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A G D I Working Paper

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Corporate Social Responsibility Initiatives in Nigeria and Rural Women Livestock Keepers in Oil Host Communities¹

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Research Department

Corporate Social Responsibility Initiatives in Nigeria and Rural Women Livestock Keepers in Oil Host Communities**Joseph I. Uduji & Elda N. Okolo-Obasi**

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Abstract

Purpose – The purpose of this paper is to critically examine the multinational oil companies' (MOCs) corporate social responsibility (CSR) initiatives in Nigeria. Its special focus is to investigate the impact of the global memorandum of understanding (GMOU) on rural women livestock keepers in the oil producing communities.

Design/methodology/approach – This paper employs a quantitative methodology. Data were collected from primary sources using participatory rural appraisal (PRA) technique. The use of participatory research technique in collecting CSR impact data especially as it concerns the small-scale women livestock keeper is based on the fact that it involves the people being studied, and their views on all the issues are paramount. The primary tool used for household survey (collection of the primary data) is a structured questionnaire which is divided into two sections. Section one of the instrument elicited information on the socio-economic characteristics of respondent, while the other section elicited information on the research questions. Both descriptive and inferential statistics were used to analyze the data so as to answer the research questions and test the hypothesis. To answer the research questions, descriptive statistics of measurement of central tendency was used, and the results were presented in tables and charts. While in testing the hypothesis, inferential statistical tool-estimation of logit model (of receipt and non-receipt of MOCs CSR through the GMOU by rural women livestock keepers as function of selected socio-economic and domestic empowerment variables) was used.

Findings – The findings shows that GMOU model is gender insensitive as rural women rarely have direct access to livestock interventions except through their husband or adult sons; which is attributed to the cultural and traditional context of the people, anchored in beliefs, norms and practices that breed discrimination and gender gap in the rural societies.

Research limitations/implications - The structured questionnaire was directly administered by the researchers with the help of local research assistants. The use of local research assistants was because of the inability of the researchers to speak the different local languages and dialects of the many ethnic groups of Ijaws, Ogonis, Ikwere, Etches, Ekpeyes, Ogbas, Engennes, Obolos, Isokos, Nembes, Okirikas, Kalabaris, Urhobos, Iteskiris, Igbos, Ika-Igbos, Ndonis, Orons, Ibenos, Yorubas, Ibibios, Anangs, Efiks, Bekwarras, Binis, Eshans, Etsakos, Owans, Itigidis, Epies, Akokoedos, Yakkurs, etc, in the sampled rural communities.

Practical implication – If the rural women do not feel GMoUs efforts to eliminate discrimination and promote equality in the livestock sector, feminized poverty would create a hostile environment for MOCs in the region.

Social implication – The livestock development in Nigeria can only succeed if CSR is able to draw on all the resources and talents, and if rural women are able to participate fully in the GMoUs intervention plans and programmes.

Originality/value – This research contributes to gender debate in livestock keeping from CSR perspectives in developing countries and rational for demands for social projects by host communities. It concludes that business has an obligation to help in solving problems of public concern, and that CSR priorities in Africa should be aimed towards addressing the peculiarity of the socio-economic development challenges of the country and be informed by socio-cultural influences.

Keywords: Gender, livestock keepers, corporate social responsibility, multinational oil companies, Nigeria.

Paper type Research paper.

1. Introduction

Globally, women play important roles in livestock keeping and provision of livestock services. It is estimated that women constitute two-third of the 400 million livestock keepers who live in rural areas and rely mainly on livestock for their income (FAO, 2011). Women may have peculiar needs and constraints related to livestock production system, as ownership of livestock could be particularly attractive and important in regions where cultural norms limit their access to land and mobility. In Africa, the gender gap could even be wider and the situation more complex due to the cultural and traditional context anchored in beliefs, norms and practices that breed discrimination and feminized poverty (World Bank/ FAO/IFAD, 2009). There is growing evidence that the number of women in Africa living in poverty has increased disproportionately to that of men (AFDB, 2015). Women's participation in the livestock keeping has increased however at the same time women's domestic workloads have not declined (IFAD, 2009). Rural women in Africa have continued to be primarily responsible for such activities as the care of children and the elderly members of the household, cooking and cleaning, fetching water and firewood, and managing the household in general (Tipilda and Kristjanson, 2008). This is especially true of the rural Niger Delta women in Nigeria who do not have the resources to hire additional labour to take over some of the household responsibilities when they engage in livestock activities (Uduji and Okolo-Obasi, 2017).

In Nigeria's Niger Delta region, decades of oil spillage and gas flaring as well as rapidly growing in migration to urban areas has meant that livestock production as a source of livelihood are no

longer viable or has experienced significant decline (Idemudia, 2014). However, the multinational oil companies (MOCs) invest in social projects and programmes in these communities of Niger Delta, where the oil is mainly extracted in Nigeria. The initial investments were in agricultural development programmes in the early sixties and have grown over the years to include health care, roads and civil infrastructure, water projects, small business and education, which could benefit the host communities (Chevron, 2014). Over the years, the MOCs have improved on how they engage with local communities to deliver these projects. In 2006, MOCs introduced a new way of working with communities called the Global Memorandum of Understanding (GMOU). The GMOUs represent an important shift in approach, placing emphasis on more transparent and accountable processes, regular communication with the grassroots, sustainable and conflict prevention (SPDC, 2013).

Notwithstanding, scholars such as Idemudia (2010), Edoho (2008), Frynas (2009), Akpan (2006), Tuodolo (2009), Uduji and Okolo-Obasi (2017) and others have argued that the corporate social responsibility (CSR) of MOCs in the region is not far reaching or deeply entrenched. Thus, it has been contended that some of these CSR initiatives are not benefiting the grassroots (Amaeshi *et al*, 2006). Arguably, despite the adoption of various CSR mechanisms by MOCs in Nigeria, the oil-producing communities have received a proportionately low amount of benefit compared to the high social and environmental costs of extractive activities (Lisk, Besada and Martin, 2013). In spite of the minimal contributions of CSR to the region, many rural communities still suffer from various ills including gas flaring, oil spillage and violence amongst others. On the other hand, Ite (2007), Eweje (2006), Lompo and Trani (2013), Renouard and Lado (2012) support CSR initiatives, arguing that CSR is making some progress in the area of local community initiatives in Nigeria. To further elucidate these assertions, Eweje (2006) illustrated that it is becoming increasingly apparent to MOCs that pollution prevention pays while pollution does not, and under pressure from stakeholder groups, MOCs now routinely incorporate impact assessments into their corporate strategy.

Meanwhile, the traditional livestock systems based on local resources and animal breeds are major source of livelihood for the rural families, and provide food and income for the rural poor's in the oil producing communities of Niger Delta. Although all household members are involved in livestock production, the cultural norms of gender discrimination in GMOUs participation appears to limit women access to resources, rights and services; while male livestock keepers have better access to participate in the Cluster Development Boards (CDBs) of the GMOUs in the

region. Hence, this paper contributes to gender debate in livestock keeping by assessing empirical evidence from CSR perspective in two areas that have received much attention in the literature:

- i. What is the level of multinational oil companies' CSR investment in livestock sector development in Niger Delta region?
- ii. Do GMoUs interventions of multinational oil companies' impact on rural women livestock keepers in Niger Delta region?

Study Hypothesis

In the rural areas of oil producing communities of Niger Delta in Nigeria, traditional systems and cultural norms have made it difficult for women to accumulate valuable assets such as farming lands; whereas livestock has emerged as an alternative form of wealth for the rural women. However, the women's rights over their livestock remained insecure, perhaps because they often acquire livestock through relatively informal means, such as inheritance or gifts from their husbands or adult sons that participate fully in the GMoUs intervention plans and programmes of the multinational oil companies. Thus, we hypothesize that CSR interventions of MOCs which could be of great benefit in securing women's right to livestock has not reduced the gender gap in the livestock production sector.

The further content of this paper is structured as follows. Section 2 considers the context of rural women in sub-Saharan Africa. Section 3 reviews gender and livestock production. Section 4 provides the African conceptualization of CSR. Section 5 presents the Global Memorandum of Understanding (GMoU) mechanism. Section 6 describes the theoretical perspective. Section 7 explains the methodology. Section 8 provides the main findings and their implications. Finally, section 9 concludes with policy.

2. The context of rural women in sub-Saharan Africa

Africa is the world's second largest continent after Asia. It has a total surface area of 30.3 million km² (figure 1), including several islands, and an estimated total population of 888 million (African Development Report, 2015). The vast Saharan Desert divides North Africa from sub-Saharan Africa. More than 70 percent of the continent's poor people live in rural areas and depend majorly on agriculture for food and livelihood (African Competitiveness Report 2017). The majority of the poor are women, and they live mostly in rural areas, and they are the continent's major agricultural producers (Uduji and Okolo-Obasi, 2018a). However, they have

continued to be hampered by lack of rights, resources and economic opportunities (AFDB, 2015). Despite the women predominating in the agricultural sector, credit and land ownership has historically been directed to the male head of the household to the detriment of gender equality in agricultural development in Africa (Anyanwu *et al*, 2016). The inequality in property and inheritance customary rules have pose ample threat to the women in the region, with devastating effects on property rights violations, including poverty, disease, violence and homeless (Uduji and Okolo-Obasi, 2018b; Yngstrom, 2010).



