DETERMINANTS OF ECONOMIC GROWTH: THE CASE OF THE UNITED STATES OF AMERICA

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ABSTRACT
The purpose of this article is to find long- and short-term determinants of U.S. economic growth over the period 1970-2016. By using cointegration analysis and vector error correction models, we compensated for many variables that were not previously linked together. Empirical analysis shows that consumer spending, population, domestic investment, FDI inflows, and exports are long-term sources of economic growth, but FDI outflows, military spending, taxes, and imports are not considered long-term sources of economic growth. In the short run, all variables have no effect on economic growth.

Keywords: Macro Determinants, Economic Growth, Cointegration Analysis, VECM, United States of America.

JEL: O40; O47; O51

Introduction
Economic growth is a process in which real income is increased cumulatively and continuously over a long period. This increase exceeds the rate of population growth while providing productive and social services, protecting resources, renewable sources of pollution, and preserving non-renewable resources against depletion. There are several definitions of economic development. One of the common definitions is that it is a process that includes achieving a high rate of growth in average real income per capita over an extended period if this is not accompanied by a deterioration in income distribution or an increase in the level of poverty in society. It is also defined as the increase in goods and services produced by an economy. These goods are produced using the main factors of production, namely land, labor, capital, and organization. Furthermore, economic growth increases the market value of goods and services produced by an economy over time.

As one of the most controversial theoretical issues in the history of research, economic growth remains the primary goal of any economic policy. Because of this issue’s multidisciplinary and multidimensional nature, it is becoming increasingly challenging, especially for the world. The locomotive economy is taken as an example of the American economy. Ac-

In the 1870s, the United States became the world’s leading economic power. In 2014 and 2016, the United States ranked fifth in global GDP. California, the wealthiest state, would have the sixth-largest economy if it were independent. The United States is the world’s number one economic powerhouse in terms of nominal GDP, ahead of China but second only to China as of 2014. Also, in 2017 the GDP of the USA was higher than that of the European Union. The country ranks eighth in the world in terms of GDP per capita and fourth in purchasing power parity. The unemployment rate is relatively low, typically between 3% and 5% of the labor force. However, the economic crisis of 2008 resulted in a high unemployment rate, which reached 6.5% in November 2008 (according to the International Labor Organization) and 9.9% in April 2010. Few assets explain the strength of the American economy: it is vast, endowed with mining resources (the world’s second-largest producer of coal, oil, natural gas, gold, copper, etc.) and agricultural resources. It lies between the two great oceans on earth, the Atlantic and the Pacific. It is also well controlled by a diverse and dense transportation network (Great Lakes, railways, ports, and airports). These statistics show that the American economy is a reference economy and a dream that all other countries, especially developing countries, want to achieve. Therefore, as an empirical exercise, this study empirically attacks the determinants of economic growth in the USA context. We will add other macroeconomic aggregates and other variables that differ from other studies that have examined this topic, such as the work of Rupasingha et al. (2002) and Asheghian (2004).

The extensive empirical literature has examined the relationship between economic growth and its determinants for different countries, and the results obtained are mixed and inconclusive. The rest of this paper is organized as follows: Section presents our literature survey. Section 3 discusses the analytical framework and methodological issues. Section 4 presents empirical analysis and results, and Section 5 summarizes the paper’s findings.

**Literature Review**

This section summarizes the empirical work showing that domestic investments, foreign direct investments, exports, imports, tax revenues, final consumption, the active population, financial development, and military spending are determinants of growth. Several reasons justify the choice of these determinants. Indeed, recent theoretical progressions argue that the standard economic growth model needs to be enriched by the intervention of other variables and other macroeconomic aggregates. For example, the nexus between domestic investment and economic growth is examined by many researchers in different cases, various data, and several empirical methods. During the period from 1981 to 2008, Ghazali (2010) showed a two-way causality between private domestic investment and economic growth in the case of Pakistan.

