


THE IMPACT OF FISCAL POLICY AND TRADE LIBERALIZATION ON ECONOMIC GROWTH: EVIDENCE FROM STRUCTURAL BREAKS FOR JORDAN

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ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 04 October 2022</p> <p>Accepted 23 December 2022</p>	<p>Purpose: The main purpose of this study is to examine the impact of fiscal policy and trade liberalization on Jordan's economic growth.</p> <p>Design/methodology/approach: The study used Augmented Dicky Fuller unit root tests and Kapetanios unit root tests with structural breaks for the empirical investigation.</p> <p>Findings: Government spending and taxation have a favourable influence on economic growth, according to the simulation results. Public debt has a negative but negligible effect on economic growth. Economic growth is significantly influenced by trade liberalisation.</p> <p>Research implications: The consequence is the proportion of spending on infrastructure and human resources should be increased by taxes financing rather than foreign loans. Improving the competitiveness of domestic industries is necessary for free trade to have a positive effect.</p> <p>Originality/value: This study is innovative due to the absence of research that addresses Fiscal Policy, Trade Openness and economic growth with the structural break in Jordan.</p>
<p>Keywords:</p> <p>ARDL; Kapetanios Test; Trade Liberalisation; Structural Breaks.</p> <div data-bbox="172 936 480 1182" style="text-align: center;">  </div>	<p>Doi: https://doi.org/10.26668/businessreview/2022.v7i6.850</p>

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O IMPACTO DA POLÍTICA FISCAL E DA LIBERALIZAÇÃO DO COMÉRCIO NO CRESCIMENTO ECONÔMICO: EVIDÊNCIAS DAS QUEBRAS ESTRUTURAIS PARA A JORDÂNIA

RESUMO

Objetivo: O objetivo principal deste estudo é examinar o impacto da política fiscal e da liberalização do comércio no crescimento econômico da Jordânia.

Desenho/método/abordagem: O estudo utilizou testes de raiz da unidade Augmented Dicky Fuller e testes de raiz da unidade Kapetanios com quebras estruturais para a investigação empírica.

Descobertas: Os gastos e impostos governamentais têm uma influência favorável no crescimento econômico, de acordo com os resultados da simulação. A dívida pública tem um efeito negativo, mas insignificante sobre o crescimento econômico. O crescimento econômico é significativamente influenciado pela liberalização do comércio.

Implicações da pesquisa: A consequência é que a proporção de gastos com infra-estrutura e recursos humanos deve ser aumentada pelo financiamento de impostos em vez de empréstimos estrangeiros. A melhoria da competitividade das indústrias nacionais é necessária para que o livre comércio tenha um efeito positivo.

Originalidade/valor: Este estudo é inovador devido à ausência de pesquisas que abordem a política fiscal, a abertura comercial e o crescimento econômico com a quebra estrutural na Jordânia.

Palavras-chave: ARDL, Teste Kapetanios, Liberalização do Comércio, Quebra Estrutural.

EL IMPACTO DE LA POLÍTICA FISCAL Y LA LIBERALIZACIÓN DEL COMERCIO EN EL CRECIMIENTO ECONÓMICO: EVIDENCE FROM STRUCTURAL BREAKS FOR JORDAN

RESUMEN

Objetivo: El objetivo principal de este estudio es examinar el impacto de la política fiscal y la liberalización del comercio en el crecimiento económico de Jordania.

Diseño/metodología/enfoque: Para la investigación empírica se utilizaron pruebas de raíces unitarias de Dicky Fuller aumentadas y pruebas de raíces unitarias de Kapetanios con rupturas estructurales.

Resultados: El gasto público y los impuestos influyen favorablemente en el crecimiento económico, según los resultados de la simulación. La deuda pública tiene un efecto negativo pero insignificante en el crecimiento económico. La liberalización del comercio influye significativamente en el crecimiento económico.

Consecuencias para la investigación: La consecuencia es que la proporción del gasto en infraestructuras y recursos humanos debería incrementarse mediante la financiación de los impuestos en lugar de los préstamos extranjeros. Es necesario mejorar la competitividad de las industrias nacionales para que el libre comercio tenga un efecto positivo.

Originalidad/valor: Este estudio es innovador debido a la ausencia de investigaciones que aborden la Política Fiscal, la Apertura Comercial y el crecimiento económico con la ruptura estructural en Jordania.

