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Endogenous and Exogenous Factors Affecting Energy Reforms in Africa: A Critical Analysis

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ABSTRACT The demise of colonialism in the 1960s and 1970s and the resultant collapse of apartheid in 1994 marked a new epoch in African independence. The political leadership called for the reconfiguration of its energy sector. Traditional sources of energy lost currency while the industrial economy demanded more energy. As the population increased, energy demands increased too. Subsequently, the post-colonial state has been entangled in the dilemma of increasing energy supplies to meet the needs of its population and to simultaneously reduce carbon emission which disturbs the ozone layer. This paper draws from history and politics to expound the nature of the dilemma. Using various countries in southern Africa as examples, this paper revisits endogenous and exogenous factors, which affect energy reforms in Africa. It concludes that both the West and Africans are partly to blame for the current situation. The paper proposes that only joint efforts can redeem the current situation.

INTRODUCTION

Energy is undoubtedly the verve and nerve of every society around the globe. It is at the epicenter of human survival and only comes second in importance to water. Energy is seen as the building block without which nothing can operate. It is seen as providing existence. In other words, it would not be an exaggeration to argue that energy is at the core of the entire human existence. Whenever energy is exchanged, it has the indisputable ability to bring about change (Kostic 2006). For many years, people have taught themselves how to use energy in different ways in order to ensure that whatever they do is done in a much easier way than would have been the case if energy did not exist, and that they also live comfortable lives through the gains made from energy. In acknowledging the important role energy plays in human lives Kostic (2007: 1) opined:

Energy moves cars and trains, and boats and planes. It bakes food and keeps them frozen for storage. Energy lights our homes and plays our music. Energy makes our bodies alive and grow, and allows our minds to think.

What is clear from this observation by Kostic is that energy does a lot of things in order to ensure human survival. Included in the list of items are basic things humans need for survival such as food production as well as those things they need for pleasure, that is, music. In both instances energy is the sine-qua-non. Noticeably, recent reports show that Africa and the world continue to face energy challenges (African Economic Outlook 2016; Foresight Africa 2016; World Economic Forum 2016). Attesting to this notion, the World Economic Forum reported that in 2015 global conditions continued to challenge the energy sector. Within Africa, the observation is that "Africa faces chronic power problems, including insufficient generation, capacity, low connectivity, poor reliability and high costs" (Eberhard 2015: 3).

But given that there are geographical variations among continents and countries within those continents it is not surprising that sources of energy also tend to vary accordingly. Climatic conditions, the landscape and many other natural factors determine the type of energy sources that are available at any given place on the globe. As a norm, the generation of energy and the supply thereof to the populace demands huge investment, especially in the modern world. Some countries invest more but achieve lesser returns for such investments in energy production. Others invest very little resources but get more out of that investment depending on the conditions within which they operate. For example, since assuming office in 2015, President Muhammadu Buhari of Nigeria placed the oil and gas industry at the heart of his reform agenda. He even appointed the Petroleum Minister (Africapractice 2016). As to whether this move will bear any positive results remains to be seen.

Therefore, given the above facts, it would be foolhardy to assume that the energy crisis

would be the same everywhere across the globe or in all countries within any given continent. In fact, even in the same country, sources of energy differ markedly. This does not only happen in the context of the urban/rural divide (important as that binary is). On the contrary, even different rural areas do not have the same sources of energy. Some use timber while others use cow dung and many such sources of energy depending on the animals they have domesticated in that given area over the years.

Against this backdrop, the present paper draws from academic fields such as history, geography and environmental science in order to trace endogenous and exogenous factors that affect the provision of energy in Africa as well as complications in energy reforms. In broad terms, the paper generally argues that the current state of energy supply in Africa is as a result of both endogenous and exogenous causal factors. The paper notes that population increase as well as the general tendency by the African people to neglect indigenous sources of energy constitute at least some of the factors that have resulted in the shortage of energy supply in sub-Saharan Africa. The paper argues that the population explosion has contributed to the shortage of energy and this reality has had a direct impact on energy consumption.

After considering both endogenous and exogenous factors, the paper concludes that it would be foolhardy to perceive exogenous factors as being solely responsible for the current state of energy supply in sub-Saharan Africa. In the same vein, the paper warns against putting the blame squarely on the doorstep of African people for the evident shortage of energy supply and for the delays in energy reforms. It proposes concerted efforts that should be made to address the situation.

