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FDI and ODA effects on recipient countries imports: Evidence from selected MENA countries

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Abstract. *FDI, ODA and imports are highly related in economic literature. We aim to investigate the impact of both inward FDI and ODA on imports, in seven middle income MENA countries (Algeria, Egypt, Jordan, Lebanon, Morocco, Palestine, and Tunisia), for the period 2000 to 2019, using two econometric techniques, which are simultaneous equations, 3SLS, and Dynamic Panel Data system estimators. We found that FDI replaces imports that indicates the dominant types of market-seeking or/and platform FDI in the area. ODA shows a positive (negative) impacts on both imports (savings), respectively, which clarifies that ODA crowds out local savings, and increases imports. We recommended of a series of an ambitious policies that would enhance FDI role and re-allocate ODA to replace imports and boost economic growth instead to suppress it, and allow for development use of ODA.*

Keywords: inward FDI, imports, ODA, dynamic panel model, MENA.

JEL Classification: C33, E21, F14, F21, F35.

1. Introduction

Official Development Assistance (ODA) and Foreign Direct Investment (FDI) are the most important foreign capital inflows for the developing countries. Several impacts have been discussed in the literature, one of some, is the impact on recipient countries' imports. FDI plays either substitution or complementary role to imports. Market-seeker or tariff-jumper FDI, to the host country, realizes economies of scale at the firm-level, hence, foreign investors choose the invest overseas, in the host country, instead to export toward it, and therefore, FDI inflows and host country imports work to be substitutes, besides the export platform type of FDI, which may leave the same impact. Other types of FDI, vertical, complex vertical and Knowledge-Capital KC model may cause more imports although the possibility of raising horizontal type. Different mentioned types of FDI inflows in recipient countries may cause a positive association with imports, directly through increasing imports such as the vertical, complex vertical and Knowledge Capital (KC) model. In addition, these types may increase imports indirectly through enhancing employment, production, income and aggregate demand, including imports. On the other hand, horizontal type may reduce imports directly through substituting, home country exports to the host country, through producing overseas in the host country local market. Furthermore, this horizontal type may increase imports indirectly through increasing employment, production, income and aggregate demand including imports. Therefore, one of the main aims of this research is to detect the dominant relationship between overall inward FDI flows and overall imports, in the selected MENA countries.

On the other side, ODA may support productive sectors, complement savings and participate in sustainable development, which substitutes imports; or it may shrink productive sectors and increase reservation wages(1), push prices up and support rent-seeking behavior that reduce production, employment, enhance aid dependency and increase imports. Furthermore, ODA is much related to donors' exports, which increases as long as aid reduces trade barriers and increase donors' soft power in recipient countries. Therefore, we aim to detect the impact of ODA on imports that may be complement or substitute.

We proceed as follows; firstly we review the related literature, second we present the analytical framework and derive the model, third we introduce the methodology and data, then we estimate and then conclude and recommend.

2. Literature review

In the era of globalization and trade liberalization, FDI, ODA, imports and openness increase dramatically. These variables are interrelated and to detect the net impact on economy, impacts on imports have to be discovered. In addition, impacts of openness on imports. In this work we are looking forward to detect the impact of ODA and FDI on imports, considering trade openness level, and we review the related literature in this section.

Widespread work investigated the FDI impacts on host developing countries. FDI plays an essential role in serving the host countries, whereas enhances local investment, capital accumulations, human capital, production technologies, know-how, new production techniques, creating new opportunities of employment, trade, growth and income. Multinational Corporations (MNCs) global networks facilitate trade for imports through intra-firm trade or trade between countries.

However, FDI affects host countries' imports in specific, which depends on FDI type. It may substitute home country imports or complement it. In case of horizontal FDI that enhanced by similarity between countries and high transportation cost, Markusen (1995), FDI substitute imports. In fact, this type is market-seeker and tariff-jumper to the host country realizing economies of scale at the firm-level. Therefore, home country investors choose the invest overseas, in the host country, instead to export toward it (host country imports), and hence, FDI inflows and host country imports work to be substitutes.

