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*Research article*

## **Autoregressive distributed lag estimation of bank financing and Nigerian manufacturing sector capacity utilization**

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### **Supplementary**

#### **Appendix**

**Table A.1.** OLS-MLR result.

Source	SS	df	MS
Model	2157.01801	3	719.006004
Residual	709.168872	25	28.3667549
Total	2866.18688	28	747.372758

Number of obs = 29; F(3, 25) = 25.35; Prob > F = 0.0000; R-squared = 0.7526; Adj R-squared = 0.7229

ACP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
T	2.82734	0.7051444	4.01	0.000	1.375068, 4.279612
LNCRM	-13.02522	4.141343	-3.15	0.004	-21.55448, -4.495965
MNE	-6.959106	1.779166	-3.91	0.001	-10.62337, -3.294845
_cons	404.931	107.5078	3.77	0.001	183.5144, 626.3475

Source: STATA 12 Outputs, 2022.

**Table A.2.** ARDL regression for bounds test.

Sample: 1993 – 2019  
 Number of obs = 27; F(3, 23) = 18.09; Prob > F = 0.0000; R-squared = 0.7023; Adj R-squared = 0.6635; Log likelihood = -84.360119; Root MSE = 5.9636

ACP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
ACPL1	0.3759016	0.1874876	2.00	0.057	-0.0119461, 0.7637493
LNCRM	2.399905	1.443128	1.66	0.110	-0.585433, 5.385243
MNE	-2.647067	1.77396	-1.49	0.149	-6.316782, 1.022648
_cons	-2.484164	47.35927	-0.05	0.959	-100.4543, 95.48595

Source: STATA 12 Outputs, 2022.

**Table A.3.** Variable lag selection.

	ACP	LNCRM	MNE
r1	1	0	0
ARDL (1,0,0) regression			

**Table A.4.** Error correction estimation (bounds test).

Sample: 1991 – 2019  
 Number of obs = 29; R-squared = 0.2992; Adj R-squared = 0.2151; Log likelihood = -90.695956; Root MSE = 5.9460

D.ACP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
ADJ ACP L1.	-0.529033	0.1669538	-3.17	0.004	-0.8728808, -0.1851853
LR LNCRM	2.739535	1.946	1.41	0.172	-1.268328, 6.747397
MNE	-4.620596	3.357192	-1.38	0.181	-11.53486, 2.29367
SR _cons	16.26555	44.52974	0.37	0.718	-75.44517, 107.9763

Note: estat btest has been superseded by estat ectest as the prime procedure to test for a levels relationship(click to run).

Source: STATA 12 Outputs, 2022.

**Table A.5.** Pesaran/Shin/Smith (2001) ARDL bounds test.

H0: no levels relationship, F = 3.558, t = -3.169  
 Critical Values (0.1–0.01), F-statistic, Case 3

	[I_0]	[I_1]	[I_0]	[I_1]	[I_0]	[I_1]	[I_0]	[I_1]
	L_1	L_1	L_05	L_05	L_025	L_025	L_01	L_01
k_2	3.17	4.14	3.79	4.85	4.41	5.52	5.15	6.36
Critical Values (0.1–0.01), t-statistic, Case 3								
k_2	-2.57	-3.21	-2.86	-3.53	-3.13	-3.80	-3.43	-4.10

accept if F < critical value for I(0) regressors  
 reject if F > critical value for I(1) regressors  
 k: # of non-deterministic regressors in long-run relationship  
 Critical values from Pesaran/Shin/Smith (2001)

Source: STATA 12 Outputs, 2022.

**Table A.6.** Standard ARDL regression (short-run analysis).

Sample: 1991 – 2019

Number of obs = 29; F(3, 25) = 18.69; Prob &gt; F = 0.0000; R-squared = 0.6916; Adj R-squared = 0.6546; Log likelihood = -90.695956; Root MSE = 5.9460

ACP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
ACPL1	0.470967	0.1669538	2.82	0.009	-0.1271192, 0.8148147
LNCRM	1.449304	1.187186	1.22	0.234	-0.9957501, 3.894359
MNE	-2.444448	1.75806	-1.39	0.177	-6.065241, 1.176345
_cons	16.26555	44.52974	0.37	0.718	-75.44517, 107.9763

Source: STATA 12 Outputs, 2022.

