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THE ROLE OF SEAPORT INFRASTRUCTURE IN ENHANCING LOGISTICS PERFORMANCE AND ECONOMIC GROWTH IN NIGERIA'S MANUFACTURING SECTOR.

BY

SALIHU ADAM JIDDAH

Universiti Utara Malaysia

DOCTOR OF PHILOSOPHY
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BY

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Kolej Perniagaan
(College of Business)
Universiti Utara Malaysia

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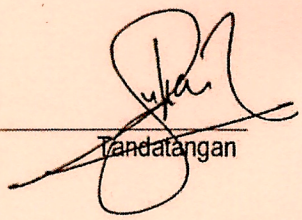

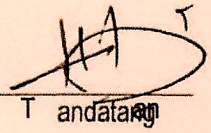

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ABSTRACT

This study emphasizes the importance of seaport infrastructure in enhancing logistics performance and driving economic growth within Nigeria's manufacturing sector. While improved port facilities are recognized as crucial, a research gap exists regarding the specific impacts of current seaport infrastructure on logistics efficiency and economic outcomes in Nigeria. This research investigates how seaport infrastructure influences logistics performance and economic growth in the Nigeria's manufacturing sector. To achieve this objective, a methodology employing a triangulation research approach was used, combining quantitative and qualitative methods. It involves analyzing cross-sectional panel data from 71 manufacturing firms listed on the Nigeria Exchange Group, with 11 firms purposively selected based on their consistent operations from 2012 to 2022. The study utilized E-Views version 12.0 for data analysis. Key findings reveal a significant positive relationship between logistics performance and economic growth, indicating that better logistics efficiency boosts economic output. Additionally, the study highlights that inadequate seaport infrastructure hinders logistics efficiency and significantly affects the relationship between logistics performance and economic growth. The recommendations stress the need for the Nigerian government to prioritize investments in port facilities, including necessary upgrades, improved transport connectivity, and the adoption of modern technologies. Furthermore, the study encourages manufacturers to collaborate with logistics providers to optimize their supply chain operations. It contributes valuable empirical evidence on the pivotal role of seaport infrastructure in facilitating trade and economic activities, underscoring the importance of strategic investments to strengthen Nigeria's manufacturing sector. These findings provide a foundation for policymakers and industry stakeholders to enhance logistics efficiency and drive sustainable economic growth in Nigeria.

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Keywords: Seaport infrastructure; Logistics performance; Economic growth; Manufacturing sector; Nigeria

ABSTRAK

Kajian ini menekankan kepentingan infrastruktur pelabuhan laut dalam meningkatkan prestasi logistik dan memacu pertumbuhan ekonomi dalam sektor perkilangan di Nigeria. Walaupun kemudahan pelabuhan yang lebih baik diiktiraf sebagai penting, terdapat jurang penyelidikan mengenai impak khusus infrastruktur pelabuhan laut semasa terhadap kecekapan logistik dan hasil ekonomi di Nigeria. Kajian ini dijalankan untuk menyiasat bagaimana infrastruktur pelabuhan laut mempengaruhi prestasi logistik dan pertumbuhan ekonomi dalam sektor perkilangan. Bagi mencapai objektif ini, satu metodologi yang menggunakan pendekatan penyelidikan triangulasi telah digunakan, menggabungkan kaedah kuantitatif dan kualitatif. Ia melibatkan analisis data panel keratan rentas daripada 71 syarikat perkilangan yang tersenarai di Nigeria Exchange Group, dan 11 syarikat telah dipilih berdasarkan operasi konsisten mereka dari tahun 2012 hingga 2022. Kajian ini menggunakan E-Views versi 12.0 untuk menganalisis data. Penemuan utama menunjukkan hubungan positif yang signifikan antara prestasi logistik dan pertumbuhan ekonomi, yang menunjukkan bahawa kecekapan logistik yang lebih baik meningkatkan hasil ekonomi. Selain itu, kajian ini menunjukkan bahawa infrastruktur pelabuhan laut yang tidak mencukupi menghalang kecekapan logistik dan memainkan peranan penting dalam mempengaruhi hubungan antara prestasi logistik dan pertumbuhan ekonomi. Syor daripada kajian ini menekankan keperluan bagi kerajaan Nigeria untuk mengutamakan pelaburan dalam kemudahan pelabuhan, termasuk naik taraf yang diperlukan, penambahbaikan hubungan pengangkutan, dan penerimaan teknologi moden. Di samping itu, kajian ini menggalakkan pengeluar untuk bekerjasama dengan penyedia logistik bagi mengoptimumkan operasi rantaian bekalan mereka. Kajian ini menyumbang bukti empirikal yang bernilai mengenai peranan penting infrastruktur pelabuhan laut dalam memudahkan perdagangan dan aktiviti ekonomi, serta menekankan keperluan untuk pelaburan strategik bagi memperkukuhkan sektor perkilangan di Nigeria. Penemuan ini memberikan asas untuk pembuat dasar dan pemegang kepentingan industri meningkatkan kecekapan logistik dan mendorong pertumbuhan ekonomi mampan di Nigeria.

