ANALYSIS OF PROFITABILITY OF GUM ARABIC MARKETING IN YOBE STATE, NIGERIA

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ABSTRACT

This study analyzed the profitability of marketing gum Arabic (*Senegalia senegal*) in Yobe State, Nigeria. Specifically, it assessed the socioeconomic characteristics of the marketers, socioeconomic factors affecting the profitability of gum Arabic marketing as well as the profitability of its marketing in the State. Purposive sampling technique was used in selecting Afunori, Nangere and Damaturu plantation areas established in 1999. From a population of 27 gum Arabic marketers, 25 respondents were selected based on Yero Yemeni`s model of sample size determination. Primary data were collected using structured questionnaire. The information collected included socioeconomic characteristics of respondents, as well as marketing costs and revenues. A combination of statistical and financial/economic tools were used in analyzing the data including percentages, means, regression as well as Gross Margin (GM) and Profitability analyses. Socioeconomic results revealed that the gum Arabic marketing scenario was dominated by male married youths whose mean age was 38.20 years, predominantly literate public servants with an average marketing experience of 10.5 years. These social factors had significantly impacted on profitability of gum Arabic marketing in the study area. Cost elements on the contrary, had insignificant impact. Gum Arabic marketers generated ₦ 2, 601.92 GM/ton/marketer whereas net profit/ton stood at ₦ 65, 048.12. Thus, the net profit/ton/marketer generated was ₦ 2, 403.09. The study concluded that gum Arabic marketing was profitable in the study area.

Keywords: Analysis; Profitability; Gum Arabic; Marketing

INTRODUCTION

The experiences of the global economic meltdown of 2009 necessitated the need for economic diversification in Nigeria (Ogbebahu, 2009). To achieve this, the Federal Government directed all states to look inwards for alternative sources of revenue for all forms of development in their respective domains. Accordingly, Yobe State endowed with favorable agroecolgy for gum Arabic and neem resources, considered large scale investment in afforestation and reforestation projects for two principal reasons: to combat desertification and to generate revenue (YBSSEDS, 2009). Based on tree selection criteria (Wilkinson and Elevitch, 2012) and critical analyses of the strengths, weaknesses, opportunities and possible

threats (SWOT), the Yobe State Afforestation Project (YBSAP) (2008), recommended *Senegalia senegal* (Gum Arabic) and *Azadirachta indica* (Neem) for their exceptionally high-level adaptation, greater microclimatic functions and wide range of valuable products and services. However, this study concentrated on the economic aspect of the program. Therefore, it is restricted to assessing the profitability of gum Arabic marketing being the major product of the species marketed in the State. Gum Arabic is the *"the desert gold"* and a promising desert flora that can change the economic fortunes of any nation (Daily Trust, 2006). Is the marketing of *Senegalia senegal* significantly profitable to justify its inclusion in the revenue generation strategies of the state (YBSSEDS, 2009)? This calls for empirical assessment of profitability of marketing gum Arabic produce in the State This study specifically assessed: the socioeconomic characteristics of gum Arabic marketing respondents, socioeconomic factors affecting the profitability of its marketing as well as profitability analysis of gum Arabic marketing in Yobe State.

Marketing of gum exudate of *Senegalia senegal* in Nigeria can be traced back to 1914 with the visit of Mr. Howbey R. Palmer (the then Governor of the Northern Province) to the Sudan. There, he was astonished by the booming gum Arabic business in that country and on return, he immediately ordered for sample collection of similar produce in Nigeria. After proper identification, the samples were later sent to the Premier Institute, London for analysis (Umar, 2006). The result had shown that the samples had similar properties to those produced in Sudan. Thus, Nigeria started gum Arabic business with London, while the first gum Arabic market centers in the country were at Geidam and Damaturu both in the present Yobe State (GABS, 2002). Farmers/collectors of gum Arabic had no specific market location or union. Therefore, assembling the produce from thousands of scattered small-sized villages was exclusively left in the hands of middlemen who had distinct markets and organized unions (Umar, 2006). Although Nigeria produced reasonable quantities of grade 1, no effort was made to process or add value to it locally. Today however, gum Arabic is processed into powder form by DANSA FOODS processing company based in Kano. Nigeria is the second largest producer and exporter of Gum Arabic after Sudan and in spite of the country`s high potentials for grade 1, the demand is considerably higher than the supply. According to the National Association of Gum Arabic Producers, Processors and Exporters of Nigeria (NAGAPPEN), US companies are placing more orders for grade 1, but the supply cannot even meet the demand due to irregularities in Production and marketing (RMRDC, 2004). This led to the importation of about 129, 550 kg of refined gum Arabic in 2001 costing ₦39.64 million (Ligali, 2005). It is thus clear that with an annual production of just 18,000 metric tons (RMRDC, 2004), Nigeria cannot meet both domestic and foreign demands.

