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CUPRINS

IMPACT OF COMMERCIAL BANKS' LENDING ON AGRICULTURAL DEVELOPMENT IN OSUN STATE, NIGERIA

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Abstract:

This study examined at how financing from commercial banks affected Osun State's agricultural development. The study adds to our understanding of the impact of commercial banks' lending on agricultural development and offers useful information to those involved in promoting the expansion, sustainability, and productivity of the agriculture sector. The research design used for this study was a descriptive survey. All FUSAKOD farm employees received a questionnaire, which was utilized to collect the data for this study. The study's conclusions demonstrated a favorable relationship between agricultural productivity and credit availability, as well as a beneficial effect of commercial bank lending on agricultural growth. Accordingly, the study suggests that the Central Bank issue sufficient instructions to the commercial banks requiring them to lend money to farmers at reasonable interest rates and with collateral securities. The report also suggests that policymakers support bank cooperation and develop tailored financing packages with adjustable terms for smallholder farmers.

Keywords: commercial banks, Agricultural development, bank lending, FUSAKOD farm

1. INTRODUCTION

Modernizing agriculture and integrating farmers in the development process require the support of commercial banks (Mohsin, Ahmad & Anwar, 2011). When the African Banking Corporation was founded in 1960, Nigeria's commercial banking history officially began. Two banks were later established: the Union Bank of Nigeria (UBA), previously the Barclays Bank, and the Bank of British West Africa, currently known as The First Bank of Nigeria. Yet, difficulties beset the native commercial banking sector, especially in the late 1950s and early 1960s, which resulted in bank closures because of low funding, poor management, and insufficient clientele.

As middlemen, commercial banks are essential in transferring savings from savers to users and cutting down on financial waste (Sherif, 2020). They serve as the foundation for loans and credits to those in need, particularly in industries like manufacturing, agriculture, and services like utilities and telecommunications. They not only protect money but also put it to good use. A country's economic development is greatly aided by this process, which gives banks the title of "wheel of economic progress". Furthermore, commercial banks generate more deposits in the economy through the loan extension process, which benefits the nation's general development and economic progress (Mgbakor, Patrick & Divine, 2014).

Agricultural credit includes trade credit and bank credit, among other forms of credit. Credit is characterized as the use of resources or services without prompt payment (Adekoya, 2013). Two key policies were implemented as a result of directives made by the Central Bank of Nigeria (CBN) in 1976: the Agricultural Credit Guarantee Scheme Fund and the Rural Banking Scheme. The purpose of these measures was to encourage commercial banks to support the expansion and development of agriculture.

The 1977 introduction of the Rural Banking Scheme attempted to alleviate banks' reluctance to engage in rural areas with lower levels of economic activity. In doing so, it made

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loan creation easier for farmers and small-scale businesses, which in turn encouraged the growth of agro-allied and agricultural sectors (Ater, 2003).

In order to reduce the risks involved with agricultural lending in commercial banks, the CBN and the federal government established the Agricultural Credit Guarantee Scheme Fund, which was also started in 1977. The purpose of this program was to increase the flow of bank credit to the agricultural sector by guaranteeing loans made by commercial and merchant banks for authorized agricultural projects (Mudi, 2007). The Agricultural Credit Guarantee Scheme Fund Act of March 1977 serves as the scheme's legislative foundation.

In 2001, the CBN launched the Trust Fund Model (TFM) in an effort to improve lending under the Agricultural Credit Guarantee Scheme Fund even more. By depositing money with participating banks, this strategy entailed the involvement of oil firms, state and municipal governments, and non-governmental organizations (NGOs) in enhancing the security of farmers' savings. The goal of this program was to lessen the risks that banks took on when making loans to the agriculture industry (Mudi, 2007).

Nigeria's economy has always been based mostly on agriculture, which exports cash crops to generate foreign exchange and boosts GDP. Commercial banks have shown little interest in financing agriculture, nevertheless, as a result of perceived risks and low profitability (Obilor, 2013). Nigeria has nevertheless put in place a number of programs for agricultural development, such as the provision of integrated farming tools, farm towns, cooperative plantations, and advanced agricultural practices (Sherif, 2020). The main objectives of this study are to assess the role of the commercial banks in agricultural development in Osun state.

Specifically, the study tends to be achieving the following objectives;

1. to examine the effect of commercial bank lending on the improvement of agricultural output in Osun state.

2. to evaluate the impact of commercial bank lending on enhancing the storage of farm products in Osun state.

3. to investigate the effect of commercial bank lending on the efficient distribution of agricultural products in Osun state.

2. LITERATURES REVIEW
2.1 The Concept of Agricultural Finance

Studying the financial facets of farming is known as agricultural finance, and it is essential to the economy. It focuses on financing agriculture to produce the most (Ndife,2020). Financing for agriculture, however, confronts difficulties in Nigeria. Commercial banks have less interest in financing to the agricultural industry since it is thought to be riskier and less profitable than lending to other industries (Enyim, Ewno, Okoro, 2013). Due to sanctions, banks used to comply with funding for the agricultural sector, but their interest has since decreased. (Ndife,2020).

Therefore, according to Akinleye, Akanni, and Oladoja (2003), Nigerian peasant farmers depend increasingly on unofficial finance sources including moneylenders, cooperatives, and community associations. But frequently, these sources fall short of providing the farmers with the credit they require (Nwankwo, 2013). The Nigerian government created the Nigerian Agricultural Cooperative and Rural Development Bank (NACRDB) in 1973 as a response to this (Nwankwo, 2013). Due to low funding, the NACRDB was unable to properly tackle the issue despite its best efforts (Akinleye, Akanni, Oladoja).

In order to incentivize commercial banks to extend credit to the agricultural sector by guaranteeing loans against inherent risks, the government launched the Agricultural Credit Guarantee Scheme (ACGS) in 1977 (Zakaree, 2014). But even years after commercial banks were established, it's still unclear how much of them are involved in agricultural credit distribution (Akinleye, Akanni, Oladoja, 2013).

Nigeria still significantly depends on imports of industrial raw materials and essential food products, despite its enormous agricultural resources. This underscores the difficulties facing the agricultural finance industry.

2.2 Sources of Agricultural Credit

In order to meet the demands of farmers and agricultural enterprises, agricultural loan is available from a number of official sources. Small-scale farmers and communities can receive financial support and credit access from non-governmental organizations (NGOs), commercial banks, agricultural development banks, microfinance institutions (MFIs), government programs offering subsidized loans and grants, development finance institutions (DFIs) providing long-term financing, cooperatives pooling resources to provide financial services, and cooperatives.

2.3 Informal Sources

Informal agricultural credit sources, which are usually unregulated by the government, include equity capital—the owner's personal savings or contributions from partners or shareholders—reinvested profits—a portion of profits that are put back into the business to support growth or modernization—self-financing—the use of enterprise resources—like machinery or livestock—as collateral for loans—and family and friends.

2.4 Concept of Agricultural Development in Nigeria

According to Nwankwo (2013), agricultural development in Nigeria refers to measures taken to increase the sector's sustainability, productivity, and ability to contribute to economic growth, food security, rural development, and the decrease of poverty. Development of agriculture is vital given its critical position in Nigeria's economy. In order to support a variety of crops, livestock, and fisheries, Nigerian agriculture must prioritize diversification and value chain development. It also has to strengthen post-harvest handling, processing, and marketing systems in order to boost competitiveness. Additionally, the emphasis is on providing smallholder farmers with access to technology, finance, extension services, and market connections. A focus is also placed on the adoption of technology and mechanization to increase productivity, the involvement of the private sector to spur growth and entrepreneurship, the adoption of climate resilience and sustainable practices to adapt to climate change, and institutional and policy reforms to support agricultural development. In general, Nigerian agricultural development seeks to make the industry a sustainable engine of growth and development in order to diversify the economy, lessen dependency on oil, guarantee food security, and enhance rural livelihoods.

2.5 The Role of Agriculture in Nigeria's Economic Development

Nigeria's economy has been greatly influenced by agriculture, which has helped with many facets of the nation's growth. These are some essential elements of this crucial role:

• Agriculture and Export Earnings: Over time, the worldwide demand for primary products, the dominance of the petroleum sector, and productivity have all had an impact on how much agriculture contributes to Nigeria's export earnings (Nwankwo, 2013). Agriculture's percentage in exports has decreased relative to their absolute value, which has an effect on the export portfolio of the nation.

• Agriculture and Balance of Payments: Nigeria's balance of payments has benefited from increased agricultural output of industrial raw materials, which has helped lessen reliance on imports. The industry hasn't always performed well, though, with times of deficits having an impact on the stability of the economy as a whole.

• Agriculture and Food Supply: Despite its potential, Nigerian agriculture has not been able to keep up with the country's food needs, which has resulted in a decline in per capita food

production and a greater reliance on food imports. The country's capacity to invest in other areas of development has been impacted by this tendency, which has put pressure on foreign exchange reserves.

• Agriculture and Employment: Nigeria's agricultural sector employs a sizable share of the work force, especially in rural areas, and continues to be a major employer in the nation. The sector's employment proportion of the entire labor force has, however, gradually decreased, reflecting broader economic changes.

• Previous Attempts at Revamping Agriculture: Nigeria has attempted to move agriculture from subsistence to market-oriented production by implementing a number of legislative initiatives and programs throughout the years. Modernizing and revitalizing the agricultural sector has been the goal of programs like the National Accelerated Food Production Project (NAFPP), River Basin Development Authorities (RBDA), Operation Feed the Nation (OFN), Land Use Decree, and the creation of commodities boards and credit facilities.

2.2 Theoretical Review
2.2.1 The Financial Intermediation Theory

According to Jack Hirshleifer and James DeHaven's financial intermediation theory (1952), commercial banks play a crucial role in enabling the flow of funds, particularly those intended for agricultural purposes. Many of the theory's shortcomings have been brought out by critics, including the assumption of perfect knowledge, the omission of market concentration and credit rationing, and the disregard for non-financial variables influencing agricultural development. This is further elaborated by Stiglitz and Weiss (1981) in the loan pricing theory, which establishes interest rates for agricultural loans; the Bank Lending Credit Channel Theory emphasizes the influence of commercial bank credit availability on land development. A balanced strategy that takes into account both financial and non-financial aspects of agricultural development is required, as these theories combined highlight the importance of loan accessibility in promoting agricultural investment and sustainable growth.

2.3 Empirical Review

The relationship between commercial bank lending and agricultural development in Nigeria has been the subject of numerous studies that have illuminated different aspects of it. A study by Ogbanje, Yahaya, and Kolawole (2012), which ran from 1981 to 2007, showed that loans from commercial banks to the agriculture sector had a favorable impact on the GDP (gross domestic product) of agriculture. They observed that, despite a slowdown in the rate of expansion of agricultural GDP, commercial banks' loan stock to the agricultural sector had grown significantly over time. Enyim, Ewno, and Okoro (2013) concurred, emphasizing the favorable correlation between agricultural productivity and commercial banks' lending to the sector.

Imoughele, Ehikioya, and Mohammed (2013) concentrated on how the performance of sectoral output in the Nigerian economy is affected by the accessibility of commercial bank credit. The study conducted between 1986 and 2010 came to the conclusion that sectoral productivity was boosted by the steady expansion of monetary policy, which increased the supply and demand for commercial bank loans. The factors influencing agricultural output and their causal relationships with macroeconomic variables were also examined by Kareem, Bakare, Raheem, Olagumela, Alawode, and Ademoyewa (2013), who noted the significant positive relationships between agricultural output and foreign direct investment, commercial bank loans, interest rates, and food import value.

While Udih (2014) claimed that bank loans and advances to agricultural entrepreneurs improve agricultural development and productivity, Bassey, Akpaeti, and Udoi (2014) highlighted the necessity for adequate finance of the agricultural sector to boost agricultural GDP. According to Mudi, (2007) research, industrial output and bank lending had a long-term

influence on agricultural output in Nigeria. Mohsin, Ahmad & Anwar, (2011) emphasized the substantial influence of commercial bank lending on agricultural production in Nigeria and confirmed a favorable association between commercial bank credit and agricultural output.

Medugu, Musa, and Abalisi (2019) investigated how Nigerian agricultural output was affected by commercial bank lending between 1980 and 2018. Their analysis indicated that there was a substantial and positive correlation between Osun State's agricultural output and the loans made by commercial banks. They therefore suggested that the government take action to cut interest rates on commercial bank loans in order to increase accessibility and affordability.

Together, these studies offer a thorough grasp of the intricate relationship that exists between agricultural development and commercial bank lending in Nigeria, highlighting the sector's varied dynamics and policy and practice consequences.

3. METHODOLOGY

A research design is a strategy or manual that outlines the procedures for gathering and analyzing data relevant to a particular issue (Onyeizugbe, 2013). The methodological strategy employed in this study to collect data and characterize the traits, actions, attitudes, or viewpoints of a particular population or sample is known as a descriptive survey research design. The goal is to offer a thorough and in-depth comprehension of a specific subject, which makes it appropriate for gathering information on many facets of commercial bank lending and how it affects the agricultural industry.

According to the Osun State Ministry of Agriculture Nigeria, there are forty-one (41) established farms in Osun state, which makes up the study's population. Because simple random sampling gives every farm an equal chance of being chosen for the study and because FUSAKOD farms were the only ones that affordably provided staff and data records access, they were the only ones chosen for the study.

A questionnaire was used for primary data collection, and it was given to every employee at FUSAKOD.

A questionnaire was used for primary data collection, and it was given to every employee at the FUSAKOD farms. This approach was selected because it makes it possible to quickly and affordably get first-hand knowledge from a large number of people. The research objectives guided the development of the questionnaire, which was intended to capture key themes about the influence of commercial bank financing on agricultural development.

There are two primary portions of the questionnaire. The respondents' background data, including sex, marital status, age, years of experience, level of education, and organizational position, is gathered in the first section. The research goals mentioned in the introduction are the main topic of the second part.

Responses were recorded on a 5-point Likert scale, where strong agreement, agreement, disagree, undecided, and strongly disagree were denoted by the numbers 5, 4, 3, 2, and 1, respectively. This scale makes it simple to compare responses between groups and among respondents.

In order to guarantee comprehension and accurate responses, the researcher personally delivered the questionnaires to the respondents at the FUSAKOD farms. Classification, coding, transcribing, tabulation, and editing were all part of the data processing process. To ascertain the direction and strength of the association between various sets of data, both linear and multiple regression analyses were utilized, while descriptive analysis was utilized to ascertain the effect of commercial bank lending on agricultural development.

To address the research questions and accomplish the study's goals, the data were examined using both descriptive and inferential statistics using the Statistical Package for Social Science (SPSS) version 20. The key elements pertaining to how commercial bank lending affects agricultural growth will be made evident by this procedure (Onyeizugbe, 2013).

3.1 Model Specification

Multiple linear regression is the model that's been employed. Multiple regression is a statistical technique used to predict a dependent variable (Y) using more than one independent variable (X1, X2, X3). It is named such because linear regression presupposes a linear relationship between the independent variables and the dependent variable.

The model specified for this study is shown below:

$Y = \beta o + \beta 1 X1 + \beta 2 X2 + \beta 3 x3 + \mu$

Where: Y = Agricultural Development (dependent variable)

βo = Constant Term

Commercial bank lending = X1 X2 X3 Coefficient of the independent variable

X1 – Output (independent variable)

X2 – Storage (independent variable)

X3 – Distribution (independent variable)

$\beta o, \beta 1, \beta 2, \beta 3$ – regression coefficients

Ut = Error term

In the equation describing the relationship between agricultural development (Y) and its influencing elements (X1, X2, X3), the coefficient of the independent variables (X1, X2, X3) represents commercial bank lending.

4. RESULTS

Analysis of Demographic Information

Table 4.1.: Gender of the Respondent

Gender of the Respondents	Frequency	Percent
Male	33	66.0
Female	17	34.0
Total	50	100.0

Source: Field Survey 2023.

Table 4.1 displays the respondents' gender distribution, with 34.0% of women and 66.0% of men, showing that more men were included in the sample. In Figure 1, the pie chart illustrates this data.

Figure 1: Gender of the Respondents
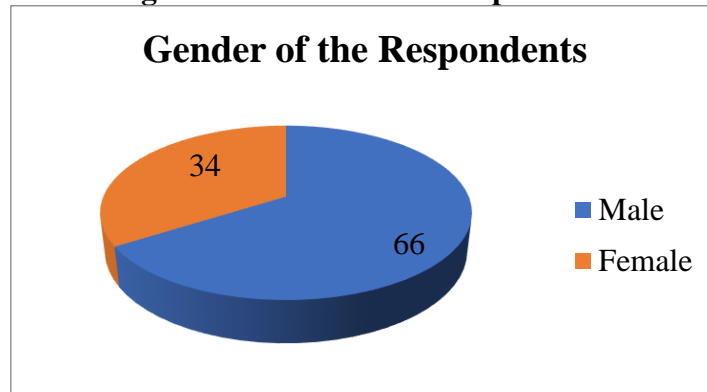
Source: Field Survey 2023.

Table 4.2: Age of the respondent

		Frequency	Percent
	20-25	19	38.0
	26-30	13	26.0
Valid	31-35	12	24.0
	36-40	2	4.0
	41-45	4	8.0
	Total	50	100.0

Source: Field Survey 2023

As can be seen from the above table, the respondents' ages ranged from 20 to 25 years (38.0%), 26 to 30 years (26.0%), 31 to 35 years (24.0%), and both 36 to 40 and 41 to 45 years (8.0% each). This suggests that while employees in the 36–40 age group were captured less frequently, a higher percentage of employees in the 20–25 age range were.

Table 4.3: Marital Status of the Respondents

Marital Status of the Respondents		Frequency	Percent
Valid	Single	29	58.0
	Married	19	38.0
	Separated	2	4.0
	Total	50	100.0

Source: Field Survey 2023.

The respondents' marital status is shown in the table above. The data indicates that 29 respondents (58.0%) were single, 19 respondents (38.0%) were married, and 2 respondents (4.0%) were separated from the research.

Table 4.4: Educational Qualification of the Respondents

Educational Qualification		Frequency	Percent
Valid	O\level (GCE, WAEC, SSCE)	4	8
	OND/NCE	14	28
	B.Sc/B.Edu/B.A	24	48
	M.Sc/MBA/M.A	7	14
	P.H.D	1	2
	Total	50	100.0

Source: Field Survey 2023.

Four respondents (8%) had O level qualifications, fourteen (28%) had OND/NCE, twenty-four (48%) had B.Sc./B.A., around seven (14%) had M.Sc./MBA/M.A., and one (2%) had a PhD, as shown in Table 4.4. This suggests that each respondent possessed a particular degree of schooling and related credentials.

Table 4.5:   Years of experience

		Frequency	Percent
	Below 5 years	36	72.0
Valid	5-10 years	13	26.0
	11-20 years	1	2.0
	Total	50	100.0

Source: Field Survey 2023.

According to Table 4.5, 36 respondents (72%) have worked for the company for less than five years, 13 (26.0%) for five to ten years, and 1 (2.0%) for eleven to twenty years.

4.2 Data Analysis
4.2.1 Agricultural output

Table 4.6: With the help of commercial bank funding, better agricultural output results in higher revenues for farmers and agricultural workers.

		Frequency	Percent
Valid	Strongly Disagree	0	0
	Disagree	0	0
	Undecided	6	12.0
	Agree	14	28.0
	Strongly Agree	30	60.0
	Total	50	100.0

Table 4.6 shows that, with the help of commercial bank loans, higher agricultural output results in higher incomes for farmers and agricultural workers—30 respondents strongly agreed with this statement, and 14 respondents agreed. Six respondents were also unsure, and none of them strongly disagreed or disagreed.

Table 4.7: Lending from commercial banks helps to boost agricultural productivity, which boosts the economy by generating jobs and assisting the agro-processing sector.

		Frequency	Percent
Valid	Strongly disagree	0	0
	Disagree	1	2.0
	Undecided	6	12.0
	Agree	23	46.0
	Strongly Agree	20	40.0
	Total	50	100.0

According to Table 4.7, 20 respondents strongly agreed and 23 agreed that loan from commercial banks helps to increase agricultural output. This boosts the economy by generating jobs and assisting the agro-processing sector. Furthermore, one respondent disagreed, six respondents were unsure, and none strongly disagreed.

Table 4.8: Improved agricultural productivity can propel rural development with the help of loans from commercial banks.

		Frequency	Percent
Valid	Strongly Disagree	0	0
	Disagree	0	0
	Undecided	8	16.0
	Agree	19	38.0
	Strongly Agree	23	46.0
	Total	50	100.0

A greater output from the agricultural sector can propel rural development with the help of commercial bank funding, according to Table 4.8, where 23 respondents strongly agreed and 19 agreed. Nobody disagreed or strongly disagreed, and eight respondents were unsure.

Table 4 .9: Through commercial bank lending, a more varied and productive agricultural production strengthens the resilience of the food system.

		Frequency	Percent
Valid	Strongly Disagree	0	0
	Disagree	2	4.0
	Undecided	4	8.0
	Agree	23	46.0
	Strongly Agree	21	42.0
	Total	50	100.0

Table 4.9 shows that, when it comes to varied and increasing agricultural output backed by commercial bank funding, 21 respondents strongly agreed and 23 agreed that this strengthens the resilience of the food system. Furthermore, two respondents disagreed, four respondents were unsure, and none of them strongly disagreed.