Figure 1. Nigeria in the Continent of Africa.

In sub-Saharan Africa, violence begins with gender bias at birth with ceremonies which attach lesser value to girls and continues through early childhood marriage, whereby young girls, as young as 8 years old are given away to husbands and become pregnant at early puberty (McFerson, 2010). So young mothers have not had the time to finish their own physical growth and as a result there is a competition in nutrition between the fetus and the young mother, leading to nutritional deficiency for the mother and the baby (Bold, *et al*, 2015). In rural Africa, young divorced mothers often have no other livelihood except to migrate to the urban centers to be employed as domestic servants; as the status of divorced women is very low because of their lack of economic support from the husband (Peterman, 2011). The rural women have no customary right to share the family property with husband in the case of divorce (Fafchamps and Quisumbing, 2010). They leave the home with a few of their personal belongings without any means of social security (Doss, 2014). The parents often consider divorced daughters an added economic burden, so most are not welcome back, and are reduced to destitution (Ossome, 2014;

Verma, 2014; Nadasen, 2012). In Nigeria, in particular, a lack of collateral among rural women has been a major hindrance to accessing credit from formal financial institution for small-scale trading, smallholder farming, artisanal fishing, and ownership of livestock (Uduji and Okolo-Obasi, 2018a; Olowu, 2012). In rural Niger Delta, women are served by informal money lenders, who generally provide easy access to credit but at a higher cost, charging the poor rural women borrowers' nominal monthly effective interest rates that typically range from about 10 percent to more than 100 percent (Uduji and Okolo-Obasi, 2018b). It is against this backdrop, that this paper argue that CSR has not reduce the gender gap in livestock production sector in oil producing communities of Niger Delta region of Nigeria.

3. Gender and livestock production

Livestock are one of the largest non-land assets in rural asset portfolios that are widely owned by rural households and perform multiple functions (ILRI, 2005). Livestock constitute a popular productive asset with high expected returns through offspring, sale or consumption of products, and their use in the farming system. In spite of two-third of the world's more than 600 million poor livestock keepers being rural women, little research has been conducted on the role of rural women in livestock keeping and the opportunities that livestock-related interventions could offer the women (ILRI, 2012). Livestock has been described as an asset that women can own more easily, and that have the potential to contribute to a reduction in the gender asset gap within households (ILRI, 2008). In rural Africa, it is often easier for women to acquire livestock assets, whether through inheritance, markets, or collective action processes, than it is for them to purchase land, or physical assets, or to control other financial assets (Water-Bayer and Letty, 2010). However, the relative informality of livestock property right can be disadvantageous to women when their ownership of the animals is challenged (Bravo-Baumann, 2000). Therefore, interventions that increase rural women's access and rights to livestock, and then safeguard the women from dispossession, and from theft or untimely death, could help them move along a pathway out of poverty (Grace, 2007; Yisehak, 2008; Kristjanson *et al*, 2007).

In Nigeria, although women are involved in and may control production, they often do not own the means of production - namely, livestock, land and water (Ogunniyi *et al*, 2015). Often, too, women lack access to the services and input delivery systems in the livestock production, which are mostly male, dominated (Olojede and Njoku, 2007). This lack of access and control are often attributed to cultural norms which deny women rights beyond usufructs rights to resources - land,

animals and water – and right to decision-making (Arowolo and Bankole-Oye, 2014). FAO (2011) argues that if women were to have access to the same level of resource as men, agricultural productivity would go up by 10-30 percent and agricultural output would increase by up to 4 percent. According to Ogunjimi *et al* (2012) Nigerian women are more likely to be considered the owners of small livestock compared to large livestock, and to have a say in the disposal and sale of these and their products, and in the use of income accrued from the sales. Despite their role in livestock production, rural women's control has traditionally declined when production has increased and products are marketed through organized groups such as cooperatives, whose membership is often predominantly men (Ogunniyi *et al*, 2015). Studies in the crop sector have shown that the types of products and distance to markets could influence the level of control that rural women have over those products and the income derived from their sale (African Women Development Fund, 2013). According to Ampofo *et al* (2004) addressing gender in sub-Saharan Africa means identifying, understanding the relevance of, and addressing the different livelihood needs, priorities, interests and constraints of men and women along the lines of age, ethnicity, socio-economic status and ability. Hence, this paper contributes to the gender debate in livestock keeping by assessing empirical evidence from CSR perspective of multinational oil companies in Niger Delta, Nigeria.

4. African conceptualization of CSR

The challenge for corporate social responsibility in African countries could be said to be framed by a vision that was distilled in 2000 into the millennium Development Goals of a world with less poverty, hunger and disease, greater survival prospects for mothers and their infants, better educated children, equal opportunities for women, and a healthier environment (UN, 2006). Unfortunately, these global aspirations appear to have remained far from being met in sub-Saharan African countries. Amaeshi *et al* (2006) argue that Nigerian concept of CSR is remarkably different from the Western version, and should be aimed towards addressing the peculiarity of the socio-economic development challenges of the country and be inform by socio-cultural influences. Hence, philanthropic initiatives as CSR by companies are prevalent in Nigeria. Thus, in African countries, the absence of government action in providing amenities for its citizens accentuates the role of multinationals in CSR, but philanthropy is not regarded as CSR in Western countries (Frynas, 2009). Muthuri (2012), relying on the extant literature on CSR in Africa posited that the CSR issue prevalent in Africa include poverty reduction, community development, education and training, economic and enterprise development, health and

HIV/AIDs, environment, sports, human rights, corruption and governance and accountability. Thus, for this study, we operationally define CSR in the context of African conceptualization, and critically focus on gender disparities in Nigeria.

5. The global memorandum of understanding (GMoU) mechanism

A GMoU is a written statement between MOCs and a group (or cluster) of several communities. Clusters are based on local government or clan/historical affinity lines as advised by the relevant state government (Ite, 2007). The governing structures are well defined, with a 10-person Community Trust, a Cluster Development Board (CDB) and a steering committee chaired by the State Government. The CDB functions as the main supervisory and administrative organ, ensuring implementation of projects and setting out plans and programmes. It is the decision-making committee, and the GMoU enables representatives of state and local governments, MOCs, non-profit organizations (such as development NGOs) to come together under the auspices of the CDB as the governing body (SPDC, 2013; Uduji & Okolo-Obasi, 2017). Under the terms of the GMoUs, the communities decide the development they want while MOCs provides secure funding for five years, ensuring that the communities have stable and reliable financing as they undertake the implementation of their community development plans. MOCs also provide access to development experts to oversee project implementation and build the capacity of the CDBs to grow into functional community development foundations. This system replaces the previous approach whereby MOCs agreed to hundreds of separate development projects with individual communities and managed them directly and separately (Chevron, 2014; Uduji *et al*,2018).

In spite of the transparency and accountability in the GMoU model that provides a good platform for other local and international donor agencies to fund development projects directly through the CDBs, MOCs operating in the Niger Delta have continue to face the challenge of how to determine the success or failure of their CSR initiative either in terms of its effect on community development or its impacts on corporate community relations. To address this problem, MOCs

