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The Influence of Government Policy on the Performance of Solid Mineral Resources in the Northern Nigeria

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Abstract: Nigeria has abundant oil and solid mineral deposits virtually in all the zones that made up Nigeria as a country. However, Nigeria depends solely on crude oil for a long time for its revenue leaving the solid mineral resources untapped. With the current economic hardship bedeviling Nigeria, it becomes imperative for government to look beyond oil and delve into other economic deposits which solid mineral resource becomes an area of interest for the government. One of the factors that will form a base for government to increase its revenue base through solid mineral resource is policy. This study examines the influence of government policy on the performance of solid mineral resources in Northern Nigeria. Data collection will be obtained through survey method to elicit information from respondents. The instruments adopted included questionnaire, interviews, discussion and observation. A total of 300 respondents were selected from the solid mineral mining communities, miners, MDAs, and questionnaire was administered to them. Both descriptive and inferential statistical methods were used to carry out the analysis. Review of related literature was carried out on published materials on the subject. This study found out that major areas of government policy which influenced the performance of solid mineral resource in Northern Nigeria are; performance contract to the accountability with immediate consequence for failure, engagement of appropriate human resources and enhancement of the capacity of available ones, technical assistance, realistic planning. The study also found out that there was an improvement in the productivity of the sector and its contribution to the federation account about, N25b in 2016, against N700m in 2015.

2017 recorded a further increase to about ₦3.3b. The study proffers recommendations such as improvement in the use of performance contract, public private partnership, partnership with expatriates,

solid mineral resources to be in exclusive list, government presence (development) in areas where there is solid mineral resources.

Introduction

Background Of The Study

The growth in Nigeria's economy since independence in 1960 has not significantly affected the lives and the general well-being of the citizens. Among many reasons that Nigerian citizens has been in the economic predicament is because the solid mineral resources has not been harnessed to yield the required economic input. Nigeria depends on crude oil from the southern part of the country for a very long time leaving the solid mineral resources in the North untapped.

With continuous economic hardship and challenges for the government to meet with its obligation, government is now expanding its tentacles to harness the solid minerals resources in the North. One of the ways that government is doing this is through its policies on the solid mineral resources in Nigeria particularly in the Northern part of the country. Policy is the road map which defines what government wants to do, the process and action plan.

There is an avalanche of regulatory and institutional reforms that had taken place in the country over the years that can provide better operational environment for the benefits of investors and mining operators. These include, but not limited to the Explosive ACT 1964 and its regulations of 1967 Constitution of the Federal Republic of Nigeria, 1999 (as amended), National Minerals and Metals Policy 2008, Nigerian Minerals and Mining Act, 2007, Minerals and Mining Regulations 2011, Nigerian Investment Promotion Council Decree 1995, Nigerian Extractive Industries Transparency Initiative (NEITI) Act 2007, Environmental Impact Assessment Act 1992, Seven Year Strategies Action Plan for Solid Minerals Development in Nigeria (2002-2009), Miners Association of Nigeria (MAN), Nigerian Economic Empowerment and development strategy (NEEDS), International Development Association (IDA), Ministries of Planning and Finance, National Planning Commission, Federal Ministry of Mines and Steel Development, Ministry of Environment, etc. All these forms part of government policies on solid mineral resources targeted towards improving the sector.

Statement Of The Problem

The aim of every government is to enact polices and develop a framework that will impact positively on whatever it intends to achieve. Policies on solid mineral resources are as well formulated to develop the solid mineral sector of the economy. However, the problem here is whether these policies are having the desired impact on the solid mineral resources in Northern Nigeria.

Objectives Of The Study

The general objective is to evaluate the influence of government policies on the performance of solid mineral resources in Northern Nigeria.

