledge.

Price information was significant at 5% and had a positive influence on the choice of urban market outlet. The odds ratio of 1.589 implies that the poultry farmers who had access to price information of the birds will be encouraged to sell in an urban market outlet instead of the farm gate. This implies that the poultry farmers will most likely increase their commercialization activities in the urban market outlet when they have adequate information of prices in that market. Essentially, price information helps the poultry farmer to know the prevailing prices and price trends in the market and helps them to plan on how they can maximize profit efficiently. The result is consistent with the findings of Jari and Fraser (2009) where availability of market price information resulted in an increase in commercialization.

Access to extension officer was significant at 10% and had a negative relationship with the choice of urban market outlet. The odds ratio of 0.257 reveals that the smallholder poultry farmers who were visited and had access to extension officers had a lower likelihood of selling their output in the urban market outlet as compared to the farm gate. This could be attributed to the fact that poultry farmers who accessed better extension services and had adequate information about current market prices and buyers' preferences might not have acted on the information in planning and decision making on how they can increase their profit from poultry production. In addition, the smallholder poultry farmers that had access to extension services could still be operating at the subsistence level and not able to expand their level of production. Therefore, the smallholder poultry farmer would rather prefer to sell their birds at the farm gate instead of the urban market outlet to reduce cost. This finding is not consistence with Kuma et al, (2013) which revealed that access to dairy extension services significantly affected accessing hotel/restaurant milk market outlet.

Table 3. Factors that influences the choice of local and urban market outlet among the sampled smallholder poultry farmers

Variables	Coefficient	Local Market Std. Error	Odds Ratio (Exp. β)	Coefficient	Urban Market Std. Error	Odds Ratio (Exp. β)
Sex	0.145199	0.5265076	1.156	0.9780436	0.6023754	0.817
Years of Formal Education	-0.0947547	0.0646239	0.909	-0.1884252	0.0660517***	0.828
Household Size	-0.2937156	0.1456204**	0.745	0.0328012	0.1413398	0.783
Group Marketing	-0.6135303	0.5399782	0.541	-0.2000181	0.5352963	0.287
Vehicle Ownership	-0.3311339	0.4892078	0.718	-0.2544037	0.5121774	0.284
Contractual Agreement	0.9220822	0.511785*	2.515	0.5484537	0.5229955	0.621
Years of Poultry farming Experience	-0.0490635	0.0409114	0.952	-0.1151868	0.0469631**	0.812
Price Information	-0.6243166	0.5533172	0.535	2.222612	0.8980194**	1.589
Access to Extension Officer	0.0493942	0.6650952	1.051	-1.357831	0.7133852*	0.257
Distance to Market	0.0518497	0.0707498	1.053	0.071551	0.0715436	0.934
Road Condition	0.952201	0.5280629*	2.591	0.6866973	0.5442011	0.684
Farmland Size	-0.2380488	0.2921293	0.788	-0.186678	0.3139364	0.448
Total livestock on the farm	0.0036074	0.0015895**	1.004	0.0027622	0.0017177	0.999
Access to credit facilities	-0.4896929	0.4911999	0.613	-0.8305989	0.5325021	0.153
Constant	2.905927	1.476	18.282	0.5747074	1.622586	0.074

Number of Observations = 200
LR Chi^2 (28) = 75.42
Prob. > Chi^2 = 0.0000
Pseudo R^2 = 0.1788
Log Likelihood = - 173.22451

***, ** ,* indicate estimates significant at 1%, 5% and 10% level of significance respectively

Source: Field Survey, 2015.

Note: Farm gate option is the base category

3.4. Major constraints experienced by the smallholder poultry farmers in the study area

Table 4 reveals the list of constraints to commercialization in descending order of severity as experienced by the smallholder poultry farmers. The most severe constraints faced by the smallholder poultry farmers in Oyo State, Nigeria is long distance to market and the least severe constraints experienced is lack of farmers group or cooperatives among the poultry farmers.

