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Editorial

Journal of Economics and Behavioral Studies (JEBS) provides distinct avenue for quality research in the ever-changing fields of economics & behavioral studies and related disciplines. Research work submitted for publication consideration should not merely limited to conceptualization of economics and behavioral developments but comprise interdisciplinary and multi-facet approaches to economics and behavioral theories and practices as well as general transformations in the fields. Scope of the JEBS includes: subjects of managerial economics, financial economics, development economics, finance, economics, financial psychology, strategic management, organizational behavior, human behavior, marketing, human resource management and behavioral finance. Author(s) should declare that work submitted to the journal is original, not under consideration for publication by another journal and that all listed authors approve its submission to JEBS. Author (s) can submit: Research Paper, Conceptual Paper, Case Studies and Book Review. Journal received research submission related to all aspects of major themes and tracks. All submitted papers were first assessed by the editorial team for relevance and originality of the work and blindly peer-reviewed by the external reviewers depending on the subject matter of the paper. After the rigorous peer-review process, the submitted papers were selected based on originality, significance, and clarity of the purpose. The current issue of JEBS comprises papers of scholars from Nigeria, Tanzania, Indonesia, Pakistan and USA. The Effect of Sectorial Contributions to GDP on Environmental Degradation, Private- Cooperatives Synergy in the Face of Agricultural Policy Changes, Stronger Digital Leadership for Greater Business Strategy, Shareholder Activism and Firm Performance, The Effect of Halal Label Perception, Lifestyle and Quality of Service on Purchase Decision and Podvertising: Podcast Listeners' Advertising Attitudes, Consumer Actions and Preference for Host-Read Ads were some of the major practices and concepts examined in these studies. The current issue will therefore be a unique offer where scholars will be able to appreciate the latest results in their field of expertise and to acquire additional knowledge in other relevant fields.

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The Effect of Sectorial Contributions to GDP on Environmental Degradation: A Verification of the Environmental Kuznets Curve Hypothesis in Nigeria

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Abstract: This paper empirically verifies the validity of the Environmental Kuznets Curve (EKC) hypothesis in Nigeria by focusing on the relationship between key sectors of the Nigerian economy and environmental degradation. The study adopted the Autoregressive Distributed Lag (ARDL) model using time series data for the period 1981-2018. The bounds-testing approach proposed by Pesaran, Shin and Smith, (2001) was adopted to test for cointegration. The results show a long-run relationship between economic growth (disaggregated into key sectors) and environmental degradation measured by carbon dioxide emissions. In the short run, agriculture, industry and services sectors significantly explained the variation in carbon dioxide (CO_2) emissions, while the construction sector does not have any significant effect on Carbon emissions both in the current and the future periods. Specifically, the industrial sector has a positive effect on CO_2 emissions which confirms the short-run EKC hypothesis; while agriculture and services though were significant, have a negative effect on CO_2 emissions, invalidating the short-run EKC hypothesis. In the long run, industry and services sectors were significant in explaining variation in CO_2 emission. However, while the services sector shows a negative relationship with CO_2 emission in line with the long-run EKC Hypothesis, the industrial sector invalidates the hypothesis with a positive effect. These results imply that the key sectors of the economy have varied effects on environmental degradation, hence the hypothesis is inconclusive. Nigeria is therefore advised to pursue economic growth via industrial and services sectors with an emphasis on environmental sustainability, which could be achieved through the use of renewable and cleaner technology in nation-building.

Keywords: *Carbon dioxide Emissions, Environmental Sustainability, Economic Growth.*

1. Introduction

The developmental efforts of a man toward achieving survival bring about consequential effects on the environment (Vithali, 2018; Wallace-Wells, 2019). In what looks like Newton's third law of motion, the action for the growth of the economy through the production of goods and services generates an equal reaction to environmental degradation, especially in the parts of the world, where there is little emphasis on environmental protection (Ogboru and Anga, 2015). In most developing countries especially, the burning of fossil fuels, gas flaring, electricity production, cement production, distribution and consumption, mining and other explorative activities, and reliance on alternative power supply through generators are some of the growth-generating economic activities. These activities are constant ways of emitting carbon dioxide (CO_2), which continues to have adverse effects on the environment, tending towards a catastrophic climate change and threat to the continuity of man (Pereira and Viola, 2018; Mckie, 2018; Kopits, Marten and Wolverton, 2013). The relationship between economic growth and with consequences of environmental pollution is the crux of the Kuznets hypothesis, which posits positive short-run nexus between the growth of an economy and environmental pollution and a negative long-run relationship between them (Kuznets, 1955; Stern, 2011).

EKC hypothesis is true in the case of many advanced countries as many of these countries, particularly in Europe and North America have adopted more environmentally-friendly technologies in carrying out most of their economic activities as well as championing the course for a pollution-free world thereby enhancement of quality climate and cleaner environment for all (Aghion et al., 2009; Martin & Vaitilingam, 2014). In contrast, most developing economies such as those in Latin America, Asia and Africa continue to increase environmental pollution with almost every increase in the production of goods and services (Bell & Russell, 2002). It is evident that these countries largely run their productions in a manner that creates as much pollution as value creations as they rely more on fossil fuel consumption, use of firewood for domestic cooking, heavy reliance on fuel-consuming modes of transportation, horizontal expansion in terms of housing development, with consequences on deforestation and by extension, emissions of carbon dioxide (Omoju,

2014; Adu & Denkyirah, 2017). This is generally not a good direction to follow as the future of humanity has been painted gloomy if there are no concerted efforts to cut the emissions of greenhouse gases.

Currently, evidence has shown that Carbon related emissions are responsible for about 75% of emissions of greenhouse gases and almost 80% of the emissions are generated from energy production and consumption, especially in developing countries (Akpan and Akpan, 2012). In recent times, the world has taken a common position to confront the issue of increasing environmental pollution, particularly the depletion of the ozone layer through the emissions of Greenhouse Gases, GHG, and (UN Climate Change Conferences 2009, 2010, 2014 and 2015). Given the attendant negative imports of economic activities on the environment, many studies have been undertaken to gauge the relationship between economic growth with environmental pollution. Notably, some studies established the validity of the EKC hypothesis in some countries (Ozturk and Acaravci, 2010; Lean and Smyth, 2010; Öztürk and Yildirim, 2015; Yahaya, Iro and Kabiru, 2019), some other studies could not confirm the hypothesis for other countries (Sulaiman and Abdul-Rahim, 2017). Yet, the study conducted by Eratas and Uysal (2014) established a somewhat N-shaped nexus between the variables in BRICT countries. Nigeria is among the industrializing countries in the Sub Sahara Africa with an economy that has been on the increase over time.

The growth of its economy has been premised mostly on energy production and exploration of crude oil with attendant environmental consequences in form of air pollution that is occasioned by gas flaring, among others, and oil spillages. Similarly, the release of carbon dioxide from cement production and construction of housing and infrastructure; carbon monoxide from vehicular operations through heavy reliance on road transportation, and nitrous oxide from nitrification and de-nitrification processes in agriculture, revealed that all sectors of the economy contribute to one way or the other to environmental degradation. The negative effects of the growth of the economy on the environment have been confirmed by Abdulrahim, Waziri, Huong and Ahmad (2014) and Akpan and Akpan (2012). However, it is worthy of note that all the studies conducted on the said relationship have focused on composite GDP as a proxy for economic activities, while none has attempted to disaggregate GDP into key sectoral components to investigate their individual effects on environmental degradation. In place of examining the aggregate effect of economic growth on environmental pollution, it will be helpful if policymakers have information on the contributions of each sector of the economy to pollution emissions.

This will provide room for more specific policy formulation to tackle the issues of the environment. In view of this, this paper investigates the contributions of key sectors of the economy (Agriculture, Construction, Industry, Services, and Trade) to environmental degradation proxied by CO_2 emissions. This is in a bid to first ascertain the existence or otherwise of long-run equilibrium between the GDP sectoral components and CO_2 emissions in Nigeria, and second, to examine the nature of the relationship, and determine which sector contributes most to environmental degradation. The outcome of this research will provide a guide to policymakers in identifying the sector that contributes the most to environmental pollution in a bid to encourage environmentally friendly technology in the sector, thereby promoting a cleaner environment and protection of the ecosystem at large. The latter parts of the paper are structured in the following manner. Section 2 reviews relevant literature, section 3 discusses the research methodology; while the estimation techniques were discussed in section 4. Section 5 considers the presentation and discussion of results, while the paper is concluded in section 6.

2. Literature Review

The well-being of man amidst limited natural resources has been a source of concern since ageless times. Many theoretical expositions have been made about the relationship between the consumption of natural resources, population growth and environmental degradation. For instance, Steiguer (1995) identified three economic theories, which provide a useful explanation of the environment. First is the population growth and resource scarcity by Thomas Malthus; second is the theory of steady-state economy by J.S. Mill, and third is the neoclassical economic theory of efficient markets as a solution to resource use and environmental problems. Kuznets (1955) added to the frontier of knowledge in the environment by formulating the Environmental Kuznets Curve hypothesis, which explains environmental pollution as the consequence of economic growth. The EKC theory is a common baseline theory for many research works in this area. Most

studies have not only relied on its framework some others have attempted to verify the validity of its assertions in different climes. Akinlo (2009), Ozturk and Acaravci (2010), Alam, Begum, Buysse, Rahman, & Van Huylenbroeck (2011), Akpan and Akpan (2012), Sulaiman, Abdulrahim, Waziri, Huong & Ahmad (2014).

Demir, Cergibozan, and Gok (2018), and Yahaya, Iro and Kabiru (2019) are some of the studies that have been conducted to confirm the existence or otherwise of the EKC theory. Specifically, a similar study by Ang (2007) adopts energy consumption as an intervening variable in relation to France. The study specifically adopts vector error correction modeling (VECM) alongside the cointegration technique and affirms a fairly robust long-run relationship among the variables in the period between 1960 and 2000. In another study, Soytas, Sari, and Ewing (2007), also examine the dynamic nexus of CO_2 emissions with real output (which was proxied by energy consumption, labor and fixed capital) for the United States using time series data for the period between 1960 and 2004. It was concluded that only energy consumption and not GDP have a causal influence on CO_2 emissions in the long run. It was further revealed that gauging economic activities may not be the efficient solution for the reduction of emissions and other environmental challenges in the United States. In a related study, Ozturk et al. (2010) adopts the Autoregressive distribution lag (ARDL) bounds technique to test the nexus of economic growth with employment ratio, energy consumption and carbon emissions in Turkey. It was found that by adopting energy policies that reduce CO_2 emissions in the country, the real output of long-run growth may not be affected. The outcome of the studies by Soytas, Sari, and Ewing (2007) and Ozturk et al. (2010) is a positive affirmation of the existence of the EKC hypothesis for the US and Turkey.

Within the same period, Lean and Smyth (2010) employ annual times series data for Malaysia covering 1970-2008 to examine the dynamic nexus among economic growth, power generation, using exports as a control variable in a multivariate model. The results reveal the existence of one-directional causality running from economic output to power generation. By implication, efficient management of power consumption and conservation can be achieved without hindering the economic growth process. On a broader perspective, Erataş and Uysal (2014) conducted a similar study on BRICT countries and adopting Panel Cointegration techniques, they find an N-shaped relationship as against an inverted U-shaped relationship hypothesized by Kuznets. Similarly, the EKC hypothesis has also been positively affirmed by studies conducted by Baek (2015) and Öztürk and Yildirim (2015) on Arctic and MINT countries, respectively. Conversely, Sulaiman and Abdul-Rahim (2017) conducted a similar study using a 3-way linkage approach in addition to the ARDL model. The study finds that both carbon dioxide emission and energy variables have no significant effect on the performance of the Malaysian economy. Furthermore, they reveal a reverse case for CO_2 emissions, which they find to be positively and significantly dependent on energy consumption and economic growth. The study outcome invalidates the Kuznets hypothesis for Malaysia. In an innovative twist and more recently, Demir, Cergibozan, and Gok (2018) adopted the ARDL approach alongside secondary data for the period 1963-2011 to examine how income inequality affects carbon dioxide emissions in Turkey.

It was revealed in the results that carbon dioxide emissions are inversely related to income inequality, in which case, an increase in income inequality leads to a reduction in carbon emissions. Also, in their contribution to the EKC hypothesis, Zaidi, Zafar, Shahbaz, and Hou, (2019), innovatively examine how globalization and financial development relate to carbon emissions in APEC countries. The study which covered 1990-2016 adopts Westerlund (2007) cointegration technique alongside Continuously Updated Bias-Corrected (CUP-BC) as well as Continuously Updated Fully-Modified (CUP-FM) methods to gauge the long-run elasticities among the variables. It was found that carbon emissions are significantly reduced by both globalization and financial development, whereas, the emissions are increased by increasing economic output and higher energy use. The outcome is another testimony to the EKC hypothesis. In Nigeria, studies have also been conducted on the relationship between economic performance with environmental pollution. One of the recent studies by Akpan and Akpan (2012) adopt the Autoregressive distributed lag (ARDL) technique on secondary data from 1970-2008. The study's long-run results reveal that increasing economic output brings about an increase in carbon emissions, which invalidates the Kuznets hypothesis for Nigeria. Conversely, Sulaiman, Abdulrahim, Waziri, Huong & Ahmad (2014) examine the relationship between energy consumption with carbon dioxide emissions alongside economic output. The study adopts the ARDL approach and reveals that a long-run relationship exists among the variables.

The study by Sulaiman et al. (2014), unlike Akpan and Akpan (2012), validates the Kuznets hypothesis for Nigeria. In a more recent study, Yahaya, Iro and Kabiru (2019) brought a twist to the study of economic performance and environmental pollution by examining the influence of fossil fuel consumption on carbon dioxide emissions in Nigeria using economic output, financial development and foreign direct investment as control variables. The study reveals that both in the current and future periods, CO_2 emissions are increased both significantly and positively by the explanatory variables. By implication variables of economic growth and development have the capacity to increase carbon dioxide emission in Nigeria in the short run only. In summary, all the studies reviewed above-considered GDP in its aggregate form as a proxy for economic growth, while few of them paid specific attention to the short-run and long-run relationship to verify the EKC hypothesis. Therefore, attempts will be made in this study to examine the differential effects of sectoral contributions of GDP components on environmental pollution in Nigeria to identify the contributions of each sector to CO_2 emissions.

3. Research Methodology and Model Specification

In achieving the objective of investigating the effect of key sectors of Nigeria's economy on environmental degradation, times series data on key sectors of the economy (Agriculture, Industry, Construction, and Services) for the period 1981-2018 were employed in the study. Meanwhile, time series data on the population for the same period was also adopted as an intervening variable. The Autoregressive distributed lag (ARDL) method was adopted to conduct data analysis, while the data analyzed were obtained from the Statistical Bulletin of the Central Bank of Nigeria (2018). This method of estimation was adopted because: first, it can be applied to variables that are of the same or different integration orders, that is, I(0) or I(1) or a combination of both. For instance, Engle and Granger (1987) and Johansen and Juselius (1990) approaches required that variables are of the same order of integration. Second, the ARDL estimation technique makes it possible for short-run and long-run coefficients of independent variables to be obtained simultaneously. Third, the ARDL technique is suitable to produce estimates for a small sample size. All the variables in this study were log-linearized for uniformity and ease of analysis. The underlying theory for this study is the Environmental Kuznets Curve theory, which established a relationship between the growth of the economy and environmental degradation. It hypothesizes a positive short-run relation and a negative long-run equilibrium between the variables. This implies that in the long run, increasing economic output is expected to bring about a reduction in environmental degradation. In achieving the objective of the study, the growth of the economy was proxied by GDP, which was disaggregated into its key sectors, while environmental degradation was proxied by carbon dioxide emissions.

The linear construct between environmental pollution and increasing economic output can be represented mathematically as below:
$CO_2 = f(GDP)$ 3.1
The econometric form of model 3.1 is given as:
$CO_{2_t} = \beta_o + \beta_1 GDP_t + \varepsilon_t$ 3.2
Where: CO_{2_t} is carbon dioxide emission at time t, β_o and β_1 are the intercept and coefficient of the explanatory variable, respectively.
GDP is the explanatory variable at time t that explains the changes in CO_2.
To suit the purpose of this study, which seeks to examine the effects of sectoral contributions to GDP on CO_2 emissions, model 3.2 is decomposed as follows:
$CO_2 = f(AGR, CONS, IND, SEV, POP)$ 3.3
Where: CO_2, AGR, CON01, IND, SEV, POP denotes Carbon dioxide emissions, Agriculture, Construction, Industry, Services, and Population, respectively.
Expressing equation 3.3 in a stochastic form, we have:
$CO_{2_t} = \beta_o + \beta_1 AGR_t + \beta_2 CON01_t + \beta_3 IND_t + \beta_4 SEV_t + \beta_5 POP_t + \varepsilon_t$ 3.4
The log-linearized form of model 3.4 is:
$LNCO_{2_t} = \beta_o + \beta_1 LNAGR_t + \beta_2 LNCON01_t + \beta_3 LNIND_t + \beta_4 LNSEV_t + \beta LN_5 POP_t + \varepsilon_t$ 3.5

Estimation Techniques

Unit Root Test: The starting point in adopting time series data for regression analysis and prediction is to verify the presence of non-stationarity property in the data. This is because any estimation using non-stationary data will generate spurious regression, and cause the model to lose its predictive power. In this study, a unit root test for stationarity was conducted for all the variables of interest to identify the presence or otherwise of stationarity and ascertain the order of integration. This is because the use of ARDL may be invalidated by the presence of any variable that is integrated of order 2. Consequently, the study adopted unit root test methods suggested further confirmed by the approach suggested. The Augmented Dickey-Fuller (ADF) approach was carried out within the framework of the equation specified as model 4.1 below:

$$\Delta Y_t = \vartheta + \theta_1 t + \delta Y_{t-1} + \theta_i \sum_{i=1}^{k} \quad \Delta Y_{t-1} + \varepsilon_t \qquad\qquad 4.1$$

Where ϑ is a constant, t is the time trend, while ε_t is the error term. The term Y_{t-1} is the lagged value of the series Y. The equation is a time and trend specification form for the Augmented Dickey-Fuller unit root test using the Autoregressive Moving Average (ARMA) structure of the errors in the regression. The Phillips Perron (PP) test, which ignores serial correlation is often specified using the equation below:

$$\Delta Y_t = \vartheta + \beta' t + \pi Y_{t-1} + \varepsilon_t \qquad\qquad 4.2$$

In this case, ε_t is of integrated order zero, I(0) and maybe heteroskedastic (Obioesio, 2015).

Table 1: Unit Root Test Result

Variables	AUGMENTED DICKEY-FULLER TEST (ADF)		PHILLIPS-PERRON TEST (PP)		Order of Integration
	t-stat	P-Values	t-stat	P-Values	
$LNCO_2$	-1.931064	0.3150	-1.931064	0.3150	
LNAGR	0.024076	0.9549	0.025613	0.9550	
LNCON01	-0.183950	0.9316	0.225256	0.9706	
LNIND	-0.769567	0.8159	-0.671535	0.8416	
LNSEV	0.360042	0.9783	0.851893	0.9936	
LNPOP	-3.182240*	0.0311	0.285391	0.9743	I(0)
$\Delta LNCO_2$	-6.085137*	0.0000	-6.085137*	0.0000	I(1)
ΔLNAGR	-5.850647*	0.0000	-5.849978*	0.0000	I(1)
ΔLNCON01	-3.440588*	0.0159	-3.359901*	0.0193	I(1)
ΔLNIND	-5.547051*	0.0000	-5.670457*	0.0000	I(1)
ΔLNSEV	-3.104838*	0.0351	-2.960076*	0.0485	I(1)
ΔLNPOP	-4.710111*	0.0005	-4.734679*	0.0005	I(1)

Source: Authors' computation, (2019) using E-views 9.0
Note: Δdenotes first difference variables. *Denotes rejection of the null hypothesis of unit root at a 5% level of significance. The lags are selected automatically based on the optimal lag length selection of the SIC criteria; t-stat denotes t-statistic.

ARDL Bounds Test for Cointegration: It is usually necessary to check the existence of 0long-run equilibrium or relationship between the variables. In performing the bounds test for cointegration, the conditional ARDL (p, q1, q2, q3, q4, q5, q6) model with 6 variables is specified as:

$$\Delta LNCO_{2_t} = \delta_{01} + \beta_{11} LNCO_{2_{t-i}} + \beta_{21} LNAGR_{t-i} + \beta_{31} LNCON01_{t-i} + \beta_{41} LNIND_{t-i} + \beta_{51} LNSEV_{t-i}$$

$$+ \beta_{61} LNPOP_{t-i} + \sum_{i=1}^{p} \gamma_{1i}\Delta LNCO_{2_{t-i}} + \sum_{i=1}^{q} \gamma_{2i}\Delta LNAGR_{t-i} + \sum_{i=1}^{q} \gamma_{3i}\Delta LNCON01_{t-i}$$

$$+ \sum_{i=1}^{q} \gamma_{4i}\Delta LNIND_{t-i} + \sum_{i=1}^{q} \gamma_{5i}\Delta LNSEV_{t-i} + \sum_{i=1}^{q} \gamma_{6i}\Delta LNPOP_{t-i} + \varepsilon_{1t}$$

Equation 4.3

$H_o: \gamma_{1i} = \gamma_{2i} = \gamma_{3i} = \gamma_{4i} = \gamma_{5i} = \gamma_{6i} = 0$ (no cointegration exists)
$H_1: \gamma_{1i} \neq \gamma_{2i} \neq \gamma_{3i} \neq \gamma_{4i} \neq \gamma_{5i} \neq \gamma_{6i} \neq 0$ (cointegration exists), where *i* = 1, 2, 3, 4, 5 & 6).

Table 2: The Results of the ARDL Cointegration Test

Dependent Variable: DLNRGDP		
Function: F_{DLNCO2}(DLNCO$_2$|DLNAGR, DLNCON01, DLNIND, DLNPOP, DLNSEV)		
F-Stat (5) = 6.859237		
Asymptotic Critical Values (n =1000)*	I(0)	I(1)
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

*The critical values for the lower I(0) and the upper I(1) bounds were obtained from Pesaran, Shin, and Smith (2001). **Source:** Authors' computation (2019) using E-views 9.0.

In conducting cointegration using the ARDL technique, the selection of optimal lag length is an important step to take; hence, Akaike Information Criterion was considered for this purpose. The optimal lag length that was produced lag length analysis is 3 for CO$_2$, AGR, and SEV, while the optimal lag length for CON01, IND, and POP are 2, 1,0 0, respectively in the model. The ARDL cointegration test results, obtainable in Table 2 revealed that the calculated F-statistic of F (CO$_2$|AGR, CON01, IND, SEV, POP) exceeds the upper critical value. Hence, the results affirm the presence of a long-run relationship between the variables at a 5% significance level in Nigeria over the 1981–2018 period.