The resource-seeker vertical types of FDI enhanced by differences in the factor endowments between home and host countries, absence of Factor-Price-Equalization (FPE), Markusen (2002), and low trade costs either transport or tariff barriers. In fact, such type locates a part of production value chain in the host country to benefit lower costs that requires increasing intra-firm trade between headquarter and affiliates and may complement host country imports. On the other hand, complex vertical FDI enhanced in case of; high income in region, or similarity between countries, similarity in relative factor endowments, home and third countries are different in relative factor endowments, countries are different in relative unskilled labor and when transport costs between countries are high, Matsuura and Hayakawa (2008). This type produces overseas in the host country to serve the domestic market more cheaply, or to save trade costs, and targets the host country as an exports platform, FDI serves in addition other countries in the region through exports or more FDI, which suggested by Ekholm et al. (2003). This complex type reduces imports through serving the local host country, which works as a horizontal, and may increase imports through importing goods from the headquarter in the home country, which works such as vertical, and finally letting the relationship between FDI inflows to host country, and host country imports can be positive or negative. In addition, KC model stands if the two previous types were merged leaving the overall impact on imports ambiguous depending on the dominant type of FDI, in this model, either horizontal or vertical, if it stands.

On one hand, different mentioned types of FDI inflows in recipient countries may cause a positive association with imports, directly through increasing imports for the vertical, complex vertical and KC model. In addition, these types may increase imports indirectly through enhancing employment, production, income and aggregate demand, including imports. On the other hand, horizontal type may reduce imports directly through substituting, home country exports to the host country, of producing overseas in the local home country market. Furthermore, this horizontal type may increase imports indirectly through increasing employment, production, income and aggregate demand including imports, although the small marginal impact of this effect. Therefore, one of the main aims

of this research is to detect the relationship between overall inward FDI flows and overall imports, in the selected MENA countries.

The impacts of ODA are in the main interest of economic literature debate. ODA, similarly to FDI, one of the main capital sources bridges the saving-investment gap in developing countries in specific. In this case, which contributes in filling the foreign exchange gap, creates access to better technology and managerial skills, Chenery and Strout (1966). ODA complements domestic savings, increases investment, capital accumulations, and growth. Moreover (Morrissey, 2001) pointed out that, ODA may increase ability to attract more capital goods and technology, which promotes productivity and endogenous technological changes. This is true in case of good fiscal, monetary and trade policies, meanwhile, little impact stands in case of such poor policies, Burnside and Dollar (2000). McGillivray et al. (2006) suggest that aid effectiveness depends on institutional quality, moreover, it is influenced by political, external and climate conditions and indicate that aid has a decreasing return (namely, that each additional dollar of aid has a lower (positive) impact on growth than the preceding dollar). Therefore, aid has a positive impact on growth when it has not an adverse impact on investment and savings, Sabra and Sartawi (2015). However, if the aid increases growth, saving, investment and support productive sectors, it would substitute imports through enhance producing locally, instead of importing, enhanced by aid development impacts, although the marginal positive impacts on imports as a result of increasing income. On the other hand, aid may turn to serve donors' exports and enhance it, meanwhile, aid reduces trade barriers between donors and recipient countries. This, in fact, increases recipient country imports without leaving real positive impacts on macroeconomic indicators.

Djankov et al. (2006) found that ODA has a negative direct impact on economic growth, and it does not increase investment, meanwhile, it impacts positively on government expenditure. Rent seeking behavior activities among parties in power enhance government spending, reduce investment, imply non-productive use of resources and increases openness Djankov et al. (2006), which redirect aid resources toward imports and associate negatively with savings. Moreover, non fungible aid is more effective than fungible aid, and finds that aid does not impact positively on either investment or any human development indicator, but it increases the size of government, Boone (1996). In addition, exceeding the optimal size of government reflects negatively on growth, Sabra (2016). In other words, the negative or positive impact of aid depends on whether government spends on public consumption or investment, respectively Djankov et al. (2006). Aid positive impact induces investment and growth that may replace imports, and negative impact supports public spending and consumption, which induces imports. Foreign aid inflows appreciate real exchange rate, which impedes the exporting sector, which is relatively small and necessary for development in developing countries, Bevan (2005), Adam (2005), and in addition increase imports in different sectors. Agriculture sector usually one of the main exporting sectors in developing countries which harm hard by exchange rate appreciation impacts strongly and negatively on fragile workers and businesses, Benjamin et al. (1989), Stevens (2003), Rajan and Subramanian (2005), Adam and Bevan (2005), which may create aid-dependency for humanitarian reasons that support food imports. However, exchange rate appreciation reflects on overall prices in economy, which increases inflation.