Long distance to the market was the most severe constraint experienced by the smallholder poultry farmers in Oyo state, Nigeria. Majority of the poultry farmers within villages in Oyo State must travel several kilometers on the road to major markets such as Agbeni, Bodija and so on where they can sell their output at higher prices. The long distance is a serious concern for the poultry farmers because they incur a high transportation cost which is a major limiting factor. Insufficient working capital was the second most severe constraints experienced by the smallholder poultry farmers. This is a pointer to the fact that smallholder poultry farmers require enough working capital to grow their business which is not adequately available to them. Bad roads or poor road network was ranked as the third most severe challenge experienced by the farmers. Road is the only available means by which poultry birds and eggs are transported from the farms to the market. Bad roads will increase the cost of transportation (marketing cost of the smallholder poultry farmer. Inadequate access to credit ranked as fourth among the challenges experienced by the smallholder poultry farmers. This suggests that some poultry farmers did not belong to any farmers group or cooperative society where they could easily access credit facilities. Price instability ranked as fifth among the constraints affecting commercialization. This is because price instability and fluctuations in the market will affect the decision making of some of the poultry farmers.

Inadequate extension service was also a challenge experienced by the smallholder poultry farmers in Oyo state. It ranked as sixth among the severe constraints. This shows that the visit of extension officers to the poultry farmers was not frequent. Therefore, the farmers may likely not have enough information on modern farming practices and prevailing market prices among others. High cost of transportation ranked as seventh among the severe constraints faced by the smallholder poultry farmers. This is because the rural areas and villages are far away from the major markets and some roads network leading to the farms are in a deplorable condition. Lack of market information ranked as eighth among the list of severe constraints experienced by the poultry farmers. Many of the farmers do not have adequate information from reliable sources like extension officers, Ministry of Agriculture and so on about the prevailing prices of their output, kind of livestock required in the markets and alternative markets where they can sell their output. Pest and diseases outbreak ranked as ninth among the list of severe constraints. Though poultry farming is prone to pest and disease outbreak however in the study area it appears to be a minor constraint. Weather condition ranked as tenth among the list of severe constraints faced by the poultry farmers. Despite the fact that poultry farming is weather sensitive however it has not been a major threat to their production activities in the study area. Low level of government support was ranked eleventh. To the poultry farmers, it ranked low because they view it as a minor problem because to a large extent government had supported poultry farming in Nigeria by placing a ban on the importation of frozen poultry products into Nigeria recently in 2015. Lack of farmers group or cooperatives appears to be a very minor challenge to the poultry farmers as it was ranked

twelfth. This could be justified by the fact that there are enough poultry farmers group such as Agbeloba Poultry Farmers Association, Poultry Association of Nigeria (PAN) among others. Though, some of the sampled respondents are not members of this farmers group due to personal reasons, the respondents do not consider it to be a severe constraint hampering their commercialization activities.

Table 4. Severity of constraints affecting commercialization among smallholder poultry farmers in descending form

Major Constraints	Mean Score	Rank
Bad roads or poor road network	3.92	3rd
Inadequate extension services	3.77	6th
Lack of farmers group or cooperatives	3.34	12th
Inadequate access to credit	3.88	4th
Long distance to market	4.08	1st
High cost of transportation (Transaction cost)	3.70	7th
Price instability	3.87	5th
Low level of government support	3.38	11th
Pest and diseases outbreak	3.49	9th
Insufficient working capital	3.99	2nd
Lack of market information	3.69	8th
Weather problem	3.45	10th

Source: Field Survey, 2015.

4. CONCLUSION AND RECOMMENDATIONS

The paper established that most of the poultry farmers sell their output at the local markets. Majority of the smallholder poultry farmers were involved in the production of layers only. Many the poultry farmers do not have access to extension officers. Multinomial logit model results were in two aspects as regards to the determination of the factors affecting the choice of market outlet among the smallholder poultry farmers in Oyo state. The first aspect of the multinomial logit result reveals that four out of the fourteen variables included in the model was significantly influenced by the choice of local market outlet as compared to the farm gate option. The significant variables were household size, contract agreement, road condition and the total number of livestock on the farm. The second aspect of the multinomial logit result showed that four out of the fourteen variables included in the model significantly influenced the choice of urban market outlet as compared to the farm gate option. The significant variables were years of formal education, years of experience in poultry farming, price information and access to extension officers. The most severe constraint faced by the smallholder poultry farmers was long distance to market and the least severe constraint was the lack of farmers group or co-operatives.

Price information of the poultry output such as birds and eggs should be made available to the farmers at all time through mass media (radios, televisions) and extension officers to help the smallholder poultry farmers in planning and decision making on their farms. Also, there is a need to employ more extension officers who should visit the smallholder poultry farmers more frequently so as provide better extension services such as training the poultry farmers on improved farming practices and providing adequate information on the current market prices of their output, as well as the change in consumer preferences. Government at all levels should assist in the improvement of rural infrastructure especially farm-to-market which would facilitate convenient and faster delivery of farm output to consumers in various market outlets.

