

Trade Policy, Corruption and Economic Growth in Benin

This paper aims at analyzing the effects of trade policy and corruption on economic growth in Benin. The estimation results from the vector error-correction model show that production subsidies have a positive effect on economic growth while corruption and tariffs have a negative effect on the growth of the economy. There is a need to revise the tariff rate, make the production subsidy program more effective, and effectively discourage customs fraud and corruption in the public administration.

Keywords: Trade Policy, Tariffs, Subsidies, Economic Growth, Corruption.

Introduction

Developing countries, like developed countries, have trade policies to ensure the operation of transactions to ensure growth in trade (Khandaker and Sharmin, 2015). However, the corruption remains a barrier to economic exchanges and the functioning of public services, since it increases the costs and risks associated with business activity, deters foreign direct investment and has a negative effect on business creation (Abdella et al., 2018). Ineffective trade policies such as those related to customs are conducive to corruption (OECD, 2016). States use several procedures that allow them to protect local industries and secure trade in goods and services. Customs and administrative procedures are necessary for the proper implementation of trade policies (OECD, 2016). Trade policy, all laws and rules in trade, mechanisms and measures implemented by the State to improve the economic situation of the country, generally results in the liberalization of trade or commercial protectionism. The latter may take the form of tariff and / or non-tariff barriers in the process of exchange between a nation and the rest of the world. Despite tariff barriers, trade agreements of nations have resulted in a significant reduction in tariffs. Indeed, tariffs are complex, they often lack transparency; their effects are difficult to grasp and can be a source of injustice. They remain a key barrier to market access (O'Rourke, 2000). The highest tariffs generally affect goods constituting a significant share of the purchases of the poorest consumers (OECD, 2004). Non-tariff barriers are the set of non-tariff restrictive measures put in place by a country to protect its market from external competition. Similarly, tariff barriers are generally customs measures that allow a country to limit or make it more difficult to access the national territory for a product from abroad.

The theory of comparative advantages shows that the more open a country is, the more it directs its scarce resources towards more efficient sectors and improves its well-being (Ricardo, 1817). The new theories of international trade, integrating returns to scale and imperfect competition, indicate that the gains are static. On the other hand, in the theory of growth, exchange gains are dynamic. Neoclassical growth models assume that technological change is

1 exogenous and that a nation's trade policies can not affect its economic growth
 2 (Solow, 1957). Grossman and Helpman (1991), Romer (1993), Kim and Lin
 3 (2008) establish a relationship between trade policy and economic growth and
 4 deduce that free trade policy has a positive impact on economic growth.
 5 Bairroch (1972), on the other hand, establishes an inverse relationship between
 6 trade policy and economic growth, but supports the idea that protectionism is
 7 an effective means of converging towards economic growth. He was later
 8 joined by O'Rourke (2000) who inferred the existence of a positive correlation
 9 between tariffs and economic growth. Kalecki (1929), Rodrik and Rodriguez
 10 (2001) deduce a non-linear relationship between trade policy and economic
 11 growth. For Leff (1964), corruption is like oil that allows the wheels of the
 12 market to spin. But, market distortions are usually the result of a cumbersome,
 13 rigid and inefficient bureaucracy that is worth stimulating to gain speed and
 14 productivity (Leys, 1964). In addition, corruption is the misuse of state
 15 property by an official for personal gain (Alesina et al., 2003). It eliminates
 16 inefficient rigidities such as bureaucratic delays or tedious regulations and
 17 stimulates public officials to facilitate trade (Bailey, 1966).

18 Yet some authors denounce the harmful effects of corruption on economic
 19 activity. Myrdal (1968) contradicts the positive thesis and believes that
 20 corruption instead of fluidifying the pace of economic activity enable
 21 transactions on the market to the extent that a state-mandated agent requires
 22 bribes to give an authorization, it constitutes a bottleneck for the market
 23 process. Similarly, the use of corruption to circumvent rigidities in the market
 24 contributes to a cyclical equilibrium and cannot be a long-term equilibrium
 25 (Rose-Ackermann, 2004).

26 Other empirical studies have demonstrated the existence of a negative and
 27 significant relationship between corruption and economic growth (Mauro,
 28 1995). Preventing corruption is known to be an expensive process that low-
 29 income countries cannot afford (Dreher and Herzfeld, 2005). The cost of
 30 corruption globally is about \$ 1 billion a year (Kaufmann, 2005). For the
 31 African Development Bank, the cost of corruption in Africa can reach 25% of
 32 the continent's GDP. According to OECD estimates, removing all tariffs on
 33 merchandise trade and reducing trade costs by 1% of the value of world trade
 34 would improve the global welfare of more than \$ 170 billion Dollars per year,
 35 increasing the current annual GDP of some regions by up to 2% (OECD,
 36 2004). The combined implementation of a complete elimination of tariffs and
 37 the reduction of trade costs would result in welfare gains equivalent to 1.37%
 38 of annual GDP in developing countries and 0.37% developed countries. If
 39 tariffs were eliminated, more than half of the benefits would go to developing
 40 countries (OECD, 2004). More efficient customs regimes could lead to a 2% to
 41 3% increase in GDP per capita in the OECD area, which leads us to ask what is
 42 the combined effect of trade policy and corruption on economic growth in
 43 Benin"?