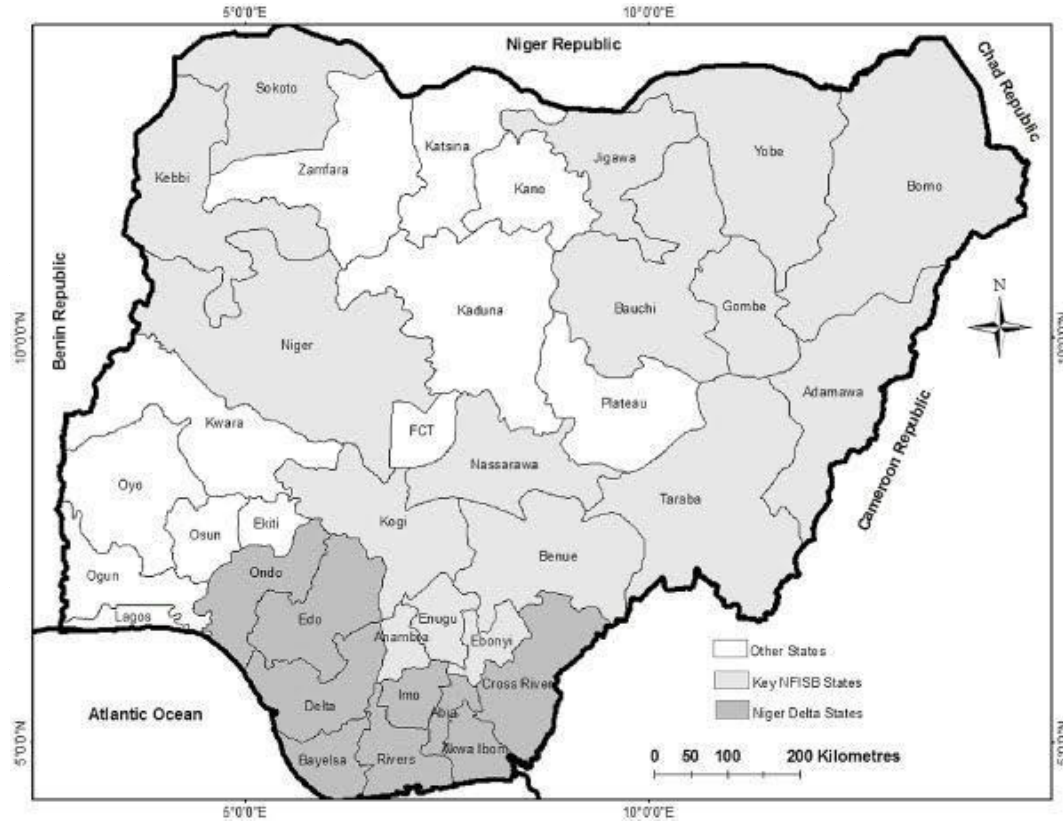


Figure 2: Constituents administrative states of the Niger Delta, Nigeria.

Idemudia and Osayande (2008) narrated that the specific objectives of SCOTDI include providing a framework for ranking GMoU clusters, provoking healthy rivalries among the GMoU clusters through capacity building interventions, business value expectations, and reputation enhancement opportunities. Shell (2013) describes the criteria for SCOTDI Assessment as follows: Transparency and Accountability (the extent to which GMoU processes especially the institution is open to scrutiny and provides information on its activities to its stakeholders); Inclusiveness and Participation (the creation of equal opportunities for the entire community to participate in the development process, and address marginalization and exclusion of vulnerable groups in benefit distribution); Governance and Democracy (the manner in which power is exercised in the management of the economic and social resources, and adherence to laid down procedure); Business Climate (the enabling environment for MOCs to operate and its alignment with strategic priorities); Progress and Sustainability (the deployment of innovation in project execution, capacity to implement quality projects, alignment of projects to felt need, diversity and growth in funding). Thus, drawing heavily from SCOTDI, we conceptually develop the suitable criteria for analyzing the opinion of rural women livestock keepers' towards GMoUs interventions in Niger Delta region (Figure 2).

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6. Theoretical perspective

Though this paper settled for quantitative methodology, we viewed the outcome from Visser (2006) analogy. Visser used the exploration of CSR in Africa to challenge the accuracy and relevance of Carrolls (1991) CSR Pyramid. Probably, Carroll's CSR Pyramid is the most well-known model of CSR, with its four levels indicating the relative importance of economic, legal, ethical and philanthropic responsibility respectively. Most critically, Visser's Africa's CSR Pyramid suggests that the relative priorities of CSR in Africa are likely to be different from the classic, American ordering. However, his finding remains speculative and provocative and would therefore benefit from further empirical research. This paper sought to view the quantitative outcome through the lens of Africa's CSR Pyramid in determining the importance of cultural context for appropriate CSR priorities and programmes in rural Nigeria oil producing communities. Amaeshi *et al* (2006) have also argued that the Nigerian conception of CSR should be remarkably different from the Western standard/expectations of CSR. Muthuri (2012) also posited that CSR in Africa should include poverty reduction programmes. Hence, we presume that a CSR initiative that eliminate discrimination and promote equality in livestock sector in Africa has huge potential to increase agricultural production and ultimately reduce feminized poverty in the continent growing population.

7. Methodology

The study adopts quantitative methodology, as a contribution given the paucity of quantitative works in the region (Lompo & Trani, 2013; Uduji & Okolo-Obasi, 2017; Uduji *et al*, 2018). The survey research technique was used with the aim of gathering cross-sectional information from a representative sample of the population. It is essentially cross-sectional that describes and interprets what exists in the area.

7.1. Study area

Table 1 captures the area of study with the current trend in the oil host communities of the Niger Delta region as at 2017.

Table 1: Demographic characteristics of oil producing communities in Niger Delta

State	2006 Population	Size of the State in KM ²	Major Ethnic group	Violence Level	% Oil Production	Location of Oil	MOCs	Movement Group
Akwa Ibom	3,902,051	8,412 Km ²	Ibibio, Anang and oron	Significant	45	Off shore	Exxon Mobile, Shell, Agip	MEND, IWAAD, Afigh, Ekid, Niger Delta Avengers
Abia	2,881,380	5,834 km ²	Igbo	Moderate	10	Off shore/ On Shore	Shell, Agip, Total	IPOB, MASSOB, Niger Delta Avengers
Bayelsa	1,704,515	10,773 km ²	Ijaw, Nembe, Ogbia and Epie-Atissa	High	40	Off shore/ On Shore	Exxon Mobile, Shell, Agip, Total	MEND, IYC, Delta Avengers
Cross River	2,892,988	13,564 Km ²	Ibibio, Anang and oron, Yakkur Ogoja, Itigidi	Moderate	12	Off shore/ On Shore	Shell, Agip, Total	MEND, IWAAD, Ekid Delta Avengers
Delta	4,112,445	16,842 Km ²	Urhobo, Ijaw, Isoko, Itsekiri, and Anioma	High	38	Off shore/ On Shore	Shell Chevron, Total	IYC, Itsekiri Youth Council, Urhobo Economic foundation, MEND, Niger Delta Avengers
Edo	3,233,366	14,825 Km ²	Benin, Ishan, Akokoedo, Etsako, Esan Owan	Low	18	Off shore/ On Shore	Shell, Agip, Total	Egbesu, MEND, Niger Delta Avengers
Imo	3,927,563	5,100 km ²	Igbo, Ndoni	Moderate	10	Off shore/ On Shore	Shell, Agip, Total	IPOB, MASSOB, Niger Delta Avengers
Ondo	3,460,877	12,432 Km ²	Ijaw, Yoruba, Epie-Atissa	Moderate	10	Off shore/ On Shore	Shell Chevron, Total	OPC, MEND, Niger Delta Avengers
Rivers	5,198,716	11,077	Ndoni, Ijaw & Ikwere, Ogoni	High	40	Off shore/ On Shore	Shell Chevron, Total, Halliburton	MOSOP and MEND, Niger Delta Avengers
Total	21,044,081							

Source: Authors' compilation

7.2. *Sample size*

The sample size is determined using Taro Yamane's formula for finite population as in shown in equation 1 below.

$$n = \frac{N}{1+N(e+e)} \quad \text{Equation 1}$$

Where n = the sample size

N = total or finite population of the study area

e = level of significance (Limit of tolerable error)

1 = unity (constant)

The estimated total population of women in the Niger Delta area is 15,456,542 with about 65 percent of the women living in the rural communities and involved in livestock keeping. The estimated population of study is 10,046,753. The level of significant of the study is 5 percent (95 percent confidence level), e = 0.05 percent. Following the above formula, the sample size for the study determined was approximately 400. However, to enable us raise a wider opinion from the three major categories of respondents involved in the study (those who hold to the traditional systems and cultural norms of the people; those who are pro-gender; and those who are gender neutral), this formula derived size of 400 was multiplied by 3 to ensure that an adequate and inclusive sample size was determined for the investigation. Hence, the total sample size determined was 1,200.

7.3

Sampling procedure

The selection of the sample involved both purposive and simple random samplings. In the first stage, five states of Bayelsa, Delta, Imo, Ondo and Akwa Ibom were purposefully selected based on the perceived availability of female livestock keeper in the states. In stage 2, from each of the selected states, two local government areas (LGAs) were randomly selected, giving a total number of ten LGAs sampled in the study. In stage 3, from the selected LGAs, four communities each was randomly selected, giving a total of forty rural communities. Finally, with the help of community leaders and traditional rulers, thirty women livestock keepers were purposively selected from each rural community to get the 1,200 respondents used for the study.

