Global Economic Crisis: A Challenge to the Entrepreneurship Development of Technical Vocational Education and Training in Oil and Gas Sector of the Nigerian Economy

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Abstract

The paper attempts to evaluate the Global economic crisis and the challenges to entrepreneurship development of technical vocational education and training in oil and Gas sector of the Nigerian economy. Effects of the global melt down in the economies of developed countries of the world and its chain-link action has gradually enveloped the entire world economy. This development impacted negatively on the Nigerian economy coupled with the Niger delta crisis that has drastically affected oil and gas production and development of new fields with its attendant consequences. Accordingly, vocational and technical education institutions that undertake training of technicians in such enterprise as welders, electricians, pipe fitters including safety experts were affected as a result of global melt down, constraining the oil and gas companies from engaging the services of Technical Vocational Education and Training Professionals (TVET) in the energy sector.

Introduction

The global economic crisis in recent times can be likened to the great depression in the Second World War. Its impact is so overwhelming that the economies of the major countries were all affected not without a significant cost to the tax payers in those nations. Gradually, its ripples and Chain-link effect actually enveloped the entire global economy, affecting financial houses, industries, mortgages and in-fact the cost of providing social services experienced deep constrain. The oil and gas industry which are the major energy providers driving the global economy was it-self undergoing these global constrains. In Nigeria, its effect was immediately felt, coupled with local distress in the polity, especially the Niger-Delta crisis which drastically affected oil and gas production and development of new fields and its attendant infrastructural provision difficulties. The development of new fields and the provision of infrastructures are the concern of the technical and vocational education institutions in the area of training of oil
and gas professionals that depend upon them to drive its activities. Thus the financial crisis being experienced globally has also affected the Nigerian oil and gas industries in terms of investing in human capacity development in anticipation of production of new oil fields. Vocational technical education institutions that undertake the training of technicians in such enterprises as welders of different categories, electricians, pipe fitters and safety experts are all affected as a result of the global economic meltdown which has constrained the oil and gas companies from engaging the services of TVET professionals in the energy sector.

NGERIA AND ENERGY

Nigeria and energy have been synonymous for the last fifty years, and with good reasons. Nigeria is the largest oil producer in Africa historically (OPEC, 2005), oil and gas have been the chief contributors to this economic sector; oil in particular accounts for nearly 90 percent of total foreign exchange of Nigerian revenue (FOS, 2001). It is not a surprise that since the mid-20th century, energy production has been essential to Nigeria’s economic stability and growth. But with the global demand for energy seemingly growing by the day, Nigeria’s leaders are not only investing in tried-and-true oil and gas production but also aggressively pursuing alternative sources to ensure the country continues to play a leading role on the international stage (NNPC, 2002).

Nigeria is, above all, rich in “black gold”, while crude oil reserve estimates vary, many believe them to be approximately 35.2 billion barrels, a figure expected to grow with future drilling and appraisals (NNPC, 2002). Industry experts estimate daily production at 2.6 million barrels a day. Most of Nigeria’s crude oil production, comprising 10 major crude streams, is light sweet crude, with a low sulphur content; much of it comes from small fields in the swamps of the Niger Delta, and its product is exported through seven terminals and a number of floating production vessels (DPR, 2001).

The upstream sector is dominated by joint venture operations, run by major multinational companies such as Shell, Total, Agip, Exxon Mobil and chevron accounting for 95 percent of Nigeria’s crude oil production (NNPC, 2001).

According to NNPC (2003), the government has awarded several private indigenous companies concessions over the past three years, and three-Amni International, Dubri Oil limited and Consolidated Oil has already begun production. Moni Pulo, Obekpa Petroleum and Chrome Energy are three of the biggest success stories of Nigeria’s growing base of indigenous companies. Moni Pulo found early success with the Abana Oil Fields in the Gulf of Guinea shortly after forming. Further Obekpa, a subsidiary of the Obekpa Group, has made it a point to team up with international companies such as Devon Energy; which is regarded as a rising player domestically. Lastly, Chrome Energy found its niche with the Nigeria Sao Tome & Principe Joint Development Zone, having recently secured preferential oil blocks in that area (NNPC, 2005).

DPR (2004) opined that domestic marketers comprise fewer than 30 percent of downstream market share, while the major international marketers boast the rest. The government faces challenges in the downstream sector-such as a lack of resources to efficiently manage the aging infrastructure and a “non-commercial pricing environment”. Accordingly, it is encouraging further private sector participation in the sub-sector.
With proven natural gas reserves believed to total a staggering 185tn cubic feet, Nigeria has one of the top ten natural gas endowments in the world (OPEC, 2007). The country has ambitious plans to raise earnings from natural gas exports to half of all oil revenues by 2010, and Nigeria is the world’s second-largest source of LNG by as early as 2008, (FOS, 2003). Experts attribute much of this marked increase in economic growth to increased liquefied natural gas (LNG) production, which the government has aggressively pursued via the Nigeria Liquefied Natural Gas project, which was started in 1989 and is jointly owned by the Nigerian National Petroleum corporation and three other international oil companies with local affiliates. Besides being better suited to meet the world’s growing demand for natural gas than traditional gas, LNG provides better access to underutilized natural gas resources and reduces natural gas’ volume by 600 percent, making it more economical to transport between continents (FME, 2004). Additionally, it is clean-burning, which could help decrease gas flaring in Nigeria. In addition to oil and gas production, Nigeria has made it a priority to develop alternative energy sources.

Consequently, in analyzing the effect of this global trend on the economy, the researchers relied on squirrel data on the production profile of all the major oil and gas companies in Nigeria and how it has affected entrepreneurship development especially with regards to developing entrepreneurial professionals from the vocational technical education institutions as shaven below.

