

Financial Integration and Growth Volatility Nexus: The Nigeria Experience

Victor Chukwunweike Ehiedu

Accounting, Banking and Finance Department, Faculty of Management Sciences, Delta State University, Asaba Campus, Delta State, Nigeria.

Anthony Ogormegbunan Odita

Department of Business Administration and Marketing, Faculty of Management Sciences, Delta State University, Asaba Campus, Delta State, Nigeria.

Anthony Anyibuofu Kifordu*

Department of Business Administration and Marketing, Faculty of Management Sciences, Delta State University, Asaba Campus, Delta State, Nigeria. E-mail: anthony.kifordu@yahoo.com

Received July 05, 2020; Accepted September 05, 2020

ISSN: 1735-188X

DOI: 10.14704/WEB/V17I2/WEB17041

Abstract

This paper examined empirically financial integration impact on Nigeria economic growth volatility. Specifically, it identified some of the major key variables through which financial integration influence growth volatility in Nigeria. Three research hypotheses were stated from which an empirical model was formulated to link the influence of financial integration using economic output as explained variable and degree of openness, foreign private investment, exchange rate foreign debt as explanatory variables over the period of 1987– 2019. Multiple regression analysis was employed to estimate the relevant variables. In addition, we tested for stationarity and determined long run association between the variables of the models. The work also reconciled the disequilibrium which exists in the short and long run relationships of the variables in the models. The result showed a non-significant degree of openness but positively associated with gross domestic product. Foreign private investment was strongly and statistically significant to gross domestic product. It was therefore recommended that for Nigeria financial sector services to take substantial benefits of broad participation in globalization, the provision of sound macroeconomic policy framework with high degree of certainty of the future of investment is needed.

Keywords

Financial Integration, Growth Volatility, Domestic Product, Nexus, Nigeria Experience.

Introduction

Liberalization procedures for capital accounts have always witnessed vulnerability. We see increased global risks because financial nexus can multiply real and imagined financial distresses. Holding growth constant, higher macroeconomic volatility would normally be associated with an increase in inequality of income, and therefore measures of poverty based on inequality. If the growth benefits are large— as indeed they may well be, although the evidence is clearly very mixed — then of course increased financial integration may increase relative poverty measures reducing absolute poverty measures in the longer run. Kose, Prasad, and Terrones (2013) noted that globalization has the potentials to prevent growth volatility when risks are diversified. There are indications of more growth volatility from more financially integrated countries as suggested by the latest crises. Scholars and researchers want to find out any or all available confirmation of globalization and macroeconomic link. However, we must always remember the difference between consumption volatility and output, (Bordo, 2015).

It is always difficult to confirm the effect of international integration on output volatility. Production base can be improved to assist developing economies by accessing capital through financial integration. Ehiedu, (2014) submitted that production specialization arising from comparative advantage can be encouraged by increased financial integration and this leads to economic vulnerability to distresses. Whatever the outcome of financial integration and output volatility nexus may be, it is expected that consumption volatility will be lessened by financial integration. Economic welfare is often seen as an outcome of reduction in consumption fluctuations, (Obstfeld, Maurice, and Kenneth Rogoff, 2018).

Prasad (2014), Bailliu (2014) opined that countries can share macroeconomic risks and seamless consumption when they can access international financial markets. It is reasoned that country specific factors and output volatility can be link financial assets deals can be disassociated using financial assets deals judging from the fact that gross domestic product/output volatility are ideally, never linked from one country to the other.

Aims of the Study

From the preceding section of this work, financial integration has its potential benefits and risks. The primary aim is to examine empirically, financial integration impact on Nigeria economic growth volatility. Specifically, the following aims will be considered.

- 1) To investigate degree of openness and gross domestic product nexus.
- 2) To ascertain foreign private investment and gross domestic product nexus.

- 3) To determine exchange rate and gross domestic product nexus.
- 4) To examine foreign debt and gross domestic product nexus.

Theoretical Framework

Anuku (2014) reported the effect of current and capital account openness on gross domestic product/output volatility, consumption and investment nexus using a cross-sectional approach. He estimated the following regression model:

$$\delta_{j,i} = \alpha + \beta_{j,c}FC_i + \beta_{j,k}FK_i + \varepsilon_{j,i}$$

Where j = domestic product/output volatility (Y); consumption (C) and investment (I)
 α = standard deviation.