7.4 *Data collection*

Data were collected from primary sources using participatory rural appraisal (PRA) technique. The use of participatory research technique in collecting CSR impact data especially as it concerns the small-scale women livestock keeper is based on the fact that it involves the people being studied, and their views on all the issues are paramount. The primary tool used for household survey (collection of the primary data) is a structured questionnaire which is divided into two sections. Section one of the instrument elicited information on the socio-economic characteristics of respondent, while the other section elicited information on the research questions. The structured questionnaire was directly administered by the researchers with the help of local research assistants. The use of local research assistants was because of the inability of the researchers to speak the different local languages and dialects of the many ethnic groups of Ijaws, Ogonis, Ikweres, Etches, Ekpeyes, Ogbas, Engennes, Obolos, Isokos, Nembes, Okirikas, Kalabaris, Urhobos, Iteskiris, Igbos, Ika-Igbos, Ndonis, Orons, Ibenos, Yorubas, Ibibios, Anangs, Efiks, Bekwarras, Binis, Eshans, Etsakos, Owans, Itigidis, Epies, Akokoedos, Yakkurs, etc, in the sampled rural communities.

7.5 Analytical framework

Data collected from respondents were subjected to series of treatment. Both descriptive and inferential statistics were used to analyze the data so as to answer the research questions and test the hypothesis. To answer the research questions, descriptive statistics of measurement of central tendency was used, and the results were presented in tables and charts. While in testing the hypothesis, inferential statistical tool-estimation of logit model (of receipt and non-receipt of MOCs CSR through the GMoU by rural women livestock keepers as function of selected socio-economic and domestic empowerment variables) was used. For binominal response variables, the logistic link which is the natural logarithm of the odds ratios is stated thus:

$$\log \left[\frac{p_i}{1 - p_i} \right] = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_k x_{ik}$$

Equation 2

The logit is thus the logarithms of the odds of success (the logarithm of the ratio of the probability of success to the probability of failure). *Hence, the linear logistic model of the impact of multinational oil company's CSR activities using GMoUs on **rural women empowerment through livestock production in the Niger Delta** was estimated using the equations below.*

To ascertain the impact of *multinational oil company's CSR on **rural women's empowerment through livestock production in the area*** decision about spending on family consumption, the model estimated is stated thus.

$$\text{Logit (WEP}_1) = \beta_0 + \beta_1 \text{GCSR} + \beta_2 \text{Age} + \beta_3 \text{PriOcc} + \beta_4 \text{HSize} + \beta_5 \text{Edu-1} + \beta_6 \text{OfFY} + \beta_7 \text{Edu-2} + \beta_8 \text{Exp/AKn} + \beta_9 \text{MS} + \beta_{10} \text{AKap} + \beta_{11} \text{Land} + \beta_{12} \text{Lown} + \mu$$

Equation 3

Where:

WEP₁ = Women empowerment through livestock in the area of spending on family consumption
(1 if yes, and 0 otherwise)

Also, WEP₂ is the estimation of the *impact of multinational oil company's CSR activities on rural women empowerment through livestock production in the area of* decision about sending children to school. The model is estimated thus:

$$\text{Logit (WEP}_2) = \beta_0 + \beta_1\text{GCSR} + \beta_2\text{Age} + \beta_3\text{PriOcc} + \beta_4\text{HSize} + \beta_5\text{Edu-1} + \beta_6\text{OfFY} + \beta_7\text{Edu-2} + \beta_8\text{Exp/AKn} + \beta_9\text{MS} + \beta_{10}\text{AKap} + \beta_{11}\text{Land} + \beta_{12}\text{Lown} + \mu$$

Equation 4

Where:

WEP₂ = Women empowerment through livestock in the area of the decision about sending children to school (1 if yes, and 0 otherwise)

Finally estimated also is, the *impact of multinational oil company's CSR activities on rural women empowerment through livestock production in the area of* decision about medical treatment of the children. The estimated model is thus:

$$\text{Logit (WEP}_3) = \beta_0 + \beta_1\text{GCSR} + \beta_2\text{Age} + \beta_3\text{PriOcc} + \beta_4\text{HSize} + \beta_5\text{Edu-1} + \beta_6\text{OfFY} + \beta_7\text{Edu-2} + \beta_8\text{Exp/AKn} + \beta_9\text{MS} + \beta_{10}\text{AKap} + \beta_{11}\text{Land} + \beta_{12}\text{Lown} + \mu$$

Equation 5

Where:

WEP₃ = Women empowerment through livestock in the area of the decision about medical treatment of the children (1 if yes, and 0 otherwise)

7.6 Explanatory variables

The study considered twelve variables which have direct bearing to determining the level of empowerment of the rural women livestock keepers. The variable represented as *GCSR* is the Multinational oil companies (MOCs)'s corporate social responsibility (CSR) using GMOU intervention received by the rural women valued in Nigeria naira (NGN). The actual variable considered here is investment in **rural women empowerment through livestock production** embarked upon by the MOCs using the GMOU as acknowledged by the rural women.

Age = Age of the rural woman livestock keeper; age has a major role to play as only the middle aged and younger women livestock farmers may be able to access the GMoU interventions. In line with the logit, (less than 40 =1 otherwise =0)

PriOcc = Primary occupation of the rural woman livestock keeper is very important as it determines how the respondent is either focused or distracted from proper management of the received support from GMoUs (full time =1, otherwise =0)

HHSize = Household size of the rural woman livestock keeper, which help in determining the level of hand available for work in the livestock and the amount of consumption that will be going on (1- 5 =1 otherwise = 0)

Edu-1 = Highest level of education of the rural woman livestock keeper, as empowerment of the rural women livestock keeper is highly collated with the level of literacy and the higher the respondent is educated the better for voicing out. (Literate =1, otherwise = 0)

MS = Marital status of the rural woman livestock keeper, which has a major role to play in access to other resources that is culturally gender sensitive or insensitive (married =1 otherwise = 0)

Edu-2 = Highest level of education of the rural woman livestock keeper's husband, as empowerment of women is easier with an educated husband (educate =1 and uneducated = 0)

OffFY = Off-farm income of the rural woman livestock keeper, other income source of the livestock keeper is very important covariant as it plays a major role in continuing in business in the absence of external help or even abandoning the business in the presence of surplus from the off farm income.

Lown = Livestock ownership by the respondent helps in determining the level of agitation and or doggedness to be included in the GMoUs. For women, purchase or receipt of a livestock does not necessarily imply ownership (1=owned ten and above, 0 = zero otherwise)

Exp/AKn = Farming experience of the rural woman livestock keeper, plays a key role in knowing how to manage the received resources to boost the livestock farming.

AKap = Access to capital; women generally lack collateral, decision-making power in the household and control over loans; GMoU product that is geared toward enhancing access to capital will make a lot of impact.

Land = Access to and ownership of land; *given the complexity of different tenure systems in Nigeria, Ownership of land, security of tenure is an important precondition for women's empowerment as the intensive agriculture/livestock farming requires a good expanse of land; access to land and ownership type is very crucial.*

**In this model, the main parameter of interest is β_1 in terms of sign and significance.*

8. Main findings and implications

8.1 Descriptive characteristics

The analysis of women livestock keepers begin with the description of some of their social (education), demographic (age, marital status, household size), and economic (occupation, income) characteristics in the oil producing communities of the region. In the table 2, we present the summary of the socio economic characteristics of the women livestock keepers in the rural communities of Niger Delta. About 53% of the farmers are fully involved in livestock keeping; while the rest 47% are part time farmer who are also involved in government or other private sector job employment (4%), Trading (7%) and crop farming (36%). The average age of the livestock keepers is 38 years. This indicates that the women are still in their active years, while the average farming experience is 29 years. The respondents demonstrated literacy level of education with 64% of the respondents being able to read and write, while only 36% showed complete illiteracy; 42% has basic primary education, 18% have up to West African school certificate, and about 5% have university education or equivalent.

Table 2: Socio – economic characteristics of the respondents

	Freq	%		Freq	%
			Household Size		
			1-4 Person	506	42
			5-9 Person	378	32
			10-14 Person	242	20
			15 Person and above	74	6
				1200	100
			Annual Off Farm Income Level (in NGN)		
			N1000 - N50,000	444	37
			N51,000 - N100,000	392	33
			N101,000 - N150,000	178	15
			N151,000 - N200,000	104	9
			N201,000 - N250,000	50	4
			N251,000 - N300,000	22	2
			Above N300,000	10	1
				1200	100
			Annual Farm Income Level (in NGN)		
			N1000 - N50,000	330	28
			N51,000 - N100,000	268	22
			N101,000 - N150,000	164	14
			N151,000 - N200,000	136	11
			N201,000 - N250,000	102	9
			N251,000 - N300,000	84	7
			N301,000 - N350,000	62	5
			N351,000 - N400,000	38	3
			Above N400,000	16	1
				1200	100
			Annual receipt of critical factors of production (in NGN)		
			None	716	60
			N1000 - N50,000	236	20
			N51,000 - N100,000	112	9
			N101,000 - N150,000	54	5
			N151,000 - N200,000	36	3
			N201,000 - N250,000	22	2
			N251,000 - N300,000	18	2
			N301,000 - N350,000	6	1
			N351,000 - N400,000	0	0
			Above N400,000	0	0
				1200	100
Primary Occupation					
Livestock Keeping	640	53			
Trading	82	7			
Paid Employment	42	4			
Crop farming	436	36			
	1200	100			
Farming Status					
Part time	560	47			
Full time	640	53			
	1200	100			
Years of Experience in Livestock keeping					
0- 10 Years	76	6			
11 - 20 Years	118	10			
21 - 30 Years	330	28			
31 - 40 Years	386	32			
Above 40 Years	290	24			
	1200	100			
Age of Respondents					
Less than 20 years	36	3			
21-30 years	114	10			
31- 40 Years	242	20			
41 - 50 Years	370	31			
51 - 60 Years	248	21			
Above 60 Years	190	16			
	1200	100			
Level of Education					
None	428	36			
FSLC	508	42			
WAEC/WASSCE	210	18			
B.Sc. and Equivalent and above	54	5			
	1200	100			
Marital Status					
Single	86	7			
Married	868	72			
Widow	104	9			
Divorced	58	5			
Separated	84	7			
	1200	100			
Level of Education of Husband					
None	226	26			
FSLC	352	41			
WAEC/WASSCE	256	29			
B.Sc and Equivalent and above	34	4			
	868	100			

