Financial Re-Engineering and Financial Performance of Poultry Business in Nigeria

Dada, Samuel Olajide, Akintoye, Ishola Rufus and Alawode, Olufemi Peter
Department of Accounting, Babcock University, Ilishan-Remo, Nigeria

doi: https://doi.org/10.37745/ejaaf.2013/vol11n46086

ABSTRACT: The poultry industry as the largest employer of labour in the organised private sector and contributes 25% to Nigeria agricultural GDP. Previous studies had not adequately been able to integrate the process of capturing performance of poultry business using the balanced scorecard performance pillars. Thus, this study examined the impact of financial re-engineering on corporate performance and the sub-variables of the poultry business in Nigeria. The study used survey research. 4,324 active farmers and major stakeholders in the poultry industry from Nigeria’s six geopolitical zones made up the study’s population. The Taro Yamane sample size formula was used to determine the sample size of 450 with a response rate of 84%. The range of the constructs' Cronbach's alpha reliability coefficients was 0.87 to 0.95. The data were analyzed using descriptive and inferential (multiple regression) analysis with a 5% level of significance. The findings revealed that all financial re-engineering proxies had a significant effect on financial performance (Adj. R2 = 0.535, F(5,379) = 87.901, p < 0.05). The study concluded that financial re-engineering has significant effect on financial performance of the poultry business while the lag in the adoption of modern technology including the usage of artificial intelligence and robotics reflected in sub-optimal performance which need be focused for effective asset utilisation. The study recommended the introduction of standards that will aid the starting point of using financial results to drive the business and make credit availability easier in support of various government and non-governmental financial aids and grants.

KEYWORDS: asset utilization, balanced scorecard, business strategy, economic value added, financial re-engineering, organizational structure, profitability.

INTRODUCTION

The downturn in the Nigerian economy affects all the sectors perhaps in different magnitude and dimensions and the government has engaged in various reforms focusing on revamping the ailing industries in partnership with the private sector with the Central Bank of Nigeria taking a leading role in the agricultural sector which contributes average of 6% to 8% according to Netherlands Enterprise Agency, 2020 and PwC, 2020.
There are many factors responsible for the poor corporate performance part of which is the understanding of the suitable performance measurement system available, and which could be deployed by these firms with some of them requiring adoption or adaption from the developed economies.

While financial performance and effective utilisation of assets are the twin side to viewing the financial perspective it is worthy of note that sales, expenditures and income are the three basic but comprehensive elements that are used in measuring the financial performance and in addition to the income metric can be the analysis through indicators such as financial ratios and budget and budgetary control activities, all of these with the sole aim of visibly maximizing the stakeholders value. (Evans, 2020; Odusanya et al., 2018; Reschikwati et al., 2020). From the perspective of business process re-engineering, financial re-engineering may be described as the basic rethinking and drastic rebuilding of company processes to produce substantial improvements in crucial, contemporary performance indicators. The examination and restructuring of firm processes are known as business process re-engineering. Business Process Re-engineering is classically not downsizing, reorganization, automation, restructuring, new technology, but it is rather a dramatic change in the overall organisational processes and structures, management systems, employee responsibilities and performance measurements, incentive systems, skill development, and the use of information technology so that the processes support the organization to realize its goals, a system right from basic planning to achievement measurement. (Nzewi, Nzewi, & Moneme, 2015).

In the identification of the various threats to corporate performance and with particular reference to the agricultural sector that covers the poultry sub-sector, it is also imperative that options are considered in getting optimal solutions to these performance issues and one of the ways that was considered vital for the purpose of this study is the adaption of a proxy of balanced scorecard measurement system through financial re-engineering focusing on particular business-related strategy, the available business systems and technology, organisation structure and culture as a wholesome solution to performance management. The poultry industry is a huge business with sometimes overly complex business structure but also simple to operate. The business can be viewed from three basic business category, namely, the primary poultry producer who are into servicing of the farmers with biological inputs like day old chicks (DOC), parent stock, hatch able eggs, point of cage/lay, and post-brooding birds. The second category of poultry business are the secondary producers who are producing for food and not for re-generation having almost same output as the primary producers but for consumption. The third category of farmers are service providers supplying all forms of inputs including logistics, veterinary services, feed supply, drugs and vaccination and other inputs. The poultry subsector is the most commercialised and capitalised of all the four main sub-sectors of the Nigerian agricultural sector (Netherlands Enterprise Agency, 2020; Nwandu, Ojogbane, Okoh, & Okechukwu, 2016). The rate of return on agricultural investments is equally competing with other high-yielding sectors and thus the allocation of
resources will be a dynamic function of optimal profitability (Asuquo, Arigor, & Eyo, 2021; PwC Nigeria, 2018). These specific links which are camouflaging the challenges of financial performance as earlier highlighted can be resolved or improved with financial re-engineering and adopting one or a mix of the various performance measurement systems.

**Statement of the Problem**

There is scarcity of, tested, standard business process system in the Poultry Industry today in Nigeria, an industry worth NGN1.875trillion according to Central Bank of Nigeria (Awojulugbe, 2019) Though the stock and assets management of the industry is covered by the IAS 41 on Biological Assets but there is the need for a workable business process or the re-engineering of any existing system in the face of the challenges of the economy as driven by technology. The leading Livestock companies are all being managed as a trading company or livestock services company and not quoted on the Nigerian Stock Exchange. Thus, this work explored the impact of financial re-engineering programmes on the financial performance of the Poultry industry in Nigeria using the proxies of balanced scorecard as measurement indicators, this was done in asking to what extent do financial re-engineering impact on the financial performance in the poultry business in Nigeria?