FC_i (*resp.* FK_i) = measure of current account (*resp.* capital account) openness.

He found the nonexistence of significant links among openness and any of the volatility proxies.

Ehiedu (2014) examined the basis of gross domestic product/output volatility from 1960 - 1978 and 1979 - 1997 for a broad spectrum of countries. Employing a 2 period panel OLS and IV approaches; he concluded that trade openness has the potential to link up any economy to more volatility. However, private capital flows had no considerable link to gross domestic product/output volatility. Financial development stage appears to have a significant smoothing effect on gross domestic product/output growth, but the impact is nonlinear. Deep financial systems seem to reduce volatility, but only up to a certain threshold. Private credit threshold is approximated at 100 percent of annual GDP which is relatively high. Buchi (2012) studied OECD countries employing yearly data from 1960 to 2000. She used Sutherland's the representation as follows:

$$\delta_{i,t} = \alpha_{0,i} + \alpha_{1,t} + \beta_1\sigma_{i,t}^{controls} + \beta_2FO_{i,t} + u_{i,t}$$

Where $\alpha_{i,t}$ = standard deviation of the recurring factors of real GDP for a 5 year period;
 $FO_{i,t}$ = measure of financial integration.

From the Sutherland's representation, financial integration is expected to increase financial distresses and diminish budgetary distresses. He found the nonexistence of significant links among financial openness and gross domestic product/output volatility.

The results support the model's predictions that financial integration amplifies monetary shocks and dampens fiscal shocks.

Review of Empirical Studies

In the literature, empirical studies showed a complex and mixed picture about financial integration and growth nexus. The diverse results did not sustain an affirmative effect of integration or otherwise. Razin (2014) examined trade, financial openness, output volatility, consumption, and investment nexus using 138 countries' data from 1980 – 2013. The result showed that financial openness and macroeconomic volatility had no considerable nexus. Anuku (2016) explored the sources of macroeconomic volatility using 74 countries' data from 1960 – 2014. He concluded that lower financial volatility encourages high level development of the domestic financial sector. Nevertheless, for the developing economies, increased degree of openness encourages increased output volatility. The result specified that financial openness and financial volatility do not have considerable effect on macroeconomic volatility. Aizenman (2017), Razin (2014), differently studied 1990 – 2016 financial volatility and economic growth from The result revealed a complex and mixed picture, where the relationship between economic growth and lagged financial volatility was a function of volatility type, economic structure, and global models of economic growth. Economic growth and lagged equity flows had few and unstable relationship unlike economic growth and FDI relationship. Reinhart and Reinhart (2009) analyzed financial volatility roll-over prizes for 181 economies from 1960 - 2007. The result showed that roll-over prizes are affirmatively related with financial and economic crisis for emerging economies. Bussiere and Fratzscher (2018) noted did not observe any form of existing affirmative relationship between financial openness and economic growth. Using 45 advanced economies and emerging markets data for 1980 - 2017, the result showed that in the short-run, financial openness may support economic growth. This support does not extend to medium to long run.

Klein (2018) concluded that a considerable and affirmative effect on financial depth and economic growth of open capital accounts in a cross-section of countries from 1986-2015 and 1976-1995. Greater financial deepening and more rapid growth were recorded by countries with open capital accounts. Buchi (2012), between 1988 and 2010 empirically investigated the effect on economic growth of three different types of private capital flows in 51 developed and developing countries. The result showed that FDI had an affirmative effect on economic growth, but had a depressing economic growth effect from foreign debt, exchange rate and portfolio investment. Anuku (2016) found that economic growth was affirmatively associated with degree of openness. Mougani (2012) demonstrated

considerable divergences on the effect of financial integration on growth. The data did not support the view that international financial integration accelerates economic growth, even under particular economic and financial conditions.

Method of Data Analysis

This research shall adopt a regression analysis technique and specifically multiple regression models. This is based on the assumption drawn from Gujarati (2005), two-variable model is inadequate in practice, which is also supported by Pyndyck and Rubinfeld (1995), that a dynamic equation provides a better representation of the real world that is relatively richer than a single equation model. The major data that will be used in this analysis is time series data. That is, annually collected set of observations. Empirical work based on this assumes that the underlying time series is stationary. However, several studies have shown that regression on this assumption, sometimes, results in spurious or nonsense observations, because most economic time series data are never stationary over time especially at first difference (Gujarati, 2005). Regression analysis is assumed meaningful if applied to stationarity data, otherwise, if two different time series are non-stationary individually, but are co-integrated among the variables, Error Correction Mechanism (ECM) can, therefore, be applied.