Similarly, Tan and Tang (2011) studied the relationship between domestic investment and economic growth in Malaysia. Over the period from 1970 to 2009 and using the Granger causality test, they showed unidirectional causality from domestic investment to economic growth. However, Bakari and El Weriemmi (2022a) searched the nexus between domestic
investment and economic growth in the case of Arab Countries for the period 1990 to 2020. They found no relationship between domestic investment and economic growth in the long run. However, they found that domestic investment causes economic growth in the short run. In another context, Bakari (2017a) examined the impact of domestic investment on economic growth in the case of Malaysia for the period 1960 to 2015. Using the error correction model, he found that domestic investment causes economic growth in the long run. However, in the case of Algeria, Bakari (2018) found that domestic investment harms economic growth in the long run, using the vector error correction model for the period 1969 to 2015. From 1965 to 2016, Bakari (2020) examined the relationship between domestic investment and economic growth in Tunisia. Using Sims’s (1980) model, he found a negative relationship between domestic investment and long-term economic growth. According to Bakari (2020), Tunisia has not yet reached the required level of reforms, which is relatively acceptable given the country’s security crisis, drought, and natural disasters; Likewise, he indicated the lack of transparency and presence of corrupt practices.

Keho (2017) examined the nexus between the labor force and economic growth in Cote d’Ivoire from 1965 to 2014. Toda and Yamamoto Granger causality tests show that the labor force doesn’t affect economic growth. Paudel and Perera (2009) studied the nexus between the labor force and economic growth in Sri Lanka from 1950 to 2006. Using Cointegration analysis, empirical analysis suggests a positive cointegration relationship between the labor force and economic growth in the long run.

Beck and Levine (2004) show that financial development promotes growth by removing the barriers that small businesses face when seeking external financing. On a large sample of 145 countries in Africa and Asia, Ben Naceur and Ghazouani (2007) also assess the relationship between the development of the banking structure and economic growth from 1960 to 2011. Using the two-stage generalized method of moments (GMM-system), they show that the development of the banking structure slows down the evolution of economic activities. Using Panel CS-ARDL, Dahmani et al. (2021) found that financial development harms economic growth in the case of MENA countries from the period 1980 to 2018. Using annual data over the period 1970-2013 in China and India, Shahbaz et al. (2017) confirmed that financial development increases economic activity in these two countries. In another study, Andreasen and Valenzuela (2016) found that financial development has a favorable effect on economic activity in the case of 27 developed and developing countries. Ngongang (2015) sought to analyze the relationship between financial development and economic growth, using a sample of 21 SSA countries from 2000 to 2014. He found no relationship between FD and economic growth. Over a period from 2001 to 2012, Lonzo and Kabwe (2015) studied the effect of financial intermediation on economic growth in the Democratic Republic of Congo. They found that financial development has a positive and significant effect on economic growth.

Amin et al. (2018) examined the effect of taxation on economic growth in China and Pakistan during the period 1986 to 2015. Applying estimation based on cointegration analysis and the ARDL model, they found that taxation positively affects long-term economic growth. For G7 countries using annual data from 1980 to 2016, Gurdal et al. (2020) found no relationship between taxation and growth in the short and long run. Mkadmi et al. (2021a) studied the impact of tax revenue on economic growth in Tunisia over the period 1976 – to 2018. The empirical results highlighted that tax revenue has a positive impact on economic growth in the long term. In another study in the same case, Mkadmi et al. (2021b) confirmed that tax revenues could make domestic investment a growth stimulator in the case of Tunisia during the period 1995 to 2020. In the case of France, Bakari (2019) found that taxes strategies negatively
affect economic growth and domestic investment. He indicated in his research that France’s authorities must make new strategies to fix this problem. However, in the case of Germany, Bakari et al. (2020) found that taxation has a positive effect on economic growth and domestic investment in the long run.

On a sample of 20 countries covering the period from 1980 to 2010, Karman et al. (2016), using a methodology based on panel econometrics with a fixed effect and a random effect, found a significant relationship between trade openness and economic growth. They are analyzing the effect of trade openness on the economic growth of 6 CEMAC countries over the period 1967 to 2016, with the GMMs, Ekodo and Ngomsi (2017) claim that these countries do not benefit from their trade openness. Bakari and Mabrouki (2017a) Found that exports and imports cause economic growth in the case of Panama. However, in another study for the case of Tunisia, Bakari et al. (2019a) found no effect between exports, imports, and economic growth in the long run for the case of Uruguay.

Yildirim and Ocal (2006) carried out a comparative study on the impact of military expenditure on economic growth between India and Pakistan from 1949 to 2000. In the case of Pakistan, the causality ran from economic growth to military spending. In comparison, In the entire sample of 90 countries from 1992 to 2006, Chang et al. (2011) found that military spending brings deleterious growth to low-income countries.