Palabras clave: ARDL, Test de Kapetanios, Apertura Comercial, Rupturas Estructurales.

INTRODUCTION

The rate of economic growth is a key indicator of the level of progress that a nation has made in its development. To phrase this another way, having a high rate of economic growth contributes to the resolution of some macroeconomic issues, such as poverty, unemployment, and income inequality. As a result, due to the importance of economic growth, the researchers have carried out a large number of studies, both theoretical and empirical. The most important takeaways from the study were the factors that influence economic growth. In the endogenous growth theory that was presented by (Barro, 1990; Barro & Sala-i-Martin, 1992; Rømer, 2001), the emphasis is placed on recognising endogenous technology to be a deciding element

in the economic growth of a country. Similarly, the new international trade paradigm emphasises that the transfer of technology through the flow of foreign goods and services will accelerate economic growth in the home nation (Grossman & Helpman, 1991; Krugman & Obsfeld, 2000). Both theories emphasise the relevance of technology advancement to economic growth. Fiscal policy and trade policy are the macroeconomic instruments that play a vital role in fostering technologies that stimulate economic growth. Determinants of economic growth are a critical and stimulating study issue in economics for which nearly remain unanswered. The crucial question is whether or not fiscal policy and trade liberalisation have an influence on the economic growth of developing nations or otherwise?

Jordan has been able to achieve growth in the private sector that is driven by the market thanks to the Structural Adjustment Programs (SAPS) that have been implemented throughout the country with the backing of the International Monetary Fund (IMF) (Harrigan and El-Said, 2010). A major part of these adjustments was fiscal policy, which provided the impetus for efforts to restore economic equilibrium in Jordan by lowering the country's current account deficit, which was accomplished by raising public revenue while simultaneously cutting public expenditures (Baker and Al-Ibainy, 2018; Al-kasasbeh, 2022). Finally, the decrease in public expenditure was effective in bringing about the change; nevertheless, the effect of the taxes was paradoxical, and Jordan's current account deficit appeared to create more crisis and instability.

In addition, Jordan is an example of a middle-income Arab nation that is troubled by the spillover effects of many economic and political crises. The country is now experiencing a refugee crisis as a result of the Syrian civil war. Despite the fact that Jordan was not directly involved in the crisis, the country's fiscal policy was up against a number of obstacles in the late 2011s (kasasbeh, 2021). The conflict in the Syrian Arab Republic, for instance, has had a direct bearing on the economy in terms of total demand, inflation and growth volatility. The amount of commerce with Syria plummeted to around 280 million Jordanian dinars after the first year of the revolution in 2012, representing a decline of almost 37% within a single year. After the outbreak of events and the closure of the border crossing as a crucial road, Jordan's exports to Turkey and Europe were entirely halted, which obviously contributed to negative implications for the Jordanian economy (Al-Khasawneh & Abu Aleqa, 2012; Kasasbeh, 2021).

Both fiscal policy and trade liberalisation are intriguing topics and highly relevant to the conditions in Jordan from 1970 to 2018. During this time, the link between economic growth, trade liberalisation, and fiscal policy is highly appealing, making it possible to make estimates about it. Even though a relationship between fiscal policy, trade liberalisation and economic growth is mentioned in the economic literature, different studies that look into this

link come to different outcomes. This study will analyse the Jordanian economy with the structural break. The goal of this study is to look at how fiscal policies and trade liberalisation affect economic growth empirically.

Method of the study is as follows: in the next section, an evaluation of the results of previous empirical investigations on the topic. The third section presents an empirical investigation of the influence that Jordan's trade liberalisation and fiscal policies on economic growth. The findings are presented in the final section of the essay.

LITERATURE REVIEW OF EMPIRICAL LITERATURE

In previous studies, the relationship between fiscal policy and economic growth was estimated using a variety of fiscal policy tools. There are three sorts of fiscal policy instruments: (i) fiscal policy that focuses on tax revenue, (ii) fiscal policy that focuses on government spending, and (iii) fiscal policy that combines government spending and tax revenue as a funding source. The same case for trade openness is measured differently by empirical studies. The indicator consists of the import to GDP ratio, the export to GDP ratio, and the trade volume.

The aggregated level of fiscal policy effect on economic growth was estimated by Ndubuisi (2017) studied the dynamic link between fiscal policy and economic growth in Nigeria during the period 1985-2015 using OLS, unit root test, Error Correction mechanism, and cointegration to analyse the data. The results indicated that fiscal policy considerably affected Nigeria's economic growth.