Table 1

Oil companies – production Output

Daily averages and percentage contribution in 2005

<table>
<thead>
<tr>
<th>Company</th>
<th>Quantity (bbls)</th>
<th>Average production (bbl/d)</th>
<th>Percentage contribution (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell</td>
<td>337,435,655</td>
<td>924,481</td>
<td>36.72</td>
</tr>
<tr>
<td>Mobil</td>
<td>209,841,101</td>
<td>574,907</td>
<td>22.83</td>
</tr>
<tr>
<td>Chevron</td>
<td>127,393,127</td>
<td>349,022</td>
<td>13.86</td>
</tr>
<tr>
<td>Elf</td>
<td>79,597,071</td>
<td>218,074</td>
<td>8.66</td>
</tr>
<tr>
<td>Naoc/Phillips</td>
<td>62,263,035</td>
<td>170,584</td>
<td>6.78</td>
</tr>
<tr>
<td>Addax</td>
<td>23,813,968</td>
<td>65,244</td>
<td>2.59</td>
</tr>
<tr>
<td>NPDC/AENR</td>
<td>19,900,957</td>
<td>54,523</td>
<td>2.17</td>
</tr>
<tr>
<td>Continental Oil</td>
<td>13,241,057</td>
<td>36,277</td>
<td>1.44</td>
</tr>
<tr>
<td>NAE</td>
<td>11,330,731</td>
<td>31,043</td>
<td>1.23</td>
</tr>
<tr>
<td>Pan Ocean</td>
<td>8,631,714</td>
<td>23,649</td>
<td>0.94</td>
</tr>
<tr>
<td>Moni Pulo</td>
<td>5,794,198</td>
<td>15,875</td>
<td>0.63</td>
</tr>
<tr>
<td>Texaco</td>
<td>5,469,970</td>
<td>14,988</td>
<td>0.60</td>
</tr>
<tr>
<td>AENR</td>
<td>4,317,081</td>
<td>11,828</td>
<td>0.47</td>
</tr>
<tr>
<td>EPGA /CONNOCO</td>
<td>2,918,248</td>
<td>7,995</td>
<td>0.32</td>
</tr>
<tr>
<td>NPDC</td>
<td>2,025,562</td>
<td>5,549</td>
<td>0.02</td>
</tr>
<tr>
<td>SNEPCO</td>
<td>1,566,520</td>
<td>4,292</td>
<td>0.17</td>
</tr>
<tr>
<td>Cavendish Petroleum</td>
<td>1,408,276</td>
<td>3,858</td>
<td>0.15</td>
</tr>
<tr>
<td>Company</td>
<td>Sales (in billions)</td>
<td>Profit (in billions)</td>
<td>Profit Margin (%)</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------</td>
<td>----------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>AMNI</td>
<td>839.956</td>
<td>2.301</td>
<td>0.09</td>
</tr>
<tr>
<td>CONOIL</td>
<td>726.530</td>
<td>1.990</td>
<td>0.08</td>
</tr>
<tr>
<td>ATLAS</td>
<td>163.979</td>
<td>449</td>
<td>0.02</td>
</tr>
<tr>
<td>Dubri</td>
<td>152.701</td>
<td>418</td>
<td>0.02</td>
</tr>
<tr>
<td>Niger Delta Pet. Res.</td>
<td>141.028</td>
<td>386</td>
<td>0.02</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>918.972.465</strong></td>
<td><strong>2.517.733</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>


**Table 2**

**Global oil Demand by Region**

(Millions of bbl/d, except where otherwise noted)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>25.43</td>
<td>25.34</td>
<td>0.09</td>
<td>4.0</td>
<td>3.3</td>
</tr>
<tr>
<td>Europ</td>
<td>16.30</td>
<td>16.33</td>
<td>-0.03</td>
<td>-2.1</td>
<td>1.3</td>
</tr>
<tr>
<td>OECD Pacific</td>
<td>8.63</td>
<td>8.53</td>
<td>0.10</td>
<td>1.2</td>
<td>-1.8</td>
</tr>
<tr>
<td>China</td>
<td>6.59</td>
<td>6.43</td>
<td>0.16</td>
<td>2.5</td>
<td>15.2</td>
</tr>
<tr>
<td>Other Asia</td>
<td>8.72</td>
<td>8.56</td>
<td>0.16</td>
<td>1.9</td>
<td>6.3</td>
</tr>
<tr>
<td>Former Soviet Union</td>
<td>3.80</td>
<td>3.76</td>
<td>0.04</td>
<td>1.1</td>
<td>4.7</td>
</tr>
<tr>
<td>Middle East</td>
<td>5.91</td>
<td>5.62</td>
<td>0.29</td>
<td>5.2</td>
<td>6.6</td>
</tr>
<tr>
<td>Afrika</td>
<td>2.90</td>
<td>2.81</td>
<td>0.09</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Latin America</td>
<td>4.99</td>
<td>4.86</td>
<td>0.13</td>
<td>2.7</td>
<td>4.1</td>
</tr>
<tr>
<td>World</td>
<td>83.25</td>
<td>82.23</td>
<td>1.02</td>
<td>1.2</td>
<td>3.8</td>
</tr>
</tbody>
</table>

**Source: International Energy Agency**

**Table 3**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present daily output</td>
<td>More than 2.3 million bbl/d</td>
</tr>
<tr>
<td>Perspective output by 2012</td>
<td>4 Million bbl/d</td>
</tr>
<tr>
<td>Crude oil reserves</td>
<td>35.87 million bbl (2006)</td>
</tr>
<tr>
<td>Natural gas reserves</td>
<td>5’229 trillion M³ (2006)</td>
</tr>
<tr>
<td>Gas flaring</td>
<td>To be eliminated by 2008</td>
</tr>
<tr>
<td>Major export regions 2005</td>
<td>North America, Europe’ Asia &amp; far East</td>
</tr>
<tr>
<td>Crude oil exports</td>
<td>32.2 bn $ (2006)</td>
</tr>
<tr>
<td>Crude refining capacity</td>
<td>445’000 bbl/d (2006)</td>
</tr>
<tr>
<td>Net Natural Gas Exports</td>
<td>12.6 bn m³ (2006)</td>
</tr>
</tbody>
</table>
Table 4

| Major Terminals | Bonny island, Brass River Escravos, Forcados, Odudu, Pennington, Qua (Kwa) Iboe |
| Major oil Fields | Cawthorn Channel, Edop, Ekulama, Escravos Beach, Forcados Yorki, Jones Creek, Meren, Nembe, Okan, Oso, ubit |
| Major Foreign Oil Company Involvement | British Gas, BP, Chevrotaxco, Deminex, ENI/Agip, ExxonMobil, Petrobras, Shell, Statoil, Sun Oil, Tenneco, Total S.A |
| Refineries | Rivers State (150’000 bbl/d) Warri (118’750 bbl/d) Kaduna (110’000 bbl/d) Alesa Eleme (60’000 bbl/d) |


Table 5


The Concept of Entrepreneurship

Entrepreneurship simply means self-employment, and in the private sector of the economy, the key operator is mostly associated with the word entrepreneurship; he is called the coordinator, decision maker, risk bearer, manager, innovator, organizer, initiator, and so on. Anele (2004) noted that entrepreneurship is not limited to any cultural, geographical or racial groups or the only preserve of large or small enterprises. The entrepreneur ranges from the ordinary peasant farmer, palm wine taper, oil miller to the highly altitude business men and
women engaged in small, medium and large scale industrial, commercial and agricultural enterprises with modern and sophisticated technologies. In order words, there is not a particular type of person who becomes an entrepreneur. In the words of Emeruwa (2004), “an entrepreneur sees an enterprise before it is established, conceives it, establishes it, keeps it alive and has the power of death over it”. This signifies that partnership or companies, an individual, a group of persons or family operators are usually the entrepreneurs, because human beings perform the above functions, as individuals or as a group.

