# Petroleum Scarcity and Quality of Life Among Commercial Motorists in Kaduna Metropolis

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## Abstract

*The study examined the relationship between petrol scarcity and quality of life of commercial motorists in Kaduna metropolis. The metropolis was divided into three major clusters namely, Kaduna South, Kaduna North and Kaduna Central. Cluster sampling procedure was employed; data were collected on socio-demographic characteristics of the respondents and their experience of petrol scarcity in relation to their income and quality of life. This was made possible via structured questionnaire. Two null hypotheses were tested and the result of the first indicated an inverse relationship between the incident of petrol scarcity and the level of income of the respondents while that of the second revealed similar relationship between petrol scarcity and quality of life of the motorists studied. This was made possible via the use of regression analytical tool. Some useful recommendations were also provided.*

**Keywords:** Petroleum, Scarcity, income, Quality of Life, Motorists, Kaduna
**JEL Codes**: O29

## 1. Introduction

Generally, issues relating to quality of life of the people have been among the most fundamental facts of discussions within the domain of humanities, particularly the political science, economics and Sociology among others. In political science, for example, the general consensus is that, political leadership should be more focused on the leaders' ability to improve the quality of life their subjects. That is why the success or otherwise of their administration is highly dependent on the extent to which they are able to live up to such expected role. Similarly, conventional economists have rightly observed that, quality of life remains among the most important qualitative indices for economic development of every society. They therefore conclude that, unless there is a considerable improvement in the quality of life of a people, development cannot be said to have taken place in any human society. In the same vein, development sociologists have been able to examine the relevance of quality of life to the general socio-economic well-being of a people. They therefore conclude that, unless both the manifest and the latent elements of the causal factors, for quality of life are strictly examined, individuals or group understanding of what constitutes development can never be complete.

However, a glance at the focus and direction of analysis in most of the recent studies, theoretical postulations or conceptual clarifications, that relate to the question of quality of life, would several that, many of these works majorly focus on the manifest, as against the latent elements of the causal factors of the problem, in question. Whereas, a critical look into the nature and dynamics of the phenomenon, one would come to see that, a lot of latent factors could be held responsible for the conditions of quality of life of people. One of such elements is the availability of, and accessibility to, some of the basic needs of everyday living, among which is *Premium Motor Spirit* (PMS), also known as petrol. Petrol and other related products are important basic needs of everyday modern living; without which production, distribution and consumption of goods and services become almost impossibility (Lukman, 2001). Going by this analysis, it could be right to assume that, any deficiency in the availability and affordability of the petroleum product is very likely to have a significant impact on the overall quality of life of the people.

In relation to Nigeria, the incidence of petrol scarcity has become a recurrent event that has stricken the concerns of various individuals and stakeholders within the academic and non-academic professions. For example, some scholars have described the incidence of petrol scarcity, in Nigeria, as a *Resource-Curse;* because it reflects a form of scarcity of what the country has in abundance. Although Nigeria is reputed as the sixth largest producer of crude oil in the world, the country suffers intermittent shortage of petrol, the macro-effects of which cannot be adequately quantified in monetary terms. But a number of companies and related industrial concerns are known to have been folding-up on a daily basis; thereby throwing the hitherto, self-employed Nigerians, such as commercial motorists, into the already saturated labour market (Lukman, 2001:4).

Inferring from what has been said so far, it is evident that, the incidence of petrol scarcity in Nigeria is a problem with spill-over effects, capable of negatively affecting the quality of life of an average Nigerian. Despite this prevailing reality, however, little research efforts have been directed towards this end. It is therefore; against this background that, this study aimed at, not only covering this palpable gap, by means of empirical evidence, but also examining the extent to which petrol scarcity is a factor predictive of quality of life of commercial motorists in Kaduna metropolis.

*Objectives of the study*

The general aim of the study is to examine the effects of petrol scarcity on quality of life among commercial motorists in Kaduna metropolis. Specifically, the objectives of the study include:

i. examining the patterns that petrol scarcity takes in the study area;

ii. ascertaining on the dynamics of quality of life among commercial motorists in Kaduna metropolis and;

iii. finding out how the incidence of petrol scarcity affects quality of life of commercial motorists in the study area.