Specifically, this study will find out the following;

To determine whether the government have policies on solid mineral resources in Northern Nigeria

To ascertain whether government policies on solid mineral resources in the Northern Nigeria are being implemented

To analyze the participation of host communities in the policy formulation and implementation process

To ascertain whether solid mineral resources contribute adequately to the economic growth of Nigeria

Research Questions

1. Does the government have policies on solid mineral resources?
2. Does the government implement its policies on solid mineral resources in Northern Nigeria?
3. Do the host communities participate in the formulation of policies on solid mineral resources in Nigeria?
4. Does the solid mineral resource contribute adequately to the economic growth of Nigeria?

Hypothesis

The following hypothesis were formulated

H₀₁: There is no significant relationship between government policies and the performance of solid mineral resources in Northern Nigeria.

H₀₂: Government policies do not significantly influence the performance of solid mineral resources in Northern Nigeria.

Significance Of The Study

The development of the solid minerals sector is an important aspect of any nation's industrialization. This is because a lot of investors will be attracted to the sector (both local and foreign) to take advantage of the development thereby increase the economic activities. This study will evaluate the impact of government policy on the performance of solid mineral resources in Northern Nigeria and make recommendations where necessary to guide the government on further policies towards the sector. It will provide investors the information, they may require concerning the solid mineral in Northern Nigeria. The findings will as well serve as a reference point to those that want to carry out research work on related topics.

Scope Of The Study

The study will focus on the influence of government policies on the performance of solid mineral resources in Northern Nigeria. The scope will be limited to all the states in the North that have solid mineral deposits both the ones being mined and yet to be mined.

Review Of Related Literature

Evolution of mining in Northern Nigeria started long before the colonization of Nigeria by the British government. To lend credence to this ascertain, Eyre and Agba, (2007), and Oyedokun and Igbonor (2013) opined that mining has been one of the oldest economic activities in Nigeria, dating back to 340BC. Early mining activity involved the extraction of gold and other metallic substances. According to them, mining then was concentrated near the surface due to lack of mining implements that could be used to access mining activities. Oke (2005) described mining as a traditional industry in Northern Nigeria thriving amongst the people well before the on-set of western civilization and the birth of Nigeria as a nation in 1914. These locally extracted minerals in the form of material ores were locally smelted and processed further by black smiths to make farm implements, hunting equipment while things like clay, sand and stone were used for local building. Ornaments and jewelries were also made from available noble metals such as gold, silver and bronze by the local goldsmiths.

Organized mining of solid minerals according to Mallo (2012), commenced in Northern Nigeria around 1903 during the colonial regime of the British government. The mining continued for about 40 years with the mining industry witnessing the influx of British and German foreign miners such as the Amalfamed Tin Mines Ltd, Exlands Ltd, Gold and Base Metals and others. These companies introduced mechanized mining which led to higher productivity of the mines and consequently land devastation as no law was put in place by the colonial government to guide mineral extraction. The discovery of oil in 1956 halted

the mineral extraction industry as both government and industry began to focus on the new resources. The Nigerian civil war in the late 1960s led to many expatriates mining experts to leave the country. Mining regulation was handled by the Ministry of Solid Mineral Development which oversees the management of all solid mineral resources both in the North and in the South. Mining policy is codified in the Federal Minerals and Mining Act of 1999. Historically, mining industry was monopolized by the state-owned public-corporations. This contributed to the decline in the productivity in almost all mining industries.

However, with the recognition of the sectors capability to promote the economic diversification agenda and to contribute to the nation's Gross Domestic Product (GDP), the government has implemented a number of initiatives, to accelerate its development. Some of the challenges that impede the rapid development of the sector in the North include: limited geographical/geographical information, infrastructure gaps, project funding, illegal mining and other community challenges.

Regulations On Solid Mineral Resources

Mining of solid mineral resources is regulated by the constitution of the Federal Republic of Nigeria 1999 (as amended), the Nigerian Minerals and Mining Act 2007 (the Mining Act) and the Nigerian Minerals and Mining Regulations, 2011 (the Mining Regulations) the Ministry of Mines and Steels Development, the Mining Cadastre Office (MCO), the Mines Inspectorate Department (MID) and the Mines Environmental Compliance Department (MECD) are the government bodies administering the mining industry in the Northern Nigeria.