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Literature Review

Trade Policy and Corruption

The existing economic literature on the relationship between trade policy and corruption focuses on the linear and non-linear relationships of the interactive effects of trade on corruption (Majeed, 2014). Trade induces the increase of corruption in a linear specification while its effect on corruption decreases in a nonlinear specification. Some authors stress the existence of a negative effect of economic openness on corruption (Krueger, 1974, Ades and Di Tella, 1999, Wei and Shleifer, 2000, Gatti, 2004). On the other hand, other studies highlight a positive relationship between trade and corruption. Ades and Di Tella (1999) find ambiguous trade policy effects on corruption. On the one hand, lower foreign competition increases rents and offers more opportunities for corruption, while it is more useful for a nation to avoid corruption and increase the accountability and oversight of its bureaucracy. Treisman (2000) argues that the risks of corruption are likely to increase in the face of trade liberalization; he adds that extensive trade liberalization can help reduce corruption. Krueger (1974), Bhagwati and Srinivasan (1980) and Bhagwati (1982) develop the first mechanism that focuses on rent - seeking to derive and construct the theoretical basis for the link between trade and corruption. Indeed, in the market economy, State's restrictions on economic activities generate rents in different forms such as corruption, smuggling and the black market. Only bureaucrats have discretion to allocate legitimate expenses or illegitimate benefits to clients; they are likely to extract a bribe to exercise their legal but discretionary authority. Quantitative restrictions on imports as opposed to tariffs, quotas and other official import authorizations confer monopolistic powers on legal importers and consequently generate opportunities for economic activities in pursuit of rent. Agents can legally compete or illegally seek rent-seeking activities such as bribery to exploit these opportunities. Thus, Dutt and Traca (2009) present a pioneering model that highlights the effect of corruption in customs activity on bilateral transactions. Krueger (1974) shows that rent-seeking activities create a gap between social and private costs and force the economy to operate at a suboptimal level. Gatti (1999) has described two effects of an inward-looking policy on corruption: the first effect is on direct policy distortions, implying that high barriers to free trade induce private agents to seek favoritism of bribe-takers and the second effect addresses the effect of foreign competition which implies that strong restrictions on free trade diminish competition between domestic and foreign firms, leaving room for rent for activity research and corruption.

Ades and Di Tella (1999), provide new information on rent-seeking corruption. They present evidence that the level of rents and market structures in particular, determines the intensity of corruption in an economy. They argue that the variation in the size of rents due to the change in competition has ambiguous effects on corruption and the determination of this impact remains an empirical problem. On the one hand, lower levels of competition provide opportunities for bureaucrats to extract more rents from the companies they

control and, on the other hand, this also implies that it is more valuable for society to avoid corruption and increase the accountability and oversight of its bureaucracy. Corruption is higher in countries where domestic firms are less exposed to foreign competition or to countries with concentrated exports (Majeed, 2014). Wei and Shleifer, (2000) propose another alternative to explain the relationship between trade and corruption by integrating into the analysis of the costs and benefits of government control. It should be mentioned that the quality of the institutions coupled with their capacity to fight corruption depend on the resources allocated by the country for this purpose. A nation is investing more to improve the quality of its national public institutions when the benefits outweigh the costs. Investors and international traders can easily divert their businesses from countries where corruption and bad governance discourage trade decisions of foreign stakeholders more strongly than national decisions.

Under trade-related issues, an economy more exposed to international markets deems it optimal to allocate more resources to building good institutions to achieve a lower level of corruption than an open country. Torrez (2002) examines the link between corruption and trade policy to test the idea that restrictive trade policy shifts productive activities towards rent -seeking. Increasing imports of various goods increases the marginal utility of bribe revenue for customs officials, thus increasing incentives for bribery. However, trade openness can also generate new opportunities for corruption. Tanzi (1998) reports that trade liberalization creates new opportunities for bribery as a means of obtaining foreign contracts or privileged access to markets, or specific benefits such as incentives tax.

Trade Policy and Economic Growth

The history of trade policy goes back to the era of commercialism. But Smith (1776) and Ricardo (1817) are the pioneering authors who emphasized the importance of trade policy in the economy of nations. Already in the 18th century, Smith (1776) claimed that the specialization of countries led to the economic growth of exchange participants and consequently to world welfare. Ricardo (1817), by his theory of comparative advantages, has shown that the more open a country is, the more it allows him to redirect his scarce resources to more efficient sectors and improve his well-being.

The driving force of trade policy on economic growth is the main message of classical and neoclassical theorists. However, the role of trade policy in economic growth has been perceived differently according to the current of economic thought. The traditional analysis of international trade provides an unequivocal affirmative answer to the question of whether free trade policy is the engine of economic growth. Their conclusion leads to the "optimality" of free trade and thus represents a plea for unhindered global trade. Therefore, the choice of a trade policy, especially protectionism or free trade, is no longer based on countries, which naturally seek economic prosperity, but which all have an interest in applying free trade. Later, Grossman and Helpman (1991), and Romer (1993), argued that countries that are more open have a great

1 capacity to acquire advanced technologies from the rest of the world. Sjöholm
 2 (1999) shares the same logic and argues that participation in international trade
 3 is important for increasing productivity through the use of economies of scale.
 4 Similarly, strong and sustainable economic growth, generally in conjunction
 5 with greater trade openness, is the central objective of Kim and Lin's (2008)
 6 trade policy.