Osuala, (1998) stressed that an entrepreneur is the person who carries out the functions of an enterprise. According to them, there are three types of entrepreneur: they are;

a. The traditional entrepreneur: This type is conservative and only practices what his predecessors had practiced in certain fields in the past.

b. The adaptive entrepreneur: This type only applies to existing tools in organizing, using and controlling economic activities.

c. The innovative entrepreneur: this is the person who creates things anew in a manner that revolutionizes an organization of productive factor to the advantage of societies.

In pointing out some characteristics that are common to most successful entrepreneurs, Olaitan (1996) argued that reasonable risks, self confidence, hard work, patience, tenacity, stability, accepting success or failure of one’s work, setting plans for goals as well as initiatives are some of the characteristics of entrepreneurs.

**Effect of Entrepreneurship on Poverty Reduction**

According to Hwang and Powell (2000) cited in Maduagwu (2005), entrepreneurship refers to the creation and growth of new and small businesses driven by the desire for reward; the term also denotes the desire for independence, self-realization and creative activity. Entrepreneurship can be said to negatively correlate with poverty. That is, an increase in entrepreneurship will lead to a decrease in poverty. Entrepreneurship has positively affected the level of poverty prevalence by helping in reducing poverty considerably. Some of the positive effects of entrepreneurship on the level of poverty are:

i. It leads to creation of more jobs, thereby reducing the rate of unemployment in the economy.

ii. Boosts the Gross Domestic Product (GDP) and Gross National Product (GNP) of a country.

iii. Leads to an improvement in social well being and standard of living of the people in a community or country.

iv. Leads to the availability of more goods and services at an affordable rate and.

v. Can also boost the level of economic growth and development in a country.

Some of the factors that could hinder the success or growth of entrepreneurship in a country according to Amali (1996) are inadequate finance, infrastructural constraints, inadequate and incompetent manpower, or implementation of government policies, poor manpower training and development, entrepreneur’s personal problems and identifying and satisfying the real needs and wants of the customers.
Taking into account the measures taken by government to ensure that poor and less-privileged Nigerians have access to micro credit facilities especially with the aim of encouraging them to set up their own businesses, Asumbe (2001) argued that the government is aware of the impact of microfinance and microfinance banks especially on entrepreneurial activities. Indeed, it should be noted that the creation of microfinance banks is in itself a growth strategy to increase the volume of entrepreneurial involvement in Nigeria. Some of the effects of the existence of microfinance banks on entrepreneurial growth are:

(i) Economic Empowerment of the poor
(ii) Employment Generation and Poverty Reduction

The baseline economic survey of Small and Medium Industries (SMIs) in Nigeria conducted in 2004 indicate that the 6,498 industries covered, employed a little over one million workers. Considering the fact, that about 18.5 million (28% of the available work force) Nigerians were unemployed, the employment objective and role of the SMIs was far from being reached. One of the hallmarks of the National Economic Empowerment and Development Strategy (NEEDS) is the empowerment of the poor and the private sector, through the provision of needed financial services, to enable them engage or expand their present scope of economic activities and generate employment. Delivering needed services as contained in the strategy have been remarkably enhanced through additional channels, which the microfinance bank framework has provided. Further, they have assisted the Small and Medium Industries in raising their productive capacity and level of employment generation.

Government and allied oil and gas prospecting companies in the area should fully integrate the host communities in their poverty reduction programs. These may include building and rehabilitation of schools, primary health care services, community water supply, adult literacy classes, food security and nutrition, family planning, reconstruction and rehabilitation of roads, provision and maintenance of electricity to the rural populace, free and basic community education, skill acquisition center and vocational training institutions to empower the youths of the area in provision and creation of jobs for rural inhabitants which can reduce tension, unemployment and other social vices in the Niger Delta areas. The provision of these could improve the living standards of the rural populace of the areas.

Improvement in human capabilities through training of extension workers is another way poverty can be reduced in the Niger Delta areas. Agbamu (2006) posited that agricultural and vocational knowledge among rural dwellers are in a bid to equip them with capabilities, which can enhance their production activities. He further stated that higher productivity is attainable by using more knowledge in the production process. To face the challenges that poverty raises, governments, firms, educational institutions and society at large must be acknowledged and the transition to a more inclusive and equitable knowledge economy requiring long-term commitment. The task at hand is not only to promote social and political acceptance of the private sector participation in issues of exclusion and poverty reduction, but also to generate social awareness of a problem that is incumbent on us all. The latent capacity of the poor for entrepreneurship would be significantly enhanced through the provision of microfinance services to enable them engage in economic activities and be more self-reliant; increase employment opportunities, enhance household income, and create wealth.

Since the 1980s, Non-Governmental Organizations (NGOs) have emerged in Nigeria to champion the cause of the micro and rural entrepreneurs, with a shift from the supply-led
approach to a demand driven strategy, An example of a programme, which has been created by the Nigerian government to reduce poverty, is the National Poverty Eradication programme (NAPEP) with the mandate of providing financial services to alleviate poverty, but much success has not been recorded. Therefore the place of entrepreneurship will be much more appreciated in The Niger Delta. Over the years, with the development of entrepreneurship, people are moving from the poverty line on the provision line mark. Graduates are encouraged not to roam about the streets after earning a degree that has not fetched them a job; they are now encouraged to go about creating something of value, and making their services available for use by the general public. In the present era of entrepreneurial development, even secondary school students want to partake and not to be left out. Some of these college students start making things with their hands, and they sell them to their schoolmates. They make beads, bags, and other little trade to help their parents in their own little way. These young ones in their own way are reducing the impending poverty that might want to attack them in later years, because of lack of employment.

Vocational Technical Education and Poverty Alleviation
The usefulness of vocational technical education is inestimable as it stretches from an individual to the society at large. Olaintan (1996) buttresses this fact by concluding that apart from individuals being the primary beneficiaries of vocational/technical education, the nation is usually the fundamental beneficiary of this form of education. In other words, vocational/technical education serves as an excellent instrument of making positive change in individuals’ life and the society at large. Thus, vocational/technical education alleviates poverty in so many ways such as:

- Training millions of young people and adults to participate in the world of work. Its development has included a move from apprenticeship method in beginning to full-time vocational/technical schools and then to vocational education programmes in public high schools.