Many factors combined to determine the profitability of marketing forest product in Nigeria. However, the major ones that dominate the literature were grouped into two: social and economic also known as socioeconomic factors (Umar *et al.*, 2014). The socioeconomic factors influencing gum Arabic marketing in Nigeria are briefly examined below:

(i) Age has an inverse relationship with profitability of gum Arabic marketing in Nigeria (Mbah, 2011 and Umar *et al.*, 2011). This implies that there is diminishing return to profit with increase in ages of marketers.

(ii) Education is a crucial to the success of any agribusiness activity (UNDP, 2008). The relationship between education and profitability of forest product marketing is not only positive but also direct (Umar *et al.*, 2014).

(iii) Gender and marital status have very little or no effect on profitability of marketing gum Arabic products (Umar *et al.*, 2011 and Umar *et al.*, 2014). Although studies have shown

that male gender and married marketers tend to dominate marketing scenarios of most forest products, there is no empirical evidence reflecting the significance of their influences on economic profitability.

(iv) Marketing experience influences the marketing process positively or negatively depending on the accumulated marketing experience of the individual. The longer the experience, the more effective and efficient the marketing activities (Muhammad, 2016). Experienced marketing clients produce the required grades and standards that command attractive prices. Marketing experience improves the effectiveness of marketing events (Woods, 2008).

(v) Cost of purchase influences the forces of demand and supply of gum Arabic produce in Nigeria. An increase in purchase cost leads to greater supply of the commodity with consequent fall in prices (Adegeye and Dittoh, 2005).

(vi) Operating cost has inverse relationships with profit realized from marketing of most forest products. Marketing costs in this category include transportation, storage, grading, handling, tax and bagging expenditure. Most often, the inverse relationship is occasioned by incurring high operating cost to the point of Diminishing Marginal Return (Ndanitsa, 2010).

(vii) Labor expenses also have inverse relationships with profits (Muhammad, 2016). Thus, an increase in labor expenditure reduces profit levels whereas a decrease increases the profit margins from gum Arabic Marketing.

(viii) Total fixed cost (TFC): Cost items in this category included scales, measures, head pans and other related items use in the marketing of both products. Although TFC has an inverse relationship with profits, studies have shown that their effects are negligible (Umar *et al.*, 2014). Most often, these items are not regularly used or under-utilized; creating unnecessary expenditure that reduces profit.

MATERIALS AND METHODS

The Study Area

The study was conducted in Yobe State in the North-eastern Nigeria located between latitudes $10^0 \, 27^1$ to $13^0 \, 23^1$ North and longitudes $9^0 \, 40^1$ to $12^0 \, 30^1$ East of the Green Which Meridian (Figure 1). It is bounded on the North by the Niger republic, on the East by Borno State, Bauchi and Jigawa States on the Southwest and Northwest respectively (Encyclopedia Britannica, 2006). It covers a total land area of 45,502 square kilometers. Considerable climatic variations abound between the Northern and Southern parts of the State. In the north, annual rainfall ranges from 300mm to 500mm whereas in the southern part, the range per annum falls between 500mm and 1000mm (YBSG, 2004). Temperatures are particularly very high throughout the year ranging from 39^0 C to 42^0 C (YBSG, 2004). Two vegetation types occur in the state: Sahel in the north and Sudan Savannah in the south. Both vegetation types are under severe continuous threats of desert encroachment (Iloeje, 2012). Farming and marketing are the major occupations in the state.