7 In addition, Chang, Kaltani and Loayza (2009), for their part, stress that
 8 trade openness promotes efficiency in resource allocation and technological
 9 progress, and encourages competition in domestic and international markets.
 10 The conventional view is also supported by Yassar and Morrison-Paul (2007),
 11 who argue that economic growth can be affected, particularly for developing
 12 countries, by international trade, technology and measures put in place by
 13 nations to control trade in goods and services. The classical analysis links trade
 14 policy with economic growth. This analysis is based on the assumption that
 15 free trade policy is an effective means of initiating economic growth. However,
 16 this unambiguous link between trade policy and economic growth seems to be
 17 more than doubtful.

18 Indeed, Bairoch (1993) argues that economic growth promotes
 19 international trade and thus relegates the idea of the leading role of
 20 international trade to growth as a "myth". From this analysis Bairoch (1993)
 21 reveals the coincidence of the policy of reinforced protectionism with a
 22 correlative acceleration of trade expansion and economic growth. On the other
 23 hand, the application of a free trade policy does not necessarily lead to
 24 economic growth.

25 The new theories of international trade show that the global benefits of
 26 openness can be accompanied, in a situation of market imperfections, of
 27 unequal distribution between countries, and even of net losses, hence the need
 28 for strategic intervention of the states. This may include protection in the form
 29 of a tariff or subsidy to exporting firms. Contrary to the traditional neo-
 30 classical theory that proposes optimal intervention policies to correct these
 31 imperfections, the new theories advocate the establishment of a strategic
 32 commercial policy to garner the maximum gains at the level of foreign
 33 companies (Athanasia, 2013).

34 The study of the relationship between international trade and economic
 35 growth is enriched by the theory of endogenous growth. This theory introduces
 36 into the analysis the role of technical progress and intermediate goods. This
 37 theory allows, according to Edwards (1993), to establish a long-term balance
 38 between trade liberalization and economic growth. More specifically,
 39 endogenous growth models provide a new vision of traditional problems
 40 relating to international specialization, comparative advantages, international
 41 trade flows and their impact on national production patterns.

42 Affirming the specificity of each economy to enter the world economy,
 43 Kalecki (1929) considers that trade openness is not automatically conducive to
 44 economic growth. Rodrik and Rodriguez (2001) take a similar position by
 45 relativizing the systematic existence of gains linked to trade openness. The
 46 view that seems to be unanimous in the more recent work is that although
 47 openness seems to have, on average, a rather beneficial effect on growth, this

effect varies considerably from one country to another and depends of a set of conditions related to the structure of the economy and its institutions.

In this first case, empirical studies have shown that the effect of trade policy on economic growth is positive. Indeed, out of 44 developing countries, Mohsen et al. (2002) tested the short and long-run relationship between a trade policy that aims to increase export volume and economic growth through an approach to cointegration techniques by Johansen (1995), and the Error Correction Model. The results suggest that short-term effects are transmitted over the long term in 60% of the countries in which the assumption that export growth leads to economic growth is assumed and in 40% of countries where the assumption that production improves exports is confirmed. Moreover, Yanikkaya (2002) has shown that a trade policy aimed at creating barriers has a positive and significant effect on economic growth, especially for developing countries, despite the consensus that the flow is positive, trade and economic growth. On contrary, the empirical studies that have resulted in a negative effect of trade policy on economic growth appear to be isolated and few in number. Myrdal (1957) shows that a trade policy that focuses on trade between developed and developing countries will lead to a deterioration of trade terms, increasing differences between them. In its view, the exports of the underdeveloped countries are mainly primary products, which are subject to excessive price fluctuations and also present an inelastic demand in the export markets.

Other studies have yielded mixed results. These studies have shown that the effect of trade policy on economic growth is not automatic. For example, Gries and Redlin (2012) show with an Error Correction Model model applied to 158 countries, a positive and significant causality from trade openness to economic growth and vice versa. This presumes that international integration is a beneficial strategy for economic growth in the long run. But, reversely, there is a negative adjustment in the short term, which suggests that the opening would be painful for the economies undergoing these adjustments. Although the long-run effect remains mostly positive and significant, the short-term adjustment becomes positive when the income level increases. This result suggests that different commercial structures in low- and high-income countries have different effects on economic growth (Malhotra, 2004). Didier and Pinat (2013), in their study on the problem of the improvement of growth through trade policy, using the gravitational model, reach the conclusions according to which a policy of trade openness with the pole of world growth, particularly developed countries only, leads to large surpluses of growth than trade with any other trading partner. Also, this relationship is strengthened when the country and its main cluster partners market similar products of high quality. Using a two stage least square (TSLS) regression, they show that trade has a significant effect on income and that some channels of transmission are more beneficial than others. With the increased neo-classical growth model suggested by Mankiw et al. (1992) to investigate the relationship between trade openness and growth, Ulasan (2012) concludes with a linear regression that the ratio between trade volume and GDP is positively and significantly associated with economic growth. It states that without the construction of good

institutions, the maintenance of conflict management on the ethnolinguistic dimension and stable fiscal policies, trade policy will not guarantee economic growth.

