Sustainable Livestock Farming: Balancing Environmental Responsibility and Financial Prosperity

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ABSTRACT
This study focused on the effect of environmental costs on profitability of livestock farming in Yewa South Local Government area of Ogun State. The study is unique as the environmental costs on profitability are geared towards livestock farming. A survey research design was adopted. The population of this study was (87) comprising of staff of all the livestock farms in Yewa South Local Government. Proportionate stratified sampling technique was used in selecting the sample size of (56) respondents that were given questionnaires. The study used primary and secondary data and employed descriptive and inferential statistics; the data gathered was subjected to analyses using percentages, averages and multiple regression models. The results showed that environmental costs which are represented by conventional and contingent costs have a positive significant relationship with profitability of livestock farms with regression coefficients of $\beta = .621$, $p < 0.000$ with (R^2) of 0.879 and $\beta = .432$, $p < 0.000$ with (R^2) of 0.796. The study concluded that environmental costs have a positive significant effect on profitability while fines and penalties have positive insignificant effect on profitability of livestock farms with regression coefficient of $\beta = -.225$, $p < 0.000$ and (R^2) of 0.763. Therefore, the study recommended that Livestock farmers should look inwardly for locally manufactured environmental pollution prevention equipment that are less expensive for farms that are small and Medium Scale Enterprises.
Keywords: Conventional costs, Contingent costs, Profitability, Environment

INTRODUCTION
An environment is a place or arena where people, objects, or creatures reside, or where anything inhabits or lives. An environment may also be referred to as a setting. It is not necessary for an environment to be the actual site in which we reside; rather, it may be anything from schools and companies to communities and even nations.

The 1980s are often seen as the decade in which environmental awareness first emerged in Nigeria. Between the months of December 1983 and August 1985, the Federal Military Government made a significant effort to raise awareness about the need of protecting the environment. That administration made considerable use of the media in its efforts to instill a strong environmental consciousness among the Nigerian people. The Federal Military Government was in charge of spreading massive amounts of environmental propaganda, while state military governors were entrusted with putting policy guidelines into effect by turning propaganda into legal reality. The Federal Military Government established the tone for the whole situation. As a direct consequence of this, state governments have acted independently to pass environmental laws (Uchegbu, 1988 cited in Ladan, 2007).

The Federal Environmental Protection Agency of Nigeria (FEPA) was founded on December 30, 1988, by Decree 58, with the statutory duty for environmental protection and development in general. Its official name is the Federal Environmental Protection Agency of Nigeria. Since the FEPA was established, a number of laws, rules, and regulations have been implemented to control pollution,

hazardous wastes, and effluents, as well as to require environmental impact studies for construction projects.

According to Ladan (2007), environmental law is a specific collection of official laws, judgements, and actions that deal with issues concerning the quality of the environment, the availability of natural resources, and the viability of the ecological system. Statutes, common law, international treaties and conventions, regulations, and policies are the components that make up environmental law, which is a complex and linked framework. Its primary objective is to shield the natural environment from any possible influence, effect, or damage that might be caused by humans (Web, 2006b).

At this time, there is an uptick in interest in the preservation of the natural environment across all fields. This is shown by the fact that the majority of nations have adopted environmental regulations. Despite this, it is becoming more apparent that the processes that are now being used by public bodies in the process of designing and implementing regulatory solutions for a variety of organisations are fast becoming archaic. This is the case as the quest for innovative methods to fight environmental degradation takes pace.

Environmental accounting is a discipline that identifies resource use, measures the costs of an organization's or nation's economic impact on the environment, and communicates those costs (Deegan, 2013). These costs include the costs to clean up or remediate contaminated sites, environmental fines, penalties, and taxes, the purchase of pollution prevention technologies, and the costs of waste management.

Both conventional and contingent expenses are examples of costs that may be controlled by companies in such a manner that their impact on the profits of the firm is reduced to a negligible level. The majority of farms that raise animals collect, pack, and recycle the waste products of their animals, including chickens, pigs, and cattle. These waste products are then utilised as fertilisers for other agricultural commodities, such as plantains, cocoa, and cocoyam, as well as for petrol that is used in homes. This tactic reduces costs associated with parking trash items and cleaning the whole region so that it is free of pollutants to the greatest extent possible.

On the other hand, profitability is the reward for all of the efforts that a company puts forth in order to make more money on capital invested into a corporation throughout the course of a business period. Profitability is also an indicator of the opportunities that exist inside a certain corporate organisation.