Keywords: Infrastruktur pelabuhan laut; Prestasi logistik; Pertumbuhan ekonomi; Sektor perkilangan; Nigeria

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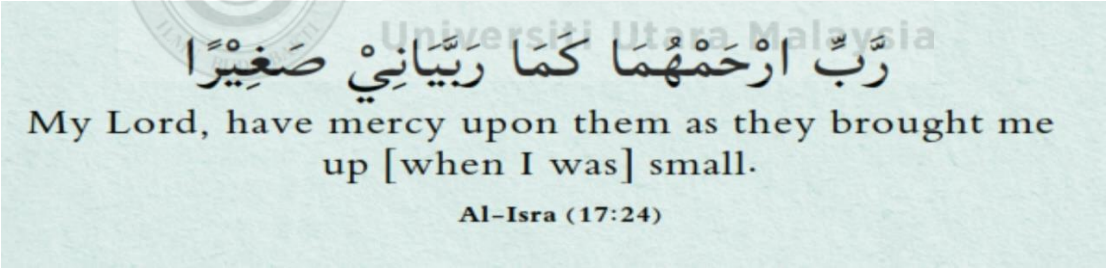
All I have for them so long as I live is this prayer:



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I express heartfelt appreciation to my beautiful wife, Mrs. Aisha Ismail (Aisha Adam-Jiddah), whose love and sacrifices have been immeasurable. It is my earnest prayer that Allah blesses our union with everlasting joy and that we grow old together to enjoy the fruits of our labor and family. With humility I will share this PhD honor with my wife. This woman stepped in the shoes of my mother in prayers and best wishes all the time for me. **I LOVE HER VERY MUCH**

To my children, my bone kids, my sources of happiness, Afnaan Adam Jiddah (The leader), Zayyan Adam Jiddah, Zakiyyah Adam Jiddah, Salih Adam Jiddah Jr. (named after my father), and Ruqayyah Adam Jiddah (named after my mother), this success is dedicated to them. I am by this; challenging them to strive for excellence and make me a proud father, In sha Allah, the same way I felt, that I must have made my Papa so proud after my successful Viva.

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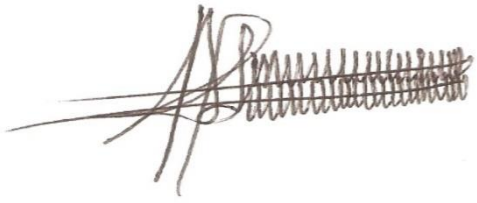

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LIST OF ABBREVIATIONS

ADF	Augmented Dicker-fuller
AfCFTA	African Continental Free Trade Area
AHP	Analytic Hierarchy Process
ANPV	Anticipated Net Present Value
ARDL	Autoregressive Distributed Lag
ATR	Average True Range
CBN	Central Bank of Nigeria
CPM	Critical Path Method
CUR	Current Ratio
DAR	Debt-Assets Ratio
DEA	Data Envelopment Analysis
DER	Debt Equity Ratio
DHL	Dalsey, Hillblom, and Lynn
DT	Delivery Time
EBITDA	Earnings before interest, taxes, depreciation, and amortization
ECM	Error Correction Model
EDB	Ease of Doing Business
EPS	Earnings Per Share
EU	European Union
FDI	Foreign Direct Investment
FEM	Fixed Effect Model
FTZ	Foreign Trade Zones