The conclusion drawn in this paper is that if energy reforms are to be effective and if energy supply is to be improved in sub-Saharan Africa, both endogenous and exogenous factors should be brought into the equation. Any attempt to privilege one area of analysis at the expense of the other would be suicidal for the African continent, as it would provide no lasting solution to the current energy crisis, which sub-Saharan Africa is battling with.

Structurally, the paper begins by providing conceptual definitions with the view to ensuring an understanding of the context within which certain key concepts are used in the paper. Secondly, the different sources of energy in different parts of the African continent are enumerated and their geographical location spelt out to buttress the submission made above that energy supply reflects geographical specificity. This is critical in that it will assist in understanding why sub-Saharan African countries have varied experiences in terms of energy supply and react differently to the shortage of energy while also taking different routes for energy reforms. Having delineated the various sources of energy, the paper addresses endogenous and exogenous factors affecting energy supply and the lack of energy reforms in sub-Saharan Africa several decades after the end of colonialism and the demise of apartheid. Lastly, solutions are proffered on how the current situation could be addressed.

Objectives of the Study

The primary objective of this study is to establish both the internal and external causal factors for lack of or delay in energy reforms in Africa. Specifically, it purports to establish why it is so difficult for the African governments to implement energy reforms. In so doing, the paper locates Africa within the broader international context with the view to demonstrate that the continent does not operate in isolation. Simultaneously, the paper does not portray Africans as innocent victims. While acknowledging the role played by the international community in shaping what African governments do, the paper does not entirely remove agency from the African people. Within this broader context, the paper demonstrates the complex nature of Africa's predicament and espouses the view that remedying the current situation calls for concerted efforts by both African governments and their international counterparts.

METHODOLOGY

This study was carried out using document analysis as one of the acceptable methods of data collection within the research community. Put succinctly, document analysis simply "means analyzing the text for themes and patterns" (Bertram and Christiansen 2014: 97). It is used in cases where researchers do not necessarily create new data sets but give meaning

and context to pre-existing data in order to make sense of a particular situation or theme. As a general norm, the study of documents and secondary analysis "are often neglected" (de Vos et al. 2006: 314).

Given that by their very nature researchers are part of the world they are researching (Cohen et al. 2007) and have their own interpretation of what they see, direct observation of what is happening around Africa was also used as a methodological approach to the study. Under observation, the researcher observes what is happening and subsequently reports on what has been observed. Under this methodological approach the researcher "sees for herself the context and site of the research study" (Bertram and Christiansen 2014: 84).

By using these methods of data collection, the researcher was able to have a grip of the issues at play and was thus able to delineate the endogenous and exogenous causal factors.

Conceptual Definitions

From a general perspective, the term 'energy' is used to define the level of an activity or different activities. Within this context, people generally say that a person has the energy to talk, walk, sit or stand. Implicit in this conceptualization of energy is that such a person is lively or healthy. Therefore, for a person who is critically ill, the energy level drops to the extent that such a person cannot talk, walk, sit or stand. In such cases people then say that the person has no energy to do all of these things. In that sense, any person who has no energy is assumed to be incapacitated. Such a person's movements and actions are curtailed. Therefore, the lack or absence of energy is a form of disempowerment. The person who has no energy has no power to do certain things thus being unable to reach any set goals.

Linked to this general conceptualization of energy is the definition provided specifically by the physicists. For them, energy simply means "the ability to do work" (Otieno and Awange 2006: 10) or "the ability to perform work" (Kostic 2007: 1). In this context, any person who is unable to do work even if he or she wants to do so is deemed to have no energy. In that sense, the way in which physicists conceptualize 'energy' is not different from the general understanding of this term. Some use this concept interchangeably with other concepts such as 'strength' or 'stamina', all of which enable a person to do or perform certain duties. In the context of this paper, the word 'energy' is assumed to mean that which enables an individual to do certain things or enables some manufactured items such as machines to operate.