The majority of executives in charge of businesses are of the opinion that maximising profitability, sustainability, and stability should be the fundamental objective of any organisation. Companies have a responsibility to work towards greater eco-efficiency, but in order to achieve this goal, they must first compile accurate data on the conventional and contingency expenses, revenues, and profitability (Web, 2006b).

When it comes to supplying their customers with products and services, companies are subject to a wide variety of different kinds of prices, two of the most common of which are conventional charges and contingent fees.

The Traditional Approach to Costs as a Concept

Frequently, the focus of cost accounting and capital planning is placed on the expenditures that are associated with the utilisation of raw materials, utilities, capital goods, and suppliers. On the other hand, conventional and contingent expenses are often ignored. Nevertheless, cutting down on use and waste of these resources is good for the environment since it not only slows down the rate at which the ecosystem degrades but also helps to preserve the nonrenewable resources that are already in existence. As a consequence of this, whether these expenditures are regarded as conventional or contingency costs, it is essential to include them into the procedures that are used to make decisions inside a company.

Costs that are contingent on future events and may most accurately be described in terms of their likelihood of happening are referred to as future contingent costs. They include expenditures for repair and compensation for inadvertent environmental releases (such as oil spills), fines and penalties for projected regulatory breaches, and future expenses arising from unforeseen ramifications of approved or international emissions. For example, an oil spill is an example of an environmental release that was not
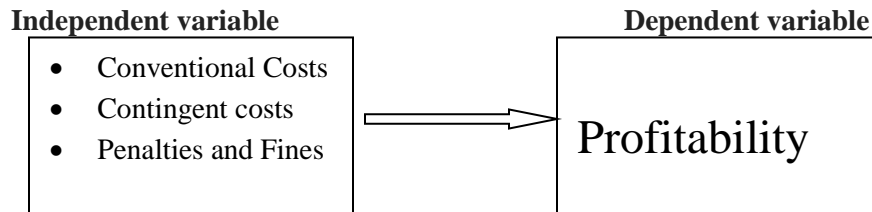
deliberate. These expenditures may also be referred to as "contingent liabilities" or "contingent liability costs." Because these expenditures are no longer need to be recorded for other reasons, they may be ignored in internal management accounting systems as well as choices for the future (Encyclopaedia, 2008).

The idea behind making a profit

According to Tulsian (2014), profitability may be broken down into two parts: profit and ability. The term "profit" refers to the monetary benefit, while "ability" refers to the capability of a firm to make profits, which reflects the company's earning power and operational success. The capacity of an investment to provide returns over a period of time is what we mean when we talk about profitability of that investment. Despite their close relationship with one another and their interdependence, profit and profitability are two separate notions. However, profitability is a relative measurement, despite the fact that profit is an absolute word. Simply looking at a company's profits is not a very good way to evaluate how well it runs its operations. A large profit does not always mean that an organisation is operating at peak efficiency, just as a low profit does not always indicate that an organisation is operating inefficiently. As a result, profit is not the major measure that is utilised when comparing the operational and financial efficiency of a company. Instead, profitability is used as a criterion to assess the success of operational processes.

According to Emerz (2005), environmental accounting is the process of giving accurate financial information on the societal cost associated with industrial externalities' effects on the environment. It also includes the cost expended by a company to reduce the disparity between the marginal social cost and the marginal private cost in order to decrease the gap between the two.

In this article, a conceptual examination of conventional and contingency costs, as well as the influence these costs have on environmental pollution, is presented and discussed. In this research, cattle farming is referred to as a Small and Medium Scale Enterprise (SME), and it is investigated how these expenses may be controlled so that they do not have a detrimental impact on the profitability of the business. In the model, the following variables are represented:

Independent variable

Dependent variable

- Conventional Costs
- Contingent costs
- Penalties and Fines

Profitability

Source: Researcher, 2020
Figure 1:   Conceptual models

The natural environment has a tremendous impact on ecosystems due to the strong interaction that exists between the natural environment and human activities. Environmental Right Action (ERA) recognises the crucial part that people play in reversing environmental deterioration and places an emphasis on the significance of preserving the natural environment for future generations. The term "eco-efficiency" refers to a philosophy that encourages the creation of useful items while simultaneously minimising negative affects on the environment, consumption of resources, and financial expenses. It places a greater emphasis on treating the underlying causes of environmental damage rather than just the effects of such damage. In the article of Araoye et al. (2018), the authors cite the work of Aert, Cornier, and Magnum (2006), who state that eco-efficiency has three important consequences. To begin, it is important to see the improvement of ecological and economic performance as being complimentary. Second, improving environmental performance should not be seen as an act of charity but rather as a competitive need in today's world. However, in contrast to the viewpoint presented by Deegan (1998), societal costs, which include both fixed and variable expenditures that are not compensated for by related income, are borne by society rather than being distributed to the advantage of particular businesses. Last but not least, eco-efficiency must to be seen as being advantageous for long-term growth.