Bakari et al. (2018) searched the determinants of economic growth in the case of Nigeria for the period 1981 to 2015. By applying the vector error correction model, they found that domestic investment, foreign direct investment, imports, exports, and labor don’t affect economic growth in the long run. Only imports cause economic growth in the short run. For the case of 24 Asian economies over the period 2002-2017 and using fixed and random effects models, Bakari and Tiba (2019) pointed out that domestic investment positively influences economic growth. However, they found that foreign direct investment and exports harm economic growth.

Moreover, they found that population, imports, and final consumption expenditure have no real impact on economic growth. Using an estimate based on the ARDL model, Bakari and El Weriemmi (2022b) examined the impact of urbanization and ruralization on Tunisia’s economic growth from 1965 to 2019. The results show that urbanization harms economic growth. However, ruralization has a positive effect on economic growth. Bakari (2017b) searched the impact of domestic investment, exports, and imports on economic growth in the case of Japan by using OLS regression since he found all variables are stationary in level. He discovered that exports and domestic investment positively affect economic growth. However, he found that imports do not affect economic growth from 1970 to 2015. Also, Bouchoucha and Bakari (2021) searched the determinants of economic growth in the case of Tunisia during the period 1976 to 2017. By applying cointegration analysis and the ARDL model, they found that domestic investment, foreign direct investment, imports, and financial development harm economic growth in the long run. Only natural resources and exports positively affect economic growth in the long run. In the short run, and by applying Wald Test, which is based on the Granger Causality Test, they found that domestic investment, exports, and natural resources cause economic growth in the short run. In the case of Canada, and for the period 1990 – 2015, Bakari (2016) found that there is no effect between domestic investment, exports, and imports on economic growth in the long run. In the case of Peru, Bakari et al. (2019b) searched the nexus between domestic investment, exports, imports, and economic growth for the period 1970 – 2017. They found by using the VECM model that imports,
domestic investment, and exports are not a source of economic growth in Peru. Again, Bakari (2017c) searched the nexus between domestic investment, imports, economic growth, and exports in the case of Sudan. For the period 1976 – 2015 and by applying the error correction model, he found a cointegration relationship between exports, domestic investment, imports, and economic growth. Still, there is no relationship between all these variables in the long run, which means that exports, domestic investment, and imports don’t influence economic growth in the long run. Also, Bakari (2017d) found that exports and domestic investment harm economic growth in the long run in the case of Egypt. However, he found that imports positively affect economic growth.

Other determinants of economic growth are not included in our empirical analysis. For example, we can site diversification. In this sense, Torayeh (2011), Uremadu and Onyele (2016), Oluwatoyese et al. (2016), Mahmood and Munir (2017), Ahmed and Sallam (2018) indicate that diversification can stimulate economic growth. However, Mehrara and Baghbanpour (2016), Toyin (2016), Bakari (2018), and Elmakki et al. (2017) proved in the same countries that diversification is not seen to be a source of economic growth. In another sense, we found that Stiroh (2005), Commander et al. (2011), and Cirera et al. (2016) indicated that digitalization and ICT have a positive effect on economic growth. However, we found that other researchers indicated that digitalization harms economic growth, such as Stiroh (2002), Yousefi (2011), Bakari and Tiba (2020). Also, we can add that other works indicate the importance of innovation as a determinant of economic growth (See: Solow, 1956, 1957; Lucas, 1988; Aschauer, 1989; Romer, 1990, 1993; Grossman and Helpman, 1991; Aghion and Howitt, 1992; Mabrouki, 2018; Bakari, 2019).

**Analytical Framework and Methodological Issues**

To search for the determinants of economic growth and to refer to the works of Barro (2003); Ciccone and Jarociński (2010); Cuaresma et al. (2014); Boldeanu and Constantinescu (2015); Khan et al. (2020); Bakari and Mabrouki (2017b), Bakari and Tiba (2021); Syzdykova et al. (2019); Hassouneh (2019); Ogunjinmi (2022); Saba and Ngepah (2019). We use the augmented production function, including many variables is expressed as:

$$Y = F(FCE, P, DI, FDI IN, FDI OUT, ME, T, X, M)$$  \hspace{1cm} (1)

Where Y is GDP per capita growth (constant 2015 US$, annual %); P is Population growth (annual %); FDI IN is Foreign direct investment, net inflows (% of GDP, constant 2015 US$), FDI OUT is Foreign direct investment, net outflows (% of GDP, constant 2015 US$), ME is Military expenditure (% of GDP, constant 2015 US$), T is Tax revenue (% of GDP, constant 2015 US$), M is Imports of goods and services (% of GDP, constant 2015 US$), DI is Gross fixed capital formation (% of GDP, constant 2015 US$), FCE is Final consumption expenditure (% of GDP, constant 2015 US$), and X is Exports of goods and services (% of GDP, constant 2015 US$).