Given these various but related definitions, there is a view that energy is the prime mover of all human activities. This view is predicated on the understanding that almost all forms of development (epitomized in part by things such as industrialization), which humans talk about happen because there are sources of energy that make such development and/or industrialization possible. Therefore, it is both correct and appropriate to say that energy is "the agent for changing the state of any system, from poverty to wealth, from weak economy to strong economy, from nothing to productivity, from insecurity to safety and so on" (Otieno and Awange 2006: 10). This conclusion is premised on the fact that energy makes things happen. Drawing from this trajectory, Otieno and Awange (2006) espoused the view that it would be a fruitless exercise to try and separate the terms 'work' and 'energy'. In other words, both authors perceive these concepts to be inextricably intertwined given the similarity they seem to have between them.

In the South African context, the Department of Minerals and Energy does not deviate from the general and physicist conceptualization of the term 'energy' offered above. In its White Paper, the department considers renewable energy sources to be the sun, wind, biomass, water (hydro), waves, tides, geothermal, ocean current, and any other natural phenomena which are cyclical and do not deplete (*White Paper on Renewable Energy* 2003: v). All these energy sources enable humans to perform certain duties and also enable machines to operate.

Energy reform literally means introducing changes to the conventional way of generating energy. This is accompanied by legislative and policy frameworks, which guide such change(s) with the view to ensuring that everything is done in a coordinated manner. Therefore, when talking about energy reforms in sub-Saharan Africa the understanding is that changes are made to the pre-existing forms of generating energy and that conventional sources of energy are revisited with the view to achieving better results.

The next section of this paper focusses specifically on the different sources of energy, which include the renewable sources of energy enumerated in the White Paper above.

METHODS AND SOURCES OF ENERGY IN SUB-SAHARAN AFRICA

Energy is derived from different sources. As alluded to in the introduction above, each continent and each region and/or country within that continent taps into the readily available sources of energy before trying to solicit energy from elsewhere. This is done with the understanding that such energy sources could be obtained without having to use too many resources, both financial and material, to extract or generate it. There are instances where countries import energy from other countries at a cheaper price than they could produce it locally. A case in point is South Africa, which obtains some of its energy from Mozambique and Lesotho (Mashinini 2010; Lloyd 2011; Wentworth 2013; Monjane 2015). Invariably, even before various sources of energy can be enumerated, it would be appropriate to point out that energy sources can be divided into two types, that is, commercial and non-commercial sources. Commercial sources include electricity and petroleum-based fuels. On the other hand, non-commercial sources include *inter alia* biomass materials such as plant and animal wastes and wood of different kinds including charcoal.

There is general consensus that despite its poverty, Africa is blessed with plenty of resources (Hope 1997; Mills 2012; Twineyo-Kamugisha 2012). These resources are located in different regions. For example, the western and central parts of Africa boast of oil deposits in countries such as Nigeria, Algeria, Angola, and Southern Sudan. Coal is available in abundance in a number of southern African countries, including South Africa. There is also natural gas in different parts of the African continent. Moreover, there is a potential for hydro energy from some of the African rivers such as Limpopo, Nile, Volta, Congo, Niger, Zambezi and many others throughout the African continent.

South Africa benefits immensely from the Lesotho Highlands Water Scheme (Mashinini 2010; Wentworth 2013) as well as power generated in Mozambique, especially from the Cahora Bassa hydro-dam located in Tete in the country's Central Province (Brouwer 2004; Lloyd 2011; Monjane 2015). This means that even if these two countries do not have military power equivalent to that of South Africa, they do have energy power to make up for the other weakness by making themselves recognized by other countries. For some reasons to be discussed later, the rivers mentioned above contribute very little energy in sub-Saharan Africa compared to biomass. Other countries such as Kenya and Ethiopia have a potential to produce geothermal energy if proper infrastructure could be put in place to tap into this energy source. In a nutshell, Africa is in a good position to be energy sufficient given the various sources of energy enumerated above. However, several factors make this goal of being energy sufficient not only difficult but also almost impossible. This point will be revisited later.

Suffice to say that the availability of these diverse energy sources on the African continent is not something new. Various sources of energy have been consumed by the people of sub-Saharan Africa for years. For example, in 1950, energy in East Africa came from coal (56%), petroleum (29%), natural gas (9%) and hydro (6%) (Contribution of Commercial Energies in World Energy, 1950). By the 1990s it was still being reported that with regards to the total energy consumption in East Africa non-commercial forms or sources of energy still contributed more than eighty percent of the overall energy grid (Onyango et al. 2011). An audit conducted in the 1960s in sub-Saharan Africa showed the same diversity as that of the 1990s. For example, petroleum emerged as the main energy source at 43 percent, followed by coal (34%) and natural gas (17%). Hydro and nuclear energy came last at 6 percent.