Research Hypotheses

The following research hypotheses will be examined in the course of this dissertation and these are thus presented in the null form.

H₀₁: Degree of openness and economic output has no nexus.

H₀₂: Foreign private investment and economic output has no nexus

H₀₃: Exchange rate and economic output has no nexus.

H₀₄: Foreign debt and economic output has no nexus

Model Specification

$$GDP = f(DOP, FPI, EXR, FD)$$

From the above model we have the linear econometric model as follows:

$$GDP = a_0 + a_1DOP + a_2FPI + a_3EXR + a_4FD + U_t$$

Apriori Expectations: $a_1 > 0$, $a_2 > 0$, $a_3 \geq 0$, $a_4 < 0$

Where: GDP = Gross Domestic Product; DOP = Degree of openness; FPI = Foreign Private Investment; EXR = Exchange Rate; FD = Foreign debt; U_t = Random Term.

Presentation of Results

Table 1 Summary of the Estimated OLS Equation

Dependent Variable: LOG(GDP)				
Method: Least Squares				
Date: 10/01/20 Time: 02:44				
Sample: 1987 2019				
Included observations: 33				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(DOP)	0.327291	0.240363	1.361655	0.1842
LOG(FPI)	0.506638	0.127005	3.989135	0.0004
LOG(EXR)	0.588397	0.224344	2.622750	0.0140
LOG(FD)	-0.019265	0.121211	-0.158939	0.8749
C	8.571947	1.877705	4.565119	0.0001
R-squared	0.973970	Mean dependent var		14.49088
Adjusted R-squared	0.970252	S.D. dependent var		2.133417
S.E. of regression	0.367964	Akaike info criterion		0.977062
Sum squared resid	3.791123	Schwarz criterion		1.203806
Log likelihood	-11.12153	F-statistic		261.9253
Durbin-Watson stat	2.262047	Prob(F-statistic)		0.000000

Source: E-View package (2020)

Interpretation of Results

From Table 1, it suggests that the Degree of Openness LOG(DOP), Foreign Private Investment (LOG(FPI), and Exchange Rate LOG(EXR) have a positive linear relationship with the Gross Domestic Product LOG(GDP) while the Foreign Debt LOG(FD) has a negative linear relationship with the LOG(GDP). This implies, therefore, that a unit addition to DOP, FPI and EXR will boost GDP by about 33%, 51% and 59% units respectively; while a unit addition to FD will decrease GDP by 19%.

The R^2 suggests that 97% of the total variation in the LOG(GDP) has been explained by the LOG(DOP), LOG(FPI), LOG(EXR) and the LOG(FD) taken together. This is good enough since the unexplained variation is just 3% (1-0.97). The \bar{R}^2 , which is the adjusted R^2 for degrees of freedom agrees with the R^2 since it suggests that 97% of the total variation in the LOG(GDP) has been explained by the LOG(DOP), LOG(FPI), LOG(EXR) and the LOG(FD) taken together.

The F test which is a test of the joint hypothesis and the overall significance of the model has an absolute value of (261.9253) and probability value of (0.000000) which suggests that the LOG(DOP), LOG(FPI), LOG(EXR) and the LOG(FD) are important factors to be

taken into consideration when explaining the variation in the LOG(GDP) at 5% level of significance.

The t test at 5% level of significance and a test of the individual hypothesis suggest that the LOG(FPI), and the LOG(EXR) with observed values of 3.989135, and 2.622750 respectively and the respective probabilities of 0.0004, and 0.0140 are statistically significant in explaining the changes in the LOG(GDP), while the LOG(DOP) and the LOG(FD) with observed values of 1.361655 and -0.158939 and the probability of 0.1842 and 0.8749 in explaining the changes in the LOG(GDP) was not statistically considerable. The Durbin-Watson test with value of 2.262047 suggests no presence serial correlation among the variables.