Also the Environmental Impact Assessment Act, 1992, the Land Use Act, 1978, the Nigerian Export Incentives and Miscellaneous Provisions Act, the National Environmental Standards and Regulations Enforcement Agency Act 2007, the Explosive Act, the Nuclear Safety and Radiation Protection Act, the Companies Income Tax Act and the Financial Act, 2020 are other sources of policies affecting the solid minerals in the North.

Empirical Framework

Whether Government Have Policies On Solid Mineral Resources In Nigeria

According to Banwo and Ighodalo (2018) in their paper titled Solid Minerals – Harnessing Nigeria's Viable Alternative Resource to Crude Oil; Legal and Regulatory Framework, the constitution of the Federal Republic of Nigeria 1999 (as amended) vests total ownership and control of all minerals, mineral oils, and natural gas in, territorial under or upon any land, territorial waters and the Exclusive Economic Zone of Nigeria in the Federal Government (FG). Nigerian Minerals and Mining Act, 2007 follows this constitutional provision. The federal government exercises its absolute ownership and control by granting exploration and mining licenses, leases or permits to applicants through the Mining Cadastre Office under the supervision of the Ministry of Mines and Steel Development.

Other subsistence legislation made pursuant to the Act and governing the minerals and mining sector include Nigeria minerals and mining regulations (2011), National Minerals and metals policy (2008) and the guidelines for mineral title applications.

According to them, the regulatory, supervisory and institutional authorities in Nigerian mineral and mining sector include the Ministry led by the (Honorable Minister), Mining Cadastre Office (MCO), Mines Inspectorate, Mines Environmental Compliance Artisanal and Small Scale Mining Department, Metallurgical Inspectorate and Raw Materials Development, Steel and Non-ferrous Metals Department, Nigerian Geological Survey Agency, Nigeria Institute of Mining and Geological Survey, Nigerian Institute of Mining and Geosciences, Nigerian Metallurgical Development Centre, National Steel Raw Materials Exploration Agency, Council of Mining Experiences and Geoscientists, and the state Governors who issues Rights of Occupancy over lands that are mining areas.

Solid Minerals Policy Implementation Assessment Framework

The study of Haddad and Demsky (1995) on policy formulation and implementation found out the work of particular relevance to the solid minerals sub-sector. According to them, policy cycle consist of seven policy - planning processes. The first four deals with policy making, the fifth with planning and the sixth and seventh with policy adjustment. The stages in their recommended policy cycle are as follows:

1. Situation analysis
2. The generation of policy options
3. Evaluation of policy options
4. Making the policy decisions
5. Planning of policy implementations.
6. Policy impact assessment
7. Policy adjustment/subsequent policy cycles

They believe that these seven stages were not necessarily linear in the face of new development in information. The assessment approach in the study was holistic in that it considered all the stages in the policy making process but concentrated more on the implementation process and outcomes. Mthethwa (2012) discussed three important reasons why assessing policy implementation was crucial. He was of the opinion that it promotes accountability by holding policy-makers and implementers accountable for achieving stated goals. It enhances effectiveness because understanding and addressing barriers to policy implementation can improve policy delivery. Lastly, it fosters equity among stakeholders and guarantees good quality outcomes of high standard of performance.

From the study, the mean rating by respondents from all the four groups on the extent of implementation of the policy could be outlined as follows: The fraud mean ratings were mining communities, miners, MDAs and universities. All these ratings were within the disagreement limit. This implies that the level of implementation of the policy was low. The above findings agreed with the findings in the study of Eyre and Agba (2007) where objectives specified in an earlier policy could not be reasonably achieved due to implementation problems and challenges of doing business in Africa.