4.2.2: Agricultural storage

Table 4.10: Due to commercial banks' lending activities, storage aids in the preservation and protection of agricultural products against weather-related damages, pests, and spoiling.

		Frequency	Percent
Valid	Strongly Disagree	0	0
	Disagree	1	2.0
	Undecided	6	12.0
	Agree	22	44.0
	Strongly Agree	21	42.0
	Total	50	100.0

According to Table 4.10, 22 respondents and 21 respondents strongly agreed that storage, made possible by loans from commercial banks, aids in the preservation and defense of agricultural products against weather-related damages, pests, and spoiling. Furthermore, one respondent disagreed, six respondents were unsure, and none strongly disagreed.

Table 4.11: Appropriate storage facilities and post-harvest loss minimization strategies are employed in commercial bank lending.

		Frequency	Percent
Valid	Strongly Disagree	1	2.0
	Disagree	1	2.0
	Undecided	7	14.0
	Agree	20	40.0
	Strongly Agree	21	42.0
	Total	50	100.0

Table 4.11 shows that 20 respondents and 21 strongly agreed that suitable storage facilities and practices to prevent post-harvest losses are improved by commercial bank loans. Seven people were also unsure, one disagreed, and one strongly disagreed.

Table 4.12: Additionally, storage facilities made possible by commercial bank lending help farmers hold their goods during times of high supply and release them into the market during periods of low supply.

		Frequency	Percent
Valid	Strongly Disagree	0	0
	Disagree	2	4.0
	Undecided	4	8.0
	Agree	23	46.0
	Strongly Agree	21	42.0
	Total	50	100.0

According to Table 4.12, 21 respondents agreed strongly and 23 agreed that commercial bank lending helps farmers manage their products according to market supply by giving them access to storage facilities. In addition, two respondents disagreed, four respondents were unsure, and none of them strongly disagreed.

Table 4.13: Loans from commercial banks have helped to provide enough storage, which leads to effective marketing and distribution of agricultural products.

		Frequency	Percent
Valid	Strongly Disagree	0	0
	Disagree	1	2.0
	Undecided	6	12.0
	Agree	23	46.0
	Strongly Agree	20	40.0
	Total	50	100.0

According to Table 4.13, twenty respondents strongly agreed and twenty-three agreed that funding from commercial banks has helped provide sufficient storage facilities, which have led to effective marketing and distribution of agricultural products. Furthermore, one respondent disagreed, six respondents were unsure, and none strongly disagreed.

4.2.3: Agricultural distribution

Table 4.14 Lending from commercial banks helps to build the distribution network, which in turn helps to build rural communities' roads, storage facilities, and transportation hubs.

	Frequency	Percent
Strongly Disagree	0	0
Disagree	0	0
Undecided	7	14.0
Agree	23	46.0
Strongly Agree	20	40.0
Total	50	100.0

Twenty respondents strongly agreed and twenty-three agreed, according to Table 4.14, that commercial bank lending helps build the distribution network, which in turn helps build rural infrastructure such as roads, storage facilities, and transportation hubs. None of the respondents strongly disagreed, and seven were unsure.

Table 4.15: Through commercial bank loans, improved distribution channels generate opportunity for traders and wholesalers.

		Frequency	Percent
	Strongly Disagree	0	0
	Disagree	1	2.0
Valid	Undecided	6	12.0
	Agree	23	46.0
	Strongly Agree	20	40.0
	Total	50	100.0

Table 4.15 reveals that twenty respondents agreed strongly and twenty-three agreed that better distribution channels allow commercial bank loans to open doors for traders and wholesalers. Six others were unsure, one disagreed, and none strongly disagreed.

Table 4.16. Lending from commercial banks helps distribute agricultural products to other regions.

		Frequency	Percent
	Strongly Disagree	0	0
	Disagree	1	2.0
Valid	Undecided	9	18.0
	Agree	16	32.0
	Strongly Agree	24	48.0
	Total	50	100.0

Table 4.16 shows that 16 and 24 respondents, respectively, agreed and strongly agreed that commercial bank financing helps distribute agricultural products to various locations. Furthermore, one respondent disagreed, nine respondents were unsure, and none strongly disagreed.

Table 4.17: Food waste can be reduced via a well-managed distribution infrastructure that guarantees prompt transportation with the help of commercial bank loans.

		Frequency	Percent
	Strongly Disagree	1	2.0
	Disagree	1	2.0
Valid	Undecided	7	14.0
	Agree	20	40.0
	Strongly Agree	21	42.0
	Total	50	100.0

Table 4.17 shows that twenty respondents agreed and twenty strongly agreed that timely transportation combined with a well-planned distribution system backed by commercial bank loans can reduce food waste. Seven people were also unsure, one disagreed, and one strongly disagreed.

4.2.4: Commercial bank lending

Table 4.18: Commercial bank loans give farmers and agribusinesses the money they need to make investments in equipment and technology.

		Frequency	Percent
Valid	Strongly Disagree	0	0
	Disagree	2	4.0
	Undecided	4	8.0
	Agree	23	46.0
	Strongly Agree	21	42.0
	Total	50	100

21 respondents strongly agreed and 23 agreed, as shown in Table 4.18, that commercial bank lending gives farmers and agribusinesses access to finance for capital expenditures on equipment and technology. Two respondents disagreed, while four respondents were unsure, and none strongly disagreed.

Table 4.19: Lending from commercial banks provides funding to satisfy seasonal cash flow needs and maintain efficient agricultural operations.

		Frequency	Percent
Valid	Strongly Disagree	0	0
	Disagree	0	0
	Undecided	8	16.0
	Agree	19	38.0
	Strongly Agree	23	46.0
	Total	50	100.0

According to Table 4.19, 19 respondents and 23 strongly agreed that financing from commercial banks enables farmers to maintain smooth operations and meet their seasonal cash flow needs. Furthermore, none of the respondents strongly disagreed, and eight were unsure.

Table 4.20: In rural areas, employment opportunities are generated via agricultural growth financed by commercial bank loans.

		Frequency	Percent
Valid	Strongly Disagree	0	0
	Disagree	1	2.0
	Undecided	6	12.0
	Agree	23	46.0
	Strongly Agree	20	40.0
	Total	50	100.0

Table 4.20 reveals that while none of the respondents strongly disagreed, 20 highly agreed, 23 agreed, 6 were unsure, and 1 disagreed that agricultural development financed by commercial bank loans generates job prospects in rural regions.

Table 4.21: Commercial bank lending helps to reduce poverty in rural regions by raising agricultural output and income levels.

		Frequency	Percent
Valid	Strongly Disagree	1	2.0
	Disagree	1	2.0
	Undecided	7	14.0
	Agree	20	40.0
	Strongly Agree	21	42.0
	Total	50	100

Table 4.21 reveals that of the respondents, 21 highly agreed, 20 agreed, 7 were undecided, 1 disagreed, and 1 strongly disagreed that increased agricultural output and income levels brought about by commercial bank lending help reduce poverty in rural regions.

4.3 Test of Hypotheses
4.3.1 Hypothesis one
Ho_1:   Lending from commercial banks has no discernible impact on increasing agricultural productivity.

Table 4.22:   a synopsis of the regression analysis showing how loan from commercial banks significantly increases agricultural output.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.803[a]	.644	.637	1.037

a. Predictors: (Constant), agricultural output
Source: Authors computation, 2023

An R-squared score of 0.644 in the model summary table indicates a considerable impact on raising agricultural output in Osun state. When all parameters are taken into account, this model predicts 66.4% of the variance in agricultural output improvement. This indicates that the variables in this model account for 66.4% of the variability in agricultural development, with the remaining 34.6% coming from factors not covered in this analysis.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	93.406	1	93.406	86.933	.000[b]
	Residual	51.574	48	1.074		
	Total	144.980	49			

a. Dependent Variable: Commercial bank lending
b. Predictors: (Constant), agricultural output
Source: Authors computation, 2023

Because the p-value is less than 5%, the ANOVA statistic in the processed data table indicated a significance level of 0%, meaning that the data is appropriate for making inferences about the population parameters. At a significance level of 5%, the critical F-value of (1,49) 86.933 indicated the overall significance of the model, indicating a strong impact of commercial bank lending on agricultural output.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.780	1.423		2.656	.011
	agricultural output	.764	.082	.803	9.324	.000

a. Dependent Variable: Commercial bank lending

Source: Authors computation, 2023

We reject the null hypothesis since the significance of the hypothesis is 0.000, which is less than 0.05, and conclude that commercial bank lending has a significant impact on agricultural output.

4.3.2: Hypothesis Two

Ho2: Commercial bank lending have no significant impact on enhancing the storage of farm products.

Table 4.23: An overview of the regression methodology used to assess how commercial bank financing has improved agricultural product storage.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.785[a]	.616	.608	1.077

a. Predictors: (Constant), Agricultural storage

The coefficient of determination, or R-squared (R^2), explains how much changes in the independent variable affect the dependent variable. The R-squared value in the model summary table was 0.616, suggesting that agricultural storage has a major effect on loans from commercial banks. When all parameters are taken into account, this model predicts 61.6% of the variance in improving agricultural storage. This indicates that factors not covered in this study account for 38.4% of the variability in agricultural development.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	89.353	1	89.353	77.103	.000[b]
	Residual	55.627	48	1.159		
	Total	144.980	49			

a. Dependent Variable: Commercial bank lending
b. Predictors: (Constant), Agricultural storage

The processed data table's ANOVA statistic revealed a significance level of 0%, meaning that inferences about the population parameters may be made with this data. At a significance level of 5%, the key F-value came out to be (1,49) 77.103, indicating statistical significance for the entire model and a considerable impact of commercial bank lending on improving agricultural product storage.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.086	1.590		1.941	.058
	Agricultural storage	.820	.093	.785	8.781	.000

a. Dependent Variable: Commercial bank lending

At 0.000, the significance of the hypothesis is less than 0.05. As a result, we find that commercial bank lending greatly improves farm product storage, rejecting the null hypothesis.

4.3.3: Hypothesis Three

Ho3: Commercial bank lending have no significant effect on the efficient distribution of agricultural products.

Table 4.24: An overview of the regression analysis examining the impact of financing from commercial banks on the effective distribution of agricultural goods.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.589[a]	.347	.333	1.404

a. Predictors: (Constant), Agricultural distribution

A metric called the R-squared (R^2) indicates the extent to which changes in the independent variable account for variations in the dependent variable. The R-squared value in the model summary table was 0.347, demonstrating a substantial relationship between agricultural distribution and commercial bank lending. According to this model, if all the factors are taken into account, 34.7% of the changes in agricultural distribution can be explained. This implies that variables not covered in this study account for 65.3% of the variations in agricultural development.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	50.300	1	50.300	25.500	.000[b]
	Residual	94.680	48	1.973		
	Total	144.980	49			

a. Dependent Variable: Commercial bank lending
b. Predictors: (Constant), Agricultural distribution

Because the p-value is less than 5%, the data are appropriate for inferring information about the population parameter, according to the ANOVA statistic in the processed data table, which displayed a significance level of 0%. At the 5% significance level, the key F-value was (1,49) 25.500, indicating the significance of the model as a whole and the significant impact of commercial bank lending on the effective distribution of agricultural products.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.506	1.887		3.979	.000
	Agricultural processing	.559	.111	.589	5.050	.000

a. Dependent Variable: Commercial bank lending

We reject the null hypothesis since the hypothesis's significance level is 0.00, which is less than 0.05. Thus, we draw the conclusion that the effective distribution of agricultural products is significantly impacted by commercial bank loans.

4.4 Discussion of Findings

Out of 50 responders, 34% were women and 66% were men. The following was the distribution of ages: 20–25 made up 36.0% of the population, followed by 26–30, 24–35, 36–40, and 41–45 (8%) in that order. 58.0% of people were single, 38.0% were married, and 4.0% were separated based on their marital status. 8.0% of the population held O-level credentials, 28.0% held OND/NCE, 48.0% held a B.Sc. or B.A. degree, 14.0% held an M.Sc. or MBA/M.A. degree, and 2.0% held a Ph.D. Furthermore, 2.0% had been working for 11–20 years, 26.0% for 5–10 years, and 72.0% for less than 5 years.

The first hypothesis examined the impact of lending by commercial banks on agricultural output. The results showed a regression with a significant impact, as indicated by the R^2 value of 0.644. A statistically significant contribution to agricultural output was demonstrated by the F-Statistic, which was very significant (F tab (1,49) > F cal 86.933), and the Beta value, which was 0.803 with $p < 0.05(0.000)$ and t-value = 9.324.

The second hypothesis, which looked at how commercial bank lending affected farmers' ability to store their produce, had a considerable impact, as indicated by the R^2 value of 0.616. The beta value was 0.785 with $p < 0.05(0.000)$ and t-value = 8.781, showing a statistically significant contribution to the storage of farm products. The F-Statistic was extremely significant (F tab (1,49) > F cal 77.103).

With an R^2 value of 0.347, hypothesis three—which examined the impact of commercial bank lending on the distribution of agricultural products—showed a substantial impact. The beta value was 0.589 with $p < 0.05(0.000)$ and t-value = 5.050, indicating a statistically significant contribution to the distribution of agricultural goods. The F-Statistic was extremely significant (F tab (1,49) > F cal 25.500).

5. CONCLUSION AND RECOMMENDATIONS
5.1 Conclusion

The purpose of this study was to evaluate how commercial bank lending affects the growth of agriculture. The results show that commercial banks can support agriculture by lending money to farmers and agribusinesses so they may buy better equipment and increase agricultural output. The findings show that commercial bank lending has a favorable impact on the advancement of agriculture.

5.2 Recommendations

The conclusion and result led to the formulation of the following recommendation:

i. Commercial banks ought to lend to farmers and other agricultural enterprises in order to take advantage of financial intermediation. One useful tool for highlighting the significance of credit availability for agricultural development is financial intermediation.

ii. To attract commercial banks to agricultural financing, the Agricultural Credit Guarantee Scheme (ACGS) ought to improve the terms of its credit guarantee.

iii. Clear instructions from the Central Bank should be sent to commercial banks, telling them to lend money to farmers at fair interest rates and with manageable collateral requirements.

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TALENT MANAGEMENT STRATEGIES AND EMPLOYEES' TURNOVER INTENTIONS IN MANUFACTURING INDUSTRIES, SOUTH WEST, NIGERIA

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Abstract

The importance of employees to manufacturing industries cannot be overemphasized as they contribute to the industries' performance and the consequent impact on the nation economy, this study therefore investigated the contributions of talent management strategies (human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management, and employee performance appraisal) to employees' turnover intentions in manufacturing industries in South -West Nigeria. The study employed a descriptive survey research design. The target population of the study comprised 3,172 staff working in six manufacturing industries in South-West Nigeria. The study made use of stratified and simple random sampling techniques to select 952 respondents Two research instruments; Integrated Talent Management Strategies Questionnaire (ITMSQ) and Employees' Turnover Intentions Questionnaire (ETIQ) used were validated and their reliability ascertained. Two research questions raised and two hypotheses formulated were analysed with inferential statistics. The findings reveal low level of employees' turnout intentions, the adoption at high rate all examined talent management strategies, significantly combined and relative contributions of talent management strategies to employees' turnout intentions. Recommendations made include organizations; need to adopt more talent management strategies, regularly evaluate the effectiveness of integrated talent management practices adopted, improve on retention programmes based on the identified integrated talent management strategies that contribute significantly to turnover employees' turnout intention.

Keyword: Talent Management Strategies and Employees' Turnover Intentions

Introduction

The importance of employees to an organization has been acknowledged for a long time, as they play a pivotal role in creating and maintaining a competitive advantage for their organization (Akintayo et al., 2020). The biggest and the most valuable asset of any company is its employees; as they can be described as a key assets in the world market (Akintayo et al., 2020). Besides all other assets are nothing more than commodities that can be purchased at market prices, but only the human asset has potential to learn, grow and contribute meaningfully to the growth of an organization (Obisi, Samuel & Ilesanmi, 2020). This is more reason why, companies are competing against each other to acquire and keep talents in order to maintain their operations and continue to grow (Shafieian, 2014). Manufacturing industries like every other organizations are not known only by the physical structures (buildings), reason being that such buildings though as important as they may be in providing a face and shelter to the organization and employees, are not the most important aspects of organizations (Pfeffer, 2010).

Most industries across the world depend largely on the efficiency of their manufacturing operations to generate quality outputs that can satisfy customers. An increasing inefficiency in the manufacturing process triggers higher production cost. (Verma & Kesari, 2020) noted that, the problem of inefficiency often degenerates from wrecked machines as well as a low morale of employees leading to high rate of turnover. The consequences of such upsurge in production cost are higher product prices and possible shrinkage in the sales volume of the industry (Gulatti& Kletter, 2019). To mitigate the menace of inefficiency, it therefore becomes germane for industries to facilitate efficiency in manufacturing processes. Generally, manufacturing inefficiency could be attributed to mismanagement of human and non-human resources as well as quality of employees engaged for production (Bashir, Ali & Haruna 2021). The issue of attracting, engaging and retaining highly qualified employees stems from a managerial perspective that is more important than ever previously (Herzberg 2005 cited in Sajeda, 2017). As employees are so vital for the functionality of organizations, employees' turnover intention

is a subject matter that is considered to be one of the most serious obstacles facing different organizations considering the way and manner employees exit organizations (Lopes, 2018). This indicates that employees' turnover places unnecessary pressure on workforce, who are at work but experiencing an increased workload and thereby leading to low morale, high level of stress and increased rate of absenteeism (Yousef & Shadi 2021).

Statement of the Problem

The state of economic downfall in Nigeria has contributed to negatively to the quality of work life of an ordinary government worker in Nigeria and this has posed several challenges on retention and overall performance of employees in many work organizations particularly in the manufacturing industry (James & Mathew, 2020). In the manufacturing industry for instance, there have been incidences where the employees are resigning and jumping from one company to another, which results in high cost of undertaking frequent recruitments, training sessions and loss of valuable time to focus on customers (Benson, 2020).

The manufacturing industry in Southwest Nigeria is facing challenges in terms of employee retention and performance. Despite being a vital sector for economic growth and development, the industry is experiencing high turnover rates and suboptimal employee performance (Bikefe& Daniel, 2022). This raises concerns about the long-term sustainability and competitiveness of manufacturing companies in the region. The manufacturing industry in Southwest Nigeria is grappling with high employee turnover rates, resulting in significant costs for companies and hindering their ability to maintain a skilled and experienced workforce (Bikefe& Daniel, 2022). Furthermore, the manufacturing in southwest Nigeria is facing the challenges in maintaining high levels of employee performance.

Talent management strategies in manufacturing companies are poor and rife with unethical behaviors, such as selection bias, management preferences, Federal character syndrome, influences of ethnicity and social class, selection discrimination, favouritism, and godfather syndrome (Fajana, 2019). For instance, despite the importance of effective human resource planning in supporting talent management strategies, there are gaps, challenges, and shortcomings within the manufacturing industry in South West Nigeria. Okonkwo et al. (2022) claim that many firms, particularly those in the private sector, have given human resource planning—a crucial management function—less priority. Even the so-called large companies in the private sector lack well-articulated HR planning, which has serious financial repercussions for the organizations in the areas of excessive hiring, poor job performance, training, and transfers.

Furthermore, manufacturing companies in Nigeria face significant issues, gaps, challenges, and shortcomings related to employee retention strategies. The manufacturing industry in Nigeria has little opportunities for career growth, especially for entry-level and mid-level employees (Kojo et al., 2023). Thus, employees are less likely to stay with the same firm due to the lack of clear growth paths and development opportunities, which has also impacted their performance (Kojo et al., 2023). These hinders the effective execution of integrated talent management strategies, resulting in higher turnover intention and lower job performance. Thus, it is vital to rectify the specific challenges and gaps in employee retention practices to create a positive work environment and enhance employee satisfaction within the industry.

Furthermore, the turnover challenges facing organizations is taking its tolls leading to loss of highly skilled staff, loss of knowledge and experience, established customer relations, and may even result in poor customer satisfaction, poor sales, and resultant possible loss of revenue and market share (David, 2018). Essentially, it has been observed from the related studies that, various researchers have conducted studies on different talent management variables as determinants of employees' turnover intentions and job performance at work place. Such variables include: compensation management, recruitment and selection, leadership

styles, human resources planning, performance appraisal, training and development and career management, employee retention, health and safety management and the findings remain positive and were statistically significant (Wan &Syarif, 2015; Chipunza & Malo, 2017; Gareth, 2017; Harris & Williamson 2018;Onuorah et. al., 2019; Bello (2019); Onwukaet. al. 2020; Hezekiah, 2022; Adeoye &Elegunde, 2020; Debowale, 2021).

It is in the light of the above that this study investigated the influence of integrated talent management strategies (human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management, and employee performance appraisal) on employees' turnover intentions in manufacturing industries in South -West Nigeria. This is for the purpose of ascertaining the contribution of integrated talent management strategies to employees' turnover intentions in South-West Nigeria.

Research Objectives
The broadly investigated contributions of integrated talent management strategies (human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management, and employee performance appraisal) to employees' turnover intentions in manufacturing industries in South -West Nigeria. The study specifically determined:

i. the extent of integrated talent management strategies being adopted in selected manufacturing industries.

ii. the level of employees' turnover intentions (high/low) in the selected manufacturing industries .

the combined contributions of integrated talent management strategies (Human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management and performance appraisal) to employees' turnover intentions in the selected manufacturing industries .

the relative contributions of integrated talent management strategies (Human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management and performance appraisal) to employees' turnover intentions in the selected manufacturing industries.