Economic Growth and Corruption

The literature suggests that the quality of institutions is crucial for creating economic growth (Nyström, 2008). The major role governance plays in the competitiveness of economies is reflected in the institutional environment (Kubickova, 2017). The institutional environment of a nation is a determinant of economic growth (Nord, 1990); similarly, sound economic institutions encourage productive actions and discourage corrupt behavior. Kubickova (2017) supports the idea that an increase in the level of corruption has a positive effect on the competitiveness of nations. By contrast, Mauro (1995) attests that corruption is negatively associated with growth through investment. Among the authors who support the positive effect of corruption on growth is the pioneering contribution of Leff (1964), who considers that corruption is the fat that makes bureaucratic wheels work. Trade policy characterized by distortions caused by institutional failure, corruption is needed to reduce the rigidities that constrain economic growth and reduce investment especially for developing countries. The difficulties of a decision to invest a business can come from an economic and political environment such as the unknown and irrational behavior of the government. Corruption could reduce uncertainty and increase investment, as bribes should allow the company to control and affect the decision of public officials. In the same vein, Lui (1985) suggests a model of corruption in which the decision to pay bribes by customers could achieve a social balance. If clients consider time value and opportunity cost, their decision could lead to the optimal social point because of the minimization of waiting costs (Ngoc et al., 2018).

Given the decision to bribe clients, bureaucrats could improve their efficiency and make decisions to speed up administrative procedures. Similarly, Beck and Maher (1986), with a less extreme view of the positive effect of corruption, found that there is a difference between bribery and the competitive bidding model because makes the same good at the lowest cost, is able to pay the highest price of corruption, as a result, corruption can improve efficiency by providing projects to the most successful companies. In the same vein, Acemoglu and Verdier (1998) have shown that the enforcement of property rights by the public authority is a necessary condition for the creation of wealth and it is important to prevent all forms of corruption.

However, the costs associated with this process are prohibitive. Corruption is an expensive scourge for individuals, businesses, organizations, the public sector and the general economy (Rotberg, 2019). The various surveys that attempt to capture the amounts of bribes that companies must pay in percentages of their sales or the actual financial scale of corporate-level corruption (Mungiu-Pippidi and Ramin Dadasov, 2016); despite these attempts, these results account for only a portion of the hidden costs that companies bear, and ignore the effects of corruption on the effectiveness of trade policy as well

as the particularly harmful effects of corruption on consumers, the most vulnerable (Ngoc et al., 2018).

Other authors oppose the school of thought that argues that corruption improves efficiency and demonstrates that assumptions that support the positive impact of corruption are based on weak and problematic assumptions. For them, corruption is sand in the wheels of bureaucracy, since the approach that supports improved efficiency assumes that bureaucrats will increase their productivity to promote economic growth, but Tanzi (1998) argues that rigidities are not made by society, but are created by public officials, especially in the case where such barriers can attract more bribes.

Myrdal (1968) also indicated that in a situation of corruption, instead of speeding up administrative procedures, public officials would maintain rigidities in order to receive more undue payments. Kaufmann and Wei (1999), firms will likely spend more time negotiating with civil servants, resulting in an increase in the cost of capital. Unlike Beck and Maher (1986), the firms that pay the highest bribes may not be the most economically favored because they view the bribe as a high rate of return on investment (Tanzi, 1998). It should be noted that corruption does not affect efficiency only through price mechanism alone. Murphy et al. (1991) found that because of corruption, agents will likely shift from productive rent seeking to unproductive rent, in other words, corruption leads to reallocation of employment down to the optimum which would hurt human capital and therefore economic growth.

Methodological Approach

The analytical framework is inspired by the works of Nerlove (1958) and Harvey (1981) who used in their work an autoregressive model with staggered delays that integrates the production decisions y_t that depend on the future price x_{t+1} .

$$y_t = \mu + \sum_{i=1}^s \beta_i x_{t-i} + \varepsilon_t \quad [1]$$

The coefficients β_i are the delay coefficients. They determine how y_t will respond to a change in x_t , ε_t are Gaussian white noises. This type of specification encounters a problem of multicollinearity and the structure of the rational scaled delays introduced by Griliches (1967) makes it possible to reduce the number of parameters to be estimated and makes the model extremely flexible and simple according to this form:

$$y_t = \mu + \alpha y_{t-1} + \beta x_t + \varepsilon_t \quad [2]$$

ε_t is a white noise and $|\alpha| < 1$ a stationary condition. At this level of analysis, we seek to analyze the effects of trade policy and corruption on economic growth in Benin over the 1985-2018 period. The choice of this period of origin is conditioned by the availability of data. In the context of econometric

inferences we use the vector error correction model (MVEC). The idea of using Johansen's (1995) system cointegration method (MVEC) allows the estimation of error correction models with several cointegration vectors, the ability to capture structure, and dynamic interactions. This technique differs from that of Engle and Granger, who estimates only a cointegration relationship and assumes low exogeneity.

Failure to control exogeneity can lead to biased results (Saha et al., 2016 Gloria and Vaillancourt, 2012, Wooldridge, 2009). Taking inspiration from the works of Didier and Pinat (2013) and Ulasan (2012) to which we make modifications taking into account the framework of analysis of this article. The basic econometric model that is tested in our analysis can be expressed by the following regression function:

$$tcrois_t = \alpha_0 + \alpha_1 lipc_t + \alpha_2 ltdd_t + \alpha_3 louv_t + \alpha_4 lsub_t + \mu_t \quad [3]$$

Where t represents the size of the time series, the empirical results were obtained using Stata13.