- Reduces the rate of unemployment amongst the citizenry. Many educated Nigerians are neither self-employed nor unemployed by the government. In fact, technological and industrial development would have been stimulated through the production of competent or capable workers who would have utilized available materials to develop the country. In other words, this form of education can be reduced drastically. It enables individuals to acquire the skills needed to make them become employed or be self-employed after graduation.

- Major effort of alleviating youth unemployment and dropout in Nigeria has been initiated via vocational/technical education programmes by the Federal, State and Local Governments. Education programmes of the Federal and State Governments include the establishment of polytechnics and mono-technic colleges. The ultimate aim of establishing such institutions is to provide youths with saleable skills, which will enable them not only become employable, but to establish their own industries and business.
• It refines individual’s attitude to work. This is because a person with expertly acquired skills sees himself/herself as someone who is hard working to make money in order to live comfortably. In other words, individuals now see the dignity in labour, which encourages the feelings that the skills acquired quantities living comfortably.

• Vocational/technical education encourages both cognitive and psychomotor skills for useful things in the society.

Technical vocational education and training (TVET) have been recognized the world over as tools for alleviating poverty and enhancing technological development. Therefore, the salvation of Nigeria in general and Niger Delta States in particular, in the 21st century depends to a great extent on sound, relevant and functional TVET. This is so because TVET provide skills necessary for self employment and creating employment for others. UNESCO (2002) defined TVET as those aspects of the educational process involving in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of the economic and social life. TVET exists in three forms namely;

i. Formal TVET
ii. Informal TVET
iii. Non formal TVET

The formal TVET are those programmes offered in secondary schools, technical colleges, polytechnics, universities among others, while informal TVET are the apprenticeship programs run by roadside mechanics, herbal medical practitioners, blacksmithing and others. Non formal TVET are those programmes designed, run and managed by private and public organizations for the purpose of addressing specific needs such as NITEL training school Oshodi, PAN Training school among others aims at;

1. Producing semi skilled and technical manpower necessary to restore, revitalize, energize, operate and sustain the national economy and substantially reduce unemployment.
2. Providing technical and vocational education that is broad-based in nature accommodating at all periods of life without discrimination or bias on grounds of sex, intellectual talents and aptitudes, physical disabilities or culture, religion and ideology;
3. Serving as a means of national defence against poverty brought about by lack of job skills;
4. Reforming the content of technical and vocational education to make it more responsive to the socio-economic needs of the country;
5. Harmonizing and inter-relate with industry and the labour market in terms of resources for training as well as production standards;
7. Enhancing access to technical and vocational education programs at all levels of the education system;

In order to achieve these objectives, the FGN in the master plan for the development of TVET in Nigeria from 2001-2010 recommended the following priority areas:

1. Getting all Nigerian youths (boys and girls) to benefit. TVET aims at increasing access by a minimum 30% to achieve reduction in gender imbalance by 50%; achieve 50% public enlightenment on the value of TVET and restructure informal TVET.

2. Provision of learning experiences (curriculum) that would ensure that beneficiaries of TVET scheme have job skills for solving many Nigeria socio-economic problems by the provision of equipment to Polytechnics and Technical Colleges for accreditation, review of TVET curriculum to make it more functional, increase the number of qualified TVET teachers among others.

3. Provision of conducive environment that will ensure that students derive maximum benefits from TVET (These include training of 20,000 teachers for technical colleges, 10,000 for polytechnics, rehabilitation of classrooms and workshop facilities among others.

4. Preparation of new breed of teachers that will translate the new vision of technical and vocational education into action in classrooms, laboratories and other places of learning. The action plan include rehabilitation of existing teacher education institutions and establishment of new Universities of Science and Technology, Teacher Education and giving better salary remuneration to teachers among others.

5. Improving the status of TVET institutions: The action plan include greater emphasis to construction and production courses rather than service works, granting criteria and autonomy to polytechnics and colleges of education to run degree and ending discrimination in employment between polytechnics and university graduates.

6. Academic and Professional Progression: The action plan includes integration of informal TVET into formal TVET, elimination of gender bias in TEVT, promoting vocational guidance and counseling in secondary schools among others.

7. National Assessment and Certification: The action plan includes transformation of NABTEB into National Authority for Vocational Qualification, adoption of common curricular for TVET institutions and assessment and certification of craftsmen, and artisans.

8. Monitoring, Research and Evaluation: The action plan includes establishment of presidential Task Force to monitor the implementation of the action plan.

Conclusion

This paper recognized the value of entrepreneurship in every economy and the need for sustainable skills acquisition by men and women. An increase in entrepreneurship will create wealth and growth of new and small businesses and help in reducing poverty. Be that as it may, while we acknowledge the fact that the master plan on TVET development in Nigeria from 2001 to 2010 is a work well done, it is the author’s considered opinion that the plan is a myth rather than a reality because even the Federal Government has not implemented the key
recommendations of the master plan which include one model technical college in each state of the federation by Federal Government as well as by the state and local governments. Again, one observes that the following matters are arising in the implementation of the plan and the development of TVET in the Niger Delta States.

1. The numbers of TVET institutions are few as compared to general education schools. This makes it difficult to increase access rate to 50% by 2010.
2. Enrollment of students into TVET programmes is still on the low side despite all the measures taken over the years.
3. Female enrolment into TVET programme is still on the low side as compared to their male counterparts. This makes it difficult to reduce gender imbalance to 30% by 2010.
4. Teacher recruitment, deployment and retention is still one of the major challenges of TVET in the Niger Delta as some of the teachers have never attended any workshop, conference, or industrial attachment in the North since employed.
5. The Informal TVET in the Niger Delta is still not integrated into formal TVET thus rendering it unrecognized.
6. Data on informal and formal TVET are scanty which makes it difficult for any effective repositioning of the system.

The salvation of the Niger Delta in particular and Nigeria in general depends on sound and functioning TVET. It seems the master plan on the development of TVET from 2001-2010 is a wild dream in which the Federal Government itself has not been able to implement 30% of the recommendations of the master plan at the end of the decade 2010.