Conceptual Clarification: Talent Management
The concept of talent management has gained more ground and relevant due to evolution of corporate human resource management in today's present work environment. Talent management remains one of the most future-oriented practices in both private and public businesses (Ganaie& Haque, 2017). (Fatile et al., 2020), positioned that as talent remains scarce among other factors of production, there is a need to effectively manage and retain available ones in the interest of the organization. Today, organizations now understand and appreciate the need to have the best talents, if they must survive in this hyper competitive and increasingly complex business environment (Smith, 2020). It also illustrates the need to fill up key positions promptly with employees whose talents were developed within the organization (Cappelli, 2015).

Essentially, talent management signifies comprehensive and integrated human resource practices with the goal of attracting and retaining the right individuals, for the right positions, at the right time (Sajeda, 2017). Thus Integrated talent management strategies are the combinations of series of human resources management practices of maintaining and retaining employee for a better job performance. These strategies according to Hazem (2018) include, recruiting, retaining and developing the most talented and superior employees. The strategy also refers to the critical corporate function where the company strives to have the best talent, closing all the talent gaps and managing the talent by insuring that the right person is in the right job at the right time to achieve the best possible results (Hezekiah, Opeyemi

&Oluwatunmise, 2022). Keeping in view various strategies and indices of talent management as put forward by different researchers, this study consider it necessary to select integrated talent management strategies relevant to address the ravaging issues of employees' turnover intentions and poor job performance, the strategies are: human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management, and employee performance appraisal.

Human Resources Planning

Akinremi and Adedeji (2019) define human resource planning as the supply and demand of their skills according to their skills requirements and ensure that top performing employees are retained in the organization. They explain further that human resource planning is one of the major strategies of understanding the talent requirements. Employee planning is the foundation of staffing; hence, the process that identifies current and future human resources needs for an organization to achieve its goals (Armstrong, 2016). Wheeler (2014) says that employee planning is the first step in the talent management process and entails understanding the talent requirements and aligning them with the organizational goals as well as the specific service delivery environment in which the public sector department functions.

Employee Development

Another important strategy of integrated talent management is, employee development, i.e. provision of training and development in public and private organizations (career development, on /off the Job training, seminar, workshop, orientation and mentoring). Kim (2014) defined employee development as a set of systematic and planned activities designed by an organization to provide its members with the opportunities to learn necessary skills to meet current and future demands of work (Ogbeta, Nzewi& Chiekezie, 2015). Participation in staff development programmes by an employee is to begin immediately as a person is employed and should continue throughout a person's career (Werner & Desimone, 2011). They further opined that objective of employee resources development in organization like manufacturing industries is to increase the skills and knowledge of the workers. Employee development no doubt adds value to organizations in terms of increased productivity, morale and greater organizational efficiency (Rashid &Ayoode, 2020).

Employee Retention

Employee retention is also a very crucial integrated talent management strategy. This strategy can simply be put as the policies and plans organizations have in place and follow to satisfy the diverse needs of employees and create an environment those employees to stay in the organization (David, 2018). Financial and non-financial rewards policies, such remuneration, compensation, recognition, promotion and fringe, benefit, supervisors' supports, etc. are commonly retention strategies for controlling employees' turnover intentions and job performance. Employee retention can be represented by a simple statistic (for example, a retention rate of 80% usually indicates that an organization kept 80% of its employees in a given period) (Smith, 2020).

Employee Health And Safety Management

Employee health and safety management as part of integrated talent management strategies depict general state of physical, mental, and emotional well-being of an employee (Amponsah-Tawiah &Dartey-Baah, 2011). Organization like manufacturing industry is expected to comply with the Nigerian labour acts embedded under occupational safety and health (Ngwama, 2016). This is to ensure that, the industry takes into consideration health and safety precaution measures against organizational work hazard (Ngwama, 2016). This is

important because, healthy worker is the one who is free from illness, injury, mental and emotional problems that may impair his normal work activity or routine (Dwomoh, Owusu& Addo, 2013). Onoh- Linus (2021) put it more succinctly that an organization where employees within feel that management 'cares' for them, there is an indication of positive management of occupational health and safety system and as such results in safer working practices and also have positive impact on employee job performance.

Employee Performance Appraisal

Employee performance appraisal is a another talent strategy worth of note in this study. A Onwuka, Ugwu and Kekeocha (2020) define performance appraisal as the means to gather essential information about employees for decision making. The authors further stressed that it determines employee performance, assists to communicate any areas of improvement to employees and helps the management to come up with a plan of ensuring good relations between supervisors and employees for enhanced organizational performance. This encourages employees to understand how their performance is contributing to the public sector department, they are committed to stay in the organization (Linah, 2018). In his own views, Bello (2019) submitted that globally, diverse performance evaluation practices are employed depending on business, human resources cadre and corporation cultures. Performance appraisal has been integrated by organization's in diverse sectors in an attempt to strive and continue to exist in a global competitive economy (Onwuka et. al., 2020). Therefore, in any organization, human capital is the most important asset that can be relied on to attain competitive advantage..

The Theory of Human Capital

Human Capital theory was first proposed by Theodore Williams Schultz in the 1960's (Oyeniyi, 2019) to examine economic value of education but more recently it has been used in human resource management practices. The theory is the most popular theory in the studies that link human resource management and performance Oyewole & Adegoke (2018). This theory states that people possess innate abilities, behaviour and personal energy that make up the human capital they bring to their work (Armstrong, 2006). People with collective skills, abilities and experience coupled with their ability to deploy these aspects in the interests of the employing organizations are now recognized as making a significant contribution to the organizational success and constituting significant sources of competitive advantage (Oyeniyi, 2019). The human capital theory considers people as an asset and stresses that the investment in people by organizations always brings worthwhile returns. Armstrong (2006) points out that individuals generate, retain and use knowledge and skill thus human capital creates intellectual capital.

Human capital supports the notion that educational institutions need competent, motivated and committed employees who are willing to work and who can utilize their skills and knowledge towards effective attainment of the educational goals. Human capital theory is criticized for blaming individuals for defects of the system, making pseudo-capitalists out of workers, fudging the real conflict of interest between the two and is regarded as species of rational-exchange theory. Furthermore, it was said that said that human capital theory is a tautological or self-verifying theory and therefore not empirically testable (Oyeniyi, 2019). In responding to this criticism, Rauf (2018) posits that, human resources need to be leveraged effectively by the organization instead of simply possessed. He went further that the inclusion of dynamism of human capital compensation focuses on dynamic capabilities that help alleviate concerns and welfare of staff and consequently to retain them.

Methodology

This study investigated the contribution of integrated talent management strategies (human resource planning, recruitment and selection, employee development, employee

retention, employee health and safety management, and employee performance appraisal) to employees' turnover intentions in manufacturing industries in South -West Nigeria. The study employed a descriptive survey research design. The target population of the study comprised 3,172 staff working in six manufacturing industries (BUA Group, WAMCO Nigeria PLC, Lafarge Africa PLC Ewekoro, Rite Food Ltd, Nigerian Eagle Flour Mills Ltd and Premium Edible Oils Products Ltd) in six States of South-West Nigeria (Lagos, Ogun, Oyo, Osun, Ondo and Ekiti states). The study made use of stratified and simple random sampling techniques to select 952 respondents from 3 sampled states, Lagos, Ogun and Oyo.

Two research instruments were used to collect data for this study. The instruments are:. Integrated Talent Management Strategies Questionnaire (ITMSQ) with 60 questionnaire items and Employees' Turnover Intentions Questionnaire (ETIQ) with 10 items, both instrument were measured with 4 Likert-type of scales(Strongly Agree, Agree, Disagree and Strongly Disagreed) .The instruments were validated by the experts in Test and Measurement Department, Adekunle Ajasin University, Akungba Akoko, Ondo state. ITMSQ has demographic section which include name of the industry, employees' age, marital status, gender, highest educational qualifications, designation, and working experience. So also ITMSQ has six sub-scales with reliability index obtained through test and retest method and Cronbach and Alpha reliability technique; Human Resources Planning Scale(0.93), Recruitment and Selection Scale (0.81), Employee Development Scale (0.83) Employee Retention Scale(0.76), Employee Health and Safety Management Scale(0.77) and Employee Performance Appraisal Scale(0.74). Meanwhile the reliability index of ETIQ obtained was 0.78. Two research questions raised and two hypotheses formulated were analysed with inferential statistics.

Answering of Research Question

Research Question One: What are the extent of integrated talent management strategies being adopted in selected manufacturing industries in South West Nigeria?

Table 1: Integrated talent management strategies being adopted in selected manufacturing industries.						
Percentage Level of adoption by Manufacturing Companies	WAMCO	BUA	LAFARGE	EAGLE FLOUR	RITE FOOD	EDIBLE OIL
Human Resource Planning, Recruitment and Selection, Employee Development, Employee Retention	2.2%	2.3%	2.3%	2.2%	2.2%	2.0%
HRP, Recruitment and Selection, Employee Development, Employee Retention, Employee Health and Safety	2.2%	2.5%	2.6%	2.4%	2.3%	2.2%
HRP, Recruit. and Select, Employee Develop, Employee Retention, Employee Health and Safety, Performance Appraisal	95.6%	95.2%	95.6%	95.4%	95.5%	95.8%
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Author's Computation using SPSS 23.0, (2023

The table 1 indicates level of adoption of integrated talent strategies among the selected manufacturing industries in South West Nigeria. The table and figure 1 further showed high level of adoption of integrated talent strategies (HRP, Recruit. and Select, Employee Develop, Employee Retention, Employee Health and Safety, Performance Appraisal) in the selected manufacturing industries This high level was evidenced in Edible oil with 95.8% level, Lafarge and WAMCO; 95.6%, Rite food; 95.5% , Eagle Flour ; 95.4% and BUA company with 95.2% level of adoption. Additionally, this outcome implies that all the selected industries are

currently adopting all the dimension of integrated talent strategies captured in this research at 95% and above capacity.

Research Question 2: What is the level of employees' turnover intentions (high/low) in manufacturing industry?

Table 2: Level of employees' turnover intentions (high/low) in manufacturing industry.								
		Marital Status						
Level of Employee Turnover Intention		Single	Married	Separated	Widow	Others		
Low Intention	Gender of the Respondents	Male	170	99	1	4	0	274
		Female	224	253	87	22	9	595
	Total		394	352	88	26	9	869(91%)
High Intention	Gender of the Respondents	Male	8	12	0	0	0	20
		Female	26	29	3	2	3	63
	Total		34	41	3	2	3	83(9%)
Total	Gender of the Respondents	Male	178	111	1	4	0	294
		Female	250	282	90	24	12	658
	Total		428	393	91	28	12	952

Source: Author's Computation using SPSS 23.0, (2023)

Table 2 revealed the level of employee turnover intention among the in the selected manufacturing industries. A total of 869 representing 91% respondents have low turnover intention while 83 respondents representing 9% have high level of turnover intention in the selected manufacturing industries. This result indicted that turnover intention is low and this implies that employee retention rate is very among the selected manufacturing industriesin the South West, Nigeria.

Testing of Hypotheses

Hypothesis One: There is no significant combined contribution of integrated talent management strategies (Human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management and performance appraisal) to employee turnover intention.

Table 3: Analysis of the Interaction between combined integrated talent management strategies and employee turnover intention.				
Mode	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.934[a]	.873	.872	1.45115
a. Predictors: (Constant), Employee Performance Appraisal, Recruitment and Selection Strategy, Human Resource Planning Strategy, Employee Retention Strategy, Employee Health and Safety Management, Employee Development Strategy				

Source: Author's Computation using SPSS 23.0, (2023)

Table 3 showed the model summary of the regression analysis of interaction between combined integrated talent strategies and employee turnover intention with (R) value of .934. This indicates a very strong association between combined integrated talent strategies and employee turnover intention. R^2 value of 0.873 indicates that combined integrated talent strategies accounted for employee turnover intention. Other variables which are major that accounted for about 13% employee turnover intention are not contained in this model but

represented under the stochastic error term. The null hypothesis one was rejected by this finding, hence there is significant combined contribution of integrated talent management strategies (Human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management and performance appraisal) to employees' turnover intention.

Table 4: Regression Showing Significance of Predictors to Employee turnover Intention					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	13709.750	6	2284.958	1085.054	.000[b]
Residual	1990.027	945	2.106		
Total	15699.777	951			
a. Dependent Variable: Employee Turnover Intention					
b. Predictors: (Constant), Employee Performance Appraisal, Recruitment and Selection Strategy, Human Resource Planning Strategy, Employee Retention Strategy, Employee Health and Safety Management, Employee Development Strategy					

Source: Author's Computation using SPSS 23.0, (2023)

Table 4. shows the F-statistics value for regression to test the overall significance of the independent variables in explaining the employee turnover intention. The results show that the combined integrated talents management (Employee Performance Appraisal, Recruitment and Selection Strategy, Human Resource Planning Strategy, Employee Retention Strategy, Employee Health and Safety Management, Employee Development Strategy) in the selected study area significantly predicted the level of employee turnover with the F value 6,951, P-value < 0.05 (Sig .000). This indicates strong evidence against the null hypothesis, as there is less than 5% probability that null hypothesis is correct. F – statistical indicates that the overall regression model is highly statistically significant in terms of its goodness of fit since the value of F_{tab} (6,951) > F_{cal} (1085.054). The Study therefore concluded that, there is significant combined contribution of integrated talent management strategies (Human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management and performance appraisal) to employees' turnover intention

Hypothesis Two:. There is no significant relative contributions of integrated talent management strategies (Human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management and performance appraisal) to employees' turnover intentions.

Table 5: Analysis of the Interaction between relative integrated talent management strategies and employee turnover intention							
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	.825	.353		2.340	.019	.133	1.517
Human Resource Planning Strategy	.133	.050	.130	2.642	.008	.034	.232
Recruitment and Selection Strategy	.463	.042	.456	11.058	.000	.381	.545

Table 5: Analysis of the Interaction between relative integrated talent management strategies and employee turnover intention							
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Employee Retention Strategy	.001	.122	.001	.009	.004	-.238	.240
Employee Development Strategy	.161	.133	.159	1.215	.025	-.099	.422
Employee Health and Safety Management	.059	.055	.058	1.064	.047	-.167	.050
Employee Performance Appraisal	.268	.046	.268	5.774	.000	.177	.359

Source: Author's Computation using SPSS 23.0, (2023)

Table 5 showed the regression coefficients of the significant relative contribution of integrated talent management strategies to employees' turnover intention. The results show that beta weight 0.463 and t value =-11.058 to be the highest contribution, meaning that 1% increase in recruitment and selection strategy will lead to 46% immediate improvement (Reduction) in employees' turnover intention. Also, employee performance appraisal strategy yields a beta weight 0.268 and t value = 5.774 contribution. Follow by employee health and safety management with beta weight of 0.059 and t value =1.064. Moreover, Human resource planning strategy also contributes significantly with the beta weight of 0.133 and t value= 2.642, meaning that 1% increase in Human resources planning policy will lead to 26% improvement (reduction) in employees' turnover intention. in the immediate year. However, Employee retention strategy contributes significant to employees' turnover intention. with beta weight of 0.001 and t value 0.009. From the results obtained from table 4.10, the p-value calculated is lesser than 5%, critical value. Hence the null hypothesis was rejected. The Study therefore concluded that there is significant relative contribution of integrated talent management strategies to employees' turnover intention.

Discussions of Findings

Objective one was achieved through descriptive analysis, the finding indicated that the rate of adoption among the selected manufacturing Organisation is very high as revealed in the table 4.2 and fig 4.1. The finding revealed that above 95% of the respondents agreed that integrated talent strategies (HRP, Recruit. and Select, Employee Develop, Employee Retention, Employee Health and Safety, Performance Appraisal) are currently in practice by their organisations. The study supported Kehinde (2018) and Aderoba (2022) that many manufacturing industries in Nigeria adopted different management strategies.

Objective two was achieved with the aids of descriptive analysis (frequency and percentage count). The findings of the study revealed that 869 representing 91% of the respondents have low turnover intention. Meaning that majority of the employees from the selected organization are indispose to quit their job urgently while just 83 respondents representing 9% have high level of desire to leave their job. The result shows that the present integrated talent management strategies been used by the organizations are reasonably working

well with the employees. Akinremi et al (2019) found that employee turnover intention is very low in those organization that adopted different talent management strategies.

Objective three was achieved with the determination of combined contributions of integrated talent management strategies (Human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management and performance appraisal) to employees' turnover intentions). The major finding from objective 3 was that, it was established that there is significant combined contribution of integrated talent management strategies (Human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management and performance appraisal) to employees' turnover intention. The study supported Al-Dalaweh et al (2020); Zhaoyan (2022); Ateufac (2021) that talent management strategy has positive influence on employee turnover intention.

Objective four was achieved with the testing of hypothesis on the relative contributions of integrated talent management strategies (Human resource planning, recruitment strategies and selection, employee development, employee retention, employee health and safety management and performance appraisal) to employees' turnover intentions. The finding established that there is significant combined contribution of integrated talent management strategies (Human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management and performance appraisal) to employees' turnover intention. The study supported. The finding supports the conclusion of Galgallo and Matembei (2022); Gadi and Kee (2018); Zhaoyan (2022) that different talent management strategies have significant effects on turnover intention.

Conclusion

Base on the finding of this study it was concluded that the manufacturing industries in South West Nigeria adopted all the integrated talent management strategies (Human resource planning, recruitment and selection, employee development, employee retention, employee health and safety management and performance appraisal) examined in this study. Also employee turnover intention was low and that there was a significant combined and relative contribution of all the examined talent management strategies on employees' turnover intentions in manufacturing industries in South-West Nigeria.

Recommendations

Arising from the findings, it was recommended that:

i. Recognizing the dynamic nature of the workforce, organisations need to adopt more talent management strategies in mitigating turnover intention;

ii. Organisations need to regularly evaluate the effectiveness of integrated talent management practices adopted so as to improve on employee retention;

iii. Organization should develop other retention programmes based on the identified integrated talent management strategies that contribute significantly to turnover intention. These initiatives could include mentorship programmes, career development opportunities, and recognition programs to foster employee engagement and loyalty and

iv. Government and policy maker should enact policies to improve talent management in civil services and private organizations.

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SHARING ECONOMY

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Abstract

The current interlinked crises (covid, war, earthquakes, global warming, dwindling resources), have accentuated the transition towards new forms of the economy that focus on sustainable development and the need for rapid action to counter the effects of crises. Digitization, digital platforms and new collaborative business models have shaped more environmentally and resource responsible behavior. Thus, the collaborative economy can be a solution for future sustainable development. The paper focuses on the effects of the collaborative economy, effects that will have an impact on sustainable development. The collaborative economy creates new opportunities for all actors involved, e.g. it contributes to the creation of new jobs, the reduction of waste, the integration of people with disabilities into the labor market, leading to sustainable development.

Keywords: *sharing economy, collaborative economy, sustainable future*

JEL classification: D16, O10, P25

Introduction

The sharing economy is an economic model based on the sharing of goods and services between people. This sharing is facilitated by 'digital platforms. The collaborative economy brings a significant change in how people interact with goods and services, promoting more responsible consumption and more efficient use of resources.

The main characteristics of the collaborative economy include: digital platforms, lack of ownership, trust between people, stimulating collaboration between people. Digital platforms are the ones that facilitate the meeting between suppliers and consumers. Examples of the collaborative platform are: Airbnb (for housing rental) and Uber (for transport). The lack of property is another feature of this new economy; people no longer emphasize ownership but share underused goods through digital technology. This results in reduced waste, and it can lead to sustainability. For the collaborative economy to develop, it is essential that people trust, interact with strangers. Confidence building is maintained by the evaluation and feedback systems offered by collaborative platforms.

The most used collaborative services are: Transport (BlaBlaCar), Accommodation: (Airbnb) and Services (TaskRabbit). Among the benefits of the collaborative economy are: reduced costs (sharing goods and services may be cheaper than owning them); promoting sustainability through efficient use of resources.

The development of the collaborative economy through strategic convergence involves integrating several areas and economic actors in a coherent and coordinated way, in order to amplify the benefits of this new economy. Strategic convergence involves aligning objectives and resources among various entities - such as governments, companies, communities and digital platforms - to create a sustainable and efficient ecosystem. Basic principles of the collaborative economy (Business Journal, 2018) include:
- Urban density favors collaboration
- Unused value is lost value
- Trust and reciprocity
- Waste as raw material
- Transparent and free information

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In contemporary business environments, the development and implementation of a facilitating/collaborative economy through strategic convergence represents a strong approach to organization and operation This merger combines the principles of facilitating economic models, focus on collaboration, sharing and resource optimization, with strategic alignment of goals, objectives and actions between different stakeholders. In the year 2021 Édouard Dumortier- Co-founder of AlloVoisins mentioned that the Health Crisis will accelerate the development of the collaborative economy, which will have a considerable impact on the economic, fiscal, social and societal spheres (Dumortier. E., 2021). In other news, the collaborative economy is a type of economy that supports sustainable local development (FengSheng Chien, 2022), which can be a solution for global sustainable development. According to Flash Eurobarometer 467, conducted in 2018, almost one smart Center Europe no used the services offered through collaboration platforms, especially in transport sector and the accommodation. (European commission, 2018.)