Source: Authors' Computation

Also 72% of the women are married and living with their husband, while 7% are single, 9% widowed, 5% divorced and 7% separated. Also, 26% of the husbands of the married women are not educated, while 74% of them are educated, and can read and write. The analysis also showed that the average household size of the respondents is 8 persons. About 63% of the respondents earn more than N50,000 Nigerian Naira (\$139) annually from off livestock farm income, while 28% earn less than N50,000 Nigerian naira annually from livestock farm income. About 60% of the women livestock keepers receive no form of assistance from the MOCs in the form of CSR, while about 20% receives less than 50,000 NGN annually as assistance from the MOCs. This suggests that the level of MOCs intervention in the area of livestock farming among the women is still inadequate, when compared with other sectors like health services, scholarship and skill acquisition as shown in figure 3.

8.2 Rating of GMoUs impacts

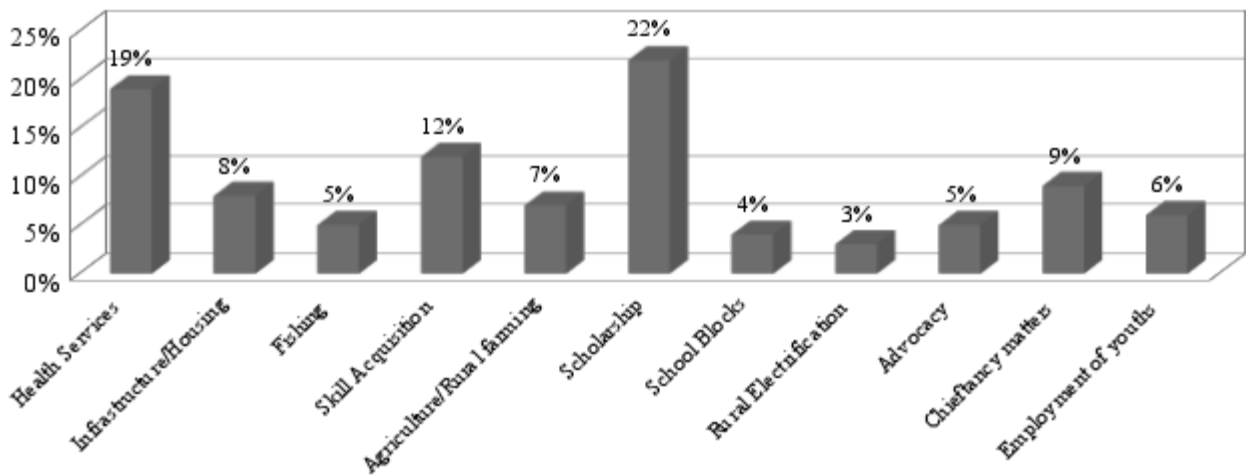


Figure 3: Type and scope of GCSR embarked upon by the MOCs in the host communities
Source: Authors' computation

In the figure 3, we showed that the MOCs have invested their CSR in the areas of scholarship which took 22% of the total investment, while health service took 19% and skill acquisition took 12%. Our area of interest which is agriculture and rural farming accounted for only 7% of the total investment, while chieftaincy matters gulped a whole 9% of the GCSR in the region.

The further breakdown of the 7% of the intervention in agriculture and rural farming in figure 4 shows that MOCs have not significantly invested in livestock production, especially when

compared with interventions in crop production in the oil producing communities. This finding is supported in recent study of Uduji and Okolo-Obasi (2017). This suggests lack of adequate attention to an important sector in developing countries that contributes more than 33 percent to agricultural Gross Domestic Product (GDP), and is one of the fastest growing agricultural sub-sectors (ILRI, 2008).

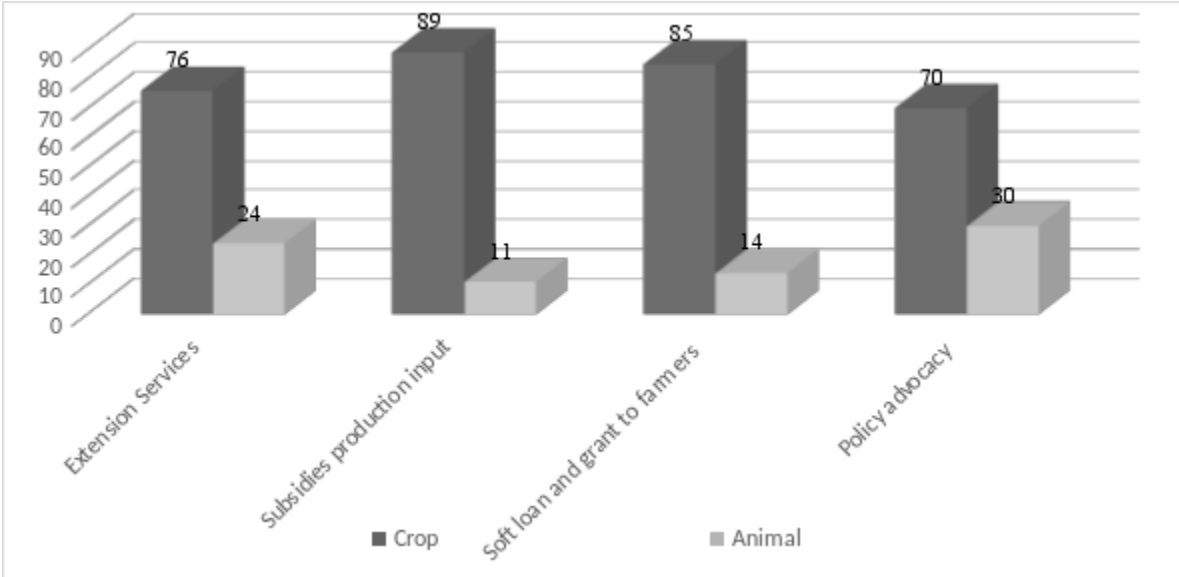
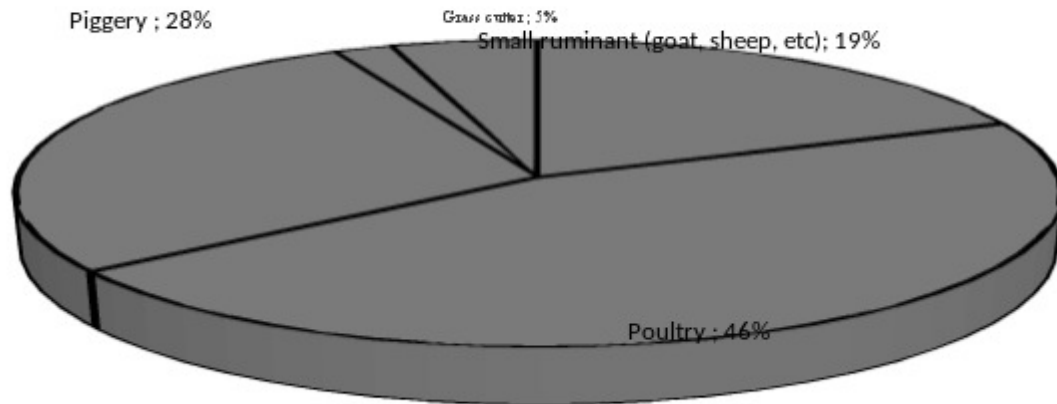


Figure 4: Percentage distribution of investment between animal and crop production

Source: Authors’ computation

The livestock sector is a major contributor to food and nutritional security, and serves as an important source of livelihood of the rural poor people in Nigeria. In this Niger Delta region, population growth, urbanization, and most importantly, increasing income, have resulted in a rapid increase in demand for livestock products, which is likely to continue well into the future. Livestock production is especially imperative in attaining the Sustainable Development Goals (SDGs) and should therefore not be underestimated in GMoU intervention plans and programmes of MOCs in the oil producing communities of the region.