In addition, Ngakosso (2018) researched Fiscal Policy and Economic Cycles in Congo, analysing quarterly data from the period 1989 to 2015. To fulfil these study aims, a mathematical model developed by Huart was employed. The study revealed that the fiscal policies implemented during this term were both counter-cyclical and pro-cyclical expansionist. This brought in the accumulation of payment arrears and instability of public debt. Wickramasinghe (2020) examined the impact of Fiscal Policy on economic growth in Sri Lanka, India, Singapore, and Thailand. The research is based on the Vector Error Correction Model (VECM) from 1978 to 2018. Conclusions - Sri Lanka's and Singapore's fiscal policies have a major influence on economic growth over the long run. In India, Fiscal Policy has a large long-term and short-term impact on economic growth, but in Thailand, Fiscal Policy has a significant short-term impact on economic growth.

Rexha, Bexheti, and Ukshini (2021) studied the impact of fiscal policy on economic growth in the Republic of Kosovo from 2006 to 2016 using VAR and Granger tests. The data demonstrated a correlation between government spending and economic growth. Moreover, the

relationship between government revenue and economic growth is positive but not significant. The results indicate a bidirectional relationship between expenditures and public revenues. In addition, Al Issawi (2021) examined the impact of fiscal policy shocks on Iraq's economic growth from 1996 to 2019. Utilizing the Structural Vector Autoregressive (SVAR) model. The results of the response functions indicated that a shock to public revenues and public expenditures had a positive impact on GDP in the short and medium term, but with a very small multiplier, implying that fiscal policy centred on increasing public spending had no effect on economic growth rates.

Peah and John (2016) identified the causal relationship between trade liberalisation and economic growth using panel data from 1990 to 2014 for the five BRICS countries. They utilised a static fixed effect model and a dynamic panel in accordance with the Arrelano-Bond strategy for GMM approaches. Under both the static and dynamic models, their results revealed that trade progression intermediary in terms of professional career transparency has a significant positive effect on financial development rate. They said that developing nations who want to follow the path of BRICS economies to monetary recognition should consider a rising inward organisation that encourages more prominent exchange development.

Keho (2017) examined the impact of trade openness on economic growth for "Cote d'Ivoire" from 1965 to 2014 using a "Multivariate framework" with capital stock, labour, and trade openness as the regressors variables. It employed the ARDL limits method for cointegration, as well as the "Toda and Yamamoto Granger causality tests." The findings indicate that trade openness positively affects economic growth in both the short and long term. In addition, it indicated a favourable association between trade openness and economic growth capital formation. Furthermore, Mangir, Acet, and Baoua (2017) employed the Vector Error Correction Model (VECM) to analyse the link between trade openness and economic growth in Niger from 1970 to 2015. The results indicated a short-term relationship between trade openness and economic growth in Niger.

Furthermore, between 1980 and 2016, Khobai, Kolisi, and Moyo (2018) evaluated the long-term link between trade openness and economic growth in Ghana and Nigeria. The control variables were investments, exchange rates, and inflation. They employed the "Augments Dickey-Fuller (ADF)," "Phillips and Perron (1988)," and the DF-GLS empirical test developed by Elliot, Rothenberg, and Stock (1996). The ARDL method was also applied in the study to evaluate the long-term association between the variables. The results indicated a long-term link between the variables in both economies. In the case of Ghana, the trade openness has a positive influence on economic growth that is substantial at the 1% level, but in the case of Nigeria, the

trade openness has an insignificant negative link with economic growth. The results indicate that each of these economies could execute the various policy developments. In another related study, Yakubu and Akanegbu (2018) investigated the empirical link between trade openness and economic growth in Nigeria from 1981 to 2017 using the OLS. According to the results, the degree of openness had a large and positive impact on economic growth. In contrast, the Granger causality test revealed a unidirectional relationship between real Gross Domestic Product (GDP) and degree of openness.