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Marketing Efficiency In The Distributive Trade Channel For Onions In Osun State

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ABSTRACT

The perishable nature of vegetables demands an effective and reliable chain/channel of distribution for fast disposal. Performance of the existing distributive channels, marketing efficiencies of the channel operators and factors that influenced the marketing efficiencies of the marketing operators are integral to effective marketing. Much attention has not been given to this in the agricultural marketing literature in Nigeria. Marketing efficiency analysis revealed that marketing of onions by bulk merchants, wholesalers and retailers is most efficient in one of the selected markets at 149%, 343% and 275% respectively. Transaction loss, sales volume, transportation cost, wages, association dues, stall rent and cost of capital are factors that affect onion marketers in the study area.

1. INTRODUCTION

Onion is the second most important vegetable in Nigeria after tomato and pepper (Hussaini, Amans and Ramalan, 2000). However, the perishable nature of onions demands comprehensive planning for movement, storage, processing and distribution. The growth of vegetable industry as a commercial proposition largely depends mainly on allied enterprises like storage, processing, marketing, maintenance and service enterprises to encourage vegetable enterprise (Agricultural information, 2011). Recent trends have shown that marketing agricultural output is becoming an increasingly difficult occupation for marketers (Ayinde, 2005).

Agricultural Technology (Agrictech) Portal (2008) observed that farmers producing agricultural produce are scattered in remote villages while consumers are in semi-urban and urban areas. Produce has to reach consumers for its final use and consumption. There are different agencies through which produce passes and reaches the consumer also known as market channel or channel of distribution. The market channel or channel of distribution therefore is a path traced in the direct or indirect transfer of title of a product as it moves from a producer to an ultimate consumer or industrial user. Thus, channel of distribution of a product is the route taken by the good as it moves from the producer to the consumer or industrial user (Agrictech Portal, 2008).

Marketing channel (distribution channel) is a set of various agencies (market intermediaries) arranged in a particular way to accomplish the movement of a product from the producer to the final consumers (Adejobi and Adeyemo, 2012). In addition, marketing channel is interdependent organizations that help make a product available for use or consumption by the consumer or business users. Channel intermediaries are firms or individuals such as

wholesalers, agents, brokers or retailers who help move a product from the producer to the consumer or business user (Adejobi and Adeyemo, 2012).

Production is incomplete until goods/commodities produced reach the final consumers. The movement of product from producer to consumer is an important function of marketing. It is the obligation of the producer to make goods available at the right place, the right time, the right price and in the right quantities. The process of making goods available to the consumer needs effective channel of distribution (Adejobi and Adeyemo, 2012).

Moreover, it is observed that a sizable number of producers operate on a very small scale that could be considered economically non-viable. Farmer (producer's) inability to analyze effectively the cost-benefits associated with production and marketing/distribution activities or lack of supply chain structures further worsens the situation (Adejobi 2005). In other words, food distribution/marketing by farmers and their families, mostly in the immediate post-harvest period usually involves many costs. In Nigeria, these costs are so high that lowering the costs through efficient distributive/marketing system may be as important as increasing agricultural production (Ahmed and Rustagi, 1987; Adejobi and Adeyemo, 2012).

Therefore, the issue of how much food gets to the households, which is fundamental in household's food security, is a function of food production level, food marketing/distribution efficiency and the households' income level (Ladele and Ayoola, 1997). Idachaba (2004), observed that food distribution/marketing problems are evidenced when farmers, who are the primary producers residing mostly in rural areas could not get their produce to the market at the right time as a result of inefficient distributive/ market system which leads to considerable post-harvest losses and which reduces the returns for their efforts. The wastages have been on the increase despite the measure put in place to check them. The performance of various categories of intermediaries involved in channel management of agricultural output have not been satisfactorily assessed to establish their operational efficiency, particularly the extent to which they account for these losses as they undertake their distributive trade functions (Christiansen et al, 2003).

It is uncertain, if all categories of intermediaries differ in their marketing efficiency as well as their gross margins from operations. Understanding various categories of distributive channels and the relative efficiencies of the various channels in the marketing of onions will provide solutions to the problems encountered in making onions available to the final consumers. From the foregoing explanations, the study described the socio-economic characteristics of the identified channel operators in the study area, estimated the marketing efficiencies of the identified channel operators and determined the factors that affect marketing efficiencies.

