

INFLUENCE OF AGRICULTURAL SECTOR ON GROSS DOMESTIC PRODUCT (GDP) GROWTH IN NIGERIA. (1981 TO 2015).

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ABSTRACT

This study seeks to investigate the influence of agricultural sector on gross domestic product (GDP) growth in Nigeria from 1981 to 2015. The broad objective of this study is to evaluate the impact of agricultural sector on gross domestic product growth in Nigeria. The specific objectives of the study are; to ascertain the effect of crop production on gross domestic product growth in Nigeria. To examine the effect of livestock production on gross domestic product growth in Nigeria. To assess the effect of fishery production on gross domestic product growth in Nigeria. And to determine the effect of forestry production on gross domestic product growth in Nigeria. The researcher used secondary source of data in the study because of the nature of the study. The results show that agriculture is statistically significant in influencing GDP growth in Nigeria. The result does not contradict Uma, Eboh and Obidike (2013) whose study indicated a combined effect of the variables (crop production, livestock production, fishery and forestry) was significant. However, the study differed in the individual contributions of crop production, livestock and fishing on GDP growth. In line with expectations crop production and livestock productions increased especially since 2011, therefore contributing slightly higher comparatively to other year to GDP growth. However, forestry and fishery went contrary to expectation. It is recommended that government should take advantage of the general positive change in attitude of Nigerians towards agriculture by building sustainable agribusiness ecosystem with private sector active participation. Also, provide supporting infrastructure and control systems to encourage commercial agriculture.

Keywords: Agricultural Sector, Gross Domestic Product (GDP), Growth, Nigeria.

Introduction

In recent times, the Nigerian government swung into action to reform the agricultural sector, this was spearheaded by the Agricultural Transformation Agenda (ATA) focusing on building the

sector whose relevance had shrunken dramatically owing to the excessive reliance on oil and to a large extent has succeeded in redirecting Nigeria's focus back to agriculture. However, there is still more work to be done. According to Federal Ministry of Agriculture & Rural Development (2016) policy and strategy document, Nigeria still imports a significant amount of food. Nigeria is also not earning significant foreign exchange from agriculture, meaning we are losing on both ends. Therefore, it became paramount to "refresh our strategy" to tackle these 2 issues head on. The Agricultural Promotion Policy (APP) is that refreshed strategy.

In order to achieve success in agriculture, it is important to establish the aggregate contribution of agriculture to the Nigerian GDP growth as well as ascertain the contribution of sub-sectors within the Agricultural sector.

Nwafor, Ehor, Chukwu and Amuka (2011) posits that agriculture is one sector that has a critical role to play in poverty reduction in Nigeria, over 40% of the country's GDP comes from the sector and it employs about 60% of the working population.

According to Arokoyo (2012) as cited by Oyinbo and Rekwot (2014) Nigeria is a vast agricultural country "endowed with substantial natural resources" which include: 68 million hectares of arable land; fresh water resources covering about 12 million hectares, 960 kilometres of coastline and an ecological diversity which enables the country to produce a wide variety of crops and livestock, forestry and fisheries products. While, Eboh, Oduh and Ujah (2012) says that economic growth in Nigeria has largely been accounted for by resilient agricultural growth associated with performance in four constituent sub-sectors: crops, livestock, fisheries and forestry. Consequently, issues associated with the extent to which these sub-sectors contribute to Nigeria's growth performance remains to be resolved. There are several existing literature on contribution of agriculture to economic growth in Nigeria, Africa and across the globe, yet there exists a relative dearth of empirical information on the analysis of GDP growth as explained by sub-sector level influence of agriculture viz a viz crop production, livestock production, fishery production and forestry production, hence this study.

The Objective of the Study

The broad objective of this study is to evaluate the impact of agricultural sector on gross domestic product growth in Nigeria. The specific objectives of the study are;

1. To ascertain the effect of crop production on gross domestic product growth in Nigeria.
2. To examine the effect of livestock production on gross domestic product growth in Nigeria.
3. To assess the effect of fishery production on gross domestic product growth in Nigeria.
4. To determine the effect of forestry production on gross domestic product growth in Nigeria.

Research Questions

1. What effect does crop production have on gross domestic product growth?
2. To what extent does livestock production affect gross domestic product growth?
3. What is the effect of fishery production on gross domestic product growth?
4. What is the effect of forestry production on gross domestic product growth in Nigeria?