Recommendations

(1) Government should establish functional technical and vocational education institutions for the training of skilled technicians
(2) Oil and Gas companies should partner with government in the business of development of entrepreneurial skills for professionals in the economy.
(3) Those in authority in Nigeria should wake up and provide uninterrupted electrical power if entrepreneurial skills development and employment amongst the citizenry is to be achieved.
(4) Further investment in the area of the development of oil and Gas fields should be pursued vigorously to enhance this sector of the economy.
(5) There is need for government and oil companies to integrate their host communities in poverty reduction programmes to reduce hostility.
Reference:


GLOBAL ECONOMIC CRISIS: A CHALLENGE TO THE ENTREPRENEURSHIP DEVELOPMENT OF TECHNICAL VOCATIONAL EDUCATION AND TRAINING IN OIL AND GAS SECTOR OF THE NIGERIAN ECONOMY

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Abstract
The paper attempts to evaluate the Global economic crisis and the challenges to entrepreneurship development of technical vocational education and training in oil and Gas sector of the Nigerian economy. Effects of the global melt down in the economies of developed countries of the world and its chain-link action has gradually enveloped the entire world economy. This development impacted negatively on the Nigerian economy coupled with the Niger delta crisis that has drastically affected oil and gas production and development of new fields with its attendant consequences. Accordingly, vocational and technical education institutions that undertake training of technicians in such enterprise as welders, electricians, pipe fitters including safety experts were affected as a result of global melt down, constraining the oil and gas companies from engaging the services of Technical Vocational Education and Training Professionals (TVET) in the energy sector.
Introduction

The global economic crisis in recent times can be likened to the great depression in the Second World War. Its impact is so overwhelming that the economies of the major countries were all affected not without a significant cost to the tax payers in those nations. Gradually, its ripples and Chain-link effect actually enveloped the entire global economy, affecting financial houses, industries, mortgages and in-fact the cost of providing social services experienced deep constrain. The oil and gas industry which are the major energy providers driving the global economy was it-self undergoing these global constrains. In Nigeria, its effect was immediately felt, coupled with local distress in the polity, especially the Niger-Delta crisis which drastically affected oil and gas production and development of new fields and its attendant infrastructural provision difficulties. The development of new fields and the provision of infrastructures are the concern of the technical and vocational education institutions in the area of training of oil and gas professionals that depend upon them to drive its activities. Thus the financial crisis being experienced globally has also affected the Nigerian oil and gas industries in terms of investing in human capacity development in anticipation of production of new oil fields. Vocational technical education institutions that undertake the training of technicians in such enterprises as welders of different categories, electricians, pipe fitters and safety experts are all affected as a result of the global economic melt down which has constrained the oil and gas companies from engaging the services of TVET professionals in the energy sector.

NIGERIA AND ENERGY

Nigeria and energy have been synonymous for the last fifty years, and with good reasons. Nigeria is the largest oil producer in Africa historically (OPEC, 2005), oil and gas have been the chief contributors to this economic sector; oil in particular accounts for nearly 90 percent of total foreign exchange of Nigerian revenue (FOS, 2001). It is not a surprise that since the mid-20th century, energy production has been essential to Nigeria’s economic stability and growth. But with the global demand for energy seemingly growing by the day, Nigeria’s leaders are not only investing in tried-and true oil and gas production but also aggressively pursuing alternative sources to ensure the country continues to play a leading role on the international stage (NNPC, 2002).

Nigeria is, above all, rich in “black gold”, while crude oil reserve estimates vary, many believe them to be approximately 35.2 billion barrels, a figure expected to grow with future drilling and appraisals (NNPC, 2002). Industry experts estimate daily production at 2.6 million barrels a day. Most of Nigeria’s crude oil production, comprising 10 major crude streams, is light sweet crude, with a low sulphur content; much of it comes from small fields in the swamps of the Niger Delta, and its product is exported through seven terminals and a number of floating production vessels (DPR, 2001).

The upstream sector is dominated by joint venture operations, run by major multinational companies such as Shell, Total, Agip, Exxon Mobil and chevron accounting for 95 percent of Nigeria’s crude oil production (NNPC, 2001).

According to NNPC (2003), the government has awarded several private indigenous companies concessions over the past three years, and three-Amni International, Dubri Oil
limited and Consolidated Oil has already begun production. Moni Pulo, Obekpa Petroleum and Chrome Energy are three of the biggest success stories of Nigeria’s growing base of indigenous companies. Moni Pulo found early success with the Abana Oil Fields in the Gulf of Guinea shortly after forming. Further Obekpa, a subsidiary of the Obekpa Group, has made it a point to team up with international companies such as Devon Energy; which is regarded as a rising player domestically. Lastly, Chrome Energy found its niche with the Nigeria Sao Tome & Principe Joint Development Zone, having recently secured preferential oil blocks in that area (NNPC, 2005).

DPR (2004) opined that domestic marketers comprise fewer than 30 percent of downstream market share, while the major international marketers boast the rest. The government faces challenges in the downstream sector—such as a lack of resources to efficiently manage the aging infrastructure and a “non-commercial pricing environment”. Accordingly, it is encouraging further private sector participation in the sub-sector.

With proven natural gas reserves believed to total a staggering 185tn cubic feet, Nigeria has one of the top ten natural gas endowments in the world (OPEC, 2007). The country has ambitious plans to raise earnings from natural gas exports to half of all oil revenues by 2010, and Nigeria is the world’s second-largest source of LNG by as early as 2008 (FOS, 2003). Experts attribute much of this marked increase in economic growth to increased liquefied natural gas (LNG) production, which the government has aggressively pursued via the Nigeria Liquefied Natural Gas project, which was started in 1989 and is jointly owned by the Nigerian National petroleum corporation and three other international oil companies with local affiliates. Besides being better suited to meet the world’s growing demand for natural gas than traditional gas, LNG provides better access to under utilized natural gas resources and reduces natural gas’ volume by 600 percent, making it more economical to transport between continents (FME, 2004). Additionally, it is clean-burning, which could help decrease gas flaring in Nigeria. In addition to oil and gas production, Nigeria has made it a priority to develop alternative energy sources.

Consequently, in analyzing the effect of this global trend on the economy, the researchers relied on squirrel data on the production profile of all the major oil and gas companies in Nigeria and how it has affected entrepreneurship development especially with regards to developing entrepreneurial professionals from the vocational technical education institutions as shaven below.