2. CONCEPTUAL FRAMEWORK

In Nigeria, commercial onion production is mainly in the North. Sokoto and Kebbi states are among the states in the north where considerable quantity of onion is produced annually (Ayodele 1996). This study adopted the concept (Fig 1) of Dogondaji., Baba, and Mohammed (2006) distributive trade channel. There are intermediaries in the distributive business which include bulk merchant, wholesalers and retailers based on the quantity of onion been handled. Retailers display their onion in small heaps on the ground while wholesalers usually buy directly from either farmers or the bulk merchants who gathered onions through the aid of

bulk agents that transport sizeable quantities for sale in other states. Most onion producers/farmers sell their produce either to the bulk merchants or at the urban market. Further observations shows that wholesalers receive their supplies from two main sources: farmers, who transport directly to the markets and bulk merchants who buy at the farm gate, homes or rural markets and transport to the urban markets. Retailers source their supplies from wholesalers operating in urban market or directly from the farmers. Finally, retailers sell in small quantities to consumers.

3. MATERIAL AND METHODS

Major towns in the state (study area) are characterized with markets for onions and other commodity especially the food crops. The strong and interlinked road network within the state facilitates the distribution of food crops in the state. The study employed the collection of primary data and multi-stage sampling technique in selecting the respondents. The first stage involved the purposive selection of six towns/cities in the state. The second stage involved the random selection of two markets from each of the selected cities to have twelve markets. Stratifications of onion marketers in each market into bulk merchants, wholesalers and retailers for better identification of channel operators is the third stage. The final stage involved the selection of three respondents each from the bulk merchants' stratum and wholesalers' stratum and four respondents from the retailers' stratum per market through a simple random sampling, making ten marketers per market. Overall, one hundred and twenty marketers were interview.

3.1. Specifications of the Models

Descriptive statistics, marketing efficiency analytical tools and regression model are the analytical tool used for this study.

3.1.1. Marketing Efficiency

Marketing efficiency of the channel operators is a function of both pricing and operational efficiency. Marketing efficiency is:

$$\frac{value\ added\ by\ marketing\ activities}{marketing\ costs}\ X\ 100\ \ldots\ldots\ldots\ldots\ldots\ldots(1)$$

In other words,

$$marketing\ efficiency\ = \frac{net\ margin}{marketing\ costs}\ X\ 100\ldots\ldots\ldots\ldots\ldots\ (2)$$

Since,

$$net\ margin\ = marketing\ margin\ - marketing\ Cost$$

Therefore,

$$marketing\ \ efficiency\ = \frac{marketing\ margin\ - marketing\ cost}{marketing\ costs} \times 100\ \ldots(3)$$

3.1.2. Regression Models

Multiple regression models: double log, semi-log, linear and exponential were use to estimate the factors that influence the marketing efficiencies of the operators and the lead model is the linear regression model

Implicitly, the model adopted is:

Y = f(X1, X2, X3, X4, X5,X6 X7, X8, ei) …….(4)

The explicit function:

Yi = á0 + á1X1 + á2X2 + á3X3+ á4X4 +á5X5+ á6X6+ á7X7+á8X6+ á9X7 +á10X8+ Ui

Where,

Y = Marketing efficiency (%).

X1 = Sales volume (Kg). X2 = Losses incurred in transaction (Kg). X3 = Cost of capital used (interest on loans and depreciation charges on fixed assets). X4 = wages (₦). X5= Transportation costs (₦). X6 = Association dues (₦). X7 = Stall rent (₦). X8 = Types of channel member, Dummy, 1, 2 & 3 (with 1 = 1 if retailer, 0, otherwise; 2 =1 if wholesaler, 0, otherwise; 3 = 1 if bulk merchants, 0, otherwise).

4. RESULTS AND DISCUSSION

4.1. Socio-Economic Characteristics of Onion Marketers

There are some social economic characteristics of the onion marketers, which by nature and processes are likely to affect the marketing efficiency and the overall performance of the business.

4.1.1. Age of Respondents

Age is an important factor that affects marketing efficiency of marketers. Table 1, showed that a larger percentage (75%) of onion bulk merchants are between 20-29 years of age while no respondents in the wholesalers and retailers strata fall within this age range. There is pooled mean age of 40 and standard deviation of 9.69. It means that onions bulk merchants are youth. This may probably be owing to the fact that majority of the bulk merchants are from the northern part of the country, a region characterized with high incidence of non-schooling (US Embassy, 2012). This contributes to the early age involvement of people from the region into other means of livelihood rather than schooling, which is contrary to what is obtainable in southwestern part of the country where the wholesalers and retailers reside.