Sample and Sampling Procedure

The State was divided into three plantation areas: comprising Afunori Plantation Area (APA), Nangere Plantation Area (NPA) and Damaturu Plantation Area (DPA) based on the

existing zoning arrangement of the Yobe State Afforestation Project (YBSAP). APA covered a total land area of 16,059.52 km^2, whereas NPA and DPA had 10,706.35 and 18,736.12 km^2 respectively (YBSSEDS, 2009). Multistage sampling technique was used. The first stage was purposive sampling of gum Arabic plantations established in 1999 in each plantation area. The second stage relates to the sampling of gum Arabic marketers. Of the total population (27) of gum Arabic marketers (YBSSEDS, 2009), a sample of 25 was drawn based on Yero Yemeni's model (1967) of sample size determination (equation i). The outline of the model is given below:

$$n = \frac{N}{(1+N(e)^2)} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (i)$$

Where:

n = Sample size of gum Arabic marketers
N = Population of gum Arabic marketers
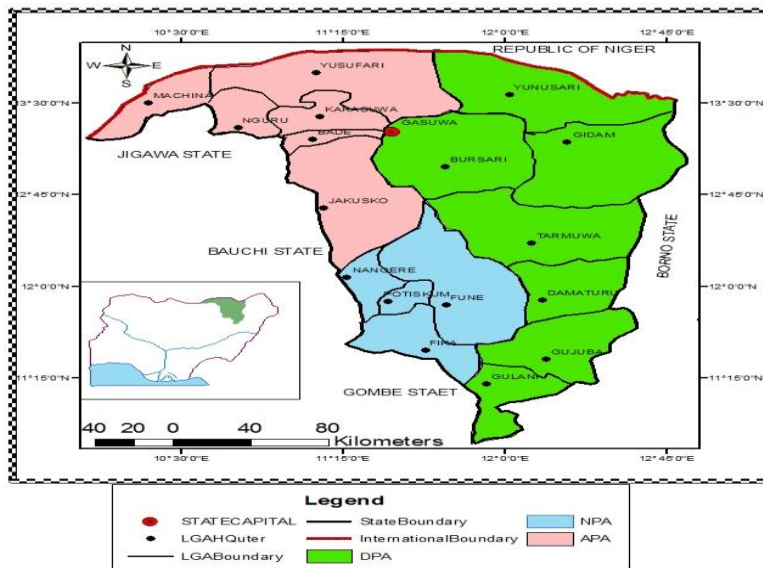e = Sampling error (0.05)

Figure 1: Map Yobe State Showing the Study Area

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Data Collection

Primary data were collected using a structured questionnaire. A total of 30 copies of the questionnaire were produced for data collection out of which 25 copies were correctly filled, returned and used in data analysis.

Data Analysis

A combination of both descriptive and economic/financial tools was used in analyzing the data. Descriptive statistics such as means, percentages and frequency count were used in analyzing the socioeconomic variables of respondents. In contrast, Gross Margin (GM) and profitability as well as linear regression analyses constituted the main economic and financial tools applied in assessing the profitability of gum Arabic marketing in the study area.

Model Specifications

(i) Gross Margin/profitability analysis

GM is simply the difference between the Total Revenue (TR) generated from the marketing of gum Arabic produced and the total variable cost (TVC) incurred. This study adopts Umar *et al.* (2014) method of GM, Net Profit (NP) and Total Cost (TC) computations as follows:

GM = TR – TVC…………………………………………………………………...(ii)

Where:
GM = gross margin of gum Arabic marketing (₦/tone/marketer)
TR = Total Revenue generated from gum Arabic marketing (₦)
TVC = total variable cost incurred in gum Arabic marketing (₦)
NP = TR – TC………………………………………………………………… (iii)
Where:
NP = net profit realized from gum Arabic marketing (₦/ton)
TR = total revenue generated from the sales of gum Arabic produced (₦)
(b) TC = TFC + TVC ………………………………………………………… (iv)
Where:
TFC = Total Fixed Cost of scales, head pans and measures/modus used in marketing gum Arabic marketing (₦)

(ii) Multiple Regression Model

Multiple regression analysis was used to compare the effects of socioeconomic factors on the profitability of gum Arabic marketing. The data generated on this aspect was subjected to several algebraic forms of the multiple regressions such as the linear, the Cob-Douglas, Semi-log and Exponential functions. The regression model is explicitly expressed as:

$Y = f (X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + X7 + X8 + U)$
……………………………………… (v)
Where:
Y = Total Net Profit/tone realized from gum Arabic marketing (₦)
X_1 =   Purchase cost (₦)
X_2 =   Operating cost (₦)
X_3 =   Labor cost (₦)
X_4 =   Marketing experience (years)

X_5	=	Educational level (years spent in school)
X_6	=	Cost of fixed inputs (calculated by straight line depreciation method) (₦)
X_7	=	Major occupation
X_8	=	Gender
U	=	Error term.