Furthermore, aid inflows increase demand on different sectors, tradable and non-tradable, which increases imports in tradable good to satisfy demand, and increases the prices and wages in the non-tradable sectors under the fixed supply of skilled labor. Non-tradable sectors, such as construction, education and health care, enhanced by government spending expanded, which cause more profits, higher demand, wages and prices, that attract more productive resources from tradable sectors, that called "resource-movement effect". Appreciation of exchange rate causes higher prices in economy, and resource movement effect makes tradable sectors, such as agriculture and industry, less profitable and less competitive internationally that decrease exports and increase imports, whereas tradable goods are fixed under the assumption of small open economy, Rajan and Subramanian (2011), Corden and Neary (1982). Hence, tradable sectors are less competitive in international markets and with higher spending as a result of higher wages and higher aid cause a "spending effect", which increases the demand on traded goods and increases imports. Foreign aid and FDI, in addition, expected to be complementarities or substitutes, as a source of foreign capital, basing on whether aid increase marginal productivity and complement private investment or crowd it. This would in addition to influence imports. The theoretical and empirical debate is still standing and presents the need for this research in MENA area.

The relationship between ODA and donors exports to the recipient country is strongly stands. Donors give preferences in aid allocation to countries with which they have highest trade ties influenced by various lobby and businesses groups that inducing aid-trade dependency, Lloyd, McGillivray, Morrissey and Osei (1998), Suwa-Eisenmann and Verdier (2007). In addition, donors might be able to increase their exports to recipient countries through its political influence and military ties, McKinley and Little (1979). Wagner (2003), finds that increasing aid to a country by 10% increases the donor exports to the recipient by 1.63%. This elasticity translates into an average of 1.85 cents of exports generated per additional dollar of aid. Furthermore, Sabra (2013), employed a dynamic gravity model between 23 Development Assistance Committee DAC and the 18 MENA countries founds a positive relationship, whereas aid increasing to a recipient country by 10% increases the dynamic donor’s exports to the recipient by range from 9.7% to 17%.

Finally ODA and FDI as a main source of international capital that may associates with imports positively or negatively, the theoretical justifications for both hypotheses are standing. No empirical work has been found in the MENA area, therefore, we aim to detect the association between these inflows of foreign capital and imports.

3. Empirical framework

The main purpose of this research is to investigate the impact of each FDI and ODA on the imports. Therefore, we include both variables in the estimated model. A limited empirical work has been done to detect the relationship between FDI, ODA and Trade, especially imports. In addition, we did not found any work investigate these relationships in the MENA area. Furthermore, no pioneer model is standing. We use two techniques, the first, three-stage least-squares regression, 3SLS estimates two equations simultaneously, first

equation includes the main determinants influence imports flow, which are Gross domestic product (GDP), openness, government expenditure, Consumer Price Index (CPI) besides FDI and ODA. The second method detects the impact on domestic savings, and includes GDP and ODA. The second model is the dynamic panel data techniques namely Allerano-Bover/Blundell-Bond estimators. This estimates dynamically the impact of ODA, FDI, GDP, openness, government expenditure and CPI.

FDI may associate positively on imports in case of vertical dominance types, meanwhile it may associate negatively with imports in case of horizontal and third country effect dominant types of FDI. In addition, FDI needs time to start producing to provide local market and replace imports; or to import goods and complement imports. Therefore, we use inward FDI in one time lag to detect its influence on imports. In other words, the inward FDI in year t-1 (previous year) will affect the imports in year t (current year).