<table>
<thead>
<tr>
<th>Company</th>
<th>Quantity (bbls)</th>
<th>Average production (bbl/d)</th>
<th>Percentage contribution (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell</td>
<td>337’435’655</td>
<td>924’481</td>
<td>36.72</td>
</tr>
</tbody>
</table>

Table 1
Oil companies – production Output
Daily averages and percentage contribution in 2005
<table>
<thead>
<tr>
<th>Company</th>
<th>Shares</th>
<th>Market Value</th>
<th>P/E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobil</td>
<td>209,841,101</td>
<td>574,907</td>
<td>22.83</td>
</tr>
<tr>
<td>Chevron</td>
<td>127,393,127</td>
<td>349,022</td>
<td>13.86</td>
</tr>
<tr>
<td>Elf</td>
<td>79,597,071</td>
<td>218,074</td>
<td>8.66</td>
</tr>
<tr>
<td>Naoc/Phillips</td>
<td>62,263,035</td>
<td>170,584</td>
<td>6.78</td>
</tr>
<tr>
<td>Addax</td>
<td>23,813,968</td>
<td>65,244</td>
<td>2.59</td>
</tr>
<tr>
<td>NPDC/AENR</td>
<td>19,900,957</td>
<td>54,523</td>
<td>2.17</td>
</tr>
<tr>
<td>Continental Oil</td>
<td>13,241,057</td>
<td>36,277</td>
<td>1.44</td>
</tr>
<tr>
<td>NAE</td>
<td>11,330,731</td>
<td>31,043</td>
<td>1.23</td>
</tr>
<tr>
<td>Pan Ocean</td>
<td>8,631,714</td>
<td>23,649</td>
<td>0.94</td>
</tr>
<tr>
<td>Moni Pulo</td>
<td>5,794,198</td>
<td>15,875</td>
<td>0.63</td>
</tr>
<tr>
<td>Texaco</td>
<td>5,469,970</td>
<td>14,988</td>
<td>0.60</td>
</tr>
<tr>
<td>AENR</td>
<td>4,317,081</td>
<td>11,828</td>
<td>0.47</td>
</tr>
<tr>
<td>EPGA /CONNOCO</td>
<td>2,918,248</td>
<td>7,995</td>
<td>0.32</td>
</tr>
<tr>
<td>NPDC</td>
<td>2,025,562</td>
<td>5,549</td>
<td>0.02</td>
</tr>
<tr>
<td>SNEPCO</td>
<td>1,566,520</td>
<td>4,292</td>
<td>0.17</td>
</tr>
<tr>
<td>Cavendish Petroleum</td>
<td>1,408,276</td>
<td>3,858</td>
<td>0.15</td>
</tr>
<tr>
<td>AMNI</td>
<td>839,956</td>
<td>2,301</td>
<td>0.09</td>
</tr>
<tr>
<td>CONOIL</td>
<td>726,530</td>
<td>1,990</td>
<td>0.08</td>
</tr>
<tr>
<td>ATLAS</td>
<td>163,979</td>
<td>449</td>
<td>0.02</td>
</tr>
<tr>
<td>Dubri</td>
<td>152,701</td>
<td>418</td>
<td>0.02</td>
</tr>
<tr>
<td>Niger Delta Pet. Res.</td>
<td>141,028</td>
<td>386</td>
<td>0.02</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>918,972,465</strong></td>
<td><strong>2,517,733</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>


**Table 2**

Global Oil Demand by Region
(Millions of bbl/d, except where otherwise noted)

<table>
<thead>
<tr>
<th>Region</th>
<th>Demand</th>
<th>Annual Change</th>
<th>Percent 2005</th>
<th>Percent 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>25.43</td>
<td>-0.09</td>
<td>0.4</td>
<td>3.3</td>
</tr>
<tr>
<td>Europ</td>
<td>16.30</td>
<td>-0.03</td>
<td>-0.2</td>
<td>1.3</td>
</tr>
<tr>
<td>OECD Pacific</td>
<td>8.63</td>
<td>-0.10</td>
<td>1.2</td>
<td>-1.8</td>
</tr>
<tr>
<td>China</td>
<td>6.59</td>
<td>0.16</td>
<td>2.5</td>
<td>15.2</td>
</tr>
<tr>
<td>Other Asia</td>
<td>8.72</td>
<td>0.16</td>
<td>1.9</td>
<td>6.3</td>
</tr>
<tr>
<td>Former Soviet Union</td>
<td>3.80</td>
<td>0.04</td>
<td>1.1</td>
<td>4.7</td>
</tr>
<tr>
<td>Middle East</td>
<td>5.91</td>
<td>0.29</td>
<td>5.2</td>
<td>6.6</td>
</tr>
<tr>
<td>Afrika</td>
<td>2.90</td>
<td>0.09</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Latin America</td>
<td>4.99</td>
<td>0.13</td>
<td>2.7</td>
<td>4.1</td>
</tr>
<tr>
<td>World</td>
<td>83.25</td>
<td>1.02</td>
<td>1.2</td>
<td>3.8</td>
</tr>
</tbody>
</table>

**Source:** International Energy Agency

**Table 3**

Present daily output | More than 2.3 million bbl/d
Perspective output by 2012 | 4 Million bbl/d
---|---
Crude oil reserves | 35.87 million bbl (2006)
Natural gas reserves | 5’229 trillion M$3 (2006)
Gas flaring | To be eliminated by 2008
Major export regions 2005 | North America, Europe, Asia & far East
Crude oil exports | 32.2 bn $ (2006)
Crude refining capacity | 445’000 bbl/d (2006)
Net Natural Gas Exports | 12.6 bn m$3 (2006)

**Table 4**

<table>
<thead>
<tr>
<th>Major Terminals</th>
<th>Bonny island, Brass River Escravos, Forcados, Odudu, Pennington, Qua (Kwa) Iboe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major oil Fields</td>
<td>Cawthorn Channel, Edop, Ekulama, Escravos Beach, Forcados Yorki, Jones Creek, Meren, Nembe, Okan, Oso, ubit</td>
</tr>
<tr>
<td>Major Foreign Oil Company Involvement</td>
<td>British Gas, BP, Chevron, ExxonMobil, Petrobras, Shell, Statoil, Sun Oil, Tenneco, Total S.A</td>
</tr>
<tr>
<td>Refineries</td>
<td>Rivers State (150’000 bbl/d) Warri (118’750 bbl/d) Kaduna (110’000 bbl/d) Alesa Eleme (60’000 bbl/d)</td>
</tr>
</tbody>
</table>


**Table 5**


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The Concept of Entrepreneurship

Entrepreneurship simply means self-employment, and in the private sector of the economy, the key operator is mostly associated with the word entrepreneurship; he is called the coordinator, decision maker, risk bearer, manager, innovator, organizer, initiator, and so on. Anele (2004) noted that entrepreneurship is not limited to any cultural, geographical or racial groups or the only preserve of large or small enterprises. The entrepreneur ranges from the ordinary peasant farmer, palm wine taper, oil miller to the highly altitude business men and women engaged in small, medium and large scale industrial, commercial and agricultural enterprises with modern and sophisticated technologies. In order words, there is not a particular type of person who becomes an entrepreneur. In the words of Emeruwa (2004), "an entrepreneur sees an enterprise before it is established, conceives it, establishes it, keeps it alive and has the power of death over it". This signifies that partnership or companies, an individual, a group of persons or family operators are usually the entrepreneurs, because human beings perform the above functions, as individuals or as a group.