Four (4) functional models (linear, semi-log, double log and exponential) were tried. Using the economic theory, statistical criteria and coefficient of multiple determinations (R^2), the regression result with the best line of fit was selected for interpretation of the study as adopted by Maiangwa (2007) and Mesike, Agbonkpolor, Umar and Giroh (2007). The functional models are as follows:

Linear: $Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + U$…………… (vi)

Semi-log: $Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + U$…………..(vii)

Cob-Douglas: $\log Y = b_0 + b_1\log X_1 + b_2\log X_2 + b_3\log X_3 + b_4\log X_4 + b_5\log X_5 + b_6\log X_6 + b_7\log X_7 + b_8\log X_8 + U$………………………………………………………………. (viii)

Where:
X_1………X_8 independent variables, defined in equation (v) above

b_0	=	constant
$b_1 - b_8$	=	Regression coefficients
Y	=	Dependent variable
U	=	Error term

RESULTS

Socioeconomic Characteristics of Gum Arabic Marketers

Results revealed that the class 31 – 41 years was the modal age class of the respondents. It constituted 56% of the total respondents engaged in gum Arabic marketing Table 1). It was also the class with the most active individuals. The age class 42 – 52 years followed with 20% of the sampled gum Arabic marketers. The male gender dominated the marketing scenarios of gum Arabic in the study area. It formed 72% of the sampled respondents involved in the study. The balance of 28% represented female participation in gum Arabic marketing in the state (Table 1).

Married individuals constituted 72% of respondents involved in gum Arabic marketing. Singles, widows, and divorcees collectively formed 28% of the respondents (Table 1). Individuals with No-Formal-Education (NFE) constituted 20%, primary education 24% while those with access to secondary education formed 56% (Table 1). Generally, there was high literacy level among the sampled gum Arabic marketers.

More than half of gum Arabic marketers were Civil Servants (52%) followed by the farming occupation which accounted for 40% of the total respondents involved in the study (Table 1). Trading was the least occupation of the respondents engaging only 8% of the respondents.

The mean marketing experience among the sampled respondents was 10.50 years. Thus, gum Arabic marketing was relatively more popular, and an older business compared to other forest product marketing in the study area (Table 1).

Table 1: Socioeconomic characteristics of Gum Arabic marketers

Socioeconomic variable	Frequency	Percentage (%)	Mean	Standard Deviation
Gender				
Male	18.00	72.00		
Female	07.00	28.00		
Total	25.00	100.00	-	-
Age Class				
20 – 30	04.00	16.00		
31 – 41	14.00	56.00		
42 – 52	05.00	20.00		
53 – 63	02.00	08.00		
Total	25.00	100.00	38.20	8.8
Marital Status				
Married	18.00	72.00		
Single	02.00	08.00		
Widow	03.00	12.00		
Divorcee	02.00	08.00		
Total	25.00	100.00	-	-
Educational Qualification				
No Formal Education (NFE)	05.00	20.00		
Primary	06.00	24.00		
Secondary	14.00	56.00		
Total	25.00	100.00	-	-
Main Occupation				
Farming	10.00	40.00		
Trading	02.00	08.00		
Civil Servant	13.00	52.00		
Total	25.00	100.00	-	-
Marketing experience				
05 – 08	07.00	28.00		
09 – 12	11.00	44.00		
13 – 16	07.00	28.00		
Total	25.00	100.00	10.50	2.99

GM and Profitability Analysis of Gum Arabic Marketing

Table 2 depicts the profitability analysis for gum Arabic marketing in the three-plantation areas using Gross Margin (GM) model. Results indicated that 685.41 tons of the products were marketed between 2009 and 2013 and generated ₦184, 779, 748.81. Total GM realized by the marketers was ₦44, 584, 663.96. Thus, GM per ton stood at ₦65, 048.12 while GM value per marketer per ton was ₦2, 601.92. Total Net Profit (NP) calculated was

at ₦41, 177, 696.38 whereas, NP/ton was ₦ 60, 077.47. Thus, each gum Arabic marketer realized ₦2, 403.09 NP/ton/marketer (Table 2).