Hypotheses

1. H_0 : Crop production has no significant effect on GDP growth in Nigeria.
2. H_0 : Livestock production has no significant effect on GDP growth in Nigeria.
3. H_0 : Fishery production has no significant effect on GDP growth in Nigeria.
4. H_0 : Forestry production has no significant effect on GDP growth in Nigeria.

Review of Related Literature

Various scholars have defined agriculture; paramount among these definitions is the fact that it is the planting of crops and rearing of animals in order to satisfy the various needs of man. According to The New Webster's Dictionary of the English Language, International edition (2004) Agriculture is the science or practice of large-scale soil cultivation. Wikipedia (2010) describes Agriculture as the production of food and goods through farming. For this study, we will be looking at agriculture through these sub-sectors; crop production, livestock production, fishery and forestry.

Crop production is a branch of agriculture that deals with growing crops for use as food and fiber, for example the growing of grains, cotton, tobacco, fruits, vegetables, nuts and plants. Livestock production is domesticated animals raised in an agricultural setting to **produce** commodities such as food, fiber, and labor. The term is often used to refer solely to those raised for food, and sometimes only farmed ruminants, such as cattle and goats. (Wikipedia retrieved 2017). Fishery production encompasses the farming facility used in the culture or propagation of aquatic species including fish, mollusk, crustaceans and aquatic plants for purposes of rearing and culturing to enhance production. Forestry production involves the science and craft of creating, managing, using, conserving, and repairing forests. (Wikipedia, retrieved 2017) These various aspects of agriculture contribute to the growth of the economy in varying degrees. Oji-Okoro (2011) summarizes thus that agriculture resource has been an important sector in the Nigerian economy in the past decades, and is still a major sector despite the oil boom; basically it provides employment opportunities for the teeming population, eradicates poverty and contributes to the growth of the economy. **Gross Domestic Product (GDP)** is one of the primary indicators used to gauge the health of a country's economy. It represents the total Naira value of all goods and services produced over a specific time period; you can think of it as the size of the economy.

Empirical review

Olajide, Akinlabi, and Tijani (2012) while investigating the topic agriculture resource and economic growth between 1970 and 2010 in Nigeria used the Ordinary Least Square regression method was used to analyze the data. The results revealed a positive cause and effect relationship between gross domestic product (GDP) and agricultural output in Nigeria. Agricultural sector is estimated to contribute 34.4 percent variation in gross domestic product (GDP) between the periods investigated.

Oji-Okoro Izuchukwu (2011) also, while analyzing the contribution of agricultural sector on the Nigerian economic development, used a panel of data used was sourced from the statistical bulletin of the Central Bank of Nigeria and World Bank's development indicators, multiple regression was used to analyze the data, the result indicated a positive relationship between Gross Domestic Product (GDP) vis a vis domestic saving, government expenditure on agriculture and foreign direct investment between the period of 1986-2007. It was also revealed

in the study that 81% of the variation in GDP could be explained by Domestic Savings, Government Expenditure and Foreign Direct Investment. In order to improve the agricultural sector it is recommended that government provides more funding for agricultural universities in Nigeria to carry out researches on all areas of agricultural production this will lead to more exports and improvement in the competitiveness of Nigeria agriculture production in international markets. The Central bank of Nigeria should also come up with a stable policy for loan disbursement to farmers at a reasonable interest payback.

Uma, Eboh and Obidike (2013) empirically appraised the influence of agriculture on economic growth from 1970-2009. It examined the influence of output of various types of agricultural practices on Real Gross Domestic Product (RGDP), a proxy for economic growth. Data for the study were sourced from the statistical bulletin of the Central Bank of Nigeria. Augmented Dickey-Fuller and Phillips Perron tests were carried out to test for unit-root and Johansen co-integration test confirmed a long-run relationship of the dependent and independent variables. Error correction model was established. The method of ordinary least square was employed in the data analysis. The study found that the contributions of crop production, livestock and fishing on economic growth were statistically insignificant. Only forestry contributed significantly to growth at the period of study. However, the combined effect of the variables was significant. On this note, among the recommendations made are that it is imperative for the federal, state and local governments to establish integrated agriculture in all the wards in each local government; corruption should be tackled, and there is need for emulation of the radical reform of food production adopted by the Chinese government.