## 2. Literature Review

*Conceptual Clarifications*

Some important terms are conceptually examined in order to have a better understanding of the topic under discussion.

*Concept of Quality of Life?*

What parameters to be used in measuring the quality of life of the people, is one of the fundamental questions that has been debated for time immemorial, within the academic circle, different work environments and in many spheres of life. As a concept, quality of life is understood differently by different individuals under different social situations. Basically, it refers to the degree to which basic human needs are satisfied in relation to the individual and, or group perceptions of subjective well-being (Costanza *et al*, 2008). The dynamics involved in assessment of quality of life of the people includes financial security; job satisfaction; family life; psychology of degree of happiness, health and safety among numerous others (Akinyemi *et al*, 2002).

According to Ferrans (1990), what constitute quality of life may be arranged in the following order: (i) normal life, (ii) Social utility (iii) satisfaction with life, (iv) degree of happiness (v) ability to achieve personal goals ad (vi) natural capacities (Ferrans, 1990).

For a critical appraisal of the appropriateness of the six identified Ferran's conceptualizations, the following points are further observed. i, the concept of quality of life should not be viewed as synonymous to that of health status" or "functional abilities". ii, Quality of life becomes easily understood when its appraisal relies heavily on subjective factor(s) as against objective parameters; iii, there exists a poor distinction between determinants and indicators of quality of life; iv, quality of life is dynamic; that is it changes over time; quality of life can be influenced negatively or positively; an overall assessment of quality of life is preferable to that of health-related criterion that is emphasized in some recent studies.

Looking at the conceptual pitfalls, it is revealed that the only conceptualization that appears to succeed in dealing with the conceptual problem is the one that sees quality of life in terms of people satisfaction with life. It is against this background that the study conceptualized quality of life as "the magnitude or the degree of total life satisfaction that can be positively or negatively influenced in relation to individuals' or group perception of certain aspects of life they deem important to them". By implication, assessment of quality of life requires an overall measurement of life satisfaction of the people. Some external factors like family life, work,

and physical health can be of additional importance, as they equally impact, positively or negatively on socio-economic well-being of the people.

*Petrol Scarcity in Nigeria*
At macro-sociological level, petrol is often referred to as the black gold of the twentieth century as it is one of the most lucrative sources of wealth of the world. Its exploitation has created some of the largest fortune and has helped to achieve impressive economic growth and development of different economies of the world. Likewise, in Nigeria, the commercial production of petroleum, which began as early as 1958, has since become the mainstay of the country's economy, contributing about 93 percent of Nigeria export earnings, 75 percent of foreign earnings, 87 percent of total government revenues, and 45 percent of Gross National Production (Augustine, 1990). At micro-sociological level, petrol has remained instrumental to the growth of small and large scale businesses, by means of which individuals and group earn their living in Nigeria.

However, from 1974, when the first problem of fuel surfaced, there have been a number of commentaries on its effects on income and quality of life of Nigerians. However, most of these commentaries especially the ones found on the pages the National Dailies only reflect the product of casual observations as against in-depth analytical studies. For example, the report of the special committee on the review of petroleum product, supply and the distribution, carried out in October 2000, and us with a forth right account when its stated that:

> *... the effects of in adequate supply and high unstable prices of petroleum product have been devastating to end-users, especially the urban and rural poor. These categories of Nigerians have been further marginalized in terms of real earnings and purchasing power, thus undermining the poverty alleviation objective of the government capacities utilization in the manufacturing sector have also continued to deteriorate because of the shortages and non availability of Automobile Gas (AGO) and Low Pour Fuel Oil (LPFO), which provides energy to industrial machines and plant (FRN, 2000:16-17).*

Though the study has been criticized widely, as an outcome of government effort to justify its plan to deregulate the downstream sector of the petroleum industry, the report did not shy away from mentioning the negative impact of petrol scarcity on the populace. It is clear that the report is not only silent on crippling effects the scarcity, in question, has on transportation and price of food stuff, but also did not take into cognizance the loss of jobs and loss of personal incomes to millions of Nigerians. Again, the report did not say anything about the unquantifiable man-hour loss to the national economy resulting from the length of time taken at the filling stations to get the scarce products.