Big ruminant (cow,horses, donkey etc);
2%



Fi

Figure 5: Percentage distribution of women on type of livestock they are keeping in Niger Delta

Source: Authors' computation

In our focus to gender equity and empowering women, which is vital for improving animal production and thereby improving the livelihoods of rural households in Niger Delta communities, table 3 analyses suggests that GMoU interventions have not significantly impacted on the recent upsurge interest in women and livestock in rural communities in Niger Delta. However, figure 4 agree with Njuki and Sanginga (2013) in that low-cost investment of MOCs in small-scale livestock keeping – a dairy cow, a few goats, a few chickens or guinea pigs – offer opportunities for women not only to increase household income, but also to control a large portion of it, take decision that reflect on family consumption, sending children to school and paying hospital bill; thus reducing gender inequality in Niger Delta communities in particular, and sub-Saharan Africa in general.

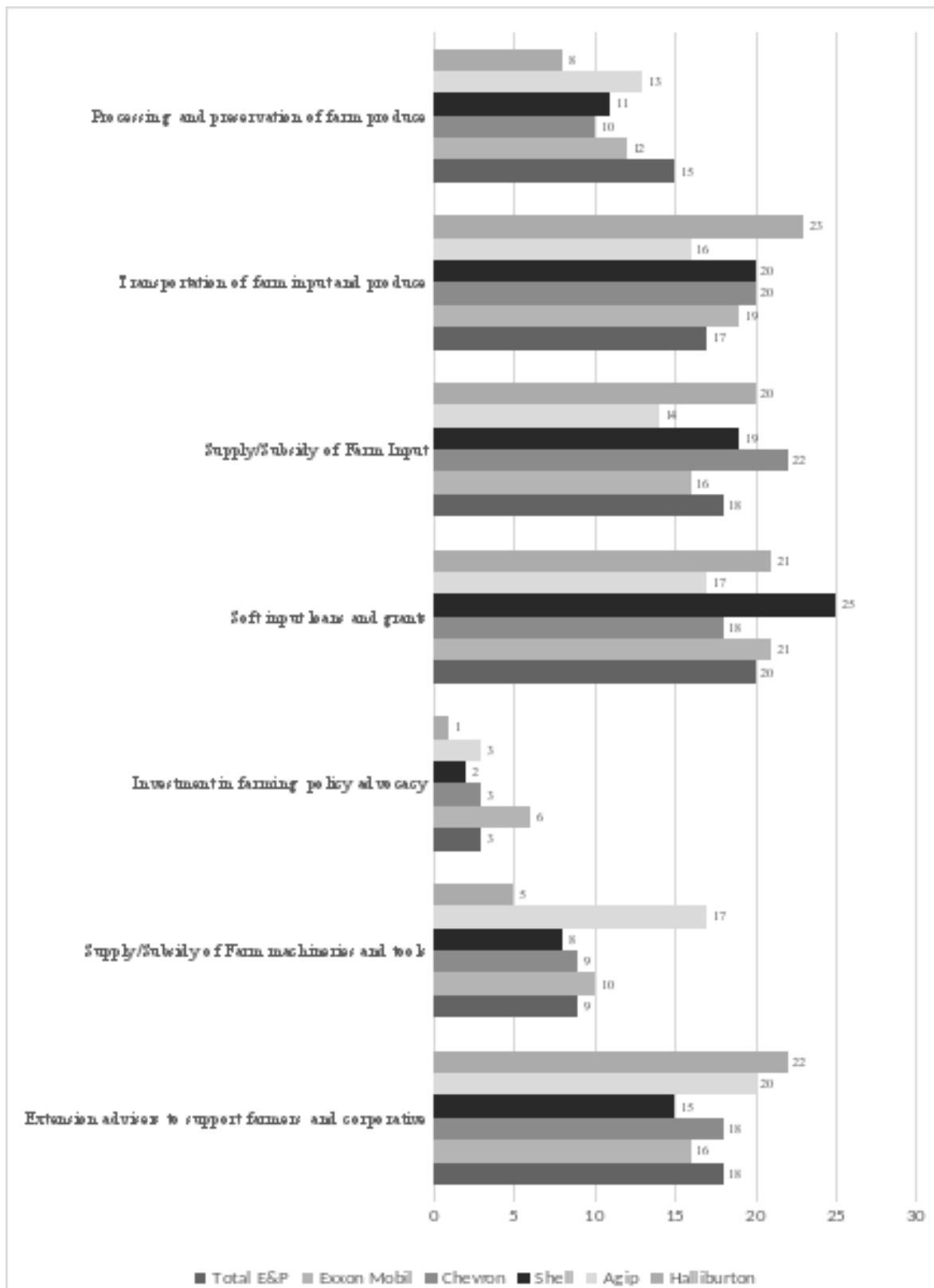


Figure 6: Percentage rating of multinational oil firms' investment in agriculture in Niger Delta region as at 2017

Source: Authors' computation

Table 2 concur with Tipilda and Kristjanson (2008) in that increased livestock production for both house consumption and the market, diversification in income sources from livestock, and women’s stronger positions as livestock owners helps reduce their families vulnerability to the impacts of HIV/AIDs and other diseases, thus contributing to SDGs. Therefore, if GMoUs of MOCs would recognize these links between livestock production and tackling hunger, gender inequality and vulnerability to debilitating disease, CSR would then impact on the development spotlight on women and livestock in Niger Delta region of Nigeria.

Figure 6 suggests that after decade of sensitization and efforts to mainstream gender in agricultural production, women have continued to be overlooked in many livestock-related GMoU intervention in Niger Delta, due to cultural and traditional context of the region, which is anchored in beliefs, norms and practice that breed discrimination and feminized poverty as observed also in Uduji and Okolo-Obasi (2018). Therefore, there is still a strong tendency for GMoUs and CDBs to assume that the major actors in livestock production in the region are men, particularly when large ruminants are involved.

Table 3: Rating of GMoUs impact on rural women livestock keepers by respondents

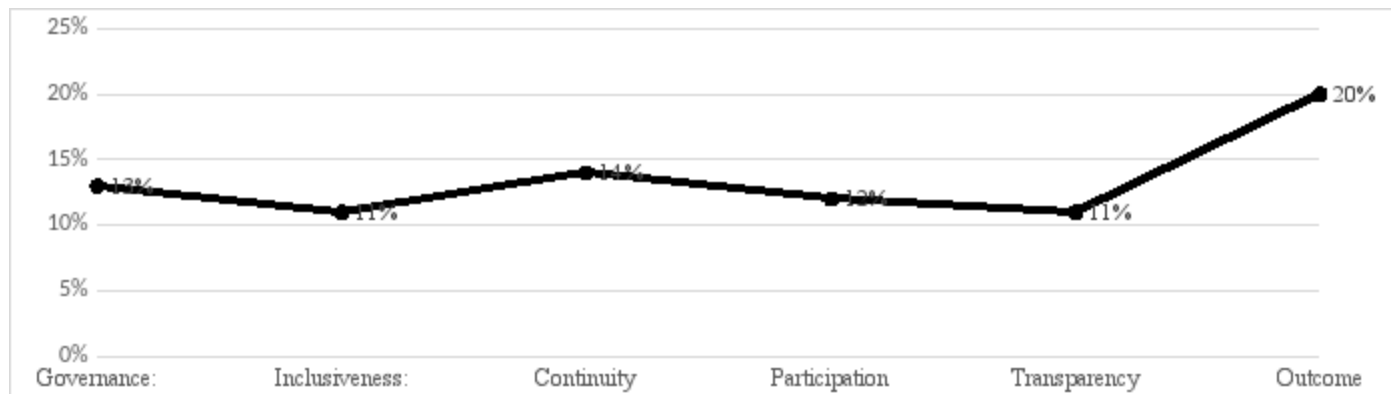
Criteria	Variables	None	Low	Moderate	Significant	High	Overall
Governance:							
	Election or selection democratic		14				
	Tenure limit well defined			27			
	Succession processes well outlined and adhered to		10				
	Rule of law upholds		9				
	Freedom of aspiring to represent		5				
							13
Inclusiveness:							
	Sensitive to gender			31			
	Sensitive to sectors		9				

	(especially agriculture)		
	Sensitive to residence location (Rural area)	4	11
	Sensitive to Age (young rural women)	10	
	Sensitive to disables (physically Challenged)	0	
Transparency			
	Commerce process is open	8	
	Financial management is open	20	
	Decision making process is open	11	11
	Fight against corruption	5	
	Free flow of information	9	
Participation			
	Equality in the distribution of benefits	15	
	Extent of participation in GMoU process	18	
	Sense of ownership of project	10	
	Freedom to generate or suggest projects	4	12
	Level of bottom top approach in project designing	11	
Continuity			
	Self-sustainability of the project	20	
	Capacity building ability of project	32	
	Future centeredness of the	12	14

project		
Alignment between GMoU projects and community priority	5	
Diversity of sources of funding	2	
Outcome		
Grievance management	18	
Youths gainfully employed	10	
Community and MOCs relationship harmonized	15	20
Business environment enhanced	20	
Enhanced environmental advocacy by GMoU	35	

Source: Authors' computation

Nevertheless, appreciations of the roles of women in livestock husbandry and of the values that women place on different products and services of the livestock will deepen the understanding of multi functionality of livestock in the region. This in turn, should give direction to GMoU interventions that strengthen the functions of livestock that are for promoting gender equality in the oil producing communities of the region.