ODA may associated positively on imports if ODA complement local investment, domestic savings and cause growth. For this reason, we detect the impact of ODA on domestic saving in equation 2 of model 1 (simultaneous analysis). On the other hand, ODA crowds out the demotic savings that would react negatively on investment, growth and cause rent-seeking behavior in government and higher government size, in this case, ODA increases imports as a result of higher relative prices in the local economy, and the presence of Dutch disease. Therefore, if ODA positively impact on imports, it should negatively impact on domestic savings, and vice versa.

CPI a proxy for inflation and important determinant of imports may associate positively with imports, whereas represents higher relative prices in the local economy caused by exchange rate appreciation as a result of foreign aid inflows, as explained before. This can be also as a result of other factors such as inconvenient fiscal and monetary policies that may appreciate local currency. On the other hand, negative impacts of inflation on imports still possible. Therefore, we expect positive impact of inflation on imports in case of positive impact of ODA on imports, and vice versa.

GDP have to influence imports positively, it, in fact, the main determinant of imports, which is function of local income. Therefore, a positive and strong significant impact is highly expected on imports. In addition, a positive strong and significant impact of GDP should stand in association with domestic savings.

Government expenditure is general government final expenditure, which includes all government current expenditures for purchases of goods and services, and most expenditure on national defense and security. Government expenditure financed by foreign aid enforces public spending on public services and sector, which may enhance resource movement effect, spending effect, and more imports. In addition, government expenditure is a source of economic growth, Barro (1990). It is expected to affect imports positively.

More openness and trade liberalization must enhance more imports and exports. In fact, our interest in the current work is openness impact on imports. Openness influences both exports and imports growth positively, hence, we expect a positive impact on imports. More

openness associates positively on government size, which plays as a stabilizer against external shocks, Sabra (2016). However, the overall and net impact on trade balance may be positive or negative that subject to which component is higher influenced exports or imports, Chaudhary and Amin (2012), that may be a core discussion of other researches.

4. Empirical model

4.1. Two stage least squares estimation

4.1.1. Model one

We use panel data for seven middle income MENA countries (Morocco, Algeria, Egypt, Palestine, Jordan, Lebanon and Tunisia) for the period 2000 to 2019 basing on data availability that collected from World Bank database. The two-equation model avoids the simultaneity bias occurred in single-equation models.

$$\ln \text{Imports} = \beta_0 + \beta_1 \text{Ln InFDI} + \beta_2 \text{Ln ODA} + \beta_3 \text{LnGDP} + \beta_4 \text{Ln Gov} + \beta_5 \ln \text{OPEN} +$$

$$+\beta_6 \ln \text{CPI} + \epsilon \qquad \text{Equation 1}$$

$$\text{Ln Savings} = \alpha_0 + \alpha_1 \text{Ln In ODA} + \alpha_2 \text{Ln GDP} + \text{v} \qquad \text{Equation 2}$$

Where: Imports is imports of goods and services. lnFDI is inward foreign direct investment flows. ODA is official development assistance, GDP is gross domestic product, Gov is government expenditure. OPEN is the trade openness measured by the sum of exports plus imports as a share of GDP. CPI is consumer price index, and ϵ and v are error terms. The parameters β_1, β_2, β_3, β_4, $\beta_5 and$ β_6 represent the elasticities of imports with respect to InFDI, ODA, GDP, Gov, OPEN and CPI. In addition, the parameters α_1, α_2 represent the elasticities of imports with respect to ODA, GDP. Model aims to detect the impact of both inward FDI inflows and ODA on imports from one side, and impact of ODA and GDP on savings, that ensures the impact of ODA on imports through the impact on savings, from the other side.

4.2. Dynamic panel data system

4.2.1. Model two

In addition, we use the dynamic panel data GMM systems approach which estimates the parameters from a system of equations. This method is important for the dynamic panel data analysis, and it the first use, according our knowledge, in the empirical studies relating to the subject and region.

$$\Delta \text{ Ln Imports} = \beta_0 + \beta_1 \Delta \text{ Ln Imports}_{t-1} + \beta_2 \Delta \text{ Ln InFDI} + \beta_3 \Delta \text{ Ln ODA} +$$

$$+\beta_4 \Delta \text{ Ln GDP} + \beta_5 \Delta \text{ Ln Gov} + \beta_6 \Delta \text{ Ln OPEN} + \mu + \Delta \nu_t \qquad \text{Equation 3}$$

