

Benefits of RE for Nigeria cannot be overemphasised. Efficiency in energy leads to many forms of social benefits such as reduced energy bills for every poor household within the Nigerian economy. From an economic standpoint, it can be discussed that the implementation of renewable energy target within the country would have much form of significant costs [34]. The Nigerian economy could majorly benefit from the use of targeted interventions, which would further aim towards the reduction of local air pollution. This would also help the country in tackling the emissions from greenhouse gases. The lack of irregular supply of power and reliable access can be defined as a persistent problem that is affecting several businesses across the country. This kind of problem based on the supply of energy resources mostly discourage various foreign investors from investing within the country [35]. From an estimation of the world power in energy production, Nigeria is situated at the bottom of the world power ranking. According to the World Bank Business Report, Nigeria is ranked at 187 among 189 countries from all across the world [35].

Nigeria energy mix has largely been dominated with the extreme use of oil that constitutes up to 57 percent and a 36 percent of natural gas [36]. Hydropower and solar power majorly represent 7% and 13% respectively. Most of the Nigerian population primarily depends on the utilisation and burning firewood for the purpose of generating energy. The burning of firewood has several forms of serious health implications that would brought heart and lung diseases [37]. Needless to say, that the utilisation and development of renewable energy should be given topmost priority. Nigeria is mostly blessed with a large form of renewable energy resources [38]. The full form of utilisation and development would lead to sustainable development and reduction in poverty for the economy. The use of renewable energy resources leads to less impact on the environment than any other form of energy sources [30]. For this reason, Nigeria may need to invest more to support development of renewable energy resources. This means, technologies should be developed in such a manner that it would remove all forms of constraints and barriers towards the diffusion of renewable energy. Although there are some problematics of Renewable Energy in Nigeria, however, the country has abundant sunshine, solar installation projects are only in the country between 7.0 kWh/m² /day within the northern coastal regions and 4.0 kWh/m² /day within the Southern coastal regions. The availability of sunshine can be considered as the major form of positive indicator that the country is investing towards the development of solar energy resources [39]. Furthermore, the government of Nigeria has also initiated the operation based on “Light up Rural

Nigeria” since 2014 which primarily aims towards providing constant supply of electricity in the rural areas with the help of an off-grid system. However, Nigeria faces a low level of investment for generating power from renewable energies [40]. Low costs of investment but higher costs of maintenance have resulted for the low development of renewable energy strategies and products in Nigerian households. There are many consumer behaviour (CB) theories and models that can be applied to understand individual consumers and their consumption pattern. Some of these CB theories are enumerated below.

The psychoanalytic model says consumers will always respond to symbolic concerns as much as they will always respond to those functions and economics. In this theory it implies that external factors like income and age do not fully account for the behaviour of consumers since motivations of the consumers to purchase a product is the vital parameter [41]. In this context, consumers will not purchase renewable energy based on their age and income without motivation and the required information about the energy. This is based on the principles of Sigmund Freud, which explains that the behaviour of the individual is under the internal forces Eros and Thanatos. These impulses are manifested implicitly, so they are allowed by society, while satisfying the Eros of the consumer.

Pavlovian theory talks about the reactions to the stimuli of human behaviour. It is based on four basic concepts: impulse, clues, responses, and reactions. The impulses called needs or motives are the strong stimuli that incite the individual to act (hunger, thirst, cold ...). The impulse generally induces a reaction in relation to a key configuration. The modern version of Pavlov does not pretend to present a complete theory of behaviour but offers some original ideas about aspects of behaviour. Pavlov's model provides guide in the field of advertising strategy. Repetition of advertisements produces two desirable effects and serves as reinforcement, because the consumer after purchasing is selectively exposed to the advertisements for the product. This provides guidelines for coping strategies. Identify the strongest impulses related to the product; the announcer has to fully exploit his treasure trove of words, colours, or images by selecting the key settings that may represent the strongest stimulus for those impulses [42]. This Pavlovian theory proves highly significant for marketers, and it is linked to the positive experience of the consumers.

Sociological theory presents the consumer as a social being that seeks integration, according to Thorstein Veblen (1827-1929) in [3] “The main reason that guides people's behaviour is their need for integration into their social group.”. In this way, it can be seen that consumers have a certain

consumption behaviour that differs from previous theories, since the acquisition is made to satisfy the need to belong to a social group and differentiate themselves from others. These behaviours present preferences for those products that are in fashion and that meet social trends and expectations. An example of the application of this theory is given in the acquisitions of fashion products or of products most used by the majority. In this model the buyer is part of the institution known as society. Since a buyer lives in a society, he will be influenced through it and in turn influences it in developmental path. The buyer plays lots of roles as a part of various informal and formal organisations such as a firm's employees or a family member [3]. Peer groups also play a key role as they act as an influencing factor on the consumption of renewable energy in the country.