Given the long-run and short-run nature of the macroeconomic variables and economic growth relationship, it is necessary to test for cointegration before Granger causality analysis. Since the cointegration methodology is common and well-documented elsewhere (Engle and Granger, 1987; Johansen, 1991; Johansen and Juselius, 1990), only a brief overview is provided. Johansen (1991) modeled time series as a reduced rank regression in which they computed the maximum likelihood estimates in the multivariate error correction model (ECM) with Gaussian errors. The model is based on the error correction representation given by:
\[ \Delta \mathbf{Y}_t = \varphi + \sum_{k=1}^{n-1} \gamma_k \Delta \mathbf{Y}_{t-k} + \delta \mathbf{Y}_{t-1} + \varphi, \]

where \( \mathbf{Y}_t \) is a column vector of \( n \) variables, \( \varphi \) is a vector of constant terms, \( \gamma_k \) and \( \delta \) represent coefficient matrices, \( \Delta \) is a difference operator, and \( \varphi \sim N(0, \Sigma) \). The coefficient matrix \( \gamma \) is known as the impact matrix, and it contains information about the long-run relationships. After pre-testing for the order of integration for each variable, Johansen’s methodology requires the estimation of Eq. (2), and the residuals are then used to compute the likelihood ratio test statistic (the trace test).

**Empirical Analysis and Results**

The data set in this study consists of observations for GDP per capita growth (annual %), Population growth (annual %), Foreign direct investment, net inflows (% of GDP), Foreign direct investment, and net outflows (% of GDP). In addition, Military expenditure (% of GDP), Tax revenue (% of GDP), Imports of goods and services (% of GDP), Gross fixed capital formation (% of GDP), Final consumption expenditure (% of GDP), and Exports of goods and services (% of GDP). The data set is obtained from the World Bank indicators, is annual, and covers 1970 to 2016.

First, the order of integration properties of the data is examined using two unit-root tests: the augmented Dickey and Fuller (1979) (ADF) and Phillips and Perron (1988) (PP) for the null hypothesis of non-stationary. The combination of the unit root test results (see Table 1) suggests that the variables are integrated of order one (i.e., I(1)). It implies the possibility of cointegrating relationships. Table 2 provides the results for the Johansen cointegration tests based on an ECM using an optimal lag length of one. Results from the trace test indicate that the variables in the system are cointegrated. The existence of cointegrating relationships implies that an ECM specification is appropriate. Furthermore, the residuals from the ECM specification are white noise.

Table 3 reports the results of Granger causality tests based on the ECMs. Each column represents an equation for each of the ten variables in the system. For each variable, at least one channel of causality is active. Short-run Granger causality through is P-values of the Granger causality test / Wald test for short-term relationships or long-run causality through a statistically significant lagged error-correction term (t-statistics). A significant lagged ECT coefficient implies that past equilibrium errors affect current outcomes. In the short run, our results point out the presence of unidirectional causality running from foreign direct investment outflows to economic growth without any feedback. Also, we found unidirectional causality from imports to growth without any feedback. Additionally, we recorded the absence of causality between domestic investments, final consumption, military expenditures, foreign direct investment inflows, and exports and economic growth, respectively. However, in the long run, our findings reported the presence of causality nexus running from final consumption expenditure and foreign direct investment outflows to economic growth.
<table>
<thead>
<tr>
<th>Unit Roots Tests</th>
<th>ADF</th>
<th>PP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Constant</td>
<td>Constant, Linear Trend</td>
</tr>
<tr>
<td><strong>Y</strong></td>
<td>(4.964599) ***</td>
<td>(5.132366) ***</td>
</tr>
<tr>
<td><strong>FCE</strong></td>
<td>[0.953333]</td>
<td>(2.877089 )</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>(2.110642)</td>
<td>(2.237096)</td>
</tr>
<tr>
<td><strong>DI</strong></td>
<td>(0.0607) **</td>
<td>(3.902868)***</td>
</tr>
<tr>
<td><strong>FDI OUT</strong></td>
<td>(1.181749)</td>
<td>(5.185033)***</td>
</tr>
<tr>
<td><strong>FDI IN</strong></td>
<td>(2.005667)</td>
<td>(3.734438)**</td>
</tr>
<tr>
<td><strong>ME</strong></td>
<td>(1.553159)</td>
<td>(2.057116)</td>
</tr>
<tr>
<td><strong>T</strong></td>
<td>(3.756092) ***</td>
<td>(4.211644)***</td>
</tr>
<tr>
<td></td>
<td>[5.061238]***</td>
<td>[5.012070]***</td>
</tr>
<tr>
<td><strong>X</strong></td>
<td>(1.663633)</td>
<td>(3.449948)*</td>
</tr>
<tr>
<td></td>
<td>[5.017018]***</td>
<td>[5.017275]***</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>(1.757387 )</td>
<td>(3.145328 )</td>
</tr>
</tbody>
</table>