Moyo and Khobai (2018) used the ARDL Bounds test method and Pooled Mean Group (PMG) model to examine the relationship between trade openness and economic growth for 11 Southern African Development Cooperation (SADC) countries from 1990 to 2016: Tanzania, Botswana, Mauritius, South Africa, Namibia, Swaziland, Malawi, Zambia, Lesotho, Mozambique, and Madagascar. The results indicated that trade openness had a negative influence on economic growth over the long run. Furthermore, Ajayi and Araoye (2019) used the VECM to examine the impact of trade openness on Nigeria's economic growth from 1970 to 2016. The cointegration test findings indicated that the variables had a long-term connection. The data demonstrated a negative link between trade openness and economic growth in Nigeria. Al_kasasbeh, Alzghoul, & Alhanatleh (2022) researched how openness to trade affects economic growth. The ongoing inconsistent results, mostly on the empirical side, have produced confusion among researchers and policy makers over the trade-growth relationship. The paper concludes that the available literature provides an affirmative answer to the question of whether or not trade openness causes economic growth. However, various issues still exist in the current literature, which needs an appropriate approach to handle them, in order to establish an explicit relationship between trade openness and economic growth. In the midst of all these debates, the empirical literature has demonstrated that not every nation has the same dynamic connection between fiscal policy, trade liberalisation, and economic growth. The link between these variables has been observed to vary from nation to country and over time. Therefore, the relationship tends to depend on the empirical framework and method employed for econometric analysis.

SPECIFICATION MODEL

We used annual time series data from 1980 to 2020 for this study. The variables were selected based on economic theory, previous research, and the availability of data. In addition, the dependent variable was computed utilising the Real Gross Domestic Product (GDP). To measure trade liberalisation, the total of exports and imports represented as a ratio of GDP

(X+M/GDP) was utilised. It is one of the most often employed indicators of trade openness in the literature. Taxes, government spending, and debt were utilised to evaluate fiscal policies.

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This study established an estimating model to assess and examine the influence of fiscal policy and trade liberalisation on Jordan's economic growth from 1970 to 2018. The general form of the estimate equation for the effects of fiscal policy and trade liberalisation on economic growth is;

$$LNRGDP_t = \beta_0 + \beta_1 LNT_t + \beta_2 LNGE_t + \beta_3 LND_t + \beta_4 LNDTL_t + \varepsilon_t$$

Where $LNRGDP_t$ indicated the natural logarithms of real gross domestic product, $LNGE_t$ indicated the natural logarithms of government expenditure, LNT_t indicated the natural logarithms of taxes, $LNTL_t$ indicated the natural logarithms trade liberalization, LND_t indicated the natural logarithms of debt and ε_t is an error term.

Table.1: Variables description and data source

Variable	Abb.	Period	Source
Economic growth	GDP	1980-2020	WDI
Taxes	T	1980-2020	WDI
Government	GE	1980-2020	WDI
expenditure	D	1980-2020	WDI
Debt	TL	1980-2020	WDI
Trade liberalisation			

Note: WDI World Bank Development Indicators

All variables are converted to the natural logarithm. In order to overcome the problem of heteroscedasticity, the logarithmic transformation was intended to provide a more normalised data set. Before estimating the economic growth equation, the time-series properties of the data were validated using the Augmented Dickey-Fuller (ADF) and Kapetanios (K) unit root tests. In addition, diagnostic and stability testing proved the conformance and model suitability of our specification. Estimates for the growth equations were obtained using the ARDL Bounds test approach to cointegration, which was first proposed by Pesaran and Shin

(1999) and later backed by Pesaran, Shin, and Smith (2003). (2001). This method not only discloses the long-run dynamics that were predicted, but also the short-run dynamics.

RESULT AND DISCUSSION

Unit Root Tests

Since time series data were employed, checking whether they were stationary at levels or needed to be differenced to make them stationary. Consequently, there was no doubt about the reliability of the data analysis's conclusions. This study employs the Augmented Dicky-Fuller, 1987 (ADF) test, which is a unit root test of the first generation that disregards structural discontinuities yet was widely employed in the literature on economic growth. Under the null hypothesis, all unit root tests assume non-stationarity without exception. Since these tests are extensively utilised. Therefore, this study used Kapetanios's (2005) second generation with structural breaks. The findings of the data series were checked for stationarity using the Augmented Dicky-Fuller (ADF) and Kapetanios (K) techniques. This test describes the unit root tests that permit inserting structural fractures.

The findings of the unit root analysis of the variable for taxes, government expenditures, debt, trade liberalisation, and real gross domestic product are presented in Table 1.