Key

None	=	0
Low	=	1-25
Moderate	=	26-50
Significant	=	51-75
High	=	75-100

Figure 7: Assessment of GMoUs impact on rural women livestock keepers

Source: Authors' computation.

8.3 Projected effects of GCSR

Table 4a: Projected effects of multinational oil firms CSR investment using GMoU on access to livestock services and markets by rural women in Niger Delta region

Y	X	Coefficients	Std Error	Significant	Odd Ratio
WEP₁ Family consumption	GCSR	0.125	0.041	0.062*	8.213
	Age	-0.017	0.009	0.233**	.983
	PriOcc	0.039	0.022	0.16**	.962
	HSize	-0.014	0.001	-0.072*	.986
	Edu-1	0.491	0.018	0.074**	.996
	Edu-2	0.916	0.114	0.058**	.908
	AKap	-0.047	0.124	1.029**	1.810
	Lown	0.015	0.021	0.060*	1.217
	Constant	0.929	0.667	0.164**	2.533

* a Variable(s) entered on step 1: Age, PriOcc, HSize, Edu-1, OfFY, Edu-2, Exp, MS, AKKn, Land, Lown, GCSR.

** significant at 5%; ***significant at 10%.

Source Authors' Computation

$$\text{Logit (WEP}_1) = 0.929 + .125\text{GCSR} + (.017) \text{Age} + .039 \text{PriOcc} + (.014) \text{HSize} + .491\text{Edu-1} + .916\text{Edu-2} + (.047) \text{AKap} + .015\text{Lown}$$

A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between the “yes” and “no” impact of CSR (chi square = 45.210, $p < .000$ with $df = 8$). Nagelkerke’s R^2 of .814 indicated a strong relationship between prediction and grouping. Prediction success overall was 90 percent. (94 percent for yes and 86 percent for the no). The Z- value for GCSR is 4.5, with an associated p-value of .083. Based on the set 5 percent significant level, the finding indicates that GCSRs of the MOCs could make significant impact on gender in livestock related interventions in Niger Delta. On the other hand, the EXP (B) value of the Predictor – GCSR is 5.253, which implies that if the MOCs raise their CSR program targeted to empowering the rural women through livestock production by one unit, the odds ratio is 8.23 times as large and therefore rural women are 8.2 more times likely to be domestically empowered to take decisions that reflect on family consumption.

Table 4b: Projected effects of multinational oil firms CSR investment using GMOU on access to livestock services and markets by rural women in Niger Delta region

Y	X	Coefficients	Std Error	Significant	Odd Ration
WEP ₂ Schooling of Children	X ₁ GCSR	1.436	0.054	0.051*	4.145
	X ₂ Age	-0.021	0.012	-0.081**	0.980
	X ₄ HSize	-0.033	0.024	-0.065*	0.967
	X ₅ Edu-1	0.036	0.028	0.091***	1.036
	X ₇ Edu-2	0.187	0.135	0.052*	.830
	X ₁₀ AKap	0.030	0.010	0.092**	1.000
	X ₁₁ Land	0.004	0.021	0.083**	.996
	X ₁₂ Lown	0.230	0.116	0.074**	.795
	Constant	2.173	0.951	1.022**	8.785

* a Variable(s) entered on step 1: Age, PriOcc, HSize, Edu-1, OffY, Edu-2, Exp, MS,AKKn, Land, Lown, GCSR.

** significant at 5%; ***significant at 10%.

Source Authors’ Computation

Logit (WEP₂) = 2.173 + 1.436GCSR + (.017) Age + (.033) HSize +.036Edu-1 +.187Edu-2+ .030AKap + .004Land + .230Lown.

A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between the “yes” and “no” impact of CSR (chi square = 45.210, $p < .000$ with $df = 8$). Nagelkerke’s R^2 of .865 indicated a strong relationship between prediction and grouping. Prediction success overall was 89 percent. (90 percent for Yes and 88 percent for the No). The Z- value for GCSR is 5.2, with an associated p-value of .071.

Based on the set 5 percent significant level, the finding indicates that GCSRs of the MOCs could make significant impact on gender in livestock related interventions in Niger Delta. On the other hand, the EXP (B) value of the Predictor – GCSR is 4.12, which implies that if the MOCs raise their CSR program targeted to empowering the rural women through livestock production by one unit, the odds ratio is 4.145 times as large and therefore rural women are 4.1 more times likely to be domestically empowered to take decisions that reflect on sending children to school.

Table 4c: Projected effects of multinational oil firms CSR investment using GMOU on access to livestock services and markets by rural women in Niger Delta region

Y	X	Coefficients	Std Error	Significant	Odd Ration
WEP₃ Medical treatment	GCSR	0.125	0.041	0.053*	1.133
	Age	-0.025	0.010	0.062**	0.976
	Edu-1	0.304	0.010	0.065*	0.996
	Edu-2	0.241	0.119	0.051**	1.786
	AKap	0.025	0.023	0.047*	1.026
	Land	0.017	0.024	0.083**	1.017
	Lown	0.211	0.124	0.059**	1.810
	Constant	1.645	0.829	1.164*	2.533

* a Variable(s) entered on step 1: Age, PriOcc, HSize, Edu-1, OffY, Edu-2, Exp, MS,AKKn, Land, Lown, GCSR.

** significant at 5%; ***significant at 10%.

$$\text{Logit (WEP}_3) = 1.645 + .125\text{GCSR} + (.025) \text{Age} + .304\text{Edu-1} + .241\text{Edu-2} + .025\text{AKap} + .017\text{Land} + .211\text{Lown}$$

A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between the “yes” and “no” impact of CSR (chi square = 38.40, $p < .000$ with $df = 8$). Nagelkerke’s R^2 of .743 indicated a strong relationship between prediction and grouping. Prediction success overall was 92 percent. (93 percent for Yes and 90 percent for the No). The Z- value for GCSR is 2.13, with an associated p-value of .053. Based on the set 5 percent significant level, the finding indicates that GCSRs of the MOCs could make significant impact on gender in livestock related interventions in Niger Delta. On the other hand, the EXP (B) value of the Predictor – GCSR is 2.12, which implies that if the MOCs raise their CSR program targeted to empowering the rural women through livestock production by one unit, the odds ratio is 1.133 times as large and therefore rural women are 1.1 more times likely to be domestically empowered to take decisions that reflect on paying hospital bill.

In all the three decision areas considered, at one percent significant level, the GCSR, level of education of the husbands were positively significant, showing that, any increase in the CSR activities using GMoU will make positive impact in empowering the rural women livestock farmers in decision making. Also it implies that women livestock farmers with educated husband stand more chance of being empowered than their counterpart. Household size is negatively significant at the same one percent level for the decision WEP₁ and WEP₂, showing that the higher the household the more tendency to consume the receipts from the MOCs (if any).

At five percent significant level, access to capital, access to land and livestock ownership were positively significant while Age of the respondent was negatively significant at the same level. This shows that all efforts should be made to enhance the women's access to land and capital before they advance so much in age.

8.4 Addressing gender inequality in livestock - system development

Generally, table 3 provides positive evidence for Chevron (2014) assertions that GMoUs in Niger Delta region have become popular with communities; with greater ownership leading to better projects, sustainability and improved trust; provides a better organized community interface and grievance/dispute resolution mechanism; ensures transparency, inclusiveness and accountability in managing development funds. Also, information in table 3 supported SPDC (2013) proof that in 2009, RA GMoU cluster in River state embarked on the upgrading of Rumuibekwe daily market for women in Port Harcourt through the provision of 90 open market stalls, for restaurants/food vending, hair dressing salons, and fashion design/tailoring that has created direct employment opportunities for about 300 women. Okoji (2013) baseline survey confirms that a poverty incidence of 50 percent among women in the cluster was reduced to 30 percent; by the end of 2012, MOCs had signed agreements with 33 GMoUs, covering 349 communities in the Niger Delta region, and every aspect of GMoU is executed in partnership with the communities in the cluster and close to a dozen facilitating non-profit organizations; the latter handle sensation and communication of the GMoU model to the communities and develop the capacity of CDB members on the community development process; and also ensure quality delivery of GMoU projects and programmes in the region. This effort could be seen as a good intension of the MOCs. However, Visser (2006) suggests that CSR in Africa should not just

begin with good intention for the people, but with the stakeholder action. Amaeshi *et al* (2006) emphatically suggest that Nigerian concept of CSR should be aimed at addressing the peculiarity of socio-economic development challenges of the people. Muthuri (2012) based on the extant literature posited that CSR in Africa should target poverty redirection. So, whatever the MOCs are doing should be grass rooted, and be prompted by the basic needs of the people, and abide by gender sensitivity.