Where: Imports_{t-1} is the lagged variable of the dependent variable. This lagged independent variable is explanatory variable can strongly explain the dependent variables. lnFDI is inward foreign direct investment flows. ODA is official development assistance,

GDP is gross domestic product, Gov is government expenditure. OPEN is the trade openness measured by the sum of exports plus imports as a share of GDP. μ represents the unobserved country specific effects, and ν_t is the standard error. DPD system takes into consideration the cross country heterogeneity raise from pooled OLS estimation with cross sectional data. In addition, DPD system analysis provides more coherent estimation compared to fixed or random effect models, which addresses several biases related to heterogeneity across countries and time, Mitze and RWI (2010).

5. Econometric methodology

The Three-Stage Least Squares (3SLS) is a well known econometric technique and widely used in the literature. In fact, it used to estimate the parameters of a simultaneous equations when errors across the equations are not correlated and the equations concerned are over-identified or exactly identified, Mishra (2008). Estimation of imports and savings equations individually might endure simultaneous equations bias due to some of the explanatory variables might not be truly exogenous. Consequently, we estimate the two equations simultaneously.

Standard estimators for the static panel data model, which control for the existence of individual effects, are the Fixed Effects Model (FEM) and Random Effects Model (REM) approaches. The econometric analysis with this model addresses several biases, these biases related to heterogeneity across countries and time. The problem with standard FEM is that, it cannot estimate parameters such as time invariant variables. On other hand, the problem of standard REM is the biases caused of endogeneity problem due to the potential correlation between one or several explanatory variables, and the residuals, in addition. However, choosing among the FEM and REM estimator rests on an all or nothing decision with respect to the assumed correlation of right hand side variables (independent variables) with the error term. In empirical applications, the truth may often lie in between these two extremes, Mitze and RWI (2010). Arellano-Bover, Blundell-Bond is a recent econometric technique, which is dynamic panel data system (DPD system) analysis. This method is based on the generalized method of moment GMM technique that has been widely used in empirical estimation of dynamic panel data models. Blundell and Bond (1998) proposed system GMM estimators to overcome the inconsistent instrumental variables estimators caused by weak instruments. Firstly, They showed that the level GMM estimators by Arellano and Bover (1995) are free from weak instruments when even the parameters concerning the lagged variables is close to unity, and then combined the moment conditions, which are used in first differencing, and the level GMM estimators to improve the efficiency of the estimators, Hayakawa (2005)

The dynamic panel data is GMM systems approach that estimates the parameters from a system of equations: the first differenced model using lagged levels imports as instruments for the lagged difference of import equation. Secondly, use the difference instrumental variables in the model, Arellano and Bover (1995); Arellano and Bond (1998); Blundell and Bond (1998). Therefore, we run dynamic panel data system analysis, which is Arellano Bover Blundell Bond. In fact, we rely on the DPD system estimation to detect the impact

of inward FDI and ODA on imports. The long run coefficients are calculated by the equation: long run parameter (coefficient) = determinant (independent variable) coefficient/1 – dependent variable coefficient, Sabra (2015).

6. Data

This work uses panel data of seven selected middle income MENA countries (Algeria, Egypt, Jordan, Lebanon, Morocco, Palestine, and Tunisia) for the period 2000 to 2019. We use imports, inward FDI flows, openness, government expenditure, ODA, CPI and GDP variables. ODA is the net official development assistance and official aid received. Trade openness measured by the sum of exports plus imports as a share of GDP. Government expenditure is general government final consumption expenditure. GDP is the proxy can capture national income and aggregate demand. CPI is a Consumer Price Index and proxy for inflation based on year 2010. The proxies of variables are widely used in the previous literature. All row data of variables are collected from World Development Indicators of the World Bank, except FDI inflows, which collected from UNCTAD database, besides openness calculated as exports plus imports divided on GDP. Limited missing values are still standing. All variables are taken in logarithm. We use the variables in algorithm to get the elasticities, guarantee linearity and reducing any potential multicollinearity. STATA software has been used for the analyses.

7. Results

The following tables show the estimation results of the previous two models.