Oyinbo and Rekwot (2014) Agricultural Production and Economic Growth in Nigeria: Implication for Rural Poverty Alleviation. The study used empirical information on the relationship between agricultural production and the growth of Nigerian economy with focus on poverty reduction. Time series data were employed in this research and the analyses of the data were done using unit root tests and the bounds (ARDL) testing approach to cointegration. The result of the data analysis indicated that agricultural production was significant in influencing the favourable trend of economic growth in Nigeria. Despite the growth of the Nigerian economy, poverty is still on the increase and this calls for a shift from monolithic oil-based economy to a more plural one with agriculture being the lead sector.

Methodology

The researcher used secondary source of data in the study because of the nature of the study which was an analysis of the impact of the agricultural sector on GDP growth in Nigeria between 1981 - 2016. Data that have been hitherto generated are required and used for this type of study. The time series data cover 36 years ranging from 1981-2016. The data was obtained from the National Bureau of Statistics. The method of data analysis is the ordinary least square (OLS) multiple regression method.

Model Specification

The approach was to collate GDP data for the agricultural sector output and Total GDP. In the model, the dependent variable is Gross Domestic Product (GDP). The independent variable is

agricultural output (Crop production, livestock, forestry and fishing). The statistical formulation of the model can therefore be presented as follows:

$$GDP = \beta_0 + \beta_1 \text{cropProd} + \beta_2 \text{livestProd} + \beta_3 \text{foresProd} + \beta_4 \text{fishProd} + E$$

Where:

GDP = Gross Domestic Product

β_0 = Intercept

$\beta_1 \text{cropProd}$ = estimation coefficient for Crop production

$\beta_2 \text{livestProd}$ = estimation coefficient for Livestock production

$\beta_3 \text{foresProd}$ = estimation coefficient for forestry production

$\beta_4 \text{fishProd}$ = estimation coefficient for Fishing production

E = error term

Relationship between agricultural sector and GDP growth

Table 1: Model summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.934 ^a	.873	.856	6573918.34664

Source: *Regression Analysis of Data, 2016.*

a. Predictors: (Constant), Contribution of Fishery production to GDP, Contribution of Livestock production to GDP, Contribution of crop production to GDP, Contribution of forestry production to GDP

From the model summary above, the coefficient to multiple determination $R^2 = 0.873$, describes the extent to which the dependent variable (GDP growth) is being explained by the independent variables. This implies that 87.3% of variations in GDP growth are caused by the variables analyzed above. Also, the adjusted R^2 was 0.856; showing 85.6% of variation in GDP growth was explained by changes in the variables analyzed above. Standard error of estimate measures the dispersion of the dependent variable estimate around the mean.

Table 2: Analysis of Variance

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8895337489891623.000	4	2223834372472905.800	51.458	.000 ^b
	Residual	1296492072848746.800	30	43216402428291.555		
	Total	10191829562740370.000	34			

Source: *Regression Analysis of Data, 2016.*

a. Dependent Variable: Total GDP for the year

b. Predictors: (Constant), Contribution of Fishery production to GDP, Contribution of Livestock production to GDP, Contribution of crop production to GDP, Contribution of forestry production to GDP

From the table above, “sig” which checks the goodness of fit of the model, shows model fits the data. Since the significance is less than the 0.05, the goodness of the model is fit.

The model explains the deviations in the dependent variable at 95% confidence interval and hence we can accept the model and the lower the number the better the fit. Typically, if Significance could have been greater than 0.05, it could have been concluded that our model could not fit the data. The *F*-ratio in the ANOVA table above tests whether the overall regression model is a good fit for the data. The table shows that the independent variables statistically significantly predict the dependent variable, $F(4, 95) = 51.458$, $p < .0005$ (i.e., the regression model is a good fit of the data).

Table 3: Regression Result

Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	25796499.018	5381284.678		4.794	.000
Crop production	2.956	1.074	.720	2.752	.010
Livestock production	122.860	18.084	2.195	6.794	.000
Forestry production	-789.481	151.481	-1.669	-5.212	.000
Fishery production	-94.981	36.808	-.621	-2.580	.015

Source: *Regression Analysis of Data, 2016*.