The Long Run Coefficients Estimates: Having ascertained the presence of long run nexus between the variables, it is necessary, in line with the stated objectives, to examine the Environmental Kuznets Curve theory for both the short run and the long run relationships among the variables. This study adopted the Error Correction Mechanism (ECM) form of the ARDL model. The ECM estimates the speed at which a dependent variable converges to equilibrium after a change in other variables. The ECM model representing equation 4.3 is specified below:

$$\Delta LNCO_{2_t} = \delta_0 + \sum_{i=1}^{p} \omega_i \Delta LNCO_{2_{t-i}} + \sum_{i=1}^{q} \gamma_{1i} \Delta LNAGR_{t-i} + \sum_{i=1}^{q} \gamma_{2i} \Delta LNCON01_{t-i} + \sum_{i=1}^{q} \gamma_{3i} \Delta LNIND_{t-i}$$
$$+ \sum_{i=1}^{q} \gamma_{4i} \Delta LNSEV_{t-i} + \sum_{i=1}^{q} \gamma_{5i} \Delta LNPOP_{t-i} + \alpha ECT_{t-1} + \varepsilon_t$$

Equation 4.4,
Where Δ represents the first differenced variable, ε_t represents the residual error term that is assumed to be iid with zero mean and constant variance; α is the coefficient of the error correction term; while ECT is the term that measures the speed of adjustment between the short and long-run relation. The ECT_{t-1} is expected to have a negative sign, while it must be statistically significant at the same time to affirm the existence of a long-run relationship between carbon dioxide emissions and the key sectors of Nigeria's economy.

Diagnostic Tests after Cointegration: In checking the robustness of the ARDL model, the study conducted some diagnostic tests. This is also for checking the reliability, consistency and efficiency of the model and coefficients. For this purpose, serial correlation test, heteroskedasticity test, normality test, functional form test, and stability tests via CUSUM and CUSUMSQ were carried out.

4. Results and Discussion

Error Correction Mechanism (ECM) model estimates were obtained from the regression of model 4.4 above. The motive of this study is to specifically examine the respective contributions of the key sectors of the economy to environmental degradation within the purview of the EKC hypothesis. For this reason, the short and long-run ARDL results are presented in Table 3. This provides an opportunity to examine the alignment of Nigeria's economic growth (in particular, the sectors) with the EKC hypothesis. The results are presented below:

The Estimated Long Run and Short Run ARDL Model

Table 3: Long Run and Short Cointegration Equations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Short Run Coefficients				
D(LNCO$_2$(-1))	-0.448081	0.215461	-2.079639	0.053
D(LNCO$_2$(-2))	-0.506076	0.205834	-2.458659	0.025
D(LNAGR)	0.586301	0.308079	1.903084	0.0741
D(LNAGR(-1))	0.48932	0.397057	1.232369	0.2346
D(LNAGR(-2))	-0.59135	0.254574	-2.322898	0.0328
D(LNCON01)	0.476517	0.365156	1.304971	0.2093
D(LNCON01(-1))	0.354884	0.243407	1.457983	0.1631
D(LNIND)	0.885405	0.281207	3.14859	0.0059
D(LNPOP)	-1.14205	0.678991	-1.681983	0.1108
D(LNSEV)	-1.788897	0.607288	-2.945714	0.009
D(LNSEV(-1))	-0.757815	0.868629	-0.872426	0.3951
D(LNSEV(-2))	-0.775687	0.532198	-1.457516	0.1632
ECT(-1)	-0.673796	0.18111	-3.720371	0.0017
R^2	0.929305			
Adjusted R^2	0.858611			
DW Stat	2.2160581			
Long Run Coefficients				
LNAGR	0.911055	0.488686	1.864296	0.0796
LNCON01	0.644372	0.402126	1.602415	0.1275
LNIND	2.901744	0.862325	3.365022	0.0037
LNPOP	-1.69495	1.331999	-1.272485	0.2203
LNSEV	-1.754922	0.662578	-2.648628	0.0169
C	13.467698	16.211623	0.830743	0.41176

Source: Authors' computation (2019) using E-views 9.0.

The ARDL regression outcomes revealed that it is not all the key sectors of the Nigerian economy that are statistically significant in explaining the variation in environmental degradation, which was measured using CO_2 emissions. Precisely, construction (CONS01) was found to not have any significant impact on carbon dioxide emissions. Further results reveal that in the short run, the agricultural sector in its current and lag one periods has no significant effect, however, the lag two period of the agricultural sector and the services sector show statistical significance with a negative impact on carbon dioxide emissions which invalidates the EKC short run hypothesis; hence, they do not increase carbon dioxide emissions. Meanwhile, the industrial sector confirms the EKC hypothesis for Nigeria with a statistically significant positive relation with CO_2 emissions. Time series data on the population for the same period was also adopted as an intervening variable. The Autoregressive Distributed Lag (ARDL) approach was adopted from estimation, while data were obtained from the Central Bank of Nigeria's Statistical Bulletin (2018). This means that, the higher the industrial output, the higher the CO_2 emitted into the environment. The ECM model demonstrated acceptable signs, which were both negative and statistically significant.

The ECT result also confirmed the existence of a long-run equilibrium between the time series variables. It also showed that the disequilibrium in the short run will converge in the long run at the rate of 67.37 percent annually. In the long run, however, the agricultural and construction sectors still showed a positive relationship to carbon dioxide emissions, though they are not statistically significant. The industrial sector is statistically significant with a positive effect on CO_2 emissions, which means that in the long run, higher industrial outputs will bring about higher environmental degradation. Although this is against the EKC hypothesis, it is a cause of concern for policymakers in Nigeria. Lastly, the services sector appears to be a hopeful future driver of the Nigerian economy as it is both statistically significant and showed a negative relationship with carbon dioxide emissions. This is an empirical confirmation of the Environmental Kuznets Curve theory, which postulates that in the long run, the growth of the economy will be negatively related to environmental degradation. The import of the findings of this study is that Nigeria as a country should focus

more on economic growth from the services sector while advocating for cleaner and environmental-friendly technologies in other sectors of the economy.

Presentation of the Robustness Check and Diagnostic Tests Results: Despite the significance of the econometric model and the empirical confirmation of the relationship between environmental degradation and the key sectors of Nigeria's economy, it is necessary to check the robustness of the model through the diagnostic tests, which are reported hereafter.
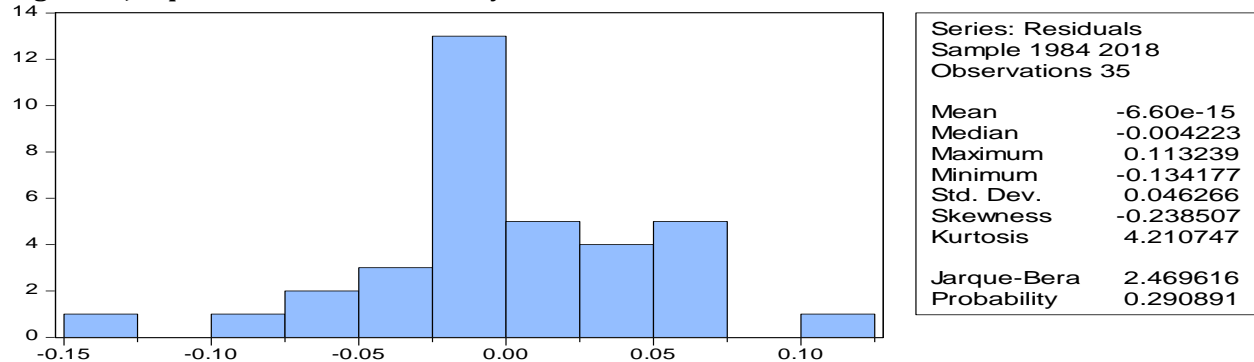
Table 4: Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.603508	Prob. F(1,16)	0.4486
Obs*R-squared	1.272187	Prob. Chi-Square(1)	0.2594

Table 5: Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	2.001274	Prob. F(17,17)	0.0814
Obs*R-squared	23.33829	Prob. Chi-Square(17)	0.1386
Scaled explained SS	8.839076	Prob. Chi-Square(17)	0.9452

Figure 1: Jarque-Bera Test for Normality

Series: Residuals	
Sample 1984 2018	
Observations 35	
Mean	-6.60e-15
Median	-0.004223
Maximum	0.113239
Minimum	-0.134177
Std. Dev.	0.046266
Skewness	-0.238507
Kurtosis	4.210747
Jarque-Bera	2.469616
Probability	0.290891

Figure 2: Plot of CUSUM and CUSUMSQ Tests for the Parameter Stability
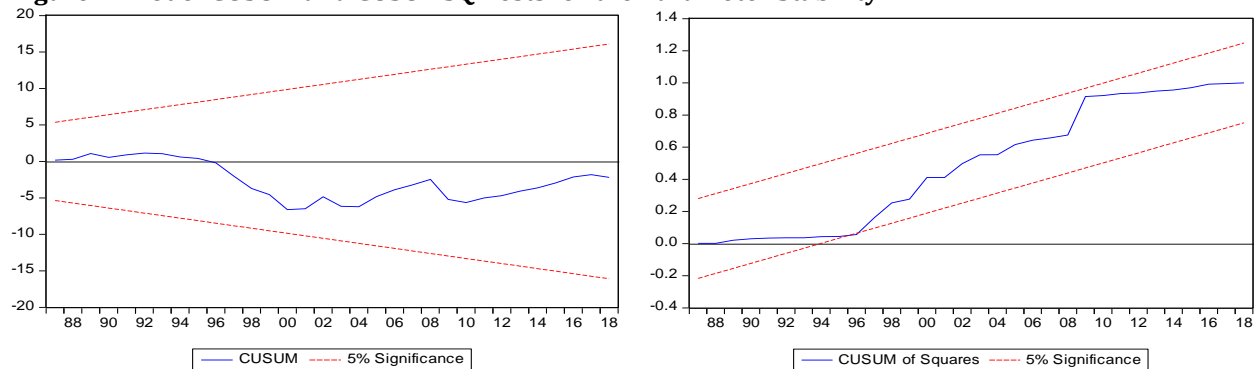
Table 6: Omitted Variable Test Result

Omitted Variables: RESIDSQ			
	Value	**DF**	**Probability**
t-statistic	0.947929	16	0.3573
F-statistic	0.898569	(1, 16)	0.3573
Likelihood ratio	1.912409	1	0.1667

Considering the test of goodness of fit, it was revealed that the R-Squared of the model is 92.9 percent. This means that within the context of the Nigerian economy, the key sectors and the economy and population as an intervening variables can explain 92.9 percent of the total variation in CO_2 emissions. The Adjusted R-Squared of the same model revealed the explanation of total variation between the variables to be about 85.86 percent. Further than that, the diagnostic test results show that there are no problems relating to serial correlation, heteroskedasticity, misspecification and normality of the residuals in the econometric model as shown in the results presented earlier. More so, the results of the CUSUM and CUSUMSQ tests as presented in Figure 2 show that the estimated coefficients fall within the acceptable critical bounds of 5% significance. By implication, the estimated parameters are found to be stable over the period of the study.

5. Conclusion and Recommendations

This study has revealed various results of the relationship between key sectors of Nigeria's economy and environmental degradation in line with the Environmental Kuznets Curve (EKC) hypothesis. The theory predicted a positive relationship between economic growth and environmental degradation in the short run, while it also predicted a negative relationship in the long run. This study reveals that it is not all the sectors of Nigeria's economy that contribute to environmental degradation in Nigeria. Specifically, attention should be paid to Agriculture, Services and Industrial sectors. It is expected that any country that is growth-focused will bother less about environmental pollution and degradation in the short run. This is a fallout of the EKC hypothesis. Therefore, more emphasis should be placed on the long-run relationship, where a negative relationship is expected between the growth of the economy and environmental pollution. It is therefore recommended that policymakers in Nigeria should focus more on the agricultural and industrial sectors, which were not only statistically significant but also showed a long-run positive relationship with environmental pollution, against the EKC hypothesis.

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Private-Cooperatives Synergy in the Face of Agricultural Policy Changes: Moral Hazard Behavior Ameliorated? An Experience from Coffee Cooperatives in Southern Highlands, Tanzania

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Abstract: The private sector is essential for improving the coffee sector by supporting farmers through cooperatives and groups. The study objective is to assess the impact of policy changes on moral hazard and private-farmers investment synergy. The present study used data collected from coffee farmers and cooperatives in Mbeya, Songwe and Ruvuma in Tanzania. Analyses were achieved by using descriptive statistics and difference-in-difference (DiD) at both the farm level and cooperative level. The results indicate that the 2017/2018 government policy changes ameliorated moral hazard and free-riding behaviors among farmers, owing to repay loans. Cooperatives with contractual arrangements with private investors suffered from moral hazards attributable to policy changes whereby the decline in the coffee collection was 33,040 kg (with an average treatment effect on the treated (ATT)) of coffee parchment, whereas, at the farmers' level, farmers reduced the collection of coffee with an ATT of 24.6 kg. In addition, because of these changes, some central pulse units were found to be non-functional, while others were under-utilized. In this regard, such moral hazard behavior among coffee farmers destabilized cooperatives, as well as the existing synergy between private investors and cooperatives. It is recommended that before policy or any institutional change, it is important to consider strategies and paths to reduce the moral hazard and free-riding behaviors of any stakeholder to improve market efficiency. For the coffee sector, this would include farmers collecting coffee from member cooperatives only. The government must consider having an effective institutional/policy change mechanism, in particular having a preparatory stage for policy change, to ensure that all contracts that have to be affected by such changes are reinforced properly to reduce unnecessary losses for any actor in the value chain. The government can facilitate or mediate disputes related to investments in agriculture, provide administrative support, and help negotiate compensation.

Keywords: *Private- Cooperatives Synergy, Policy changes, moral hazard behavior, coffee marketing.*

1. Background

Coffee production is an important part of Tanzania's economy, with coffee output averaging between 30,000 and 40,000 metric tons per year, with Arabica accounting for 70% and Robusta accounting for 30% (Mavuno Technologies, 2022). This sector contributes approximately 1.7% of the total share of coffee production in the world (OEC, 2022). Coffee farming is dominated by subsistence farming and it provides direct income to more than 450,000 households and livelihoods for more than 2.5 million Tanzanians through marketing and value addition (TCB, 2017). Coffee is mainly grown in Kilimanjaro, Arusha, Mbeya, Songwe, and Ruvuma regions. Other regions included Kigoma, Mara, Rukwa, Tanga, and Kagera (Robusta). The current average production is 55, 000 tons annually, accounting for just 0.7% of the world output (TCB, 2017). The southern highland regions are endowed with suitable land for coffee production, with enormous potential for expansion of production in the zone. However, the major challenges in coffee production include low production of quality coffee and productivity, the inadequacy of extension services, high prices and low access to reliable agro-inputs, poor agronomic practices, instability of coffee prices in the market, and lack of financial institutions investing in the coffee value chain, which could have enabled farmers to access reliable loans (FAO, 2020).

Coffee production variation over the past 50 years (Figure 1) indicates that the maximum production was recorded in 2005 at 95,000 tons (FAO, 2020). The average coffee yield per hectare is 250 kg for Arabica and 750 kg for Robusta, which is relatively low compared to the global potential yield of approximately 1,250 kg/ha for Arabica and 1,500 kg/ha for Robusta (Andrew and Philip, 2014). The low yields were attributed to factors such as few old trees in most farms, poor agricultural practices (e.g., high intensity of intercropping with bananas, especially in the northern and western zones), insufficient use of inputs (fertilizers and pesticides), and climate-related problems such as drought and increasing temperatures. Since coffee production and primary processing are undertaken by smallholder farmers, this has a serious implication on coffee quality, unlike in estates where primary processing standards are followed, resulting in premium

quality coffee. The two most commercially important species grown in Tanzania are varieties of Arabica Coffee and Robusta Coffee, a larger part of which is exported as raw materials, while the remaining proportion is roasted mainly for local use.

Coffee Production Potential in the Southern Highland: Coffee production was estimated to increase from 50,000 tons to reach 100,000 tons by the year 2021 (Figure 1) (TCB, 2017). It was envisioned to an increase in volume has to go hand in hand with the increase in quality from 35% premium coffee to at least 70% (TCB, 2017). Although vision is crucial, the northern coffee-producing zone in Tanzania has been declining as farmers consider coffee production no longer profitable compared to other fast crops such as bananas, tomatoes, and dairy farming (Makoye, 2015). Coffee production in the southern highlands has been increasing, requiring deliberate efforts to revive crop production by gap-filling. The southern highlands constantly increased to offset the decline in the northern highlands (Makoye, 2015). As indicated (Figure 2) the evolution of coffee production in Tanzania, whereby in the 1980s, the northern part contributed approximately 66% of the total coffee by 2008, but by 2015, its contribution was approximately 28%, while the total production remained the same (Craparo et al., 2015). Accordingly, the trend of coffee production has remained skewed to the Southern Highland, as its northern part has been experiencing an increase in temperature, as well as farmers shifting to other economic activities, largely horticulture.

Figure 1: Trend of Coffee Production in Tanzania
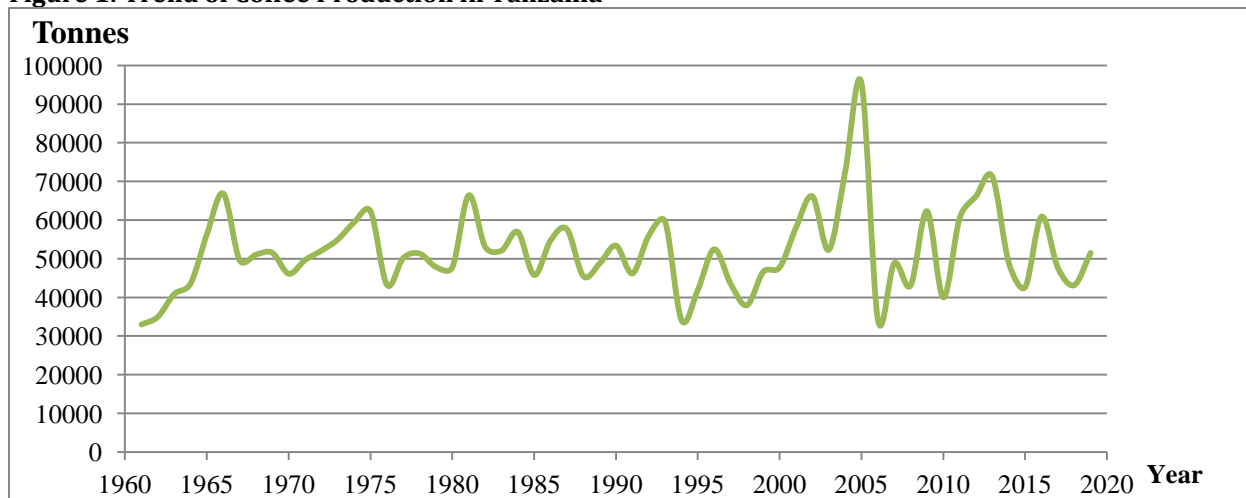
Figure 2: Changes in Coffee Production across Zones in Tanzania
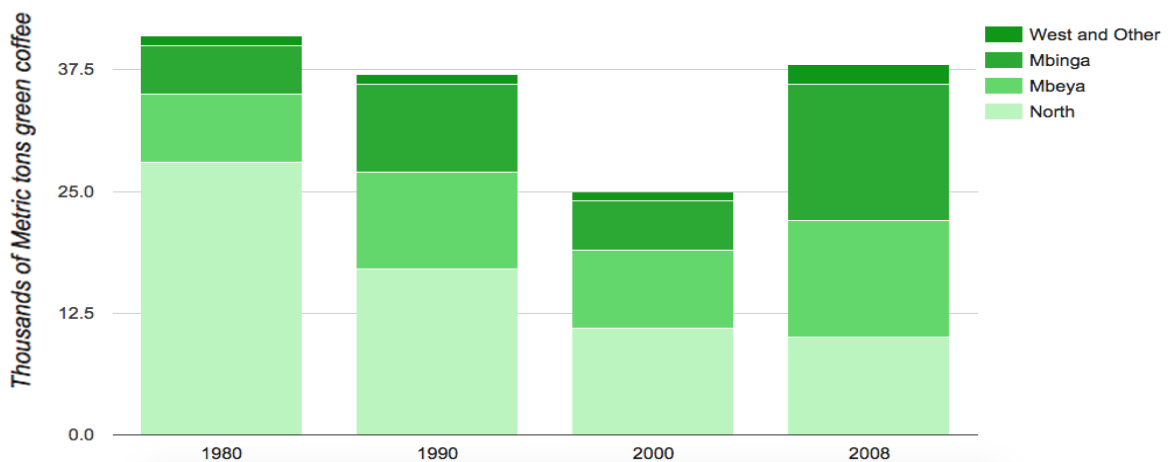
Source: TCB (2017).

Public Policy, Private Investment, and Smallholder Producers' Synergy: The government makes policies to improve the marketing of a specific crop, although this is not always the case. Public policy is a regulatory measure, courses of action and funding priorities concerning a given topic promulgated by a governmental entity (Kilpatrick, 2010). Public policies are set forth for both short-term and long-term benefits and across different groups and the economy at large (Marwa, 2015) and it is therefore important to understand how public policy changes affect cooperative–private investment synergy.

Figure 3: Policy, Private Investment, Productivity and Sustainability in Agriculture
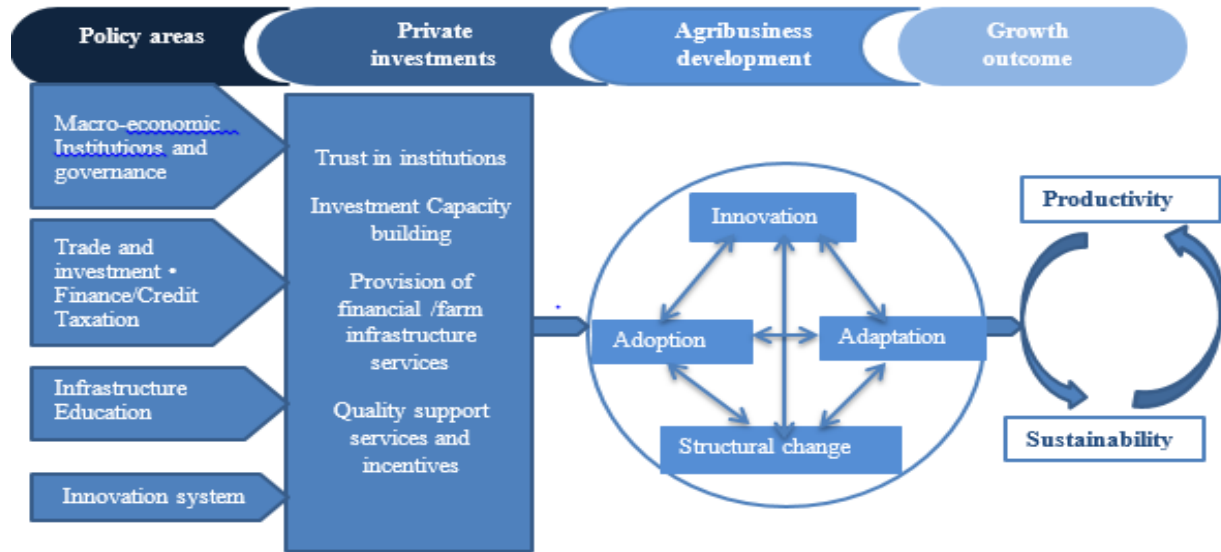
In the context of policies (Figure 3), private investment and smallholder farmers' production and productivity synergy, cooperatives, and farmer groups have been instrumental (Harwig, 2019; Hanns R. Neumann Stiftung, 2018; Ruben et al., 2018; IDH the sustainable trade initiative, 2015; Technoserve, 2015; IFAD, 2013). Beyond the normal functions of cooperatives in supporting farmers, to strengthen the synergy between them and private investors, they have the so-called collective reputation in contracts to deliver services acquired from private investors, such as financial services, inputs, machinery, and equipment to their members. Accordingly, performing agricultural cooperatives address the challenges facing their members, and one of the ways has been securing loans from private investors for which repayment depends largely on deductions from earnings in the following season (FAO, 2012). Farmers have been securing services from private investors through their cooperatives, largely because of the collective reputation of strong contracts governed by governmental legal frameworks, policies, regulations, laws, and laws. For example, more than seven regulatory frameworks govern the coffee sector in Tanzania. These include the 2001 Tanzania Coffee Industry Act, 2013 National Agriculture Policy, Tanzania Coffee Industry Development Strategy (2011-2021), Coffee Industry Regulations of 2013, District Council by-laws, and onset policy changes.