Participation Of Host Community In Policy Making On Solid Mineral Resources

Olowokere, and Abasilim, (2019) carried out a study on Rights of Host communities to Mineral Resources for the Empowerment of Rural Dwellers in Zamfara State of Nigeria. The Paper investigated the rights of host communities in the policy making and implementation process of solid mineral resources in the land that will ensure poverty alleviation, economic empowerment and sustainability in some selected mining communities in Zamfara State, Nigeria. The study used the survey instrument (questionnaire). Descriptive and inferential statistics were used for analysis of data. The research findings revealed that the host communities are entitled to certain rights to mineral resources in their land but that there was no significant institutional policies put in place by the government in regards to the implementation of these legal rights to mineral resources. The paper therefore concludes that the unenforced rights were not enough to provide the enabling environment required for economic empowerment of the rural dwellers in Zamfara state, Nigeria.

Whether Solid Mineral Resources Contributes Adequately To The Economic Development

Esowe (2020) in his study “Appraising solid minerals’ contribution to Government coffers” used survey instrument (questionnaire), descriptive and inferential statistics method for the analysis of data. The sector recorded a slip in the revenue contribution to the economy’s coffers for the period ended Q2, 2020.

Findings show that the sector is largely unexploited despite the huge potential it has in providing alternative revenue sources for the country. There has been different policy measures put together by the relevant authority to boost the sector as part of the efforts to diversify the economy but little was achieved because of insufficient geo-data, weak infrastructure and limited policy enforcement. These, however, impacted negatively or rather held the industry back.

Data Analysis, Results and Discussions

The data were sorted, coded, captured and analyzed with SPSS (Statistical Package for Social Scientists) by using its facilities for descriptive statistics which include: frequency tables, cross tabulations, percentages, means and standard deviation; and inferential statistics which include: normality tests, reliability tests, non-parametric tests, analysis of variance (ANOVA), correlation and post hoc multiple range tests. These tests were hinged on ratings as independently provided by the respondents in the questionnaire administered. A 5-point Likert scale of undecided (UD), disagree (D), strongly disagree (SD), agree (A) and strongly agree (SA), was adopted in the design of the questionnaire to obtain the respondents level of agreement with the various statements used to carry out the assessment. The ratings were: undecided (1), strongly disagree (2) disagree (3), agree (4) and strongly agree (5), respectively.

The Participation of Host Communities in Policy Formulation on Solid Mineral Resource

The table below shows the changes in the mean ratings of all respondents on the statements evaluated for the process of policy formulation. Analysis of variance and Hochberg's GT2 Multiple Comparison and Range Tests showed that there were significant differences among the mean ratings ($p < 0.05$). Hochberg's GT2 Multiple Comparison and Range Tests were chosen in preference to Duncan's Multiple Range Tests to separate the means. This is because it is the preferred choice when samples are of unequal sizes as occurred in this study.

The statement that the stages in the formulation process considered above were appropriate for solid minerals policy formulation was highly rated by all the groups. This implies that all the groups agreed with the stages in the process of the policy's formulation. However, the mining communities, miners and universities disagreed that they were sufficiently carried along while drafting the policy. Furthermore, the comparative analysis is in agreement with the recommendation of Haddad and Demsky (1995) that if the interests of policy key stakeholders were not carefully assessed and addressed, the policy formulated would have every chance of failing.

The Participation of Host Communities in Policy Formulation on Solid Mineral Resource

S/N	Statement	Level of Agreement (Mean Ratings)				Group 252
		Mining Communities 59	Miners 65	MDAs 77	Universities 51	
1.	The stakeholders were duly informed about drafting a new solid minerals policy.	2.90 ^{ab}	3.11 ^b	3.16 ^b	2.49 ^a	2.95
2.	The stakeholders provided inputs for the formulation of the new policy.	2.81 ^{ab}	3.09 ^b	2.92 ^b	2.43 ^a	2.84
3.	The existing solid minerals environment was properly analyzed before commencement of current policy formulation	2.42 ^{ab}	2.34 ^{ab}	2.75 ^b	2.02 ^a	2.42