The first essential step towards addressing gender inequality in livestock-system development in Niger Delta should be the gender analysis. This should lead to better understanding of: i) gender relations in livestock keeping households, division of livestock-related work between women and men, and differences in their access to and control over productive resources, ii) women's and men's needs and interests, and opportunities to support them in an equitable way, iii) constraints to women's involvement in livestock development and how these might be overcome, and iv) different expected and – overtime – experienced impacts of livestock – related interventions on women and men, and how to address the consequences in the region.

The second step would be focusing on the rural women in livestock keeping which could start with focusing on the livestock they keep and on their livestock-related tasks in the region identified through gender analysis (figure 5). Table 4a-4c suggests the most promising GMoU interventions for rural women in the resource-poor households of the region to be small - scale, low – external - input income - generating activities involving goats, dairy cows, poultry and other small livestock such as guinea pigs, bees and silkworms, including not only production but also processing and marketing. This finding agrees with Waters-Bayer and Letty (2010) and Njuki and Sanginga (2013) in that the shift in approach over the years from looking at women in livestock development to looking at gender in livestock development has sometimes led to a loss of focus, with the result that insufficient attention is paid to those who need most support to attain equality, this being the women.

Thirdly, in addressing the gender inequality in livestock-system development, the CBDs should give adequate attention to reducing women's workloads for activities such as fetching water and feed, cleaning pens, small-scale processing of livestock products to market. This concurs with Yisehak (2008) in that if interventions demand additional work on women who have little control

over the products, then their motivation to participate is likely to be lower- as will the level of improvement in livestock production.

Fourthly is the need for rural women better access to general education as well as to specific training and information related to livestock keeping? Hence, to improve livestock husbandry and value addition to animal product in Niger Delta, rural women need to be trained directly, not through second-hand information via male family members. Also, observing that the extension agents for crop and livestock husbandry are usually male, whereas those for home economics are usually female. Therefore if female agricultural extension and home agents are trained in livestock production marketing and participatory experimentation for local adaptation of technologies, they will be able to give relevant support to rural women.

Finally, considerable success in promoting livestock keepers by rural women in Niger Delta region can be achieved in GMoU model by making small-scale credit available to women groups as evidence in figure 6 and figure 7 of our analysis. This is confirmed in Kristjanson *et al* (2010), suggesting that it is usually easier for groups of women rather than individuals to access resources for products, also through credit, and to achieve economies of scale in marketing the products. Existing informal grouping-whether traditional or more recently developed by the rural women themselves-can provide good starting points for enhancing women's managerial and leadership skills, which could eventually lead to rural women becoming more active in community-based organizations involving both men and women in Niger Delta region.

On the whole, the findings reveal that GMoU model tend to be gender insensitive as rural women rarely have direct access to livestock interventions except through their husband or adult sons; which is attributed to the cultural and traditional context of the people, anchored in beliefs, norms and practices that breed discrimination and gender gap in the rural societies. Most critically, the findings suggest that the relative priorities of CSR interventions of MOCs in Nigeria's oil host communities should be different from the Western version as suggested by Carroll (1991) in that If the rural women do not feel GMoUs efforts to eliminate discrimination and promote equality in the livestock sector, feminized poverty would create a hostile environment for the multinational oil firms doing business in the region. The livestock development in Nigeria can only succeed if CSR is able to draw on all the resources and talents, and if rural women are able to participate fully in the GMoUs intervention plans and

programmes. The findings agree with Waters-Bayer and Letty (2010) in that interventions should recognize the importance of social capitals in promoting gender equity and empowering women through livestock in developing communities. The findings also concur with Visser (2006) in that the importance of cultural context in the determination of appropriate CSR priorities and programmes, and the need for flexibility in approaches to CSR policy and practice by multinationals operating in Africa and globally. However, in extension and contribution, we argue that if MOCs are to work towards ideal CSR interventions that adhere to the socio-cultural context of Africa and Nigeria in particular, GMoUs should be designed to be more gender sensitive for women in livestock production sector in the rural areas of oil host communities. It is therefore our contention that MOCs are in a better position to empower rural women by reducing the gender disparities in livestock production sector in oil producing communities of Nigeria's Niger Delta region. Investing in women livestock keeping and instituting GMoUs policies that close this gender gap in Nigeria would yield enormous benefits for women and their families, communities and the country. Closing the gender gap in livestock keeping would help increase food security and improve livelihoods for Africa's growing population. Closing the gap would also benefit Africa's next generation in that when a woman gains more control over her income, she gains more say over important decisions that affect her family, especially her children. The African family, in which a woman influences economic decisions, would certainly allocate more income to food, health, education and children's nutrition. Therefore improving gender equality through livestock production would translate into a generation of rural Africans who are better fed, educated and equipped to make productive contribution to their rural economies within livestock keeping and beyond.

9. Conclusion and policy

In the rural areas of oil producing communities of Niger Delta in Nigeria, traditional systems and cultural norms have made it difficult for women to accumulate valuable assets such as farming lands; whereas livestock has emerged as an alternative form of wealth for the rural women. However, the women's rights over their livestock remained insecure, perhaps because they often acquire livestock through relatively informal means, such as inheritance or gifts from their husbands or adult sons that participate fully in the GMoUs intervention plans and programmes of

the multinational oil companies. Thus, we set out to critically examine the multinational oil companies' (MOCs) corporate social responsibility (CSR) initiatives in Nigeria, with special focus on investigating the impact of the global memorandum of understanding (GMoU) on rural women livestock keepers in the oil producing communities. This paper contributes to gender debate in livestock keeping by assessing the empirical evidence from CSR perspective in two areas that have received much attention in the literature:

- i. What is the level of multinational oil companies' CSR investment in livestock sector development in Niger Delta region?
- ii. Do GMoUs interventions of multinational oil companies' impact on rural women livestock keepers in Niger Delta region?

A total of 1200 rural women were sampled across the rural communities of the Niger Delta region. Results from the use of a logit model shows that GMoU model is gender insensitive as rural women rarely have direct access to livestock interventions except through their husband or adult sons; which is attributed to the cultural and traditional context of the people, anchored in beliefs, norms and practices that breed discrimination and gender gap in the rural societies. The result of analysis carried out shows that if the MOCs should increase their *CSR program targeted to empowering the rural women through livestock production by one unit, the odds ratio is 8.23 times for decisions that reflect on family consumption; 4.1 times for decisions that reflect on sending children to school and 1.1 times for decisions that reflect on paying hospital bill. This simply implies that the rural women livestock farmers are 8.2 more times likely to be domestically empowered to take decisions on family consumption; 4.1 more times likely to be domestically empowered to take decisions on sending children to school, and 1.1 more times likely to be domestically empowered to take decisions on paying hospital bill. The GCSR in all the areas are significant showing that, though small, the little intervention has made significant impact that must be worked on for further improvement.*

The practical implication of this study is that if the rural women do not feel GMoUs efforts to eliminate discrimination and promote equality in the livestock sector, feminized poverty would create a hostile environment for MOCs in the region. The livestock sector development can only succeed if the region is able to draw on all its resources and talents, and if rural women are able to participate fully in GMoUs intervention plans and programmes. This will require intensified

efforts to eliminate discrimination and promote equality in the livestock sector. The essential steps toward addressing gender inequality in livestock-system development in the region should begin with gender analysis. Then focusing on women in livestock they keep and on their livestock-related tasks identified through the gender analysis. The most promising GMoU interventions for rural women in resource-poor household Niger Delta region should be small-scale, low-external-input income-generating activities involving goats, dairy cows, poultry and other small livestock such as guinea pigs, bees and silkworms, including not only production but also processing and marketing. CBDs should give adequate attention to reducing women's workloads for activities such as fetching water and feed, clearing pens, small-scale processing of livestock products and transporting products to market. Considerable success in GMoUs promoting livestock keepers by women can be achieved by making small-scale credit available to rural women's group in the region. Investing in women livestock keepers and instituting GMoU policies that close this gender gap would yield enormous benefit for women and their families, communities and the country.

It is worth mentioning that while this study contributes to extant literature on the role of oil from the perspective of CSR in gender and livestock in Niger Delta region; it also provides essential policy directions on the relationship. However, completing this study with comparative studies in other oil producing communities of developing countries will be important for the purpose of globally policy making.

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