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Analysis of Tea Consumption in South-West Nigeria

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ABSTRACT: *Tea (camellia sinensis) is a drink widely accepted globally. The market of tea has grown significantly over the years. It is forecast to reach 6.77 billion USD in 2025). There is plenty evidence that regularly drinking tea can have a lasting impact on wellness. Both green and black teas are packed with antioxidants which help to build antibodies. There is however, little information documented on the level of tea consumption. This study therefore empirically investigated the level of tea consumption as well as assess global tea consumption from 2012-2025. The study was carried out in the South west geopolitical zone of Nigeria. Information was obtained from the respondents using well structured questionnaire. For this study one hundred and forty-six respondent's information was used for analysis. Descriptive analysis, composite score analysis and linear regression analytical techniques were the analytical tools used in the study. Forty-nine percent of tea consumers have secondary education, a mean household size of four persons. They take tea about three times a week and consume an average of three sachets per week. Seventy-four percent of tea consumers reside in rural areas. Fifteen percent of the respondents are in the high category of tea consumption. The factors that influence tea consumption are gender ($p \leq 0.1$), household size ($p \leq 0.05$), place of residence ($p \leq 0.1$), brand of tea($p \leq 0.01$) and number of sachet of tea consumed per week($p \leq 0.01$). Respondents consume tea in South West Nigeria however their level of consumption is still low. There is a need to sensitize the populace in South West Nigeria on the health benefits of tea. This will in turn grow tea business (companies and farmers).*

KEYWORDS: consumption, determinants, south West, Tea

INTRODUCTION

Globally, water is the most consumed drink followed by tea (Statistica, 2022). There are diverse kinds of tea based on their oxidation levels. They are black, oolong, green and yellow. Tea consumption originated in China in 2737 BC. It was believed that the consumption of tea started from a Chinese emperor who accidentally drank tea while sitting under a tea tree. The leaves of the tea tree fell inside a pot of boiling water. Tea culture had been a common practise in china before it came to the west. Turkey was the leading tea

consuming country in 2016 with a per capita tea consumption of 6.96 pounds/ year while China's annual consumption was 1.25 pounds/person. China, India and Kenya were the three leading global tea producers in 2018 (Statistica, 2022). In 2015, Nigeria tea market was valued in retail prices at a value of 1.11billion USD (Market Research, 2020). It is forecast to reach 6.77 billion USD in 2025. The tea market in Nigeria has evolved over the years based on consumers' changing behaviour.

Several studies have shown that tea may boost human immune system, fight off inflammation, and even ward off cancer and heart disease (Yang and Landau, 2000). There is plenty evidence that regularly drinking tea can have a lasting impact on wellness. Both green and black teas are packed with antioxidants which help to build these antibodies. Green tea been proven to treat sore throat, cold, cough and also get rid of mucus. Apart from these, it also—disinfects respiratory tracts, throat and lungs (NOARA, 2020). The chemical Methylxanthine, Theobromine and Theophylline which are present in tea can stimulate compounds that can ward off this virus in a human with at least an average immune system (NOARA, 2020).

Even though some studies on tea consumption affirmed that tea has medicinal value in preventing and healing several diseases (NOARA, 2020). There is however, little information documented on the level of tea consumption. This study therefore empirically investigated the level of tea consumption as well as assess global tea consumption from 2012 to 20125 with a view to provide some informed basis for investments in the sub-sector, and particularly a guide to empower tea farmers to produce more which will translate to increase in farmers income and welfare.

Objectives

i) To profile socio economic characteristics of tea consumers in the study area
ii) To determine the level of consumption
iii) To determine the factors influencing tea consumption.
iv) To assess global tea consumption from 2010-2025

Table 1 presents tea consumption across nations of the world. Turkey had the highest annual per capita (3.16kg) consumption of tea in 2016, Morocco 1.22kg, Egypt 1.01kg, South Africa 0.81kg and USA 0.23kg.