In a review of the current state of country's downstream sector, Lukman, the late Nigerian former oil minister, made similar assertion by saying:

> *...Products has been scarce, leaving many people to queue endlessly at fuel stations with the attendant waste of man-hour. Scarcity has also encouraged boarding, mishandling of product and over pricing in the black market (see Lukman, 2001:4).*

In the most recent report, just released by the Nigerian Bureau of Statistics, it has been observed that, about 1.46million formerly employed Nigerians have become unemployed in the third quarter of 2015 while about 518,102 have become unemployed in the fourth quarter of 2015. The Nigerians who became unemployed within the first and second quarter of 2016 now stands at 2.6 million (NBS, 2016).

With this ugly picture painted above, one can rightly argue that, the overdependence on oil by the Nigerian government and the individuals could be contributing factor. If the trend remains unchecked, it could further negatively affect both the aggregate and disposable income of government and individuals. This could further negatively affect the quality of life of the people in the country.

### 3. Methodology
This study is purely a survey research and survey design becomes the best method to be used in conducting the research. This is because of the focus of the study which aimed at examining the relationship between two operational variables. This study was conducted in Kaduna Metropolis-Kaduna; the capital city of Kaduna State, founded by the British in 1913. (Dansabo,2006). It is a very busy commercial and industrial centre, where commercial motorists form a major socio-economic

component. This is the rational behind the selection of commercial motorists as the target population for this study.

The population of the study consists of 2513 registered commercial vehicles in the metropolis and multi-stage sampling procedure was used to select a sample of 10% of the commercial motorists, which made the sample respondents to stand at total 251. The study started by dividing Kaduna Metropolis into three major clusters, Kaduna South, Kaduna North and Kaduna Central respectively. Cluster sampling procedure was employed to facilitate the process of administering questionnaires to the targeted motorists. Within each cluster, 2 motor parks were selected, giving us a total of 6 motor garages. Therefore, 6 major motor parks were selected as representative of the total number of motor parks (55) within the metropolis. Selection of the commercial motorists was guided by that of motor parks.

Both primary and secondary sources were utilized to generate data for this study. Questionnaire was used as the instrument of data collection. The questionnaire used consists of three major parts, with the first section collecting socio-demographic data of the respondents, the second part collecting information on the respondents' experience of petrol scarcity while the last segment dwelling on data relating to quality of life of the population studied respectively. The method of data analysis consists of both descriptive and inferential statistics. Frequency count and percentages were used as descriptive statistics to achieve objective one and two while regression analytical tool was used as inferential statistical in the study to achieve objective three.

**4. Presentation and Analysis of Data**
This sub-section is used to present and analyze primary data generated for the study.

Table 1: Socio-demographic Characteristics of Respondents

| | | Frequency | Percentages |
|---|---|---|---|
| 1 | Age in years | | |
| | Below 20 | 15 | 59.98 |
| | 21-30 | 53 | 21.12 |
| | 31-40 | 67 | 26.69 |
| | 41-50 | 98 | 39.04 |
| | Above 50 | 18 | 7.17 |
| | Total | 251 | 100.00 |
| 2 | Marital Status | Frequency | Percentages |
| | Single | 27 | 10.76 |
| | Cohabiting | 12 | 4.78 |
| | Married | 162 | 64.54 |
| | Divorced | 50 | 19.92 |
| | Total | 251 | 100.00 |
| 3 | Education | Frequency | Percentages |
| | No formal education | 22 | 8.7 |
| | Primary School | 34 | 13.55 |
| | Junior Secondary School | 61 | 24.30 |
| | Senior Secondary School | 88 | 35.33 |
| | Tertiary | 46 | 18.33 |
| | Total | 251 | 100.00 |
| 4 | Monthly Income in ₦ | Frequency | Percentages |
| | Below 50, 0000 | 41 | 16.33 |
| | 51,000-100,000 | 158 | 62.95 |
| | Above 1000,000 | 58 | 20.72 |
| | Total | 251 | 100.00 |
| 5 | Type of Accommodation | Frequency | Percentages |
| | One-wing room apartment | 64 | 25.50 |
| | Self-content | 100 | 39.84 |
| | Flats | 54 | 21.51 |
| | Extended family dwelling | 33 | 13.15 |
| | Total | 251 | 100.00 |