4.1.2. Gender of Respondents

Since marketing of some products is gender sensitive. Thus, gender plays an important role in marketing efficiency of marketers or markets operators. Onion bulk merchants are predominantly (77.8%) male while onion wholesaling and retailing are in the hands of female marketers (Table, 2). Apart from the energy-demanding task involved in transporting onion from the northern to the southern part of the country, the religion and socio-cultural values of the northerners prevents women/female folks from being bulk merchants.

4.1.3. Years Completed in Formal School

Table 3, revealed that 38.9% of onion bulk merchants had zero year completed in formal schooling which means they are not lettered compared to what is obtainable in the wholesalers and retailers' stratum where there is no operators without having formal education. The result furthered showed a pooled mean value of 6.90 and standard deviation of 3.6.

Low level of education can be traced to the fact that the northern region where the bulk merchants come from have between 60-65% of primary school age children that never attended school compare to less than 3% in the southern state (US Embassy, 2012). Possibility of this affecting the marketing efficiency of the bulk merchants is high, since direct relationship between marketing efficiency and level of literacy should exist.

4.1.4. Marital Status

The study discovered that, 63.9% of onion bulk merchants were married and majority of the wholesalers and retailers (83.3% and 62.5% respectively) were married with no respondents being single. The result of the pooled data on marital status distribution indicated that 84.2% of onion marketers were married (Table 4). Since each stratum as well as all strata has a preponderance of married marketers, enhance marketing efficiency is expected (Uguwumba, 2009; Jimoh, 2014).

4.1.5. Credit Access

Credit access is pivotal to business expansion in most developing countries. The study further observed that not all the Bulk Merchants and majority of wholesalers (91.7%) and retailers (97.9%) had access to credit facilities (Table 5). It indicated that onion marketing did not attract funding from formal or informal sources or that the marketers do have necessary information as regards credit availability. This is a potential hindrance to business expansion for the onion market intermediaries.

4.1.6. Experience in Business

The bulk merchants interviewed during the research work had less years of experience in the business compared to other strata (Table 6). This might be because of the age factor, the bulk merchants leave the business for the young ones, because of their inability to cope with the herculean tasks associated with conveyance of onions from the northern region to the study area.

4.2. Marketing Efficiency

Marketing efficiency of the channel operators is a function of both the pricing and operational efficiency. Table 7, 8 and 9 shows that highest net marketing margin in naira per 120 kg of onion for bulk merchants and wholesalers were highest in Osogbo at ₦ 1,496.4 and ₦387, respectively while the net marketing margin in naira per 30kg of onions for retailers was highest in Osogbo at ₦220. The lowest net marketing margin was found in Iwo for the bulk merchants (₦899.0) and Ikirun has the lowest net marketing margin for the wholesalers and retailers strata (₦283.0 and ₦130.0 respectively). The average marketing costs of onions in the study area were ₦1,030.01, ₦112.8 and ₦66.7 for the bulk merchants, wholesalers and retailers respectively.

The marketing efficiency was highest in Osogbo for all the channel operators (149%, 343%, and 275% for bulk merchants, wholesalers and retailers respectively). The very high marketing efficiency means an efficient marketing system; however, according to Olukosi and Isitor (1990), market efficiency is a function of both pricing and operational efficiencies. Babatunde and Oyatoye (2008) established this in a work where the average marketing efficiency of maize enterprise per 100kg in the study area was 143.5% and interpreted to mean an efficient marketing system. Channel operators in the study area could therefore interpret the result in this study to mean a high pricing efficiency in onion marketing.

4.3. Regression Analysis

A number of factors usually affect marketing efficiency. Based on the significance of their parameters estimate, the factors identified to be affecting marketing efficiency of onions marketers in Osun State are losses incurred in transaction, sales volume, transportation and storage costs and cost of capital used. The lead equation is the linear equation

$$: Y=b_0+b_1 X_1+b_2 X_2+b_3 X_3+b_4 X_4+b_5 X_5+b_6 X_6$$

Table 11 shows that coefficient of all the independent variables [i.e. losses incurred in transaction, sales volume, transportation cost, wastages, association dues, stall rents and cost of capital used had significant effect on the marketing efficiency. Hence, they all have the tendency to predict the marketing efficiency. The variables included in the model had the coefficients significant between 1% ($p<0.01$) and 10% ($P<0.1$). The adjusted R2 was 0.75, which suggests that a good deal (75%) explanations of the variations in the marketing efficiency of marketers by the independent variables. More explicitly:

Sales Volume: this is positively related to the marketing efficiency and significant. It inferred that a percentage increase in sales volume would increase the marketing efficiency by 1134%. This implies that onion marketers that sell in larger volumes are more efficient than those that sell otherwise.