In the collaborative economy, emphasis is placed on creating an environment conducive to collaboration, innovation and value creation. This economic model should use technology platforms and networks in an effort to enable efficient sharing of resources, knowledge and expertise between participants. The sharing economy is seen as a new force within the global economy, the beginning of a broader change in the economy (Stokes, K., Clarence, E. and all, 2014). It's a new kind of economy facilitated by technology.

The development of the sharing economy is based on collaborative platforms that facilitate the connection of diverse stakeholders, allowing them to exchange ideas, resources and services. These platforms facilitate interactions, collaborations and transactions, thus enabling participants to harness their mutual strengths and capabilities. By pooling resources and capitalising on economies of scale, participants can achieve greater cost efficiency. The sharing economy covers several sectors and is characterized by a wide variety of business models, each of which has its own market characteristics. Anyway, a common element in most business models is the use of underutilized assets to extract economic benefits (Petropoulos, Georgios (2017)). Tetrevova and Kolmasova note that the collaborative economy has the potential to contribute to sustainable development (Tetrevova & Kolmasova, 2021). In other words, the authors state that the collaborative economy, by its means, can represent an accumulation of solutions for future sustainable development. The collaborative economy benefits from the effects of the platform, where the value of the platform increases exponentially with the number of participants. This encourages collaboration and participation, leading to greater innovation and collective success. Community engagement is a hallmark of sharing economies, where participants contribute to and benefit from collective growth and community prosperity. Trust, reciprocity and mutual support are essential elements of these collaborative ecosystems.

Strategic convergence involves aligning the goals, objectives and strategies of different stakeholders towards a common goal or vision. It ensures that efforts are coordinated, resources must be allocated efficiently. Strategic convergence requires stakeholders to share a common vision and goals, understanding how their individual efforts contribute substantially to achieving the broader goals of the organization or ecosystem. Alignment of strategies: involves aligning strategies and actions of different stakeholders to avoid conflicts and duplication of efforts. Strategic convergence should ensure that resources are consistently targeted and redirected to initiatives supporting overall strategic priorities. Strategic convergence also involves a strong collaborative decision-making process in which stakeholders contribute their insights and expertise to the development of joint strategies. This encourages commitment and commitment to collective goals. Performance measurement and accountability: Includes the establishment of superior mechanisms to measure the continuous progress towards achieving common objectives and, in addition, to hold stakeholders accountable for their contributions.

Transparent reporting and evaluation processes will help track performance and ultimately identify potential areas for continuous improvement.

Adaptability and Flexibility: Strategic convergence requires adaptability and flexibility to respond to changing circumstances and emerging opportunities. By continually assessing and adjusting strategies to ensure alignment with evolving needs and priorities, the organization can gain (and maintain) a sustainable competitive advantage.

Facilitating convergence: Facilitating convergence should focus on creating an environment and processes that enable alignment, collaboration and synergy between different stakeholders or entities. It involves providing the necessary support, structures and mechanisms to facilitate the convergence of efforts towards common objectives. Key components of the collaborative economy:

- Developing collaborative platforms and tools: enabling convergence would normally involve the use of technology and collaborative platforms to enable communication, information sharing and coordination between stakeholders. Such platforms provide a basic space for stakeholders to collaborate, exchange ideas and work on common goals.
- Communication channels: establishing channels and communication protocols to ensure that information flows efficiently at different levels and functions within the organization or between partner organizations. Communication helps prevent misunderstandings and promote organizational efforts.
- Training and capacity building: Facilitating convergence involves the provision of training and capacity-building initiatives that equip stakeholders with the skills, skills and, the knowledge and resources needed to contribute effectively to collaborative efforts.
- Conflict resolution mechanisms: Implement conflict resolution mechanisms or disagreements that may arise during collaborative processes. Effective conflict resolution mechanisms help to address differences constructively and keep the momentum towards achieving common goals.
- Celebrating success and learning: facilitating convergence also involves celebrating the successes and milestones achieved through collaboration, as well as promoting a culture of continuous learning and improvement. Recognising achievements and reflecting on lessons learned, stakeholders are constantly motivated to support collaborative efforts and adapt to evolving challenges.
- Incentives aligned: strategic convergence should align incentives between stakeholders, thus encouraging cooperation and collective action towards common objectives. Participants should be motivated to collaborate, knowing/understanding that their efforts contribute to the success of the wider ecosystem.

Individual objectives must be subject to departmental objectives, while departmental objectives must be subject to the objectives of the organization. This alignment of objectives is the fundamental criteria for organizational success through COORDINATION, not just COLLABORATION!

Conclusion

In conclusion, the merger between the collaborative economy and strategic convergence is a synergistic approach to organizing and operating in complex and interconnected business environments. By harnessing the power of collaboration, coordination, shared resources, and strategic alignment, organizations and ecosystems can achieve collective success while fostering innovation, resilience, and sustainable growth.

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INFLUENCE OF FINANCIAL INCENTIVES ON JOB SATISFACTION AMONG EMPLOYEES IN FAST FOOD RESTAURANTS IN OSOGBO OSUN STATE, NIGERIA

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Abstract

This research study investigated the influence of financial incentives on job satisfaction among employees in Fast Food Restaurants in Osun State. The study was a survey was which employed ex-post factor design. A total of 180 respondents were selected for the study in which (40%) were male while (60%) were female. Questionnaire format was used and was made up of four (4) sections namely: Section A (Socio Demographic variable scale), Section B (measure financial incentives scale), Section C measured non financial incentives scale while Section D measured job satisfaction. The collected data were subjected computerized data analysis, using the Statistical Package for Social Sciences (SPSS) version 21.0 was use. Both the descriptive and inferential statistic were used.

The result revealed that there was a significantly positive relationship between financial incentives and job satisfaction among fast food restaurant Employees $\{r (178) = .41^{**}. P< .05\};;$ there was a significantly positive relationship between bonuses and job satisfaction among fast food restaurant employees $\{r (178) = .27^{**}, P< .05\};$ there was a significantly relationship between commission and job satisfaction among Fast Food Restaurant Employees $\{r (178) = 25^{**} P< .05\};$

The study recommend that the organization should consider financial incentives as one of the factors in promoting job satisfaction that leads to employee performance among employees in Fast Food Restaurants in Osun State. It concluded that that there was significantly positively relationship between the financial incentives and job satisfaction and there was significantly positively relationship between the non-financial incentives and job satisfaction among fast food restaurant employee

Keywords: Financial incentives, Job Satisfaction, Employees, Fast Foods

INTRODUCTION

Job satisfaction is the aim of most managers, the contention is that a satisfied employee has a better attitude to work than a dissatisfied employee. Similarly, Schmidt (2007) observed that job satisfaction refers to an individual's understanding of the degree of attractiveness of a job if both positive and negative outcomes are weighed up against each other. It is an affective reaction to a job that results from the person's comparison of the actual outcomes with those that are desired, anticipated or deserved (Okpara, 2006). Job satisfaction is a worker's sense of achievement and success on the job. It is generally perceived to be directly linked to productivity as well as to personal well-being (Statt, 2004). Job satisfaction implies doing a job one enjoys, doing it well and being rewarded for one's efforts (Kaliski, 2007). Job satisfaction further implies enthusiasm and happiness with one's work. Job satisfaction is the key ingredient that leads to recognition, income, promotion, and the achievement of other goals that lead to a feeling of fulfillment (Kaliski, 2007). Job satisfaction can be defined also as the extent to which a worker is content with the rewards he or she gets out of his or her job, particularly in terms of intrinsic motivation (Statt, 2004).

Job satisfaction is seen in terms of the degree of agreement or discrepancy between what one expects and what one actually gets in the work environment. Hewstone and Stroebe (2001) define job satisfaction as an affective reaction to a job that results from the incumbent's comparison of actual outcomes with those that are desired. In this regard, performance on the job requires that an individual's expectations and aspirations in terms of reward considerations and fulfillment needs be met. If these needs are fulfilled, employees will be satisfied with the

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outcome of the job and greater satisfaction would generally motivate employees in performing their tasks more efficiently, thus resulting in an increase in the organization's productivity.

Employee job satisfaction affects the quality of service with a consequent effect on the degree of workers performance and general output of the employee involved (Heartfield, 2012). Therefore, efforts to improve employee job satisfaction can create satisfied employees with a positive effect on employee performance and general output of the employee. Organizations therefore know how to manage a diverse group of workers because as this will aid in recruitment and retention of talented employees and ensure high levels of job satisfaction (Heartfield, 2012).

Fast Food Restaurants is faced with challenges in human performance which is affecting on the organization's productivity, quality of work, duration of projects and finally on firm's profits (Berg, 1991). Due to the global competition, organizations tend to retain talented or good personnel. Job security and loyalty to the organization is challenged by external market pressure and changing social norms. What are the factors that drive these talented or good personnel to give in their best? Personnel must be committed to their organization (Berg, 1991). They must be willing and able to give greater effort to help their organization to succeed. They must be prepared to go beyond what is expected of them to deliver outstanding work. Good personnel feel inspired by their work and care about the future of their organization being successful (Nsldoken, 2011). The 'carrot and the stick' leadership do not work presently and managers must find new ways to motivate the personnel. Considering the above, there are debates on whether financial incentives should be used to motivate employees disregarding non-financial incentives or vice versa. The study therefore looks at the need to investigate whether both financial and non-financial incentives have an impact in job satisfaction among employees of Fast Food Restaurants in Osun State.

LITERATURE REVIEW
Theoretical Framework
Herzberg's Motivator-Hygiene Theory
Fredrick Herzberg developed the motivator-hygiene theory. This theory is closely related to Maslow's hierarchy of needs but relates move specifically to how individuals are motivated in the workplace. Based on his research Herzberg argued that meeting the lower-level needs (hygiene factors) of individuals would not motivate them to exert effort, but would only prevent them from being dissatisfied. Only if higher-level needs (motivators) were met would individuals be motivated (Berridge, 2001).

The implication for managers of the motivator-hygiene theory is that meeting employees lower-level needs by improving pay, benefits, safety, and other job-contextual factors will prevent employees from becoming actively dissatisfied but will not motivate them to exert additional effort toward better performance. To motivate works or employees, according to the theory, managers must focus on changing the intrinsic nature and content of jobs themselves by "enriching" them to increase employees" autonomy and their opportunities to take on additional responsibility, gain recognition, and develop their skills and careers. An analysis of these interviews led Herzber to conclude that certain factors led to job satisfaction, which he termed motivators and certain factors found in the two groups are summarized as follows:

Hygiene Factors
- Leading to dissatisfaction:
- Policies and Administration
- Supervision
- Working conditions
- Money
- Job security
- Status

- Relationship with peers and subordinates

Motivators

- Leading to satisfaction
- Achievement
- Recognition
- Responsibility
- Growth and development

Reinforcement Theory

Pride (2009), advocate that reinforcement is a philosophy of stimulus which is well known on the premise that a behavior which is rewarded for an appreciative action is most probably to be repeated, whereas deeds which are corrected or reprimanded is possibly not to be repeated. Griffin, (2009), opined that reinforcement theory is established on the notion that attitude is a function of its outcomes. Judging from the explanations given above, it can be inferred that an individual is likely to exert greater energy to perform a task when an action is satisfied, or in other terms the worker will be stimulated to replicate the present conduct that accounted for the behavior to be satisfied. Looking at it from the angle of an establishment and industrial perspective, Landy, (2009), describe that reinforcement concept is contingent on three modest components which are stimulus, response and reward. Pride (2009), expound in detail that reinforcement concept gives the impression in diverse levels and can be used in numerous manners consisting of positive and negative reinforcements. A constructive reinforcement concerns the status quo where preferred actions are reinforced by giving a worker an incentive. An example is that, majority of employees recognize compliment as well as been acknowledged by their managers for an action well executed and increase the readiness to participate very well in prospect events. An undesirable reinforcement on the other hand characterizes the idea that there is the possibility that a conduct connected with a deed will be sustained by restricting an undesirable work (Luthans, 1995).

METHODOLOGY

Research Design

This study was a survey which employed Ex Post Facto design. The independent variables, majorly for the study was financial incentives. The dependent variable was job satisfaction.

Population of the study

The population comprised of both male and female employees, who are members of staff of selected Fast Food Restuarants in Osogbo, Osun State, Nigeria which are Captain Cook Resturant in which the number of staff was 47, Appetizer Restuarant & Fast Food, Ajegunle in which the number of staff was 30, Fingerlinking Resturant, Osogbo in which the number of staff was 30, Spices Eatery Okefia in which the number of staff was 44 and Ostrish Bakary Fast Food Osogbo in which the number of staff was 35 thereby indicating a total population of 140 for the five (5) selected fast food Resturant in Osogbo, Osun State

Sampling and sampling Techniques

Due to the large population size, the simple random techniques was taken to select sample for the study. This sample size can be derived mathematically using Yaro-Yeme's formula as stated below:

$$n = \frac{p}{1 + \left[P(S)^2\right]}$$

Where: n = Sample size sought

P = Population size of the study

I = Constant figure

S = Level of significance (5% or 0.05)

Solving for the sample size for staff in Captain Cook Resturant Osogbo, n where 48 is the population size of the study therefore:

$$n = \frac{48}{1+[48(0.05)^2]}$$

$$n = \frac{48}{1+[48(0.0025)]}$$

$$n = \frac{48}{1+0.0625}$$

$$n = \frac{48}{1.0625}$$

n = 47

Solving for the sample size for staff in Appetizer Resturant & fast food, Ajegunle Osogbo Osun State, n where 32 is the population size of the study therefore:

$$n = \frac{32}{1+[32(0.05)^2]}$$

$$n = \frac{32}{1+[32(0.0025)]}$$

$$n = \frac{32}{1+0.08}$$

$$n = \frac{32}{1.08}$$

n = 30

Solving for the sample size for staff in Fingerlinking Resturant Osogbo Osun State, n where 28 is the population size of the study therefore:

$$n = \frac{28}{1+[28(0.05)^2]}$$

$$n = \frac{28}{1+[28(0.0025)]}$$

$$n = \frac{28}{1+0.07}$$

$$n = \frac{28}{1.07}$$

n = 26

Solving for the sample size for staff in Spices eatery Okefia Osogbo Osun State, n: where 44 is the population size of the study therefore:

$$n = \frac{4}{1+[44(0.05)^2]}$$

$$n = \frac{45}{1+[45(0.0025)]}$$

$$n = \frac{45}{1+0.055}$$

$$n = \frac{45}{1.055}$$

n = 44

Solving for the sample size for staff in Ostrish bakary fast food osogbo, n where 38 is the population size of the study therefore:

$$n = \frac{38}{1 + [38(0.05)^2]}$$

$$n = \frac{38}{1 + [38(0.0025)]}$$

$$n = \frac{38}{1 + 0.095}$$

$$n = \frac{38}{1.095}$$

n = 35

Therefore, the sample size across the selected fast food restaurants is stated as thus: 47 + 30 + 26 + 44 + 35 = 180

N = 180

Research Instrument

The instrument that was used for this study was questionnaire format. The questionnaire was comprised of four sections, namely Section A, Section B, and Section C.

Section A

The scale contained the socio demographic information of the respondents which include the name of the organization, age, gender, marital status, highest educational qualification, working experience (in years), current position in the organization etc.

Section B was used to measure financial incentives scale. This scale was developed by Al-Nsour (2012). The scale consists of 7 items, Examples of items in the scale include: financial incentives: provides enough payment to meet the requirements of life; It provides rewards for skilled employees commensurate with their performance; It provides bonuses for workers according to their post and consistent with their level of performance; provides overtime payment to employees after working hours; It provides transportation allowances for those who live in far areas; provides a fair and adequate compensation on retirement; and It provides financial incentives to employees when they work professionally (Appropriate job qualifications)". The measure shall be assessed on a five-point scale, ranging from (5= Strongly Agree, Agree 4= Undecided 3= Disagree 2= Strongly Disagree 1). High scores in the scale indicate more financial incentives while low scores in financial incentives indicate less financial incentive. The internal consistency reliability of this scale was α=0.68 (Al-Nsour, 2012).

Section C was used to assess job satisfaction. This scale was developed by Al-Nsour (2012). The scale consists of 20 items, Examples of items in this scale include "being able to keep busy all the time"; "The chance to work alone on the job"; "The chance to do different things from time to time"; "The chance to be "somebody" in the community"; "The way my boss handles his/her workers"; "The competence of my supervisor in making decisions"; "Being able to do things that don't go against my conscience". The measure was assessed on a five-point scale, ranging from (5= Strongly Agree, agree =4, Undecided =3, Disagree =2, Strongly Disagree =1). The internal consistency reliability of this scale was α=0.55 (Al-Nsour, 2012).

Administration of Research Instrument

The copies of questionnaire were administered by the authors with the help of branch heads of the selected fast food restaurant. The researcher explained all aspects of the questionnaire to the respondents. Data were collected within 24 hours which provide enough time for valid and reliable information which were supplied by the respondents.

Method of Data Analysis

The collected data in the study were subjected to computerized statistical data analysis. The statistical package for social sciences (SPSS) version 21.0 was utilized in analyzing the collected data. Both the descriptive and inferential statistics were used. Specifically, the statistical test of Pearson, r correlation was employed in testing the stated hypotheses.

Results and Discussion

The results of the study are shown below from Descriptive to inferential statistics

Table 1: Distribution of Respondents by Gender

Sex	N	%
Male	72	40
Female	108	60
Total	180	100

Source: Authors' Fieldwork, 2019

The result in table 1 above revealed that 72(40 %) of the respondents were male while 108(60%) were female.

Table 2: Distribution of Respondents by Age

Age Group	N	%
20-30 yrs	65	36.1
31-40 yrs	53	29.4
41-50 yrs	39	21.7
51 yrs and above	23	12.8
Total	180	100

Source: Authors' Fieldwork, 2019

The result in table 2 above revealed that 65 (36.1%) of the respondents were within age bracket 20-30 yrs; 53 (29.4%) were within age bracket 30-40 yrs; 39 (21.7%) of the respondents were within age bracket 41-50 yrs while 23 (12.8%) were within age bracket above 51 yrs and above.

Table 3: Distribution of Respondents by Marital Status

Marital Status	N	%
Single	74	41.1
Married	103	57.2
Separated	3	1.7
Widow/Widower	1	0.6
Total	180	100

Source: Authors' Fieldwork, 2019

The result in table 3 above show that 74(41.1%) of the respondent were single, 103(57.2) were married, 3 (1.7) of the respondents were separated, 1(0.6%) of the respondents were widow/widower

Table 4: Distribution of Respondents by Highest Educational Qualification

Education Qualification	N	%
SSCE/NECO/GCE/WAEC	31	17.2
NCE/OND/A LEVEL/DIPLOMA	49	27.2
First Degree/HND	68	37.8
Post Graduate Diploma	14	7.8
Masters Degree	10	5.6
Others	8	4.4
Total	180	100

Source: Authors' Fieldwork, 2019

The result in table 4 above showed that 31 (17.2%) were holders of SSCE/ NECO/ WAEC/GCE; 49 (27.2%) of the respondents were holders of NCE/OND/A' Level/Diploma; 68 (37.8%) were holders of First Degree/Higher National Diploma; 14 (7.8%) of the respondents were holders of Postgraduate Diploma 10 (5.6%) were holders of Masters Degree while only 8 (4.4%) of the respondents were holders of other educational qualifications

Table 5: Distribution of Respondents by Level of Working Experience

Working Experience	N	%
0-5 yrs	27	15
6-10 yrs	39	21.7
11-15 yrs	43	23.9
16-20 yrs	50	27.8
21 yrs and above	21	11.7
Total	**180**	**100**

Source: Authors" Fieldwork, 2019

The result in table 5 above showed that 27 (15%) of the respondents had worked between 0-5yrs; 39 (21.7%) of the respondents had worked between 6-10 yrs; 43 (23.9%) of the respondents had worked between 11.15 yrs; 50 (27.8%) of the respondents had worked for 16-20 21 yrs while 21 (11.7%) of the respondents had worked between 21 yrs and above

Table 6. Distribution of Respondents by Types of Employment

Type of Employment	N	%
Permanent Staff	84	46.7
Temporary Staff	57	31.7
Contract Staff	23	12.8
Casual Staff	16	8.9
Total	180	100

Source: Authors' Fieldwork, 2019

The result in table 6 above showed that 84 (46.7%) of the respondents were permanent staff of the respondents 57 (31.7%) of the respondents were temporary staff 23 (12.8%) of the respondents were contract staff while only 16 (8.9%) of the respondents were casual staff.

Hypothesis Testing
Hypothesis One
This stated that there would be a significantly positive relationship between financial incentives and job satisfaction among fast food restaurant employees. The hypothesis was tested by Pearson, r Correlation. The result is shown in table 7 below.

Table 7: A Summary Table of Pearson r Correlation showing the Relationship Between Financial Incentives and Job Satisfaction among Fast Food Restaurant Employees

Variables	N	$\overline{X}$	SD	df	r	P
Financial Incentives	180	30.26	9.43	178	.41**	<.05
Job Satisfaction	180	85.05	35.57			

Source: Authors' Fieldwork, 2019

The result in table 7 above revealed that there was a significantly positive relationship between financial incentives and job satisfaction among fast food restaurant Employees {r (178) = .41**. P< .05}

Therefore, the hypothesis one was supported by the result of the study.