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Table 1: Countries ordered by annual per capita consumption of tea in year 2016.

Rank	Country/Region	Tea consumption
1	Turkey	3.16 kg
2	Ireland	2.19 kg
3	Iran	1.99 kg
4	United Kingdom	1.94 kg
5	Russia	1.38 kg
6	Morocco	1.22 kg
7	New Zealand	1.19 kg
8	Chile	1.19 kg
9	Egypt	1.01 kg
10	Poland	1.00 kg
11	Japan	0.97 kg
12	Saudi Arabia	0.90 kg
13	South Africa	0.81 kg
14	Netherlands	0.78 kg
15	Australia	0.75 kg
16	United Arab Emirates	0.72 kg
17	Germany	0.69 kg
18	Hong Kong	0.65 kg
19	Ukraine	0.58 kg
20	China	0.57 kg
21	Canada	0.51 kg
22	Malaysia	0.48 kg
23	Indonesia	0.46 kg
24	Switzerland	0.44 kg
25	Czech Republic	0.42 kg
26	Singapore	0.37 kg

Rank	Country/Region	Tea consumption
27	Slovakia	0.36 kg
28	India	0.33 kg
29	Taiwan	0.29 kg
30	Sweden	0.29 kg
31	Hungary	0.28 kg
32	Norway	0.27 kg
33	Austria	0.27 kg
34	Finland	0.24 kg
35	United States	0.23 kg
36	Argentina	0.21 kg
37	Israel	0.20 kg
38	France	0.20 kg
39	Vietnam	0.20 kg
40	South Korea	0.17 kg
41	Spain	0.15 kg
42	Denmark	0.15 kg
43	Italy	0.14 kg
44	Belgium	0.13 kg
45	Bulgaria	0.11 kg
46	Romania	0.073 kg
47	Portugal	0.064 kg
48	Thailand	0.050 kg
49	Philippines	0.027 kg
50	Greece	0.023 kg
51	Venezuela	0.023 kg
52	Peru	0.023 kg
53	Colombia	0.018 kg
54	Brazil	0.018 kg
55	Mexico	0.014 kg

Source: http://en.wikipedia.org/wiki

METHODOLOGY

The study was carried out in the South west geopolitical zone of Nigeria. Two states were selected (Oyo and Osun States). In each of the selected States, one urban and one rural Local Government Areas (LGAs) were selected thus making a total of four LGAs selected for the study. The LGAs selected were Oyo (Oluyole and Ido) and Osun (Irewole and Ife East). Information was obtained from the respondents using well structured questionnaire. One hundred and sixty copies of questionnaire were distributed. After sorting out for missing data 196 respondents' information was used for analysis. For this study one hundred and forty six respondent's information was used for analysis.

Analytical techniques

Descriptive analysis, composite score analysis and linear regression analytical techniques were used in this study. STATA 12 was the program used for analysis.
Descriptive analysis: This involves the use of mean, frequencies, percentages, tables.
Composite score Analysis: This was used to measure the level of tea consumption. This was done based on the number of sachets of tea consumed by respondents per week. The categorisation into the high, intermediate and low level of tea consumption was then achieved using a composite score as given below and as used by Oladokun, 2018

High category = between highest number of sachets consumed to (Mean + S.D) points
Intermediate category = between upper and lower categories
Low Category = Between (Mean – S.D) points to 0 points.

Linear Regression Analysis – this was used to determine the factors influencing tea consumption in Southwest Nigeria.
The implicit model is:
$Y_i = \beta_1 x_{il} + \beta_2 x_2 + \ldots\ldots\ldots + \beta_n x_n + \varepsilon_i$ ....(1)
Where
Y= frequency of consuming tea per week
εi= error term
The X_{is} are exogeneous variables, which are:
State, LGA, Age, Gender, Marital status, Educational Level, household size, Income, Place of residence, number of sachet per week and brand of tea

RESULT AND DISCUSSION

The socio economic characteristics of tea consumers were presented in table 2. In this study 146 respondents consumed tea while fifty do not. Sixty-five percent of tea consumers were between age 31 and 60years. This implies that tea consumers are in their middle age. The mean age of tea consumers is 40years. Fifty-three percent are female while 78% are married. Forty-nine percent of tea consumers have secondary education, a mean household size of four persons. They take tea about three times a week and consume an average of three sachets per week. Seventy-four percent of tea consumers reside in rural areas.