*Source: Researcher's fieldwork, 2016*

From table 1, the age pattern of the respondents revealed that the proportion of them in age group 21-30, 31-40 and 41-50 are higher as compared to what obtained in the remaining two groups-Below 20 and above 50. This implies that the majority of the sample population is in the economic active group. Then marital status of the respondents indicated that, the percentage of those who are married (64.5%) is higher as compared to those who are single (10.8%) cohabiting (4.8%) and the divorced (19.9%). This observation, especially on the percentage of the divorced, reflects the effects the economic hardship that prevailed during petrol scarcity. The education pattern revealed that, at one extreme end, about 22 (8.8%) of the respondents had no formal education. At the other end, about 46 (18.3%) of the respondents have higher educational qualification than the rest. In between the two extreme ends, the highest number of the respondents only had primary school education (13.6%), junior secondary school certificate (24.3%) and senior secondary school certificate (35.1%). By

implication, majority of the respondents were uneducated. This reflects the rationale behind their total dependent on their occupation which is also dependent on availability of and accessibility to petroleum products. The distribution of the respondents according to their level of monthly income indicated that, the average income earners are higher in number (62.9%) as compared to the low income (16.3%) and high income groups. This shows a class division even within the same occupational distribution of people. With respect to distribution of respondents by the type of residential accommodation, these occupying self-content apartments are higher in number (39.8%) as compared to those occupying one- wing-room apartment (25.5%), flats (21.5%). This pattern may reflect the effect of urbanization and modernization in the study area. Many studies have indicated that types of housing, among others, have both negative and positive impact on the quality of life of the people (Akinyemi, 2012).

Table 2: Perceptions of Respondents on effects of petrol scarcity on their income

| Petrol Scarcity | Income | | |
| --- | --- | --- | --- |
| | Before the Scarcity | During scarcity | Total |
| High | 177 (70.1%) | 32 (12.7%) | 209(83.3%) |
| Low | 15 (6.0%) | 27 (10.8%) | 42 (16.7%) |
| Total | 47 (18.7%) | 204 (81.3%) | 251 |

Source: Author's Field Survey

A look at table 2 revealed a larger number of the respondents (70.1%) in agreement with a high level of their income, before the scarcity, as compared to those whose income rose (12.7%) during the same period. Again, when referring to the question of law level of income, as against the improved level (second row), about 27 (10.8%) acknowledge low income before the period of scarcity and only 25 (6.0%) accepted having low income during the scarcity of the products. In other to further statically confirm the finding above, Yule's Q statistical parameter is utilized:

Yule's Q statistical parameter is given thus:

$$Q = \frac{AD - BC}{AD + BC}$$

Where the expected values are represented in the form of ABC and D, and the actual value is denoted by 'Q'.

$$Q = \frac{(21 \times 15) - (177 \times 27)}{(21 \times 15) + (177 \times 27)}$$

$$= \frac{480 - 4779}{480 + 4779}$$

$$= -\frac{4299}{5259}$$

$$Q = -0.82$$

The results obtained from the Yule's Q statistical parameter test indicates that, there is a very strong negative (-) association between petrol scarcity and income. Petrol scarcity is inversely proportional to the level of income of commercial motorists in the state. By implication, the higher the scarcity of the product, the lower the income of the motorists studied and vice versa.