In this specification, the dependent variable represents the GDP growth rate; the independent variables integrate the variables relevant to the initial conditions. As control variables, we take into account in this same matrix of explanatory variables such as tariff rates (tdd) to capture the effect of trade policy; corruption is approximated by the perception index of corruption (ipc); economic openness ($openness$) is used in this work to translate the effects of national trade policy on trading partners and production subsidies abbreviated by (sub) translate the different support for producers of goods and services to be subject of commercial transactions. In the sensitivity analysis of our various results, the data used are secondary and come from the WDI database of the World Bank, the BCEAO database and Transparency International.

Results and Discussion

This section presents the estimations results just after the descriptive statistics of the variables of the study, and the results of the econometric estimation.

Table 1. Descriptive Statistics

variables	Tcrois	louv	LSUB	LIPC	LTDD
Mean	4,068	4,002	23.260	1,137	2,484
Median	4,225	4,034	21.929	1,098	2,484
Maximum	8.976	4,306	25.675	1,360	2,498
Minimum	-2.854	3,645	21.929	0.916	2,478
Std. Dev.	2,365	0,140	1,769	0.118	0.005

The variable $tcrois_t$ has the smallest minimum value and $lsusb_t$ has the highest maximum value. The variance-covariance matrix specified below reports that the variables are correlated. The correlation matrix shows a negative correlation between the variables and couples; and $lsusb_t$, $tcrois_t$, $ltdd_t$, $tcrois_t$, $lipc_t$ with respective values -0.151 and -0.024. and a positive correlation between couples $louv_t$ and $lipc_t$; tdd_t and $lipc_t$. $tcrois_t$ and $lsusb_t$ have the values are respectively 0.109; 0.176 and 0.049.

Table 2. Matrix of Covariance

variables	LIPC	louv	LSUB	LTDD	tcrois
LIPC	1,000	0,190	0.709	0,318	-0.024
louv	0,190	1,000	0.325	0,145	0.491
LSUB	0.709	0.325	1,000	0.053	0.049
LTDD	0,318	0,145	0.053	1,000	-0.151
tcrois	-0.024	0.491	0.049	-0.151	1,000

However, correlations between different variables are weak to cause problems of multi collinearity. This leads us to realize the stationary test on different variables.

Table 3. Results of the Unit Root Test

Variables	Tcrois	LTDD	LIPC	louv	LSUB
	-6.113	-2.932	-8.355	-6.102	-5.223
ADF test	(-2.960)	(-2.991)	(-2.963)	(-2.960)	(-2.960)
Order of Integration	I (0)	I (1)	I (1)	I (1)	I (1)

By performing the usual unit root tests (Dickey-Fuller), we conclude that the first variable is the combination of a deterministic trend and a stochastic trend, that the annual drift of the variable $tcrois_t$ is stationary at level I (0). Similarly, the results of unit root tests also allow us to conclude that the variables $tcrois_t$, $ltdd_t$, $lipc_t$ and $louv_t$, $lsusb_t$ are stationary in first difference over the entire period.

Table 4. Results of Cointegration Test

Hypothesis	Eigen value	Trace Statistic	Critical value (5%)	Prob. **
None	0.531	44.202	47.856	0.105
At most one	0.309	21.455	29.797	0.329
At most two	0.194	10.365	15.494	0.253
At most three *	0.121	3,872	3,841	0.049

The results in the table above illustrate the multivariate analysis of the rank of cointegration according to the Johansen (1995) methodology, which leads to the conclusion that there are three cointegration relationships. Therefore, an error-correction vector model representation of the stationary series dynamics is postulated. With regard to the order of the VEC model, the order chosen is based on the statistical criterion of Akaike and Schwartz.

Table 5. Optimum Lag

The G	AIC	SC	HQ
0	-6.175	-5.984	-6.117
1	-7.240 *	-6.289 *	-6.949 *
2	-6.501	-4.788	-5.977
3	-6.320	-3.845	-5.563
4	-7.239	-4.003	-6.250

In this study, the optimal lag $P = 1$ is one that jointly minimizes the criteria previously. Indeed, the choice of the optimal lag is the need to take into account the relatively long time in the incidence of corruption. The table below provides information on the short-term estimation results.

Table 6. Estimation Result of the Short-Term Model

Estimated MVEC: Economic Growth	
trois (-1)	1,000
LIPC (-1)	-328.157 (50.590) [-6.486]
louv (-1)	-6.624 (24.545) [-0.269]
LSUB (-1)	16.343 (2.952) [5,534]
LTDD (-1)	-2,398.718 (869.477) [2.758]
c	-5,943.095

(.) - the standard deviations, [.] -the statistical Student's t ** significant at 5%

We obtain a MVEC of order 1, and a large number of coefficients associated with the lagged terms are not significantly different from 0 since the value of the t Student associated to these coefficients is lower in absolute value than the critical value for a threshold $\alpha = 5\%$ ie 1.96. Thus, for the equation of the GDP growth rate approximated by $tcrois_t$, the estimated coefficients of the variables $ltdd_t(-1)$, $lipc_t(-1)$ and $lsub_t(-1)$ are significantly different from 0 in the short-term dynamics.