The inadequacy in these existing consumer behaviour models lies in their emphasis on factors influencing consumer behaviours, but they do not adequately explain what drives the decision process to buy a product or service – as these models are variants of psychology discipline such as psychoanalytic, Pavlovian, behavioural and sociological models of needs [3]. They are all connected to factors which influence consumer behaviour to demand a product or a service. However, consumer behaviour is not as straightforward as these models make out. There are individual differences in perceptions, behaviours, and preferences. Indeed, motivation plays a more critical part in consumer behaviours [4] than these models suggest. Herein lies the major gaps in literature. To offer a more suitable model for this particular study, these existing models on consumer behaviour need to be expanded and built upon by juxtaposing consumer behaviours models with contemporary knowledge of IMC. The practiced and tested 4Ps of marketing has shown that having the right product, the price and in the place as well as effective promotion using people's emotions drive consumers' demand for a product or service [5]. So far, the literature reviewed above can be synthesised for clarity. RE is recognised as part of the significant solution to energy crisis in Nigeria and that RE is becoming one of the major drivers of sustainable social economic development [1]. Nonetheless, sufficient knowledge about the RE products are key factors which determine how the consumers of the renewable energy will purchase and use these RE products [2]. Although, Nigeria generates insufficient amount of electrical energy which makes the availability of electricity in the country to worsen over years [6]. Moreover, the lack of sufficient amount of electricity in the country makes some industrial and commercial sectors to rely heavily on self-generated power through the use of diesel and petrol generators. This accounts for about half of the total electricity consumed in the country [43]. Also,

there is lack of structural constructs defining how the indicators of consumer's knowledge, commitment, and general awareness of consumers regarding RE products interact with different dimensions of consumers' sustainable or green consciousness while choosing RE products [7, 8, 9]. The major gap in literature is the inadequate knowledge of the importance of using renewable energy in the country [10]. In any case, there is a high need for supplementing power plants supported with RE [44]. Any effective marketing of RE products would have to involve social processes whereby consumer benefits to be gained from the government support for RE and the target audience will need be identified based those identified benefits [18].

Further to the above, IMC would help in developing ideas which are related to the understanding of RE over the key drivers of market based on influencing brand strategies [19]. In addition to the problematics of RE in Nigeria is the low costs of investment but higher costs of maintenance which have resulted in the low development of renewable energy strategies and products in Nigerian households [40]. Therefore, any reforms made on the power sectors and RE should play a major role towards the economic growth of the Nigerian economy [45]. The problem of adopting RE becomes intractable as the Nigerian economy has faced tremendous population boom, and half of the population do not have access to electricity supplies which has stretched the supplies of power and soared the emissions of carbon to certain breaking point. This has been a major factor towards turning an oil-rich Nigeria into a renewable-based economy [29]. Despite this, RE has been noted as the most efficient way of bringing the different rural communities into a common electricity platform and cleaning a bit of the population from the worst form of pollution [30]. Moreover, a ready and easy access to electricity to every home would further help in reducing the unemployment rates among the youth which would further help in increasing the productivity within the country [31]. Perhaps, because Nigeria produces higher fossil fuels, it may be very hard to fully adopt the use of renewable sources of energy which do not meet the demand of the country [32]. Finally, the prohibitive initial cost to set up renewable energy production infrastructure may discourage consumers from using this type of energy and they may opt to stay with traditional sources which are abundant in the country at affordable cost [33].

In summary, the literature review suggests that consumer's environmental concern and products functional attributes such as price, quality and benefits of product have emerged as the two major determinants of consumption of RE. The gap in the existing theoretical models (see paragraph on inadequacy of consumer theories in the literature review) for consumer behaviour shows that in order

to adequately account for the RE purchase behaviour, these theories namely; Environmental concern and Re consumption, Functional attributes of RE consumption, Energy consumption trends and the role of RE in Nigeria, and Availability of RE in Nigeria will need to be examined empirically in order to develop the understanding of a valid IMC model in light of the current marketing models. An exploration in the literature indicates that the current trend in energy consumption in Nigeria is tolerant for the full use of RE in the country. The knowledge on renewable energy is increasing, and so is the increase in its consumption for as long as the energy is available and affordable. It is clearly demonstrated in literature, that currently in Nigeria, there is no government policy which discourages the use of fossil fuel energy in the country more so because the country highly depends on fossil fuel energy which it has in abundance for its economic growth as the main source of foreign earning.