**Hypotheses and Rationale for Hypotheses Development**

**H₀: financial re-engineering has no significant impact on the financial performance of the poultry business in Nigeria.**

The hypothesis showing that financial re-engineering does not impact on the financial performance of the poultry business in Nigeria was tested for the study. The poultry industry in Nigeria is worth NGN1.875trillion (CBN 2020, PAN 2020) and the most capitalised in the agricultural sector. Hitherto, it is an industry that is more of family funded or informal funding system but is enjoying government attention resulting from the diversification policies targeting revenue from non-oil sector and the employment generation ability of the poultry industry. There are many formal funding programmes coming from both the private sector (majorly money-deposit banks and other financial institutions) and the public sector as championed by the Central Bank of Nigeria through institutions like BOA, NIRSAL, BOI, BOD and SMEDAN (Ajala, Ogunjimi, Famuwagun, & Adebimpe, 2021; Olumide-Oyaniyi & Ajayi, 2019; Adeyomu, Ajiboye, Isitor, & Faseyi, 2017). The following hypotheses showing that financial re-engineering does not impact on the corporate performance of the poultry business in Nigeria were tested for the study.

Financial performance as a proxy in the balanced scorecard has been widely discussed and particularly in the large organisations. Norton and Kaplan originally promoted the balanced scorecard for appraisal in the companies on the leading edge of performance. Even for organisations that do not have shareholders, the financial perspective indicates how well the strategy and operations contribute to improving the organisation's financial health and this is very
well applicable to the poultry industry which still operate largely in the SMEs category with mostly family ownership. According to Hansen & Mowen (2010), a balanced scorecard is a “strategic-based responsibility accounting system” that translates an organization’s mission and strategy into operational objectives and measures for four different perspectives, including the financial perspective, the customer perspective, the process perspective, and the infrastructure (learning and growth). Thus, the financial assessment is virtually identical to the balanced scorecard, and because it ultimately gauges an organization's survival and sustainability, it becomes a key strategy determinant.

Farm businesses in Nigeria are dynamically under pressure to intensify production sustainably by managing costs, enhance output quality and meeting market demands. These is making the sector to be in search of funding and particularly that the various public credit agencies are ready to pump money into the poultry industry as a sub-sector of the agriculture sector, financial performance becomes the single most significant determinant of ability to secure credit funding and various other promotional support programmes. Thus, it becomes essential to assess financial re-engineering activities that will contribute into the formulation of strategy and measurement of financial performance even with the limitations that most of the poultry farms are in the SMEs category with no publicly available financial statement.

There has been many studies on the impact of financial re-engineering on financial performance and this includes the study of (Adegbie & Olaore, 2020) which affirmed that it can lead to reduction in operation cost. The study of (Olayeni et al., 2021) which centred on the impact of green strategy to impact financial performance and the studies of (Esokomi & Otuya, 2020; Gomera et al., 2018; Yensu et al., 2016) all on impact of financial re-engineering on financial performance.

LITERATURE REVIEW
Conceptual Review
Traditionally, organisational or corporate performance is tilted towards financial measurement, however, there is now a growing emphasis towards measuring both the financial and non-financial performance which is broader and sustaining and strategically throws more light on the financials. The current performance and long-term performance criteria are the true measure of performance as they are inter-dependent. Management information systems are critical for supplying financial and non-financial data to internal and external users. The availability of information on which managers can act effectively is critical to an organization's capacity to compete successfully. The financial controlling role primarily provides information for planning and managing corporate activities. One of the most essential aspects of financial control is performance assessment systems, which are critical in assessing the achievement of organizational goals. As a result, a review of the literature reveals that performance measurement system design and development are becoming increasingly important (Owolabi, Ajibolade, & Uwuigbe, 2021; Rocha, de Lima, da Costa, Oliveira Sant’Anna, & Angelis, 2020; Oyewo, Oyedokun, & Azuh, 2019).
The financial management literature had previously emphasized the use of financial performance metrics to improve organizational strategy and assess managerial performance (Rashid, Ali, & Hossain, 2020; Ratnatunga & Montali, 2020). Using new technology has led to many changes and developments, including the adoption of total quality management and a just-in-time procurement system, as well as the rise of today's highly competitive business environment. These changes have led to a need for better performance measures to sustain a continuous improvement process in a competitive environment with low profit margins (Akinola, 2022; Aliyu, Abdullahi, & Bakare, 2020; Ogbebor, Osho, & Oguntodu, 2020). Additionally, the increasing demand and exploration for the utilisation of non-performance measures such as quality and customer satisfaction have necessitated that both financial and non-financial performance measures are considered in the totality of measuring corporate performance (Owolabi & Adeosun, 2021; Owolabi, Adetula, & Taleatu, 2016).

**Financial Performance**

Performance measurement is all about financial and non-financial performance, with the non-financial indicators playing significant roles and impact the financial performance at times significantly (Okoye, Odum, & Odum, 2017). In this study, focus of financial performance will centre around profitability, sales growth, asset utilization and competitive advantage. The concept of profitability could be as wide or varied depending on the purpose it is intended to serve but basically can be viewed from the perspective of internal and external users.