Table.2: ADF Unit Root Tests

Variables	ADF	
	At level	At first different
LNRGDP	-1.954 (0.379)	-3.882* (0.379)
LNGE	-2.252 (0.450)	-5.555* (0.000)
LNT	-3.766* (0.006)	-4.795* (0.000)
LND	-2.011 (0.281)	-8.998* (0.000)
LNTL	-2.421 (0.141)	-7.745* (0.000)

Source: Research finding.

Note: *, **, *** denotes 1%, 5%, and 10% level of significance respectively, Schwarz Information Criteria (SIC) were used in lag selection.

It can be observed that the real gross domestic product series was non-stationary and not integrated at the 1%, 5%, and 10% levels of significance with constant and trend, but became stationary and integrated after taking the first difference. In a similar manner, the debt series has a unit root at the level with both constant and trend. After taking the first difference, the series became unified and stationary. The Government Expenditure series had a unit root at

the level and became stationary and integrated at the first difference at 1% levels of significance. Also, trade liberalisation series has a unit root at the level with both constant and trend. After taking the first difference, the series became unified and stationary. However, the Taxes were found to be stationary and integrated at 1% significant levels at both level and first difference. Taxes was stationary at I(0) and I (1). The empirical findings presented in Table 1 demonstrate that the ARDL limits approach is the effective way to determine the long-term associations between the variables under research, especially when mixed results are encountered.

Kapetanios Unit Root Test

This study will employ time series new generation tests, thereby utilising extra data. In addition, these structural breaks are produced by the behaviour of economic agents, some shocks and political changes. The success of cointegration tests is significantly impacted by structural breaks in a cointegration relationship. The significance of taking structural breaks into account when analysing taxes, government expenditures, public debt, trade liberalisation, and economic growth can be confirmed by a number of historical events.

A Unit Root Test for Kapetanios's m-Break Data Kapetanios presented a new generation of the unit root test for the I(1) hypothesis that accounts for the possibility of an unknown number of breaks (m). Investigate the unit root hypothesis with drift, but no breaks against a trend stationary alternative hypothesis with (x) break in the trend and constant.

Table 3: Kapetanios Unit Root Test

LNRGDP			
Model	Numbers of breaks	Test statistic	Break dates
A	1*	-4.650	1989
	2	-6.080	1988, 1989
	3	-5.543	1988, 1990, 2015
	4	-3.908	1989, 1990, 2012, 2016
	5	-5.755	1988,1989,1990, 2012, 2015
C	1*	-4.765	1982
	2	-5.313	1970, 1988
	3	-6.803	1970, 1989, 2014
	4	-5.080	1988, 1990, 2012, 2015
	5	-3.067	1989, 1990, 2012, 2016, 2017
LNGE			
Model	Numbers of breaks	Test statistic	Break dates
A	1*	-4.368	1989
	2	-5.061	1993, 2002
	3	-6.707	1992, 1996, 2015
	4	-6.877	1995, 1997, 2010, 2016

	5	-6.802	1996,2002,2006, 2011, 2017
C	1*	-4.350	2016
	2	-6.808	1993, 2006
	3	-6.491	1997, 1999, 2014
	4	-5.504	1996, 1997, 2010, 2014
	5	-3.926	1999,2002,2010, 2012, 2017
LND			
Model	Numbers of breaks	Test statistic	Break dates
A	1*	-3.830	1991
	2	-5.064	1988, 1993
	3	-6.733	1998, 2014, 2017
	4	-7.087	1989, 1991, 1994, 2016
	5	-7.822	1988,1989,1990, 2015, 2017
C	1*	-4.368	2017
	2	-5.808	1990, 1992
	3	-6.003	1988, 2007,2012
	4	-5.980	1991, 1992, 2012, 2014
	5	-3.007	1992, 1993, 2007, 2010, 2017
LNT			
Model	Numbers of breaks	Test statistic	Break dates
A	1*	-5.830	1997
	2	-6.064	1980, 1990
	3	-6.733	2006, 2008,2010
	4	-5.087	1980, 1990, 1993, 2007
	5	-5.211	1977, 1992, 1997, 2010,2016
C	1*	-3.709	2012
	2	-4.113	1985, 1993
	3	-4.09	2008, 2009,2016
	4	-5.294	1991, 1998, 2007, 2013
	5	-5.780	1976, 1993, 2009, 2010,2012
LNTL			
Model	Numbers of breaks	Test statistic	Break dates
A	1*	-3.830	1983
	2	-5.064	2012, 1993
	3	-6.733	1998, 2014, 2017
	4	-7.087	1972, 1991, 2012, 2016
	5	-7.822	1988, 2013,2014, 2015, 2017
C	1*	-4.368	2017
	2	-5.808	1990, 2016
	3	-6.003	1987, 2017,2012
	4	-5.980	1991, 1999, 2012, 2016
	5	-3.007	1992, 1973, 2012, 2014, 2017

Source: Research finding.