Interpretation:

Only variable with p-value less than 0.05 is statistically significant. Looking at the table above, crop production and livestock production are positively significant. The regression coefficient for crop production and livestock production are positive (2.956 and 122.860) with a p-value of 0.010 and 0.000 respectively, which is below 0.05 significant levels. The regression coefficient for forestry production and fishery production are negative (-789.481 and -94.981) having a p-value of 0.000 and 0.015 which is below 0.05. This means that increasing the crop production and livestock production would increase the GDP growth of the economy. While forestry production and fishery production has an inverse relationship, meaning that increasing their production would decrease GDP growth of the economy. The general form of the equation to predict GDP growth from agricultural sector is:

Predicted dependant = $25796499.01 + (2.956 \times \text{cropProd}) + (122.86 \times \text{livestProd}) - (789.48 \times \text{foresProd}) - (94.98 \times \text{fishProd})$

This is obtained from the **Coefficients** table, as shown above. In multiple linear regression, the size of the coefficient for each independent variable gives you the size of the effect that variable is having on your dependent variable, and the sign on the coefficient (positive or negative) gives you the direction of the effect. In regression with multiple independent variables, the coefficient tells you how much the dependent variable is expected to increase when that independent variable increases by one, holding all the other independent variables constant. From the analysis above and the model, an increase in crop production and livestock production cause an increase in industrial growth, an increase in forestry production and fishery production causes a decrease in industrial growth as indicated by the negative sign before the forestry and fishery production in the regression model.

In summary, the analysis of the relationship between agricultural sector and GDP growth in Nigeria from 1981 to 2016 show that, according to the F ratio in the table above, the regression model is a good fit for the data. Also the table indicates that the independent variable analyzed are all statistically significant predictors of the dependent variable, $F(4, 95) = 51.458, p < .0005$ (i.e., the regression model is a good fit of the data).

Discussion of Results

The results show that agriculture is statistically significant in influencing GDP growth in Nigeria. The result does not contradict Uma, K. E., Eboh F. E. & Obidike P. C. (2013) whose study indicated a combined effect of the variables (crop production, livestock production, fishery and forestry) was significant. However, the study differed in the individual contributions of crop production, livestock and fishing on GDP growth.

In line with expectations crop production and livestock productions increased especially since 2011, therefore contributing slightly higher comparatively to other year to GDP growth. However, forestry and fishery went contrary to expectation.

It is also plausible to mention that the influence of agriculture to GDP growth can be attributed to the Federal Government's aggressive policy and implementation strategy of Agricultural Transformation Agenda (ATA), which reduced high cost and stringent collateral requirement for farmers for loans, provision of fertilizers, expert advisory services and so on.

Conclusion and Recommendations

In analyzing the effect of agriculture on GDP growth; crop production and livestock production showed positive contributions to GDP growth in the Nigeria economy. However, fishery and forestry didn't have the same effects. The study observed that there is an increase in farming operations in Nigeria with the agricultural sector contributing greater percentage to GDP in the last 3years comparatively to other years.

It is recommended that government should take advantage of the general positive change in attitude of Nigerians towards agriculture by building sustainable agribusiness ecosystem with private sector active participation. Also, provide supporting infrastructure and control systems to encourage commercial agriculture. Finally, government should show greater transparency and credibility in fulfilling its part in agricultural programmes like agricultural credit guarantee scheme and so on, in order to encourage farmers and would be farmers.

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GDP AT CURRENT BASIC PRICE (NORMAL GDP)=N=Million