Profitability is a company's capacity to produce a profit. It is also what remains of a company's income after it pays all expenditures directly linked to revenue creation, such as manufacturing a product, and other expenses related to business operations (Evans, 2020; Reschiwati et al., 2020). Profitability denotes that the whole amount of income in a reporting period is larger than the total number of costs, as compared to the assets employed to achieve such profit. To grasp the notion of profitability, it is important to realize that, while the terms profit and profitability are sometimes used interchangeably, they are related but not the same thing. Profit is an absolute quantity, whereas profitability is a relative one. Profitability is a statistic used to estimate the extent of a company's profit in relation to its size, which is a measure of efficiency. Profitability may also be defined as a company's capacity to generate a return on an investment based on its resources as compared to an alternative investment. Although a firm can make a profit, this does not always imply that it is profitable. (Nguyen & Nguyen, 2020) analysed profitability as a critical responsibility for businesses in a competitive context, and one of the critical aspects for performance evaluation that displays the proportion of profit in relation to asset investment, equity, or sales. Profitability is not only a credible basis for evaluating company success; it is also a valuable instrument for anticipating future business performance since it shows shareholders' wealth and thus appeals to investors (Odusanya et al., 2018).
Asset utilization is a metric that measures how well you employ your assets. A greater asset utilization rate usually correlates into improved overall efficiency and larger profit margins. To maximize asset utilization, factors contributing to time loss buckets and target improvements to reduce losses will be identified and managed by developing a top-level work plan for each work stream that defines its current and future states and measures the unit cost impact of such planned improvements. The asset turnover ratio is calculated conceptually and for this study by dividing the value of agricultural production by the average total assets. Farm production value may be determined from the farm's revenue statement, and average total assets can be acquired from the farm's market value of financial position statement. To determine the asset turnover ratio, gross income is commonly utilized instead of agricultural output value for simplicity. (Langemeier, 2020). A better asset utilization rate, primarily for inventory and equipment, often translates into increased overall efficiency and larger profit margins in asset-intensive businesses such as the poultry industry. (Akinleye & Dadepo, 2019). An efficient use of assets, assuring minimal idle time and capacity utilization to fulfill the manufacturer's efficiency prediction, would enable output maximization, making goods and services accessible for sale and eventually increasing profit. (Shafique et al., 2021). Asset utilization is a genuine measure of how effectively you are utilizing your installed capacity. It combines the dependability factor, which evaluates how available all assets are for operations, and the utilisation factor, which measures the effective hours or time such assets are put to full use.

The degree to which financial goals have been met is referred to as financial performance. It is the process of calculating the monetary value of a company's policies and operations. Financial performance is evaluated using financial statements such as the balance sheet, profit or loss statement, statement of cashflow, and statement of changes in equity to analyse the entire firm's financial well-being. The balance sheet displays a breakdown of an organization's financial balances and provides an insight of how the business manages its assets and liabilities. The profit or loss statement shows the gross profit margin, cost of goods sold, operational profit margin, and net profit before and after taxes margins for the year. The profit or loss statement and the balance sheet are combined in the cash flow statement. It specifies the sources and uses of cash that are accessible to a company. Finally, the statement of changes in equity (statement of retained profits) shows how the owner's equity has changed over time.

The fundamental economic goals of an enterprise have to do with profitability, growth, and shareholder value, and financial performance metrics reflect if the company's strategy, implementation, and execution are contributing to bottom-line improvement. The financial performance according Olotu, Salawu, Adegbie and Akinwunmi (2019) is considered as the leading perspective and the topmost part of balanced scorecard particularly as it affects key strategy implementation and assessment of corporate performance and basically answer the question of the perception and understanding of the stakeholders. There are three parts to the financial measures, and they are business growth, value creation, and profitability. Business
growth is measured by revenue to assets ratio, increase in revenue and assets, revenue from new products and services. Economic value added (EVA), market value added (MVA), stock price, and dividends are all used to quantify value creation. While profitability can be measured by Profit margin, return on investment, return on capital employed, return on assets among other related measurements (Tsirikas, Katsaros, & Kosta, 2020; Miloloža, 2018). Financial perspective is best measure particularly in large organisations with published financial statements and thus can move easily from financial evaluation to financial expectation and this is the reason why BSC is largely used for large incorporations but also the benefit derivable will even booster the SMEs into improved efficiency and increase in size by all ramifications and thus the measurement can be inferred through the usage of questionnaire recognizing the key indicators (Araújo, Oliveira, & Gomes, 2020; Alattyih, Haider, & Boussabaine, 2019; Lingesiya, 2012; Madsen, 2015; Bititci et al., 1997).

The financial perspective remains the core value through which a business can be measured and could be short-term like weekly or monthly or even quarterly sales revenue and operating income with the attendant inadequacies of such financial measures which ranges from backward-looking tendencies (historical perspectives) through weaknesses at reflecting contemporary value-creating actions. These inadequacies have however led to the development of shareholder value analysis to make financial analysis more forward-looking forecasts future cash flows and discounts them back to a rough estimate of current value. Some detractors of financial measures go even further in their criticism. Financial views critics claim that the competitive landscape has evolved, and that traditional financial measurements do not enhance customer happiness, quality, cycle time, or staff motivation. Financial performance, according to critics, is the outcome of operational activities, and financial success should follow logically from performing the fundamentals well, implying that firms should avoid navigating by financial measurements (Rafiq, Zhang, Yuan, Naz, & Maqbool, 2020; Kaplan & Norton, 2007).