Unit Root Test

Table 2 Summary of Augmented Dickey-Fuller (ADF) Unit Root Test

Variable	Level data	1 st Difference	Second Difference	Order of Integration
GDP	5.134074*	-1.650609	-6.576002	<i>I</i> (0)
DOP	-0.658281	-5.071855*	-6.710062	<i>I</i> (1)
FPI	1.158478	-2.229215	-6.759645*	<i>I</i> (2)
EXR	-0.037641	-3.560528*	-6.092506	<i>I</i> (1)
FD	-2.323701	-3.856315*	-5.780578	<i>I</i> (1)

Source: E-View package (2020)

- * indicates stationary at the 1% level
- ** indicates stationary at the 5% level
- *** indicates stationary at the 10% level
- 1% critical value = -3.6752
- 5% critical value = -2.9665
- 10% critical value = -2.6220

The ADF unit root test suggests that the GDP became stationary at level *I*(0), while DOP, EXR, and FD were stationary after taking the first difference *I*(1), but the FPI finally became stationary only after taking the second difference *I*(2). They were all stationary at the 1% critical value. This sets the pace for co-integration test.

Cointegration Test

Table 3 Summary of Johansen Co-integration Test

Null Hypothesis	Alternative Hypothesis	Eigen value	Likelihood Ratio	5% critical Value	1% critical Value
R = 0	R = 1	0.875208	131.6847	68.52	76.07
R = 1	R = 2	0.684191	69.25137	47.21	54.46
R = 2	R = 3	0.459968	34.67285	29.68	35.65
R = 3	R = 4	0.358496	16.18907	15.41	20.04
R = 4	R = 5	0.091259	2.870868	3.76	6.65

Source: E-Views (2020)

Sample: 1987-2019

Included observations: 30

Test Assumption: Linear deterministic trend in the data

Series: LOG(GDP) LOG(DOP) LOG(FPI) LOG(EXR) LOG(FD)

Lag interval: 1 to 2

The Johansen co-integration test in Table 3 shows that the L.R. rejects null hypothesis of R = 0, R = 1, R = 2 and R = 3 of no co-integration and, thus, accepts the alternative hypotheses of R = 1, R = 2, R = 3 and R = 4 of co-integration. The L.R. could not, however, reject null hypothesis of R = 4. Thus, on the aggregate, a long run relationship exists among the LOG(GDP), LOG(DOP), LOG(FPI), LOG(EXR) and the LOG(FD).

Error Correction Model (ECM)

Table 4 The Summary of Vector Error Correction Estimates

Sample(adjusted): 1987 2019					
Included observations: 30 after adjusting endpoints					
Standard errors & t-statistics in parentheses					
Cointegrating Eq:	CointEq1				
LOG(GDP(-1))	1.000000				
LOG(DOP(-1))	-3.019432				
	(0.91532)				
	(-3.29878)				
LOG(FPI(-1))	-4.379703				
	(1.30267)				
	(-3.36211)				
LOG(EXR(-1))	6.001959				
	(2.13867)				
	(2.80640)				