The Concept of Quality of Life
Enahoro (2009) carried out a research project on environmental design and used the methodology that was outlined. According to Owolabi (2007), Hass (1999) defines Corporate Social Responsibility (CSR) as an evaluation of an individual's quality of life (QOL), taking into account their present living situations, cultural context, and personal beliefs. The quality of life (QOL) considers several facets of an individual's health and happiness, including the physical, psychological, social, and spiritual components. Subjective evaluations of quality of life (QOL) may in certain circumstances be supplemented by objective indicators, or objective indications may serve as proxies for subjective evaluations, especially for persons who are unable to experience QOL subjectively. According to the findings of the research, uncontrolled industrial production for the sake of economic growth has resulted in social costs, harm to the environment, and difficulties within society. According to Dierkes (1979), cited in Owolabi (2007), these negative effects have helped contribute to society's hostility to industrialization, and corporate organisations are often perceived as being responsible for environmental degradation and other social ills.

The hypothesis of perking order
The pecking order hypothesis was first presented by Myers (1984) and focuses on the choices that are made about the capital structure of small enterprises. It seems to imply that businesses would rather utilise their own sources of money rather than look for funding from other sources. This approach is relevant to small and medium-sized enterprises (SMEs), since the majority of them first depend on funding from inside the company before resorting to sources from the outside. The research highlights how important it is to limit environmental damage as much as possible in order to cut down on conventional and contingency costs and ensure that these expenses have a negligible or nonexistent effect on the profitability of cattle production. Farms are able to avoid paying expenses and fines by ensuring that there is no damage at all. This ensures that their revenues are not affected. The research also sheds light on the importance that business managers all over the world attach to environmental accounting, despite the fact that this is not currently a priority in Nigeria. Degradation of the environment and the expenses associated with it include emissions into the air, water, and land, as well as residential waste outflows into rivers and coastal waters that have not been cleaned, and the disposal of solid waste by techniques such as land spreading or cremation. When opposed to bigger firms, which can access public markets, small businesses have a more difficult time gaining access to external finance sources and so depend more heavily on private capital markets. Another element that might be constraining for small businesses is the availability of relevant information. According to the findings of Araoye et al. (2018), who evaluated the effect of conventional and contingency expenses on Nigerian oil and gas enterprises, capital investments, oil spills, and gas flaring had a negligible influence on GDP when compared to the effect of labour.

In the Yewa South Local Government Area of Ogun State, the researchers carried out an investigation that focused on conventional and contingency expenses as well as the implications these costs have on the profitability of cattle production. The study used primary data, descriptive and inferential statistics, and regression models to examine the data and achieve its objectives. These objectives included determining the significant effects of conventional and contingent costs on the profitability of livestock farming, investigating the impact of environmental penalties and fines, and exploring the relationship between conventional and contingent costs and the profitability of livestock farming. Primary data was collected from livestock farms in the United States.

APPROACH AND METHOD
For the purpose of gathering the main data required for the investigation, the research project made use of a survey research design. In order to gather primary data for the study, structured questionnaires were used as research instruments. These questionnaires were sent out to the employees of all livestock farms in order to collect their responses.

The population of the study consisted of 87 staff members from all livestock farms in Yewa South Local Government. These staff members included Farm Managers, Account Supervisors, Farm Attendants,

Gardeners, and Cleaners who engage or participate in the process of making decisions, incurring costs, and preparing farm accounts. The study was carried out in 2017.

In order to acquire primary data for the research activity, the survey research design was used in the study that was carried out. In order to gather primary data for the study, structured questionnaires were employed as research instruments. These questionnaires were then sent to all of the staff who worked at livestock farms.

The participants in the research consisted of 87 staff members who worked on livestock farms located within Yewa South Local Government. These staff members comprised Farm Managers, Account Supervisors, Farm Attendants, Gardeners, and Cleaners who were responsible for making decisions, incurring expenditures, and preparing farm accounts.

DISCUSSION OF FINDINGS
Test of Hypotheses
Hypothesis I
H_{01}: There is no significant effect of conventional costs on the profitability of all livestock farming in Yewa South Local Government.