Financial Re-engineering – Business Process Re-Engineering

There are many words used interchangeably to describe financial re-engineering and for the purpose of this work are taking to be the same. These names are business process re-engineering; core process redesign; new industrial engineering; working smarter core process redesign,’ ‘new industrial engineering’ or ‘working smarter; Strategic Business Process Re-engineering; Business Re-engineering; Business Process Redesign; Business Process Improvement and financial process re-engineering. Business Process Re-engineering is a management practice that aims to improve the efficiency of the business process. Re-engineering is a fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in cost, quality, speed, and service. Michael Hammer defined Business Process Re-engineering as the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed (Bello & Viltard, 2019). Fundamental, radical, dramatic and processes are the four key words emanating from the
definition of Hammer and will need to be focused (Kenneth, Enefaa, & Deedam, 2018).

McAdam’s concluded his work by stating that small businesses engage in business process re-engineering using practical ideas called "phenomenological" instead of theoretical idea tagged "positivistic" and this way of adapting the usage of re-engineering phraseology is very much in line with small business practice when it comes to trendy innovations, which is picked based on environmental assessment of workability of these phenomena (McAdam, 2002).

This theory of Business Process Re-engineering was popularized in 1996 by Michael Hammer who focused on re-engineering of business processes as a strategic decision hitherto called re-organisation (Şerban, 2015). In his article, “Re-engineering Work – Do not Automate, obliterate” Hammer emphasised that organisations are fond of believing that automation is the solution to a system that is not working instead of outright elimination that is more likely to add value. Aziz (2019) and Bhaskar(2018) stated that though the basic components of business process re-engineering will remain the same however the SMEs specific related issues and challenges like cost, resistance, communication and poor design need be incorporated in their BPR decision making. Business process re-engineering is the method of improvising the operation of a business on a broad scale with the aim of cutting down redundancies and minimize organisation operational costs in all dimensions. This process is not limited to any aspect of an organisation and can also be a combination of change management, customer focus, business process mapping and any other optimization measures (Sneader & Singhal, 2020).

**Figure 1: Business Process Re-engineering Steps**

![Business Process Re-engineering Steps Diagram](source: Adapted from Hammer & Champy 1994)
Poultry Industry
The Nigerian poultry industry has been rapidly expanding in recent years and is therefore one of the most commercialized (capitalized) subsectors of Nigerian agriculture (Ojabo et al., 2020). The popularity of poultry production can be explained by the fact that poultry has many advantages over other livestock. Poultry birds are good converters of feed into useable protein in meat and eggs. The production costs per unit remain relatively low, and the return on investment is high. Therefore, farmers need a relatively small amount of capital to start a poultry farm. Furthermore, poultry meat is tender and the acceptability to consumers is high, regardless of their religious beliefs. Also, the production cycle is not long, so capital is not tied up over a long period. Eggs, as one of the major products of poultry production, are more affordable for the common person than other sources of animal protein (Heise, Crisan & Theuvsen, 2015).

The profitability and diversity of poultry business income is science and technological dependent. A sound knowledge and logical management skill combined will contribute significantly to economic sustainability of the business. Thus, when evaluating the relevance of farm management, poor growth, and obstacles in poultry industry, it is critical to assess and comprehend the current state of managerial abilities, as well as the elements that influence them (Rekwot, Owoshagba, Ahmed, & Atiku, 2018). It is also an industry that involves a huge and significant number of individuals, packers, supplier, distributors, retail grocers and food service operators in its value chain (Ogunyemi & Orowole, 2020).

Theoretical Framework
This study was anchored on Dynamic Capabilities Theory and Resource-Based View theory. For the independent variable of financial re-engineering, the dynamic capabilities theories was used. Dynamic capability which according to (Cyfert, Chwilkowska-Kubala, Szumowski, & Miśkiewicz (2021); Drago, de Moura, da Silva, da Veiga, Kaczam, Rita, & da Silva (2022) draws its theoretical basis from the classic resource-based view of the firm within the strategy theories as a theory of competitive advantage in quickly changing contexts that focuses on understanding how organisations adapt their resources to compete in their environment, this research will concentrate on the theory's competitive advantage. When discussing knowledge acquisition as the foundation for transformational activities around dynamic capabilities, knowledge transfer within the organisation in ensuring proper information supply to units participating in organisational change processes, and encouragement of employees to experiment, which is the basis for the emergence of new, breakthrough ideas, dynamic capabilities theory is relevant.