*Test of Hypotheses*
The hypotheses to be tested in this study are stated thus:

$H_{o1}$: incidence of petrol scarcity does not have significant effect on daily income of commercial motorists in Kaduna Metropolis

$H_{o2}$: incidence of petrol scarcity does not have significant effect on Work-stress experience of commercial motorists in Kaduna metropolis

Table 4: Summary of Regression Test of effect of the incidence of petrol scarcity on daily income of commercial motorists in Kaduna Metropolis

| Variables | Co-efficient | Standard Error | t-statistics | P-value |
|---|---|---|---|---|
| Constant | 0.109 | 0.72 | 1.519 | 0.130 |
| Incidence of petrol scarcity | 0.512 | 0.132 | 3.882 | 0.000 |
| R square: 0.864 | No of observation: 251 | | | |
| Adjusted R square: 0.861 | R: 0.930 | | | |
| F-statistics: 302.277 | | | | |

*Source: Author's Computations using SPSS statistical package*

Judging from the statistical results in table 4, it is shown that incidence of petrol scarcity has significant effect on daily income of commercial motorists in the study area ($R^2 = 0.864$) with a coefficient of 0.512 at 0.05 level of significance. The marginal effect reveals that Incidence of petrol scarcity is effective in determining the level of daily income of commercial motorists in Kaduna metropolis. In other words, the implication of the result is that, the higher the incidence of petrol scarcity, the lower the income level of commercial motorists in the metropolis and the lower the incidence of petrol scarcity, the higher the income level of commercial motorists in the area.

Table 5: Summary of Regression Test of effect of the incidence of petrol scarcity on experience of work-stress by the commercial motorists

| Variables | Co-efficient | Standard Error | t-statistics | P-value |
|---|---|---|---|---|
| Constant | 0.678 | 0.113 | 5.932 | 0.000 |
| Incidence of petrol scarcity | 0.181 | 0.211 | 0.844 | 0.391 |
| R square: 0.721 | No of observation: 251 | | | |
| Adjusted R square: 0.719 | R: 0.791 | | | |
| F-statistics: 71.993 | | | | |

*Source: Author's Computations using SPSS statistical package*

Table 5 is used to examine the effect of the incidence of petrol scarcity on work-stress experience of commercial motorists in Kaduna metropolis. It could be deduced from the table that the incidence of petrol scarcity has significant effects on work-stress experience of commercial motorists in the metropolis ($R^2 = 0.721$). This finding implies that the incidence of petrol scarcity has significant effect of work-stress of commercial motorists in Kaduna metropolis. This practically means that petrol scarcity usually makes the commercial motorists experience stress (probably physical and mental in the process of carrying out their daily work

*Discussion of Findings*

It becomes of utmost importance to discuss the research findings in relation to its previously identified objectives.

On the first objective, which examined the patterns that petrol scarcity takes in the study area, the findings revealed that the general public view was that: hoarding and price hike by the retailers, lack of supply from the source and strike by tanker drivers constituted the major picture of petrol scarcity in Kaduna metropolis.

On the second objective, which aimed at ascertaining on the dynamics of quality of life among commercial motorists in Kaduna metropolis, the findings revealed that, a great number of the respondents have agreed that the effects of the incidence of petrol scarcity is far-reaching, mainly in terms of loss of income and man-hour loss, resulting from long queues at the service station.

On the third objective, which also aimed at finding out how the incidence of petrol scarcity affects quality of life of commercial motorists in the study area, the result of regression test has indicated that the incidence of petrol scarcity is in inversely proportional not only to the levels of the motorists' income, but also to their conditions of quality of life. By implication, the study found out that, the higher the incidence of petrol scarcity the lower the levels of motorists' income and their resultant quality of life and vice versa.

Furthermore, majority of the respondents have agreed to a feeling of low quality of life, as reflected by their loss of income and their experience of work-related stress during the periods of petrol scarcity.

**5. Conclusion and Recommendations**

Having investigated the incidents of fuel scarcity and its effects on quality of life of the people of Kaduna Metropolis, the following major conclusions were made:

Demographically, males constituted the total percentage (100%) of the people engaged in transportation in Kaduna; the level of fuel consumption is quite high, hence demand had always outstripped supply, the effects of fuel scarcity are far-reading, mainly in terms of loss of income physical and mental stress and man-hour loss resulting from long queues at the service stations. On the patterns of the scarcity in question, majority of the respondents were of the view that lack of fuel at the services station is the major cause of the problem those who believed that hoarding and price hike in the black market, as the cause of petrol scarcity, are higher than those whose views about the cause is in terms of strike by tanker drivers. This study therefore combines the three points of views as the dominant causes of petrol scarcity in Kaduna metropolis. That is to say, lack of petrol at the filling stations is one of the major realities surroundings phenomenon of fuel scarcity, followed by hoarding and price hike by retailers and the last being strike by tankers drivers.