* **; ** and * denote significances at 1%, 5% and 10% levels respectively

( ) denotes stationarity in level

[] denotes stationarity in first difference
Table 2: Johansen Cointegration Test Results

<table>
<thead>
<tr>
<th>Hypothesized No. of CE(s)</th>
<th>Eigenvalue</th>
<th>Trace Statistic</th>
<th>0.05 Critical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>None *</td>
<td>0.890078</td>
<td>393.9983</td>
<td>239.2354</td>
</tr>
<tr>
<td>At most 1 *</td>
<td>0.808657</td>
<td>296.8469</td>
<td>197.3709</td>
</tr>
<tr>
<td>At most 2 *</td>
<td>0.753179</td>
<td>224.0847</td>
<td>159.5297</td>
</tr>
<tr>
<td>At most 3 *</td>
<td>0.657975</td>
<td>162.5246</td>
<td>125.6154</td>
</tr>
<tr>
<td>At most 4 *</td>
<td>0.565535</td>
<td>115.3183</td>
<td>95.75366</td>
</tr>
<tr>
<td>At most 5 *</td>
<td>0.433835</td>
<td>78.63810</td>
<td>69.81889</td>
</tr>
<tr>
<td>At most 6 *</td>
<td>0.395232</td>
<td>53.60780</td>
<td>47.85613</td>
</tr>
<tr>
<td>At most 7 *</td>
<td>0.325802</td>
<td>31.47973</td>
<td>29.79707</td>
</tr>
<tr>
<td>At most 8</td>
<td>0.188283</td>
<td>14.13357</td>
<td>15.49471</td>
</tr>
<tr>
<td>At most 9 *</td>
<td>0.106504</td>
<td>4.955006</td>
<td>3.841466</td>
</tr>
</tbody>
</table>