The literature review notes the major gap that needs to be filled is the lack of structural constructs defining how the indicators of consumer's knowledge, commitment, and general awareness of consumers regarding RE products interact with different dimensions of consumers' sustainability consciousness while choosing RE products [7], [8], [9].

3. Methodological Approach

This paper proposes a methodology that has objectivism as its ontological position, while its research philosophy is both positivism (deductive) and interpretivism (inductive) [46]. The strategy adopted here is the survey and the instrument used is the questionnaire. The tools and techniques for analysis are the SPSS tools such as Factors analysis for validity of the questionnaire, Cronbach's Alpha for reliability of the questionnaire. The approach of descriptive statistics helps in drawing major kinds of inferences about the estimation of parameters and populations [47] which was sampled.

The limitation of this study lies in the assumptions made from the small, selected sample which is hoped to be generalized to the population of 200 million people in different regions and cultures of the country. Also, the cost and finance as well as political factors may hinder the application of relevant innovative use of RE raw materials as technology is not readily available. Still, Nigeria has fossil fuel in abundance as major source of foreign reserve and high price of RE may prevent political will and consumers to focus on RE. Further, the small data collected from one particular region may affects its applicability of the construct in Nigeria because of differences in cultural, economic and lifestyle in different regions of the country.

The conceptual framework adopted is based on the Engel Kollat Blackwell (EKB) Model of consumer behaviour decision-making cognitive process that helps predict what consumers are going to buy [13, 48].

The variables used in this paper are derived from the hypotheses in Figure 1.

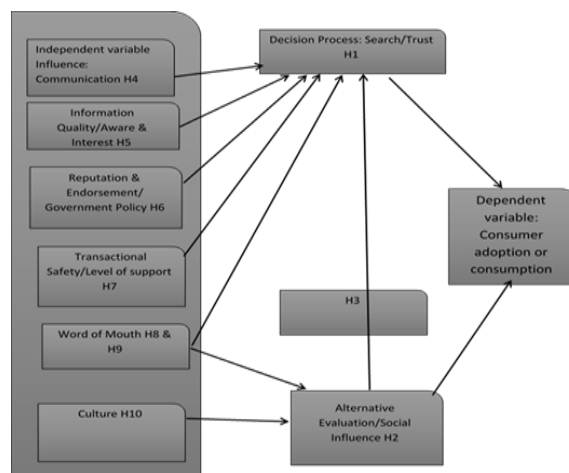


Figure 1. Adapted Conceptual Framework for this study [54]

Hypothesis 1. A higher level of trust among consumers will result in a higher level of consumer Adoption/Consumption (CAC).

Hypothesis 2. A higher level of social influence among consumers will result in a higher level of consumer consumption in CAC.

Hypothesis 3. A higher level of social influence among consumers will result in a higher level of trust in CAC.

Hypothesis 4. An increase in the level of communication among consumers has a positive impact on the level of trust in CAC.

Hypothesis 5. The quality of information (level of support for RE, e.g. sponsored events) social media has a positive impact on the level of trust in CAC.

Hypothesis 6. An increase in the level of a company's reputation has a positive impact on the level of trust in CAC.

Hypothesis 7. An increase in the level of transaction safety/ supportive government policy has a positive impact on the level of trust in CAC.

Hypothesis 8. An increase in the level of word of mouth (WOM) has a positive impact on the level of trust in CAC.

Hypothesis 9. An increase in the level of WOM has a positive impact on the level of social influence in CAC.

Hypothesis 10. Culture has a positive impact on the level of social influence in CAC. This conceptual framework will be tested and refined based on the data collected from the survey which will be analysed to determine the consumer behaviour regarding RE consumption and adoption and to develop an IMC model.

4. Initial Findings

The development of sustainable IMC based on the consumer behaviour for RE are presented in Figures 1 to 6:

H1a: There is a significant impact of consumer behaviour toward renewable energy on the sustainable development of IMC in Nigeria.

H1b: There is no significant impact of consumer behaviour toward renewable energy on the sustainable development of IMC in Nigeria.

Are you aware of the environmental and climatic change due to increasing transport flow and pollution?
70 responses

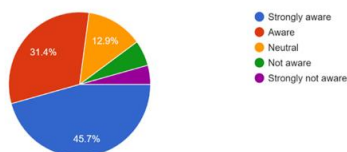


Figure 2. Awareness of climate change due to pollution

What factors influence your decision-making while choosing RE products?