4.	All stakeholders were duly informed for their inputs into the policy.	2.42 ^{ab}	2.02 ^a	2.75 ^b	2.16 ^a	2.37
5.	The inputs obtained from stakeholders were comprehensive enough and thoroughly debated for policy options generation.	2.46 ^a	2.17 ^a	2.30 ^a	2.16 ^a	2.27
6.	Adequate consideration was given to socio-economic, political and cultural environments in generating the policy options.	2.41 ^{ab}	2.15 ^a	2.86 ^b	2.45 ^{ab}	2.49
7.	Proper evaluation of the various policy options was done by stakeholders in terms of feasibility, affordability, desirability & consequences	2.47 ^{ab}	2.25 ^a	2.86 ^b	2.43 ^{ab}	2.52
8.	The final policy option selected was as a result of evaluation and agreement of all stakeholders	2.56 ^{ab}	2.34 ^a	2.96 ^b	2.37 ^a	2.59

S/N	Statement	Level of Agreement (Mean Ratings)				Group 252
		Mining Communities 59	Miners 65	MDAs 77	Universities 51	
9.	Information through various media was made available to all stakeholders	2.63 ^{ab}	2.14 ^a	2.70 ^b	2.33 ^{ab}	2.46
10.	Committees of experts were charged with the responsibility of planning for implementation	2.54 ^{ab}	2.25 ^a	3.01 ^b	2.80 ^{ab}	2.66
11.	Adequate provision was made for post-implementation impact assessment	2.49 ^a	2.18 ^a	2.35 ^a	2.25 ^a	2.32
12.	The above process is considered appropriate for solid minerals policy formulation	4.17 ^{ab}	4.22 ^b	3.68 ^a	3.73 ^{ab}	3.94

a, b, c; Means within each row with different superscript are significantly different ($p < 0.05$)

Key: Undecided (UD) - 1, Strongly Disagree (SD) - 2, Disagree (D) - 3, Agree (A) - 4, Strongly Agree (SA) --- 5

Extent of Implementation of Solid Minerals Policy

The table below shows the mean ratings by respondents from all the four groups on the extent of

implementation of the policy. The grand mean ratings were: mining communities (3.22), miners (2.92), MDAs (3.28) and universities (2.74). All these ratings were within the disagreement limit.

This implies that the level of implementation of the policy was low. The above findings agree with the findings in the study of Eyre and Agba (2007) where objectives specified in an earlier policy could not be reasonably achieved due to implementation problems and challenges of doing business in Nigeria.

Extent of Implementation of Solid Mineral Policy

S/N	Statement	Level of Agreement with extent of implementation (Mean Ratings)				
		Mining Communities 59	Miners 65	MDAs 77	Universities 51	Group 252
1.	The policy has been successfully implemented in favour of all stakeholders	3.71 ^c	3.15 ^b	3.48 ^{bc}	2.57 ^a	3.27
2.	The current reform in the solid minerals sector has led to substantial increase in GDP contribution by the sector	3.07 ^b	2.60 ^{ab}	3.01 ^{ab}	2.33 ^a	2.78
3.	High quality Geosciences' data have been generated with the implementation of the 2008 solid minerals policy	2.58 ^{ab}	2.37 ^a	3.21 ^b	2.67 ^{ab}	2.73
4.	The current solid minerals policy has led to the establishment of a transparent licensing regime for operators	3.32 ^{bc}	2.95 ^{ab}	3.87 ^c	2.45 ^a	3.22
5.	The procedure for obtaining operating license has been greatly facilitated as a result of the new policy	3.37 ^{ab}	3.11 ^a	3.88 ^b	2.98 ^a	3.38
6.	There is significant progress in the formalization of artisanal and small scale (ASM) mining operations in Nigeria	3.24 ^a	3.12 ^a	3.39 ^a	3.59 ^a	3.33
7.	There has been a considerable improvement in ASM operations which has in turn reduced greatly the level of poverty in the country	3.20 ^a	2.88 ^a	2.86 ^b	2.98 ^a	2.97