Loss Incurred in transaction: significant and positively related to the dependent variable, which contradicts a priori expectation. This means that one percent increase in the loss incurred in transaction will increase the marketing efficiency by 278%. Low level of wastages and the preservative measures used by the marketers are responsible for this contradiction.

Cost of capital used: any 10% increase in the cost of capital used would decrease the marketing efficiency by 1681%. It explained that the more the marketers pay interest on loan and incurred more depreciation charges on fixed asset the lower the marketing efficiency and vice versa.

Wages: this variable was also significant and inversely related to the marketing efficiency. This implies that as the wages increase by one percent, the marketing efficiency decreases by 731% and vice versa. The implication of this is that the more the cost incurred in terms of wages, the less efficient the marketing will be.

Transportation Cost: the variable shows that as the transportation cost increases the marketing efficiency decreases and vice versa. This implies that the more the cost incurred on transportation, the less efficient the market will be and that one percent increase in the transportation cost will decrease the marketing efficiency by 1,235%. The bulk merchants

that had to transport the onions from the northern region of the country (source of production) to the study area incurred more cost, which reflected on their high marketing costs.

Association Dues: is significant and positively related to the dependent variable.

Stall rent: significant and positively related to the dependent variable contrary to what is expected. This implies that 5% increase in stall rents will increase the marketing efficiency by 201%. It is a fact that most of the marketers sell in the open space that serves as an alternative and helps them to avoid renting a stall. This reduces the additional cost that marketers should have incurred.

5. CONCLUSIONS

From the study, there are significant differences in the ages of the identified channel operators in the study area. In addition, there are significant differences in the education levels of identified channel operators. There were no significant differences between the years of experience of the identified channel operators in the study area. The factors that influenced the marketing efficiency of onion marketers were; losses incurred in transaction, sales volume, transportation cost, wages, association dues, stall rent and cost of capital used. Larger percentages of the onion marketers do not have access to credit facilities with price fluctuation been experienced during Ramadan period.

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TABLES

Table 1. Distribution of Respondents by Age

Bulk Merchants			Wholesalers			Retailers			Pooled		
Age	**Frequency**	**Percentage**	**Age**	**Frequency**	**Percentage**	**Age**	**Frequency**	**Percentage**	**Age**	**Frequency**	**Percentage**
20- 29	27	75	20- 29	0	0	20- 29	0	0	20- 29	27	22,5
30-39	4	11,1	30-39	12	33,3	30-39	17	35,4	30-39	33	27,5
40-49	3	8,3	40-49	16	44,5	40-49	19	39,5	40-49	38	31,7
50-59	0	0	50-59	4	11,2	50-59	12	25,1	50-59	16	13,3
≥60	2	5,6	≥60	4	11	≥60	0	0	≥60	6	5
Total	36	100	Total	36	100	Total	48	100	Total	120	100

Source: Field Survey, 2016

Table 2. Distribution of Respondents by Sex

Bulk Merchants			Wholesalers			Retailers			Pooled		
Sex	Frequency	Percentage	Sex	Frequency	Percentage	Sex	Frequency	Percentage	Sex	Frequency	Percentage
Male	28	77,8	**Male**	0	0	**Male**	9	0	**Male**	28	23,3
Female	8	22,2	**Female**	36	100	**Female**	48	100	**Female**	92	76,7
Total	36	100	**Total**	36	100	**Total**	48	100	**Total**	120	100

Source: Field Survey, 2016

Table 3. Distribution of Respondents by Years completed in Formal School

Bulk Merchants			Wholesalers			Retailers			Pooled		
Years	**Frequency**	**Percentage**	**Years**	**Frequency**	**Percentage**	**Years**	**Frequency**	**Percentage**	**Years**	**Frequency**	**Percentage**
0	14	38,9	**0**	0	0	**0**	0	0	**0**	14	11,7
1-16	16	44,4	**1-16**	28	77,8	**1-16**	30	62,5	**1-16**	74	61,7
7-12	6	16,7	**7-12**	8	22,2	**7-12**	18	37,5	**7-12**	32	26,6
Total	36	100	**Total**	36	100	**Total**	48	100	**Total**	120	100