Trace test indicates 8 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values
Table 3: Granger causality test results based on Vector Error Correction Models (VECM)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Y</th>
<th>FCE</th>
<th>P</th>
<th>DI</th>
<th>FDI OUT</th>
<th>FDI IN</th>
<th>ME</th>
<th>T</th>
<th>X</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>0.012406</td>
<td>0.020205</td>
<td>0.013971</td>
<td>-0.020892</td>
<td>0.068790</td>
<td>-0.095069</td>
<td>-0.663626</td>
<td>0.014731</td>
<td>-0.014944</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.6837)</td>
<td>(0.5388)</td>
<td>(0.1210)</td>
<td>(0.7310)</td>
<td>(0.6498)</td>
<td>(0.7685)</td>
<td>(0.7509)</td>
<td>(0.5092)</td>
<td>(0.0966)</td>
<td></td>
</tr>
<tr>
<td>FCE</td>
<td>80.60769</td>
<td>-1.628648</td>
<td>-1.126207</td>
<td>1.684065</td>
<td>-5.545026</td>
<td>7.663287</td>
<td>53.49340</td>
<td>-1.187429</td>
<td>1.204595</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.9922)</td>
<td>(0.3590)</td>
<td>(0.8906)</td>
<td>(0.0074)</td>
<td>(0.7063)</td>
<td>(0.3257)</td>
<td>(0.1113)</td>
<td>(0.9517)</td>
<td>(0.8741)</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>49.49364</td>
<td>-0.614006</td>
<td>-0.691499</td>
<td>1.034027</td>
<td>-3.404681</td>
<td>4.705307</td>
<td>32.84529</td>
<td>-0.729089</td>
<td>0.739629</td>
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<tr>
<td></td>
<td>(0.1108)</td>
<td>(0.0188)</td>
<td>(0.5129)</td>
<td>(0.6001)</td>
<td>(0.9687)</td>
<td>(0.7794)</td>
<td>(0.8526)</td>
<td>(0.0683)</td>
<td>(0.2861)</td>
<td></td>
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<tr>
<td>DI</td>
<td>71.57446</td>
<td>-0.887936</td>
<td>-1.446135</td>
<td>1.495342</td>
<td>-4.923627</td>
<td>6.804508</td>
<td>47.49871</td>
<td>-1.054361</td>
<td>1.069603</td>
<td></td>
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<tr>
<td></td>
<td>(0.5728)</td>
<td>(0.1358)</td>
<td>(0.7828)</td>
<td>(0.8269)</td>
<td>(0.5857)</td>
<td>(0.0594)</td>
<td>(0.9511)</td>
<td>(0.9488)</td>
<td>(0.2738)</td>
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<tr>
<td>FDI OUT</td>
<td>-47.86495</td>
<td>0.593801</td>
<td>0.967093</td>
<td>0.668743</td>
<td>3.292643</td>
<td>-4.550470</td>
<td>-31.76445</td>
<td>0.705097</td>
<td>-0.715290</td>
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<td></td>
<td>(0.0070)</td>
<td>(0.0256)</td>
<td>(0.2205)</td>
<td>(0.0630)</td>
<td>(0.2469)</td>
<td>(0.0428)</td>
<td>(0.3144)</td>
<td>(0.2140)</td>
<td>(0.0396)</td>
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<tr>
<td>FDI IN</td>
<td>14.53694</td>
<td>-0.180342</td>
<td>-0.293713</td>
<td>-0.203102</td>
<td>0.303707</td>
<td>-1.382011</td>
<td>9.647096</td>
<td>-0.214143</td>
<td>0.217239</td>
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<tr>
<td></td>
<td>(0.6447)</td>
<td>(0.8776)</td>
<td>(0.8134)</td>
<td>(0.5118)</td>
<td>(0.9819)</td>
<td>(0.4487)</td>
<td>(0.5775)</td>
<td>(0.9575)</td>
<td>(0.4871)</td>
<td></td>
</tr>
<tr>
<td>ME</td>
<td>-10.51868</td>
<td>0.130492</td>
<td>0.212526</td>
<td>0.146961</td>
<td>-0.219758</td>
<td>0.723583</td>
<td>-6.980477</td>
<td>0.154950</td>
<td>-0.157190</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.1240)</td>
<td>(0.0110)</td>
<td>(0.4242)</td>
<td>(0.2752)</td>
<td>(0.1419)</td>
<td>(0.7660)</td>
<td>(0.9910)</td>
<td>(0.4684)</td>
<td>(0.4926)</td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>-1.506872</td>
<td>0.018694</td>
<td>0.030446</td>
<td>0.021053</td>
<td>-0.031482</td>
<td>0.103658</td>
<td>-0.143257</td>
<td>-0.022198</td>
<td>-0.022519</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.6020)</td>
<td>(0.4113)</td>
<td>(0.8015)</td>
<td>(0.4175)</td>
<td>(0.2562)</td>
<td>(0.9421)</td>
<td>(0.8920)</td>
<td>(0.3485)</td>
<td>(0.1693)</td>
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<td>X</td>
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<td>-0.842156</td>
<td>-1.371575</td>
<td>-0.948442</td>
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<td>6.453681</td>
<td>45.04977</td>
<td>1.014457</td>
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<td></td>
<td>(0.1688)</td>
<td>(0.9700)</td>
<td>(0.8839)</td>
<td>(0.2544)</td>
<td>(0.5710)</td>
<td>(0.9792)</td>
<td>(0.5008)</td>
<td>(0.7123)</td>
<td>(0.9239)</td>
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<tr>
<td>M</td>
<td>-66.91682</td>
<td>0.830154</td>
<td>1.352029</td>
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<td>-1.398034</td>
<td>4.603227</td>
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<td>-44.40777</td>
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<td></td>
<td>(0.4162)</td>
<td>(0.6909)</td>
<td>(0.6337)</td>
<td>(0.5641)</td>
<td>(0.3721)</td>
<td>(0.9272)</td>
<td>(0.3978)</td>
<td>(0.9496)</td>
<td>(0.1247)</td>
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</tr>
<tr>
<td>Lagged ECT</td>
<td>[-0.32624]***</td>
<td>[-1.350376]***</td>
<td>[-0.0495]***</td>
<td>[0.405836]</td>
<td>[-1.091462]***</td>
<td>[0.089066]</td>
<td>[0.032599]</td>
<td>[-0.00883]</td>
<td>[-0.32150]</td>
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</tr>
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</table>

Values in brackets are estimated t-statistics for each cointegration equation.