2. Relationship between Set Policy Change and Moral Hazard

The purpose of the government regulatory framework in cooperative-private investment synergy is to ensure that cooperative members and investors comply with the agreed conditions for continued synergy (World Bank, 2021; International Cooperative Alliance, 2020; Urassa, 2014). With specific to agriculture and cooperative development, government formulates policies for supporting members, improving marketing efficiency, and eliminating barriers to improved marketing (Ruete, 2014). The regulations also play the function of ensuring that a level playing field with other types of business organizations is guaranteed and maintained. The synergy between private investors and cooperatives and hence smallholder farmers can be particularly positive only when ethical and sustainable business principles are followed (OXFAM, 2012). Cooperatives' performance is based on collective reputation among members. Megyesi and Mike (2016) explain that a collective reputation among members is an important type of collective action to stabilize cooperative relationships among members and external stakeholders.

Reputation has long been recognized as a market force that may ensure contractual performance (Klein and Leffler, 1981). Accordingly, collective reputation assumes that the farmers in the cooperative share a common reputation, which is based on the group's past average quality and depends on the reputation of the individual (Tirole, 1996). However, moral hazard and free-riding behavior exist among farmers and hence require a regulatory framework to control such behavior. A remedy to the moral hazard and free-riding behavior problems is to invest resources in monitoring actions by using contracts that penalize dysfunctional behavior (and use the information in the contract (Holmstrom, 1979). However, onset changes in the regulatory framework may ameliorate moral hazard behavior among farmers, resulting in the collapse of cooperatives because the reputation of these cooperatives sits on the collective thoughts and feelings of the members (Deloitte, 2016). In addition, private investors may incur losses because cooperatives fail to pay back loans or any services provided. This study postulates that on-set changes in the regulatory framework of the coffee sector in Tanzania in 2017/2018 created loopholes for coffee farmers to practice moral hazard in a prior-established synergy between cooperatives and private investors, which aimed to enhance productivity and sustainability among smallholder farmers. After the 2017/18 coffee season, the government of Tanzania declared a new regulation for coffee marketing aimed at improving marketing efficiency.

One of the key parameters was cooperative, being the sole collector of coffee from farmers, unlike in the previous season, where cooperatives, farmer groups, and individual traders were equally allowed to collect or buy coffee directly from farmers, the policy change mandated cooperatives to collect coffee from farmers solely. In this regard, the study aimed to answer the following policy questions: Do changes in the regulatory framework ameliorate moral hazard behavior among coffee farmers? Second, to what extent do changes in policies and regulations destabilize private-farmers investment synergy? In particular, moral hazard is defined as a situation in which a contractual relationship suffers from an onset regulatory framework due to the behavior of one or both contractual parties being able to shirk the contract in a way that alters the expected payout (Liang and Coble, 2009). According to Holmstrom (1979), moral hazard results in the worst performance when collective rents depend on individuals' hidden actions. Moral hazard arises when monitoring is not fully implemented to detect who fails to comply with contracts because there is no longer a lawful path to monitoring or reforms made to some organizations changing their structures (Liang and Coble, 2009; Ozanne et al., 2001). For example, one of the changes was that all farmer groups operated as a cooperative, and no private trader was allowed to buy coffee directly from farmers. Such changes may create opportunistic behavior among coffee farmers because of the possibility of being obliged to comply with the prior contractual arrangement.

Opportunistic behavior due to an incomplete contract enforcement environment, such as policy change, is a risk in many economic transactions leading to unfulfilled contracts (De Janvry and Elisabeth, 2007). Scholars have identified sources of moral hazard and free-riding behaviors in farmers/cooperative and private investors relationships including asymmetric information and idiosyncratic (Arouna et al., 2021; Bonroy et al., 2018; Merel et al., 2015; Castriota and Delmastro, 2015; Fares and Orozco, 2014; Ashraf et al., 2009; Fares, 2009; Cinyabuguma et al., 2004). To our knowledge, little is known about the extent to which changes in the regulatory framework promote moral hazards among farmers. Under the 2017/18 government directives towards coffee marketing, existing farmer groups were obliged to change their structures and became cooperatives with no transformation process. Private investors who had invested in coffee quality improvement by establishing central pulpery units for selected farmer groups were prohibited from buying coffee directly from farmers. Prior to changes, some of the investor-farmer groups' synergy was as follows: first, supplying inputs to farmers through their groups and deductions to be made in the following harvest season. Second, farmer groups and cooperatives secured coffee processing units on contractual arrangements that allowed farmers to pay back the next coffee sales. Third, private investors provided other support, such as transportation of inputs to reach farmers, with the expectation that cooperatives will process coffee at their processing plants.

3. Methodology

Setting and Data: Data collection and analysis hinge on the government policy changes on coffee marketing in the 2017/2018 coffee season by considering before and after the changes. In 2017/18, the government of Tanzania changed its coffee marketing policy whereby it was meant to improve coffee marketing efficiency.

Such changes provided a plausible variation that helped identify before and after data useful in analyzing the impact of such changes on moral hazard and private investors-cooperatives synergy. Data for the coffee collection were collected through registers as all cooperatives keep records for several years for each farmer, and farmers have solid record keeping. Cooperatives were categorized into two groups: those with contractual arrangements and those without contracts. For this, it was possible to make a clear cut-off for the two groups. Accordingly, random assignment of treatment has become more common in social sciences, such as pilot studies of policy interventions; most real-life situations involve non-random assignment (Fredriksson and de Oliveira, 2019). Group one contains cooperatives and farmers with contractual arrangements that were hypothesized to be subjected to policy changes, creating rope holes for farmers and cooperative leaders to breach the contract because of moral hazard and free-riding behavior.

Group two included farmers whose cooperatives had no contracts and were referred to as control groups. for purpose of identifying the extent to which other factors affect selling decisions by farmers, social-economic characteristics such as age, gender, annual earnings, household size, the main source of income, religion, household size, coffee farming experience, location, extension services received, coffee variety, and access to financial services other than private companies for control factors were also collected. For the rigorous selection of the groups, matching was applied to have two groups with similar characteristics, except having a contract with private investors, denoted as 1, otherwise 0. Researchers took the precaution of having an unclear group that the choice of a comparison group may be unclear due to an ambiguous functional form in the pre-treatment trend, lack of balance in the distribution of covariates between the treatment and comparison groups, or lack of overlap (Clair and Cook, 2015). Cooperatives and farmers were purposively selected, and a total of 46 cooperatives were found to have rich data useful for analyzing the impact of public policy changes on coffee. Based on whether a cooperative had a contractual arrangement, forty-six cooperatives (25 controls and 21 treatments) were identified. Within the identified cooperatives, about 1236 (562 farmers from cooperatives with contracts with private investors and 674 from cooperatives without contracts) were selected and interviewed.

Theoretical and Empirical Framework: Let cooperatives of N members seek to gain from collective action by acquiring services from their cooperatives. To support its members, the cooperative may decide to have contractual arrangements with private investors annually. If cooperatives accept contracts with investors, it is necessary to enforce contracts and rights; (Offe, 2000) thus, synergy is established. In the coffee sector, there are two types of cooperatives: cooperatives with a contractual arrangement (CCP) and cooperatives without a contractual arrangement (CWP). To achieve DiD analysis, the level of production was assumed to be constant on average years with quantity (Q) and they are allowed to collect coffee at a cooperative regardless of whether they are members or nonmembers. The total coffee collected (Q) is the summation of coffee collected from the own cooperative (OC) and non-membership cooperative (NOC) (Q=OC +NOC). With moral hazard and free-riding behaviors, if OC provided services to her farmers in the base year, farmers would deliver less (OC) and more to NOC. However, because of trust, some farmers will maintain collecting coffee from their cooperative (OC) as per harvest (Action A), and others will deviate by collecting coffee from other cooperatives NOC (Action B).

Farmers decided that action B would cause cooperatives to fail to repay loans; hence, synergy is weakened and both cooperative and private investors may incur losses. Because of the change in coffee marketing policy, creates loopholes for farmers to not collect coffee from their respective cooperatives as the bidding principle has changed, and hence moral hazard and free-riding behavior. This study measures moral hazard behavior in terms of farmers' declined supply of coffee to their cooperatives from which they received loans in terms of inputs conditioned to payback due to coffee collection, and these cooperatives had secured funding from private investors. Following the theoretical framework stated above, the empirical strategy focuses on testing whether changes in the coffee marketing policy caused moral hazard behavior among coffee farmers, given covariates (X= (X1..........Xn)). The proxy for policy change outcome is whether a particular cooperative contracts with a private investor or not. It is assumed that these changes created a loophole for farmers to reduce the quantity of coffee collected through cooperative services.

Formalizing the Counterfactual Approach

Notation: The difference-in-differences (DID) method was found to be appropriate for impact evaluation in this study. DID explores the time dimension of the data to define the counterfactual. Data for both the treated and control groups before and after treatment are required. It estimates the impact of the intervention by comparing the difference in outcomes between the treated and control groups in some periods after the participants had completed the program with the difference that existed before the program (Wooldridge, 2005 and Gibbons et al., 2018). Compared to cross-section estimators, it has the advantage of controlling for differences in unobservable characteristics over time, that is, a specific form of selection on unobservable characteristics. For this case, two groups are indexed by treatment status T=0,1, where 0 indicates coffee farmers/cooperatives who/which are not likely to be affected by a change in policy on coffee marketing (control group) and 1 indicates farmers/cooperatives who/which are affected by the decree (treatment group).

Several scholars have applied DiD to assess the impacts of policy changes in different economic sectors (Flammer, 2014; Lemmon & Roberts, 2010). DiD follows that farmers and cooperatives data is observed in two time periods, t=0,1, where 0 is a time period before the policy change (pre-treatment) and 1 is a time period after changes (post-treatment). Let $\overline{Y}_0^T$ and $\overline{Y}_1^T$ be the average outcomes for the treatment group before and after, respectively, and $\left(\overline{Y}_1^C\right)$ and $\overline{Y}_0^C$ be the corresponding outcomes for the control group. The subscripts correspond to the time and treatment status. The difference in difference (or "double difference") estimator is defined as the difference in average outcome in the treatment group before and after treatment minus the difference in average outcome in the control group before and after treatment: it is literally a "difference of differences.

$$\text{"}\widehat{\text{ATT}} = \left(\overline{Y}_1^T - \overline{Y}_0^T\right) - \left(\overline{Y}_1^C - \overline{Y}_0^C\right) \tag{1}$$

The difference estimator for the pre-period; â which is then subtracted from the post-period estimator to obtain δ.

Modeling the Outcome: Policy changes of the year (2017/18) when new directives started to be implemented, and the variable of interest was cooperative coffee collected at both the cooperative level and farmers affected by the policy.

$$\text{Government policy on coffee marketing} \begin{cases} 0 = \text{before policy change (2017/18)} \\ 1 = \text{after policy change} \quad (2018/19) \end{cases} \tag{2}$$

$$\text{Government decree on coffee marketing} \begin{cases} 0 = \text{cooperatives not affected} \\ 1 = \text{cooperatives affected} \end{cases} \tag{3}$$

The outcome Yi is modeled by the following equation

$$Y_i = \alpha + \beta T_i + \gamma t_i + \rho(T_i * t_i) + \sum_{i=2}^{n} \beta_i X_i + \varepsilon_i \tag{4}$$

Where the coefficients given by α, β, γ and ρ are all unknown parameters and ε_i is a random, unobserved "error" term which contains all determinants of Yi which our model omits. By inspecting the equation, you should be able to see that the coefficients have the following interpretation

α = constant term
β_1 = treatment group-specific effect (accounting for average permanent differences between treatment and control).
β_{2-6} =, where Xi denotes other observable factors (control variables) affecting the farmers' decision to default from selling coffee to the cooperatives where they obtained inputs on loans.
γ = time trend common to the control and treatment groups
ρ = true effect of policy change

Main Assumptions
A. The "parallel trends" assumption; Difference-in-difference (DiD) estimators assume that in absence of treatment the difference between control (B) and treatment (A) groups would be constant or 'fixed' over time. Identification based on DiD relies on the parallel trends' assumption, which states that the treatment group, without the reform, would have followed the same time trend as the control group (for the outcome

variable of interest)(Fredriksson & de Oliveira, 2019). The parallel trend assumption, following Lechner (2010), can be expressed in terms of the potential outcomes:

$$E(Y_1^0 \mid D = 1) - E(Y_0^0 \mid D = 1) = \alpha + \sigma^0 + Y - \alpha - Y = \sigma^0 \tag{5}$$
$$E(Y_1^0 \mid D = 0) - E(Y_0^0 \mid D = 0) = \alpha + \sigma^0 - \alpha = \sigma^0 \tag{6}$$

That is, the pre and post-period differences in baseline outcomes were the same (δ^0) regardless of whether individuals were assigned to the treatment group (D=1) or control group (D=0).

B. The unobserved heterogeneity is time-invariant and is canceled out by comparing the before and after situations (Wooldridge, 2005).

4. Results and Discussion

Impact of Government Policy Change on Coffee Farmers' Reputation to Cooperatives Coffee Collection at Cooperative: The review revealed that before 2018, coffee marketing was largely dominated by farmer groups, who sold coffee to private traders. After the 2017/2018 coffee season, the cooperatives became the sole collectors of coffee from farmers, resulting in the dissolution of all farmer groups, and private investors were restricted from direct contact with coffee farmers. In this regard, private investors who had provided loans and other production and marketing facilities remained uncertain, as farmers with moral hazard behavior were considered to have good chances of loan repayment, which was set to be done during coffee collection. In the early season of coffee farming, different companies and financial institutions contracted farmer groups and supplied different services such as inputs and money for operations. Subsequently, farmers received such inputs and were obliged to collect and sell coffee through groups. Results (Table 2) reveal the coffee collection trend of some cooperatives that experienced a huge decline in coffee collection compared to previous years and the projection. Table 2 indicates that changes in the coffee collection at the cooperative level were observed with an increase in the quantity of coffee at the cooperative that had no contract with private investors, whereas cooperatives that had contractual arrangements experienced a decline in the coffee collection. For confirming the parallel trends assumption, before policy changes, the coffee collection was not statistically different from zero. As it is indicated in Table 2, cooperatives with contractual arrangements used to collect more coffee compared to cooperatives without contractual arrangements.

With a mean difference of approximately 5,143 kg before baseline (first point for parallel trends assumption) and 4,766 kg (at baseline). However, after the policy changes, coffee collection at cooperatives with contractual arrangements declined significantly, reducing the capacity of these cooperatives to pay back loans from private investors. As indicated (Table 2), coffee collection declined by 43%, whereas cooperatives without contracts experienced an increase in the coffee collection by 25%. Generally, the onset of changes in coffee marketing created a moral hazard among coffee farmers, whereby cooperatives that had served their members with inputs and other services, such as processing, experienced a huge decline in the collection of coffee on an average of 21,826 kg. Cooperatives that had not provided inputs experienced an average increase in the coffee collection of 11 and 215 kg. This implies that farmers with loans from their respective cooperatives decided to sell coffee through other cooperatives, leading to their cooperatives failing to pay back loans from private investors. Based on the DID approach, policy changes negatively impacted cooperatives with contracts with private investors by an average treatment effect on the treated (ATT) of 33,040 kg. This has resulted in these cooperatives failing to repay loans from private companies and other financial institutions. For example, it was found that cooperatives had planned to deduct TZS 256 per kilogram for loan repayment and other operations costs, then, given ATT of 33, 040 kg, it implies such cooperatives lost about TZS 8, 458,240. The results are in line with those of Bachmann et al. (2019), who found that because of moral hazard behavior, farmers supplied low-quality milk due to adulteration stemming from the malpractices of some upstream milk producers.

Table 1: Difference in Difference Results at Cooperative Level

	2016/17 (Parallel trend point	2017/18 Before the enactment of the decree	After change	Difference	% Change in coffee collection	P Value (DID)
Treated	61,488	50,150	28,325	-21,826	-43.	
Control	56,345	45,385	56,600	11,215	25	
Difference	5,143	4,766	-28,275	**-33,040**		0.000***
P Value (parallel trend pre and baseline data 0.1842						

Impact of Change in Coffee Marketing Policy on Central Pulpery Unit (CPU): In Arabica coffee processing, central pulse units (CPU) have the potential to increase quality and hence price. Table 2 indicates that approximately 47% of the survey cooperatives were found to have CPUs. However, some cooperatives processed less coffee at their CPUs, as farmers-maintained processing coffee at their homes. For example, one of the cooperatives in the Mbinga district in the Ruvuma region, in the 2019/2020 season, processed only approximately 11% of coffee at the CPU. Key informant interviews revealed that, in the Rungwe district in the Mbeya region, all available CPUs were functional. According to the Rungwe district coffee inspector, there were nine redundant CPUs before 2018; six CPUs were functioning and owned by private companies. After the decree by the government prohibiting these companies from buying coffee at the farm gate, all the CPUs were grounded. In Mbeya DC, 13 CPUs were available, all functioning; in Ileje in Songwe district, six CPUs were available, two functional, and four CPUs required maintenance. In Mbozi District, approximately 108 CPUs were largely owned by private traders. Cooperatives hire them during harvest. However, approximately 60% of CPUs were not used because cooperatives failed to agree with their owners.

Table 2: Availability and Status of Central Puperly Unit (CPU)

Region	District	Total CPUs	Functioning
Mbeya	Rungwe	9	0
	Mbeya TC	13	13
Songwe	Mbozi	108	43
	Ileje	6	2
Ruvuma	Mbinga	24	24
	Nyasa	27	27

Furthermore, during 2017/2018, when the government restricted private buyers from purchasing coffee directly from farmers, farmers did not realize the price differences between coffees processed at CPUs and those processed at home. As a result, farmers have opted to process coffee at home. Other contributing factors include the fact that some cooperatives had a few members, and hence, per day collection of cherry is not sufficient to support the utilization of available CPUs. The challenges remain in the modality taken by cooperatives in terms of disaggregating prices according to whether coffee is CPUs or HP and cooperative leaders had been mixing in paying farmers, which means farmers were paid blanket prices, regardless of where they had processed their coffee.

Econometrics Results on the Impact of Policy Change on Moral Hazard Behavior: The results for DiD OLS model (Table 3) reveal the estimate of DID (Average Treatment effect on the Treated (ATT) is -24.6 kg of coffee parchment and is significant at 5% level. In other words, changes in coffee marketing policy caused the moral hazard behavior of decreasing the quantity of coffee collected from the respective cooperatives by 24.6 kg of coffee parchment over 1 year. Further, the interaction between treatment on treated and time significantly influenced farmers to reduce the quantity of coffee collected to their respective cooperatives by -8.4 kg coffee parchment relative to coffee farmers whose cooperatives had no contract private investors. However, some covariates, such as a cooperative with a CPU for coffee processing and average distance to the cooperative office, were cofounders. This implies that such covariates were found to influence farmers' decisions to default, from collecting their coffee to the respective cooperatives. This implies that the availability of CPU influenced farmers to be more morally obligated to their cooperatives relative to their counterparts.

Table 3: Econometric Results: Impact of Government Decree on Moral Hazard among Coffee Farmers

Variables	Coefficients	Pr(>|t|)
A: Impact of policy change on moral hazard among coffee farmers		
Average Treatment Effect on the Treated (ATT)	-24.6	0.000***
Time	-2.3	0.6204
Policy change*Time	-8.4	0.0585*
B: Farming practice		
Coffee farm size	-0.025	0.1625
Cost of input used	0.174	0.157
Coffee varieties	0.361	0.414
Cooperative own Central Pulpery Unit (CPU)	0.046	0.000***
C: Socioeconomic variables		
Household head education level (years)	0.167	0.445
Marital status	−0.011	0.183
Household size	0.024	0.873
Age of the household head	0.309	0.334
Distance to the coffee collection center	−0.003	0.852
Distance to Cooperative office	−0.002	0.011*
Income from other sources (TZS)	0.026	0.438
Relative/friend with cooperative leaders	0.037	0.344
Constant	-57.14	0.000***

*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$, R^2=63, F-statistic: 18.23 p-value: 0.000***

5. Conclusion and Recommendations

Coordination of economic activities can be achieved through different means, and one is a collective reputation in coffee marketing. Through an in-depth econometric analysis of cooperative-based data and household survey data, it was found that the 2017/2018 government decree on coffee marketing ameliorated the moral hazard among farmers due to repayment loans. At the cooperative level, the decree impacted the decline in coffee collection with an average treatment effect on the treated (ATT) of about 33,040 kg, while at the farmer level; farmers reduced the collection of coffee with ATT of around 24 kg. In addition, because of these changes, some central pulpery units were found to be non-functional, while others were under-utilized. In this regard, such moral hazard behavior among coffee farmers destabilizes cooperatives as well as the existing synergy between private investors, since the reputation of these cooperatives sits on the collective thoughts and feelings of the members. It is recommended that before policy or any institutional change, it is important to consider strategies and paths to reduce the moral hazard and free-riding behaviors of any stakeholder to improve market efficiency. For the coffee sector, this would include restricting cooperatives from receiving coffee from non-member farmers. The government must consider having an effective institutional/policy change mechanism, in particular having a preparatory stage for policy change, to ensure that all contracts that have to be affected by such changes are reinforced properly to reduce unnecessary losses for any actor in the value chain. The government can facilitate or mediate disputes related to investments in agriculture, provide administrative support, and help negotiate compensation.

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Stronger Digital Leadership for Greater Business Strategy: A Study Using Mixed Methods

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Abstract: This study analyzes the influence of Digital Leadership (DL) on Digital Business Strategy (DBS) in an organization as an activity with a digital systems mindset even though it does not only use digital technology when implementing it. The research model was tested on a multinational company in the field of computer technology and information systems in Indonesia, headquartered in Japan, and has a long history of advocating personal and environmental harmony. A survey given to respondents in the category of senior positions representing the company is one of the strengths of this research. To carry out the analysis, the survey was processed using mixed methods that combine qualitative and quantitative approaches. The results show DL has a significant influence on DBS and this DL and DBS evaluation model can be used by organizations that want to assess their DL and DBS, as a basic reference to review governance, policies, and business strategies that support competitiveness and business sustainability. Further research can explore indicators of digital leadership and digital business strategy in this study according to the locus and character of the unit of analysis and the role of government regulation as one of the external parties supporting the company's business.

Keywords: *Business strategy, Competitiveness, Digital leadership, Governance, Meso level.*

1. Introduction

The word *digital* has been used more and more frequently in recent years. Especially, when the world is experiencing the Covid-19 outbreak which requires us to keep physical distance from each other for almost two years and forces us to use digital technology to conduct daily activities. Studying and exploring digitalization and its benefits for business growth and the environment is always interesting. In the September 2019 issue of the Forbes.com website, 70% of the digital transformations conducted by companies have failed. Companies that experience failure in conducting digital transformation encounter obstacles. On the other hand, one of McKinsey's April 2020 surveys in Europe revealed that around 70% of executives from countries such as Austria, Germany, and Switzerland said the 2019 Coronavirus disease (Covid-19) pandemic allowed their digital transformation to accelerate. This shows that companies need to see digital leadership and business strategy through internal organs of the company as revenue generators and run the business well. Looking back over almost two decades ago, some examples of how business is done over the internet and have transformed entire industries by themselves or are more likely to cooperate with their competitors in an all-digital way are given by Tapscott (1994, 2014). Tapscott's all-digital approach is in line with Teece (2017) which sees companies across all industries embracing internet-based digitalization strategies to expand or enhance their business. Cotarelo et al. (2018) also reveal that the internet can be used as a worldwide sales channel to address scarce resources and foreign obligations, and accelerate internationalization (Arenius et al., 2006).