Obviously, some of these sources are used more than others. This is due in part to the comparative availability of each energy source as well as the common usage of that energy source by predecessor communities in a given locality. Sometimes the amount of time and resources needed to generate energy determines which one to use regularly. Of the different energy sources discussed above, in the 1990s biomass has the lion's share of the distribution as shown in Figure 1.

Longitudinal data sets show that energy reforms in sub-Saharan Africa have not been as quick as has been the case in other parts of the

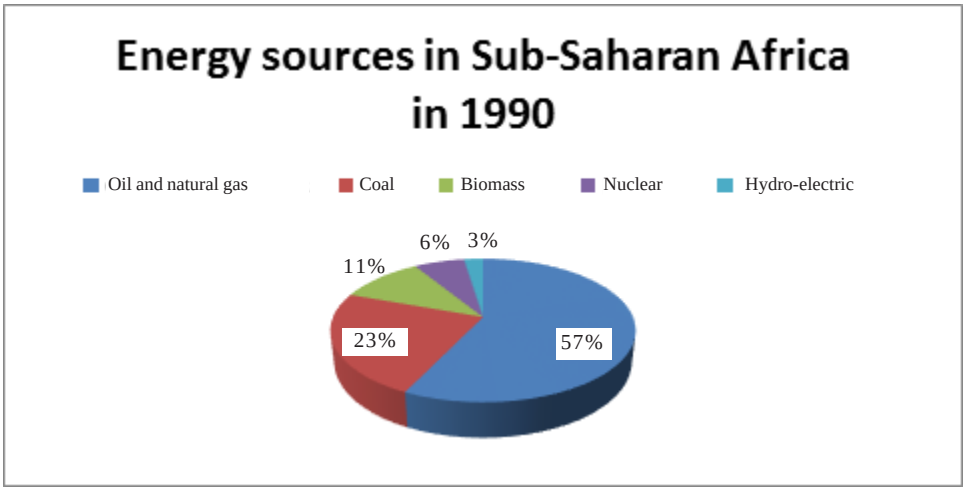

Fig. 1. Energy sources in Sub-Saharan Africa in 1990
Source: Compiled by author from various sources

world. The reasons for this bias towards biomass are provided below when endogenous and exogenous contributing factors are discussed. Some of the reasons have already been provided above, albeit in passing. The more readily available and the more accessible the energy source is, the higher the chances of it being used regularly. In the same vein, any energy source, which is not readily available and needs a lot of resources to extract, is not likely to attract many people. These are some of the obvious reasons for preferring certain energy sources to others.

But even before going into any detail about the reason for the evident bias towards biomass by Africans, a quick comparison of Africa's energy consumption pattern with that of the global community shows a direct opposite of what is seen above. Biomass is not the preferred or commonly used energy source globally. Instead, oil and natural gas tend to be given first priority with biomass ranking third on the list of energy sources. World energy consumption in 2000 revealed that oil and natural gas constituted 56.6 percent, followed by coal (23.2%), biomass (10.6%), nuclear (6.3%) and hydro-electric (2.4%). Geothermal and other energy sources accounted for only 0.5 percent (Otieno and Awange 2006: 18).

The sad reality is that although sub-Saharan Africa has different sources of energy, very few people are able to access it. This is confirmed by various statistical data contained in many reports. For example, it is reported that over 622 million people across Africa are living without access to electricity. Included in this list is two-thirds of the population living in sub-Saharan Africa (*Africa Monitor* IEA 2004). This is because, as the World reports state, sub-Saharan Africa (excluding South Africa) produces only about 28,000 megawatts of electricity, which is the same quantity as that produced by Argentina alone. The future picture does not look good. The International Energy Agency reports that due to the population explosion in sub-Saharan Africa, it is estimated that as many as 530 million people in this region will be without electricity up to the year 2040. This is despite the fact that a projected 1 billion people will have access to electricity by that time. Arguing along the same lines, South Africa's Department of Environmental Affairs and Tourism (2005: 6) conceded that "due to our growing energy needs, new generation capacity will be required by end of 2008". This prophecy has come true as evidenced in the recent intermittent load shedding in 2014-2015. As mentioned earlier in this paper, Mozambique provides South Africa with electricity but its citizens do not have it (as confirmed in various sources). In fact, despite the country's electricity generating and supply potential, Mozambicans still rely on wood fuel (Brouwer 2004).