Values in parentheses are P-values of the Granger causality test / Wald test for short-term relationships.

The other values present the coefficients of the estimated variables included in the long-term relationships.

* *** ; ** and * denote significances at 1% , 5% and 10% levels respectively.
In the long run, consumer spending, population, domestic investment, foreign direct investment, and exports all positively impact economic growth. It can explain the positive effect of consumption on growth because consumption is a source of job creation, thereby increasing production. In addition, the positive effect of population on growth is due to the spillover effects and synergies of the panoramic society, leading to an improvement in the U.S. economic growth path. In addition, the positive impact of domestic investment is due to the importance of local communities, whose fiscal capacity contributes to public efforts to promote the economic vibrancy of the U.S. economy. Furthermore, while positive externalities such as spillovers, international capabilities, the direction of technology transfer, and additional financial resources positively impact economic growth, the significant positive impact of FDI is justified. The results of Tiba et al. (2015). Finally, the high value-added of U.S. exports and the high degree of diversification of the export mix attest to the significant positive impact of exports on growth. However, outflows of foreign direct investment, military spending, taxes, and imports harmed economic growth. The negative impact of FDI outflows is seen as a deficit in the U.S. economy. In the long run, the significant negative impact of military spending on economic growth can be explained by the U.S. government’s tendency to use its fiscal resources. To distort the function of government spending rather than investing productive activities in non-productive activities that generate high output in sex. Rent is generated. Search Practices and Corrupt Practices Consistent with Tornell and Lane (1999)’s theory of the “bulimia effect,” they argue that the availability of income is automatically related to public spending policies targeting unproductive activities.

Also, the numerous negative impacts of taxation on growth are even through the visual record, wherever the economic process is panelized like the brink of taxation will increase. Finally, the numerous negative impacts of the imports are thanks to the comparative advantage. The low stander of foreign merchandise negatively affects growth within the semipermanent (Tiba and Frieha, 2018). Within the short run, it was detected no significant impact. It is often even because these determinants couldn’t exert a right of way impact on growth.

Conclusion

Due to the importance of the economic process because of the central issue of each policy. We tend to plan to examine the economic determinants of growth for the yank economy over the spanning time 1970 to 2016. The relation analysis records the presence of unifacial relations running from foreign direct investment outflows to economic processes and from imports to growth. Also, we tend to record the absence of relation between domestic investments, final consumption, military expenditures, foreign direct investment inflows, and exports and economic process, severally within the short run. However, we tend to record a causal relationship between final consumption expenditure and foreign direct investment outflows to the economic process in the long term. Our empirical results have seen a significant positive result in ultimate consumption expenditure, population, domestic investment, foreign direct investment inflows, and exports in the economic process within the long term. Also, our insights recorded a significant negative impact of foreign direct investment outflow, military expenditure, revenue, and imports on growth. Our proof saw the absence of any substantial impact in the short run. From our insights, it may deduce a group of implications. First, the yank authority ought to re-orient their expenditure towards productive activities to form new jobs, stimulate consumption, and raise the expansion path. Also, the United States of America authorities ought to set rigorous import standards to preserve the American environment-economic sphere.
At the end of this project, we are aware that the relevance of our results and recommendations remains limited—both by the methodology adopted and by the availability of data. Indeed, our methodology does not consider several determinants of economic growth. Likewise, we did not use very advanced econometric models because of the short research period on this subject.

It is essential to specify that the outcome of one of the research avenues envisaged would largely depend on data availability. The latter constituted a very constraining factor in the conduct of our research because we had to consult different data sources for several variables to construct the time series necessary for the estimates. Likewise, we propose investigating the future to exercise other determinants of economic growth and conducting other comparative studies with other countries such as China, India, Russia, France, Japan, and Germany.

References