The use of the internet is certainly inseparable from information and communication technology (ICT) devices that run concurrently. Clementine et al. (2016) reveal that the advancement of ICT in any country requires expertise to use highly technical tools effectively. The advancement of ICT has accelerated the growth of society 5.0, a vision of a society where the virtual and physical worlds are increasingly connected. The presence of digital technology in society 5.0 is integrated with people's lives, so we need to improve our abilities and skills as one of the supporting factors for the economic growth of the area where we live. In our research, digital meaning is in the context of digital systems that make small changes in one way and can result in other changes. The change occurs either when there is a change or there is no sudden change in something else, then one of the values changes to the other. The way digital system changes work does not occur in the analog system concept where a small change in one thing implies a small change in another (Kernighan, 2017). The business operation gap between the analog and digital worlds can be bridged by companies through intelligent document processing, with humans in the circle (Choy et al., 2022). AlNuaimi, et al. (2022) revealed many organizations failed with digital transformation because they started with

technological change without developing a coherent digital strategy and plan. According to Cennamo, et al. (2020), the spread and influence of digital technology have enabled important transformations to occur in corporate processes, structures, roles, and interactions. They revealed that digital transformation is not only a traditional IT back-end process.

But also influences the organization as a whole, including entrepreneurial, innovation, and governance processes as well as redefining strategy. The strategy related to the digitalization context in this research is called a digital business strategy (DBS) which can help company policies be implemented to achieve company goals through the influence of digital leadership (DL) skills that exist in the organization. This study wants to see the effect of DL on DBS which can make business strategies work well. The results of the research are expected to be used as a tool for companies who want to see whether their DL and DBS are in line and can make the company's business governance grow and have a competitive advantage. The DL will be positioned as an exogenous variable and the DBS as an endogenous variable to answer the research question: How does the influence of DL on DBS make the company's business sustainable? One of the novelties of this research is DL and DBS conducted on homogeneous objects, a multinational company with a brand that has a long history and plays an important role in the ICT business in the world. Using the type of company that is classified as advanced in digitization can be a precise example. Another novelty that supports the results of the study is respondents in senior positions in all business units representing a company.

2. Literature Review

Digital Leadership: Regarding the role of leadership in organizations, Hesselbein, et al. (2009) revealed that leaders at all levels should focus on their organization in terms of its capabilities, not its structure. The relationship between leadership and digitalization in research conducted by Auvinen, et al. (2019) shows data on emphasizing the presence of a leader (in any way) as important for followers to feel led (see for example Gabriel, 2015). So, instead of building a leadership influence for good organizational governance, digital platforms only serve as a communication tool for leadership work related to strategy narratives. Therefore, according to him, for now, more traditional leadership practices that involve face-to-face presence and interaction have value for followers. This is evidenced by the echoing statement of an experienced practitioner who was involved in the research: 'What I see going on around me has made me even more convinced that presence and face-to-face interaction are paramount to leadership. It cannot be just social media and Skype alone. A study on digitization and leadership that adopts the perspective of macro and micro analysis has been carried out by Cortellazzo et al. (2019). From a micro perspective, according to their research, the context of digitization and leadership is classified into four categories based on whether the research focuses on the following: the relationship between e-leaders and organizations and how leaders adopt technology to solve complex organizational problems.

The impact of digital technology on leadership ethics and also the use of digital technology to influence social movements by leaders. Meanwhile, from the study side, microanalysis is classified into three different categories, depending on whether they focus on: the increasing complexity of the C-level role; necessary skills for e-leaders; and practice to lead virtual teams effectively. Looking at the synthesis of research on leadership and digitalization, then our study sees a gap, where the problem to be investigated in the research focuses on the meso (organizational) level that combines macro and micro (individual) perspectives and also the use of the term 'e' as electronic-versus digital, thus adding a novelty in research and studies related to the topic of digital leadership. This research selects previous studies related to leadership and digitalization in business conducted by the MIT Sloan Management Review with Deloitte for five years (Kane et al., 2019) as indicators of digital leadership variable as follow: **(a)** transformative vision, **(b)** forward-looking perspective, **(c)** digital literacy, and **(d)** adaptability. The indicators are new skills that differentiate Digital leadership from traditional ones as a result of digital disruption. The MIT Sloan Management Review with Deloitte surveyed more than 20,000 business executives, managers, and analysts worldwide to understand the challenges and opportunities associated with digital transformation over a long period (2014-2019), and this is one of our considerations for using these indicators in this research.

Digital Business Strategy: The most profitable alternative business strategy must be selected and decided by the organization (David, 2017). According to them, this is done because no organization has unlimited resources, so strategy formulation decisions bind the organization to certain products, markets, resources, and technologies over a long time. For better or worse, strategic decisions have large multifunctional consequences and lasting effects on organizations. In this regard, top managers have the best perspective to fully understand the consequences of strategy formulation decisions; they have the authority to use the necessary resources for profitable strategy implementation. David also revealed that strategy determines long-term competitive advantage. The basic tenet of good strategy is about the whole company and not just individuals, so a strategic plan needs to involve the entire management team working together to think about the industry.

Competitors, opportunities, and value chain, and finally make some choices about positioning and direction. Then, the team needs to develop implications for further action (Magretta, 2012). From a question-and-answer session with Michael Porter regarding his concept of competition and strategy, Magretta writes that so many managers confuse operational effectiveness with strategy. According to Ross, et al. (2017) operations and strategy are in line, where companies that cannot carry out their business activities or enterprise capabilities will not be able to provide reliable operations, thus they will not be able to compete digitally. Furthermore, a strategy based on digital solutions is changing what companies sell, meaning companies seek to integrate diverse products and services into solutions, to improve products and services with information and expertise that helps solve customer problems, and adds value throughout the product and service life cycle. Over time, digital solutions can transform a company's business model by shifting its revenue stream base from transactional sales to value-laden, sophisticated offerings that generate recurring revenue.

In addition, Correani, et al. (2020) specifically revealed that digital strategy formulation refers to the determination of guiding policies for value creation and appropriation by utilizing digital technology to achieve long-term goals. It includes factors related to the external environment, the potential of the technology in the current competitive scenario, and the evolution of the market. These factors are in line with the concept of business sustainability, and Wheelen (2018) revealed that there was a time when the word *sustainability* was used to describe competitive advantage, not the environment. But currently, according to him, the term is also reflected in the company's 'triple bottom line' annual report, namely Traditional Profit/Loss, People Accounts (organizational social responsibility), and Planet Accounts (organizational environmental responsibility), where according to Wheelen it was first used by John Elkington in 1994. Regarding digital leadership which requires new skills the organization must have, then the same goes for its business strategy. The formulation of a digital strategy must identify the elements of the company's business model that must be modified according to the new strategy (Correani et al., 2020).

The indicators of the digital business strategy variable used in this research adapt findings from their study. The following are indicators of the digital business strategy variable used in this research:
  a. Scope,
  b. Data sources (External & Internal),
  c. Data Platform,
  d. People,
  e. Partner,
  f. Artificial Intelligence (AI)
  g. Information & Knowledge,
  h. Processes & Procedures,
  i. Transformed Activities,
  j. Tasks & Services, and
  k. Customers.

Concept Operationalization: From the digital leadership and digital business strategy variables in an organization that has been described above, through this study the indicators of each variable were developed into questionnaire items that can be distributed evenly to all senior positions in all business units in the company. This is to keep the narrative meaning of each statement in the questionnaire in line with the

concept of variables in this research model. In addition, it also aims to compile survey items that will be given to respondents according to the research method used. The literature review is carried out carefully and focuses on the organizational level (meso). Focusing on the meso level also considers Anderson (2019) which reveals that the leader's position has responsibility for the business unit or the entire business so they must understand and be committed to higher organizational goals including the organization's vision, mission, and strategy.

3. Methodology

This type of research is qualitative research with quantitative data processing (mixed methods research). The quantitative method in this study uses PLS-SEM (Partial Least Squares–Structural Equation Modeling). The data processing technique was carried out descriptively and inferentially using the SmartPLS3 software. The company that becomes the research locus is a multi-national company domiciled in DKI Jakarta, Indonesia. A total of 42 senior positions (C-level, Department Head, Manager, and Senior Staff) from all divisions in the company participated in filling out the questionnaire. The survey was conducted taking into account the common method bias and the use of statistical controls to overcome the shortcomings. Qualitative data on digital leadership and digital business strategy variables as well as indicators were obtained through discussions with various related parties. Through this qualitative approach, the study of this research becomes deeper.

4. Results and Discussion

Descriptive analysis is done by looking at the Mean value of the indicators that describe the situation of digital leadership and digital business strategy in the company. The range of Mean values used is from 'Very Low' to 'Very High' with an interval scale of 1 to 5. The results of Mean values for Digital Leadership (DL) and digital business strategy (DBS) indicators show a high category (Table 1). Starting from the DL variable, the indicator with the highest Mean value (4.072) in Digital Leadership is digital literacy. That is, understanding technology is the most important skill to be able to grow the skill of digital leadership in the company. Digital literacy according to Kane, et al. (2019) is not core technical skills like programming or data science, but it is the knowledge or skills in the digital field in general. The high-level digital understanding that the company has through the Mean value above shows the company understands how technology works or not, thus enabling the company to make the right decisions in an uncertain environment. According to Bawden (2001), the term 'digital literacy' has been used by many writers throughout the 1990s (about 30 years ago).

So, the term digital literacy is not something new to us now. A study by Kozanoglu, et al. (2021) revealed a concept of digital literacy shows that digital literacy is not only the interaction between employees and technology but also employees through their practices during digital transformation. According to him, there are many digital literacy challenges, such as assessment and integration into several company systems including human resource management. And once these challenges are resolved, digitally literate employees can bring many benefits to digital transformation projects in organizations. By the order of the Mean values of the indicators for digital leadership in Table 1, digital literacy is considered a trigger for other indicators in digital leadership. That is, triggering indicators of transformative vision, adaptability, and having a forward-looking vision that makes the company responsively lead the business to environmental changes. This also allows the company to change its business direction when technology and markets develop unexpectedly toward digital business strategy and business sustainability.

Table 1: The Mean Value Test Results

Variables	Indicators	Mean Value	Criteria	Order based on Research Result
Digital Leadership (DL)	Transformative Vision	4.012	High	2
	Forward-looking perspective	3.816	High	4
	Digital literacy	4.072	High	1
	Adaptability	3.841	High	3
Digital Business Strategy (DBS)	Scope	3.834	High	2
	Data Sources (External and Internal)	3.500	High	8
	Data Platform	3.655	High	7
	People	3.750	High	5
	Partner	3.679	High	6
	Artificial Intelligence (AI)	4.000	High	1
	Information and Knowledge	3.786	High	4
	Processes and Procedures	3.357	Medium	9
	Transformed Activities, Tasks, and Services	3.833	High	3
	Customers	4.000	High	1

The next analysis is the Mean value of indicators in the DBS variable. Referring to Table 1, the highest indicators of DBS are Artificial Intelligence (AI) and also Customers, with the same Mean value of 4,000 each. Because these two indicators have the same Mean value, this study looks at AI and Customers are two indicators that become one and inseparable and act as the main indicator of the company's DBS. Correani, et al. (2020) revealed that the formulation of a digital (business) strategy refers to the establishment of policy guidelines for the creation and allocation of value by utilizing digital technology. Then, the high Mean value of AI and Customers in Table 1 support the digital business model by defining the AI strategies and capabilities needed to turn data into information and, ultimately, generate knowledge that can be used to create value for customers. Customers according to Correani et al. (2020) are from internal and external companies. The view on the effects of Artificial Intelligence (AI) systems that affect the important nature of customer relationship management (CRM) has been expressed by Libai, et al. (2020). Their study sees that AI-CRM systems can be of concern and consideration for both regulators and human rights groups. For example, it was revealed that the World Economic Forum might become one of the events for developing an AI-CRM system, identifying problems, and making recommendations on how to address the new customer relationship environment we all face. Regarding the use of data owned by organizations, the idea from Libai, et al. (2020) briefly states that acquiring and maintaining a more diverse data set will be a significant source of AI-CRM competitive advantage.

The Mean Values of AI and also Customers in Table 1 show how these indicators have become a key business strategy of the company in today's rapidly growing digital environment. After AI and Customers, the other indicators of DBS in a row according to Table 1 are Scope, Transformed Activities, Tasks, and Services, Information and Knowledge, People, Partners, Data Platforms, Data Sources (External and Internal), and the last is Processes and Procedures. As the name implies, these indicators play a complementary role while building partnerships with stakeholders to drive the company's business processes. The Mean value in Table 1 also correlates with the company's business which has been running for more than 30 years in Indonesia and has made a significant contribution to digital innovation and cybersecurity through its products and services for commercial and social customers. Recently, one of the real efforts of the company related to AI and customers is to provide products with High-Performance Computing (HPC) technology to help organizations/companies that need very fast and reliable IT infrastructure to process, store and analyze large amounts of data to one step ahead of the competition and optimize business processes. Next, we conduct an inferential analysis to see the influence of digital leadership (DL) on digital business strategy (DBS) and answer research questions and draw conclusions. Using the PLS-SEM method, in this study convergent validity was determined by considering Hair, et al. (2021) and Memon, et al. (2020) who do not encourage researchers to justify their sample size by relying solely on statistical programs but also consider the target population, such as sample research population.
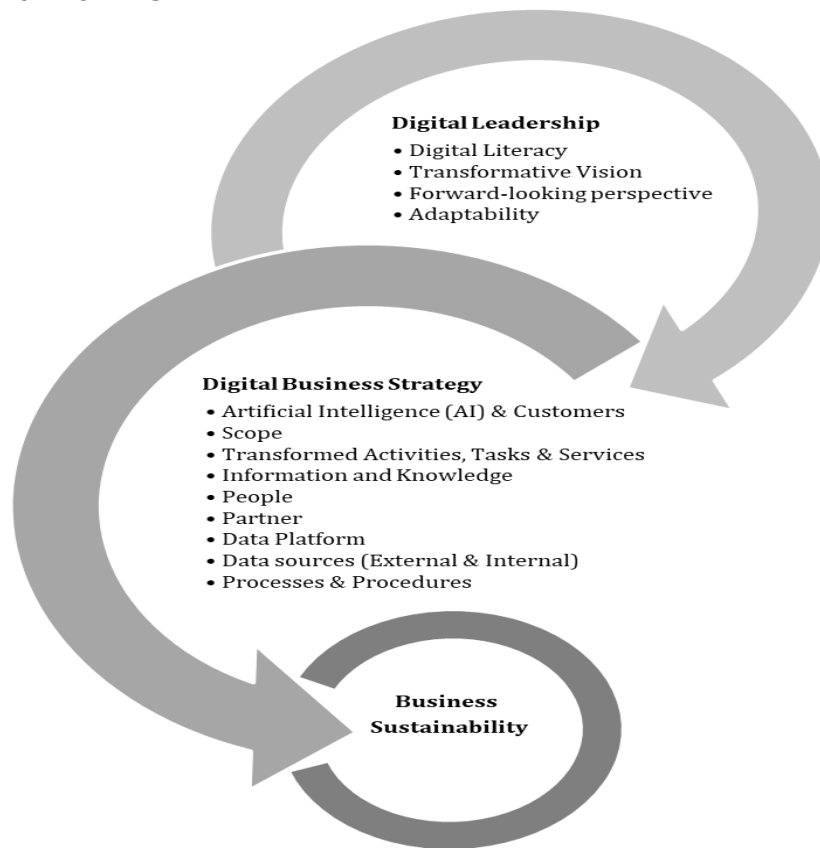
Table 2: The Inner Model Test Results

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	Significance (T >= 1.96)	P Value	Significance (p < 0.05)
DL → DBS	0.291	0.278	0.146	1.989	+	0.047	+

Through a series of procedures and data processing according to the requirements of the PLS-SEM method, the results of hypothesis testing indicate that there is a significant influence between DL and DBS. The inner weight coefficient value is 0.291 with a T-statistic value of 1.989 and a P-value of 0.047 as shown in Table 2. This number indicates that the higher the digital leadership, the higher the digital business strategy, and vice versa. This shows that the company's digital leadership skills have a strong influence on the digital business strategy being implemented. The significant effect of DL on DBS from the inferential analysis can also be seen in the business condition of the company. As a multinational company that has been in business for almost 30 years in Indonesia and a subsidiary of a global company that has its headquarters in Japan which has also been operating for more than 87 years, it is one of the most admired companies in the world and is included in the Global 500 company group (Fortune, 2022).

The age of business operations is relatively long, and the company shows good performance. Then the indicators of the digital leadership and digital business strategy variables used in this study show their role. The company's digital leadership also leads to strategies for achieving sustainable living through digital innovation for the benefit of business, society at large, and the planet. Being domiciled in Jakarta, the province with the highest digital index number in Indonesia (East Venture, 2021), is also one of the things that support the company's business strategy. We also held discussions with the company and other parties related to the context of human resources, leadership, digitalization, and business strategy. This activity demonstrates the company's role in supporting digital transformation for social (other than commercial) purposes. Helping regions that are not yet 'literate' in ICT and digitalization, in collaboration with local governments.

Indonesia is one example of the company's activities that support the welfare of the community and the environment. Indirectly, it practices the company's philosophy of operating ethics and how to treat each other, suppliers, customers, employees, people, and the planet. The company's digital leadership and business strategy can also be seen from these activities. Refers to the meaning of digital in the context of digital systems that make small changes in one way and can lead to changes in other and even produce better and more value than it has been seen in this study through the significant influence between digital leadership and digital business strategy in the company. All indicators in DL and DBS are the driving force for the company's business. Here DL is a form of leadership owned by the company (meso level) running a business with the support of people within the company (micro level). Through understanding and commitment at the micro level –people within the organization– DL and DBS towards higher corporate goals including the organization's vision, mission, and strategy, DL and DBS in the meso level -the company-are also strong. Together with other support systems such as a healthy company's financial condition, DL and BS will support the company's business to run well.

Figure 1: The DL on DBS

Digital Leadership
- Digital Literacy
- Transformative Vision
- Forward-looking perspective
- Adaptability

Digital Business Strategy
- Artificial Intelligence (AI) & Customers
- Scope
- Transformed Activities, Tasks & Services
- Information and Knowledge
- People
- Partner
- Data Platform
- Data sources (External & Internal)
- Processes & Procedures

Business Sustainability

This study reveals that the digital system mindset does not only use digital technology when implementing it, but Digital literacy as the main indicator of DL as well as AI and customers as the main indicator of DBS shows that facilities and infrastructure for information, communication, and technology (ICT) are needed. Budgets for facilities and infrastructure are prepared along with future business strategies. But without realizing it, companies often make business strategies that only generate profits in a certain time and ignore the benefits that will be obtained in the future. In today's digital era, companies can no longer carry out such a strategy, but must also pay attention to sustainable success through DL and DBS indicators. According to the studies by David (2017) and Correani, et al. (2020) in the literature review above, strategy can determine long-term success and competitive advantage, as well as business sustainability as disclosed in Wheelen (2018). To make it easier to see the indicators and the relationship between DL and DBS in the company according to the results of our research, these are arranged in Figure 1. The order of indicators of DL and DBS is arranged based on the Mean value, starting from the highest to the lowest. Digital literacy is the strongest indicator of DL while Artificial Intelligence (AI) and Customers is the strongest indicator of DBS. From the DL circle, there is an arrow toward the DBS circle, which means that DL has an impact on DBS. Next, from the DBS circle, there is an arrow pointing to the 'Sustainability' circle.

This model has been proven through our research at the company and the sustainability of the company is proven by its longevity the business and its successful headquarters in a global position. This can be seen in terms of leadership and strategy from the headquarter which is also passed down to its subsidiaries throughout the world even though there are diverse cultures between countries where they operate. As we stated in the introduction to this paper, some companies have failed and succeeded in carrying out their digital transformation, so the indicators of the DL and DBS variables that have been tested on the company that is the object of this research can use to evaluate those failures and successes.

5. Conclusion & Recommendations

The significant influence of Digital Leadership on Digital Business Strategy shows that having these skills is a valuable asset for the company toward a competitive and sustainable business. In this company, Digital literacy is the highest indicator of the digital leadership variable. AI and Customers are the highest indicators of digital business strategy variables. Looking at the high Mean value of the indicators of Digital Leadership and Digital Business Strategy variables also a significant effect between the two variables, in line with the company profile and this is a good example. This company's success is expected to impact private organizations and state-owned enterprises, especially for implementing indicators in Digital Leadership and Digital Business Strategy when they want to compete digitally. As part of a sustainable national economic system, the company's policies and efforts towards the development of human resources and infrastructure that promote Digital Leadership and Digital Business Strategy may require external support, such as the government's policy and real role in providing secure digital infrastructure and digital space.

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Shareholder Activism and Firm Performance: A Review

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Abstract: The paper aims to review the literature on the influence of Shareholder Activism on firm performance including share price, financial performance, corporate governance, and innovation. Many studies have been reviewed to find the relationship between the identified constructs. For this purpose, the review methodology has been used to go through the literature relating to the impact of Shareholder Activism on Firm Performance over the period ranging from 2000 to 2021. Furthermore, the study concludes that shareholder activism significantly affects how well a company performs. However, studies claim that shareholder activism has a favorable impact on a company's performance, while other scholars claim that it has a detrimental effect. However, some researchers have found that the influence is minimal. Moreover, firm performance can be enhanced if a firm's management works in collaboration with activist investors.

Keywords: *Shareholder Activism, Share price, financial performance, corporate governance, R&D, Innovation.*

1. Introduction

A surge in shareholder activism has been a hallmark of investor capitalism (Greenwood & Schor, 2009; Useem, 1996; Kahan & Rock, 2009; Renneboog & Szilagyi, 2011). Investor disagreements with managers to express their unhappiness can range from formal actions to change corporate direction and performance (Westphal & Bednar, 2008; David & Hillman, 2007; Song & Szewczyk, 2003; David, Hitt, & Gimeno, 2001). In studies of corporate governance, the topic of shareholder intervention in the management of firms remained divisive. To explain how shareholder activism activities affect the development of the corporate governance framework and strategy, the research typically takes a shareholder activism stance (Westphal & Bednar, 2008). When shareholders actively engage in managerial activities when they are unhappy with the direction that the firm, they are associated with is headed, this is referred to as "shareholder activism." (Judge, Gaur, & Muller-Kahle, 2010); Tirole, 2006; Gillan & Starks, 2007). It is suggested that because ownership and control are separated, this participatory behavior can assist reduce agency costs (Faccio, Marchica, & Mura, 2011; Bebchuk, 2005). For instance, significant shareholder intervention, according to Jie & Youzhi, (2011), helps lower managerial misconduct. Furthermore, while the focus shareholders may weigh the advantages and disadvantages of their involvement, particularly because it would be made public, other shareholders may also stand to benefit from it (Goranova & Ryan, 2014). The longevity of a business depends on organizational performance. Organizational performance is widely acknowledged as a crucial outcome variable of interest in business and management research.