This study was also based on the resource-based perspective which idea emerged, through Farid (2022), because of Jay Barney's paper "Firm Resources and Sustained Competitive Advantage (1991)," It was first articulated by Birger Wernerfelt in 1984 (A Resource-based View of the Firm). According to the resource-based view (RBV), organizations have resources, a subset of which allows them to gain a competitive advantage and a subset of which leads to better long-term
performance. According to resource-based theory, precious, scarce, difficult to replicate, and non-substitutable resources best position a corporation for long-term success. These strategic resources can lay the groundwork for the development of firm skills that will lead to superior performance over time. This theory assumes that ownership and control of critical strategic assets is pivotal to financial performance and thus a key to competitive advantage and overall survival. Thus, RBV is seen more from an internal perspective (Madhani, 2010). That the resources available to the organisation is perfectly mobile and can be used by competition as well (Madhani, 2010). Utami and Alamanos (2022) study showed that RBV sees firms as bundles of physical and intangible resources.

**Empirical Review - Financial Re-engineering and Financial Performance**

The empirical studies reviewed established that financial perspective is greatly influenced by financial re-engineering which is also called business process re-engineering. However, a good number of the studies reviewed present the overall view of financial performance from large and quoted enterprises with a balance between those who used the traditional financial performance measurement tools versus those that used the perspective of the operators of the system through the administration of questionnaires.

Adegbie and Olaore (2020) discovered that financial re-engineering impacts positively on the liquidity and profitability of the SMEs including the tangible assets growth and went ahead to recommend that SMEs should adopt measures that will improve on the efficiency of operating practices and reduce their operational cost. This was supported by the work of Esokomi and Otuya (2020) in the study of the impact of financial re-engineering on the financial performance of Kenyan cooperative societies as a service organisation. Sujová, Marcineková, and Simanová (2019) introduced the increasing pressure of globalisation impacting on corporate performance and resulting into a more positive Return on Equity (ROE). The study went further to recommend using modern process indicators for better financial performance. Olayeni Ogbo, Okwo, Chukwu, Ifediara and Ezenwakwelu (2021) introduced the adoption of an organization-wide green strategy as a means of improving product quality and the firm’s financial lifeline in developing economies using The Hayes mediation approach. All these studies utilise the questionnaire in collecting data largely for regression analysis. To determine the link between strategic planning and financial performance, Gomera, Chinyamurindi, and Mishi (2018) sampled 225 people who are either owners or managers of small and medium-sized businesses (SMEs) in the Buffalo City Metropolitan area of the Eastern Cape Province of South Africa. Strategic planning has a positive relationship with SME financial performance, according to the study, which used regression and correlation analysis. The core aspects of strategic planning (formulation, implementation, evaluation, and control) were also found to have a positive relationship with financial performance. The study concluded with a recommendation that SME strategic planning be expanded for competitive advantage. The studies of (Dalalo and Hunde (2020); Jayawardane and Gamlath
(2020); Yensu, Yiadom, and Awatey (2016)) all supported that a strategic focus on the business processes will all ultimately lead to a better financial performance.

However, there are also studies that utilised secondary data and this is applicable in most cases reviewed to manufacturing organisations of public companies (Adefulu, Akinshipe, Makinde, & Akpa (2020); Bako & Banmeke (2020); Andari, Agustina, Mariana, & Fathonah (2019); Khashman, 2019; Ofurum et al., 2019; Olotu, Salawu, Adegbie, & Akinwunmi (2019); Otulia, Mbeche, Wainaina, & Njihia (2017).

This study will however focus on the perspectives of personnel within the poultry industry which is largely dominated by the SMEs in a developing economy where agricultural is deemed the sector with the second highest revenue earner after the oil and gas sector.

**Researcher’s Conceptual Model**

**Figure 2: Researcher’s Conceptual Model**

![Diagram](https://www.eajournals.org/)

**Source:** Researchers Concept 2022
METHODOLOGY

This section discusses the research design, study population, sample size and sampling technique, determination of sample size, method of data collection, research instrument, pilot study, validity and reliability of research instrument, methods of data analysis, researcher’s conceptual model, model specification, a priori expectation, and ethical considerations. The justifications for using each approach, as well as their relevance to the current investigation, was presented.

Sample Size and Sampling Technique

For the purpose of this research, a mix of stratified, purposive, and random sampling methods was used to collect data from the target population of 4,324 active farmers, based on information obtained from the Nigeria Poultry Show. The country six geo-political zones represented the strata on which the various poultry farmers are sampled based on their level of activity which is basically whether they are active or inactive and moving further to ensure maximum reach based on defined target as contained in Table 1. This approach is considered appropriate because it helped to obtain satisfactory representation of various sub-groups within the population and in a very comprehensive data reach as all sample units were contacted and questionnaire administered physically or electronically. The Poultry Network embarked on training of Interns across the geo-political zones in farms and these Interns served as Research Assistants in the administration of online questionnaire in the various geo-political zones which was centrally harvested.

The Taro Yamane formula was used to estimate the sample size for this investigation. This is the classic method of randomization, and it identifies the margins of error for the most important questions in the survey. The Taro Yamane formula was also adopted by similar studies like Kabuoh, Ulikere and Francis (2021) ; Olajide and Okunbanjo (2020) and because it is considered the most appropriate for a finite population that is not too large. This aided in obtaining the sample and the results needed to make data-driven sampling decisions.