Hypothesis Two
This stated that there would be a significantly positive relationship between bonuses and job satisfaction among fast food restaurant employees. The hypothesis was tested by Pearson Correlation. The result is stated in table 8 below.

Table 8: A Summary Table of Pearson r Correlation Showing the Relationship Between Bonuses and Job Satisfaction among Fast Food Restaurant and Employees

Variables	N	$\overline{X}$	SD	df	r	R^2
Bonuses	180	2.43	0.41	178	.27**	
Job Satisfaction	180	85.05	35.57			<.05

Source: Authors' Fieldwork, 2019

The result in table 8 above revealed that there was a significantly positive relationship between bonuses and job satisfaction among fast food restaurant employees {r (178) = .27**, P< .05}

Therefore, the hypothesis two was supported by the result of the study.

Hypothesis Three
This stated that there would be a significantly positive relationship between commission and job satisfaction fast food restaurant employees. The hypothesis was tested by Pearson r correlation. The result is stated in table 9 below:

Table 9: A Summary Table of Pearson r Correlation Showing the Relationship Between Commission and Job Satisfaction among Fast Food Restaurant Employees

Variables	N	$\overline{X}$	SD	df	r	P
Commission	180	2.33	0.88	178	.25**	
Job Satisfaction	180	85.05	35.57			<.05

Source: Authors' Fieldwork, 2019

The result in table 9 above revealed that there was a significantly positively relationship between commission and job satisfaction among Fast Food Restaurant Employees {r (178) = 25** P< .05}. Therefore, the hypothesis three was supported by the result of the study.

Conclusion

In view of the obtained findings it is hereby concluded that:

• There was a significantly and positively relationship between the financial incentives and job satisfaction among fast food restaurant employees

• Bonuses was significantly and positively related to job satisfaction among fast food restaurant employees

• Commissions was significantly and positively and related to job satisfaction among fast food restaurant employees

Recommendations

From the findings and various discussions, some recommendations are here offered:

Fast Food Restaurants should consider financial incentives as one of the factors in promoting job satisfaction that leads to employee performance among employees in Fast Food Restaurants in Osun State

Fast Food Restaurants should consider financial incentives as one of the factors in promoting job satisfaction that leads to employee performance among employees in Fast Food Restaurants in Osun State

Managers of the Fast Food Restaurants should ensure that appraisal is regularly done so that employees who are due for promotion are promoted rightly

Managers of Fast Food Restaurants should allow employees some level of freedom to do their job and this can be achieved by engaging in lesser supervisions.

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CAPITAL ALLOWANCE AND OPERATION EFFICIENCY OF LISTED CONSUMER GOODS FIRMS IN NIGERIA

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Abstract

This study looked into the impact of capital allowance on the operational effectiveness of firms producing consumer goods in Nigeria. The research design was expo-facto, both descriptive and inferential statistics were employed in analyzing the data. Population of the study was all the 21 consumer products companies listed on the Nigeria Exchange Group between 2014 and 2021. 12 companies were selected as the sample size using purposeful sampling. Through the use of the firm's publicly available financial filings, data was acquired from secondary sources. The results of the analysis showed that capital allowance improved efficiency. According to the study's findings, consumer items firms operate more efficiently when their capital allowances are advanced. It was advised that the Nigerian government reevaluate the capital allowances now enjoyed by firms in order to improve operational effectiveness and financial performance of consumer products enterprises. Additionally, greater capital allowances ought to be granted to more consumer products companies.

1. Introduction

Tax is an obligatory charge that governments round the world imposes on their constituents to raise money for the provision of social services. Although paying taxes is required by law, doing so has a significant negative influence on the ability of enterprises to make money (Ajiteru & Bakare 2018). Therefore, firms all over the world create ways to reduce tax liabilities by utilizing tax advantages as offered by tax legislation in order to protect their net income (Undie et al 2020). In Nigeria, however, despite the numerous tax advantages provided by the government to aid tax payers, there are still certain instances of stagnant performance throughout manufacturing enterprises, which serve as engines of growth and advancement. (Ohaka & Dagogo 2015). As a result, the main problem found is that, despite government tax incentive programs designed to promote investment, there is little to no rise in business earnings. From this issue, it can be concluded that such incentives have not significantly increased the productivity of potential manufacturing businesses. Therefore, considering the fact that the government's funds are depleted by these various tax advantages, why has the effort of the government not been successful? Thus, this study's goal is to evaluate the effects of capital allowance incentives on manufacturing firms' efficiency. In particular, personal allowances, capital allowances, investment allowances tax breaks, annual benefits, pioneer relief, and relief for losses are all being provided as incentives for different economic sectors (Uwaoma & Ordu 2014). These benefits are thought to hasten national growth and development while assisting in reviving Nigeria's manufacturing industry.

Businesses utilize incentives in various ways, and the reasons why they are started vary from one company to the next. The use of taxes by the government as a weapon for fiscal policy is intended to stimulate the global economy. Companies in Nigeria, especially those in the industrial sector, have a lot of tax benefits, including lower corporate tax rates, investment deductions, investment incentives, and depreciation allowances. This makes it possible for these companies to report greater gains after taxes, which enhances their financial performance.

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Companies that qualify for tax incentives have higher ROA and return on equity as well as reduced taxes to pay (Ohaka & Agundu, 2012).

A company can simply show by its performance how successfully and effectively it uses its resources to generate revenue. Since a firm's efficacy and value are highly correlated, it follows that the better a company performs, the higher its values will be. Increasing shareholder wealth is one company goal that cannot be overlooked. It is achievable when a firm generates returns that are higher than the market average, which happens when a larger market grows as a result of value creation. The government may play a big role in achieving this goal by providing tax benefits to those enterprises in order to encourage them to grow their wealth. Supporters of tax incentives claim that tax cuts boost equity and asset returns, allowing them to reinvest a portion of their profits (Uwaome & Ordu 2014).

There is a wealth of literature on tax incentives and business success. (Abdulrahman & Kabir 2017) examined the impact of tax incentives on FDI, economic growth, and development in Nigeria and came to the conclusion that there is a positive association between the variables. In studies like (Ngure, 2018, Onyago, 2015 and Mayende, 2013) the effect of tax incentives on the performance of manufacturing enterprises was examined generally. Studies have also looked at capital allowance and business performance. The studies on capital allowance by (Eke et al., 2021; Nduati, 2020; Nwanyanwu, 2018; Kuria et al., 2017; Ahakiri & Oboh, 2017; and Agudu & Ohaka, 2013) centered excessively on profitability as measured with ROA, ROE and profit after tax as an indicator of financial performance without anyone taking into consideration the connection between capital deductions and one of the basic metrics of performance specifically operation efficiency. This study is being conducted to close this gap in the literature. The purpose of this study is to determine whether capital allowance incentives affect the operational effectiveness of 12 listed consumer products manufacturing firms in Nigeria between 2014 and 2021 in a favorable (or adverse) manner. The selection of this study period was made to give researchers the chance to conduct an up-to-date and latest thorough evaluation of the impact of tax benefits with an emphasis on capital deductions on the economy, where manufacturing enterprises are believed to contribute a substantial share of total economic output despite their modest contribution to the nation's economic goals

2. Literature Review
2.1 Conceptual Review

Initial Allowance (IA)

Companies who expended a qualifying capital expenditure within the year of assessment when the asset was first employed for the purposes of the company's operation or business are entitled to this kind of deduction. This allowance offers immediate relief. No matter how long the starting term or possession period is, it is unchanged. This reduction is provided if a taxpayer requests it in writing for the assessment to be determined using the fiscal year during which the investment cost was incurred. The asset in question was initially exclusively or predominantly used for production or profit-making purposes. The permission is given when the asset is utilized both domestically and commercially. Distribution of the allowance is equitable. It is calculated by dividing the asset's initial purchase price by the first permissible rate.

Annual Allowance (AA)

This is a reimbursement provided to companies who have made qualifying capital expenditures at the conclusion of the beginning period and for every single year during which the asset is still in use, regardless of whether the initial reimbursement has been made. The duration of occupancy or usage of the asset within the basis time has no bearing on the annual allowance, although it shall be appropriately decreased if the basis timeframe to which it applies is less than one year.

Balancing Charge

This is stated in paragraph 9 of CITA 2007 (as amended)'s second schedule. This results from any qualified asset that is sold after a capital allowance claim has been made on it. When a business disposes of assets for which qualifying expenses were incurred at a price higher than the asset's residual worth, a balancing allowance is given. A balancing charge is the surplus, profit, or gain from the sale of any eligible capital outlay that has earned capital allowance. This occurs when the sale proceeds of any eligible capital expense that qualified for a capital deduction during the period exceed the tax-deductible value (TWDV).

Asset Turnover

The best use of an organization's resources is a key component of efficiency. Asset turnover compares the revenue for the time period to the cost of every asset in the business. It gauges how effectively a business has used its resources to produce money. To calculate the asset turnover ratio, divide annual sales by total assets. A greater ratio indicates that the leadership of a company is using its resources wisely. Conversely, if the ratio is lower, management is not maximizing shareholder value by making the most optimal use of its resources. Poor efficiency ratios can be brought on by bad management practices like speculation, failing to put out the required effort to turn a profit for the business, as well as poor managerial choices. (Ang et al 2000).

2.2. Theoretical Framework
Normative Theory

Although this theory is based on realistic tax management strategies, it differs from previous ideas in that it has received less criticism for the basis on which regulators are guided. According to this hypothesis, the development of a government institutional framework will culminate in various kinds of incentives and restrictions which act as the foundation for the operations of the government as well as other players. The incentives offered will mark a turning point for development because it is generally known that various administrations emerge; only a few of them are effective at raising taxes. Therefore, it is extremely possible that the process of developing tax strategies and tax management enhancements will result in interactions between tax regulations and administrative modifications. The article by (Chukwumerije & Akinyomi 2011) presents useful signaling implications of this concept with regard to this research that won't cause any loss of revenue for the government. Putting money into tax incentives and deductions will result in precise focused policy actions that help achieve the previously mentioned objective. It will only be deemed sound and ideal under the conditions if a present tax incentive could substantially decrease corporate taxes to levels comparable to those of other countries doing business there.

2.3 Empirical Review

There is a wealth of information available on capital allowance and the success of manufacturing enterprises in Nigeria and other nations. However, the level of divergence in the significant factors and the conclusions from the numerous researches indicate that there are conflicting with inconsistent results about the connection between firms' financial success and capital allowances. Additionally, the majority of earlier research focused heavily on profitability as a performance indicator, with particular attention on ROA and ROE, as well as other kinds of capital allowances. In order to contribute to the sparse body of literature on the topic, this study concentrated on the effect of capital allowance on the efficiency of registered consumer goods enterprises in Nigeria.

The effect of tax rebates on the corporate earnings of 69 publicly traded manufacturing businesses in Nigeria was examined by (Timah & Chukwu 2021). The types of tax benefits that

are really put into practice include the yearly allowance, investment allowance, and tax holidays. Stock capital is a moderator in the earnings per share (EPS) measure for company earnings. The main source of secondary data for the study was the accounting records of the selected firms. All of the variables affecting tax incentives have a considerable impact on EPS, according to the results of data analysis using multiple regression and descriptive statistics.

Between 2010 and 2019 (Picas, et al. 2021) looked into connection between tax and governmental incentives and long-term viability of Small scale businesses in Portugal. In order to ease the financial strain on SMEs and increase business profitability, the study investigates various incentives provided by the Portuguese government. According to the research, tax reductions have greater consequences on SMEs' financial sustainability than government incentives do. Financial incentives have a favorable effect on the ROA and a negative effect on the ROE, resulting in sustainable performance. Incentives from Portugal 2020 have a small initial effect before becoming more useful in the years that followed.

Ochieng (2020) examined the impact of tax reductions on Kenya's export processing zones' profitability. Primary information was gathered for the study using a standardized, closed-ended questionnaire. The tax inducement indicators used were corporate income tax, capital allowances, and value value-addedd tax. Performance-related determinants were ROA and ROE. The outcome of the research demonstrated a significant and favorable association between performance and corporation tax reduction, capital allowance benefits, and value-added tax rebates. He came to the conclusion that enhancing value-added tax incentives and corporate tax incentives would improve performance but not capital allowances.

Nwonyuku (2019) performed research on capital allowances and the Nigerian Company Income Tax Act with an emphasis on the effects of capital allowances for Nigerian business income tax purposes. It was emphasized how significant the potential for religious capital allowance implementation was. When employed properly, it is an investment that boosts industrial output, and industries will gain from it. In addition to its benefits, it aids government initiatives to accomplish global economic objectives and attract foreign direct investment. The study's findings demonstrate that a properly executed capital allowance plan can increase profitable non-current asset investments made by Nigerian businesses, improve tax revenue generation, and foster a culture of tax compliance.

Ngure (2018) 90 manufacturing companies in Kenya had their tax advantages and financial outcomes examined between 2011 and 2016 to determine whether there was any association between the pertinent variables. The study examined the effects of company income tax breaks, capital allowance rewards, benefits from reduced customs duties, and excise tax breaks on the performance of specific manufacturing firms. Using a secondary data gathering template and a descriptive research approach, panel data were collected for the study. The degree of the independent variables' influence on the dependent variable was examined using a pooled panel regression model. The results of the study showed that the corporate income tax advantages for the businesses had the most favorable and significant effects on their performance.

Kuria et al (2017) research was done on the productivity of 86 Kenyan export processing zone businesses in relation to capital allowance incentives. Primary data were used in the investigation. Performance measures included return on asset, the number and value of new employment created, and the company's longevity. The findings revealed that capital investment allowance and performance measures have a positive and significant association.

3. METHODOLOGY

The study's target audience consists of all of Nigeria's publicly traded consumer goods companies. The annual reports of 12 carefully chosen consumer goods companies from 2014 through 2021 were used in this study as a source of secondary data. Consideration was given to a business with complete financial data and shares that were often traded on the Stock Exchange Group's trading

floor. A panel research design that combines cross sectional and time series features, as well as panel regression, were employed to analyze the work. Secondary data on important elements such as revenue, total assets, balancing charge, initial allowance, yearly allowance, and annual allowance were extracted from the financial statements of the tested companies.

3.1 Specification of Model

The following model specification was created in accordance with the (Mauda & Saidu 2019) study on the tax incentives and financial success of selected manufacturing enterprises in Nigeria. The study used capital allowance, investment allowance, and loss relief as measurement variables, with the following model:

$$PERF = \beta 1_{it} + \beta 1\ CAL_{it} + \beta 2\ INVA_{it} + \beta 3\ LRI_{it} + \varepsilon_{it}$$

This study adjusted the model in response to changes in the corporate environment which can be described as follows:

$$ASTO_{it} = \beta_0 + \beta_1 IA_{it} + \beta_2 AA_{it} + \beta_3 BC_{it} + \beta_4 LEV_{it} + \beta_5 GRT_{it} + \mu_{it} \ \ldots\ldots\ldots\ldots\ (i)$$

Where:

ASTO = Assets Turnover $\left(\frac{Sales}{Total\ Assets}\right)$

INVTO = Inventory Turnover $\left(\frac{Cost\ of\ goods\ sold}{Average\ Inventory}\right)$

Initial Allowance (IA) is equal to its natural logarithm.

AA stands for Annual Allowance (annual allowance's natural logarithm).

BC = Balancing Charge (balancing charge's natural logarithm)

LEV = $Leverage$ $\left(\frac{Total\ debt}{Total\ asset}\right)$

GRT = Growth $\left(\frac{Previous\ year\ sales - Current\ year\ sales}{current\ year\ sales}\right)$

$Subscript_i$ = Firms

$Subscript_t$ = The period from 2014 until 2021

$\beta 1, \beta 2$ = Unknown Coefficient of Estimates

μ_{it} = Error term

$\beta 0$ = Parameter to be determined

Apriori Expectation = $\beta 1, \beta 2, \beta 3, \beta 5 < 0; \ \beta 4 > 0$

4. Data Analysis And Discussion Of Findings
4.1 Descriptive Statistics

According to the descriptive information shown in Table 1, asset turnover (ATO), a metric of efficiency used by consumer goods businesses, is on average positive with a value of 0.2276. The company has a fair asset ratio turnover; the fact that the management is able to generate moderate income from its total assets is undeniable. Initial allowance, yearly allowance, and balancing charge mean values are 5.7607, 6.4710, and 0.3514 respectively, with corresponding standard deviations of 1.6192, 1.5849, and 1.4094. The standard deviation figures demonstrate that the sampled firm has benefited from capital allowances with little variation between firms. The tested companies employ more equity than debt to finance their projects, as evidenced by the average leverage of 0.1598, while average growth was 0.2294. The quality of fit and the fact that the data are normally distributed were both demonstrated by the Jaque-Bera analysis of the variables shown in (table 1). Except for the initial (IA) and annual allowance (AA), which are negatively skewed, the majority of the statistics are positively skewed.

Asset turnover (ATO), annual allowance (AA), and balancing charge are mesokurtic, while initial allowance (IA), leverage (LEV), and growth are leptokurtic, according to the variables' kurtosis.

	ATO	IA	AA	BC	LEV	GRT
Mean	0.2276	5.7607	6.4710	0.3514	0.1598	0.2294
Median	0.9021	6.0740	6.5421	0.0000	0.1488	0.0635
Maximum	1.6631	7.9257	7.4499	0.8714	0.5966	7.0500
Minimum	0.3670	0.0000	4.6496	0.0000	0.0080	-0.9330
Std. Dev.	0.2752	1.6192	1.5849	1.4094	0.1167	0.9751
Skewness	0.5209	-2.3172	-0.9570	0.2995	1.5307	5.4008
Kurtosis	3.0151	8.8225	3.0418	3.0959	6.1168	35.261
Jarque-Bera	4.3435	221.51	18.996	15.936	76.350	4629.8
Probability	0.1139	0.3216	0.7005	0.0646	0.0563	0.0000
Sum	90.978	553.03	621.22	33.734	15.342	22.023
Sum Sq. Dev.	7.1985	249.08	32.502	15.927	1.2947	90.339
Observations	96	96	96	96	96	96

Source: Author's Computation, 2023

4.2 Multicollinearity Test of the Variables (Correlation Matrix)

The link between the capital allowance and the efficiency index is seen in Table 2a. With a correlation of 0.0364, the IA and ATO have a positive but weak relationship, meaning that if the initial allowance of the sampled firm increases, the asset turnover will only increase by 3%. With a coefficient of -0.2366, the relationship between AA and ATO is moderately negative and suggests that increasing the annual allowance given to corporations will decrease ATO by 23%. Leverage also had a minimal as well as slight connection with ATO, while BC and GRT had a favorable but insignificant link with ATO. With a coefficient of 0.3787, AA had a moderately favorable relationship with IA, while BC and GRT had weaker but still positive relationships with IA (coefficients of 0.0723 and 0.1050, respectively). The relationship between LEV and IA is unfavorable and negligible. With a coefficient of 0.2971, BC had a moderately favorable relationship with AA, as did LEV and GRT, which had coefficients of 0.0406 and 0.0043, respectively. Table 2a shows that there is no multicollinearity in the relationship that exists between the explanatory variables because it is below the anticipated level of 0.8.

Table 2a   Correlation Matrix

	ATO	IA	AA	BC	LEV	GRT
ATO	1.0000					
IA	0.0364	1.0000				
AA	-0.2356	0.3787	1.0000			
BC	0.1353	0.0723	0.2971	1.0000		
LEV	-0.0522	-0.0561	0.0406	0.1524	1.0000	
GRT	0.1299	0.1050	0.0043	0.0815	-0.0189	1.0000

Source: Author's Computation, 2023

Variance Inflation Factor

The findings of the variance inflation factors-based multicollinearity test were shown in Table 2b. After assessing how closely the independent variables are correlated as displayed in table 2b, As a result of the tolerance values being somewhat outside of the recognized norm, the result is not considered to be statistically significant. According to the evidence provided, there is no multicollinearity issue because the tolerance values are larger than 0.10 and the variables' value ranges are less than 10.. As a result, the study can use the regression coefficient

to estimate how much the independent factors will influence the dependent variables, and the results can be regarded as genuine.

Table 2b   Variance Inflation Factor
Tolerance and VIF value

Variable	VIF	$\frac{1}{VIF}$
IA	1.4421	0.6934
AA	1.3860	0..7215
BC	1.2642	0..7910
LEV	1.2203	0.8194
GRT	2.5478	0.3924

Source: Author's Computation, 2023

4.3 Heteroskedasticity Test

Table 3 displays the results of the heteroskedasticity check for the reliability of the model. The result shows that the model is not affected by the heteroskedasticity problem. For a model to be free from heteroskedasticity issue, the p-value must be higher than 0.05. In this instance, the p-value for the Breusch-Pagan Godfrey test for heteroskedasticity was more than 0.05. As a result, when determining the relationship between the elements, the calculated model is reliable and void of the heteroskedasticity problem.

Table 3 Heteroskedasticity Test: Breusch-Pagan-Godfrey

BP	5.7049	Prob. F(5,204)	0.9630

Source: Author's Computation, 2023

4.4 Serial Correlation Test

Table 4 displays the outcome of the serial correlation evaluation for the model's robustness. The Breusch-Godfrey/Wooldridge check for serial correlation in panel models was employed in the current research to ascertain if autocorrelation was present. A model is said to be unaffected by the serial correlation issue if the test's p-value is higher than 0.05. In this case, the p-value is more than 0.05. As a result, this finding shows that the model has no serial correlation issues.