A question could be posed is if the African continent is endowed with so many sources of

energy, why are there consistent reports on the shortage of energy supply throughout the continent? This question is definitely more complex than on the face of it. The reason for this complexity is that the causal factors have different derivations. Some are indigenous in character and can be traced back to Africans themselves, while others are external to Africa. It would be worthwhile, therefore, to consider both these endogenous and exogenous causal factors in order to have a holistic understanding of the picture about Africa.

DISCUSSION

Factors Affecting Energy Supply and Reforms in Africa

It has been noted that Africa as a whole and sub-Saharan Africa in particular has a huge energy as well as a renewable energy potential. All that is needed is for this potential to be developed through policy reforms and incentives (*Africa Monitor*). As mentioned above, the factors that delay energy reforms in Africa and contribute to the shortage of energy supply are both endogenous and exogenous. Each of these factors will be expounded below.

Endogenous Factors

While it is true that some of the problems facing the African continent today are not of their making but came as a result of the continent's interaction with the outside world, it is equally true that Africans cannot be totally exonerated. The reality is that Africans are partly responsible for their own predicament. The energy sector is no exception in this regard. For instance, Africans have over the years abandoned their indigenous sources of energy. It is true that the colonial state had a hand in this by drawing Africans towards electricity usage. However, at independence, Africans continued to adopt Western sources of energy during their own evolution. This was part of the decision by the African leadership to retain and protect the practices they inherited from their erstwhile masters. Many decades later, Africans are starting to deregulate their energy sector in the midst of a population explosion. In the process, retail fuel prices have increased rapidly in order to keep energy available for much longer. For example, in 2012, Nigeria, Africa's leader in oil supply, took a decision as a part of energy reforms to eliminate fuel subsidies. Inevitably, this decision resulted in a spike in fuel prices, which went from N65 (about USD 0.42) to N138 (USD 0.89) per liter (Schiere 2012: 1). This fuel hike was unprecedented in Nigeria's economic history. Consequently, strikes erupted throughout the country's 36 states when institutions such as the Nigerian Labor Congress (NLC) and the Trade Union Congress (TUC) put their weight behind the masses.

It should be noted that the desire to make energy available to the African domestic economy as well as the African people in a more cost-effective manner, is there. Moreover, there is a clear determination to make this energy affordable and of adequate and high quality. What seems to be the main challenge is "how to deal with the weak generation, transmission and distribution, infrastructure and the policies, which have inhibited investment in the energy sector" (Otieno and Awange 2006: 3). These weaknesses have to do (at least in part) with an evident lack of capacity among African governments. As the issue of affordability remains unresolved, the local people resort to other sources of energy such as biomass-based fuels. At the same time, potential investors who would have contributed to more energy generation are scared off when they realize that there would be no market for them because Africans would not be able to afford to consume the energy generated.

Cooper (2002) made a valid point that by the 1950s African colonial states were already on the verge of collapse. He argued that in the 1960s Africans inherited weak states, which is why most independent states started to show signs of weakening in the 1970s and began to rely on the IMF and the World Bank from the 1980s. Surely, this is an irrefutable fact. However, it would be erroneous to overemphasize it. At independence, some African governments failed to change the status quo. Some leaders amassed political and economic power for themselves and did not care much about the countries they were leading. Even Cooper admitted this fact. Consequently, no investment was made in improving technical expertise, something, which resulted into inadequate technical capacities. Instead, public budgets were stretched to the limit as more money was spent in trying to quell civil wars ignited by competition over economic re-

sources and political power, religious factionalism and so on. This was the case in countries such as Angola, the DRC, Nigeria, Mozambique, Kenya, and many others.

