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- ▶ **Theme: Europe at a crossroads - The challenge for future sustainable development.**

- ▶ ***Title: Exploring the Challenge for Sustainable Development in Energy Sector: Sociomaterial View of the British and Nigerian cases.***
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Outline of this presentation

- ▶ Introduction

- ▶ Sustainable Development: The Global Challenge

A reflection on United Kingdom energy sector

A reflection on Nigeria energy sector and the United Nations millennium goals for Nigeria

- ▶ Theoretical foundations for Sustainable Development –

Appreciative Inquiry Theory and

The Sociomateriality Theory

- ▶ Research Methodology (The two streams of research on technology and organisation)

- ▶ Findings and Analysis

Discussions: The North and South divide on SD

The case for UK and Nigeria energy sectors on sustainable development

- ▶ Conclusion and Future Research



This presentation will tend to explore:

- The recent challenges to Sustainable development within the energy sector looking at two distinct countries as (North and South) – UK and Nigeria as case studies.
- And to offer an appreciative systematic lens of sustainable development.
- The Sociomateriality concept to shed more light on the intimacy between social/organisational context and the resource – based / material context of sustainable development.



Introduction

According to (Srinivas, 2015) sustainable development is seen as the ability to maintain a delicate balance between the human needs. To improve a level of lifestyle and a feel of well-being. To preserve, conserve and also maintain the natural resources and the environment on which the future and present generation depend upon. But in contrast to this, the activities of man, technological development and pressure on the environment over the years have been a major challenge to world leaders and organisations on sustainable development.

It will be worthwhile to briefly listen to the links below as a teaser:

<https://www.youtube.com/watch?v=yV2EK2bMgwk>

<https://www.youtube.com/watch?v=XAi3VTSdTxDU>



Sustainable Development: The global challenge

Sustainable development as a global phenomena, focuses on four major factors such as; economy, social, environment and good governance. The energy sector is believed to be vital to the development and growth of countries of the world.

In recent times, there have been a continued and enormous pressure on the environment resulting to the current issues on climate change. This as a major global challenge has resulted to various concerns to attaining future sustainable development across the globe. Various agreements and deals have also been reached at one time or the other by world leaders and organisations.

A good example is the recent United Nations Climate Change Conference COP 21 held in Paris in 30th November to 11th December, 2015. Where a major deal was brokered by representatives from over 190 countries of the world (Harvey, 2015).



- **A reflection on UK's Energy sector**

British energy sector have been committed to the sustainability agenda, aiming to make a positive contribution to global concerns on sustainable development and environment. The annual league table in the United Kingdom (UK) lists a range of initiatives put in place to reduce the sector's environmental impact on the environment. Further to the submissions of the SD Commission publication on the UK (SDC UK, 2006) government becoming a greener energy economy in 2010, they analysed the progress made so far. Despite the slow pace for change, improvements in the energy sector.

- **A reflection on Nigeria's Energy sector**

Okolobah and Ismail (2013) described Nigeria as a country endowed with numerous natural resources in energy. With a population of over 150 million has an installed capacity of 8,000MW of electricity producing 4,242.7MW and unable to provide adequate energy supply for its citizen. Having been plagued with epileptic and erratic power supply over the past two decades resulting in slow economic growth and sustainability.

► **Theoretical foundations for sustainable development**

A systemic framework for SD is needed as a guide for all the regions, localities and countries alike to structure the framework and tailor it to their social, economic, environmental and biotechnological requirements. SD was theorised using complexity theory (Sabau, 2010). Whilst contributing to this body of knowledge Thatchenkery et al. (2010) stated a special call for studies that conceptualise SD using the so called Appreciative Inquiry Theory (AIT).

- **Appreciative Inquiry theory:** This is a systemic approach that enhances human reorientation from a resource-based view of SD to value-driven SD. AIT emphasises sustainable design and reinforces the ecosystems that create sustainable value across the board.
- **The Sociomateriality theory:** This is synonymous to the socio-technical conceptualisation. This concept was vague until Orlikowski (2007) investigated this phenomenon to understand the entanglement of the social and the material artefacts (e.g. technology, managerial technologies, devices, cognitive schemes and symbols) in everyday life.

Research Methodology

Our study explored the challenges of SD in the power sector and revealed the North-South contextual divide. We also investigated the key influencing factors that affect the success/failure of SD strategies in both the UK and Nigeria. Using an interpretative approach and qualitative data collection methods (namely, semi-structured interviews and survey) we gathered evidence of the social/governance, economic, environmental and technical factors that shape SD in the UK and Nigeria.

- ▶ **Phase I** aimed to identify if the power companies (in both the UK and Nigeria) follow institutional strategies for SD. In doing this, semi-structured interviews helped to evaluate the current status, explore the key factors that affect SD projects and focus on the most successful companies in the field. This phase included 24 interviews with supply chain managers, of which 6 work in the UK.
- ▶ **Phase II** aimed to explore the key challenges and potential solutions set by companies in both the UK and Nigeria. This phase offered a deep insight into current SD projects in two Nigerian companies and five British power suppliers. The survey was allocated to 30 participants in each company with an 85% response rate.

► **Findings & Analysis:**

- British providers, 92% emphasised that SD is a major tool for socio-economic development, while 89% of Nigerian providers confirmed that the national concern of SD was slow over the last decade.
- British experts, 90% saw SD as a process that balances between the present and future generations.
- The government developed variant strategies for lowering carbon emissions and called for more dependency on fossil fuel and renewables to keep such balance.
- While in Nigeria, 75% reported a variety of challenges such as poor government policies, lack of standards and poor procedures leading to poor service delivery in the sector, and in the country in general.

► **Discussions: The North and South divide on Sustainable development.**

- The issue of the North-South divide is a socioeconomic gap between the developing and developed contexts.
- Lieven (2001) uncovered the biotechnology boundaries between the north and south to raise the third pillar of environmental sustainability.
- In Therien's (1999) view, today's inequalities, deprivation, exploration, exploitation of the developing nations and their natural endowments without considering the environmental impact. This impedes on SD.

The case for UK and Nigeria energy sectors

- ▶ According to recent publication in Ernest and Young 2014, the UK's energy sector has been a major contributor to the UK economy and in 2013, its total economic impact was £96 billion which makes up about 6 percent of the GDP of UK; also creating a lot of job opportunities across the country which explains how the sector is to the prosperity and stability of the UK economy.
- ▶ Nigeria is ranked the second in natural gas after Algeria while petroleum export is the main hub of the country's economy with the current crude oil reserve about 35.5 billion barrels. Nigeria also has other sources of energy as tar sand, coal and lignite, bitumen and uranium deposits. In spite of all these daring records of its endowments, the country has been experiencing power deficits in production, distribution of its electricity, as a result of inefficient technology, poor management, poor standards and procedures and its high demand and over-exploitation of its natural resources by the north.

► **Conclusion and Future Research**

Our research have today offered a new lens for sustainable development and a review of both of Europe and Africa sustainability in its energy sector. The evidence provided shows that energy efficiency and renewable energy technologies are very prominent in the overall agenda for sustainable development whether local, national, regional or global. Also, it shows that SD is a quadratic bottom line process that should be iterative and social constructed by public-private stakeholders. Key challenges found are; poor governance, employees satisfaction, technological infrastructure, organisational resistance, and affordability. However, they exist with varying degrees in Nigeria and the UK. Our research offered a new conceptual lens of SD based on Sociomateriality.

THANK YOU FOR LISTENING !!!