With applications spanning from human resources and marketing to operations management-related strategy, IT, and global business (Hult, et al., 2008; March & Sutton, 1997). The primary goal of the study in each of these domains is to provide information on how companies can improve, shape, and maintain their performance, hence assisting enterprises in becoming more successful and surviving (Bititci, Garengo, Dörfler, & Nudurupati, 2012; March & Sutton, 1997). A combination of non-monetary and financial measures that may be used to assess how successfully a firm's aims and targets have been reached have been collectively referred to as organizational performance (Kapłan & Norton, 1992). Shareholder activism found to have a favorable impact on organizational performance in several types of research (Artiga González & Calluzzo, 2019; Stathopoulos & Voulgaris, 2016; Kedia, Starks, & Wang, 2016). Conversely, other studies argued that shareholder activism has a detrimental effect (Bainbridge, 2006; Guimaraes, Leal, Wanke, & Morey, 2019; Bliss, Molk, & Partnoy, 2019; Edmans, Fang, & Zur, 2013). While the little empirical study has been done on how shareholder activism affects corporate success (Shingade & Rastogi, 2019). The following academics have conducted an extensive study to examine the connections between share price, financial performance, corporate governance, and innovation and how shareholder activism affects organizational success (Goranova, Abouk, Nystrom, & Soofi, 2017; Klein & Zur, 2009; Lhuillery, 2011; Del Guercio, Seery, & Woidtke, 2008). Furthermore, recent investigations have produced mixed results. To evaluate the effects of

shareholder activism on innovation, financial performance, corporate governance, and share price performance, this study analyzed the literature, especially from the past twenty years.

2. Literature Review

The impact of shareholder activism on corporate success and return to shareholders has been the subject of conflicting research in the past. (Gillan & Starks, 2000) Researchers looked at voting outcomes and short-term market responses depending on offer types and sponsor identification since shareholder activism in the United States is done by submitting shareholder proposals. Their research demonstrates that the topics covered by the proposals and the sponsors' names affect stockholder voting and stock price reaction. Less specific suggestions are made by active investors, which have a somewhat favorable effect on stock prices. A proposal supported by fund managers or legally organized groups of investors, on the other hand, receives significantly more votes and seems to have a small but discernible negative influence on stock prices. Some authors contend that hedge fund activism gives management a check on how well the investors' wealth is being handled in addition to enhancing the profitability and stock price of the firms it targets (Brav, Jiang, Partnoy, & Thomas, 2008). But research shows that there is only a tenuous connection between share price performance and shareholder activism (Klein & Zur, 2009; Bizjak & Marquette, 1998; Ferri & Sandino, 2009; Carleton, Nelson, & Weisbach, 1998; Karpoff, Malatesta, & Walkling, 1996; Faleye, 2004). This article estimates how corporate governance policies affect shareholders' wealth and long-term results in S&P 1500 companies.

On the day of the vote, approving a corporate governance provision yields high returns of 1.3 % and an implied stock price per policy of 2.8 % (Cuñat, Gine, & Guadalupe, 2012). Azizan & Ameer (2012) examined Malaysian family-owned and -operated firms' 2005–2009 performance as well as the results of shareholder activism led by the Minority Shareholder Watchdog Group (MSWG). According to the study, involvement in the MSWG resulted in aggregate high returns of at least 0.5 percent for the selected family businesses during the [-1, 0] and [0, +1] event periods. In the course of the initial Schedule 13D filing date, which gives investors the right to request that a company's management be changed, Klein & Zur (2009) researched the effects of shareholder activists with an entrepreneurial mindset. It was discovered that there was a favorable market response close to the date of filing. The activist investors were successful in enforcing certain reforms at the targeted businesses, which allowed them to repurchase their shares, reduce the CEO's compensation, and begin paying dividends, thereby resolving the issue of free cash flow. Additionally, the targeted firms outperformed the non-targeted ones in respect of cash flow and earnings (Ameer & Abdul Rahman, 2009). Del Guercio, Seery, & Woidtke, (2008) confirmed that "just say no" activism activities, which entail refusing to elect a director as a means of protest, result in an improvement in operating performance. Other researchers that have studied long-term performance enhancement agree with it (Kim, Sung, & Wei, 2017; Nesbitt, 1994; Opler & Sokobin, 1995; Renneboog & Szilagyi, 2011).

Analyzed the off-market purchases made public by institutional investors from abroad in Korea using an event study technique. According to studies, target corporations are more inclined to reduce cash holdings, increase debt ratios, and closely tie dividend payouts and repurchases to changes in profits. It is found that activism is linked with stock price enhancement and that these market price reactions are large in the case of investors belonging to the country where activism is prevalent, despite the lack of proof that long-term performance has improved. According to Fox & Lorsch (2012), Activist shareholders are referred to be shortsighted activists since they prioritize short-term gains above long-term value. In their study of the organizational and stock price performance over the course of the five years since it was revealed that there had been an activist involvement in the USA, Bebchuk, Brav, & Jiang (2015) found no evidence to support such a claim. Although the impact of shareholder activism, whether that term is used generally or narrowly, on the performance of targeted businesses is unknown, activist investors have increasingly been successful in changing corporations' corporate governance (Thomas & Cotter, 2007; Ertimur, Ferri, & Stubben, 2010). Agrawal, (2012) asserts that a decrease in labor union/management disputes is associated with AFL activism. CIOs which has a more immediate effect on organizational stakeholders.

Another type of shareholder activism is the "Wall Street Walk," or voting with one's feet (Gillan & Starks, 2007; Admati & Pfleiderer, 2005). According to past studies, management has been positively impacted by

the "Wall Street Walk"(Admati & Pfleiderer, 2005; Parrino, Sias, & Starks, 2003). Managers alter their choices to appease shareholders because they are aware of the potential negative effects that disgruntled shareholders' actions could have on the share price. Admati & Pfleiderer, (2005) refer to this type of monitoring as "jawboning" behavior, which is associated with "behind-the-scenes" talks. Parrino, Sias, & Starks, (2003) additionally, provide evidence of how institutional investors have successfully used "voting with their feet" to pressure boards of directors of the firms to dismiss underperforming CEOs. According to Ameer & Abdul Rahman (2009), the targeted companies where the Minority Shareholder Watchdog Group (MSWG) interfered. In comparison to improvements in corporate governance, merger/acquisition and sale agreements exhibited much stronger abnormal returns.

This demonstrates that the market responds more significantly during the period when the MSWG targets businesses engaging in activities that may have an impact on investors' wealth, for example, a merger or disposal. Kellermanns, Walter, Lechner, & Floyd (2005) assert that the strategic consensus of significant shareholders makes it simpler for managers and major shareholders to cooperate to acquire the expertise and resources required for devising and adopting certain creative initiatives (Markoczy, 2001). Given the collaborative character of innovation, strategic consensus can also be considered as being advantageous for enhancing a firm's performance in this area (Subramaniam & Youndt, 2005). However, it is challenging to establish a positive relationship with management and prohibits them from discussing and exchanging expertise due to the strategic meddling of significant owners (Ruigrok, Peck, & Keller, 2006). Because of this, there is less sharing of creative information, which is damaging to businesses seeking to make the greatest innovative decisions (Zhang, Yang, Xu, & Zhu, 2018).

3. Methodology

The study's goal is to ascertain how shareholder activism impacts a company's ability to succeed. Share price, financial performance, corporate governance, and innovation have been chosen as the criteria to measure firm performance. A detailed assessment of the literature has been conducted to determine the relationship between shareholder activism and business performance. Due to this, it is challenging to stay abreast of best practices, stay current with research, and evaluate the body of evidence in a given field of business-related research. As a result, the literature review is now a technique of research that is more successful than ever (Snyder, 2019). Several databases, including Google Scholar, Science Direct, Wiley Online Library, Elsevier, etc., were used to find studies on shareholder activism and organizational performance. Measures of organizational performance can be subjective or objective. The only characteristics that this study addresses are those that are objectively related to organizational performance, such as share price, financial performance, corporate governance, and innovation. Keywords including shareholder activism, share price, financial performance, corporate governance, innovation, and organizational performance have been used to discover research publications on the subject. Moreover, Shareholder activism, share price, financial performance, corporate governance, and innovation are keywords for this paper. The study mainly looked at articles that were released between 2000 and 2021.

4. Results and Discussion

Shareholder Activism and Share Price: There are at least two main types of shareholder activism, as well as several variations. Performance-driven activism, typically spearheaded by hedge funds, concentrates on promoting significant changes in company strategy to raise the stock price of a company. On the other side, corporate governance activism concentrates on alterations to a public company's governance structures, CEO salary, and social policy. Sometimes, the second kind of activism serves as a means of achieving the first (Rose & Sharfman, 2014).

Positive: Barber (2007) states that for the 115 enterprises those CalPERS targeted, the announcement had a very positive 0.23 percent reaction. While Klein & Zur, (2009) show a high return of 5.7 percent over the 36 days before the filing dates for 134 target enterprises. Brav, Jiang, Partnoy, & Thomas (2008) exhibited an anomalous monthly return of 5.10 percent on average for 1,059 companies that 236 different hedge fund activists targeted. According to research, the average returns on odd stocks can range from 3.61 percent to 8.68 percent (Greenwood & Schor, 2009; Becht, Franks, Grant, & Wagner, 2017; Brav, Jiang, & Kim, 2009;

Boyson & Mooradian, 2011), using somewhat different datasets. These findings pertain to American businesses, but they are consistent with research on hedge fund activism from the UK (Becht, Franks, Mayer, & Rossi, 2010), Japan (Hamao, Kutsuna, & Matos, 2011), and Germany (Bessler, Drobetz , & Holler, 2015). The activism of Hedge funds prevailing in the US and abroad has been examined by Becht, Franks, Grant, & Wagner (2017), who present largely consistent findings.

In their sample, the average abnormal stock return for American targets of hedge fund activism is 6.97 percent, compared to 6.4 percent and 4.8 percent for European and Asian targets, respectively. These results strongly imply that the values of the companies that hedge fund activists have targeted have generally increased. The study discovered that clustered activism results in increased profitability and anomalous returns using sizable data on shareholder activism activities at U.S. companies (Artiga González & Calluzzo, 2019). This study employed a sample of 385 firm-year data from French firms that were part of the SBF 120 index between 2008 and 2012. There is shareholder activism, and it is good for the performance of the market (Bouaziz, Fakhfakh, & Jarboui, 2020). By bridging these boundaries and looking at information on 1,324 American hedge fund activist investors' initiatives between 2000 and 2016, it was found that there was a definite trade-off connected with hedge fund activism: Benefits are temporary and shareholder-focused, as evidenced by rapid increases in market price and profits (DesJardine & Durand, 2020). After activist intention has been disclosed, stock selection is thought to account for 13.4 percent of average returns, compared to 74.8 percent of predicted value creation.

Negative: Prevost & Rao (2000) over two days, right before the public pension funds sent their votes on 22 proposals made between 1988 and 1994, indicated a statistically significant negative impact on stock market price return. According to (Caton, Goh, & Donaldson, 2001) statistically noteworthy was the average five-day return of -0.91 percent for the 108 companies on the Council of Institutional Investor's Focus List of possible target organizations. According to Renneboog & Szilagyi (2011), For 1,510 shareholder proposals submitted between 1996 and 2005, there was a strong announcement return of 0.36 % in the four days that followed the proxy mailing or first public announcement. Cuñat, Gine, & Guadalupe (2012) the use of a regression discontinuity technique reveals that investor proposal that is successful offer an exceptional return of 1.30 percent compared to those that are unsuccessful. Following the declaration of activism, the investigation discovered a statistically significant abnormal decline in share values (Bliss, Molk, & Partnoy, 2019). The long-term effects of activism are examined in this study (Guimaraes, Leal, Wanke, & Morey, 2019) on 194 Brazilian listed businesses in 2010, 2012, and 2014. The findings demonstrate a negative correlation between the activism index and the efficiency ratings.

Insignificant: Choose an empirical approach similar to what Barber & Lyon (1997) have suggested, Song & Szewczyk (2003) found that companies on the Council of Institutional Investors' Focus list have negligible long-term gains. For shareholder motions and debates, to compute long-run abnormal returns, only Prevost & Rao (2000), Barber (2007), Del Guercio & Hawkins (1999), used techniques comparable to those in Barber & Lyon, (1997). These three investigations all produce insignificant findings. Brav, Jiang, Partnoy, & Thomas, (2008) and Clifford, (2008) have found long-term benefits, albeit their results are not significant statistically. Although the empirical results did not provide any proof of a major influence of shareholder activism on a firm's performance, Filatotchev & Dotsenko (2015) claim that in the UK, different investor-type suggestions have noticeably different partial effects of aberrant stock-market returns. According to the statistics, shareholder activism's ability to cause aberrant share prices is significantly influenced by the form, kind, and content of investor suggestions (Filatotchev & Dotsenko, 2015). The findings demonstrate that the activism of shareholders, as implied by shareholder recommendations, has no influence on the performance of the stock market (Bouaziz, Fakhfakh, & Jarboui, 2020).

Shareholder Activism and Financial Performance: Activist investors' primary goal has been to focus on the underperforming firms in their portfolio and exert pressure on the leadership of such companies to perform better (Gillan & Starks, 2000). Financial in nature is the most typical performance problem raised by activist shareholders. For instance, it has been demonstrated that hedge fund activism boosts financial operating performance (Brav, Jiang, Partnoy, & Thomas, 2008). However, there are opposite findings as well (Guimaraes, Leal, Wanke, & Morey, 2019).

Positive: It is possible to gauge the impact of the Sha index through returns, profitability, or increased valuation (DeHaan, Larcker, & McClure, 2019; Brav, Jiang, Partnoy, & Thomas, 2008; Carleton, Nelson, & Weisbach, 1998; Wahal, 1996). Accounting ratios, which include return ratios, net profit margin, and operating profit margin, are among the most often used measurement sets. According to research, the involvement of activist investors tends to sway opinions regarding irrational investments and enhance the firm's chances of success (Richardson, 2006). Boyson & Mooradian, (2011) examined the impact of hedge fund activism over a longer time span, from 1994 to 2005, and discovered a link between activism and the company's successful operational performance. Operating performance for businesses targeted by activist investors significantly improves, according to Kedia, Starks, & Wang, (2016). This study is conducted using secondary financial information for 236 manufacturing companies from India that were gathered from the CAPITALINE repository over five years. A company's success can benefit from shareholder activism in the short run, per a study by DesJardine and Durand (2020). Over time, it is linked to a drop in operational performance. DesJardine & Durand, (2020) shareholder activism boosts a company's success in the near run. It is connected to a longer-term decline in operational performance. The study sampled data from 37 publicly traded companies from FY2017 to FY2020. At least one act of action took place at the chosen firms between 2017 and 2020.

Negative: In some cases, targeted businesses' revenue is lower than that of untargeted businesses (Wahal, 1996; Opler & Sokobin, 1995). Fox & Lorsch (2012) identified activist shareholders as shortsighted activists because they emphasize short-term profits over long-term value. The company's size and market value dictate how shareholder activism impacts operational performance (DeHaan, Larcker, & McClure, 2019). Businesses with a market value under $40 million do have good long-term returns, even while larger companies do not notably experience the effects of activism on returns. This study creates an efficiency score focused on company governance, shareholding structure, and financial metrics of organizations using a sample of 194 businesses in 2010, 2012, and 2014. Guimaraes, Leal, Wanke, & Morey (2019) Results showed a negative correlation between the efficiency scores and the activism index. The information demonstrates that advocacy has minimal effect on the efficiency rankings of Brazilian-listed companies. According to the research, estimations of profitability for operational profit margin and market worth are dramatically reduced as a result of shareholder activism (Shingade, Rastogi, Bhimavarapu, & Chirputkar, 2022).

Insignificant: Smith (1996) decided that the target companies of the CalPERS fund's operating performance had not been negatively impacted. Del Guercio & Hawkins (1999) carried out interviews with the fund managers of large, active pension funds to evaluate the shareholder proposals presented by these funds. They discovered no connection between both activism and operational effectiveness. Accordingly, Strickland, Wiles, & Zenner (1996) found no evidence to suggest a connection between shareholder proposals and results of operations as measured by return on assets. In their 1999 study, Del Guercio & Hawkins, (1999) evaluated the operational return on assets and sales from one year to the next when a business received a shareholder proposal for the first time. They find that the changes are not as large as those for a group of control firms that are comparable in size, industry, and prior earnings performance. There is no statistically significant difference in any of the comparisons. Smith (1996), Karpoff, Malatesta, & Walkling (1996), Strickland, Wiles, & Zenner (1996), Wahal (1996) also reported observations of a similar nature. These findings are subject to isolated exceptions. According to Prevost & Rao (2000), when activist investors target a company just once, the impact on operating performance is statistically inconsequential; On the other hand, the impact is significant over a longer length of time when a firm is repeatedly attacked.

Shareholder Activism and Corporate Governance: Corporate performance and governance have been the target of shareholder activism (Davis & Thompson, 1994; Dimitrov & Jain, 2011). Activists "have grabbed the middle ring and are controlling the main event," according to some observers (Duhigg, 2007). The pledge to hold corporate executives accountable to the shareholders of their companies (Bebchuk, 2005; Thomas & Cotter, 2007) and stakeholders (Reid & Toffel, 2009; Rehbein, Waddock, & Graves, 2004) has been personified by shareholder activism, a social movement that sprang from the outlier behaviors of corporate gadflies (Davis & Thompson, 1994; Kahan & Rock, 2009).

Positive: For studies on activism involving hedge funds and governance, agency theory provides a unifying theoretical framework (Karpoff, Malatesta, & Walkling, 1996; Greenwood & Schor, 2009; Chen, 2004; Gillan &

Starks, 2007; Edmans, Fang, & Zur, 2013; Brav, Jiang, Partnoy, & Thomas, 2008). Shareholders (principals) must monitor and reward managers (agents) for them to enhance investor stock value (Alchian & Demsetz, 1972; Beatty & Zajac, 1994; Jensen & Meckling, 2019). Bebchuk, (2005) promotes shareholder engagement in the corporate governance of target firms and asserts that shareholder ideas may greatly lessen agency problems associated with executive choices. The importance of shareholder activism in identifying bad management is demonstrated by the fact that activist shareholders are more inclined to seek businesses with poor management (Ertimur, Ferri, & Muslu, 2011; Bradley, Brav, Goldstein, & Jiang, 2010; Cziraki, Renneboog, & Szilagyi, 2010). Generally speaking, shareholder activism seems to function as a useful monitoring tool through which the effectiveness of corporate governance can be enhanced within the company and frequently has a favorable influence on the company's success and decision-making (Stathopoulos & Voulgaris, 2016). Corporate executives must deal with the increasingly complex and wide-ranging shareholder demands for better corporate governance, asset restructuring, (Brav, Jiang, Partnoy, & Thomas, 2008; Klein & Zur, 2011), and board representation (Gillan & Starks, 2007; Westphal & Bednar, 2008; Gantchev, 2013).

Negative: This viewpoint asserts that corporate governance or company performance is being criticized by activists (Becht, Franks, Mayer, & Rossi, 2009). As per the notion of visible proxy resolutions, managerial ownership has a negative link with the activism of shareholders (Bizjak & Marquette, 1998; Carleton, Nelson, & Weisbach, 1998; Faleye, 2004; Renneboog & Szilagyi, 2011). According to several studies, proposal submissions are inefficient as a tool for agency oversight and may even be harmful to the corporate governance of the targeted firms. Prevost & Rao, (2000) argue that institutional activists usually attempt to have off-camera conversations with management first and only resort to making suggestions as the last option. Frequently praised for promoting shareholder interests are public pension funds, however, Woidtke (2002) says that cultural and political pressures may cause them to shift their attention away from assisting the leadership team and increasing economic value. This argument is also supported by Lipton, (2002). Stout, (2007) employs comparable lines of argumentation in the legal literature to refute Bebchuk's (2005) support for shareholder engagement. Goranova, Abouk, Nystrom, & Soofi (2017) collected S&P 500 samples from the years 2000 to 2005. Both facets of shareholder activism are negatively connected to corporate governance, claims a paper. This is because organizations with sound governance are more inclined to quietly respond to activist requests and have few chances to be victimized by shareholders.

Shareholder Activism and R&D & Innovation: According to agency theory, managers who seek steady, short-term increases in performance are less inclined to spend long-term assets on firm innovation efforts than significant shareholders who typically anticipate a rise in future returns from such investments (Hill & Snell, 1988). To decrease agency issues and integrate managers' objectives with those of shareholders, this argument claims that firms wanting to improve their innovation efforts should create suitable external or internal governance systems (Jensen & Meckling, 2019; Lhuillery, 2011; Mishra, 2011).

Positive: In agreement with this, the shareholder activism perspective (Kellermanns, Walter, Lechner, & Floyd, 2005; Lhuillery, 2011) recommends that to enhance company innovation activities and protect their interests, significant shareholders may utilize their advantage of share ownership to engage in management operations. For instance, they may get in touch with managers directly by attending crucial meetings and corporate events, or they could get in touch with managers covertly by using the board of directors (Hope, 2013). David, Hitt, & Gimeno, (2001) hypothesized that R&D inputs are positively correlated with activism. R&D inputs operate as a buffer between activism and its effects on R&D outputs. Less aggressive interventions may boost managers' confidence when making innovation decisions and encourage them to be more proactive when identifying and seizing potential innovation opportunities (Grosfeld, 2009). According to Kellermanns, Walter, Lechner, & Floyd, (2005), It is simpler for managers and large shareholders to collaborate and work together to obtain the information and resources required for creating and implementing specific innovation projects thanks to the strategic consensus of large owners (Markoczy, 2001). Given the collaborative character of innovation, the strategic agreement may also be considered advantageous for enhancing a company's success in this area (Subramaniam & Youndt, 2005).

Negative: Significant shareholders' influence on company strategy decisions may lead to inadequate decision-making regarding innovation. If the firm's managers simply agreed to their demands, the adversarial

strategic intervention might unintentionally raise the risk that the managers would make poor decisions in terms of innovation. Large shareholders may not fully understand the current situation and future direction of the company with which they are affiliated (Jie & Youzhi, 2011). Strategic action by large owners may limit managers' desire to innovate (Grosfeld, 2009). Moreover, Edmans, Fang, & Zur, (2013) found that the R&D of the chosen enterprises is adversely correlated with hedge fund activism. According to reaction theory, managers are more inclined to reject the participation of large shareholders and spend time or resources trying to make their involvement unsuccessful to keep their control over the allocation of resources (David & Hillman, 2007). Money that could be utilized to support innovation will be lost as a result. Additionally, it is challenging to establish a positive rapport with management and prohibits them from discussing and exchanging expertise due to the strategic meddling of significant owners (Ruigrok, Peck, & Keller, 2006). Because of this, there is less sharing of creative information, which is damaging to businesses seeking to make the greatest innovative decisions (Zhang, Yang, Xu, & Zhu, 2018).

5. Conclusion and Recommendations

The paper concludes that shareholder activism significantly impacts the firm performance. However, studies report that shareholder activism positively influences the firm performance while other studies show that shareholder activism has a negative impact, whereas some studies have come up with the conclusion of insignificant impact. Furthermore, the collaboration of the firm's management and activist investors can take the business toward success. The current has focused on the objective organizational performance measure. Moreover, future studies can inculcate perceived (subjective) organizational performance factors such as leadership, employee motivation, organizational culture, knowledge management, etc. It is recommended that studies are required to find how to manage shareholder discontent to have better business success. Finding the relationship between shareholders' activism and corporate performance is crucial to ensuring the success and growth of the target companies. Leadership teams and practitioners require such knowledge when developing strategies for firm performance, and anticipating adjustments in the shareholder activism episode.