In their diagnosis of the African energy crisis, Onyango et al. (2011: iii) opined, "Structural weaknesses in coordination and implementation of competition-related regulations hinder competitive pricing in provision of electricity and petroleum product services". In other words, their view is that the problem in most sub-Saharan African countries is structural more than anything else. If this view is anything to go by, it can be concluded that unless some structural reforms are implemented the status quo will remain. Other related challenges are weaknesses in institutional and legal frameworks. This problem is occasioned by several factors. In certain (but not all) instances, African countries do not have the required legal expertise to put systems in place to regulate what happens in the energy sector. In other instances even if institutional and legal frameworks are in place the enforcement of such frameworks does not happen. This is credited to factors such as cronyism, nepotism, and many such social ills where those saddled with the responsibility to mete out justice look at the individual and not the act that has been committed.

Some African countries are reluctant, unwilling or unable to diversify their energy generation. This results in shortages of energy supply. In South Africa, for example, it is only very recently that the country has started to use wind power (*Africa Monitor* n.d.). Even solar energy is a recent affair in South Africa. Many African countries are yet to use this source of energy. This is despite the fact that Africa is blessed with sunlight for the better part of the year, which is an advantage most Western countries do not have.

Overall, successive governments in many sub-Saharan African countries have been unable to introduce energy reforms. This has been as a result of a confluence of factors: legal, regulatory as well as political stumbling blocks. These delay and sometimes hinder the process of introducing new reforms that would enhance the opportunities for energy production on the African continent.

Monjane (2015: 1) noted, "Africa has been given many names, most of which mirror its dire social, political and economic situation". In addition to the factors enumerated above, some of the internal factors that have diminished the chances of improving energy supply in Africa are those that have somewhat become the characteristic features of many African leaders as well as their national governments. These factors include, but are not limited to, mismanagement, overregulation and rampant corruption (Schiere 2012: 4). Countries such as Nigeria have fallen victim to some of these factors. For example, Nigeria is ranked sixth in the world in terms of oil production. However, the country has to import fuel from other countries in order to satisfy domestic consumption. One of the reasons for this state of affairs is the country's inability to manage the oil industry. Mismanagement challenges of oil sources in the Niger Delta demonstrate the country's inability to use its oil to improve development (Mngomezulu 2013). Therefore, Africans need to do some introspection.

Exogenous Factors

External or exogenous factors are partly responsible for some of the energy challenges sub-Saharan Africans are wrestling with. As mentioned above, Africa's energy sources are diverse. However, some of these sources are controlled by foreign nationals who locate, extract and assist in the exportation of these sources of energy. Among the sources that end up in the international market are coal, gas and oil. Coupled with this, Africans do not determine the price of these energy sources. Consequently, not enough money is ploughed back in Africa to assist in the generation of more sustainable energy. Attesting to this point, Nkomo (2005: 19) observed, "Volatile exchange rates make planning in the energy sector a real challenge". Africans have no control over this situation, so it is an exogenous factor.

Secondly, when foreign investors invest in the energy sector in Africa they do so selectively. They subscribe to the realist theory, which is inward looking. Their primary goal is to see how much they stand to gain or what will benefit them as opposed to how their involvement could be mutually beneficial. As such, Foreign Direct Investment (FDI) is limited to upstream oil extraction development only and is also limited to just less than ten percent of the countries in the sub-Saharan region (Davidson and Conteh 2006). Whatever relationship exists between

African countries and their Western counterparts benefits the latter more. Even good initiatives such as AGOA benefit the US more than African countries because the terms are decided by the US government. As things stand, there is very little hope that this situation will change.

Another factor is that energy production in sub-Saharan Africa largely relies on foreign personnel. In a way, Africans are also partly to blame for this because over so many decades they have failed to produce their own human capital. Anyway, whenever foreign personnel come to Africa to assist the energy sector they tend to drain the continent's financial resources because they are paid high salaries. They assist in areas such as oil and gas exploration and power generation, transmission and distribution as well as decision-making related to energy (Davidson et al. 2007). Not surprisingly, decision-making largely favors foreign countries as opposed to benefiting African countries where the energy resources are extracted. This is due in part to the fact that African countries rely on external finance even though they have the raw material. A related factor is that the level of industrialization in Africa is very low. This means that locally produced raw material has to be sent to Western countries where they are refined. The final product is then sold back to Africa at exorbitant prices.