Table 4 Breusch-Godfrey /Wooldridge test

F-statistic	1.6014	Prob. F(2,305)	0.6737
Chi-squared	4.3681	Prob. Chi-Square(6)	0.1126

Source: Author's Computation, 2023

4.5 Redundant Fixed Effect and Hausman tests

To select amongst pooled, fixed, and random effect as the best suitable statistical panel, redudant fixed and hausman tests were run. As shown in tables 5a and 5b, the results of the tests

favored a fixed effect. The relationship involving capital allowance and efficiency (as determined by asset turnover) of quoted consumer goods firm was interpreted using fixed effect.

Table 5a   Redundant Fixed Effects Tests

Effects Test	Statistic	d.f.	Prob.
Cross-section F	10.937911	(11,79)	0.0000
Cross-section Chi-square	88.843081	11	0.0000

Source: Author's Computation, 2023

Table 5b   Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	7.366586	5	0.0148

Source: Author's Computation, 2023

4.6 Regression of Capital Allowance on Asset Turnover

A p-value of less than 5% was obtained from the results of the redundant fixed and hausman tests, respectively. This suggests that the estimation panel with fixed effect is the best and most appropriate. The R-Squared test results of 0.6576 suggest that there are numerous different kinds of capital allowance that could improve the efficiency of the businesses under review and that the explanatory factor influences the dependent variable to a degree of 66%, with the remainder accounted for by the error term. The F-statistic of 9.4864 and the p-value of less than 1%, which also implies goodness of fit, corroborate the significance of the explanatory factors. There is no autocorrelation issue, as shown by the Durbin Watson of 1.9725. The total outcome demonstrates how capital allowances have a major impact on the operational efficiency of Nigerian listed consumer goods companies. Initial (IA) and annual allowances (AA) showed positive and significant effects on assets turnover (ATO) with (T-Stat= 2.1767, $p<0.01$), and (T-Stat= 2.8091, $p<0.05$), respectively, based on the regression outcomes for each of the explanatory factors. The outcome demonstrates that when businesses have access to capital allowance, their efficiency will increase. When approved, a capital allowance will reduce the tax burden on businesses and hence boost productivity. The results are consistent with those of (Kuria et al. 2017; Nduati et al. 2017; Ahakiri & Oboh 2017; and Agudu & Ohaka 2013) who discovered a favorable and significant impact of capital allowance on industrial enterprises performance in Nigeria and Kenya. Additionally, this suggests that once there is a sizable increase in the capital allowance given to these enterprises, they will have enough money to fund their assets without disposing of their inventory or turning to other sources of funding and will be able to fulfill their daily operating demands. The findings of this study refute those of (Muruny 2021; Ochieng et al. 2020; Nadia 2015), who showed that capital allowance had a detrimental impact on performance

Table 6 Regression Analysis of Capital Allowance and Assets Turnover

Variable	Pooled Effect Coeff.	Pooled Effect T-Stat	Fixed Effect Coeff.	Fixed Effect T-Stat	Random Effect Coeff.	Random Effect T-Stat
C	1.8564	5.9843	1.8054	4.7455	1.7954	5.2065
IA	0.0239	1.3163***	0.0191	2.1767***	0.0193	2.1325**
AA	-0.1675	3.2086	0.1591	2.8091**	0.1573	3.0317**
BC	0.1564	2.2326**	0.0418	0.6054	0.0597	0.8711
LEV	-0.1497	-0.6389	0.2877	1.4470	0.2295	1.1238
GRT	0.0272	0.9747	0.0048	0.3127	0.0067	0.3198
R^2	0.2363		0.6576		0.2265	
Adjusted R^2	0.2183		0.5883		0.2075	
F-Statistics	2.8416		9.4864		2.3754	
F-stat p-val.	0.0198		0.0000		0.0450	
Durbin Watson	1.5311		1.9725		1.7036	

5. Discussion of Findings

Consumer goods companies should make sure to invest the money acquired as a consequence of tax evasion wisely in order to achieve the government's sustainable and developmental goal, given the study's considerable and favorable influence of capital allowance on the asset turnover. Tax incentives allow businesses to assert specific financial savings that might be diversified to improve operational efficacy, which could lead to greater cash flow and profitability metrics in the financial performance. In order to increase operational efficiency, businesses should make sure that these incentives are used as effectively as possible. Even though the capital allowance received by the sampled firm increases firm capacity utilization through good asset management decisions, more may still be done to ensure that assets are properly used and maintained. In order to avoid the loss of cash and the disposal of current asset which would have resulted from the payment of tax dues, businesses could benefit from capital allowance.

6. Conclusion and Recommendations

The study looked at listed manufacturing enterprises in nigeria and their capital allowance and operational performance. the outcome demonstrates that initial and yearly allowance had a favorable and significant impact on the assets turnover of the tested enterprises. the study came to the conclusion that capital allowances have the potential to affect how well nigerian consumer products companies operate. the report thus urges the nigerian government to evaluate the capital allowances now enjoyed by businesses and that greater capital allowances be awarded to more consumer goods businesses in order to increase their operational effectiveness and financial success.

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LEVERAGING INDIGENOUS KNOWLEDGE MANAGEMENT PRACTICE IN EMERGING ECONOMIES: A FAMILY BUSINESS PERSPECTIVE STUDY

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Abstract

This perspective piece responds to the emergence of indigenous knowledge management practice as a significant prospect for family business knowledge transfer and continuity in Africa. Therefore, the purpose of this paper is to provide insights into this developing research area. The research was carried out by reviewing and analyzing an extant body of relevant literature from prior years. With the help of specific keywords, and many database platforms such as Emerald, Science Direct, Springer Nature, Science Direct, Web of Science, Google Scholar, and Ebscohost search for extant literature to support past research findings were identified and reviewed. This paper predicts that indigenous knowledge management practice studies will be relevant and topical for academic research in developing economies over the coming years and also establishes a research agenda for future research in this area. The study recommends the integration of indigenous knowledge practice into family business operations to strengthen family business continuity. This perspective study will provide practitioners with a lens through which to examine indigenous knowledge management practice in the context of their organization in order to create capacities that will lead to improved business performance and continuity.

Introduction

The current concern of family businesses post the novel coronavirus (COVID-19) pandemic in Africa is business continuity and sustainable performance. Knowledge has been a crucial source of competitive advantage for businesses during the last several decades (Belkhodja, 2022; Olubiyi, 2019). Indigenous Knowledge, therefore, presents a significant and important opportunity for family businesses (Ge, & Campopiano, 2021; Bayat, Zargham Boroujeni, khastar, & taghavifard, 2018). However, the business environment on the continent of Africa has been characterized by competition, industry volatility, weak technological advancements, and a lack of knowledge management practices particularly indigenous Knowledge resulting in a threat to the survival of businesses (Lannon, Lyons, & O'Connor, 2023; Olubiyi, 2022a; Olubiyi, 2022b; Setiawan, & Wang, 2023). Family businesses are widely acknowledged to be a key generator of employment and economic development in the majority of countries worldwide. At the same time, family businesses are more vulnerable during times of crisis, which limits their options for response. In such a context, it seems that family business should consider Knowledge and its management even more. Indigenous Knowledge is a significant amount of Knowledge and skills obtained outside of the recognized and formal educational system. It refers to methods of knowing, perceiving, and thinking that have been handed down orally from generation to generation and represent thousands of years of exploration and creativity in many areas of life and business (Belkhodja, 2022). Apart from the foregoing development, this perspective article aims to advance the study of indigenous knowledge management in family business. It will also examine past studies on indigenous knowledge management with emphasis on its impact on family business.

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Theoretical Background and Context of the Study

The age we are leaving is known as the "Knowledge Era." Africa is home to some of the most varied and distinct civilizations on the planet, each with its own set of traditional Knowledge and traditions. For many years, however, this information has been disregarded and underestimated, resulting in a loss of cultural identity and the degradation of traditional customs. Traditional societies in Africa have continued to informally employ indigenous Knowledge to manage micro and small businesses in particular the family businesses. The tide is turning, and indigenous Knowledge is emerging as a strong instrument for unlocking Africa's family businesses. It is possible to generate new prospects for family business continuity and further employment creation by combining indigenous Knowledge with innovation, entrepreneurship, and cultural preservation. In this paper, the researcher reviewed the prior studies on indigenous Knowledge to unlock its contribution to family business continuity. Indigenous Knowledge often spreads between generations via storytelling and observation of diverse group behaviors because it is highly personalized, and community-centric in Africa (Gope, Behera, & Roy, 2017)

Indigenous Knowledge

According to Warren, (1991), Indigenous Knowledge (IK) is local Knowledge that is specific to a particular culture, society, or civilization and its non- formal Knowledge. Indigenous knowledge systems are bodies of information and benefits created by a group of people and passed down through generations (The World Bank, 2022). Indigenous Knowledge is defined as information, skills, and practices handed down from generation to generation within a specific community (Ganesh, *et al*.,2023). The recognition of indigenous knowledge management practices in family business can help to foster social cohesion and promote inclusivity. Indigenous Knowledge is not only a great resource for family businesses it can aid in the resolution of some of Africa's serious issues, such as poverty, and unemployment. Unlocking the potential of indigenous Knowledge is a path to long-term development in Africa (Ogola, 2018). Organizations around the world are increasingly trying to integrate Artificial Intelligence (AI) into their knowledge management systems in order to enhance efficiency, accuracy, and innovation as AI technologies mature, Africa can equally thread this path with indigenous Knowledge to offer practical insights and best practices in business operations.

Theoretical Framework

Knowledge-Base Theory (KBT)

Knowledge is a unique and valuable resource at the core of the company. The knowledge-based theory identifies Knowledge as the most fundamental asset of the firm which all other resources depend on (Hughes, *et al.,* 2021). Grant (1996) defines Knowledge it as "that which is known." The firm's knowledge-based theory (KBT) is an extension of the resource-based theory. The concept that the company is a collection of Knowledge has received a lot of attention from strategy theorists (Hughes, *et al.,* 2021). According to Kogut and Zander (1995), the organization exists to produce, transmit, and turn Knowledge into a competitive advantage. It goes on to say that Knowledge is an intangible diverse and difficult-to-replicate resource made up of various sorts of people at different levels of the organization and that it is comparable to performance outcomes for competitive advantage (Grant, 1996; Nickerson, & Zenger,2004; Wiklund, & Shepherd, 2003). In particular, the knowledge-based theory is adopted as the framework to identify the possible special knowledge feature embedded in family businesses and its transmission advantage.

Literature review and past research on Indigenous Knowledge in Family Business

Indigenous Knowledge is distinct, traditional, and local but it exists within a group of people and is formed in response to people's particular circumstances. Among the prior articles reviewed on the relevance of indigenous Knowledge (IK) in family business, the findings are distinctively intriguing but the insights gained remain fragmented, given that the field of study is relatively new, many studies completed so far within the last decade have merely mixed findings. Despite laudable efforts by authors worldwide, the findings remain equivocal and inconclusive, with a few authors indicating indigenous knowledge management practices give a competitive edge positively (Hadjielias, Christofi, & Tarba, 2021; Lwoga, Ngulube, & Stilwell, 2010; Olubiyi, Egwakhe, & Akinlabi, 2019; Olubiyi, 2019), some reported a contrary that indigenous knowledge management is based on socialization and culture plays a dominant role (Bayat, Zargham Boroujeni, khastar, & taghavifard, 2018; İrkey, & Tüfekci, 2021; Elia, Mutula, & Stilwell, 2014), or zero effect of indigenous knowledge management practice on family business (Prabha, 2021). The fragmentation in the research direction may be attributed to inadequate research(Bayat, Zargham Boroujeni, khastar, & taghavifard, 2018; Ganesh,*et al*.,2023) and a lack of precise comparative empirical data on indigenous knowledge management practice in family business (Ogola, 2018).

Figure 1: Research Systematic Diagram (2024)
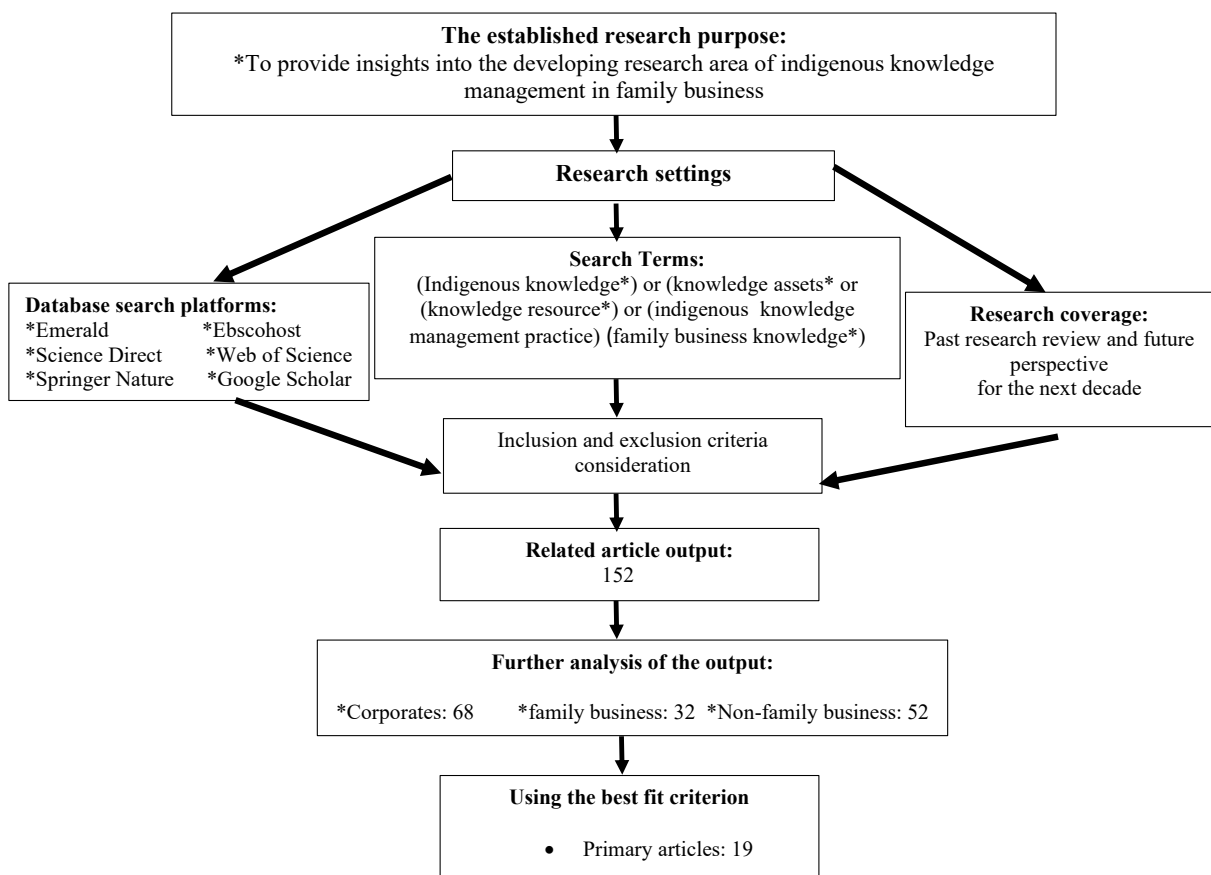
Future Research Perspective on Indigenous Knowledge in Family Business

Indigenous Knowledge is an emerging and evolving area of study. It is evident that knowledge management (KM) concepts may help manage indigenous Knowledge to fulfil current family business demands. Therefore, future research efforts may look at studies that could emphasize new approaches such as the usage of Big Data and KM principles, strategies to manage

Knowledge in family businesses, technology-based approaches, tools applications, and techniques for indigenous knowledge management and content management solutions (Mariani, & Perez Vega, 2020). There is much room for scholars to enhance understanding and uncover indigenous knowledge management practices of discovering, capturing, sharing, preserving, and utilizing the available indigenous Knowledge in the family business. Furthermore, scholars must gain critical views and insights into the possibilities and challenges of indigenous Knowledge in the family business, and research integrating indigenous and exogenous knowledge understanding for improved family business continuity is recommended. Finally, research that can uncover important elements of indigenous Knowledge to help avoid irretrievable knowledge loss, such as the role of Artificial Intelligence (AI), robotics, business analytics, and machine learning (ML) to advance literature (Huang & Rust, 2020; Mariani, & Perez Vega, 2020; Olubiyi, 2022b). Finally, future studies can focus on studying the specificities of family businesses in different countries of Africa and their indigenous knowledge use in comparison with non-African ones to determine the impact of cultural differences.

Conclusion and Recommendation

In literature, very few studies on indigenous knowledge management practice have actually been captured and recorded within the family business, even though Knowledge is a vital business resource (Ratten, *et al.* 2021; Olubiyi, 2019). Evidence indicates that because of the following barriers such as gender dynamics, governance, politics, culture, disputes, religious views, and government regulations, the expansion of indigenous knowledge management practice within the family business has been fragmented (Olubiyi, Egwakhe, & Akinlabi, 2019). The manner in which family businesses acquire and manage their indigenous knowledge assets continues to be a significant problem for family business continuity. More specifically, indigenous Knowledge should not be divorced from the persons or enterprises that own it; rather, efforts should be made to allow family businesses to innovate, generate, and manage their own Knowledge, as well as adapt other knowledge systems for long-term family business sustainability (Olubiyi,2019). It is also important for the government, corporate institutions, and communities to address the following external environment challenges for enhanced KM practices: infrastructure, policy, capacity development, links between research, technology adoption, and culture. The study makes the following general and policy recommendations, to attain the Sustainable Development Goals (SDGs) and the African Agenda 2063, leaders of government in Africa must harness, recognize, and also bring huge awareness to the benefit of indigenous knowledge management practice in the family business and the need to integrate if formally to business practices. Indigenous knowledge practice and formal scientific Knowledge may complement each other to minimize family business susceptibility and reduce poverty. It is also recommended that academic institutions, the African governments, the private sector practitioners, and other stakeholders at all levels should enter into partnerships to ensure the preservation of indigenous Knowledge in Africa.

Potential Conflicts of Interest

The author certifies that there are no conflicts of interest in the publishing of this manuscript.

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DIGITALIZATION OF LOCAL PUBLIC ADMINISTRATION

Isabela Stancea[1]

Abstract

To ensure the fastest and most efficient implementation of the digitization process a public administration in Romania, by Government Decision no. 89/2020, the Authority for the Digitization of Romania was organized and operates.

The Authority for the Digitization of Romania[2], (ADR), is organized and functions as a structure with legal personality within the working apparatus of the Government and under the coordination of the Prime Minister, having the role of realizing and coordinating the implementation of strategies and public policies in the field of digital transformation and the information society.

Keywords: *digitization, information technology, public administration.*

Jel Classification K0, K1

Introduction

ADR exercises, in its field of competence, the following functions:

a) of strategy, through which it strategically plans and ensures the development and implementation of policies in the field of digital transformation and the information society;

b) regulatory, by which it regulates the participation in the development of the normative and institutional framework in the field of digital transformation and the information society, including regarding the interoperability of the IT systems of public institutions;

c) of approval;

d) of representation, by which it ensures, on behalf of the Government, representation in national, regional, European and international bodies and organizations, as a state authority, for its field of activity, in accordance with the normative framework in force;

e) by state authority, which ensures the follow-up and control of compliance with the regulations in its field of competence;

f) administration and management;

g) to promote, coordinate, monitor, control and evaluate the implementation of policies in its field of competence, as well as the national interoperability framework;

h) communication, through which communication is ensured both with the other structures of the public sector, as well as with the private sector and civil society;

i) implementation and management of projects financed from European funds, as well as programs and projects financed from national funds and other legally constituted sources;

j) of an intermediate body, which ensures the implementation of the measures from the Sectoral Operational Program for "Increasing Economic Competitiveness" and the "Competitiveness" Operational Program under the conditions of the delegation agreement concluded with the management authority according to art. 15 of Government Decision no. 398/2015 for establishing the institutional framework for coordination and management of European structural and investment funds and for ensuring the continuity of the institutional framework for coordination and management of structural instruments 2007-2013, with subsequent amendments and additions, including regarding other programs with European funding[3].

ADR has the following objectives:

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[2] Decision no. 89 of January 28, 2020 regarding the organization and functioning of the Authority for the Digitization of Romania Published in the OFFICIAL GAZETTE no. 113 of February 13, 2020.
[3] Decision no. 89 of January 28, 2020 regarding the organization and functioning of the Authority for the Digitization of Romania Published in the OFFICIAL GAZETTE no. 113 of February 13, 2020.

a) contributes to the digital transformation of the Romanian economy and society; b) achieves electronic government at the level of public administration in Romania, by operationalizing the standardization and technical and semantic interoperability of IT systems in the central public administration and implementing the principles of the Tallinn Ministerial Declaration on electronic government from 2017;

c) contributes to the fulfillment of the objectives for Romania of the financial assistance programs of the European Union in its field of competence[1].