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The Effect of Halal Label Perception, Lifestyle and Quality of Service on Purchase Decision at Starbucks Coffee in Indonesia

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Abstract: This study intends to ascertain and assess how Starbucks coffee customers' perceptions of the halal label, lifestyle, and service quality affect their purchasing decisions. Given that the majority of people in Indonesia are Muslims and that buying a product with a halal label necessitates considering that, as well as the fact that the subject product comes from a non-Muslim nation, this study was conducted. Data were collected from a sample of 252 persons on the island of Java using a questionnaire, and the data were then analyzed using PLS. The results show that the perception of halal labeling, lifestyle and service quality has an impact on purchase decisions. This indicates that the sample used in the study will consume or purchase Starbucks goods if they are halal in compliance with the halal label on the product. Additionally, Starbucks customers tend to be individuals who lead an active lifestyle. Some customers of Starbucks are accustomed to receiving high-quality service along with their purchases; if this trend continues, the sample that will be used in this study won't purchase Starbucks goods.

Keywords: *Perception of Halal Label, Lifestyle, Quality of Service, Purchase Decision.*

1. Introduction

Currently, almost all people in Indonesia, young and old, like to drink coffee and this is in line with the rapid emergence of coffee shops. Numerous studies particularly detail the various aspects, such as lifestyle circumstances and health issues that affect a person's choice and intention to drink coffee (Najib et al., 2020). Chairy (2017) investigates how the intention to consume coffee beverages is impacted by a number of independent variables, including spirituality, environmental care, health care, and lifestyle. The discussion's findings indicate that spirituality and way of life have a favorable and significant impact on the intention to drink coffee. Associated with spirituality, when someone makes a purchase decision for halal products, most of them are related to the behavior and perceptions of individuals or consumers. Amalia, et al. (2020) show that behavior, subjective standards, and perceived behavioral control all have a significant role in purchasing decisions. Other consumer perception characteristics, such as religiosity, are also acknowledged by some academics. Haque et al. (2018) and Gard and Joshi (2018) According to Awan, et al. (2015), Nurhayati and Hendar (2020), as well as Gojali and Asih (2020), consumer worry over the product's halalness influences purchase decisions. Every coffee shop that offers its clients services cannot be divorced from the quality of service, which is equally significant as a factor in the likelihood that customers will make purchases. Over the past few decades, service quality measurement techniques and their dimensions have grown significantly in the marketing literature.

This is because scholars and practitioners have focused on the given service quality Yarimoglu (2014). Shahin (2006) further found that regular staff contact and experience evaluation are essential for enhancing service quality. One of the well-known coffee shops in Indonesia that already has a halal label at the coffee shop is Starbucks coffee shop. This coffee shop was established in Indonesia in 2002, but the shop was declared halal by the LPPOM MUI only in 2014. Starbucks was recorded by the MUI as the first coffee shop to become a halal coffee shop in Indonesia. Starbucks coffee shops are indeed favored by consumers, especially in the younger segment, which dominates over who comes to Starbucks coffee shops. With the halal certification that has been owned by Starbucks, it is possible to influence a Muslim consumer to like or often buy coffee at Starbucks. According to research by Dwik and Samboro (2019), halal labels have an advantage over other labels when influencing consumers' purchase decisions. This is also supported by another study conducted by Andriansyah, et al. (2017), in their research results halal label variables, brand image and quality have a significant effect on beverage purchasing decisions. Similarly, Bashir et al. (2019), other things make consumers like and buy Starbucks coffee because apart from having a halal certificate, someone buying a drink is also based on lifestyle, many people like modern-style products. In the present period, lifestyle is crucial and frequently serves as a platform for showcasing one's personality (Purwaningdyah & Hendayana, 2021). Drinking beverages like coffee has evolved into one of the demands or ways of life in today's culture.

For young individuals to unwind or hang out with pals, coffee shops are a favorite hangout. Parents, businesspeople, and customers of all ages frequently meet with colleagues or discuss business strategies in coffee shops (Djamaludin & Silmie 2021; Bistara & Kartini, 2018; Rivera et al., 2017). In addition, Kalra (2011) explains that drinking coffee and eating have become an integral part of the customer's lifestyle, information about quality, good service, well-cooked food and no dirty interior, service quality influences consumers' intentions. Furthermore, another study by Ramseook-Munhurrun (2012) argues that high-quality services are important for the success of organizations so that they can survive and strengthen their business. This study also discovered a substantial link between service quality and intentions to engage in repressive conduct. Because the quality of service is important and becomes the main factor for a restaurant. The same thing was also expressed by Ratnasari and Harti (2016), Marantina, et al. (2017), Ismayanti and Purwanti (2017), who said in their research that product quality, price, location and service quality have a positive effect on purchasing decisions at coffee shops. Further study is therefore required to ascertain how respondents react to lifestyle, halal labeling, and service quality and their impact on customer purchases at Starbucks coffee shops in Indonesia based on the occurrence. Therefore, research on this subject is still uncommon in Indonesia, particularly the view of halal labels associated with foreign licensed beverage products, in this example America.

2. Literature Review and Hypothesis Development

Buying Decision: The stage at which consumers decide whether or not to make a purchase is known as the purchase decision, according to Oentoro (2012). The following decisions will need to be made by the buyer when deciding whether or not to purchase: a). Product-Related Decisions: This decision is one that consumers make based on their desire to make a purchase and alternative factors. b). Product Form Decisions: With this choice, customers can choose a product depending on factors like size, style, design, and more. c). Brand-Related Decisions: In this decision, customers pick a brand by weighing their options from several brands. Marketers working for the company need to understand which competing brands consumers can choose from and why they ultimately choose a brand. d). Sales-Related Decisions: The consumer chooses where he will purchase the product in this decision. e). Decisions relating to the Number of Products: This choice relates to the quantity of goods that customers desire to purchase. In the meanwhile, businesses must understand how many products must be offered in response to how many consumer requests there are. f). Decisions Concerning Purchase Timing: This choice concerns the timing of a consumer's purchase of a good while considering several aspects, such as the accessibility of finances for the transaction: Decisions Concerning Payment Methods: The consumer's choice of payment method for the purchased item is described in this decision.

Halal Label Perception: For consumers to consume the product, halal labeling informs them that the product is actually halal and that the ingredients it contains do not contain anything that is prohibited by sharia. As a result, products without a halal label are assumed to either not have gained clearance from the designated institution (LPPOM-MUI) to be categorized as halal products or to be in question regarding their halalness. Business people who want to market to this market segment might use the halal rules to their advantage. The following components can be used to determine whether a product is halal: 1) Image, 2) text, and 3) text and image combination, 4). respect to the Packaging. The halal label's presence seeks to give customers halal protection and comfort when using the product. The goal of halal certification and labeling is to promote the competitiveness of domestic goods to boost national income and to give consumers legal clarity and protection. Alim et al. (2018) published a study by Jagdish Sheth assessing the impression of halal labels using four variables, including:

Security: There is a safety component, in terms of sources/raw materials and procedures, to the way people (Muslim customers) choose, arrange, and interpret data regarding halal food products. B. Religious values: Procedures wherein people (Muslim customers) choose, arrange, and evaluate data regarding halal food products that incorporate elements of religious values. Reliability refers to the likelihood of failure or product damage within a specific time frame. C. Health: There is a health component to the method by which people (Muslim customers) choose, arrange, and analyze data on halal food products. D. Specificity/exclusivity: Halal food goods must be distinguished from haram food products through the process by which people (Muslim consumers) choose, arrange, and interpret information about halal food items. This separation effort is made

to prevent direct contact with haram items, reduce the chance of contamination, and guarantee that the administration of halal food products is in line with Muslim consumers' perceptions.

H₁: Perception of Halal Label affects purchasing decisions at Starbucks coffee shops.

Lifestyle. The act of change can be viewed as a shift in daily activity that finally results in a change in way of life. Therefore, a set of actions that, at a certain time and location, have significance for both individuals and other people, such as relationships, consumption of products, entertainment, and clothes According to Kotler, a person's pattern of life in the world is shown in his work, hobbies, interests, and ideas, which are interpreted by Bob Sabran. Lifestyle refers to how an individual as a whole interacts with himself and his surroundings. A lifestyle is also defined as a person's manner of living, a way to spend money, and a way to spend time (Jamal & Sharifuddin, 2015; Meyer & Klonaridis, 2020; Muller & de, 2020; Nasution & Rossanty, 2018; Oktaniar et al., 2020; Sunaryo & Sudiro, 2017). A person's pattern of time and money management is considered their lifestyle in general. A person's consumption habits are ultimately determined by their behavior, which is influenced by their way of life. It is possible to assess a person's lifestyle using the following criteria: Engagements, Views, and Interests (Torun, 2020; Van & Surujlal, 2020).

H₂: Lifestyle affects purchasing decisions at Starbucks coffee shops.

Service Quality: According to Tjiptono and Chandra (2017), eight main dimensions are typically present in-service quality, including a). Performance (Performance), refers to a product's fundamental operating qualities, including the speed of package delivery, express delivery, the clarity and color of a TV's image, and food hygiene. inside the eatery. b). Features, or unique added qualities that can enhance the pleasure of using the product, such as complimentary beverages during flight, air conditioners in cars, and supplementary collections of different call tones for cell phones. c). The reliability of the product will increase with the likelihood of a breakdown decreasing. d). Confirmation, or the degree to which the product complies with the standards that have been established, such as the punctuality of train arrival and departure and the compatibility of shoe sizes to the relevant requirements. e). Product durability, or how long it will last before needing to be replaced. The product's durability increases with the potential for more frequent normal use. One product that frequently highlights durability as a major positioning is a battery. f). Serviceability, or how quickly and easily repairs may be made, as well as how knowledgeable and amiable the service crew. g). Aesthetics (Aesthetics), the study of how objects appear and are perceived by the five senses (taste, aroma, sound, and so on). h). Perceived quality, is determined by the reputation of the vendor and includes items like BMW automobiles, Rolex watches, Polo shirts, and Sony technological devices.

H₃: Quality of service affects purchasing decisions at Starbucks coffee shops.

3. Research Methodology

The research conducted in this study is a quantitative descriptive method using a purposive sampling technique, where those who have never consumed, Starbucks will not continue to fill out this questionnaire. The number of questionnaires was distributed to 252 people in cities on the island of Java, such as Jakarta, Bandung, Jogjakarta, Semarang and Surabaya, because these cities are big, usually there are Starbucks outlets, they consist of men and women. Data analysis in this study using SmarPLS. Here is the instrument grid.

Table 1: Measurement of Variables

Variable	Measurement	Source
Purchase decision	Decision product type, decision brand, decision time of purchase, decision on payment method	Oentoro (2012)
Perception of Halal Label	Security, religious values, health, specialty	Alim et al (2018)
Lifestyle	Activity, interest, opinion	Sunaryo & Sudiro, 2017)
Quality of service	Direct evidence, reliability, responsiveness, guarantee, empathy	Tjiptono and Chandra (2017)

4. Results and Discussion

The data collected were 252 respondents. The results of the Measurement Model (Outer Model) are as follows:

Figure 1
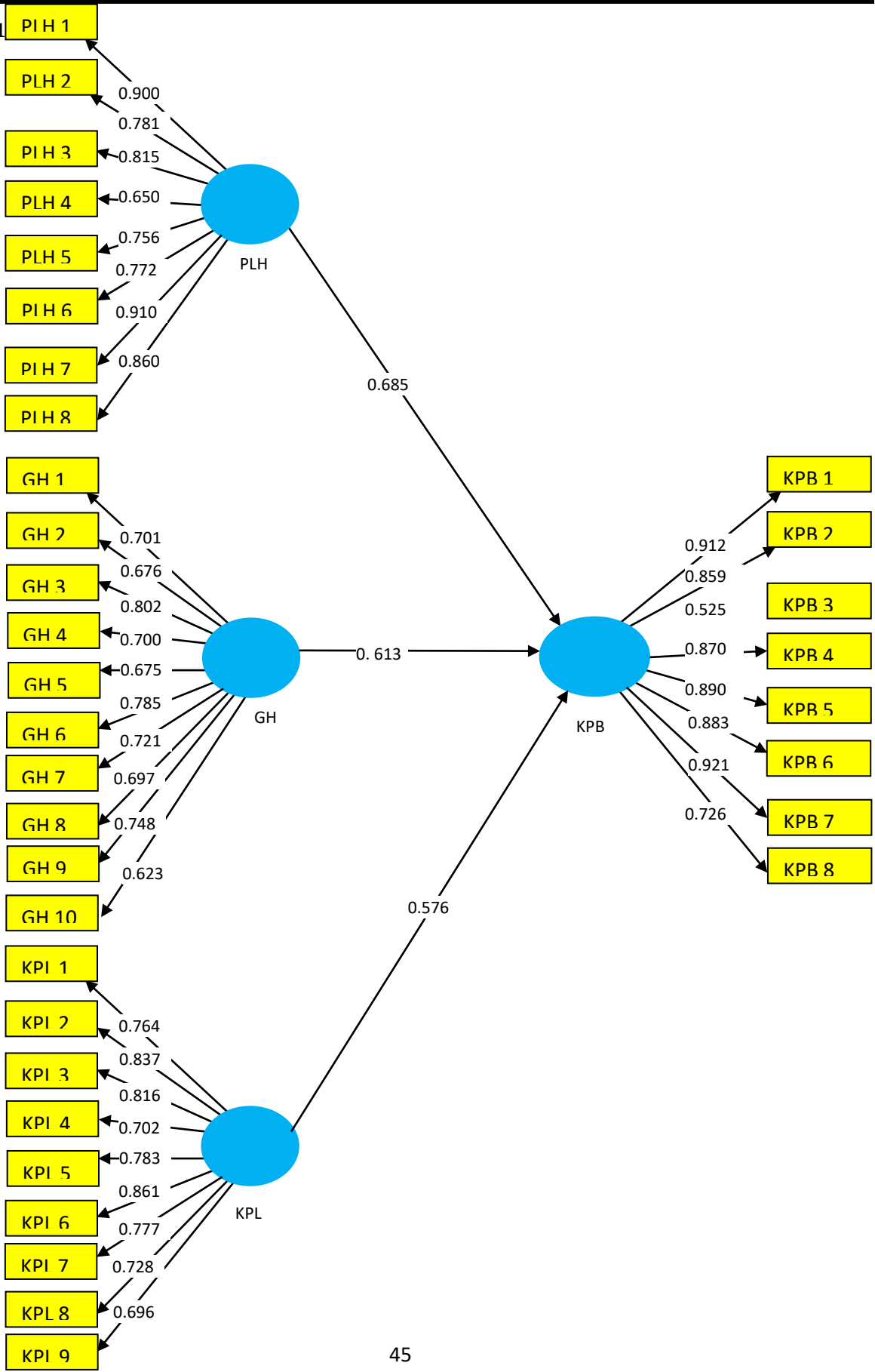
Based on the Figure above, the results can be concluded that all instruments of indicators regarding the variables of Perception of Halal Labels, Lifestyle, Quality of Service and Purchase Decisions have met the requirements and were declared valid because all factor loading values> 0.50. Likewise, for discriminant validity and convergent validity. The reliability results are very reliable, here are the results:

Table 2: Cronbach's Alpha Reliability Table

Variable	Cronbach's Alpha
Purchase Decision	0.929
Service Quality	0.926
Perception of Halal Label	0.909
Lifestyle	0.893

Table 3: T-statistics Test Results

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values
Lifestyle > Purchase Decision	0.613	5,487	0.000
Service Quality > Purchase Decision	0.576	4,567	0.000
Perception of Halal Label > Purchase Decision	0.685	5.221	0.017

The results of this study indicate that the perception of halal labels affects purchasing decisions. Perceptions of the halal label contribute to consumers making purchasing decisions at Starbucks Coffee, which states that when buying a coffee product, consumers pay attention to the halal label of the product, that the average respondent in this study responded that the perception of the halal label was: security, religion, health and specialty. Based on the results of the research that occurred, it turns out that these factors are the determining factors for consumers in determining their purchasing decisions because in this study respondents were more concerned with the halal factor in purchasing drinks at Starbucks as well as other things such as product quality and service quality on coffee purchasing decisions at the shop. Starbucks, since the halal component, make the largest overall contribution. Similarly, Bashir et al. (2019), the findings of a study done in South Africa, overseas consumers' intentions to purchase halal food products are significantly influenced by their awareness of halal. According to research done in South Africa, halal awareness significantly influences overseas consumers' intentions to purchase halal cuisine. According to Dwik and Samboro (2019) and Andriansyah et al. (2017), who claim that the perception of halal label variables in both studies has a significant influence on purchasing decisions, consumers in this study take halal labels into account.

When deciding what to buy because they have to purchase products that are guaranteed to be halal with the halal label, which helps management influence customers. According to Purwaningdyah and Hendayana (2021), a person's lifestyle can reflect, or behavior or culture that can place a person's lifestyle, and this study's findings show that there is indeed a significant influence between lifestyle and the purchase of coffee at Starbucks. This is because a person's lifestyle can reflect, or behavior or culture that can place a person's lifestyle. According to Rivera et al. (2017), some people spend more time outside the home due to obligations for work or education, so purchasing food or beverages like coffee is customarily done in coffee shops. Meanwhile, Djamaludin and Silmie (2021) claim that a person's way of life has an impact on whether or not they buy coffee drinks. The study's findings revealed a connection between gender, way of life of belief, and way of life of striving hard and consumption of instant coffee. According to the influence test findings, male gender and lifestyle preferences have an impact on how much instant coffee is consumed. Respondents are typically categorized as successful coffee consumers due to their lifestyle and need for more energy. According to the findings of the third analysis, the STARBUCKS shop's customers' decisions to buy coffee are significantly influenced by the level of service.

The initial idea put forward in this study is supported by these findings. Customers favor coffee shops with welcoming staff. Baristas also offer different coffee varieties based on what the customer wants. This demonstrates that customer service quality has a strong and considerable impact on purchasing decisions and that customers consider service quality when choosing which Starbucks outlets to buy coffee from. In this

view, it is possible to assert that service quality, as demonstrated by concrete data, dependability, responsiveness, certainty, and empathy, significantly affects consumers' decisions to buy. This occurs because customers believe that Starbucks' high level of customer service influences their choice to buy coffee from one of their retail locations. This is consistent with Tamama, et al. (2019) and Marantina, et al. (2017) Resto," both of which assert that service quality has a significant impact on purchasing decisions. In this study, it is described how the management of the quality of service applied by the coffee shop management and up to the frontline employees is done well so that it plays a crucial role in persuading someone to choose to buy halal coffee products. These findings are also consistent with Ramseook-Munhurrun (2012) argument that enterprises need to provide high-quality services to succeed and grow their businesses. This study also discovered a substantial link between service quality and intentions to engage in repressive conduct. Because a restaurant's key determining element is the quality of its service. A similar idea was also made by Ratnasari and Harti (2016) and Ismayanti and Purwanti (2017), who claimed that coffee shop purchases are positively impacted by product quality, price, location, and quality service.

5. Conclusion

Based on the data analysis and discussion of the decision to buy coffee at a Starbucks store in South Tangerang, it can be said that the perception of the halal label has an impact on customers' choices to buy coffee at Starbucks locations. This demonstrates that label perception should be taken into account along with other variables like safety, religion, health, and specificity while making beverage purchases at Starbucks locations. At Starbucks locations, coffee purchase decisions are influenced by lifestyle. Customers consider service quality to be a deciding factor when purchasing coffee at Starbucks outlets, which suggests that service quality, has an impact on customers' decisions. From the findings, it is clear that the majority of Indonesians, particularly millennials, have lifestyle factors that influence their decisions to buy Starbucks coffee. This is true even though they still consider whether or not the coffee they consume is halal because the brand they carry still has an international scent and is still imported. In addition to the services offered by Starbucks, it also affects customers' decisions to purchase coffee there because customers won't come in to buy without decent service. Given that Starbucks coffee is still relatively expensive in Indonesia, an independent variable for the price can be added for future research. to determine afterward if the cost influences whether or not Starbucks coffee is purchased.

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Podvertising: Podcast Listeners' Advertising Attitudes, Consumer Actions and Preference for Host-Read Ads

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Abstract: While comparatively few scholarly studies exist on podcast advertising, market research substantiates the effectiveness of podcast advertisements. This academic study probed podcast listeners' attitudes toward podcast advertising and motivations for consumer actions through survey research with 1714 respondents. Extending past research on attitudes toward advertising within a medium (Aam), consumer action, and listener preference for host-read podcast advertisements, this study proposes a theoretical framework that seeks to contribute to a fundamental understanding of how listeners interact with and process podcast advertising. Scale development included modifying existing scales for other media as well as original scale development using qualitative methods that were tested for validity and internal consistency. Results from the survey revealed that: (1) Podcast listeners have favorable attitudes toward podcast advertising, particularly host-read advertisements; (2) Podcast listeners are motivated by functional and socio-emotional reasons for consumer actions, which correlate with positive attitudes toward podcast advertising; and (3) The podcast consumption levels of listeners are moderate predictors of their attitudes toward podcast advertising and subsequent consumer action, while gender and age are weaker predictors.

Keywords: *Podcast advertising, advertising in a medium, attitudes toward advertising, host-read advertising, advertising consumer action.*

1. Introduction

Imagine a dedicated podcast listener enjoying the latest episode of her favorite true crime podcast. As an advertisement is about to begin, she considers skipping ahead 15 seconds, but her thumb hovers above the "skip" button as her favorite host begins an endearing story about how his toddler Owen helped cook dinner the other night using an already-prepped meal kit. No longer considering forwarding past the ad, the listener smiles, visualizing the scene and marveling at how Owen has so quickly become a toddler—it seemed only yesterday that he was still a baby! She considers purchasing a meal kit and searches for a link in the show notes. While this podcast listener installs ad blockers on her computer to avoid online advertising and pays for subscription streaming services to avoid interruptions to her broadcast content, she is still willing to listen and respond to ads on her favorite podcast. Podcast advertising is a marketing marvel that achieves higher conversion and satisfaction rates than advertising on other broadcast platforms. Few academic studies examine podcast advertising, but an abundance of market research indicates that podcasts have high conversion rates, with engaged listeners who enjoy advertisements (hereinafter referred to as ads) when regular podcast contributors incorporate personal material. While academic research on podcast listeners has been increasing, there is still limited scholarship on how these listeners interact with advertising, representing a knowledge gap.

Therefore, the goal of this study is fourfold: 1) to develop and validate scales for podcast advertising that employ both qualitative and quantitative methods for scale development, validity and internal consistency; 2) to determine the advertising attitudes of podcast listeners and examine the degree to which these listeners are influenced by ads featuring podcast hosts; 3) to understand how the consumer actions of podcast listeners correlate with their attitudes regarding podcast advertising; and 4) to explore how variables such as age, gender, and podcast consumption affect podcast advertising attitudes and consumer action. According to the findings of this study, podcast audiences attach high value to podcast advertising, particularly host-read ads, and this positive attitude correlates with increased consumer action. Results from the survey confirmed market research that indicates listeners have favorable attitudes toward podcast advertising, particularly host-read advertisements. Additionally, podcast listeners are motivated by functional and socio-emotional reasons for consumer actions, which correlate with positive attitudes toward podcast advertising. Furthermore, podcast consumption levels of listeners are stronger predictors of their attitudes toward podcast advertising and subsequent consumer action, while gender and age are weak predictors, indicating

that marketers could better target audiences based on the number of podcasts to which they regularly listen rather than more traditional demographic categories.