There are negative externalities associated with energy production and consumption. Foreign countries have the money and therefore demand the best quality of African raw material such as coal. Out of desperation, Africans comply and let go of their mineral resources cheaply. In the process of doing that, only coal of low quality remains within the continent (Nkomo 2005). This means that Africans are left with insufficient energy capacity, which adds to the already existing challenge of affordability. A combination of these challenges results in an untenable situation where the local people have to improvise. Writing about South Africa, Nkomo (2005: 14) noted, "Low-income households rely on wood, coal and paraffin as energy sources. These energy sources contribute to high levels of indoor pollution."

Even countries such as Kenya where energy reforms have been introduced, energy-related problems still prevail. In 1997, Kenya enacted the Electric Power Act. This was followed by the Energy Act of 2006, which resulted in the establishment of the Energy Regulatory Commission (ERC). These two Acts led to the separation of generation from transmission and distribution in the electricity sector as well as the liberalization of the procurement, distribution and pricing of petroleum products in Kenya (Onyango et al. 2011). While the Kenyans had plans in place to boost the energy sector, market domination forced them to increase electric power tariffs. This had problems of its own. In the end, the country's intended results have not been achieved. This is one example where a country resolved to introduce energy reforms but was frustrated by external factors, which in turn dictated what should happen locally. Onyango et al. (2011: iii) concluded:

In a nutshell, reforms in the energy sector in Kenya essentially involved vertical separation and gradual deregulation of competitive segments, from those that were deemed to have natural monopolistic characteristics, and subject to price, network access, service quality and entry regulations.

These are some of the realities African countries are faced with in their resolve to introduce reforms in the energy sector. As discussed earlier, Africans are not totally innocent, as they have made and continue to make their own contribution to the low pace of energy reforms in Africa. However, as demonstrated in this section, exogenous factors also play a huge part in negatively affecting the energy sector in Africa. Surely, things cannot be left as they are. Something needs to be done in order to reverse the current situation. It is to this topic that this paper will now turn as a way forward.

CONCLUSION

This paper has demonstrated the important role of energy in society. It argued that energy is at the epicenter of human survival. This is regardless of one's location. The paper enumerated and discussed different sources of energy and argued that some of these sources have geographical specificity. Moreover, the paper showed that the priority of most used energy sources for the African people is different from that of the international community. Most importantly, the paper noted that despite having different sources of energy, sub-Saharan Africa is currently facing an energy crisis. It was stated that with the exception of countries like South

Africa, the majority of sub-Saharan African countries are unable to provide energy to their people. The reasons for this state of affairs have been attributed to both exogenous and exogenous causal factors. Each of these was expounded in this paper.

In conclusion, it is clear that for any energy reform to be successful, both endogenous and exogenous factors need to be taken into consideration. This calls for cooperation between African countries and their Western counterparts. Within Africa, African countries need to work together as collaborators and not as competitors. By doing so they would be able to complement one another for the benefit of all. While it is true that the international community has to come to the party, the onus is on Africans themselves to change their mode of operation. The task is daunting but it is not insurmountable. All that is needed is the political will to take the continent forward and make it self-sufficient.

RECOMMENDATIONS

Based on the discussion thus far, the following recommendations are proffered; The mindset of the political and academic leadership on the African continent needs to change. Both endogenous and exogenous factors need to be attended to simultaneously. Africans need to improve their internal capacity so that they do not rely on foreign personnel who drain the continent's financial and material resources. Africans need to establish industries where raw materials could be finalized as this has the prospect to reduce energy costs while generating employment. Africans should learn to work together as opposed to being competitors. African countries also need to reduce (if they cannot end) civil wars and corruption. More money is spent quelling civil wars when it could be invested in the energy sector. Corruption and the looting of the public purse contribute to the present energy crisis. There is a need for African countries to diversify their energy sources.

With regards to exogenous causal factors, the international community needs to come on board; negotiations on energy deals should be entered into in good faith. The international community should strive to industrialize Africa and still keep the good trade relations. The specialists who come to assist African countries as personnel should refrain from milking those countries by charging them more money than local economies can afford. Lastly, to ensure a lasting solution, the relationship between African governments and their Western counterparts should be symbiotic or reciprocal instead of benefitting one party at the expense of the other.

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