Source: Field Survey, 2016

Table 4. Distribution of Respondents by Marital Status

Bulk Merchants			Wholesalers			Retailers			Pooled		
Status	Frequency	Percentage	Status	Frequency	Percentage	Status	Frequency	Percentage	Status	Frequency	Percentage
Single	7	19,4	Single	0	0	Single	0	0	Single	7	5,8
Married	23	63,9	Married	30	83,3	Married	48	100	Married	101	84,2
Widowed	6	16,7	Widowed	6	16,7	Widowed	0	0	Widowed	12	10
Total	36	100	Total	36	100	Total	48	100	Total	120	100

Source: Field Survey, 2016

Table 5. Distribution of Respondent by Access to Credit

Bulk Merchants			Wholesalers			Retailers			Pooled		
CACS	Frequency	Percentage	CACS	Frequency	Percentage	CACS	Frequency	Percentage	CACS	Frequency	Percentage
Access	0	0	Access	3	8,3	Access	1	2,1	Access	4	3,3
Not Access	36	100	Not Access	33	91,7	Not Access	47	97,9	Not Access	116	96,7
Total	36	100	Total	36	100	Total	48	100	Total	120	100

Source: Field Survey, 2016

Table 6. Distribution of Respondents by Years of Experience in the Business

Bulk Merchants			Wholesalers			Retailers			Pooled		
Exp (years)	**Frequency**	**Percentage**	**Exp (years)**	**Frequency**	**Percentage**	**Exp (years)**	**Frequency**	**Percentage**	**Exp (years)**	**Frequency**	**Percentage**
5-9	6	16,5	5-9	5	13,9	5-9	0	0	5-9	11	9,2
10-14	14	39	10-14	19	52,8	10-14	25	52,1	10-14	58	48,3
15-19	14	38,9	15-19	3	8,3	15-19	10	20,8	15-19	27	22,5
20-24	0	0	20-24	4	11,1	20-24	13	27,1	20-24	17	14,2
25-29	0	0	25-29	1	2,8	25-29	0	0	25-29	1	0,8
30-34	0	0	30-34	4	11,1	30-34	0	0	30-34	4	3,3
≥35	2	5,6	≥35	0	0	≥35	0	0	≥35	2	1,7
Total	36	100	**Total**	36	100	**Total**	48	100	**Total**	120	100

Source: Field Survey, 2016

Table 7. Marketing Efficiency of Onions Bulk merchants in the Study area

Cities	Cost Price /120kg	Selling Price /120kg	Market Cost /120kg	Market Margin /120kg	Net Margin /120kg	Market efficiency %
Osogbo	6000	8500	1003.6	2500	1496.4	149
Ede	6000	8200	1001.2	2200	1198.8	120
Ife	6500	8500	1007	2000	993	99
Iwo	6400	8500	1101.3	2000	899	82
Ilesa	6000	8500	1044.2	2500	1455.8	139
Ikirun	6000	8000	1022.8	2000	977	96
Average	**6750**	**8950**	**1030.01**	**2200**	**1168.3**	**114.2**

Source: Field Survey, 2016

Table 8. Marketing Efficiency of Onions Wholesalers in the Study area

Cities	Cost Price /120kg	Selling Price /120kg	Market Cost 120kg	Market Margin /120kg	Net Margin /120kg	Market efficiency %
Osogbo	8500	9000	113	500	387	343
Ede	8200	8600	105	400	295	281
Ife	8500	8950	110	450	340	291
Iwo	8500	8900	117	400	283	242
Ilesa	8500	9000	115	500	385	335
Ikirun	8000	8400	117	400	283	241
Average	**8950**	**9392**	**112.8**	**442**	**328.8**	**288.8**