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Table 2: Socio economic characteristics of tea consumers

Variable	Freq (N=146)	%
Age		
≤ 30	41	27.6
31-60	95	65.3
>60	10	7.1
Mean	40.1±13.8	
Gender		
Male	69	46.9
Female	77	53.1
Marital status		
Single	26	18.4
Married	114	77.6
Widowed	6	4.0
Educational Level		
No formal education	10	7.1
Primary	40	27.6
Secondary	72	48.9
Tertiary	24	16.3
Household size		
1-5	104	71.4
6-10	40	27.6
>10	2	1.0
Mean	4.4 ± 3.6	
Place of residence		
Urban	72	49.0
Rural	74	51.0
Brand of tea		
Lipton	132	90.0
Top tea	7	5.0
Others	7	5.0

Source: Field survey, 2021

The level of tea consumption is presented in table 3. Forty-one percent of tea consumers are in the low category, 44% are in the intermediate category and 15% are in the high category. This shows that more people are in the intermediate category.

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Table 3: Level of Tea Consumption

Variable	Freq	%
Low	60	40.8
Intermediate	64	43.9
High	22	15.3

Source: Field survey, 2021

Table 4 shows the result of the regression analysis. The result shows that the regressors can explain 88.2% of the variations in the dependant variables, that is, the coefficient of determination (R^2) was 88.2%. The F-ratio for the model was 58.41. Hence, the overall equation is significant at $p<0.01$. The coefficients for gender ($p\leq0.1$), household size ($p\leq0.05$), place of residence ($p\leq0.1$), number of sachet of tea consumed per week ($p\leq0.01$); and brand of tea consumed ($p\leq0.01$) were all significant. This shows that the consumption of tea is highly influenced by the factors. It could be observed that variables such as gender, place of residence, number of sachet of tea consumed per week, brand of tea were all positive at various levels of significance. This indicates that these variables go in the same direction with the tea consumption, that is, as each of the variables increases then the tea consumption also increases. However, household size was negative showing that as household size increases, tea consumption decreases. The implication of this is that, the size of household does not necessarily determines the quantity of tea to be consumed. The size of a household may large, but it can just be only few of the household members that are consuming tea.

Table 4: Factors influencing tea consumption

Variable	Coefficient	S.E	T	P>|t|
State	-0.4853	0.4699	-1.03	0.305
LGA	0.2445	0.1602	1.53	0.131
Age	-0.0066	0.0125	-0.53	0.595
Gender	0.4256*	0.2368	1.80	0.076
Marital Status	-0.0107	0.2567	-0.04	0.967
Educational level	-0.1938	0.1445	-1.34	0.183
Household size	-0.4510*	0.2291	-1.97	0.052
Income	4.94e-07	2.09e-06	0.24	0.813
Place of residence	0.7420**	0.4393	1.69	0.095
Number of Sachet of tea consumed per week	0.3288***	0.0148	22.14	0.000
Brand of tea	0.5789***	0.1529	3.79	0.000
Constant	-0.2110***	0.8937	-0.24	0.000
N=146				
R^2= 0.8820				