These results show that corruption has a negative and significant influence on short-term economic growth in Benin. This result is explained by the fact that bribery of public officials distorts the achievement of trade policy objectives. Civil servants divert public funds to build public utility infrastructure whose use would facilitate commercial transactions for the creation of wealth for strictly private purposes, thus slowing down the pace of commercial activity and thus reducing of growth. Similarly, the bribery agreement between officials and commercial agents results in bribe transfers and helps to divert financing from production equipment and as a result leads to a decline in production volume and a decline in exports and exports. a decline in economic growth. This result confirms the negative relationship between corruption and economic growth demonstrated by the work of Mauro (1995), Tanzi (1998) and Dridi (2013). Similarly, production subsidies have a positive and significant impact on economic growth in Benin. Indeed, production subsidies aim to support the increase in the level of domestic production and thus contribute to the increase of exports and the volume of trade. The positive effect of production subsidies on economic growth can be explained by the fact that the policies to fight against the corruption of public officials contribute to the increase of the tax receipts which contributes to the increase of the funds dedicated to the financing of the agricultural production. This positive effect of producer subsidies encourages low-income producers and allows them to purchase more agricultural inputs and fertilizers to improve their level of production.

This result contrasts with that obtained by Sabo et al. (2010) which states that subsidies have a negative effect on economic growth because public officials instead finance income-generating activities that guarantee economic growth divert subsidies for other strictly private purposes which affect the government deficit. This corruption behavior of bureaucrats taints the efficiency of public institutions and hampers the optimal management of the funds allocated to producers in terms of subsidy, degrades production conditions and pulls down economic growth. The poor quality of legal institutions and corruption are major impediments to trade flows (Avom and Fankem, 2014).

Our findings also show that tariff rates have a negative effect on economic growth in Benin. Indeed, the negative sign of the estimated coefficient of the variable "tariff rate" shows instead that trade policies marked by the increase in tariffs have a negative effect on the growth of the economy. This finding is in line with those of Tanzi and Davoodi (2000) and Chu (1990) who focus on the likely consequences of an excessive rise in tariff rates. Indeed, an increase in

the customs duties rates leads to a decrease in the production volume since it causes tax fraud, the development of corrupt behavior which results in the concealment of the real value of legal economic transactions in the country. to circumvent tax burdens and the transfer of public resources in bribes to public officials in charge of trade policy. This diversion is a loss of revenue for the state, which is unable to mobilize public resources to finance production. In addition, when domestic production is not sufficiently supported to facilitate exports, this rise in tariffs leads to a general decline in trade volume and a decline in economic growth.

Conclusion

Trade policy through the instruments of tariff barriers and non-tariff barriers such as tariff rates and production subsidies contribute in one way or another to the economic growth of a nation. However, for Krugman (2018), considering some key examples of strategic trade policy is not encouraging with regard to the ability of governments to target industries. This failure of governance is the bed of corruption. Corruption is not appreciated for its adverse effects on economic growth and development (Majeed, 2014); it inhibits the provision of public services, increases inequality and stifles investment (Mauro, 1995). On the other hand, several authors have argued that corruption could facilitate economic growth. It is in this line of thought that the objective of this article is to analyze the effects of trade policy on economic growth in Benin. Then, the estimation of the error correction vector model reveals that short-term tariff rates have a negative effect on economic growth while production subsidies have a positive effect on the growth of the economy. Similarly, corruption has a negative influence on economic growth. From these results, it is beneficial for the State to revise the level of the tariff rate in order to revitalize this sector and make the system of production subsidies more efficient. There is a need to put in place monitoring mechanisms to punish corruption behavior of bureaucrats and to put in place the necessary incentives to control corrupt behavior.

References

- Abdella A. B., Naghavi N., Chan Yin Fah B., (2018), The effect of corruption, trade openness and political stability on foreign direct investment : Empirical evidence from BRIC countries, *International Journal of Advanced and Applied Sciences*, 5(3) pp.32-38.
- Acemoglu D., Verdier T., (1998), Property rights, corruption and the allocation of talent: a general equilibrium approach, *Economic Journal*, 108 (405), 1381-1403.
- Adam Smith (1776), *An Inquiry into the Nature and Causes of the Wealth of Nations*, Indianapolis, *Liberty Press*, 1981.
- Ades A., Di Tella R., (1999), Rentes, competition and corruption, *American Economic Review*, 982-993. <http://www.jstor.org/stable/117169>.