Table 1: Effect of Conventional Costs on the Profitability

Model	Variables	Unstandardized Coefficients		t-value	p-value
		Beta	Standard Error		
I	Constant	6.274	0.790	7.941	0.000
	Conventional Cost	0.714	0.036	19.809	0.000

R = 0.938, R-square = 0.879, Adj. R Square = 0.877, F = 392.414, p=0.000
Source: Researcher's Compilation from SPSS

Table 1 shows that the correlation coefficient (R) is 0.938, the coefficient of determination (R2) is 0.879, and the F-statistic is 392.414 with a significant value of 0.000, which is less than 0.05. It demonstrates that traditional costs have a statistically significant positive effect on cattle production profitability. However, this means that conventional costs account for 87.9% of the shift in cattle production profitability. This is very high, and it is reinforced by the corrected R2 of 0.877 (87.7%), which further verifies the model's fitness.

The data also shows that traditional costs have a statistically significant positive effect on cattle production profitability. The t-test value (f (1/54); = 392.414; p 0.05) demonstrates this. This means that the null hypothesis, that conventional costs have no substantial effect on cattle farming profitability, will be rejected, while the alternative hypothesis will be accepted at a 5% confidence level.

Furthermore, the coefficient demonstrates that traditional expenses have a positive significant effect on cattle farming profitability with the inferential result; =.714, p 0.05. However, if all other variables remain equal, a unit change in cattle farming profitability will result in a 714 unit positive significant change in conventional costs.

The decision criterion is that if the unstandardized beta value is statistically significant in any direction at the 5% level of significance, we reject the null hypothesis. As a result, the null hypothesis that conventional costs have no substantial effect on cattle production profitability is rejected.

Hypothesis II

H_{01}: There is no significant effect of contingent costs on profitability of livestock farming in Yewa South Local Government.

Table 2: Effect of Contingent Costs on the Profitability

Model	Variables	Unstandardized Coefficients		t-value	p-value
		Beta	Standard Error		
I	Constant	4.297	1.199	3.583	0.001
	Contingent Costs	0.795	0.054	14.685	0.000

R = 0.894, R-square = 0.800, Adj. R Square = 0.796, F = 215.654, p=0.000
Source: Researcher's Compilation from SPSS

Table 2 shows a correlation coefficient (R) of 0.894, a coefficient of determination (R2) of 0.800, and an F-statistic of 215.654 with a significant value of 0.000, which is less than 0.05. It demonstrates that contingent costs have a statistically significant positive effect on cattle production profitability. However, this suggests that contingent costs account for 89.4% of the variation in cattle farming profitability. This is very high, and it is corroborated by the corrected R2 of 0.796 (79.6%), which also verifies the model's fitness.

The table also demonstrated that contingent costs have a statistically significant positive effect on cattle production profitability. This is supported by the t-test result (f (1/54); = 216.654; p 0.05). At 5% confidence level, the null hypothesis of no substantial influence of contingent costs on livestock farming profitability is rejected, and the alternative hypothesis is accepted.

Furthermore, contingent costs show a positive significant link with livestock farming profitability with the inferential result value; =.795, p 0.000. As a result, if all other variables remain constant, a unit change in cattle farming profitability will result in a 795 unit positive significant change in contingent costs.

The decision criterion is that if the unstandardized beta value is statistically significant in any direction at the 5% level of significance, we reject the null hypothesis. Because the null hypothesis is statistically significant at the 1% level of significance. As a result, the null hypothesis that contingent expenses have no substantial effect on cattle farming profitability is rejected.

Hypothesis III

H_{01}: There is no significant effect of environmental penalties and fines on profitability of all livestock farming in Yewa South Local Government.

Table 3: Effect of Environmental penalties and fines on the Profitability

Model	Variables	Unstandardized Coefficients		t-value	p-value
		Beta	Standard Error		
I	Constant	5.689	1.230	4.625	0.000
	Penalties and fines	0.722	0.055	13.187	0.000

R = 0.874, R-square = 0.763, Adj. R Square = 0.759, F = 173.906, p=0.000
Source: Researcher's Compilation from SPSS

The influence of the independent variable (environmental penalties and fines) on the dependent variable (profitability of livestock farming) is seen in Table 3. The correlation coefficient (R) is 0.874a, and the coefficient of determination (R2) is 0.763. It demonstrates that environmental penalties and fines have a significant positive impact on cattle farming profitability. The fitted model also demonstrates that all of the independent variables (environmental penalties and fines) explain for 87.4% of the variation in cattle agricultural profitability. The remaining 12.6% could be due to other factors that contribute to livestock farming profitability but are not taken into account in this study.