LOG(FD(-1))	-3.660926				
	(1.19219)				
	(-3.07076)				
C	52.45540				
Error Correction:	D(LOG(GDP))	D(LOG(DOP))	D(LOG(FPI))	D(LOG(EXR))	D(LOG(FD))
CointEq1	0.006440	0.027455	0.114661	-0.005912	0.222129
	(0.03110)	(0.04886)	(0.03935)	(0.05657)	(0.07402)
	(0.20708)	(0.56192)	(2.91409)	(-0.10450)	(3.00081)
D(LOG(GDP(-1)))	0.301458	0.225689	-0.159553	-0.507035	-0.684255
	(0.28403)	(0.44626)	(0.35938)	(0.51673)	(0.67610)
	(1.06136)	(0.50574)	(-0.44397)	(-0.98123)	(-1.01206)
D(LOG(GDP(-2)))	-0.203706	-0.435414	-0.485999	-0.665891	-1.087510
	(0.23687)	(0.37216)	(0.29971)	(0.43094)	(0.56385)
	(-0.85998)	(-1.16995)	(-1.62154)	(-1.54521)	(-1.92873)
D(LOG(DOP(-1)))	-0.061459	-0.361283	0.521659	-0.093792	0.364662
	(0.19694)	(0.30943)	(0.24919)	(0.35830)	(0.46880)
	(-0.31207)	(-1.16758)	(2.09340)	(-0.26177)	(0.77786)
D(LOG(DOP(-2)))	0.138324	0.236217	0.433131	0.455032	0.790084
	(0.15945)	(0.25052)	(0.20175)	(0.29009)	(0.37956)
	(0.86750)	(0.94289)	(2.14682)	(1.56859)	(2.08160)
D(LOG(FPI(-1)))	-0.075432	0.018755	0.435237	-0.119496	0.334074
	(0.18307)	(0.28764)	(0.23164)	(0.33306)	(0.43578)
	(-0.41203)	(0.06520)	(1.87891)	(-0.35878)	(0.76660)
D(LOG(FPI(-2)))	0.114931	0.268688	0.673224	-0.241481	0.464011
	(0.19422)	(0.30515)	(0.24574)	(0.35334)	(0.46231)
	(0.59176)	(0.88052)	(2.73953)	(-0.68343)	(1.00367)
D(LOG(EXR(-1)))	0.074747	-0.057187	-0.599155	-0.133281	-0.797109
	(0.17949)	(0.28200)	(0.22711)	(0.32654)	(0.42725)
	(0.41645)	(-0.20279)	(-2.63822)	(-0.40816)	(-1.86568)
D(LOG(EXR(-2)))	-0.033565	0.046774	-0.176837	-0.094370	-0.422878
	(0.16061)	(0.25234)	(0.20322)	(0.29220)	(0.38231)
	(-0.20898)	(0.18536)	(-0.87017)	(-0.32297)	(-1.10610)
D(LOG(FD(-1)))	0.064278	0.119505	0.226445	0.178134	0.522489
	(0.10130)	(0.15915)	(0.12817)	(0.18429)	(0.24112)
	(0.63455)	(0.75088)	(1.76676)	(0.96661)	(2.16689)
D(LOG(FD(-2)))	-0.034762	-0.099129	-0.055575	0.027415	-0.004069
	(0.08472)	(0.13311)	(0.10719)	(0.15413)	(0.20166)
	(-0.41032)	(-0.74473)	(-0.51845)	(0.17787)	(-0.02018)
C	0.164464	0.051669	0.200731	0.489624	0.506893
	(0.08629)	(0.13558)	(0.10919)	(0.15699)	(0.20541)
	(1.90588)	(0.38110)	(1.83843)	(3.11879)	(2.46771)

Source: E-View package (2020)

The vector error correction result in Table 4 suggests that the first lags of the LOG(DOP), LOG(FPI), LOG(EXR) and LOG(FD) with values of -3.29878, -3.36211, 2.80640 and -3.07076 respectively are significant. This implies that the disequilibrium short-run has been made up for by the vector error correction (VEC). Thus the short run/long run disequilibrium has been reconciled.

Recommendations

- 1) Consequent upon the results the following recommendations are suggested.
- 2) Financial integration which was proxied by the degree of openness from our analytical framework did not contribute much to Nigeria economic growth, irrespective of the fact that, it exacted a positive relationship. The opening of the economy to the global system is expected to contribute positively to the economy following the a priori expectations. Consequently, Nigeria's financial sector services should take substantial benefits of broad participation in globalization; the provision of sound macroeconomic policy framework with high degree of certainty of the future of investment is needed. This factor is premised on absence of sudden policy and lack of policy infidelity.
- 3) To maintain a steady and increasing growth level in Nigeria, the flow of foreign private investment or direct investment can be increased if there are some measures of stability in social and political system and some degree of government and private sector to willingness develop the Nigerian economy. Government can also actively reduce fiscal deficits and improve monetary management in order to prone down inflation rates and bring about a more competitive real returns on Nigeria's asset vis-à-vis Nigerian's trading partners.
- 4) The private sector participation also needs to be strengthened to compliment government's efforts in the liberalization process. However, the more private operators take advantage of the liberal policies of government, the more there will be inflow of FDI in form of portfolio investment. More fundamentals is the need on the part of multilateral institutions including IMF and world Bank to create a more supportive operating environment for private business and funding in support of long term investors in infrastructure. In the face of increased capital transaction as a result of globalization, developing economy like Nigeria might be susceptible to balance of payment difficulties; in which case IMF should be supportive through provision of funds without strangulated conditionality.
- 5) Foreign debt creates liabilities which must be repaid. Consequently, government should draw a monetary policy trust that will reduce debt to its best minimum and encourage investment. Investment generates jobs and encourages economic growth. Some economists censure foreign debt for aggravating financial calamities in most developing

economies. Edwards (2016) submitted that the Russian ruble crisis and Asian financial crisis was largely due to foreign debts.