Osuala, (1998) stressed that an entrepreneur is the person who carries out the functions of an enterprise. According to them, there are three types of entrepreneur: they are;

d. The traditional entrepreneur: This type is conservative and only practices what his predecessors had practiced in certain fields in the past.
e. The adaptive entrepreneur: This type only applies to existing tools in organizing, using and controlling economic activities.
f. The innovative entrepreneur: this is the person who creates things anew in a manner that revolutionizes an organization of productive factor to the advantage of societies.

In pointing out some characteristics that are common to most successful entrepreneurs, Olaitan (1996) argued that reasonable risks, self confidence, hard work, patience, tenacity, stability, accepting success or failure of one’s work, setting plans for goals as well as initiatives are some of the characteristics of entrepreneurs.

Effect of Entrepreneurship on Poverty Reduction

According to Hwang and Powell (2000) cited in Maduagwu (2005), entrepreneurship refers to the creation and growth of new and small businesses driven by the desire for reward; the term also denotes the desire for independence, self-realization and creative activity. Entrepreneurship can be said to negatively correlate with poverty. That is, an increase in entrepreneurship will lead to a decrease in poverty. Entrepreneurship has positively affected the level of poverty prevalence by helping in reducing poverty considerably. Some of the positive effects of entrepreneurship on the level of poverty are:

vi. It leads to creation of more jobs, thereby reducing the rate of unemployment in the economy.
vii. Boosts the Gross Domestic Product (GDP) and Gross National Product (GNP) of a country.
viii. Leads to an improvement in social well being and standard of living of the people in a community or country.
ix. Leads to the availability of more goods and services at an affordable rate and.

x. Can also boost the level of economic growth and development in a country.

Some of the factors that could hinder the success or growth of entrepreneurship in a country according to Amali (1996) are inadequate finance, infrastructural constraints, inadequate and incompetent manpower, or implementation of government policies, poor manpower training and development, entrepreneur’s personal problems and identifying and satisfying the real needs and wants of the customers.

Taking into account the measures taken by government to ensure that poor and less-privileged Nigerians have access to micro credit facilities especially with the aim of encouraging them to set up their own businesses, Asumbe (2001) argued that the government is aware of the impact of microfinance and microfinance banks especially on entrepreneurial activities. Indeed, it should be noted that the creation of microfinance banks is in itself a growth strategy to increase the volume of entrepreneurial involvement in Nigeria. Some of the effects of the existence of microfinance banks on entrepreneurial growth are:

(i) Economic Empowerment of the poor

(ii) Employment Generation and Poverty Reduction

The baseline economic survey of Small and Medium Industries (SMIs) in Nigeria conducted in 2004 indicate that the 6,498 industries covered, employed a little over one million workers. Considering the fact, that about 18.5 million (28% of the available work force) Nigerians were unemployed, the employment objective and role of the SMIs was far from being reached. One of the hallmarks of the National Economic Empowerment and Development Strategy (NEEDS) is the empowerment of the poor and the private sector, through the provision of needed financial services, to enable them engage or expand their present scope of economic activities and generate employment. Delivering needed services as contained in the strategy have been remarkably enhanced through additional channels, which the microfinance bank framework has provided. Further, they have assisted the Small and Medium Industries in raising their productive capacity and level of employment generation.

Government and allied oil and gas prospecting companies in the area should fully integrate the host communities in their poverty reduction programs. These may include building and rehabilitation of schools, primary health care services, community water supply, adult literacy classes, food security and nutrition, family planning, reconstruction and rehabilitation of roads, provision and maintenance of electricity to the rural populace, free and basic community education, skill acquisition center and vocational training institutions to empower the youths of the area in provision and creation of jobs for rural inhabitants which can reduce tension, unemployment and other social vices in the Niger Delta areas. The provision of these could improve the living standards of the rural populace of the areas.

Improvement in human capabilities through training of extension workers is another way poverty can be reduced in the Niger Delta areas. Agbamu (2006) posited that agricultural and vocational knowledge among rural dwellers are in a bid to equip them with capabilities, which can enhance their production activities. He further stated that higher productivity is attainable by using more knowledge in the production process. To face the challenges that poverty raises, governments, firms, educational institutions and society at large must be acknowledged and the transition to a more inclusive and equitable knowledge economy requiring long-term commitment. The task at hand is not only to promote social and political
acceptance of the private sector participation in issues of exclusion and poverty reduction, but also to generate social awareness of a problem that is incumbent on us all. The latent capacity of the poor for entrepreneurship would be significantly enhanced through the provision of microfinance services to enable them engage in economic activities and be more self-reliant; increase employment opportunities, enhance household income, and create wealth.

Since the 1980s, Non-Governmental Organizations (NGOs) have emerged in Nigeria to champion the cause of the micro and rural entrepreneurs, with a shift from the supply-led approach to a demand driven strategy. An example of a programme, which has been created by the Nigerian government to reduce poverty, is the National Poverty Eradication programme (NAPEP) with the mandate of providing financial services to alleviate poverty, but much success has not been recorded. Therefore the place of entrepreneurship will be much more appreciated in The Niger Delta. Over the years, with the development of entrepreneurship, people are moving from the poverty line on the provision line mark. Graduates are encouraged not to roam about the streets after earning a degree that has not fetched them a job; they are now encouraged to go about creating something of value, and making their services available for use by the general public. In the present era of entrepreneurial development, even secondary school students want to partake and not to be left out. Some of these college students start making things with their hands, and they sell them to their schoolmates. They make beads, bags, and other little trade to help their parents in their own little way. These young ones in their own way are reducing the impending poverty that might want to attack them in later years, because of lack of employment.

**Vocational Technical Education and Poverty Alleviation**

The usefulness of vocational technical education is inestimable as it stretches from an individual to the society at large. Olaintan (1996) buttresses this fact by concluding that apart from individuals being the primary beneficiaries of vocational/technical education, the nation is usually the fundamental beneficiary of this form of education. In other words, vocational/technical education serves as an excellent instrument of making positive change in individuals’ life and the society at large. Thus, vocational/technical education alleviates poverty in so many ways such as:

- Training millions of young people and adults to participate in the world of work. Its development has included a move from apprenticeship method in beginning to full-time vocational/technical schools and then to vocational education programmes in public high schools.