**Table A.7.** ARDL regression (post estimation diagnostics)

Sample: 1991 – 2019

Number of obs = 29; F (3, 25) = 18.69; Prob &gt; F = 0.0000; R-squared = 0.6916; Adj R-squared = 0.6546; Log likelihood = -90.695956; Root MSE = 5.9460

ACP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
ACPL1	0.470967	0.1669538	2.82	0.009	-0.1271192, 0.8148147
LNCRM	1.449304	1.187186	1.22	0.234	-0.9957501, 3.894359
MNE	-2.444448	1.75806	-1.39	0.177	-6.065241, 1.176345
_cons	16.26555	44.52974	0.37	0.718	-75.44517, 107.9763

**Table A.8.** Breusch-Godfrey LM test for autocorrelation.

lags(p)	chi2	df	Prob > chi2
1	3.767	1	0.0523

Note: H0: no serial correlation.

Source: STATA 12 Outputs, 2022.

**Table A.9.** LM white test for heteroscedasticity.

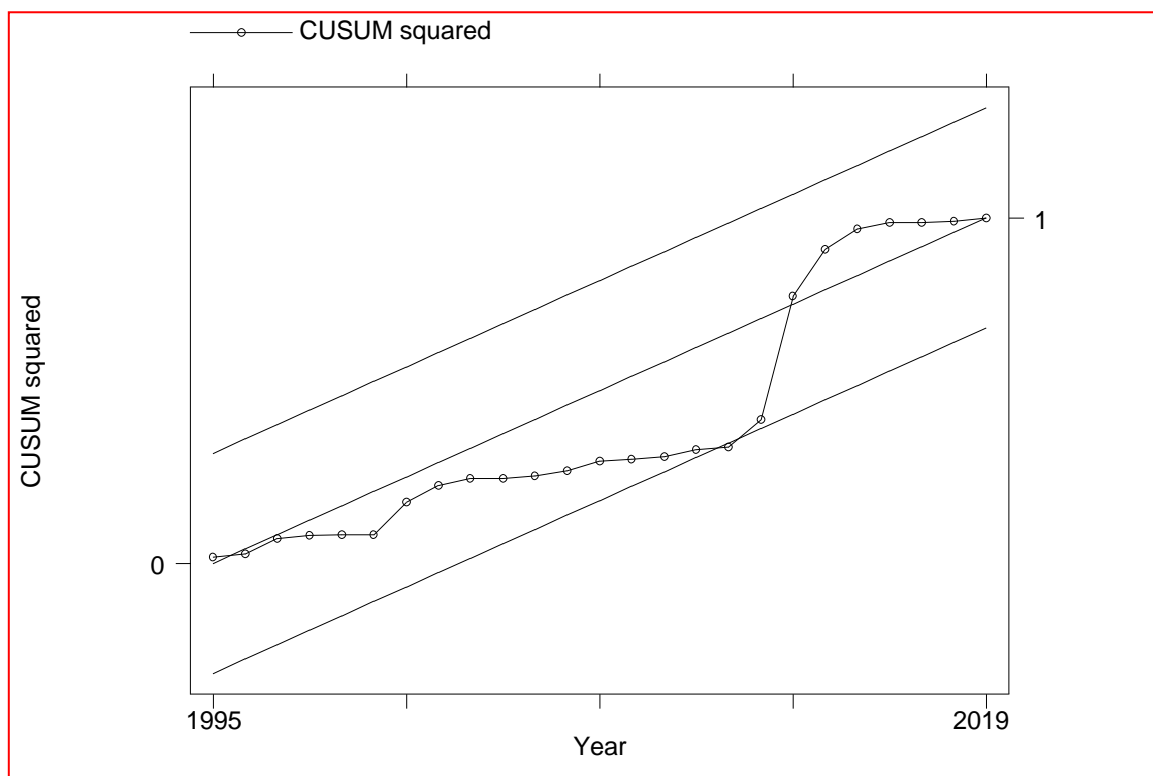
Source	chi2	df	p
Heteroskedasticity	10.75	9	0.2932
Skewness	3.34	3	0.3422
Kurtosis	2.10	1	0.1478
Total	16.19	13	0.2393

Note: White's test for Ho: homoskedasticity; against Ha: unrestricted heteroskedasticity

chi2(9) = 10.75; Prob &gt; chi2 = 0.2932

Cameron &amp; Trivedi's decomposition of IM-test

Source: STATA 12 Outputs, 2022.



**Fig. A.1.** CUSUM graph for stability test.  
Source: STATA 12 Outputs, 2022.



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