Concluding Remarks

This study objectively emphasized on the financial integration and growth volatility nexus on the Nigerian economy. From the findings of this study, the researchers conclude that financial openness was absolutely linked to growth but was not statistically considerable. This notable insignificant nature of the degree of openness is associated with the fact that Nigerian openness to world economy concentrates only on the oil export and depends more on importations. This has a way of affecting the economy. It, therefore, means that openness of Nigerian economy to the global system has not contributed much towards the development of Nigeria. Nigeria economic growth will be stimulated more when the economy discourages import and encourages the export of domestically produced goods and services apart from oil. Some of the benefits generated by financial integration, including macroeconomic discipline and financial system development and soundness, could also reduce volatility. Foreign private investment was absolutely linked to economic growth and also statistically considerable. The impact of external financial integration on growth seems to depend primarily on the initial conditions and policies implemented in the country under consideration to stabilize foreign investment, boost domestic investment, productivity and other actions aimed at boosting growth and reducing poverty.

References

- Aizenman, G.H. (2017). *Capital flow, economic growth, financial integration and financial crisis, 1990-2010*. Department of Economics, E2, 1156 High St., University of California, Santa Cruz, Santa Cruz, CA 95604, USA.
- Andini, N.L., & Sukartha, I.M. (2020). The effect of earning management, managerial ownership and firm size in the return of acquisition companies in Indonesia Stock Exchange 2011-2017 period. *International Research Journal of Management, IT and Social Sciences*, 7(3), 116-125.
- Anuku, C.E.O. (2016). *Growth effects on capital account liberalization*. Unpublished; Abraka: Delta State University.
- Bailliu, J. (2014). *Private capital flows, financial development, and growth in developing countries*. Bank of Canada Working Paper No. 2000-15, (Ottawa: Bank of Canada).
- Bordo, F.O. (2015). Foreign currency debt, financial crises and economic growth: A long-run view. *Journal of International Money and Finance*, 29(4), 642-665.
- Buchi, C.M. (2012). *Financial openness and business cycle volatility*. Working Paper (Kiel: Kiel Institute for World Economics).

- Bussiere, M., & Marcel, F. (2018). Financial openness and growth: Shortrun Gain, Long-run Pain. *Review of International Economics*, 16(1), 69-95.
- Edwards, S. (2016). *Capital Flows, Foreign Direct Investment, and Debt-Equity Swaps in Developing Countries*. NBER Working Paper.
- Ehiedu, V.C. (2014). *Investment Financing and Dividend Policy of Banks in Nigeria*. Hezekiah.
- Klein, J.B. (2018). Capital account liberalization, financial depth, and economic growth. *Journal of International Money and Finance*, 27(6), 861-875.
- Kose, M.A., Eswar, S.P., & Terrones, M.E. (2013). *Financial integration and macroeconomic volatility*. IMF Staff Papers, 50(1), 119-142.
- Mougani, G. (2012). *Financial integration, growth and macroeconomic volatility in Africa*. African Development Bank Group – Working Paper Series.
- Obstfeld, M., & Kenneth, R. (2018). *Foundations of international macroeconomics*. Cambridge, MA: MIT Press.
- Prasad, E., Kenneth, R., Shang-Jin, W., & Ayhan Kose, M. (2004). *Growth volatility and financial integration in developing countries*. NBER Working Paper no. 10942. Cambridge, MA: National Bureau of Economic Research.
- Putra, I.P.K.S.D., & Suwandana, I.G.M. (2020). Effect of organizational commitment, job stress and work-family conflict to turnover intention. *International Research Journal of Management, IT and Social Sciences*, 7(2), 30-37.
- Razin. (2014). Risk-Taking, Global Diversification and Growth. *American Economic Review*, 84(5), 1310-1329.
- Ramantha, I.W. (2020). Fraud pentagon theory in detecting financial perception of financial reporting with good corporate governance as moderator variable. *International research journal of management, IT and social sciences*, 7(1), 84-94.
- Widhiadnyana, I.K., & Wirama, D.G. (2020). The effect of ownership structure on financial distress with audit committee as moderating variable. *International Research Journal of Management, IT and Social Sciences*, 7(1), 128-137.