GDP	Agric (=N=Mill)	Sect	Industrial Sect(=N=Mill)	Total GDP the yr	for	Annual Rate %	Growth
1981	17,052.18		26,885.96	144,831.16		7.01	
1982	20,125.92		29,086.84	154,978.39		5.18	
1983	23,797.82		31,125.14	162,999.81		4.53	
1984	30,365.18		27,124.63	170,377.78		12.85	
1985	34,237.09		37,138.67	192,273.27		5.29	
1986	35,702.64		38,650.30	202,436.23		23.22	
1987	50,286.94		43,216.09	249,439.08		28.42	
1988	73,764.51		63,519.01	320,328.54		30.86	
1989	88,264.13		72,896.60	419,196.39		19.20	
1990	106,626.69		84,270.29	499,676.85		19.29	
1991	123,235.65		110,599.45	596,044.69		52.64	
1992	184,115.65		153,467.86	909,803.31		38.39	
1993	295,324.59		221,229.71	1,259,070.46		40.01	
1994	445,272.89		354,663.98	1,762,812.82		64.24	
1995	790,141.62		414,125.77	2,895,201.36		30.53	
1996	1,070,514.73		477,947.79	3,779,133.07		8.80	
1997	1,211,461.96		546,712.46	4,111,640.63		11.61	
1998	1,341,040.90		620,203.46	4,588,989.84		15.65	
1999	1,426,973.81		713,821.65	5,307,361.52		29.96	
2000	1,508,408.79		826,025.42	6,897,482.48		17.93	
2001	2,015,421.53		989,114.39	8,134,141.81		39.32	
2002	4,251,520.65		1,127,226.59	11,332,252.82		17.38	
2003	4,585,925.70		1,304,070.97	13,301,558.86		30.22	
2004	4,935,263.75		1,516,046.63	17,321,295.24		28.57	
2005	6,032,332.41		1,778,730.16	22,269,977.83		28.70	
2006	7,513,297.80		2,082,490.63	28,662,468.77		15.12	
2007	8,551,981.40		2,401,192.97	32,995,384.35		18.68	
2008	10,100,325.19		2,761,549.96	39,157,884.39		13.09	
2009	11,625,442.33		3,170,822.53	44,285,560.50		25.25	
2010	13,048,892.80		3,578,641.72	55,469,350.31		-31.46	
2011	11,593,434.13		694,814.15	38,016,960.63		8.32	
2012	13,413,842.46		761,467.00	41,181,617.09		96.71	
2013	16,816,553.01		7,233,322.47	81,009,964.61		11.27	
2014	18,018,612.87		8,685,430.03	90,136,984.65		5.59	
2015	19,636,969.04		8,973,773.16	95,177,735.68		-100.00	

GDP AT CONSTANT BASIC PRICE (REAL GDP)=N=Million

GDP	Agric (=N=Mill)	Sect Industrial Sect(=N=Mill)	Total GDP for the yr	Annual Rate %	Growth
1981	2,364,373.15	1,558,696.70	15,258,004.34		
1982	2,425,960.89	1,764,893.89	14,985,078.32	-7.58	
1983	2,409,081.92	1,167,888.87	13,849,725.17	-0.51	
1984	2,303,505.42	1,018,906.87	13,779,255.49	8.52	
1985	2,731,062.47	1,416,787.79	14,953,913.05	1.90	
1986	2,986,835.38	1,373,662.10	15,237,987.29	0.17	
1987	2,891,672.33	1,398,100.91	15,263,929.11	6.23	
1988	3,174,567.62	1,618,254.62	16,215,370.93	6.66	
1989	3,325,947.09	1,665,089.44	17,294,675.94	11.63	
1990	3,464,716.26	1,670,733.56	19,305,633.16	-0.55	
1991	3,590,837.44	1,829,335.45	19,199,060.32	2.19	
1992	3,674,792.83	1,758,605.72	19,620,190.34	1.57	
1993	3,743,665.81	1,706,701.44	19,927,993.25	0.26	
1994	3,839,675.45	1,670,724.21	19,979,123.44	1.87	
1995	3,977,381.94	1,592,491.14	20,353,202.25	4.05	
1996	4,133,548.21	1,599,938.11	21,177,920.91	2.89	
1997	4,305,679.63	1,609,831.34	21,789,097.84	2.50	
1998	4,475,241.38	1,412,443.97	22,332,866.90	0.52	
1999	4,703,643.68	1,459,023.50	22,449,409.72	5.52	
2000	4,840,971.20	1,505,663.91	23,688,280.33	6.67	
2001	5,024,542.11	1,666,488.14	25,267,542.02	14.60	
2002	7,817,084.50	1,813,813.20	28,957,710.24	9.50	
2003	8,364,832.10	1,918,093.17	31,709,447.39	10.44	
2004	8,888,573.40	2,143,453.96	35,020,549.08	7.01	
2005	9,516,991.54	2,350,990.31	37,474,949.16	6.73	
2006	10,222,474.98	2,574,290.94	39,995,504.55	7.32	
2007	10,958,469.13	2,823,534.93	42,922,407.93	7.20	
2008	11,645,370.98	3,079,037.61	46,012,515.31	8.35	
2009	12,330,325.55	3,323,411.68	49,856,099.08	11.26	
2010	13,048,892.80	3,578,641.72	55,469,350.31	-98.47	
2011	335,180.08	34,680.55	847,535.28	6.52	
2012	348,490.81	37,300.45	902,793.97	6902.56	
2013	14,750,523.21	5,826,358.45	63,218,721.73	7.53	
2014	15,380,389.33	6,684,217.12	67,977,459.22	2.65	
2015	15,952,220.15	6,676,618.63	69,780,692.72	-100.00	