S/N	Statement	Level of Agreement with extent of implementation (Mean Ratings)				
		Mining Communities 59	Miners 65	MDAs 77	Universities 51	Group 252
8.	The implementation of the 2008 solid minerals policy has led to massive employment generation in the sector	3.14 ^b	2.95 ^b	2.94 ^b	2.41 ^a	2.88
9.	Implementation of the policy has brought about substantial wealth creation through value addition to exploited solid minerals in the communities	3.14 ^a	2.97 ^a	2.88 ^a	2.76 ^a	2.94
10.	There has been an increased technological capability of mineral-based industries as a result of increased productivity in the sector	2.97 ^a	2.85 ^a	3.08 ^a	2.67 ^a	2.91
11.	The new incentives to investors are attracting substantial private investment (local and foreign) capital to the sector	3.17 ^b	2.80 ^{ab}	3.06 ^b	2.51 ^a	2.91
12.	New economic opportunities have been created in the sector as a result of the current policy	3.49 ^b	2.65 ^a	3.56 ^b	2.98 ^{ab}	3.91
13.	The new policy can be said to have enhanced considerable technological development of solid minerals	3.36 ^b	2.60 ^a	3.25 ^a	2.57 ^a	2.97
14.	Implementation of the new policy has brought about security challenges to various communities	3.37 ^{ab}	3.82 ^b	3.40 ^{ab}	2.94 ^a	3.41

Means within each row with different superscript are significantly different ($p < 0.05$)

Key: Undecided (UD) - 1, Strongly Disagree (SD) - 2, Disagree (D) - 3, Agree (A) - 4, Strongly Agree (SA) - 5

Government has a Solid Mineral Resource Policy

S/N	Statement	Level of Agreement (Mean Ratings)				
		Mining Communities 59	Miners 65	MDAs 77	Universities 51	Group 252
1.	Lunch roadmap and begin communication campaign to generate industry buy-in	2.90 ^{ab}	3.11 ^b	3.16 ^b	2.49 ^a	2.95
2.	Design/establish process for strategic planning for long-term	2.81 ^{ab}	3.09 ^b	2.92 ^b	2.43 ^a	2.84

	development					
3.	Identify gaps in exciting training programs and suggest changes	2.42 ^{ab}	2.34 ^{ab}	2.75 ^b	2.02 ^a	2.42
4.	Develop strategy to utilize priority minerals domestically and substitute exports	2.42 ^{ab}	2.02 ^a	2.75 ^b	2.16 ^a	2.37
5.	Improve regulatory clarity on powers and duties of MDAs in mining and establish clear fiscal framework for state participation.	2.46 ^a	2.17 ^a	2.30 ^a	2.16 ^a	2.27
6.	Incentivize financial participation of communities in mining.	2.41 ^{ab}	2.15 ^a	2.86 ^b	2.45 ^{ab}	2.49
7.	Expand coverage! Resolution of, and access to geosciences data in Nigeria	2.47 ^{ab}	2.25 ^a	2.86 ^b	2.43 ^{ab}	2.52
8.	Strengthen the financial and business climate.	2.56 ^{ab}	2.34 ^a	2.96 ^b	2.37 ^a	2.59
9.	Work with National and state legislature and government to address gaps and conflicts in governing legislation.	2.63 ^{ab}	2.14 ^a	2.70 ^b	2.33 ^{ab}	2.46
10.	Develop and harmonize financial incentives for attracting mining majors and juniors to Nigeria.	2.54 ^{ab}	2.25 ^a	3.01 ^b	2.80 ^{ab}	2.66
11.	Encourage forward interpretation of mining and exploration companies into downstream operations.	2.49 ^a	2.18 ^a	2.35 ^a	2.25 ^a	2.32
12.	Build local technical/managerial skills and capabilities required in the industry.	4.17 ^{ab}	4.22 ^b	3.68 ^a	3.73 ^{ab}	3.94