Table 2: GM and profitability analysis for Gum Arabic marketing at APA, NPA and DPA

Variables (Items/Activities)	Value (₦)/tone
	Arabic
Depreciated Fixed Cost	Gum
Scales	3, 350.41
Head pans	1, 248.17
Measures/Modus	372.07
Total Fixed Cost	4, 970.65
Variable Cost	
Labor	5, 343.88
Operating Cost	14, 631.31
Purchasing Cost	184, 566.79
Total Variable Cost	204, 541.98
Total Cost	209, 512.63
Total Revenue (TR)	269, 590.09
Gross Margin (D – B)	65, 048.12
GM/tone/Marketer	2, 601.92
Net Profit (D – C)	60, 077.47
NP/tone/Marketer	2, 403.09
Total Number of respondents	25
Total Quantity Marketed	685.41 tons

Regression Analysis of Socioeconomic Factors influencing the Profitability of Gum Arabic Marketing in Yobe State

Tables 3 indicates that the linear regression models gave the best fit in terms of the magnitude of R^2, appropriate signs of regression coefficients and levels of significance of the variables included in the equation and was therefore chosen as lead equation. Thus, the result of the linear model was chosen for interpretation. The R^2 value for gum Arabic was 0.9810 signifying that 98.10% of the variations in gum Arabic profits were jointly explained by the independent variables included in the model. Thus, the balance of 1.9% represented non-inclusion of some explanatory variables and/or estimation errors in the model.

The purchase cost coefficient (X_1) was negative (-48.75) and significant ($p<0.01$) implying that a naira increases in its purchase cost reduced profit by ₦48.75. In line with a priori expectation, increase in purchasing costs reduced profits generated from the marketing of the product.

The operating cost (X_2) coefficients was also negative and significant at 1%. As expected, an increase in operating costs reduces profit levels. Profit reduction per a naira increase in operating costs of gum Arabic was ₦18.20. This result infers that cost items that formed the overall operating expenditure of gum Arabic marketing were not used to the point of Diminishing Marginal Return (DMR) to profit.

The results for labor costs (X_3) also had negative coefficients and significant at 10% probability level. As expected, Labor cost had an inverse relationship with profit generated from gum Arabic marketing. Thus, a naira increases in the cost of labor gave rise to decrease

in profit margins by ₦6, 356.53. Although profit declines with increase in labor cost, more participants earned margins in the marketing system.

Marketing experience (X_4) had positive coefficients (65.95379) and was significant at 1%. Statistically, it signifies that a unit increase in marketing experience led to increase in profits of gum Arabic by ₦65.95. This agrees with the findings of Wood (2008) that experience is a useful factor in determining the effectiveness of marketing events among marketers. This could partly be responsible for high profits generated from gum Arabic marketing in each of the plantation areas studied. Furthermore, the high marketing experience among gum Arabic respondents (Table 1), coupled with the high economic value of its produce (Daily Trust, 2006) had given it greater comparative advantage over other forest products marketed in the study area. Coefficient for educational level (X_5) was positive and significant at 1%. This confirms the direct relationship between educational level of the respondents and their profits making abilities. Therefore, a unit increase in educational level leads to an increase in profit margins of gum Arabic by ₦6.38. This agrees with Umar *et al*. (2014) that education is a crucial factor to the success of any business entity.

The major occupations of the respondents (X_7) had positive coefficients and was significant at 10% probability level. The results signified that a unit increase in the occupation of gum Arabic marketers increased profits by ₦11, 294.56. This explains the reason for the higher participation of civil servants in gum Arabic marketing (Table 1) who had fixed sources of income as well as access to loan funds from private and public lending agencies to finance the business.

Table 3: Multiple regression results for socioeconomic factors affecting Gum Arabic profits

Variables	Linear			Semi-log			Double log		
	Coefficient	t-value	P-value	Coefficient	t-value	P-value	Coefficient	t-value	P-value
Purchase Cost (X1)	-48.7549	-3.32	0.004***	-472546.2	-1.32	0.206	- .3147191	-1.31	0.210
Operating Cost (X2)	-18.2031	-3.55	0.003***	-1190201	-2.40	0.029**	- .8908295	-2.67	0.017**
Labor Cost (X3	-6356.53	-1.81	0.089*	-3428.291	-0.50	0.627	- .005554	-1.19	0.250
Mark. Exp. (X4)	65.9538	4.89	0.000***	1272030	3.40	0.004***	.9714677	3.86	0.001***
Educational Level (X5)	6.38447	7.95	0.000***	1138870	4.84	0.000***	1.192496	7.55	0.000***
Cost of fixed inputs (X6)	-2603.03	-0.73	0.479	-479401.4	-2.25	0.039**	- .0860933	-0.60	0.556
Occupation (X7)	11294.56	1.82	0.088*	177187.5	1.91	0.074*	.1159717	1.86	0.081*
Gender (X8)	6871.045	0.22	0.828	152015.4	1.56	0.138	.0588541	0.90	0.382
Constant	103568.2	0.62	0.543	-7906542	-5.46	0.000	1.018721	1.05	0.310
R^2	0.9810			0.9502			0.9807		
F – Value	103.38***			38.16***			113.48***		