Source: Field survey, 2021

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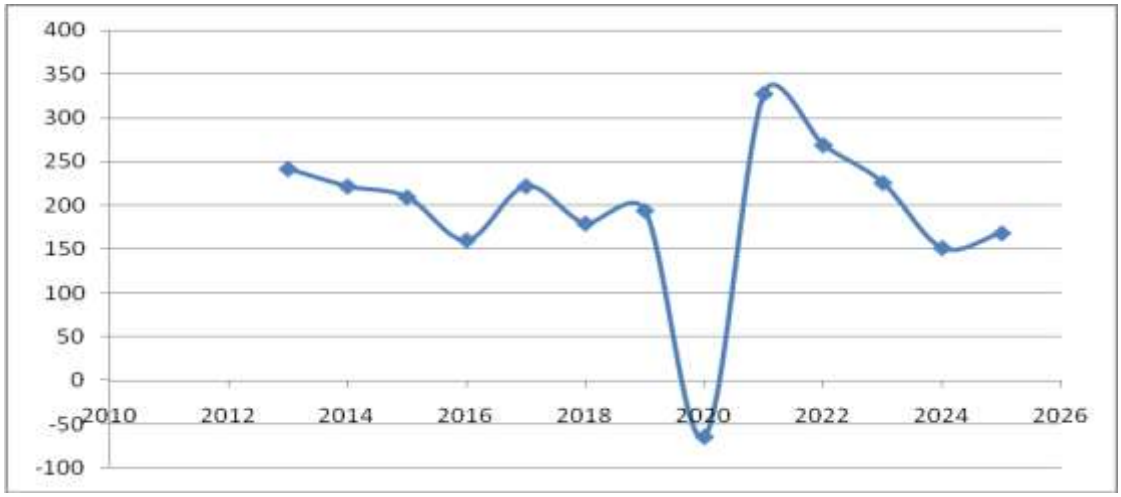
Table 5 presented the volume of tea consumption globally between 2012-2025. In 2012 4936.9 million kilograms of tea was consumed globally, 5,178 million kilograms in 2013, 5400.3 million kilograms in 2014, 5609.7 million kilograms in 2015, 5796.9 million kilograms in 2016, 5991.8 in 2017, 6171.2 million kilograms in 2018, 6365.3 million kilograms in 2019, 6300.8 million kilograms in 2020, 6628.4 million kilograms in 2021, 6897.4 million kilograms in 2022, 7123.2 million kilograms in 2023, 7274.6 million kilograms in 2024 and 744.8 million kilograms in 2025.

Table 5: Volume of tea consumption worldwide 2021-2025 in million kilograms

Year	Volume of tea consumption	Difference
2012	4936.9	-
2013	5,178.6	241.7
2014	5400.3	221.7
2015	5609.7	209.4
2016	5,796.9	160.2
2017	5991.8	221.9
2018	6171.2	179.4
2019	6365.3	194.1
2020	6300.8	-64.5
2021	6628.4	327.6
2022	6897.4	269
2023	7123.2	225.8
2024	7274.6	151.4
2025	7442.8	168.2

Source: https://www.statista.com/



Source: https://www.statista.com/
Figure 1: Trend of differences in global tea consumption

Figure 1 showed the scatter diagram of the differences in global tea consumption from 2012 2025. The difference in global tea consumption increased from 2013-2014 but reduced in 2015 (209.4 million kilograms). There was also a significant drop in year 2016(160.2 million kilograms). In 2017 tea consumption increased and the difference between 2016 and 2017 was 221.9 million kilograms... There was a huge difference in 2020. This was because of the global pandemic of Covid -19 where farmers could not go to the farm and consumers could not go out to buy tea. Tea consumption was suppose to increase greatly during Covid because of its medicinal benefits but tea was in short supply.

CONCLUSION AND RECOMMENDATION

In the study tea consumers are in their middle age, they take tea about three times a week and consume an average of three sachets per week. Forty-one percent of tea consumers are in the low category, 44% are in the intermediate category and 15% are in the high category. Global tea consumption was 6628.4 million kilograms in 2021, 6897.4 million kilograms in 2022, 7123.2 million kilograms in 2023, 7274.6 million kilograms in 2024 and 744.8 million kilograms in 2025. This study recommends that tea consumers in Nigeria should be sensitized on the health benefits of tea. This will in turn bring profit to the stakeholders of the tea industry in Nigeria.

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