In the matter of digitization, the legislative field is vast, but among the more representative normative acts, we can mention:

- Law 242 of 2022 regarding the exchange of data between IT systems and the creation of the National Interoperability Platform, published in the OFFICIAL GAZETTE NO. 752 of July 27, 2022;

- Law 455 of 2001 on electronic signature;

- GEO 89 of 2022 regarding the establishment, administration and development of infrastructures and cloud IT services used by public authorities and institutions;

- GEO 38 of 2020 regarding the use of documents in electronic form at the level of the authorities and public institutions;

- GEO 30 of 2022 regarding some measures to strengthen institutional capacity and administrative measures of the Ministry of Research, Innovation and Digitization and the Authority for Digitization of Romania necessary to implement component C7 – Digital transformation from the National Recovery and Resilience Plan, as well as other categories of measures.

As for Law 242 of 2022 regarding the exchange of data between IT systems and the creation of the National Interoperability Platform, its objective is to increase the quality of public services by facilitating the exchange of data between IT systems, reducing the bureaucratic and administrative burdens of natural and legal persons and increasing transparency on the use of data by public authorities and institutions and applies through voluntary participation, based on a data exchange contract, to legal entities under private law, respectively to individuals who exercise regulated liberal professions, to those who own computer systems and have data that present interest for public authorities and institutions[2].

The facilities and novelties that this law brings are[3]:

a) facilitating the provision of quality public services, permanently available, designed in accordance with the needs of the beneficiaries of these services;

b) promoting the widespread use of information and communication technology (ICT) within the public administration;

c) increasing the degree of traceability and transparency of the administrative act, by offering the data holder the possibility of knowing the access and processing of his personal data;

d) increasing the efficiency and effectiveness of the administrative act, by increasing the degree of interconnection of the IT systems of the authorities and public institutions and facilitating the exchange of data between public institutions;

e) the implementation of the "only once" principle, as described in Regulation (EU) 2018/1.724 of the European Parliament and of the Council of October 2, 2018 regarding the establishment of a single digital portal (gateway) to provide access to information, at procedures and assistance and problem-solving services and amendment of Regulation (EU) no. 1.024/2012, for the elimination of the exchange of data in written format and the bureaucracy;

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[1] Decision no. 89 of January 28, 2020 regarding the organization and functioning of the Authority for the Digitization of Romania Published in the OFFICIAL GAZETTE no. 113 of February 13, 2020.

[2] Art. 1 of Law 242 of 2022 regarding the exchange of data between IT systems and the creation of the National Interoperability Platform, published in the OFFICIAL GAZETTE NO. 752 of July 27, 2022.

[3] Art. 2 of Law 242 of 2022 regarding the exchange of data between IT systems and the creation of the National Interoperability Platform, published in the OFFICIAL GAZETTE NO. 752 of July 27, 2022.

f) increasing the confidence of the public and the business environment in the use of information and communication technology;

g) promoting interoperability in the central public administration, between the local administration and the central administration and between the local public administrations;

h) facilitating the access of private institutions to the data held by public institutions and vice versa;

i) ensuring the security and confidentiality of data exchanges;

j) creation and annual updating of a permanent register of IT applications used by public authorities and institutions;

k) identification and definition of primary data providers;

l) facilitating integration into the single European digital market;

m) ensuring that the implementation of functionalities involves the alignment of national identification and authorization infrastructures with the member states of the European Union in a transnational scheme, in accordance with the rules established in Regulation (EU) no. 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions on the internal market and repealing Directive 1999/93/EC.

The advantages of digitization of local public administration

In public administration, digitization generates a multitude of advantages that should be found in the institutional strategic approach and promoted by its leaders.

On the one hand, digitization makes institutional activity more efficient, leading to the efficient use of resources, cost reduction and the institution's contribution to technological and socio-economic progress. On the other hand, digitization generates new opportunities by activating institutional capacities and capabilities that can deliver innovative services and products to citizens and public administration stakeholders.

The digitization of local public administration involves the use of information and communication technologies by the public sector with the aim of improving the provision of information and services, encouraging citizens' participation in the decision-making process and the accountability of the institutional partner in a transparent and efficient manner.

The objectives of a digitization project, depending on existing needs and available resources, may be similar to the following:

- Improving access to information and services offered by public administration authorities through fast and efficient service;

- Reorganization and restructuring of administrative processes or even elimination of some processes;

- Improving the exchange of information and services between central and subordinate public authorities;

- Improving the quality of public services by the central public administration;

- Promoting the responsibility, efficiency and transparency of the public services offered.

The digital transformation of public administrations is a way to provide faster, cheaper and better services. E-government leads to improved efficiency and increases ease of use and accessibility. It also contributes to the promotion of ethical practices and reduces the risks of corruption.

E-government has a strong inter-ministerial component because it requires a general simplification of administrative processes at the level of all services, in order to respond to the needs of citizens. Implementing robust e-government is a central element of e-government development. After the establishment of decision-making and oversight bodies, EU Member States can define their necessary strategies, architectures and frameworks and proceed with their implementation.

The current global economic-social context shows us more and more the benefits of technology and the digitization of public services, and the development priorities of all states in the near future should also include this essential aspect. For Romania, the digitization of public services proved extremely useful during the state of emergency, and the expansion of this practice at the level of institutions has already become a priority on Romania's strategic development agenda.

Digitization is a tool of the future that offers efficiency and predictability, including in the case of Romania.

Digitization involves reducing the number of interactions with officials from public institutions and optimizing the citizen's interaction with representatives of public institutions.

The digitization of public institutions brings with it an increased level of efficiency and transparency and should be one of the development pillars of any intelligent community. Through digitization, the entire activity of public institutions is made more efficient, on all three levels: internally, intra-institutionally and externally, in the relationship with citizens and the rest of the institutions.

So, digitization represents the total integration of processes and workflows in the electronic environment, so that all routine or repetitive tasks (from filling in forms and registering requests to confirming payments) are done automatically or semi-automated by the computer.

Some of the benefits of the digitization process, in addition to the reduction of human interaction, which we have already mentioned:

- Providing fast and quality services to citizens; the possibility of supervision, improvement and streamlining of work processes, without additional effort.

- Notifications in real time regarding deadlines that must be respected according to public administration laws.

- Eliminating the risks of loss or destruction of documents by implementing electronic archiving processes.

Cartographic digitization of objectives of strategic interest (transport and access infrastructure, utilities, real estate and territorial assets).

There are already many UATs that have successfully transitioned to the digitization of their activity and work processes. The beneficial results of these approaches are very clear in practice and have already been studied, and based on them, certain conclusions can be drawn regarding the degree of improvement of services.

For the town halls that have already started digitizing a part, the minimum results of this process fall within the following parameters:

- Possibility of real-time verification of activities and service statuses - 100% improvement.

- The capacity to monitor the activity of the staff in the town hall - minimum 90% improvement.

- Eliminating the risks of document loss or destruction by implementing electronic archiving processes - minimum 92% improvement.

-Facilitating direct communication between citizens and specialized departments, respectively between local public administration departments - minimum 82% improvement.

It is a strategic objective that the digital transformation strategies developed and implemented in the public sector are convergent with the policies, programs and digitalization strategy of the European Commission. The first level of convergence is with the Digital Single Market. The Digital Single Market represents the strategic approach of the European Commission for the access of individuals and businesses to digital online environments. In essence, the Digital Single Market means ensuring the free movement of people, services and capital, accessing and using online services under conditions of fair competition. The three basic pillars of the Digital Single Market are access, the digital environment, the economy and society.

A strategic objective of the European Commission, which significantly influences the degree of adoption and use of digital public services, is to facilitate citizens' access to digital environments and services. The European Commission is taking steps to increase the number of citizens with access to digital media, to develop digitization skills, but also to exploit to a greater extent the strategic potential of institutions for digital transformation. To be successfully implemented, the process of change and transformation must be accompanied by an extensive process of developing digital skills and abilities in public sector institutions.

The European Commission promotes various initiatives with the main aim of developing digital skills and competences for the workforce, citizens and modernizing education at the level of the European Union. The digitization of public services and their migration exclusively to digital environments requires, as a precondition, the development of digital skills so that citizens and stakeholders of public institutions can access and use these services. The digital economy and society are strategic objectives of the European Commission, as they represent preconditions for a context conducive to innovation, growth and competitiveness.

From 2021, the digital skills strategy has a new dimension and orientation. Given that most lucrative fields and interaction with digital environments require digital skills, the European Commission will implement the new Digital Europe Programme. This program is essential for the development of digital skills, but, above all, for increasing the degree of capitalization of the institutional strategic potential. To develop these digital skills, the European Commission established the coalition for digital skills and jobs. This coalition brings together member countries, companies, social partners, NGOs and educational institutions to train digital skills in Europe.

The Coalition for Digital Skills and Jobs promotes excellence by supporting digital education initiatives, and at the European Union level there is a repository of digital skills training projects that can be applied at any time in any country. As a strategic objective, the coalition considers digital skills for: citizens, workforce, professionals in the ICT field and in the educational field.

The objectives of digitization to increase the efficiency of public administration

The trust that citizens have in public administration is particularly important, as it legitimizes and provides stability. If the trust in public institutions is decreasing, then the acceptance of public decisions will be under the sign of distrust. The more citizens trust the integrity of the political, administrative and legal processes, the more involved and open they will be to accept the results of the administrative process. Increasing citizens' trust in the administrative process must be a basic concern of the leaders who coordinate the governance process of the public administration.

There are two mechanisms that can be used to generate and maintain trust in public administration. On the one hand, trust in the administrative process is created and maintained through an iterative process that involves repeated exchanges and interactions between citizens and local public administration. For example, the positive experiences of citizens in the relationship with the public administration are an effect of the openness, accessibility and responsiveness of the public administration.

In general, any type of interaction with public administration will influence citizens' perception of the quality of public management, trust, competence, benevolence, honesty and predictability of public institutions. On the other hand, trust in institutions is a general judgment that often depends on the image or reputation of the institutions, and these are not always based on direct interaction with the citizen. Through information technology and digitization, public administration can be convergent with society's expectations, and this process is based on mutual trust.

The strategic objective of the digitization of public administration is to transform the relationship between public administration and society so that citizens perceive the administrative act as responsive, accessible, transparent, responsible, participatory, efficient, effective and adapted to the digital paradigm in which we find ourselves. The digital transformation of public administration also proposes other secondary strategic objectives. On the one hand, information technology represents the support for public and administrative decisions and for the direct promotion of participatory e-democracy. This perspective has the role of revitalizing trust in the administrative process through transparency, responsibility and the co-creation of contexts in which citizens and stakeholders will find themselves. On the other hand, from the perspective of public service innovation, digital administration is closely related to the digitization and modernization of public services.

The digitization process must be accompanied and favored by an organizational configuration characterized by flexibility, agility and decentralization, but also by an institutional culture that facilitates and enhances all of this. A digitization process that follows a decentralized organizational structure is easier to implement. Decentralized, flattened structures also facilitate governance, as tasks are accompanied by accountability, ownership, and resource allocation. Again, there is an inverse effect, as digitization leads to the decentralization of organizational structures, but the interaction within the institutional or organizational structure follows the process and not the hierarchical structure. The most important characteristic of a digital organization is flexibility; a flexible organizational structure encourages and sustains change and its transformative effects, giving the institution agility.

Conclusions

The digital transformation of public institutions has not been an option for a long time, but an obligation and necessity. We are on a one-way street; the administrative performance of any public institution is currently and will continue to be judged also according to the level of digitization.

According to recent data, Romania registers the lowest score in terms of the digitization of public services. It should be mentioned that Romania registered a decrease if we consider the top from 2015, when it occupied a more honorable position. This fact highlights the fact that Romania has not properly capitalized, from a strategic point of view, on its digitization potential.

However, from the point of view of the number of users of online services, Romania is above the European average, being included in the group of countries where the number of citizens using digital services has increased to send forms to the authorities in which they address various requests or provide evidence of certain activities .

The willingness of citizens to use online services is an encouraging fact, and this trend represents an additional reason for public administration to migrate citizen services to the digital environment. This reorientation towards digital services must be complementary with other actions. An example of this is the availability of a wide variety of information about citizens, and this information to be retrieved automatically according to their profile. Compared to other countries in Europe, Romania is in last place in terms of automatic retrieval of information from online portals and forms. This fact is caused by a multitude of factors, the most important being the interconnection of platforms and open data.

Although Romania is one of the member countries of the European Union with the best communications infrastructure, the citizens do not have the necessary skills to exploit these resources on a larger scale. In terms of advanced digital skills, specific to professionals working in the IT&C field, Romania is close to the European average. From the point of view of exploiting the digitization potential, courses for the use of Internet applications, but also of applications specific to a digitization portfolio, are a key element. Digital transformation presupposes, first of all, the existence of fundamental and transversal skills both in IT&C, and skills specific to an organizational culture oriented towards change through digitalization.

Access to digital services largely depends on the available technical infrastructure, communication and telecommunication networks, but above all, how citizens and institutions access digital services online via the Internet. Romania has an ultra-fast communications network, comparable to other countries in the European Union. Also, mobile communications and their availability offer citizens access to digital public services regardless of location, increasing the possibility of accessing them through mobile devices.

In Romania, the increase in the availability of communication services can be observed, and the increase in the share of mobile communication services increases Romania's convergence with the trends of the leading countries in the European Union. We can conclude that in Romania the communication infrastructure is favorable to facilitate citizens' access to digital public services. The global Internet has become the medium that mediates the digital interaction between citizens and public administration. The degree of use of the network, the level of activities carried out in the online environment as well as the level of transactions are important indicators for the public administration in order to digitize services for citizens; however, Romania ranks last in terms of the level of use of the Internet and the number of transactions carried out online.

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HEALTH SYSTEM EFFICIENCY AND MANAGEMENT OF PUBLIC INSTITUTIONS: CASE STUDY - LIVER ENCEPHALOPATHY ANALYSIS

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Abstract

The article examines how the health system and management of public institutions can influence effectiveness in the treatment of hepatic encephalopathy (EH), a serious central nervous system disorder that occurs in the context of advanced liver disease. The study focuses on identifying factors that may improve or hinder the effectiveness of EH treatment, highlighting the implications of these findings for health system management.

By analyzing data and literature, the authors identify several factors that influence the effectiveness of EH treatment, including access to medical services, availability of medications, and financial resources of the medical institutions involved. Institutional management issues such as resource efficiency and coordination between different levels of the health system are also examined.

The study suggests that an integrated and coordinated approach to EH management and treatment could significantly improve outcomes for patients. It also stresses the importance of implementing public policies that support access to quality healthcare and ensure the availability of resources needed for appropriate EH treatment.

The article stresses the need for a comprehensive approach to EH management, taking into account medical, institutional and public policy aspects, to ensure effective and affordable care for patients.

Keywords: efficiency, costs, effectiveness, management of public institutions

Introduction

The efficiency of the health system and the management of public institutions are fundamental aspects in ensuring quality medical care and optimal use of available resources. In a context where the rising costs of healthcare are becoming more pressing, identifying and evaluating the effectiveness of treatments and the health system is becoming a priority for policymakers and healthcare professionals.

An area particularly relevant for assessing the effectiveness of the healthcare system is the management and treatment of hepatic encephalopathy (EH). Hepatic encephalopathy is a frequent and severe complication of chronic liver disease and is associated with cognitive dysfunction and behavioral changes. Proper EH management requires an integrated and coordinated approach, including early diagnosis, treatment of triggers, and specific therapeutic interventions.

Through this analysis, we aim to analyze the efficiency of the health system and the management of public institutions in the treatment of hepatic encephalopathy. We will examine various aspects of the health system relevant to EH management, including access to healthcare, quality of care, effectiveness of treatments and associated costs.

Through detailed evaluation and analysis of these aspects, we aim to identify challenges and opportunities in EH management and formulate recommendations for improving the efficiency of the health system in managing this complex condition. The results of this study

can help optimize decision-making processes and improve the quality of care of patients with hepatic encephalopathy.

Literature review

Health system efficiency is in the spotlight of global decision-makers in light of rising spending (World Health Organization. The World Health Report 2000.). It involves efficient management of available resources and reduction of waste, which is a sign of good management (Cylus J, Papanicolas I, Smith PC., 2016). It also promotes the involvement of governments and citizens in universal health insurance (UHC) (Cylus J, Papanicolas I, Smith PC., 2016). Improving efficiency is considered an essential objective (World Health Organization. 2007) and an important component of health financing policies, contributing to achieving the objectives of the system (Kutzin J., 2008). It is also a crucial factor in setting priorities (Palmer S, Torgerson DJ. 1999;318(7191):1136).

Given the limitations of health resources, it is vital that both high- and low- and middle-income countries direct their efforts towards resource efficiency to achieve health system goals and promote the long-term financial sustainability of UHC (Cylus J, Papanicolas I, Smith PC., 2016.).

The concept of efficiency refers to the degree to which the objectives of the system are met in view of the resources invested. There are two types of efficiency: technical and allocative efficiency (Farrell MJ. The measurement of productive efficiency. 1957). Technical efficiency is achieved when resources are used in such a way as to maximise outputs for a given level of inputs or minimise inputs for a given level of outputs (Coelli TJ, et al. , 2005). Allocative efficiency is achieved when resources are allocated in such a way as to maximise outputs for a given input cost or minimise input costs for a given level of outputs. These two types of efficiency together define the "overall" efficiency of a system. Productivity, although related, is a different concept, referring to the ratio of outputs to inputs in a production system (Hollingsworth B, Peacock S. , 2008).

It has been found that between 20% and 40% of global health system spending is wasted due to inefficiency, a phenomenon that consumes resources and hinders progress towards UHC (World Health Organization, 2010.). Although generating additional funding for health is crucial, improving the use of existing resources in the health sector is considered by some to be one of the promising strategies to expand the fiscal space for health (Powell-Jackson, T., K. Hanson, and D. McIntyre, 2012). This is crucial for both low- and middle-income countries, which face tight fiscal constraints due to reduced donor support, and high-income countries, in a context of increasing resource requirements in the health sector due to an ageing population.

Therefore, efficiency assessment is an essential component of health system performance assessment. This involves identifying the boundaries of the entity being controlled, ranging from micro levels (provider-patient level) to mesoeconomic (organisational) levels and up to macro levels (national or global) of the health system (Karpa W, Leśniowska J., 2014; (8): 159–67). The choice of level of analysis shall reflect the entity taking responsibility for the performance identified by the analysis. Although evaluation of effectiveness in healthcare is increasingly common, most studies focus on efficiency at the mesoeconomic level, involving health organizations (such as hospitals and health centers), with fewer investigations at the national or subnational level.

Understanding efficiency within the healthcare system and the relationship between inputs, outputs/outcomes and factors determining efficiency can influence policy formulation and managerial decision-making (Allin S, Grignon M, Wang L., 2016;11(1):39–65).

Various elements are included within the category of health system entries, along with examples and units of measurement relevant to each:

1. **Basic elements of health systems:**

   - **Monetary value of economic results:** This can be expressed as Gross Domestic Product (GDP) per capita, measured in annual GDP.

   - **Financial value of resources available in the health sector:** Includes total health expenditure per capita (public and private) as well as total health expenditure reported as a percentage of GDP. It may also include per capita government spending on health.

2. **Human resources for health:**

   - This includes the number of doctors, nurses, pharmacists and other health workers relative to the number of inhabitants. Examples of units of measurement include the density of doctors, the number of nurses per capita and the total number of health workers per 1000 inhabitants.

3. **Medical physical infrastructure:**

   - This includes the number of hospital beds, medical imaging units (such as MRI and CT scanners) and other similar facilities, expressed in terms of population or other relevant facilities.

4. **Medical products:**

   - It concerns prescription drugs and other pharmaceutical products, as well as the number of pharmaceutical patents.

5. **Sanitary facilities:**

   - Includes the number and density of primary health care facilities, long-term care facilities and other similar facilities, measured by the number of inhabitants or other relevant facilities.

6. **Social determinants of health:**

   - This category includes social and behavioural factors that influence population health, such as education, and health risk factors such as tobacco and alcohol use. The measures include primary education, tobacco and alcohol consumption per adult person, expressed in litres of pure alcohol per year and other relevant units.

The selection process of inputs used in the efficiency assessment was based on several considerations. These included, inter alia, previous records on the use of these variables in efficiency studies, availability of relevant data, positive relationship to results, frequency of reporting data on the variable, direct relevance of input in health generation, possibility to compare efficiency between countries or standardise input to allow comparisons. (by Cos PH, Moral-Benito E., 2014;14(1):69–93) It was also considered whether the input variable could be measured consistently across all assessed units and whether the influence of the variable on efficiency was under the control of the health system. Decisions were also guided by economic theory, literature and consultation of experts and stakeholders in the field.

The results used in the literature were divided into three main categories: intermediate health outcomes, single health outcomes or their composite indices. Although there is a general

consensus that population health is the most important outcome of the health system, its measurement has remained problematic due to the unclear distinction between output and outcome.

For measuring other indicators identified in the literature, different categories of variables are presented together with specific examples and units of measurement relevant to each:

1. **Population/demographic characteristics:**

   - It includes population size and density, population growth rate and rural-urban distribution, as measured by the proportion of urban and rural population as a percentage of the total population, as well as age structure, expressed by the proportion of population in different age groups.

2. **Socio-economic characteristics of the population:**

   - This category includes variables related to employment status, income distribution and educational attainment of the population, measured by various indicators such as unemployment rate, Gini coefficient, per capita income and level of primary school enrolment.

3. **Access to basic sanitary facilities:**

   - It includes variables related to access to essential sanitation facilities, such as individual latrines, clean water and sanitation, expressed by the proportion of the population covered by these facilities and the number of water sanitation facilities.