Note: Critical values were taken from Kapetanios (2005), and are -5.338 at 1%, -4.93 at 5% and -4.661 at 10% for MODEL A, and -5.704 at 1%, -5.081 at 5% and -4.82 at 10% for MODEL C.

Table 2 shows the findings of Kapetanio's unit root test. Minimum test statistics provide the optimal number of breaks for this test. The minimum test statistics for the LNRGDP, LNT, LND, and LNTL series in MODEL (A) and MODEL (C) occurs when the number of breaks is equal to one. The optimal number of breaks for all variables is therefore one. In the Real Gross

Domestic Product series, the break date was identified as 1989 for MODEL A, and as the test statistics is smaller (in absolute value) than the critical values at all consequence levels, the series had a unit root. The break date for MODEL C is 1982, and at all significance levels, the test statistics are smaller (in absolute value) than the crucial values.

Therefore, the basic hypothesis that the series has a unit root cannot be rejected. The break date for the Government Expenditure series is 1988 in MODEL A and 2014 in MODEL C. Since the test statistics are smaller (in absolute value) than the critical values at all significance levels in both models, the series has a unit root. In the Public Debt series, the break occurred in 1980 in MODEL A. Since the test statistics are smaller (in absolute value) than the critical values at 5% and 1% significance levels, the basic hypothesis that the series have a unit root cannot be rejected. The break date for MODEL C is 2010, and the test statistics, which is smaller (in absolute value) than the critical values at all significance levels, shows that the series had a unit root.

Likewise, the break date for the Taxes series is 1997 in MODEL A and 2012 in MODEL C, at 1% significance level, shows that the series had a unit root. The break date for the trade liberalisation series occurred in 1983 in MODEL A and 2017 in MODEL C. Since the test statistics are smaller (in absolute value) than the critical values at all significance levels in both models, the series has a unit root.

Cointegration tests

The test of cointegration measures the equilibrium relationship between long-term variables. For this test, the tested variables must be unstable at the same level but have the same degree of stability. After determining the degree of joint integration of the variables under study, At least one connects all the variables together, depending on the Trace Test and Max – Eigen value Test (Crowder, &Hamed, 1993).

ARDL Bounds Test

Recent studies showed that some regressions may be spurious if the time-series properties of variables nonstationary data. The revival of ARDL methods occurred in the late 1990s with the help of work done by Pesaran et al., (2001). Many analysts such as Zachariadis (2007), Long and Samreth (2008). The ARDL approach is superior to other technique. The ARDL method gives unprejudiced evaluations of the long-run model and valid t-statistics even when some of the regressors are endogenous Harris and Sollis (2003).

Moreover, the ARDL approach includes testing whether or not a long-term association exists between the variables in a model. For this determination, a “bounds testing” approach has been established (Pesaran et al., 2001). Therefore, the following ARDL model is specified to ascertain if there is a long-run association among T, GE, D, TL and economic growth in Jordan.

Table 4: ARDL Bounds Testing to Cointegration

Bounds Testing to Cointegration (k=6)		
Estimated Models	Optimal Lag Structure	F-statistics
$GDPG_t = f(T_t, D_t, GE_t, TL_t)$	(1,2,4,4)	10.922***
Level of significant	Lower Bounds	Upper Bounds
	I(0)	I(1)
10% level	2.2	3.09
5% level	2.56	3.49
1% level	3.29	4.37

Source: Research finding.

The empirical results from table 3 show that the computed F-statistics for the first model, to which Real Gross Domestic Product (RGDP) as a dependent variable exceeded the upper bound of Pesaran et al. (2001) table. Therefore, the null hypothesis proposing the lack of long-run relationship is rejected at the significance level of 1%. In model one, reveals that real gross domestic product; taxes, government expenditure, trade liberalisation and public debt have a relationship in the long-run.

Table 5: Diagnostic Tests

X^2_{SERIAL}	X^2_{NORM}	X^2_{ARCH}	R^2	R^2_{ADJ}
0.328 (0.569)	0.4899 (0.194)	1.001 (0.349)	0.330	0.225

Source: Research finding.