2. Review of the Literature

Podcast Advertising: The growth of podcast audiences is notable at a time when traditional broadcast media advertising is decreasing. Since 2018, linear radio and television advertising revenues have declined, although digital advertising mitigated industry losses (Balderston, 2020; Benes, 2020; RAB & Borrell Associates, 2020). In comparison, podcast audiences grew steadily from 2010 (when there were 27 million weekly listeners) to 2021 (when the number of weekly listeners grew to 80 million; (Edison Research, 2021a). This increase in audience members has been accompanied by a growth in advertising revenue. Although it's expensive, she knows that using the code will provide extra income for the show's host, whom she considers a friend and would like to help. The "Share of Ear," a tracking study on audio use and consumption, reports that podcasting is responsible for all of the growth in ad-supported audio (Edison Research, 2021b). Revenues from podcast ads increased 275% from 2015 to 2017 to reach $257.4 million (IAB, 2021), and an additional 48% from 2018 to 2019 to reach $708 million (IAB, 2020). Future podcast revenues have been forecasted to surpass $1 billion in 2021 and $2 billion in 2023 (IAB, 2021).

The expanding podcast advertising market is not only gaining listeners and advertisers but also effectively reaching consumers with more memorable ads. One brand recall study (Midroll Media, 2018) found superior recall rates for podcast ads (80%) compared with digital mobile ads (45%) and digital desktop ads (35%). A 2019 case study found that a podcast campaign increased unaided recall by 1,550%, and brand recall by 640% (Vetrano, 2019). While the brand lift achieved through podcast advertising varies by industry, research has shown that lift rates can exceed those of advertising in other forms of media, such as print or linear broadcast media, by a factor of 30 (Claritas, 2020). Not only do listeners recall podcast ads, but they also generally tend to respond positively and even listen actively to them (Vilceanu, Johnson, & Burns, 2021). In a study by Midroll Media (2018), 90% of the surveyed podcast listeners reported that they listened to podcast ads rather than skipping them. Once Apple introduced podcast analytics, networks confirmed that listeners were getting through 80% to 90% of any given podcast episode, and few listeners were skipping ads (Westwood One Podcasts, 2019; Mohan, 2018). After hearing podcast ads, listeners journey through the various purchase funnel stages (Nielsen, 2021; Meyers, 2020; Mancusi, 2017b; Swant, 2016).

In one study, 54% of podcast listeners reported that they were more likely to consider brands advertised on podcasts (Edison Research, 2019). In another study, 61% of those exposed to podcast ads said they were likely to purchase the advertised goods or services (Midroll Media, 2018). Even the so-called unreachable consumers, known to avoid advertising by paying for ad-free content in other media, reported that podcast ads were the best way for a brand to reach them (Edison Research, 2020c). Nearly two-thirds of frequent podcast listeners engage in product research or purchase-related behaviors as a result of advertising exposure from podcasts (Nielsen, 2021). The largest share of podcast advertising revenue comes from host-read ads and announcer-read ads, rather than from supplied ads (IAB, 2021). Host-read ads, which are native advertisements delivered by podcast hosts (IAB, 2021), have proven to be the most popular with listeners (Nielsen, 2020; Riismandel, 2020; Edison Research, 2020c; Westwood One Podcasts, 2019; Edison Research, 2021b). Next in terms of listener preferences are announcer-read ads, which are pre-produced and incorporated into podcast content, with a producer or announcer reading from a manuscript (IAB, 2021; Riismandel, 2020).

Supplied ads, which are pre-recorded advertisements provided by an agency or brand (IAB, 2020), are least preferred and twice as likely to be considered "forced" (Nielsen, 2017, p. 4). While host-read ads are the most common type of podcast ad, the percentage has been decreasing. In the first year, the IAB collected data about host-read ads, they comprised 66.9% (IAB, 2018), 66% in 2019 (IAB, 2020) and 56% in 2020 (IAB, 2021). Host-read ads are valuable because listeners perceive them as more authentic than other advertisements (Meyers, 2020; Nielsen, 2017; Freidman, 2017). The most effective podcast ads are those incorporated within the shows by the hosts themselves, leading to a greater intention to buy on the part of the listener (Meyers, 2020). Host-read podcast ads feel more personal than online videos or banner ads because podcast hosts have a unique relationship with their listeners (Why listeners respond to podcast ads, 2017). Many people

listen through headphones in a one-to-one setting, which contributes to the feeling of being involved in a conversation with the podcaster (Berry, 2016). This strengthens the impression that the listener and host have a relationship. Because the host of a show may adopt the role of a facilitator between the audience and advertisers (Vilceanu, Johnson, & Burns, 2021), host-read advertisements encourage listeners to feel connected with the host.

To perceive the host as favorably disposed toward the advertised product. Listeners trust their favorite hosts and respond to associated perceptions of intimacy and authenticity while listening to the podcasts (Regan, 2017) Listeners view hosts as authentic, feel as if they have a personal relationship with them, and trust recommendations made by the host as they would a friend's (Meyers, 2020). Consequently, an endorsement from a host makes an ad powerful (Freidman, 2017); (Mancusi, 2017a), resulting in 71% brand recall (Nielsen, 2020). For these reasons, listeners are likely to believe that recommendations by the hosts of their favorite podcasts come from personal experience (Meyers, 2020); (Why listeners respond to podcast ads, 2017). As people build an affinity with podcasts and host the sense of personal connection and trust increases. A 2020 study emphasized the trust placed in podcast hosts by listeners: "For them, a podcast host is not just a personality, but a dependable influencer" ((Riismandel, 2020, p. 1). Thus, in many respects, podcast hosts are influencers who build trust among their listeners and give valuable endorsements (Mancusi, 2017b).

Consumer Advertising Attitudes and Consumer Actions: Attitudinal advertising research offers a constructivist perspective (Heath, 2008) seeking to measure how people think or feel about – and act in response to – advertising (Aaker, 2011); (Solomon, 2013). Attitudes toward advertising (Aadv) are defined by lasting, general predispositions to respond positively or negatively to ads consistently. Advertising attitudes develop through cognition about advertising that leads to valence discrimination and ultimately, to conation (Aaker, 2011). "Liking" (a positive attitude toward advertising), or "disliking" (a negative attitude toward advertising), can be assessed by Likert-scale responses. Advertising attitudinal research is important as those who like advertising are more likely to be persuaded by it (Mehta & Purvis, 1995; Ha, 1996) and tend to demonstrate greater purchase intent (Solomon, 2013). Consumer action is direct or indirect behavior surrounding the acquisition or use of a product or service (Bagozzi, 2006), and can also be assessed in terms of intended action because the intention is a strong predictor of future behavior (Solomon, 2013). Consumers are driven to act upon advertising messages by a range of motivations, including functional motivations such as a desire for the advertised product or service, socio-emotional motivations such as the pleasure that shopping brings, and identity motivations such as a desire to purchase a product that helps consumers symbolize who they (Dittmar, Long, & Meek, 2004).

Aadv and consumer action research have examined how audiences react to the advertising in a medium (Aam) such as television (Mittal, 1994; Lynch & Stipp, 1999); print media (Mehta & Purvis, 1995) digital media (Wolin & Korgaonkar, 2003; Lim, Ri, Donnelly Egan, & Biocca, 2015) and various other media within a comparative setting (Moore & Rodgers, 2005; Pelsmacker, Geuens, & Anckaert, 2002; Dijkstra, Buijtels, & Van Raaij, 2005). How consumers view a given medium relates to how they perceive its advertising (Bronner & Neijens, 2006) Each medium needs to be examined discretely, as attitudes toward advertising are tied to how ads are experienced within the medium under consideration (Tan & Chia, 2007). There is scant academic Aadv research on podcast advertising. A qualitative study revealed that host-read ads provide narrative transport, and access to listeners' perception of a friendship with the host and their desire to be a part of the podcast team (Moe, 2021). Another preliminary study of podcast audiences included a set of questions about advertising and determined that podcast listeners have positive attitudes toward advertising because they perceive that listening to ads provides support to hosts (Vilceanu, Johnson, & Burns, 2021). While promising, this study had a small sample size, with less than 300 participants and limited attitudinal prompts.

There is a link between consumer actions and advertising attitudes as buying interest is influenced by advertising beliefs; those who approve of advertising in general, or advertising within a particular medium, engage in increased consumer behavior (Mehta & Purvis, 1995; Ha, 1996; Ha & McCann, 2008). The purchase of a product or service may be driven by functional or socio-emotional motivations (Dittmar, Long, & Meek, 2004), and it is possible to examine the success of advertising campaigns in terms of responses from buyers and non-buyers (Chaney & Dolli, 2001). Since consumers who like advertising have increased consumer

intent, the positive attitude of podcast listeners as measured by market research suggests that they are more likely to engage in consumer behavior. Market research has indicated that podcast listeners tend to demonstrate a willingness to purchase products; 22% of general podcast listeners reported making purchases based on podcast ads, and this figure is higher (30%) among general podcast listeners who listened to podcasts daily (Acklin, 2019). Nielsen (2021) reported increased consumer action on the part of high-consumption podcast listeners in response to podcast advertising such as visiting a website either for additional information (62%), or to make a purchase (40%), compared with light users (of whom 37% visited a website for information, and 17% to make a purchase).

Demographic Effects in Advertising: Research in other media establishes differing demographic-based responses to marketing messages related to age (Loroz & Helgeson, 2013; Smith, 2019); and gender (Brunel & Nelson, 2003; Dittmar & Drury, 2000; Phillip & Suri, 2004; Rialti, Zollo, Pellegrini, & Ciappei, 2017; Wolin & Korgaonkar, 2003). Segmentation increases profitability; as such, advertisers tend to tailor messages to specific demographics. Appealing to specific age and gender groups has traditionally been one of the easiest ways for advertisers to target their ads (Darley & Smith, 1995). Age influences responses to advertising because of generational value differences (Loroz & Helgeson, 2013), technological comfort levels (Smith, 2019), tendencies to engage in consumer action (Djafarova & Bowes, 2021) and media preferences (van der Goot, Rozendaal, Opree, Ketelaar, & Smit, 2018). Gender-based advertising research has posited the existence of differing message-processing strategies for men and women (Brunel & Nelson, 2003).

Gender-based preferences for visual cues (Phillip & Suri, 2004). Gender-based differences have been found in cognitive and behavioral responses to marketing within particular media, such as social media (Rialti, Zollo, Pellegrini, & Ciappei, 2017) or online advertising (Smith, 2019). Gender has been correlated with consumer buying behavior (Wolin & Korgaonkar, 2003); some studies suggest that women are more influenced by socio-emotional and identity motivations, while men are more influenced by functional motivations (Dittmar, Long, & Meek, 2004; Dittmar & Drury, 2000). Podcast research indicates that demographics account for some of the variance in statistical studies on the motivations of general podcast listeners (Chadha, Avila, & Gil de Zúñiga, 2012; Boling & Hull, 2018; Chan-Olmsted & Wang, 2020). However, there is no evidence to indicate that demographics affect the actions or podcast advertising attitudes of podcast listeners.

Research Model Development: The literature review revealed four salient domains that are potentially important in developing a podcast advertising model: host-read ads, perceived relationship with the podcaster, attitude toward advertising in the podcast medium (Aam), and the consumer actions of podcast listeners. Overall, market research indicates that podcast listeners are engaged by ads delivered by trusted hosts, which may be influenced by a relational component. This explains the positive attitude toward podcast advertising on the part of these listeners, which leads to increased consumer action. No existing scales target the four identified domains in podcast advertising, although some can be adapted for the podcast medium. Extending past research on Aam, consumer action, and listener preference for host-read podcast advertisements, this study proposes a theoretical framework that seeks to contribute to a fundamental understanding of how listeners interact with and process podcast advertising. Accordingly, the hypotheses and research questions are presented below:

H1: Podcast listeners prefer host-read ads over supplied ads.
H2: The preference for host-read ads is predicted by the perception of a relationship with a favorite host.
H3: The preference for host-read ads is predicted by a listener interpreting host-read ads as authentic.
RQ1: Will the gender, age, or podcast consumption of podcast listeners predict a preference for host-read ads?
H4: Podcast listeners have positive attitudes toward podcast advertising.
H5: A preference for host-read ads positively relates to the podcast advertising attitudes of listeners.
RQ2: Will the gender, age, or podcast consumption of podcast listeners predict the podcast advertising attitudes of these listeners?
H6: Podcast listeners demonstrate consumer actions in response to podcast advertising.
H7: Podcast advertising attitudes positively relate to consumer actions.
H8: A preference for host-read ads positively relates to consumer action on the part of a listener.
RQ3: Will the gender, age, or podcast consumption of podcast listeners predict the advertising-based

consumer actions of podcast listeners?

3. Method

Use of Facebook to Recruit Survey Participants: Recruiting an appropriate sample of participants was challenging. Although the size of the podcast audience continues to increase, podcast listeners constitute a hard-to-reach audience (Balter & Brunet, 2012) as the majority of adults do not listen to podcasts regularly (Edison Research, 2021a). Previous research has explored the use of closed Facebook discussion groups, which many podcasts use to engage with listeners as a means of reaching target populations for quantitative research. For example, Balter and Brunet (2012) explored the use of snowball sampling through Facebook for research on hard-to-reach populations. Brief et al. (2013)and Pedersen, Naranjo, and Marshall (2017) studied problems such as alcohol abuse and post-traumatic stress disorder among military veterans by recruiting survey participants from Facebook groups. Numerous studies have used social networking platforms, especially Facebook, to access specific target populations (Chu & Snider, 2013; Morgan, Jorm, & Mackinnon, 2013; Kaysen, Cue Davis, & Kilmer, 2011). Because this study also focused on a population that would be difficult to reach without the help of social networking sites, the researcher posted survey links within specialized podcast Facebook groups to gain access to the target population.

Survey Design: Once the four domains were identified through the literature review, survey items were generated both inductively and deductively. Using logical partitioning prompts from existing Aam advertising attitude and consumer action scales were modified to frame appropriate podcast advertising questions (Mittal, 1994; Wolin & Korgaonkar, 2003; Dittmar, Long, & Meek, 2004). The Instrument Development and Construct Validation (IDCV) framework were also used to generate items. IDCV allows a researcher to conceptualize the constructs of interest through qualitative research to develop the quantitative instrument, followed by a pilot that informs revision of the instrument and finally, a quantitative validation (Onwuegbuzie, Bustamante, & Nelson, 2010). After receiving approval from Lee University's Human Subjects Committee, interview subjects were recruited at a podcast convention to answer open-ended questions about podcast advertising. Interviews were between 4 to 21 minutes, with most lasting 10 minutes. Using guidelines from Creswell and Poth (2016), who recommend the recruitment of 20 to 30 participants, 30 valid interviews were obtained. The sample was large enough to allow pertinent themes to emerge (Glaser & Strauss, 1967), reaching saturation with the twelfth respondent.

The data were analyzed using constructivist grounded theory, which allows researchers to prioritize participants' realities and uncover experiences among networks or relationships (Charmaz, 2008). In the first step, senior communication students engaged in open coding under the mentorship of the researcher, and independently identified themes from the interviews (using codes such as "prefers ads that are personalized by the podcaster" and "interprets host-read ads as credible"). Second, the coders met to discuss collectively the codes from their independent analysis, noting identical codes and themes identified in the literature review. Third, the researcher synthesized the preliminary themes into second-level codes (Tracy, 2019), defined them, and established a coding guide. Fourth, after training and practice, intercoder reliability was tested, and a raw percent agreement of 80% was deemed an acceptable level. While there are various standards for intercoder reliability, many respected sources have determined a general criterion: Frey, Boton, and Kreps (2000) agree that 70% is reliable; Ellis (1994) posits that 75% to 80% is reliable; Krippendorf (1980) accepts 80%, and Riffe, Lacey, and Fico (1988) specify a range of 80% to 90%.

Finally, the remaining discrepancies were resolved through discussion and agreement, and the researcher constructed survey items using the themes and word choices identified from the responses of participants. The survey was approved by the Human Subjects Committee, and the questions were preceded by an informed consent statement on the first page. The survey included 34 quantitative Likert-scale prompts falling into 5 categories: demographics (3), general podcast questions (6), podcast advertising attitudes (12), and podcast advertising consumer actions (7). The fifth category probed listeners' perceived relationships with podcast hosts, including four Likert scale prompts developed from the preliminary qualitative interviews and open-ended questions that were elicited for a qualitative study (Moe, 2021). Participants were asked to identify their favorite podcast(s) and complete the survey with them in mind. The pilot was administered to the target populations with feedback solicited. The pilot identified weaknesses, resulting in

the revision of prompts for clarity or elimination as well as streamlining the distribution of the survey. In the pilot survey, podcast hosts participated by recruiting listeners in their Facebook group to participate, an intervention that was discontinued once the pilot was completed.

Participants: The study is based on 1,714 valid survey responses from podcast listeners recruited via closed Facebook groups (general podcast fan groups as well as groups dedicated to particular podcasts). Posts with links to the survey were shared in these discussion groups with the permission of the administrators. Only those participants with unique IP addresses were allowed to access the survey. Once the survey was completed, a closing message offered each participant the option of entering an email address in a separate field to win a $25 gift card by random drawing. Initially, 1,810 surveys were received; however, 86 of these were removed because the respondents had not answered all of the required questions.

The age category with the most respondents was 30–44 years (51.6% of all respondents); next, was 18–29 years (26.8%), followed by 45–59 years (18.6%) and 60+ years (3%). The majority of participants were from the United States (60.9%), followed by Oceania (16.5%), the United Kingdom (11.4%), Canada (6%), and various countries in the European Union (3%), Asia (1.2%), and Latin America (1.1%). Of the total respondents, 79% (1,354) self-identified as female and 21% (360) as male. Those identifying as nonbinary were excluded, as the number of respondents in this group did not meet the minimum sample size of 1%. Participants identified their favorite podcast titles as well as their favorite content genres: true crime (70.3%), comedy (13.1%), history (7.8%), other (4.7%), and personal enrichment (4.1%; Apple's reconfiguration of podcast categories/subcategories in 2019 created a discrepancy between a subcategory that was removed by the company [Self-help subcategory in Health] and one that was newly introduced [Self-improvement subcategory in Education].

Thus, both categories were incorporated into a single genre called "personal enrichment"). Given that a large number of respondents were listeners of true crime podcasts, it is unsurprising that the sample included more respondents who self-identified as female (84.5%). PCA is a valuable starting point because it is a tool for investigating particular features of the structure of multivariate observations. The expected gender disparity confirms other research findings that women make up a larger portion of true crime podcast audiences (Boling & Hull, 2018; Joyce, 2018; Maffeo, 2019; Acklin, 2019; Niche podcasts, 2020) as well as other true crime media (Vicary & Fraley, 2010). This imbalance in terms of gender is notable because general podcast audiences tend to break down fairly equally by gender, with 51% of listeners self-identifying as male and 49% as female (Edison Research, 2019) Similarly, a joint study by Future Media and the University of Florida College of Journalism and Communications identified 52% of podcast listeners as male and 48% as female (Anstandig & Wright, 2019).

Analysis: Descriptive statistics were used to determine percentages and frequencies of the Likert-scale responses. The analysis also involved the use of IBM SPSS 28 software for statistical analysis with principal component analysis for validity, Cronbach's coefficient alpha for internal consistency of scales, Pearson's chi-square test (χ^2) to ascertain independence between variables using Cramer's V for the effect size for categorical data or eta2 (η^2) for scale data, and regression analysis to learn more about the relationship between variables with adjusted R-squared (R2adj) scores. Although many prompts used the Likert scale, the data may be assessed using parametric tests with unbiased results ((Norman, 2010); (Sullivan & Artino Jr, 2013); (Carifio & Perla, 2008). Statistical tests were interpreted at a significance level of $p \leq 0.05$, and effect sizes were described using parameters from Cohen (Cohen, 1992). For the principal component analysis (PCA), quartimax rotation was used to maximize the variance of the squared factor loadings in each variable (Jackson, 2014), with a minimum factor loading criteria of .40 (Guadagnoli & Velicer, 1988). For the regression analysis, categorical values were coded with dummy independent variables. To check that no influential cases affected the model, Cook's distance was measured with no values exceeding 0.047 (Cook & & Weisberg, 1982). Multicollinearity was tested using variance inflation factors (VIF), in which a VIF of 1 indicates that the model terms are not linearly related, and a VIF value over 10 signals a harmful correlation among the predictor variables (Neter, Wasserman, & Kutner, 1983). With a maximum VIF of 1.32, multicollinearity was not indicated.

4. Findings

All dimensions were tested for validity and reliability. An exploratory analysis was performed to assess validity using PCA as the primary purpose was to identify factors and compute composite scores. The communality of the scale, which indicates the amount of variance in each dimension and shows that all communalities were over 0.50, was also assessed. The Kaiser-Meyer-Olkin measure of sampling adequacy (MSA) was .880; data with MSA values above .800 were considered appropriate for factor analysis. Bartlett's test of sphericity was significant, indicating the statistical probability that some of the components in the correlation matrix had significant correlations and were suitable for further analysis, χ^2 (105, N=1714) = 17403.267, p < .001). Finally, the solution derived from this analysis yielded three components that explained 44.4%, 13.5%, and 9.8% of the variance; accounting for 67.7% of data variation (see Table 1). Component 1 included prompts to discover attitudes toward podcast advertising (Aam); component 2 contained items exploring participants' perceived relationship with a podcast host; and component 3 captured consumer buying actions. Prompts that did not load >.40 on one dimension were removed from the equation. To test reliability, Cronbach's alpha was calculated for each dimension, and all exceeded the minimum score of .7 (Nunnally & Bernstein, 1994). The three components were analyzed as latent variables. While it was hypothesized that a fourth component, host-read ads, might be measurable, the pertinent prompts did not load significantly together; therefore, these were analyzed as univariates using linear regression.

Table 1: PCA Results

Items	1 (44.4%)	2 (13.5%)	3 (9.8%)
Podcast Advertising Attitude (Cronbach's α = .909)			
Overall, I consider podcast advertising a good thing	.935		
Overall, I like podcast advertising	.910		
I consider podcast advertising essential	.745		
I usually listen to the ads when they occur in my favorite podcast(s)	.938		
I am more likely to listen to podcast advertising featuring someone who is regularly on the podcast (such as a host, producer or contributor)	.698		
I am more open to podcast advertising than TV advertising	.576		
I am more open to podcast advertising than radio advertising	.540		
It is important to buy products or services advertised on my favorite podcast(s)	.484		
Host-Relationship (Cronbach's α = .854)			
I feel like I know my favorite podcaster		.780	
I feel as if I have an emotional connection with my favorite podcaster		.750	
I feel like I know my favorite podcaster more than I know my favorite TV host		.807	
I feel like I know my favorite podcaster more than I know my favorite radio host		.838	
Podcast Adverting Consumer Buying Action (Cronbach's α = .816)			
I have bought a product or service because of a podcast advertisement			.827
I have bought a product or service featured on a podcast because I wanted it [functional motivation]			.830
I have bought a product or service featured on a podcast because I wanted to help out the podcaster [socio-emotional motivation]			.625

Podcast Listeners: Of the 1,714 respondents surveyed, most respondents (65.8%) reported that they listened to six or more podcast episodes per week (hereinafter PPW). Regarding the choice to listen to ads rather than skip them, 27.1% reported always listening to ads; 30% reported usually listening to ads, and 26.7% reported listening to ads half of the time or more. The level of podcast consumption correlated with the age and gender of listeners, although effect sizes were determined to be small. Male listeners were found to consume more podcasts per week (see Table 2); 76.7% of the male and 63% of the female listeners surveyed reported listening to six or more podcasts per week. Male listeners were more likely to be high-frequency podcast consumers and listened to podcasts with a higher frequency than expected (11 or more PPW), while female respondents tended to be low-frequency podcast consumers (1–5 PPW); $\chi2$ (2, N=1714) = 29.953, p < .001; Cramer's V = .132. The four age groups of listeners in the study also reported distinct podcast listening habits (as shown in Table 2). Age correlated with weekly podcast consumption, $\chi2$ (6, N=1714] = 37.582, p < .001; $\eta2$ = .0213. The youngest (18–29 years of age) and oldest audiences (60+) reported lower podcast consumption than expected, and the mid-range age groups (30–44 and 45–59 years of age) reported a higher podcast consumption (11+ PPW) than expected. Overall, the youngest audience members reported listening to fewer podcast episodes than listeners in the other three age ranges, while those in the 45–59 age group reported listening to the most.