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GARCH	Generalized Autoregressive Conditional Heteroskedasticity
GDP	Gross Domestic Product
GLM	General Linear Model
GNP	Gross National Product
ICT	Information and Communication Technology
IDX	Indonesia Stock Exchange
IMF	International Monetary Fund
IPO	Initial Public Offerings
IPS	Im-Pesaran-Shin
IT	Inventory Turnover
JIT	Just-in-Time
KPI	Key Performance Index
LDTA	Long-Term Debt to Total Assets
LLC	Levin-Lin-Chu
LPI	Logistics Performance Index
LPI	Logistics Performance Index
MAN ,	Manufacturers Association of Nigeria
MNCs	Multinational Corporations
MPI	Malmquist Productivity Index
MRP	Materials Requirements Planning
MSEs	Micro And Small Enterprises
MSR	Maritime Silk Road
NGX	Nigerian Exchange Limited

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NPA	Nigeria's Ports Authority
NPM	Net Profit Margin
OE	Organizational Efficiency
OECD	Organization of Economic Community and Development
OLS	Ordinary Least Squares
PBV	Price to Book Value
PCA	Principal Component Analysis
PEBEC	Presidential Enabling Business Environment Council
PERT	Project Evaluation and Review Techniques
PLS-SEM	Partial Least Squares Structural Equation Modelling
PP	Philip Perron
PPE	Property, Plant, and Equipment
PPP	Public Private Partnership
ProKnow-C	Knowledge Development Process – Constructivist
Q _Q Plots	Quantile-Quantile Plots
R & D	Research and Development
RBT	Resource-Based Theory
RegCo	Regulation Limited
RelCo	Real Estate Limited
REM	Random Effect Model
ROA	Return on Asset
ROI	Return on Investment
SC	Securities Commission

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SCM	Supply Chain Management
SDTA	Short-Term Debt to Total Assets
SEM	Structural Equation Modelling
SFA	Stochastic Frontier Analysis
SPSS	Statistical Package for Social Sciences
SRA	Stepwise Regression Analysis
SWOT	Strength Weakness Opportunity and Threat
TC	Transportation Cost
TDTA	Total Debt to Total Assets
TEU	Twenty-Foot Equivalent Units
TOC	Theory of Constraints
TQM	Total Quality Management
UNCTAD	United Nations Conference on Trade and Development
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UPS	United Parcel Service
UUM	Universiti Utara Malaysia
VECM	Vector Error Correction Model
VIF	Variance Inflation Factor
WB	World Bank
WBG	World Bank Group
WDI	World Development Indicators
WTO	World Trade Organization

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

A country's manufacturing industry is the nerve center of invention, and it is this innovation that provides the goods and services that are essential for the expansion and prosperity of an economy. From the time that products and services start out as raw materials through to the time that they are delivered to the end user, the management of these products and services involves a vast range of different processes (Hasamon, 2021), as a consequence of this, nations all over the world are expanding their support for their respective manufacturing sectors as a strategy for promoting their national economic growth. (Haraguchi, Cheng, and Smeets 2017).

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According to Munim and Schramm (2018), it should not come as a surprise that a competent logistics sector is today viewed everywhere as one of the primary enablers of progress. In earlier iterations of "Connecting to Compete," the emphasis was placed on the implementation of stricter policies that lead to improved logistical performance. These types of policies include regulating services (Adesunkanmi & Nurain, 2022), establishing an infrastructure for transit (Zhang & Cheng, 2023), enforcing rules, particularly those on foreign commodities (Deng & Zhang, 2020), and improving the quality of public-private-partnerships (PPP) (Ogwo & et al, 2016). The

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APPENDICES

APPENDIX A:

PANEL UNIT ROOT TEST RESULTS FOR THE VARIABLES

GDP AT LEVEL

Panel unit root test:
Summary
Series: GDP
Date: 06/09/24 Time:
21:26
Sample: 2012 2022
Exogenous variables: Individual
effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett
kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	2.29071	0.9890	11	99
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	2.78017	0.9973	11	99
ADF - Fisher Chi-square	3.41592	1.0000	11	99
PP - Fisher Chi-square	3.52574	1.0000	11	110

** Probabilities for Fisher tests are computed using an asymptotic Chi

-square distribution. All other tests assume asymptotic normality.