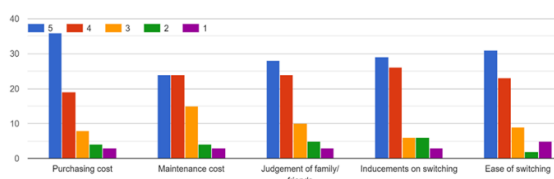


Figure 3. Factors influencing decision-making regarding buying RE products

Do you agree that IMC brings together all marketing communications activities?
70 responses

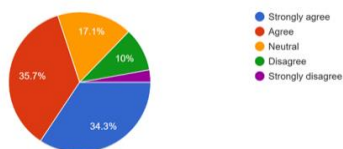


Figure 4. IMC encompasses all marketing communication activities

Do you agree that IMC is one of the most useful marketing communications that could help for the major boost the RE sector?
70 responses

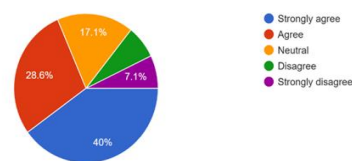


Figure 5. IMC most useful marketing communications to boost RE sector

Do you agree that advertisements influence your decision on renewable energy consumption?
70 responses

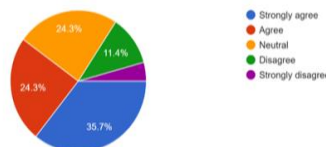


Figure 6. Influence of advertising on decision-making on RE consumption

4.1. Widespread use of RE vital to energy sustainability in Nigeria

The demand for sustainable energy is growing, but the widespread use of renewable energies is crucial to achieving sustainability in the energy sector in Nigeria [53].

Once Nigeria renewable resources are fully exploited and used, they will lead to reduced demand on fossil fuel and sustainable development [52]. Renewable energies and advanced technologies are the basic components of sustainable development. Practices in Nigeria's industrialization process have been described as unsustainable for the climate [51]. The study shows that ecological degradation can have a variety of structures, as seen in the unsustainable use of natural resources extracted in the Niger Delta in Nigeria in which Ogoni land suffer the most [27]. Despite widespread expectations on RE, the survey reveals a lack of adequate consumer information on RE issues which is a problem for consumers when shopping for RE products because a large proportion of consumers really feel that environmentally friendly products are not functioning adequately [50]. However, when consumers are fully aware of a specific problem, they cannot pay a high price for RE products. Therefore, advertisers will need to understand how to fulfil the two main objectives: environmental improvement and customer loyalty [49].

Since the beginning of electricity generation in Nigeria, all established laws and institutional methods have tried to achieve the development of the electricity grid and thus expand the country's electricity market, but these efforts have not yet fully yielded results. This means, outside the grid, limited

generation of electricity from renewable energies is urgently needed as an effective and sensible option for electricity production.

5. Conclusion

The Study and findings reveal that people are influenced by factors such as price of the energy, need for sustainability, less global warming, stable price of energy, ease of switching, and other factors. It is important that these issues are recognised, and future study is conducted so that these issues can be resolved in Nigeria and adoption of RE can be made possible in country. Since the beginning of electricity generation in Nigeria, all established laws and institutional methods have tried to achieve the development of the electricity grid and thus expand the country's electricity market. These efforts have not yet fully yielded results, hence the need for generation of electricity from renewable energies.

This work is hoped to contribute to literature and knowledge based on the application of IMC model showing interactions of variables which influence consumers' RE decision-making for purchasing RE products. Also, it will demonstrate how consumers weigh personal, environmental and economic benefits while choosing RE products. The major contribution will be the development of a sustainable IMC marketing model based on understanding of consumer behaviour on RE to help to spread awareness and usage of RE products in Nigeria in particular and in the Global South as a whole. This will influence government policy changes which will lead to social, economic, and environmental impact that will positively affect citizens wellbeing and technological developments. There are few recommendations that can be suggested based on the findings of this study. Firstly, it will be helpful for Nigeria government to establish an organisation to promote the use of energy efficient products and ensure correct practices which will promote the environmental consciousness among citizens. The establishment of a public enlightenment agency within the Nigeria Federal Ministry of Information will be helpful to the IMC model to further promote the usage of renewable energies e.g., solar and wind, while leveraging on global partnerships like the UK's Residential Energy Efficiency Project to help the country build a creative alliance for renewable energy systems. Furthermore, the creation of renewable energy financing or lending institutions, such as the Indian Renewable Energy Agency in India will help to provide foreign investment in Nigeria RE system, and the Clean Energy Office can be integrated with all sectors of the Nigerian economy as driver for implementation of various government policies on RE.

In future work, a wider critical review of existing communication models will be explored to enable a more robust model of IMC, while further study in available and affordable technology that adds innovation to the use of RE raw materials will go a long way in promoting uptake of RE by consumers.

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