Source: Field Survey, 2016

Table 9. Marketing Efficiency of Onions Retailers in the Study area

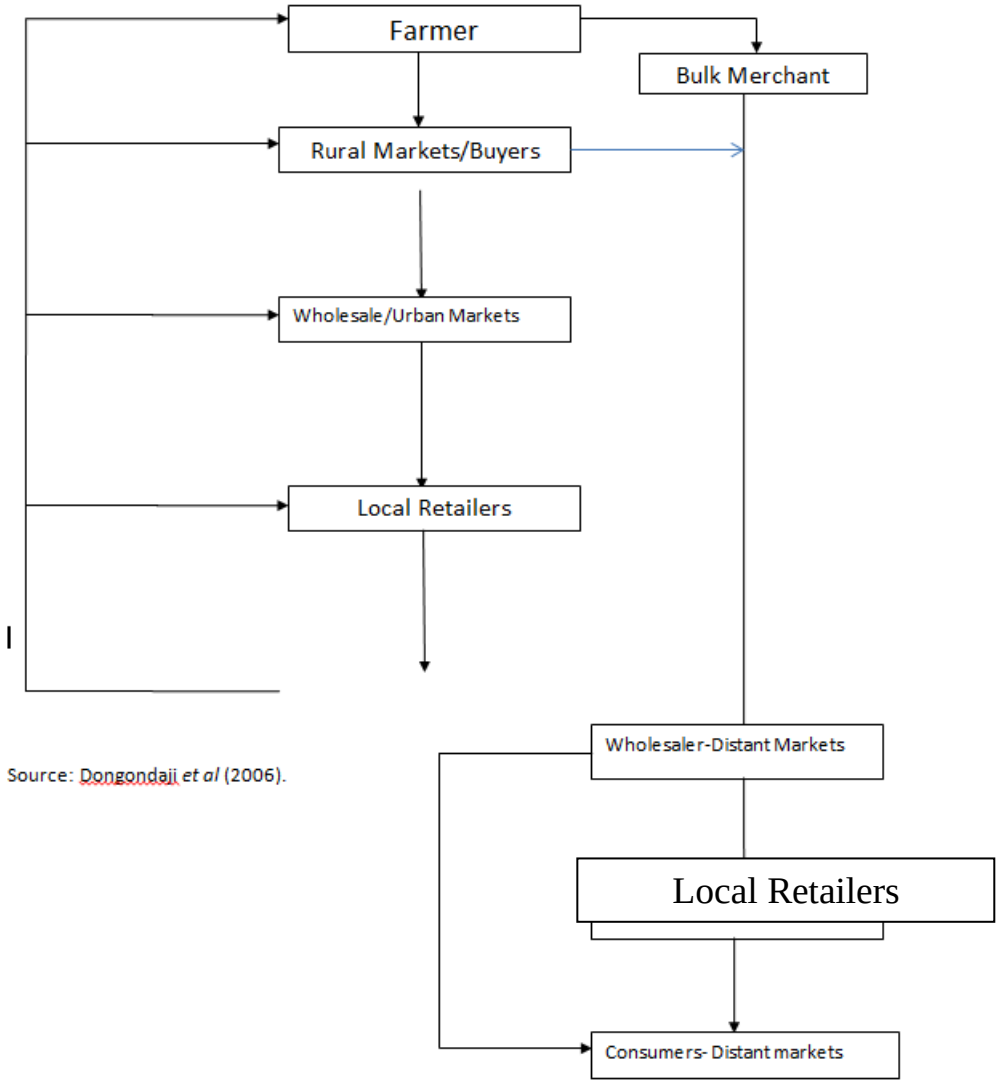
Cities	Cost Price /30kg	Selling Price /30kg	Market Cost /30kg	Market Margin /30kg	Net Margin	Market efficiency %
Osogbo	2200	2500	80	300	220	275
Ede	2100	2300	60	200	140	233
Ife	2200	2430	65	230	165	253
Iwo	2200	2400	65	200	135	208
Ilesa	2200	2450	70	250	180	257
Ikirun	1950	2140	60	190	130	217
Average	**2292**	**2520**	**66.7**	**228.3**	**161.7**	**240.5**

Source: Field Survey, 2016

Table 10. Factors Affecting marketing Efficiency of Onion Marketers (Pooled Data)

Variable	Coefficient	p-value
Constant	6.3708	0.000
Sales volume (X_1)	11.337	0.000*
Losses incurred in transaction (X_2)	2.786	0.006*
Cost of capital used (X_3)	-1.681	0.096***
Wages (X_4)	-7.306	0.000*
Transportation cost (X_5)	-12.345	0.000*
Association dues (X_6)	3.145	0.002*
Stall rent (X_7)	2.012	0.047**

Source: Field Survey, 2016



Source: Dongondaji *et al* (2006).

Fig 1: A Typical Distributive Trade Channel for Onions

Footnotes

CACS = Credit Access

Exp(yrs) = Experience in years

** means significant at 1%*

*** means significant at 5%*

****means significant at 10%*

Adjusted R^2 = 0.75