The formula of  \[ n = \frac{N}{1 + N(\varepsilon)^2} \] resulted in a sample size of 450 including the provision for margin of error and effect of online distribution of questionnaires as contained in the Table 1 following the farmers population in the various zones.
Table 1: Sampling Distribution by Geo-political Zones of the Nigeria Federation

<table>
<thead>
<tr>
<th>S/No</th>
<th>Geo-Political Zone</th>
<th>Population Size for each Division</th>
<th>Total Study Population</th>
<th>Sample Size</th>
<th>Proportionate Sample Size</th>
<th>Sample Percentage(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SW - South West</td>
<td>1954</td>
<td>4324</td>
<td>450</td>
<td>200</td>
<td>44.4%</td>
</tr>
<tr>
<td>2</td>
<td>SE - South East</td>
<td>280</td>
<td></td>
<td>30</td>
<td>6.7%</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>SS - South South</td>
<td>260</td>
<td></td>
<td>30</td>
<td>6.7%</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>NW - North West</td>
<td>680</td>
<td></td>
<td>70</td>
<td>15.6%</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>NE - North East</td>
<td>610</td>
<td></td>
<td>60</td>
<td>13.3%</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>NC - North Central</td>
<td>540</td>
<td></td>
<td>60</td>
<td>13.3%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4324</td>
<td>4324</td>
<td>450</td>
<td>450</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Researcher’s Computation (2022)

The sample size for each of the regions and states is taken as a function of poultry production capacity as indicated by the Poultry Association of Nigeria based on data submitted to the Federal Government of Nigeria on Palliatives Distribution in year 2020. Statistics from the Nigerian Poultry Show (CSIRO, 2021; LiveGAPS, 2020). With the three top producing states of Ogun, Lagos and Oyo States all from the Southwest of Nigeria.

DISCUSSION AND ANALYSIS

Descriptive Statistics

Table 2: Descriptive Statistics Table

<table>
<thead>
<tr>
<th></th>
<th>BSTR</th>
<th>BPAS</th>
<th>BTEC</th>
<th>OSTR</th>
<th>OCUL</th>
<th>FIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.01</td>
<td>3.77</td>
<td>4.01</td>
<td>4.26</td>
<td>4.30</td>
<td>4.02</td>
</tr>
<tr>
<td>Minimum</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Maximum</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.597</td>
<td>0.370</td>
<td>0.370</td>
<td>0.450</td>
<td>0.400</td>
<td>0.534</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.148</td>
<td>-2.398</td>
<td>-1.903</td>
<td>-1.365</td>
<td>-2.189</td>
<td>-0.910</td>
</tr>
<tr>
<td>Observation</td>
<td>379</td>
<td>379</td>
<td>379</td>
<td>379</td>
<td>379</td>
<td>379</td>
</tr>
</tbody>
</table>

Source: Researcher’s Computation, 2022
Table 2 presents the descriptive statistics result of financial re-engineering and corporate performance of poultry business in Nigeria. The independent variable used were proxied as Business strategy (BSTR), Business processes and systems (BPAS), Business technology (BTEC), Organisational structure (OSTR) and Organisational culture (OCUL), while the dependent variable was Customer Performance (CUS). The mean value showed the average of each variable which is between 3.77 to 4.26. The standard deviation is in close range with the mean which implies that data points are clustered round the mean which is between 0.370 to 0.597. The minimum value in the data set is two (1) while that maximum value is five (5). The minimum value reveals that there are some customer indices that are externalized and thus respondents who are largely farmers are not too sure of the situation with some indices.

Distribution of Questionnaire
The researcher distributed 450 copies of questionnaire, out of which 379 copies were received from the field. This represented an overall successful response rate of 84.22%. The rest 71 (15.78%) of the copies consisted of those questionnaires that were never returned. According to (Holton et al., 2022), the average response rate to online survey as at 2020 stood at 68% and thus will be considered as the benchmark for this work as acceptable for self-administered questionnaire. It guarantees accuracy and minimizes bias. Based on this high value of response rate, the 84.22% achieved was adequate for drawing conclusions on the study objectives. Therefore, the researcher used the questionnaire copies collected for analysis and reporting. Table 3 presents results of the response rate.

Table 3: Questionnaire Administration Response Rate

<table>
<thead>
<tr>
<th>Questionnaire</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely filled and returned</td>
<td>379</td>
<td>84.22%</td>
</tr>
<tr>
<td>Non-response</td>
<td>71</td>
<td>15.78%</td>
</tr>
<tr>
<td>Total</td>
<td>450</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: Field Survey, (2022)

Regression Analysis for Test of Hypothesis
Research Objective: Assess the impact of financial re-engineering on the financial performance in the poultry business in Nigeria.
Research Question: To what extent do financial re-engineering impact on the financial performance in the poultry business in Nigeria?
Research Hypothesis (H₀): financial re-engineering has no significant impact on the financial performance in the poultry business in Nigeria.