Contribution Of Solid Mineral Resources To The Economic Growth Of Nigeria

S/N	Statement	Level of Agreement (Mean Ratings)				Group 252
		Mining Communities 59	Miners 65	MDAs 77	Universities 51	
1.	High cost of exploitation and exploration	2.90 ^{ab}	3.11 ^b	3.16 ^b	2.49 ^a	2.95
2.	Adequate infrastructural facilities	2.81 ^{ab}	3.09 ^b	2.92 ^b	2.43 ^a	2.84
3.	Appropriate technology	2.42 ^{ab}	2.34 ^{ab}	2.75 ^b	2.02 ^a	2.42
4.	Manpower development	2.42 ^{ab}	2.02 ^a	2.75 ^b	2.16 ^a	2.37
5.	Mineral resources inventory	2.46 ^a	2.17 ^a	2.30 ^a	2.16 ^a	2.27
6.	Adequate revenue	2.41 ^{ab}	2.15 ^a	2.86 ^b	2.45 ^{ab}	2.49
7.	Employment	2.47 ^{ab}	2.25 ^a	2.86 ^b	2.43 ^{ab}	2.52
8.	Annual GDP growth rate	2.56 ^{ab}	2.34 ^a	2.96 ^b	2.37 ^a	2.59

9.	Production capacity/level	2.63 ^{ab}	2.14 ^a	2.70 ^b	2.33 ^{ab}	2.46
10.	Social responsibility	2.54 ^{ab}	2.25 ^a	3.01 ^b	2.80 ^{ab}	2.66
11.	Foreign direct investment	2.49 ^a	2.18 ^a	2.35 ^a	2.25 ^a	2.32
12.	Management of environmental hazards	4.17^{ab}	4.22^b	3.68^a	3.73^{ab}	3.94

Conclusion

The study concluded that government policy has influenced the development of the solid minerals sector in Northern Nigeria. However, there is need for improvement on the implementation of the policies and as well carry the host communities along.

Recommendations

From the outcomes of this study, the following recommendations are put forward:

1. While drafting policy or reviewing an existing one, the major stakeholders, especially the more direct beneficiaries which in this case are the mining communities, should be allowed to make their contributions for the purpose of acceptability to all and sundry.
2. The solid minerals policy should now be reviewed for performance with a view to incorporating appropriate strategies for implementation. This review can include increasing the number of solid mineral cooperative societies and facilitating access to the Solid Mineral Development Fund as provided for in the Mining and Minerals Act 2007.
3. Public-private ownership option of solid minerals in the country should be properly studied and given a trial. This can be in the form of making the necessary technology available to the local miners and exposing them to training that is considered adequate for their level of operations. The quantity of minerals exploited will then determine the level of assistance from government.
4. Appropriate derivation formula for sharing proceeds of minerals should urgently be devised to ensure more active participation by states and local governments in the exploitation and processing of solid minerals. Government should license more buying centres through which reliable information could be obtained on productivity upon which the derivation formula will be based. The derivation formula suggested is Federal (50%), State (30%) and Local Government (20%), while individuals will be given a rebate of 20% on royalties payable to the buying centres.
5. Any derivation formula subsequently agreed upon by stakeholders should continue to be applied transparently in the sector to encourage artisanal miners and other individuals.
6. The general level of infrastructure in the country should be improved upon to encourage both local and international investors to participate actively in the sector.
7. There is need to involve environmental experts in the assessment of the health implications on host communities
8. Infrastructural facilities such as roads, communication and electricity should be well maintained to ease exploitation and processing of solid minerals.
9. There should be proper monitoring of funds meant for maintenance of infrastructure to ensure that they are judiciously utilized for the progress of the sector. This can be done by the government through further confirmation with people directly benefiting from such infrastructural facilities
10. Land acquisition procedure should be made less cumbersome to encourage venturing into the solid minerals sector especially by young graduates and other interested parties. Government can acquire

such lands and apportion them among interested young graduates and others with the payment of reasonable rents.

11. The land use Act of 1978 should be reviewed in its entirety to ensure that a more realistic act that will provide enough cushioning effect on land acquisition in Nigeria for the purpose of minerals exploration and exploitation is put in place.
12. Governments at various levels in the country should concentrate more attention on the local exploitation and processing of solid minerals to be able to derive more economic benefits from them just like other countries. This can be done by encouraging our young engineers to design local equipment that can be used by artisanal miners to exploit and process further such minerals.

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