*** = Significant at 1% level ** = Significant at 5% level * = Significant at 10% level # = Lead equation

DISCUSSION

Results have shown that the sampled gum Arabic marketers were mainly youths whose mean age was 38.20 years. As youths, they vigorously handled and endured all hectic marketing activities involved in the business. This agrees with UNDP (2008) stipulations of direct involvement of able-bodied individuals in economic activities. Those onerous tasks included movement from one plantation to another or from one village market to another, grading, drying and bagging of produce. The result further indicates the willingness of both youth and matured persons to accept and manage risk as reported in the early work of Giroh, Umar and Yakubu (2010).

The male gender dominated the marketing scenario of gum Arabic produce. It constituted 72% of the total respondents engaged in gum Arabic marketing. The balance of 28% represented female participation. Clearly, this contravenes the principle of gender equality enunciated in the Millennium Development Goals (UNDP, 2008).

The married sub variable constituted 72% of the total marketing respondents. Singles, widows, divorcee and separated individuals collectively formed the balance of 28%. In other words, gum Arabic marketing engaged persons with many and varied marital statuses. Again, this also contradicts MDGs stipulations of equal job opportunities for all including women and youth (UNDP, 2008). The high participation of married respondents was explained by the need for additional incomes for livelihood improvement (UNDP, 2001).

Most of the sampled marketers had access to basic education with only few that lacked formal education. The educational background of the marketers was overwhelming. This could be the reason for the realization of high Net Profit (NP)/ton/marketer. Many studies particularly Eboh (2006) confirmed that educational background is a crucial factor for higher performance in any business activity.

Majority of the respondents were civil servants with high literacy level. High profitability was therefore expected from the gum Arabic business. Generally, gum Arabic marketing opened additional sources of income for farmers and civil servants in line with MDG stipulations (UNDP, 2008).

Respondents had high marketing experience which positively enhanced the profitability gum Arabic business. This confirms woods (2008) assertion that experience and education create behavioral changes and confidence in business.

Results have indicated considerable high net profit/tone/marketer in gum Arabic business, and this could be the reason for commercialization of its production in many countries. Therefore, the claim that it has the power to change the economic fortunes of any nation (Daily Trust, 2006; Newswatch, 2012; Leadership, 2014; Mokwunye and Aghughu, 2010 and Acacia Market Report, 2006) has been evidently confirmed. What makes gum Arabic marketing in the State more profitable? From the findings of this study, the profitability of gum Arabic marketing could be attributed to the following –The Gum Arabic produce marketed within the period was secured directly from plantations making the stock neater, well sorted and graded, properly packaged and leveled to meet international standards. This attracted favorable prices as earlier posited by Adegeye and Dittoh (2005) as well as Umar *et. al*. (2013). Two; gum Arabic had an established market backed by the National Association of Gum Arabic Producers, Processors and Exporters of Nigeria (NAGAPPEN) that ensured quality control and price regulations based on production cost and season as well as demand and commodity grade. This agrees with Umar *et al*. (2011) that the creation of an

enabling environment for production and marketing could stimulate significant return to producers and marketers.

The regression analysis of the effects of socioeconomic factors on the profitability of gum Arabic marketing has shown that all cost elements incurred in the marketing of the products had insignificant negative impact on profitability of its marketing. For instance, a naira increases in purchase cost reduced profits by ₦48.75 per ton. Similarly, a naira increases in operating costs reduced profits by only₦18.20. Thus, marketing cost had insignificant effect on the profitability gum Arabic marketing. This has been attributed to its high economic value (Acacia Market Report, 2006). Social factors including marketing experience, educational level and occupations increased gum Arabic profits significantly as reported by Umar *et al*. (2011) on costs and return of gum Arabic and some selected tree crops in Adamawa and Yobe states, Nigeria.

CONCLUSION

The profitability of gum Arabic marketing in Yobe State has been critically assessed from social and economic perspectives. Socioeconomic variables including marketing experience, educational level and the major occupations of the respondents had significant impact on profitability of gum Arabic marketing in Yobe State. The economic and statistical tools employed in assessing the profitability of marketing gum Arabic had a convergent outcome that its marketing was significantly profitable. Therefore, Gum Arabic marketing has proven that it can change the economic fortunes of Yobe State. In other words, it can be part of economic diversification program of the State.

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