GDP AT CONSTANT BASIC PRICE (REAL GDP)=N=Million

GDP	CropProd	LivestProd	ForesProd	FishProd	Agric (=N=Million)	Sector
1981	1,854,764.44	341,411.50	77,897.99	90,299.23	2,364,373.16	
1982	1,897,078.85	361,115.70	73,910.25	93,856.08	2,425,960.88	
1983	1,842,704.31	393,131.01	75,282.78	97,963.82	2,409,081.92	
1984	1,759,115.15	399,685.38	76,694.14	68,010.74	2,303,505.41	
1985	2,180,907.71	428,102.85	78,082.45	43,969.46	2,731,062.47	
1986	2,427,100.66	421,627.97	86,594.92	51,511.83	2,986,835.38	
1987	2,329,995.84	433,433.52	87,594.28	40,648.69	2,891,672.33	
1988	2,581,595.05	444,269.94	88,907.95	59,794.67	3,174,567.61	
1989	2,710,674.81	453,155.59	67,307.31	94,809.39	3,325,947.10	
1990	2,828,589.58	462,218.99	72,613.57	101,294.12	3,464,716.26	
1991	2,955,875.91	454,823.21	74,791.90	105,346.41	3,590,837.43	
1992	3,044,552.16	458,916.79	76,512.11	94,811.77	3,674,792.83	
1993	3,132,843.73	461,670.56	78,042.40	71,109.13	3,743,665.82	
1994	3,226,829.55	466,287.56	80,071.46	66,486.88	3,839,675.45	
1995	3,336,541.36	485,872.07	81,832.93	73,135.57	3,977,381.93	
1996	3,462,995.96	499,962.45	82,241.90	88,347.90	4,133,548.21	
1997	3,611,905.26	512,461.13	82,982.17	98,331.07	4,305,679.63	
1998	3,752,769.63	526,297.84	83,977.89	112,196.02	4,475,241.38	
1999	3,949,415.21	541,034.01	85,070.09	128,124.37	4,703,643.68	
2000	4,067,897.64	553,478.21	86,346.14	133,249.20	4,840,971.19	
2001	4,222,477.41	570,082.86	88,072.90	143,908.93	5,024,542.10	
2002	6,977,878.78	597,498.38	88,690.22	153,017.10	7,817,084.48	
2003	7,493,024.20	622,559.31	90,021.50	159,227.10	8,364,832.11	
2004	7,956,655.07	663,025.91	95,873.02	173,019.40	8,888,573.40	
2005	8,524,146.88	707,871.01	101,546.80	183,426.85	9,516,991.54	
2006	9,162,650.26	756,734.19	107,658.07	195,432.46	10,222,474.98	
2007	9,826,769.09	809,164.94	114,249.34	208,285.76	10,958,469.13	
2008	10,437,994.13	864,188.16	121,218.55	221,970.14	11,645,370.98	
2009	11,046,155.59	920,199.22	128,313.12	235,657.62	12,330,325.55	
2010	11,683,896.37	979,564.05	135,720.90	249,711.48	13,048,892.80	
2011	10,320,316.22	756,067.50	140,175.63	373,560.83	11,590,120.18	
2012	11,965,513.67	863,546.24	156,553.54	428,229.01	13,413,842.46	
2013	4,469,356.33	405,901.34	52,933.66	98,912.84	5,027,104.17	
2014	15,812,570.60	1,573,052.59	207,739.58	425,250.11	18,018,612.88	
2015	17,189,973.04	1,748,025.04	222,826.75	476,144.21	19,636,969.04	