4. **Features of the health system:**

   - This category includes variables related to health expenditure, access to healthcare providers, use of and distribution of health services, as well as regulation of healthcare users and regulation of insurers and providers.

5. **Political and governance environment:**

   - It includes variables assessing political stability, degree of decentralisation and macroeconomic characteristics, such as income levels at country/subnational level, expressed in terms of median income and gross domestic product.

6. **Health and well-being:**

   - This category includes variables related to lifestyle risk factors, such as tobacco and alcohol use, as well as other health-related aspects such as HIV prevalence rate and happiness index.

   Research methodology
1. **Defining the objectives of the study:**

   - Evaluation of the effectiveness of the health system in the diagnosis, treatment and management of hepatic encephalopathy.

   - Analysis of how public institutions manage and respond to the needs of patients with hepatic encephalopathy.

- Identification of gaps and strengths in the management of hepatic encephalopathy from the perspective of the health system and public institutions.

2. **Study population selection:**

Patient selection:
- 36 patients with a diagnosis of hepatic encephalopathy who are being treated or have been treated within the public health system will be recruited. These patients will be identified from the database of the public hospital or its relevant wards.

Study period:
- The duration of the study will be one year, starting from the date of recruitment of the first patient.

Data collection:
a. Patient evaluation:
- Demographic data will be collected, including age, gender, medical history, and history of previous treatments for hepatic encephalopathy.

- The severity of hepatic encephalopathy will be monitored using standardized scales such as West Haven Criteria or other cognitive status assessment tools.

- The history of previous hospitalizations and previous treatment for hepatic encephalopathy will be recorded.

b. Interviews with medical staff and administrators:
- Interviews will be organized with medical staff and administrators from public institutions involved in the management and treatment of hepatic encephalopathy.

- The interviews will be structured to assess treatment protocols, access to health services, available resources, and perceptions of the health system's effectiveness in managing hepatic encephalopathy.

Evaluation and follow-up of patients:
- Patients should be monitored regularly throughout the study, with regular assessments of their clinical status and the course of hepatic encephalopathy.

- Any adverse events or complications related to the treatment of hepatic encephalopathy will be recorded.

Data analysis:
- The data collected will be statistically analyzed to evaluate the effectiveness of treatment and institutional management in the management of hepatic encephalopathy in patients within the public health system.

- Appropriate statistical methods shall be used to identify relevant correlations and trends.

Interpretation and reporting of results:

- The results of the study will be interpreted and reported in a final report, which will include conclusions, recommendations and perspectives for improving the management and treatment of hepatic encephalopathy within the public health system.

This research methodology will provide a detailed understanding of how hepatic encephalopathy is managed at an institutional level in a public hospital and will provide relevant data to improve the quality of care of patients with this condition.

3. **Data collection methods:**

- Analysis of existing data from medical databases and reports of public institutions on hepatic encephalopathy, including information on diagnosis, treatment and patient outcomes.

- Interviews with medical staff and administrators in public institutions to gain insights and opinions on the effectiveness of the health system and institutional management in treating hepatic encephalopathy.

4. **Data analysis:**

- Analysis of collected data to assess the effectiveness of early diagnosis, access to treatment, patient recovery rate and ongoing management of hepatic encephalopathy.

- Comparison of treatment practices and protocols between different public institutions to identify best practices and possible deficiencies.

5. **Evaluation of results:**

- Evaluation of the efficiency of the health system and institutional management in terms of reducing the incidence and severity of hepatic encephalopathy, improving patients' quality of life and reducing hospitalizations and associated costs.

6. **Interpretation and reporting of results:**

- Interpret study results to highlight strengths and weaknesses of the health system and institutional management in managing hepatic encephalopathy.

- Reporting conclusions and recommendations for improving the efficiency of the health system and institutional management in the treatment of hepatic encephalopathy.

Not commonly used

TREATMENT	TREATMENT CATEGORY DRUGS	Average cost / hospitalization

Intestinal flora modifying agents	Non-absorbable disaccharides	85 lei
	Antibiotics: Rifaximin, Neomycin, vancomycin and metronidazole	215 lei
	probiotic	80 lei
	Faecal microbiota transplantation	It is not administered routinely
Dietetics	Zinc	It is not administered routinely
	Aminoacizi cu catenă ramificată	55
	Acetil-L-carnitină	190 lei
Agents acting on the central nervous system	Flumazenil	It is not administered routinely
	L-ornithine L-aspartate	92 lei
Ammonia scavengers	Ornithine phenylacetate, phenylbutyrate, and sodium benzoate	250 lei
	Spherical adsorbent with carbon microspheres (AST-120)	220 lei
	Polyethylene glycol 3350-electrolyte solution	300 lei
	L-ornithine L-aspartate	75 lei
	Molecular absorbent recirculation system	Not currently used

Nonabsorbable disaccharides, lactulose and lactitol are considered the main therapeutic agents in the treatment of hepatic encephalopathy. Studies have shown that they significantly improve the quality of life of patients with minimal hepatic encephalopathy, with lactitol showing fewer side effects compared to lactulose. Lactulose, or lactitol in certain countries, is often used as the first-line treatment for episodic hepatic encephalopathy, with an initial dose of 30–45 ml (20–30 g) of lactulose syrup every 1–2 hours, up to at least two soft bowel movements per day. Subsequently, the dose is adjusted to two to four times a day to maintain two to three bowel movements per day. An approximately equivalent dose of lactitol is 67-100 g of lactitol powder diluted in 100 ml of water. If patients cannot take these drugs orally, they can be administered in the form of enemas, usually 1-3 liters of a 20% solution of lactulose or lactitol.

Drugs with antibacterial effect, targeting urase-producing intestinal bacteria, have the ability to reduce ammonia levels. These drugs include rifaximin, neomycin, vancomycin and metronidazole.

Rifaximin: Rifaximin is characterized by low systemic absorption, extensive antimicrobial activity and a low side effect profile. The usual dose is 550 mg taken orally twice a day or 400 mg three times a day. It is often used in combination with lactulose for the treatment of acute hepatic encephalopathy and prevention of recurrence if lactulose alone is not

effective. Studies showed that combining rifaximin with lactulose significantly increased clinical efficacy and reduced mortality in patients with hepatic encephalopathy.

Neomycin: It works by inhibiting glutaminase, thereby reducing ammonia production from glutamine in the intestinal mucosa. Although it has been widely used in the past for the treatment of hepatic encephalopathy, neomycin carries significant risks of side effects, including ototoxicity, nephrotoxicity, and enterocolitis. It is recommended as an alternative in the treatment of hepatic encephalopathy.

Vancomycin and metronidazole: These drugs have also been studied both individually and in combination with lactulose. Metronidazole can be as effective as neomycin, but serious side effects, such as neurotoxicity for metronidazole and bacterial resistance for vancomycin, limit their use. Thus, long-term treatment with these drugs is not recommended.

Probiotics are composed of microorganisms that alter the intestinal flora, creating an acid-resistant environment and unfavorable to ammonia production and absorption. Prebiotics, such as lactulose and fermentable fiber, stimulate the growth of beneficial gut flora. Among the most beneficial species of intestinal bacteria in treating hepatic encephalopathy are lactobacilli and bifidobacteria. Most commercial probiotic products come from dietary sources, especially fermented milk products.

Compared to placebo, probiotics likely contribute to recovery and may reduce the recurrence of episodic hepatic encephalopathy, improving quality of life and lowering plasma ammonia concentrations. However, probiotics did not demonstrate significant effects on mortality or clinical outcomes when compared to lactulose. Although the groups treated with probiotics had lower levels of ammonia in their blood compared to the placebo or non-intervention groups, they did not differ significantly from the groups treated with lactulose. Further studies are needed to clarify the role of probiotics in the treatment or prevention of hepatic encephalopathy before they are regularly recommended.

Fecal microbiota transplantation is a procedure in which healthy gut microbiota, usually taken from a healthy donor, is transferred to a patient's gut. This technique is aimed at restoring the balance of intestinal flora and improving the digestive health of the patient.

In hepatic encephalopathy, it is believed that imbalance of intestinal flora, or dysbiosis, plays an important role in the pathogenesis of the disease. This dysfunction of the intestinal flora can lead to the accumulation of toxins in the intestine and the production of harmful chemicals, including ammonia, which can reach the bloodstream and affect brain function, contributing to the characteristic symptoms of hepatic encephalopathy.

Through fecal microbiota transplantation, the aim is to replace the affected intestinal flora with the healthy one taken from a donor. This approach can lead to restoring a healthy balance in the patient's intestinal flora, thus reducing the production of toxins and ammonia in the intestine and, implicitly, relieving the symptoms of hepatic encephalopathy.

Preliminary studies on fecal microbiota transplantation in the treatment of hepatic encephalopathy have shown promising results, including improving symptoms and improving patients' quality of life. However, further research is needed to confirm the efficacy and safety of this intervention, as well as to determine optimal donor and patient selection criteria.

Zinc: Zinc deficiency is common among patients with cirrhosis of the liver, and low serum zinc levels can be a trigger for hepatic encephalopathy. Zinc is crucial in ammonia detoxification because it contributes to the activity of muscle glutamine synthase, an essential enzyme in this process.

Branched-chain amino acids (BCAAs): Patients with cirrhosis have an imbalance between aromatic (AAA) and branched-chain (BCAA) amino acids, characterized by increased serum AAA concentrations and decreased BCAAs. These changes can lead to the accumulation of monoamine neurotransmitter precursors in the brain, contributing to altered neuronal excitability and hepatic encephalopathy.

Acetyl-L-Carnitine (ALC): Carnitine is a naturally occurring compound in the body, consisting mainly of adding an acetyl group to carnitine. ALC, a form of carnitine, is easily absorbed from the intestine and can effectively cross the blood-brain barrier. ALC is thought to have neuroprotective properties, being a carrier for short-chain fatty acids and having the potential to protect neurons.

Flumazenil: Flumazenil is a short-acting benzodiazepine receptor antagonist that has been studied in several researches for its potential benefit in the treatment of hepatic encephalopathy. It works by antagonizing and exerting a negative allosteric modulatory effect on central benzodiazepine receptors.

Dopamine agonists: Bromocriptine, a dopamine receptor agonist, has been investigated as a possible treatment for hepatic encephalopathy. In one study, 6 patients with cirrhosis and severe hepatic encephalopathy, who did not respond to standard therapy, received oral bromocriptine in doses up to 15 mg per day.

L-ornithine L-aspartate (LOLA): LOLA is a combination of two endogenous amino acids. In patients with cirrhosis of the liver, the activities of carbamoyl phosphate synthase and glutamine synthase are impaired. Ornithine acts on both enzymes, contributing to the elimination of ammonia by stimulating glutamine synthesis. This process facilitates the reduction of ammonia levels through urea synthesis by residual periportal hepatocytes and ammonia removal through glutamine synthesis in skeletal muscle.

Compared to other low-ammonia agents, LOLA is observed to cause decreases in serum ammonia levels compared to lactulose and improvement in psychometric test scores compared to rifaximin and probiotics.

Treatment with LOLA is considered beneficial compared to placebo, but studies comparing its effectiveness with lactulose are needed. Overall, LOLA is rated as safe, effective, and well-tolerated, and is often given to patients with hepatic encephalopathy outside the United States.

Ornithine phenylacetate, phenylbutyrate and sodium benzoate: L-ornithine combined with phenylacetate in the form of L-ornithine phenylacetate (OPA) reduces ammonia levels by stimulating the synthesis of glutamine from ammonia present in skeletal muscle, and phenylacetate binds to glutamine and is excreted as phenylacetylglutamine by the kidneys.

Phenylbutyrate, a prodrug of phenylacetate, is rapidly oxidized to phenylacetate and acts in the same way.

Sodium benzoate, commonly used in food and beverage preservatives, conjugates with glycine in the liver and kidneys to form hypuric acid, which transports residual nitrogen and is then excreted by the kidneys.

These affordable, adjuvant agents show promising results, but cannot be considered first-line therapies until more randomized trials are conducted. They can be considered as alternatives for patients with good creatinine clearance, who do not tolerate the standard regimen of care or show no improvement despite this regimen.

Spherical Carbon Microsphere Adsorbent (AST-120): AST-120 is an orally administered formulation of carbon microspheres that, compared to activated carbon, demonstrates superior adsorption capacity for certain organic compounds. It binds to ammonia in the gastrointestinal lumen and facilitates its excretion. Studies on rats have highlighted its ability to reduce serum ammonia levels and normalize water content in the brain.

Polyethylene glycol 3350-electrolyte solution: Before the introduction of lactulose as a therapeutic option for hepatic encephalopathy, laxative agents were used, indicating that catharsis could represent an effective treatment for this condition.

Molecular absorbent recirculation system (MARS): MARS is an extracorporeal liver support system that combines dialysis, ultrafiltration and adsorption mechanisms. It uses an albumin dialysate through a semi-permeable membrane with high fluid content to remove

protein-bound and water-soluble toxins. MARS was originally approved by the United States Food and Drug Administration in 2005 for drug overdoses and subsequently received approval in 2012 for use in hepatic encephalopathy associated with decompensated chronic liver disease.

MARS is an expensive therapy and requires specific skills and expertise to operate. It is only available in a few institutions in the United States and Europe. The benefit in terms of survival has not been demonstrated and larger randomised clinical trials are needed to justify its wider use.

Costs

In terms of costs associated with disease, cost variables have been defined into two main categories: direct costs and indirect costs.

The cost of disease has been delimited as the sum of direct costs (R&D), comprising the costs of resources used to treat the disease, and indirect costs (CI), representing losses of resources caused by the disease, attributed to the diagnosis.

Direct costs include various sources, such as hospitalisation, outpatient specialist services, psychotherapy, GP consultations and the cost of medicines. These are tangible costs with immediate impact on the payer and are expressed annually per person.

Primary care consultations and specialist outpatient services are essential components of direct costs, while hospitalisation encompasses all expenses associated with day or continuous treatment, including medication costs, laboratory investigations and medical images. The cost of hospitalization is determined by multiplying the number of days of admission by the reference cost per day of hospitalization, according to the framework contract of the National Health Insurance House (CNAS).

Prescribed medication is also an important component of direct costs, calculated on the basis of the net cost of prescribed and settled antidepressant drugs.

On the other hand, indirect costs include morbidity and mortality from the disease. The cost of morbidity is represented by the total number of sick leaves granted for the inability to work, multiplied by the costs of the working day specific to each insured person, being insured from the CNAS budget.

The calculation of the cost in healthcare facilities is based on the purchase price of medicines. However, in many real-life situations, hospitals face shortages of essential medicines, leading to situations where patients' families or caregivers are forced to buy these medicines from pharmacies at the selling price, which is often higher than the purchase price of hospitals. Thus, the actual costs for treating a patient may exceed initial estimates, putting additional pressure on families and the healthcare system as a whole.

The assessment of mortality-related costs is carried out using potentially productive lost life years (AVPPP) and cost of loss of productivity (CPL) indicators. AVPPP is an estimate of the average period a person would have experienced had they not died prematurely from illness or comorbidities.

In managing hepatic encephalopathy, the health system and institutional management face a number of strengths and weaknesses.

The health system's strengths in managing this condition include:

- Medical expertise: In many countries, the healthcare system has access to specialists well trained in treating liver diseases, including hepatic encephalopathy. These professionals are able to provide high-quality medical care and implement effective treatment protocols.

- Access to technology and investigations: The modern healthcare system provides access to advanced diagnostic technologies, such as medical imaging and specialized laboratory tests, which can help identify and monitor the evolution of hepatic encephalopathy.

- Education and awareness programs: There are efforts in many countries to raise awareness about hepatic encephalopathy among medical personnel and the general population. These educational programmes can improve early diagnosis and appropriate management of the disease.

- Multidisciplinary collaboration: Treatment of hepatic encephalopathy often requires a multidisciplinary approach, involving hepatologists, neurologists, nutritionists, and other specialists. The healthcare system can facilitate this collaboration to ensure comprehensive patient care.

Despite these strengths, there are also a number of weaknesses in managing hepatic encephalopathy:

- Limited access to resources: In many regions, financial and human resources are limited in the treatment and management of hepatic encephalopathy. This can lead to delays in diagnosis, inadequate treatment, and lack of proper follow-up of patients.

- Lack of unified standards of treatment: There are not always uniform standards of treatment for hepatic encephalopathy, and management protocols may vary between different institutions and regions. A lack of these standards can lead to discrepancies in quality of care and patient outcomes.

- Stigma and reduced awareness: Hepatic encephalopathy may still be underdiagnosed and undertreated due to lack of awareness and stigma associated with liver disease. This can lead to delays in seeking medical help and inadequate progress in managing the disease.

- The need to improve care coordination: In some health systems, care coordination for patients with hepatic encephalopathy may be suboptimal, with fragmentation between different specialties and levels of care. Better coordination could improve the quality and efficiency of care.

Managing hepatic encephalopathy involves both strengths and weaknesses within the health system and institutional management. Optimally addressing this condition requires ongoing efforts to improve access to resources, standardize treatment, and improve care coordination.

Vascular/interventional management

Portosystemic shunt embolization: Patients who do not respond to medical management are often diagnosed with refractory hepatic encephalopathy. Some of these patients may experience large spontaneous portosystemic shunts (SPSS), especially splenorenal shunts, which can cause severe episodes of hepatic encephalopathy. Several studies have investigated embolization of these shunts in selected patients and have seen beneficial results in treating episodes of hepatic encephalopathy. In a multicenter study with 37 patients diagnosed with hepatic encephalopathy and refractory SPSS, 18 patients remained free of hepatic encephalopathy for approximately 2 years, with an overall improvement in quality of life and a reduction in the number of hospitalizations. In another retrospective study involving 20 patients eligible for SPSS embolization, all patients showed immediate improvements by day 7, and 67% of them remained free of hospitalizations associated with hepatic encephalopathy within 1 year. Thus, SPSS embolization may be a treatment option for a select group of patients with refractory hepatic encephalopathy.

This analysis included two perspectives: that of the hospital and that of the healthcare payer. For both perspectives, clinical impact was expressed in terms of number of days of

hospitalization, admissions, and deaths avoided. In terms of economic impact, the calculation differed according to each perspective, as detailed below.

Combination therapy with rifaximin-α + lactulose demonstrated a reduction in the number of hospital admissions, as well as in the number of bed days per admission, compared to lactulose monotherapy. For the hospital's perspective, the result of interest for cost calculation was the number of days of hospitalization avoided.

The costs of drugs for rifaximin-α, that is, the number of months of treatment that the hospital provides and, accordingly, pays from its budget, are set at one month. The costs associated with the treatment were not considered from the hospital's perspective, as they are covered by health insurance.

The drug costs for rifaximin-α and lactulose for the first month after initiation were assumed to be covered by the hospital. This means that, in both perspectives, the hospital bears the costs for the first month of prescriptions. As for the perspective of the healthcare payer, the health insurer pays for subsequent months (from the second month) prescriptions. It was not assumed that there was drug waste for rifaximin-α or lactulose from the hospital's perspective, i.e. patients use their entire amount of rifaximin-α or lactulose before receiving another package. However, in the case of patients' deaths, it was assumed that the remaining medicines were wasted and the costs for providing the whole package were still incurred.

Conclusions

Efficiency is key to ensuring optimal use of resources in the health sector in a context of increasing expenditure and increasing demands. Achieving greater efficiency is crucial to ensure financial sustainability and progress towards universal health coverage.

Health system efficiency assessment involves a wide range of exogenous variables, covering demographic, socio-economic, access to health services, health system characteristics, political and governance environment, health and well-being.

The choice and definition of variables used in efficiency assessment are influenced by multiple considerations, including data availability, relevance to desired outcomes, relationship to economic theory and literature, and consultation of experts in the field.

There are some difficulties in measuring and defining variables such as population health, which remains problematic in many studies due to the unclear distinction between output and outcome.

The literature reveals a variety of methodologies and approaches used in assessing the effectiveness of the healthcare system, reflecting the complexity and diversity of factors involved.

Overall, assessing and improving health system efficiency remain key priorities for global decision-makers to ensure equitable and efficient access to health services and improve global health outcomes.

Evaluating the effectiveness of hepatic encephalopathy (EH) treatment involves a complex approach, taking into account multiple aspects of the health system and patient care:

- **Diversity of treatments available:** There are a variety of therapeutic options for EH management, including pharmacological treatment, management of triggers, and nutritional interventions. Evaluating the effectiveness of these treatments requires consideration of both clinical efficacy and associated costs.

- **The importance of prevention and management of triggers:** Preventing and managing factors that contribute to the development of EH, such as portal hypertension and liver infections, are crucial for improving patient outcomes and reducing the recurrence of encephalopathy episodes.

- **The role of the multidisciplinary approach:** Effective EH management involves a multidisciplinary team of hepatologists, neurologists, nutritionists and other specialists, who work together to provide integrated and personalized patient care.

- **Cost-benefit assessment:** The evaluation of the effectiveness of EH treatment must consider not only clinical efficacy but also associated costs, including direct costs of treatment and impact on patients' quality of life and indirect costs.

- **Need for further research:** Although significant progress has been made in EH management, there are still unresolved issues and challenges in the treatment of this condition. Further research is crucial for identifying and developing therapeutic strategies that are more effective and better tailored to patients' needs.

Evaluating the effectiveness of hepatic encephalopathy treatment is critical to improving the management of this condition and patient outcomes, helping to optimize resource utilization and ensure quality care.

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