Note that *, ** and *** denotes 10%, 5% and 1% significant levels respectively. The optimal lag criteria are determined by SIC. P-values are in parenthesis. Critical values for bounds are based on Pesaran et al. (2001) following restricted intercept and no trend.

Table 4 presents the findings of the diagnostic test reveals that the chi-square values reflected the lack of serial correlation and heteroscedasticity. It also shows that the model is correctly specified and the series is normally distributed. Thus, the null hypothesis of the diagnostic test was accepted.

Autoregressive Distributive Lag (ARDL) Long Run and Short Run Estimates

Table 6: Long Run and Short Run Estimates

Dependent Variable: LNGDPPC				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNT)	0.015*	0.008848	2.481537	[0.017]
D(LNGE)	0.125**	0.005421	2.045061	[0.047]
D(LND)	-0.022**	0.007988	6.756364	[0.012]
D(LNTL)	0.024*	0.000882	4.967920	[0.005]
ECM(-1)	-0.452**	0.024449	-7.591755	[0.000]
Long Run Coefficients				
LNT	0.036*	0.009695	5.748990	[0.000]
LNGE	0.628*	0.045918	3.397659	[0.000]
LND	-0.167**	0.005976	3.733234	[0.000]
LNTL	0.216**	0.005245	4.442515	[0.000]

Source: Research finding.

Note that *, ** and *** denote levels of significance at 1%, 5% and 10% respectively. Values in () and [] represent standard errors and p- values.

Table 5 represents the long-run and short-run results. The results display that an increase in taxes will lead to an increase in economic growth. The positive association between Taxes and the economic growth supported by Riba (2017), Alkasasbeh et al (2018) and Juliana (2018). Likewise, government expenditure an affirmative effect on economic growth. The results of government expenditure and economic growth have been supported by the works of Atilgan, Kilic and Ertugrul (2017); Paul and Furahisha (2017).

Furthermore, the results show that an increase in debt will lead to a decrease in economic growth. This result is consistent with the previous studies of Esteve, and Tamarit (2018), Ncanywa, and Masoga, (2018), Kasasbeh (2021). The relationship between economic growth and trade liberalization is found positive and significant; indicating that trade liberalization initiates the economic incentives and consequently increase economic growth.

In theory, the value ECM (-1) must be significant and negative which is exactly the results are presented in Table 5. The error correction term implies that the method of adjustment to restore equilibrium is very effective. The coefficient is 0.452 and is vital at the level of 5%, meaning that, the short run shocks or deviations are corrected by the speed of 45.2% towards the long-run equilibrium.

CONCLUSION AND POLICY IMPLICATIONS

Empirical studies on the impact of fiscal policy and trade liberalisation on economic growth has been widely discussed in the literature. This research investigates empirically the impact of fiscal policy and trade liberalisation on economic growth in the period 1970-2018. Fiscal policy includes government spending, taxes and debt. All variables in the model estimation are stationary and cointegration in the first different so that there is long-run effects of fiscal policy and trade liberalisation to economic growth in Jordan. Moreover, it reveals how debt is fundamentally affecting the economic growth in Jordan. Furthermore, the positive impact of government expenditure on growth in the long term had been presented. Findings revealed that taxes did not have a meaningful contribution to economic growth. Trade liberalisation had a positive impact on economic growth. The positive relationship between trade liberalisation and economic growth implies that trade liberalisation does support economic growth in Jordan.

Trade openness has a significant impact on economic growth, according to study. Trade openness is a key driver of economic growth, as predicted by most international trade theories. Vamvakidis (2002) and Harrison (1996), amongst others, report that trade openness affects economic growth positively. Trade openness can lead to an increase in specialisation, which in turn boosts productivity growth. Because of this, a more open economy faces more competition, which in turn spurs higher levels of production and therefore increases overall economic growth. As a result, trade openness benefits the Jordanian economy's growth.

The government should reduce its expenditure as a way of reducing fiscal deficit. This because the results of the study showed that debt was an impediment to economic growth. The government should streamline its allocation to the debt servicing. This is because public debt servicing was found to reduce the resources that could otherwise have been allocated to more productive sectors of the economy. Reducing government borrowing and ensuring that borrowed loans are concessional in nature can achieve the reduction in public debt. This means that since the government would have a long repayment period at a lower interest rate, the burden on public debt would be lesser.

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