Furthermore, the F-statistic result value of 173.906 with a significant value of 0.000, which is less than 0.05, is less than 0.05. This demonstrates that the explanatory variable (environmental penalties and fines) has an impact on livestock agricultural profitability in Yewa South Local Government, Ogun State, Nigeria. As a result, the null hypothesis of no substantial effect of environmental penalties and fines on cattle farming profitability will be rejected, and the alternative hypothesis will be accepted at a 5% confidence level.

The table also shows that environmental penalties and fines have a statistically significant beneficial effect on the profitability of cattle production, with the inferential result value; = 0.722, p 0.000. However, if all other variables remain constant, a unit change in cattle farming profitability will result in a large shift in environmental penalties and fines of 722 units.

The decision criterion is that we accept the null hypothesis if the unstandardized beta value is statistically insignificant at the 5% level of significance. As a result, the null hypothesis that environmental costs have no major effect on cattle farming profitability is accepted, while the alternative is rejected. This means that environmental penalties and fines have little impact on business.

RESULTS AND DISCUSSION OF FINDINGS

The analysis results showed that all of the independent variables are statistically significant, with a correlation coefficient (R) of 0.938, a coefficient of determination (R^2) of 0.879, and an F-statistic result of 392.414 with a significant value of 0.000, which is less than 0.05. It demonstrates that traditional costs have a statistically significant positive effect on cattle production profitability. However, this means that conventional costs account for 87.9% of the shift in cattle production profitability. This is very high, and it is reinforced by the corrected R^2 of 0.877 (87.7%), which further verifies the model's fitness.

Furthermore, the correlation coefficient result R of 0.894, coefficient of determination R^2 of 0.800, and F-statistic result of 215.654 with significant value of 0.000, which is less than 0.05, show that contingent costs have a positive statistically significant effect on livestock farming profitability, with contingent costs accounting for 89.4% of the change in profitability. The very high R^2 of 0.796 (79.6%) also validated the model's fitness. Furthermore, the coefficients(a) show that contingent costs have a positive significant relationship with livestock farming profitability with the inferential value; =.795, p 0.000, implying that a unit change in livestock farming profitability will result in a 795 unit positive significant change in contingent costs.

The correlation coefficient (R) of 0.874 and the coefficient of determination R^2 of 0.763 indicate that environmental penalties and fines have a significant beneficial effect on cattle agricultural profitability. The fitted model, on the other hand, revealed a variation of 87.4% in cattle farming profitability, which was accounted for by the independent variable (environmental penalties and fines). To emphasize this, an F-statistic result of (f(1/54); = 173.906 with a significant value of 0.000, which was less than 0.05, was obtained.

Finally, the finding reflects that conventional and contingent costs are statistically positively connected with a significant value smaller than 0.05, which is consistent with a prior anticipation. This is a strong indicator that conventional and contingency expenses have a favourable and significant association with livestock production profitability. This was also supported by the unstandardized beta value, which was statistically significant at the 5% level of significance.

CONCLUSION

The study concludes by rejecting the null hypothesis that traditional costs had no substantial effect on the profitability of cattle production in Yewa South Local Government, Ogun State.

As a result, the null hypothesis that contingent costs have no substantial influence on livestock farming profitability is rejected, and the goal that contingent costs have a considerable effect on livestock farming profitability in Yewa South Local Government holds true.

The impact of environmental penalties and fines on cattle agricultural profitability in Yewa South Local Government is negligible. Finally, all of the dependent variables have a positive and significant effect on cattle agricultural profitability, although environmental penalties and fines are positively insignificant.

RECOMMENDATIONS
(i) The results led researchers to make the following recommendations to the government, animal farms, and the general public: (i) animal producers should seek inward for locally built environmental pollution prevention equipment that are more affordable for farms that are Small and Medium Scale Enterprises.
(ii)The cost accountant or whomever is tasked with the responsibility of preparing the accounts is educated on the statutory handling of environmental expenses so that there is no effect on profitability if such charges are made. This ensures that the profitability of the business is not negatively affected.
(iii)The government should encourage local manufacturers to develop pollution prevention technology that is beneficial to the environment, uses local materials, and is available to small and medium-sized businesses.
(iv) The government need to additionally take into consideration livestock farming by providing import tax discounts on imported environmental pollution control equipment in order to stimulate Small and Medium Scale animal production in areas where such machinery is necessary.

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