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Annual Transportation Cost (ATC) AT LEVEL

Panel unit root test: Summary
Series: D(POI)
Date: 06/09/24 Time: 21:32
Sample: 2012 2022
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-10.22	0.0000	11	88
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-5.8528	0.0000	11	88
ADF - Fisher Chi-square	82.2655	0.0000	11	88
PP - Fisher Chi-square	124.700	0.0000	11	99

** Probabilities for Fisher tests are computed using an asymptotic Chi
-square distribution. All other tests assume asymptotic normality.

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Delivery Time (DLT) AT LEVEL

Panel unit root test: Summary
Series: DLT
Date: 06/09/24 Time: 21:35
Sample: 2012 2022
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-8.61984	0.0000	11	99
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-3.03216	0.0012	11	99
ADF - Fisher Chi-square	54.9052	0.0001	11	99
PP - Fisher Chi-square	54.9361	0.0001	11	110

** Probabilities for Fisher tests are computed using an asymptotic Chi
-square distribution. All other tests assume asymptotic normality.

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INT AT LEVEL

Panel unit root test: Summary
Series: INT
Date: 06/09/24 Time: 21:36
Sample: 2012 2022
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-0.83158	0.0028	11	99
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	0.67702	0.0008	11	99
ADF - Fisher Chi-square	19.2923	0.0272	11	99
PP - Fisher Chi-square	23.0976	0.0062	11	110

** Probabilities for Fisher tests are computed using an asymptotic Chi
-square distribution. All other tests assume asymptotic normality.

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Return on Asset (ROA) AT LEVEL

Panel unit root test: Summary
Series: ROA
Date: 06/09/24 Time: 21:39
Sample: 2012 2022
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	0.90879	0.8183	11	99
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	0.60252	0.7266	11	99
ADF - Fisher Chi-square	18.2201	0.6929	11	99
PP - Fisher Chi-square	33.2273	0.0587	11	110

** Probabilities for Fisher tests are computed using an asymptotic Chi
-square distribution. All other tests assume asymptotic normality.

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Return on Asset (ROA) AT FIRST DIFFERENCE

Panel unit root test: Summary
Series: D(ROA)
Date: 06/09/24 Time: 21:39
Sample: 2012 2022
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.5949	0.0000	11	88
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.92985	0.0017	11	88
ADF - Fisher Chi-square	47.4343	0.0013	11	88
PP - Fisher Chi-square	136.178	0.0000	11	99

** Probabilities for Fisher tests are computed using an asymptotic Chi
-square distribution. All other tests assume asymptotic normality.

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APPENDIX B

PANEL POOL REGRESSION RESULT

Dependent Variable: GDP
Method: Panel Least Squares
Date: 06/09/24 Time: 21:43
Sample: 2012 2022
Periods included: 11
Cross-sections included: 11
Total panel (balanced) observations: 121

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POI	0.218733	0.31837	0.687049	0.0000
ATC	0.002109	0.00074	2.869291	0.0049
DLT	0.004644	0.00298	1.559289	0.1217
INT	0.165903	0.08465	1.959951	0.0524
ROA	-0.273326	0.06596	-4.143753	0.0001
C	17.08996	1.34233	12.73158	0.0000
Root MSE	1.320093	R-squared		0.658802
Mean dependent var	10.72727	Adjusted R-squared		0.643968
S.D. dependent var	2.269361	S.E. of regression		1.354093
Akaike info criterion	3.492455	Sum squared resid		210.8602
Schwarz criterion	3.631089	Log likelihood		-205.294
Hannan-Quinn criter.	3.54876	F-statistic		44.4096
Durbin-Watson stat	1.968421	Prob(F-statistic)		0.0000

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APPENDIX C: PANEL FIXED EFFECT REGRESSION

Dependent Variable: GDP
Method: Panel Least Squares
Date: 06/09/24 Time: 21:49
Sample: 2012 2022
Periods included: 11
Cross-sections included: 11
Total panel (balanced) observations: 121