Table 4: Regression Estimate

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model Coefficient</th>
<th>Standard Error</th>
<th>t- stat</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.589</td>
<td>0.233</td>
<td>2.524</td>
<td>0.012</td>
</tr>
<tr>
<td>D1-BSTR-Business Strategy</td>
<td>0.104</td>
<td>0.068</td>
<td>2.024</td>
<td>0.044</td>
</tr>
<tr>
<td>D2-BPAS-Business Processes and Systems</td>
<td>-0.048</td>
<td>0.065</td>
<td>-0.861</td>
<td>0.390</td>
</tr>
<tr>
<td>D3-BTEC-Business Technology</td>
<td>0.001</td>
<td>0.075</td>
<td>0.008</td>
<td>0.993</td>
</tr>
<tr>
<td>D4-OSTR-Organisational Structure</td>
<td>0.529</td>
<td>0.064</td>
<td>8.042</td>
<td>0.000</td>
</tr>
<tr>
<td>D5-OCUL-Organisational Culture</td>
<td>0.204</td>
<td>0.054</td>
<td>4.127</td>
<td>0.000</td>
</tr>
<tr>
<td>r</td>
<td>0.735</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(R^2)/Adjusted (R^2): Overall</td>
<td>0.541 (0.535)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent Variable: Financial Performance * significant at 5%

Model
The predictive and prescriptive multiple regression models are thus expressed:

\[ \text{FIN}_i = f (\text{BSTR}, \text{BPAS}, \text{BTEC}, \text{OSTR}, \text{OCUL}) \]
\[ \text{FIN}_i = 0.589 + 0.104\text{BSTR}_i + 0.048\text{BPAS}_i + 0.001\text{BTEC}_i + 0.529\text{OSTR}_i + 0.204\text{OCUL}_i \]

Equation 1: (Prescriptive model)
\[ \text{FIN}_i = 0.589 + 0.104\text{BSTR}_i + 0.001\text{BTEC}_i + 0.529\text{OSTR}_i + 0.204\text{OCUL}_i \]

Equation 2: (Predictive model)

Interpretation of Result
Table 4 shows the result of the multiple regression analysis carried out on the examination of the effect of financial re-engineering (business strategy, business processes and system, business technology, organizational structure and organization culture) and financial performance of the poultry business in Nigeria. The regression estimates shows that financial re-engineering measured by business strategy (BSTR), business technology (BTEC), organisational structure (OSTR) and organisational culture (OCUL) positively affects corporate performance measured by financial
performance (FIN) with the exception of business processes and systems (BPAS) that negatively affects financial performance. This is indicated by the signs of the coefficient (β₀ = 0.589; β₁ = 0.104; β₂ = -0.048; β₃ = 0.001; β₄ = 0.529 and β₅ = 0.204). Also, the trio of business strategy (β = 0.104; t = 2.024, p = .044), organisational structure (β = 0.529, t = 8.042, p = .000) and organisational culture (β = 0.204, t = 4.127, P = 0.000), all had a positive significant effect on financial performance. While business technology (β = 0.001, t = 0.008, p = 0.993) had a positive but insignificant effect on financial performance of poultry businesses in Nigeria. Business processes and system (β = -0.048, t = -0.861, p = 0.390) had a negative but insignificant effect on financial performance of poultry businesses in Nigeria.

The correlation coefficient of r = 0.735 revealed that a moderately strong positive relationship exists between financial re-engineering and performance of poultry business in Nigeria. The coefficient of multiple determination, Adjusted-R² is 0.535 indicating that the financial engineering explains about 53.5% of the changes in financial performance of poultry businesses in Nigeria, while the remaining 46.5% could be attributed to other factors not included in this model.

The regression model showed that when financial re-engineering is held to a constant zero, financial performance would be 0.589, implying that without the financial re-engineering, the financial performance of poultry businesses in Nigeria would be 0.589. The results of the multiple regression analysis indicate that from the predictive model, all the variables business strategy, business technology, organizational structure and organizational culture are significant and therefore is prescribed for adequate attention by the poultry business owners in Nigeria. This implies that a one unit (1%) improvement in business strategy will result to a little above ten times (10.4%) improvement in financial performance, a one unit (1%) improvement in business processes and systems will result to about half unit (4.8%) deterioration in financial performance, a one unit (1%) improvement in business technology will result to no change (0.1%) in financial performance, a one unit (1%) improvement in organisational structure will result to about fifty three times (52.9%) improvement in financial performance and a one unit (1%) improvement in organisational culture will lead to an improvement of a little above twenty times (20.4%) improvement in financial performance.

Decision: At a level of significance of 5%, the F-statistics is 87.901, while the P-value of the F-statistics is 0.000, which is less than 0.05 accepted level of significance. Therefore, the study rejected the null hypothesis which means that financial re-engineering has no significant impact on the financial performance in the poultry business in Nigeria and the alternate hypothesis that financial re-engineering proxies have significant impact on the financial performance of poultry business in Nigeria is accepted because it reinforces all theoretical evidence gathered during the study.
DISCUSSION OF FINDINGS

The result from the analysis is in line with the study of Bako & Banmeke (2019) and Oladimeji, Akingunola, & Sanusi (2017) which stated that there exist strong relationship between deploying technology and modern business processes in the efforts at boosting profitability as a factor of financial performance in the banking industry in Kenya. The studies of (Olarewaju & Sunkanmi, 2022; Riyanto, Primiana, Yunizar, & Azis, 2018) also supported that business process re-engineering as a strategic tool will boost competitive advantage which is derivable mainly by profitability. (Adegbie & Olaore, 2020) study as well affirmed that financial re-engineering is key at ensuring profitability of SMEs in Nigeria. (Tsirikas, Katsaros, & Kosta, 2020) study showed that leadership style influences employees’ readiness to change as can be linked to organisation structure and culture and this impacts on the firm’s profitability. (Olayeni et al., 2021) highlighted the effect of adopting green strategy or corporate environmentalism to enhance the product quality and the firm’s financial lifeline while also complying with environmental dictates.