Table 2: Podcast Consumption by Gender and Age

Categories	Female 79.5% (n=1354)	Male 20.5% (n=360)	18-29 26.8% (n=460)	30-44 51.6% (n=885)	45-59 18.6% (n=318)	60+ 3.0% (n=51)
1-5 PPW 34.1% (n=585)	37%*	23.3%	42.6%*	32.1%	26.1%	43.1%*
6-10 PPW 35.1% (n=602)	34.9%	36.1%	33.9%	36.3%*	33.6%	35.3%
11+ PPW 30.7% (n=527)	28.1%	40.6%*	23.5%	31.6%*	40.3%*	21.6%
Size Effect	Cramer's *V*=.132		$\eta2$=.02			

* = Significant correlation (more than expected, p <.001)

Host-Read Advertisements: Although the host-read advertising prompts did not load as a component, the responses for individual prompts supported the strong affinity of survey participants for host-read ads (hypothesis 1): 77.6% strongly agreed that they listen to ads featuring podcast hosts, not rather than to skip them. This affinity for host-read ads correlated significantly with particular podcast genres; however, the effect size was small. More true crime and comedy podcast listeners than expected strongly agreed that they preferred ads featuring someone who is regularly on the podcast, while history podcast listeners disagreed, $\chi2$ (16, N=1713) = 145.936, p <. 001; Cramer's V = .146. When asked to rate their level of agreement with the statement that they were more likely to listen to supplied ads, such as those created by advertising agencies, and not skip these ads, only 6.7% strongly agreed or agreed. More than expected, those aged between 30–44 years disagreed or strongly disagreed with the statement that they were likely to listen to supplied ads $\chi2$ (12, N=1714) = 114.709, p < .001; Cramer's V = .149); the same is true of high PPW listeners, $\chi2$ (8, N=1714) = 43.128, p = <.001; Cramer's V=.112 as well as those identifying as female $\chi2$(4, N=1714) = 22.565, p < .001; Cramer's V=.115.

Members of niche comedy podcast audiences disagreed more than expected with the statement, while history podcast listeners disagreed less than expected $\chi2$(16, N=1714) = 124.030, p <.001; Cramer's V=.135. Examining the perception that podcast hosts are authentic when pitching ads, many respondents (56.3%) strongly agreed or agreed with the statement that their favorite host was being authentic while pitching a product, and an additional 29.3% perceived them as being authentic some of the time. These perceptions varied across listeners of different genres; comedy and true crime listeners were more likely than expected to agree that their favorite hosts were being authentic, while history listeners were more likely to disagree than expected, $\chi2$(16, N=1705) = 121.249, p = <.001; Cramer's V=.133. Consistent with the theoretical proposition

of the research, the PCA identified four host-relationship prompts as Factor 2, allowing them to be grouped into a host relationship scale that shows good internal consistency (Cronbach's alpha coefficient: four items; α = .854). A total score was calculated and used for further analyses with a mean score of 4.11 (SD = .74).

A significant model was found when analyzing which prompts predicted the respondents reporting that they prefer a host-read advertisement. Three items predict 42.5% of the movement in the variable R2adj = .425, F(3, 1679) = 417.254, p < .001. Hypothesis 2 was confirmed, as the host relationship scale score of a listener predicted a preference for host-read ads (β = .175, p < .001). Hypothesis 3 was confirmed, as a listener's perception of a host's authenticity when delivering an ad predicted a preference for host-read ads (β = .182, p < .001). Finally, listeners who reported that they were more likely to listen to, rather than skip, podcast ads predicted the preference for host-read ads (β = .473, p < .001). The data hint at a parasocial (i.e., asymmetrical) relationship between the listener and host, but this conclusion requires a more nuanced analysis, which has been undertaken in a qualitative study (Moe, 2021). The instrument did not include parasocial scales but sought to test the relationship themes identified in the qualitative interviews.

Podcast Advertising Attitudes: Eight Likert-scale prompts identified as Factor 1 were grouped into a podcast advertising attitude scale that shows good internal consistency (Cronbach's alpha coefficient; eight items; α = .909). A total score was calculated and used for further analyses with a mean score of 3.7 (SD = .83). Items 1–3 of the podcast advertising attitude scale were adapted from Mittal's General Opinion on TV Advertising scale (1994) and Wolin and Korgaonkar's web advertising scale (2003) while items 4–8 were developed from the preliminary interviews. Consistent with hypothesis 4, listeners reported positive attitudes toward podcast advertising (see Table 3). Those surveyed reported listening to podcast advertising at high rates, with 83.7% playing the ads half the time or more, and 57% usually listening to ads. Only 6.8% reported always skipping the ads. With a small effect size, true crime and comedy listeners reported listening to ads, while history and personal enrichment listeners did not, χ2(16, N=1712) = 193.764, p = <.001; Cramer's V=.168.

Table 3: Podcast Advertising Attitudes Scale by Gender and Age

Cronbach's α = .909 Answers = Likert-scale		Female	Male	18-29	30-44	45-59	60+	1-5 PPW	6-10 PPW	11+ PPW
I consider podcast advertising essential	M	3.93*	3.89*	3.95	3.87	3.98	4.02	3.71	4.0*	4.06* (η2=.028)
	SD	.948	(V=.119) 1.13	.959	.986	1.04	.969	1.03	.961	.937
Overall, I consider podcast advertising a good thing	M	3.8	3.74	3.81	3.76	3.85	3.80	3.63	3.91+	3.84+ (η2=.012)
	SD	1.05	1.05	1.10	1.05	1.12	1.14	1.09	1.04	1.09
Overall, I like podcast advertising	M	3.7	3.70	3.70	3.64	3.71	3.71	3.53	3.77+	3.72+ (η2=.010)
	SD	1.11	1.11	1.12	1.13	1.17	1.23	1.13	1.10	1.18
I usually listen to the advertisements when they occur in my favorite podcast(s)	M	3.63	3.55	3.59	3.59	3.69	3.75	3.45	3.72*	3.66* (η2=.010)
	SD	1.15	1.2	1.2	1.15	1.16	1.13	1.17	1.14	1.19
I am more likely to listen to podcast advertising featuring someone who is regularly on the podcast (such as a host, producer	M	4.05	3.96	4.16	3.96	4.04	3.94	3.9	4.1*	4.09* (η2=.011)
	SD	1.04	1.14	1.04	1.08	1.04	1.12	1.10	1.07	1.08

or contributor)

It is important to buy products or services advertised on my favorite podcast(s)	M	3.29	3.33	3.27*	3.27	3.35	3.7* (V=120)	3.11	3.4*	3.38* (η2=.018)
	SD	.947	1.03	.995	.939	.949	1.16	.932	.966	.973
I am more open to podcast advertising than radio advertising	M	3.76	3.84* (V=.169)	3.89	3.77	3.65	3.76	3.57	3.89*	3.88* (η2=.020)
	SD	.980	1.19	1.02	.995	1.10	1.14	1.03	1.00	1.02
I am more open to podcast advertising than TV advertising	M	3.7	3.77* (V=.176)	3.78	3.72	3.60	3.84	3.51	3.78*	3.87* (η2=.020)
	SD	.992	1.22	1.05	1.01	1.09	1.12	1.08	1.00	1.02

Note: Likert Scale: 5=Strongly Agree – 1=Strongly Disagree; M = mean (higher means = stronger agreement); SD = Standard Deviation.
* = Significant correlation (p <.001)
+ = Significant correlation (p =.002).

In response to the prompts adapted from Mittal's General Opinion on TV Advertising scale (1994) more than two-thirds of the listeners (72.9%) strongly agreed or agreed with the statement that podcast advertising is essential; 64.2% strongly agreed or agreed that advertising is good, and 61.2% strongly agreed or agreed that they like podcast advertising. Podcast consumption correlated with the belief that podcast advertising is essential; more than expected, moderate- and high-frequency podcast listeners strongly agreed that podcast advertising is essential, although the effect size was small $\chi^2(8, N=1714) = 53.577$, p = <.001; η2=.028. Recent comparison percentages of attitudes toward advertising in other media are not available; however, Wolin and Korgaonkar (2003) included a summary finding that 53% to 56% (mean = 2.67–2.69) reported positive attitudes in relation to web advertising, and Mittal (1994) found that 12% to 43% were positively disposed toward TV advertising. To test hypothesis 5, a linear regression was calculated to determine what elements predict podcast advertising attitude scale results.

A significant regression equation was found R^2adj = .622, $F(3, 1651) = 906.697$, p <.001 in which attitude scale results were predicted by the preference for host-read ads (β = .571, p <.001), a belief in the authenticity of host-read ads (β = .263, p <.001) and the host relationship scale (β = .128, p <.001). The respondents reported preferring podcast advertising to advertise in other broadcast media. When asked if they preferred radio to podcast advertising, only 9.9% selected radio advertising. When asked if they preferred TV advertising to podcast advertising, only 10.9% selected TV advertising. Research question 2 asked whether independent variables such as the level of podcast consumption, gender, and age of podcast listeners correlate with podcast advertising attitudes. While a few significant correlations were found for age and gender, only weak relationships were established; however, PPW correlated with all eight advertising attitude prompts (as shown in Table 3). Although PPW was not found to be a major predictor because the effect size was small, it is still notable that moderate and high podcast consumption levels correlated with higher positive attitudes in all scale items.

Consumer Action: Consumer action was measured through buying behavior, intent to purchase, and donations. A scale of three questions measured consumer behavior using already-developed buyer status prompts (Dittmar, Long, & Meek, 2004; Chaney & Dolli, 2001) these prompts were modified, however, from "have bought/have not bought" to include an additional option of "No, but I seriously considered it," as qualitative interviews revealed that many participants referred to the thought process of considering a purchase as an in-between step as opposed to a negative answer. The three prompts probed whether respondents had purchased because of a podcast advertisement and if their motivation for the purchase was functional (desire for the product/service) or social/emotional (desire to help the podcaster; (Dittmar, Long, & Meek, 2004). While identity is potentially a third motivation for consumer action (Dittmar, Long, & Meek, 2004), it was not tested quantitatively as it did not emerge as a theme from the preliminary interviews. Cronbach's alpha showed a good internal consistency (α = .816) of the three-item consumer buying action

scale (see Table 4). A total score was calculated and used for further analyses, arriving at a mean score of 1.91 (SD = .67); "Yes I have bought a product because of a podcast ad" was coded as 1, "No, but I seriously considered it" was coded as 2, and "No, I have not bought a product because of a podcast ad" was coded as 3. Questions about alternate consumer actions, such as donations made and intent to purchase in the future were not worded similarly enough to allow for inclusion in the scale.

Table 4: Podcast Advertising Consumer Buying Actions by Gender and Age

Cronbach's α = .817 Answers = Yes/Considered it/No		Female	Male	18-29	30-44	45-59	60+	1-5 PPW	6-10 PPW	11+ PPW
I have bought a product or service because of a podcast advertisement	Yes Considered it No	39.5% (n=534) 34.1% (n=461) 26.5% (n=358)	49.2% (n=176) 24.9% (n=89) 26% (n=93)	39.3% (n=181) 35.7% (n=164) 25% (n=115)	41.8% (n=369) 32.2% (n=284) 26% (n=229)	43.1% (n=137) 28.9% (n=92) 28% (n=89)	45.1% (n=23) 19.6% (n=10) 35.3% (n=18)	32.7% (n=191) 35.1%* (n=205) 32.2%* (n=188)	47.5%* (n=286) 29.9% (n=180) 22.6% (n=136)	44.4%* ($\eta2$=.017) (n=233) 31.4% (n=165) 24.2% (n=127)
I have bought a product or service featured on a podcast because I wanted it	Yes Considered it No	40.2% (n=543) 38.5% (n=520) 21.4% (n=289)	44.7% (n=161) 33.3% (n=120) 21.9% (n=79)	38.1% (n=175) 42.9% (n=197) 19% (n=87)	41% (n=362) 37.9% (n=335) 21.2% (n=187)	45% (n=143) 31.1% (n=99) 23.9% (n=76)	47.1% (n=24) 17.6% (n=9) 35.3% (n=18)	33.2% (n=194) 41.4%* (n=242) 25.3%* (n=148)	46.4%* (n=279) 34.4% (n=207) 19.1% (n=115)	43.8%* ($\eta2$=.012) (n=231) 36.2% (n=191) 19.9% (n=105)
I have bought a product or service featured on a podcast because I wanted to help out the podcaster	Yes Considered it No	23.4% (n=316) 41.9%* (n=566) 34.7% (n=468)	33.3%* (V=.121) (n=120) 30.% (n=108) 36.4% (n=131)	24.4% (n=112) 40.3% (n=185) 35.3% (n=162)	26.4% (n=233) 38.9% (n=343) 34.6% (n=305)	23.6% (n=75) 43.1% (n=137) 33.3% (n=106)	31.4% (n=16) 17.6% (n=9) 51% (n=26)	18.8% (n=109) 42%* (n=244) 39.2%* (n=228)	26.4%* (n=159) 37% (n=223) 36.5% (n=220)	31.9%* ($\eta2$=.017) (n=168) 39.3% (n=207) 28.7% (n=151)

* = Significant correlation (more than expected, p <.001)
PPW = podcast episodes listened to per week; percentages rounded.

As hypothesized in hypothesis 6, podcast listeners demonstrated consumer buying actions in response to podcast advertising. Among the sample of listeners, 41.4% said that they had already bought a product or service because of a podcast advertisement; comedy and personal enrichment listeners agreed with this statement more than expected, while true crime listeners said that they had considered such a purchase but had not followed through, and history listeners reported buying less than expected $\chi2(8, N=1711) = 44.229$, p <.001; Cramer's V=.114. It was predicted in Hypothesis 7 that podcast advertising attitudes would positively relate to consumer action, which was confirmed. The main effect was found, in which the eight-item podcast advertising scale predicted the three-item consumer buying action scale at a significant level with a medium size effect $R2adj = .311$, $F(1, 1664) = 753.440$, p <.001. When prompted to explain their motivations for making these purchases, 41.1% of the podcast listeners reported functional motivation, while 25.4% reported socio-emotional motivation.

The motivation of a podcast listener to purchase a product because it is desired is statistically associated with the motivation to purchase a product to help a podcaster. The effect size is large: respondents motivated by functional concerns are more likely than expected to be motivated by socio-emotional concerns as well, $\chi2 (6, N=1709) = 970.949$, p = <.001, Cramer's V = .533. Hypothesis 8 postulated that there was a correlation between a preference for host-read ads and consumer buying actions, but this was only partially confirmed. While the respondents' belief that a host was being authentic when pitching a product in a host-read ad acted as a predictor for the consumer action scale score, $R2adj = .171$, $F(1, 1684) = 347.388$, p <.001, a higher score on the host-relationship scale did not predict the purchase of a product in the past. Intent to purchase is another part of consumer action because the intention is a strong predictor of behavior (Solomon, 2013). The

survey asked respondents whether they would like to buy a product or service advertised on one of the podcasts they regularly consumed; 79.9% responded in the affirmative.

Linear regression revealed a significant model with medium effect size, as higher scores on the podcast attitude advertising scale predicted a listener's desire to purchase something in the future, R2adj .483, F(1, 1661) = 1553.522, p <.001. With a moderate effect size, the podcast consumer buying scale was positively related to future purchase intent, R2adj .358, F(1, 1684) = 940.080, p <.001. More than expected, high podcast consumers strongly agreed that they would like to purchase an advertised product or service in the future; moderate podcast consumers agreed, while low podcast consumers strongly disagreed or disagreed, χ2(8, N=1706) = 37.084, p <.001; Cramer's V=.104. Intended action was also examined by ascertaining how listeners chose podcast ads to respond. Respondents expressed a preference for buying products advertised on independent podcasts (59.6%) as opposed to products advertised on professional podcasts (.9%).

More than expected, when asked what type of podcast they preferred to patron, moderate- and high-frequency podcast consumers selected independent podcasts, although the effect size was small, χ2 (6, N=1695) = 56.534, p < .001; Cramer's V = .129, as did those who preferred the comedy genre χ2 (12, N=1695) = 98.905, p < .001; Cramer's V = .139. The third measure of consumer action was the extent of the financial contribution made by listeners to their favorite podcasts. Nearly half (45.2%) of survey participants donated to the podcasts of their choice; 29.2% of participants reported making a revolving monthly contribution (e.g., through the use of platforms such as Patreon); 8.5% contributed through a one-time donation (e.g., through PayPal), and 7.5% reported making donations in the form of both revolving and one-time contributions. True crime podcast audience members donated the most (45.9%), and personal enrichment podcast audience members donated the least (35.7%).

Donations did not correlate with the host relationship scale, the podcast advertising attitude scale, or the consumer buying action scale. Research question 3 asked whether variables such as the level of podcast consumption, gender, or the age of listeners correlate with podcast-advertising-based consumer action. There were no significant correlations with age. Similar to the correlations with advertising attitudes, the relationship between consumer buying action and gender was present but weak (see Table 4), with those identifying as a male having made more purchases motivated by socio-emotional concerns than expected. Podcast consumption levels correlated consistently with the three buyer actions, although a small effect size was observed. Those listening to more than six podcasts per week reported significant consumer buying action, both for functional and socio-emotional reasons.

Discussion

This study set out to investigate the perceptions, attitudes, and consumer actions of podcast listeners in response to general podcast advertising, and in particular, host-read advertising. The findings confirm the results of market research, which has noted a positive relationship between podcast listeners and their attitudes toward podcast advertising. This study also extends attitudinal advertising research to a new medium that has not been studied extensively. As expected, the results support that podcast listeners report positive attitudes toward advertising that is impacted by the podcast medium. Furthermore, attitudes toward podcast advertising and consumer actions are predicted by a preference for host-read ads. The advertising attitude of podcast audience members correlated with their consumer actions; listeners with a higher score on the podcast advertising attitude scale bought products for both functional and socio-emotional reasons and demonstrated increased future intent to buy. This finding has important implications for advertisers because it points not only to the importance of accessing consumers who express openness to podcast advertising.

But also, those consumers who have already bought podcast-advertised products and intend to purchase more in the future. While not specifically researched, the correlation between podcast listeners' positive attitudes and consumer action suggests that advertisers might find success in retargeting podcast listeners who heard their podcast ad with an online display ad. Podcast consumption rates were also analyzed, and the level of podcast consumption per week was found to have an influence on listeners – the more podcasts the respondents listened to, the more they approved of podcast advertising. There was a consistent association

between PPW, or the frequency of the listener's interaction with the podcast medium, and podcast advertising attitudes, including a preference for host-read ads and a belief in the authenticity of a host. Listening to more than six podcasts per week, although not a significant predictor, was found to have a statistically significant correlation in all eight prompts for the podcast advertising attitude scale as well as all correlating with the three consumer buying action prompts, suggesting that podcast quantity influences purchases and positive opinions.

The most notable shift in attitudes toward podcast advertising was between low-frequency (1–5 PPW) and moderate-frequency listeners (6–10 PPW). High-frequency podcast consumers (11+ PPW) exhibited only slight additional increases in some advertising attitudes and consumer action prompts, indicating that targeting moderate listeners may be most effective for advertisers. Although previous Aam research established gender differences, there were few significant results with regard to podcast advertising, all of which had small effect sizes. Those identifying as male preferred podcast advertising to advertising in other broadcast media, and reported more purchases in response to podcast ads, identifying a socio-emotional motivation for purchasing, while females were more likely to have only considered making a purchase. This finding differs from previous research in which females were found to be more likely to purchase for socio-emotional reasons in the real world (Campbell, 2000; Dittmar & Drury, 2000).

However, gender-based differences were found to diminish in the case of online shopping (Dittmar, Long, & Meek, 2004), and a similar effect may occur with podcast advertising. Regarding age, the survey revealed limited generational patterns, all of which had small effect sizes. The two oldest age groups were found to be more likely than expected to listen to podcast ads, have the most positive attitudes toward podcast advertising, and report purchasing a product for a functional reason. While the older audience comprised the smallest age category, the study revealed that podcast listeners in this category were most likely to respond in the manner advertisers hope for. The youngest age group reported more positive podcast advertising attitudes but was the least likely to report having purchased a product in response to a podcast ad. It would be interesting to include income questions in future studies to determine if the lack of purchasing might have a stronger correlation to disposable income and younger listeners may simply have less money to spend.

5. Conclusion and Recommendations

This study found that audiences prefer ads created by regular podcast contributors because they trust their favorite podcasters and consider them authentic. At the industry level, advertisers should prioritize and facilitate the involvement of show hosts in podcast advertising because podcast listeners prefer host-read ads over supplied commercials or ads in other media. Although the preference for host-read ads was supported by market research, it is now confirmed in academic research. Unfortunately, recent statistics signal that advertisers shifted away from host-read ads as they decreased in 2020 while supplied ads increased (IAB, 2021). The movement to supplied ads may be a response to the early frustrations experienced by advertisers when host- and announcer-read podcast ads were "baked-in" and "therefore live within the content for its lifetime" (IAB, 2017). According to one podcast hosting platform, these embedded host-read ads result in outdated messaging in back catalogs for about 50% of the podcasts available for download (Audioboom, 2021, p. 4). Advertisers should revisit the use of host-read ads as advances in streaming podcast ad placement allows host- or announcer-read ads to be digitally inserted, ensuring up-to-date messaging, thus eliminating the problems associated with older baked-in advertisements.

For podcasts that sell advertising within episodes, the results of this research indicate that they may be better served when their audiences listen to six or more other podcasts. Rather than assuming they are competing with other podcasts for listeners, it might be beneficial for podcasters to promote and support like-minded shows to build a stronger base with more involved listeners. Advertisers should investigate podcast genres in which the listeners build communities and share podcast recommendations with each other, thus encouraging additional podcast consumption. The exploratory nature of this study identified three domains through qualitative research that were analyzed to reveal significant correlations between perceived relationships with podcast hosts, advertising attitudes, and consumer buying actions on the part of podcast listeners. As podcast audiences continue to grow and the number of podcasts proliferates, advertisers have excellent opportunities to reach engaged consumers who not only want to hear host-read ads but are also

willing to purchase the advertised products and services.

Future Research: The limitations of this study suggest avenues for additional research on podcast advertising. To begin with, the scales used in the study should be tested for reproducible results. While participants were recruited from Facebook groups, using other means of reaching podcast audiences might uncover more representative listener samples. The respondent demographic should be expanded to include additional elements that might correlate with stronger effect sizes. Although preliminary, the results suggest that genre listeners exhibit some unique behaviors; comedy and true crime listeners demonstrated the most positive podcast advertising attitudes, while history podcast listeners were the least positive about ads. Comedy and personal enrichment podcast listeners reported the most consumer buying actions, and history podcast listeners the least. Finally, since podcast genre listeners were found to exhibit unique behaviors, additional research should analyze them more closely. Despite its limitations, this study underscores the importance of host-read ads in the podcast medium.

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