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POI	0.092362	0.37583	0.245755	0
ATC	0.005492	0.00141	3.89784	0.0002
DLT	0.004819	0.00334	1.442004	0.1523
INT	0.370336	0.16141	2.294441	0.0238
ROA	0.060338	0.12718	0.474429	0.0005
C	0.019161	2.18219	0.008781	0
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	1.201105	R-squared		0.717539
Mean dependent var	10.72727	Adjusted R-squared		0.677187
S.D. dependent var	2.269361	S.E. of regression		1.289374
Akaike info criterion	3.468824	Sum squared resid		174.5611
Schwarz criterion	3.838515	Log likelihood		-193.864
Hannan-Quinn criter.	3.61897	F-statistic		17.78216
Durbin-Watson stat	2.005658	Prob(F-statistic)		0.0000

APPENDIX D: FIXED EFFECT TEST

Dependent Variable: GDP
Method: Panel Least Squares
Date: 06/09/24 Time: 21:49
Sample: 2012 2022
Periods included: 11
Cross-sections included: 11
Total panel (balanced) observations: 121

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POI	0.092362	0.37583	0.245755	0.0000
ATC	0.005492	0.00141	3.89784	0.0002
DLT	0.004819	0.00334	1.442004	0.1523
INT	0.370336	0.16141	2.294441	0.0238
ROA	0.060338	0.12718	0.474429	0.0005
C	0.019161	2.18219	0.008781	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	1.201105	R-squared	0.717539
Mean dependent var	10.72727	Adjusted R-squared	0.677187
S.D. dependent var	2.269361	S.E. of regression	1.289374
Akaike info criterion	3.468824	Sum squared resid	174.5611
Schwarz criterion	3.838515	Log likelihood	-193.864
Hannan-Quinn criter.	3.61897	F-statistic	17.78216
Durbin-Watson stat	2.005658	Prob(F-statistic)	0.00000

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.1834	-10,105	0.0042
Cross-section Chi-square	22.859	10	0.0127

Cross-section fixed effects test equation:
Dependent Variable: GDP

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Method: Panel Least Squares
Date: 06/10/24 Time: 11:22
Sample: 2012 2022
Periods included: 11
Cross-sections included: 11
Total panel (balanced) observations: 121

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POI	0.092362	0.3184	0.245755	0.0000
ATC	0.005492	0.0007	3.89784	0.0002
DLT	0.004644	0.003	1.442004	0.1217
INT	0.165903	0.0846	2.294441	0.0238
ROA	0.060338	0.066	0.474429	0.0005
C	0.019161	1.3423	0.008781	0.0000
Root MSE	1.320093	R-squared		0.6588
Mean dependent var	10.72727	Adjusted R-squared		0.64397
S.D. dependent var	2.269361	S.E. of regression		1.35409
Akaike info criterion	3.492455	Sum squared resid		210.86
Schwarz criterion	3.631089	Log likelihood		-205.29
Hannan-Quinn criter.	3.54876	F-statistic		44.4096
Durbin-Watson stat	1.968427	Prob(F-statistic)		0.0000

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APPENDIX E: RANDOM EFFECT

Dependent Variable: GDP
Method: Panel EGLS (Cross-section random effects)
Date: 06/10/24 Time: 11:52
Sample: 2012 2022
Periods included: 11
Cross-sections included: 11
Total panel (balanced) observations: 121
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
POI	0.361871	0.30315	1.193703	0.0000
ATC	0.102108	0.1027	0.994245	0.0032
DLT	0.08644	0.02836	3.048062	0.1042
INT	0.165903	0.0806	2.058328	0.0418
ROA	0.173325	0.06281	2.7596	0.0000
C	0.089956	1.27817	0.070378	0.0000
	Effects Specification			
			S.D.	Rho
Cross-section random			0.0000	0.0000
Idiosyncratic random			1.289374	1.0000
	Weighted Statistics			
Root MSE	1.320093	R-squared		0.6588
Mean dependent var	10.72727	Adjusted R-squared		0.64397
S.D. dependent var	2.269361	S.E. of regression		1.35409
Sum squared resid	210.8602	F-statistic		44.4096
Durbin-Watson stat	2.000346	Prob(F-statistic)		0.0000
	Unweighted Statistics			
R-squared	0.658802	Mean dependent var		10.7273
Sum squared resid	210.8602	Durbin-Watson stat		2.00035