- Reduces the rate of unemployment amongst the citizenry. Many educated Nigerians are neither self-employed nor unemployed by the government. In fact, technological and industrial development would have been stimulated through the production of competent or capable workers who would have utilized available materials to develop the country. In other words, this form of education can be reduced drastically. It enables individuals to acquire the skills needed to make them become employed or be self-employed after graduation.
Major effort of alleviating youth unemployment and dropout in Nigeria has been initiated via vocational/technical education programmes by the Federal, State and Local Governments. Education programmes of the Federal and State Governments include the establishment of polytechnics and mono-technic colleges. The ultimate aim of establishing such institutions is to provide youths with saleable skills, which will enable them not only become employable, but to establish their own industries and business.

It refines individual's attitude to work. This is because a person with expertly acquired skills sees himself/herself as someone who is hard working to make money in order to live comfortably. In other words, individuals now see the dignity in labour, which encourages the feelings that the skills acquired quantities living comfortably.

Vocational/technical education encourages both cognitive and psychomotor skills for useful things in the society.

Technical vocational education and training (TVET) have been recognized the world over as tools for alleviating poverty and enhancing technological development. Therefore, the salvation of Nigeria in general and Niger Delta States in particular, in the 21st century depends to a great extent on sound, relevant and functional TVET. This is so because TVET provide skills necessary for self employment and creating employment for others. UNESCO (2002) defined TVET as those aspects of the educational process involving in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of the economic and social life. TVET exists in three forms namely;

iv. Formal TVET
v. Informal TVET
vi. Non formal TVET

The formal TVET are those programmes offered in secondary schools, technical colleges, polytechnics, universities among others, while informal TVET are the apprenticeship programs run by roadside mechanics, herbal medical practitioners, blacksmithing and others. Non formal TVET are those programmes designed, run and managed by private and public organizations for the purpose of addressing specific needs such as NITEL training school Oshodi, PAN Training school among others aims at;

9. Producing semi skilled and technical manpower necessary to restore, revitalize, energize, operate and sustain the national economy and substantially reduce unemployment.
10. providing technical and vocational education that is broad-based in nature accommodating at all periods of life without discrimination or bias on grounds of sex, intellectual talents and aptitudes, physical disabilities or culture, religion and ideology;
11. serving as a means of national defence against poverty brought about by lack of job skills;
12. reforming the content of technical and vocational education to make it more responsive to the socio-economic needs of the country;
13. Harmonizing and inter-relate with industry and the labour market in terms of resources for training as well as production standards;
15. Enhancing access to technical and vocational education programs at all levels of the education system;

In order to achieve these objectives, the FGN in the master plan for the development of TVET in Nigeria from 2001-2010 recommended the following priority areas:

9. Getting all Nigerian youths (boys and girls) to benefit. TVET aims at increasing access by a minimum 30% to achieve reduction in gender imbalance by 50%; achieve 50% public enlightenment on the value of TVET and restructure informal TVET.
10. Provision of learning experiences (curriculum) that would ensure that beneficiaries of TVET scheme have job skills for solving many Nigeria socio-economic problems by the provision of equipment to Polytechnics and Technical Colleges for accreditation, review of TVET curriculum to make it more functional, increase the number of qualified TVET teachers among others.
11. Provision of conducive environment that will ensure that students derive maximum benefits from TVET (These include training of 20,000 teachers for technical colleges, 10,000 for polytechnics, rehabilitation of classrooms and workshop facilities among others.
12. Preparation of new breed of teachers that will translate the new vision of technical and vocational education into action in classrooms, laboratories and other places of learning. The action plan include rehabilitation of existing teacher education institutions and establishment of new Universities of Science and Technology, Teacher Education and giving better salary remuneration to teachers among others.
13. **Improving the status of TVET institutions:** The action plan include greater emphasis to construction and production courses rather than service works, granting criteria and autonomy to polytechnics and colleges of education to run degree and ending discrimination in employment between polytechnics and university graduates.
14. **Academic and Professional Progression:** The action plan includes integration of informal TVET into formal TVET, elimination of gender bias in TEVT, promoting vocational guidance and counseling in secondary schools among others.
15. **National Assessment and Certification:** The action plan includes transformation of NABTEB into National Authority for Vocational Qualification, adoption of common curricular for TVET institutions and assessment and certification of craftsmen, and artisans.
16. **Monitoring, Research and Evaluation:** The action plan includes establishment of presidential Task Force to monitor the implementation of the action plan.
Conclusion

This paper recognized the value of entrepreneurship in every economy and the need for sustainable skills acquisition by men and women. An increase in entrepreneurship will create wealth and growth of new and small businesses and help in reducing poverty. Be that as it may, while we acknowledge the fact that the master plan on TVET development in Nigeria from 2001 to 2010 is a work well done, it is the author’s considered opinion that the plan is a myth rather than a reality because even the Federal Government has not implemented the key recommendations of the master plan which include one model technical college in each state of the federation by Federal Government as well as by the state and local governments. Again, one observes that the following matters are arising in the implementation of the plan and the development of TVET in the Niger Delta States.

7. The numbers of TVET institutions are few as compared to general education schools. This makes it difficult to increase access rate to 50% by 2010.
8. Enrolment of students into TVET programmes is still on the low side despite all the measures taken over the years.
9. Female enrolment into TVET programme is still on the low side as compared to their male counterparts. This makes it difficult to reduce gender imbalance to 30% by 2010.
10. Teacher recruitment, deployment and retention is still one of the major challenges of TVET in the Niger Delta as some of the teachers have never attended any workshop, conference, or industrial attachment in the North since employed.
11. The Informal TVET in the Niger Delta is still not integrated into formal TVET thus rendering it unrecognized.
12. Data on informal and formal TVET are scanty which makes it difficult for any effective repositioning of the system.

The salvation of the Niger Delta in particular and Nigeria in general depends on sound and functioning TVET. It seems the master plan on the development of TVET from 2001-2010 is a wild dream in which the Federal Government itself has not been able to implement 30% of the recommendations of the master plan at the end of the decade 2010.

Recommendations

(6) Government should establish functional technical and vocational education institutions for the training of skilled technicians
(7) Oil and Gas companies should partner with government in the business of development of entrepreneurial skills for professionals in the economy.
(8) Those in authority in Nigeria should wake up and provide uninterrupted electrical power if entrepreneurial skills development and employment amongst the citizenry is to be achieved.
(9) Further investment in the area of the development of oil and Gas fields should be pursued vigorously to enhance this sector of the economy.
(10) There is need for government and oil companies to integrate their host communities in poverty reduction programmes to reduce hostility.
Acknowledgement

This paper benefitted from earlier works in this area which were immense foundation on which this one rests. I am grateful to authors whose works I cited in the process of writing this paper.
Reference:


of Nigerian Vocational association, Nssuka.