- 1 Alesina A., Ardagna S., Nicoletti S., Schiantarelli F., (2003), Régulation and
2 investissement, *National Bureau of Economic Research*, Working paper,
3 n°9560.
- 4 Athanasia S., (2013), Exports and Economics growth in the United Arab Emirates
5 (1980-2010), *RIBM*, Doctoral Symposium.
- 6 Avom D., Fankem G.S.G., (2014), Qualité du cadre juridique, corruption et commerce
7 international : le cas de la CEMAC, Dalloz, *Revue d'Economie Politique*, 2014/1,
8 vol. 124, pp.101 à 128.
- 9 Bailey R. H., (1966), Studies on the dispersal of lichen soredia, *Journal of the Linnean*
10 *Society of London*, Botany, vol.59 Issue 380.
- 11 Bairoch P., (1993), Le tiers monde dans l'impasse, Le démarrage économique du
12 XVII siècle, *Population*, vol.27, pp.1167-1168.
- 13 Beck P.J., Maher M.W., (1986), A comparaison of bribery an bidding in thin markets,
14 *Economics Letters*, 20(1), 1-5.
- 15 Bhagwati J.N., (1982), Directly unproductive, profit-seeking (DUP)activites, *The*
16 *Journal of Political Economy* : 988-1002, <http://www.jstor.org/stable/1831156>.
- 17 Bhagwati J.N., Nrinivasan T.N., (1980), Revenue seeking: a generalization of the
18 theory of tariffs, *The Journal of Political Economy* : 10691087,
19 <http://www.jstor.org/stable/1831156>.
- 20 Chang R., Linda K., Loayza N.V., (2009), Openness can be good for growth : The role
21 of policy complementarities, *Journal of Development Economics* 90, n°1(2009):
22 3349.
- 23 Chu C.Y.C., (1990), A model of income tax evasion with venal tax officials, *Public*
24 *Finance*, vol.45, pp. 392-408.
- 25 Didier T., Pinat M., (2013), How does trade cause growth? *World Bank*.
- 26 Dreher A., Herzfeld T., (2005), Les coûts économiques de la corruption, une nouvelle
27 enquête et nouvelle preuve, *Economie Publique*, 506001.
- 28 Dridi M., (2013), Corruption et croissance économique: les canaux de transmission,
29 *Journal of Business Studies Quarterly*, '4(4).
- 30 Dutt P., Traca D.A., (2009), Corruption and bilateral trade flows : extortion or
31 evasion, *The review of economics and statistics*, 84(2), pp. 342-352.
- 32 Edwards S., (1993), Openness, trade liberalization and growth in developing
33 countries, *Journal of Economic Literature*, 31(3), pp.1358-93.
- 34 Gatti R., (1999), Corruption and trade tariffs, or a case for uniform tariffs, vol.2216,
35 *World Bank Publications*, DOI: 10.1596/1813-9450-2216.
- 36 Gloria M., Vaillancourt F., (2012), Les déterminants macroéconomiques de l'épargne
37 québécoise et canadienne-une étude économétrique, *CIRANO*, 2012RP-01.
- 38 Gries T., Redlin M., (2012), Trade openness and economic growth a panel causality
39 analysis, *University of Paderborn*, Germany.
- 40 Griliches, Z., (1967), Distributed lags: a survey, *Econometrica*, 35,16-49.
- 41 Grossman G. M., Helpman E., (1991), Innovation and Growth in the Global Economy.
42 Cambridge, MA: MIT Press.
- 43 Harvey, A.C., (1981), The econometric analysis of time series, *Philip Allan*, Oxford.
- 44 Johansen S., (1995), Likelihood-Based Inference in Cointegrated Vector
45 Autoregressive Models, Oxford University Press, Oxford.
- 46 Kalecki M., (1929), On activating the Balance of Trade, pp. 15-20.
- 47 Kaufmann D., Wei S.J., (1999), Does grease money speed up the wheels of
48 commerce? n° w7093, *National Bureau of Economic Research*.
- 49 Khandaker S., Sharmin R., (2015), The déterminant of foreign direct investments,
50 evidence from Bangladesh, *Global Review of Accounting and Finance*,
51 6(2):82-97.

- 1 Kim D. H., Lin S. C., (2008), Trade and growth at different stages of economic
2 development, *Journal of Development Studies*, 45(8), pp. 1211-1224.
- 3 Kubickova M., (2017), L'impact des politiques gouvernementales sur la destination
4 compétitivités dans les économies en développement, *Actualité du Tourisme*,
5 DOI : 10.1080 / 13683500.2017.1296416.
- 6 Krueger A.O., (1974), The political economy of the rent-seeking society, *The*
7 *American Economic Review* : pp 291-303. <http://www.jstor.org/stable/180888>.
- 8 Krugman P., (2018), Corruption hits the small time, *New york times*.
- 9 Leff N. H., (1964), Economic development through bureaucratic corruption, *American*
10 *Behavioral Scientist*, n°8 : 8-14.
- 11 Leys C., (1964), What is the problem about corruption, *The Journal of Modern*
12 *African Studies*, vol.3, n°2 : 215-230.
- 13 Lui F.T., (1985), An equilibrium queuing model of bribery, *The Journal of Political*
14 *Economy*, 760-781.
- 15 Majeed M.T., (2014), Corruption and trade, *Journal of Economie Intégration*, vol.29,
16 N°4, pp.759-782.
- 17 Malhotra K., (2004), Will a trade and investment link in the global trade regime be
18 good for human development ? *The European Journal of Development*
19 *Research*, 16(3), 716-736.
- 20 Mankiw N.G., Romer D., Well D.N., (1972), A contribution to the empirics of
21 economic growth, *Quarterly Journal of Economic*, 107(2), pp.407-37.
- 22 Mauro P., (1995), The effects of corruption on growth, investment, and government
23 expenditure: a cross-country analysis, *Institute for International Economics*, 110,
24 pp.681-712.
- 25 Mohsen B-O., Chi Wing Ng R., (2002), Long-run demand for money in Honk Kong,
26 An application of the ARDL Model, *International Journal of Business and*
27 *Economics*, Vol.1, n°2, pp.147155.
- 28 Mungiu-Pippidi A., Dadasov R., (2016), Measuring control of corruption by a New
29 Index of public integrity, European Research Centre for Ant-corruption and
30 State Building, Working paper, [https://index-integrity.org/ methodology](https://index-integrity.org/methodology).
- 31 Murphy K.M., Shleifer A., Vishny R.W., (1991), The allocation of talent:
32 implications for growth, *The Quarterly Journal of Economics*, 106 (2), 503-
33 530.
- 34 Myrdal G., (1957). *Economic Theory and Under developed Regions*, London:
35 *University Paperbacks*, Methuen.
- 36 Myrdal G., (1968), *Asian drana, an inquiry into the poverty of nations*, Asian Drana,
37 an inquiry into the poverty of nations.
- 38 Nerlove, M., (1958), *The dynamic of supply : estimation of famers response to price*,
39 *Baltimore*.
- 40 Ngoc A. N., Ngoc-Minh N., Tran-Nam B., (2018), Corruption and economic growth,
41 ith a focus on Vietnam, *MPRA Paper No. 84728, Development and Policies*
42 *Research Center*.
- 43 North D., (1990), *Institutions, institutional change and economic performance*,
44 *Cambridge: Cambridge University Press*.
- 45 Nyström K., (2008), The institutions of economic freedom and entrepreneurship :
46 evidence from panel data, *Public Choice*, 136, 269-282.
- 47 O'Rourke K. H., (2000), Tarrifs and growth in the late 19th Century, *The Economic*
48 *Journal*, vol.110, Issue 463.
- 49 OCDE, (2004), *Protectionnisme ? Tarifs douaniers et autres barrières aux échanges*,
50 *les essentiels de l'OCDE*, le commerce international.