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APPENDIX F: HAUSMAN TEST

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.367	5	0.32456

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var (Diff.)	Prob.
POI	-1.92362	-2.7619	0.049349	0.0002
ATC	0.005492	0.00211	0.000001	0.0057
DLT	0.004819	0.00464	0.000003	0.921
INT	0.370336	0.1659	0.019555	0.1438
ROA	-0.46034	-0.2733	0.01223	0.0908

Cross-section random effects test equation:
Dependent Variable: GDP

Method: Panel Least Squares
Date: 06/10/24 Time: 12:28
Sample: 2012 2022
Periods included: 11
Cross-sections included: 11
Total panel (balanced) observations: 121

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.32916	2.18219	6.108168	0
POI	-1.92362	0.37583	-5.118322	0
ATC	0.005492	0.00141	3.89784	0.0002
DLT	0.004819	0.00334	1.442004	0.1523
INT	0.370336	0.16141	2.294441	0.0238
ROA	-0.46034	0.12718	-3.61957	0.0005

Effects Specification

Cross-section fixed (dummy variables)

Root MSE	1.201105	R-squared	0.71754
Mean dependent var	10.72727	Adjusted R-squared	0.67719
S.D. dependent var	2.269361	S.E. of regression	1.28937
Akaike info criterion	3.468824	Sum squared resid	174.561
Schwarz criterion	3.838515	Log likelihood	-193.86
Hannan-Quinn criter.	3.61897	F-statistic	17.7822
Durbin-Watson stat	1.245655	Prob(F-statistic)	0.0000

APPENDIX G

PANEL HETEROSCEDASTICITY TEST

Panel Period Heteroscedasticity LR Test
Equation: UNTITLED
Specification: C POI ATC DLT INT ROA
Null hypothesis: Residuals are homoscedastic

	Value	Df	Probability
Likelihood ratio	3.651104	10	0.9617

LR test summary:

	Value	Df
Restricted LogL	176.6666	121
Unrestricted LogL	178.4922	121

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APPENDIX H:

RESIDUAL CROSS-SECTION TEST RESULT

Residual Cross-Section Dependence Test
Null hypothesis: No cross-section dependence (correlation) in
weighted residuals
Equation: Untitled
Periods included: 11.
Cross-sections included: 11
Total panel observations: 121
Cross-section effects were removed during estimation.

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	65.23849	45	0.1258
Pesaran scaled LM	2.133325		0.2329
Bias-corrected scaled LM	1.633325		0.1024
Pesaran CD	0.200209		0.8413

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APPENDIX I:
LETTER FOR DATA COLLECTION

UNIT PENGAJIAN SISWAZAH
POSTGRADUATE STUDIES UNIT (PSU)
UUM College of Business
Universiti Utara Malaysia
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UUM/COB/P-40
9 October 2023

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

LETTER OF RECOMMENDATION FOR DATA COLLECTION AND RESEARCH WORK

This is to certify that **SALIHU ADAM JIDDAH (Matric No. 905214)** is a student at the UUM College of Business, Universiti Utara Malaysia, pursuing his Doctor of Philosophy (Technology, Operation and Logistics Management). He is conducting research entitled ***"The Moderating Effect of Seaport Infrastructure on the Relationship between Logistics Performance and Economic Growth in the Nigerian Manufacturing Sector"*** under the supervision of Assoc. Prof. Dr. Suhaila binti Abdul Hanan and Ts. Dr. Nur Khairiel bin Anuar.

In this regard, we hope that you can kindly provide him with assistance and cooperation to enable him to successfully complete the research. All the information gathered will be strictly used for academic purposes only.

Your cooperation and assistance are very much appreciated.

Thank you.

"MALAYSIA MADANI"
"BERKHIDMAT UNTUK NEGARA"
"KEDAH SEJAHTERA - NIKMAT UNTUK SEMUA"
"ILMU BUDI BAKTI"

Upholding the principles of trust and integrity

NURUL NADIAH RUSLE
Assistant Registrar
for Director
Postgraduate Studies Unit
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