(Sujová, Simanová, & Marcineková, 2019) also asserted that innovation of business processes is required to improve financial performance. (Miloloža, 2018) similarly affirmed that small businesses thrive financially in the presence of a democratic approach while also highlighting various other organisation culture required for a better financial performance by organisations. However, the study of (Margaret, 2021) contended that financial factors which is sub financial re-engineering is not sufficient on its own to drive financial performance but the healthy practice of adopted financial factors focusing on management practices. The study of (Odusanya et al., 2018) also attributed financial performance mainly to credit factors including short-term leverage, inflation rate, interest rate and financial risk as having significant negative effects on firm financial performance in terms of profitability. (Oladimeji et al., 2017) had concluded that financial re-engineering has impacted particularly in the banking industry profitability and operational efficiency.

The findings on business strategy effect on financial performance agree with those of empirical research that had previously been utilized to discuss the findings of hypothesis one that all supported that a strategic focus on the business processes will all ultimately lead to a better financial performance (Dalalo & Hunde (2020); Jayawardane & Gamlath (2020); Gomera, Chinyamurindi, & Mishi (2018); Yensu, Yiadom, and Awatey (2016).

However, there are divergent views with regards to the factors or variables that principally affect financial performance as the adjusted $R^2$ of (53.5%) financial performance indicated that 46.5% can be attributed to other factors. (Hoang, Dang, Tran, van Vu, & Pham, 2019; Morara & Sibindi, 2021) highlighted that the size of the company in terms of total assets is a factor. (Bekhet, Alhyari, & Yusoff, 2020) attributed some of the key determinants of financial performance factor to be liquidity and leverage and this was also the position of (Morara & Sibindi, 2021). (Abosede, 2021) posited that cost of finance and by extension cost of equity or opportunity cost of equity has key
Impact on financial performance and this was also the position of many other research including (Olusola et al., 2022; Opoku-Asante et al., 2022).

Implication of Findings
The findings of this study have implications for Government and her agencies, funding institutions, the general public and prospective researchers. The model suggests that financial re-engineering proxies of business processes and systems is currently insignificantly affecting financial performance, and this is not farfetched as there exist no standard management information system covering the poultry business in Nigeria, and this is visible in that only one quoted livestock company exist in Nigeria. The Financial Reporting Council of Nigeria will need to collaborate with all necessary agencies to fashion out the preparation, implementation, and monitoring of the usage of standard accounting information system to build in all the advantages of the qualitative characteristics of financial reports, namely relevance, faithful representation, comparability, verifiability, timeliness, and understandability. This will make government and her agencies to ensure that more funds are pumped into the agricultural sector of the economy and improve on her GDP per capital contribution from the Agricultural sector:

Summary of Empirical Findings
On the overall, respondents show that they agree that business strategy, business processes and systems, business technology, organisational structure and organisational culture are satisfactory perspective of financial re-engineering and they further agreed that these financial re-engineering proxies have a positive influence on the financial performance of the poultry business in Nigeria. The financial re-engineering has a significant positive effect on financial performance of the poultry business in Nigeria. This is evident from the coefficient of + 0.104BSTR- 0.048BPAS+ 0.001BTEC + 0.529OSTR+ 0.204OCUL. The adjusted $R^2$ model shows 53.5% variations in financial performance (FIN) is attributed to the financial re-engineering proxies of BSTR, BPAS, BTEC, OSTR and OCUL while the remaining 46.5% is caused by other explanatory factors outside this model. The F-statistics of 87.901 and the probability of the F-statistic of 0.000 which shows that the regression result is statistically significant because it is less than 5% level of significance adopted for the study. The study rejects the null hypothesis which stated that financial re-engineering has no significant impact on the financial performance in the poultry business in Nigeria. Therefore, financial re-engineering has significant impact on the financial performance of the poultry business in Nigeria.

CONCLUSION AND RECOMMENDATION

Conclusion
In view of the findings from data analysis, the study concluded that financial re-engineering has significant effect on corporate performance of poultry business in Nigeria. Business strategy, organisation structure and organisational culture were identified as having positive significant effect on financial performance of the poultry business while business processes is having an
insignificant negative impact and business technology having a positive but also insignificant impact on financial performance. This is reflected in their coefficients and level of significance being below 5%. With regards to business technology, it is just reflective of the fact that automation is yet to be fully embraced as contained in the questions while the business processes is indicative of the absence of a standard management information system.

**Recommendation**
The reporting of financial results should be standardized by the Financial Reporting Council of Nigeria and the various technical or professional groups in the poultry business should work on a standard poultry financial reporting system, including necessary accounting and farm management software, to aid the industry at ensuring that the business matrices are well captured and situated within the globally accepted accounting practices, this is the starting point of using financial results to drive the business and make credit availability easier in support of various government and non-governmental aids and grants as well.

**Suggestions for Further Studies**
Other variables of financial re-engineering not captured in this study should be worked on while each of the variables can further be isolated and comprehensively diagnosed including applicable software applications that can be adapted/adopted in the poultry business in Nigeria. However, it need be emphasised that the responses received were adequately enough and sufficiently capable of helping in achieving the objectives of this study.
References


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Oladimeji, M. S., Akingunola, R. O., & Sanusi, A. J. (2017). Business process re-engineering and