After observing the trend to the situation of petrol scarcity and quality of life, it is recommended that certain factors be given priority on future studies. These include:

i.    Collecting data on a time series, since fuel scarcity is both perennial and sporadic, in order gain a more and deeper understanding of the phenomenon;

ii.   Carrying out similar studies elsewhere in the country to give room for comparative analysis and,

iii.  Employing more powerful analytical techniques in testing the hypotheses that may be proposed.

Finally, the study ended by proposing some possible solutions to the problems of perennial petrol scarcity in the given community. First, there should be extensive improvement in both the quantity and quality of petroleum distribution networks so as to overcome the problem of excess demand over supply of the products. Second, our overdependence on imported refined products should be checked in high proportion. Local refining of petroleum products is the only viable way of ensuring uninterrupted supply of fuel in the country as a whole, and Kaduna state in particular. Efforts should be made not only to repair the existing refineries, but also ensure the construction of new ones. By so doing, the problems of lack of petrol at the service stations, hoarding and price hike in the black market and strike by tanker drivers may surely cease to exist.

**References:**

Agada B. O. (2001): "Distribution and scarcity of Petroleum Product (PMS) in Makurdi: Implication for Socio-Economic Development". Unpublished B.Sc. Project, Department of Geography, ABU Zaria.

Akinyemi O.O. *et al* (2012), "Quality of Life and Associated Factors Among Adults in a Community, in South-West Nigeria". Results from the Ibadan Annual journal of Postgraduate Medicine V.10 No.2

Arinze P. E. (2011): "The Impact of Oil Price on the Nigerian Economy". www.transcampus.org/journals. www.ajol.info/journals/jorind JORIND (9) 1

Augustine A. J. (1990), "The Impact of Oil on a Developing Country". The case of Nigeria; praegar, New York.

Bobai, F. D. (2012) , 'An Analysis of the Relationship between Petroleum prices and Inflation in Nigeria". International Journal of Business and Commerce: Vol.1, No. 12 August (O1-07), ISSN: 2225-2436. www.ijbcnet.com

Central Bank of Nigeria 2005: "Economic and Financial Review". Vol.12, CBN

Costanza, *et al* (2008): "An Integrative Approach to Quality of Life Measurement, Research and Policy". SAPI EN S Surveys and Perspectives. Integrating Environment and Society 1 (1).

Fadda, G. P. *et al* (2000) "Views from the Urban Fringe: Habitat, Quality of Life and Gender in Santingo, Chile". In M. Jens and R. Burgress (eds) *Compact Cities. Sustainable Urban Forms For Developing Countries*. London, Spon Press: 167-182.

Ferrans C. E (1992) "Conceptualizations of Quality of Life in Cardiovascular Research". *Prog cardiovasc*. Nurs (7: 2-6).

Kombo. D. (2001): "Fuel Scarcity in Nigeia; Causes and Socio-economic Implications, an Article in the Vanguard Newspaper of 28th November, 2001 (5-7)

National Union of Road Transport Workers 2016: "Records of Registered Commercial Vehicles in Kaduna".

Onwioduokitanda E. A. and Adenuga O. (2000): "Empirical Analysis of the Demand for

Petroleum Products in Nigeria". CBN 2000 Journal Publication PP 33 – 57

Runl, O. (2010): "Nigeria is Poor because of Oil", Alternative View Publication of Change Africa, New Work, Africa Centre for Leadership Strategy and Development, August, 2010.

Sikkam B. S. (1999): "Inflationary Effects of the Petroleum Industry on the Nigerian Economy" PP 128-129

Szalai, A. (1980): "The Meaning of Comparative Research on the Quality of Life". En Nussbaum y Sen (comp). *The Quality of Life*. I.S.A.a. A.Fm. London: Sage.