- 1 OCDE, (2016), Forum sur l'intégrité, éliminer les obstacles non-tarifaires : le
2 commerce international sans corruption, *Centre de conférence de l'OCDE*, Paris,
3 France.
- 4 Ricardo D., (1817), *The principles of Political Economy and taxation*, Cambridge:
5 *Cambridge University Press*.
- 6 Rodrik D., Rodriguez F., (2001). Trade policy and economic growth: a skeptic's
7 guide to the cross-national evidence, *National Bureau of Economic Research*,
8 vol. 15, pp. 261-325.
- 9 Romer P.M., (1993), Two strategies for economic development: Using ideas and
10 producing ideas, *Proceedings of the World Bank Annual Conference on*
11 *Development Economics*, ed. Summers, L.H, pp. 63-91.
- 12 Rose-Ackerman S., (2004), The challenge of poor governance and corruption,
13 *Copenhagen Consensus Challenge Paper*, www.copenhagenconsensus.com.
- 14 Rotberg R. I., (2019), Corruption in North America: Canada and the United States, D.
15 Carment and C. Sands (eds), *Canada-US Relations*, Canada and
16 International affairs, https://doi.org/10.1007/978-3-030-05036-8_13.
- 17 Sado I., Siri A., Zebro A., (2010), Analyse de l'impact des subventions de fertilisants
18 chimiques de céréales au Burkina Faso: MEGC micro-simulé, N°: 01/2010.
- 19 Saha S., Su J.J., Campbell N., (2016), Does political and economic freedom matter for
20 inbound tourism? Across-national panel data estimation, *Journal of Travel*
21 *Research*, 56 (2), 221-234.
- 22 Sjöholm F., (1999), export, imports and productivity results from Indonesian
23 establishment data, *World Development*, 27(4), 705-715.
- 24 Solow R., (1957), Technical Change and the Aggregate Production Function, *Review of*
25 *Economics and Statistics*, vol. 39, n°3, pp., 312-320.
- 26 Tanzi V., (1998), Corruption around the world : causes, consequences, scope and
27 cures, *Staff papers-International Monetary Fund*: 559594;
28 <http://www.jstor.org/stable/3867585>.
- 29 Tanzi V., Davoodi H.R., (2000), Corruption, growth and public finances, Washington,
30 D.C.: *The International Monetary fund, Fiscal Affairs Department* : Working
31 paper, N°182.
- 32 Torrez J., (2002), The effect of openness on corruption, *Journal of International Trade*
33 *& Economy Development* 11, n°4 : 387-403.
- 34 Treisman D., (2000), The causes of corruption : a cross-national study, *Journal of*
35 *Public Economics* 76, n°3 : 399-457.
- 36 Ulasan D., (2012), Openness to international trade and economic growth, Across-
37 country empirical investigation, *Central Bank of the Republic of Turkey*.
- 38 Wei S-J., Shleifer A., (2000), Local corruption and global capital flows, *Brookings*
39 *Papers on Economic Activity* 2 : 303-346. <http://www.jstor.org/stable/2667361>.
- 40 Wooldridge J.M., (2009), On estimating firm-level production functions using proxy
41 variables to control for unobservables, *Economic Letter*, 104, 112-114.
- 42 Yanikkaya H., (2002), Convergence : A cross-country empirical analysis,
43 *ResearchGate* <https://www.researchgate.net/publication/238110997>.
- 44 Yasar M., Morrison Paul C.J., (2007), International linkages and productivity at the
45 plant level : foreign direct investment exports, imports and licensing, *Journal of*
46 *International Economics*, 71 (2), 373-388.