Table 1. *Three stage least squares estimation for equations 1 and 2*

	Inward FDI	GDP	ODA	Gov	Open	CPI	Constant	F statistics	RMSE
Imports	-.016* (-3.48)	.82* (20.77)	.08* (7.53)	.11** (2.38)	.98* (141.1)	.16* (4.42)	-.97* (-2.66)	26646*	.101
	GDP	ODA					Constant	F statistics	RMSE
Savings	11.9* (10.1)	-5.7* (1.5)	-	-	-	-	-166.4* (3.46)	138.34*	14.3

Figures in parentheses are t statistics. R^2: 0.99 and 0.54 for equation one and two, the symbols *, **, *** indicate significance at 1%, 5%, and 10% levels respectively.

Table 1 shows model one estimations for equations 1 and 2. It shows highly and significant F-statistics, and low root mean square errors RMSE, which presents model validity. All variables coefficients are significant at 1% except government expenditure that significant at 5% level, and R^2 is 0.99 and 0.54 for both equations, respectively. Estimation shows inward FDI flows is associated negatively with imports that indicates serving local market FDI types are dominant. Furthermore, FDI is slightly substitute imports. On the other hand, ODA associated positively with imports and negatively with savings. This indicates that ODA crowds out domestic savings, investment and growth, which agreed previous work in the area, Sabra and Eltalla (2016), and this pointed out aid is directed to support current government expenditure and humanitarian needs that enlarge the government size, which supported by previous work, Sabra (2016). Furthermore, government expenditure associated positively with imports that reflects inconvenient governmental policies toward

import substitution strategy, and toward using aid optimally and restrain current spending behavior that exceeds optimal size of government. Furthermore, a positive and strong relationship between GDP and imports that widely believed in the literature. Imports are highly influenced by GDP, which captures market demand and income level, besides both market and income potentials. Openness is highly and positively associated with imports that in line with the literature. Furthermore, openness increases the government size, which cause more dependence on aid. The positive association of aid, openness and government expenditure with imports is explaining each other. The final impact of trade openness on economy depends on comparing impacts on exports, besides imports. Consumer Price Index CPI is associated positively on imports in the selected countries and period, which shows increasing in local prices, which increases relative prices, and foreign goods became cheaper than local goods that causes more demand on imports. This is maybe as a result of higher international purchasing power provided by aid that cause expansion in non-traded sectors with higher wages, allow higher prices in the economy and increase imports of tradable goods. Finally, results of multiple equations analysis are in accordance with panel dynamic results.

Table 2. *Dynamic Panel data system estimation for equation 3*

	L. Imports	L. Inward FDI	GDP	Open	ODA	Gov.	CPI	Constant	chi2
Imports	.08* (4.36)	-.007* (-4.67)	.68* (30.2)	.99* (506.6)	.04* (7.47)	.21* (8.13)	.18* (11.7)	-.714* (-4.61)	288463*
Long-run coef.	-	-.008	.74	1.08	.044	.23	.2		
			H0: overidentifying restrictions are valid						320.8 *

Figures in parentheses are z statistics. The symbols *, **, *** indicate significance at 1%, 5%, and 10% levels respectively.

Table 2 shows model 2 estimations for equation 3. It shows a robust model, all variables coefficients are significant at 1%. Furthermore, as shown in Table 2, Sargant test shows that all moment restrictions are satisfied for the dynamic specifications can't be rejected. This means that the instruments are valid for model, model is robust and correctly specified. All signs are in accordance with the simultaneous analysis.

The lagged variable of imports shows the influence of previous imports behavior, it shows a very low effect relatively, as long as imports may highly fluctuate basing on local economic determinants. In other words, local determinants are higher important than previous experience of importers, these determinants are such as local income and trade liberalization policy. FDI substituting imports that suggest market seeking or/and platform exports dominant types of FDI. Low imports substitution effect has been found that suggests more FDI attraction would reduce imports and improve trade balance.

GDP as a proxy of market demand and income level, besides it captures both market and income potentials is highly and positively influence imports that follows the wide literature in the field. In fact, as much as production, income and market increasing as much as, demand on final goods, intermediate goods and raw materials increases, including foreign ones.

Contrary to FDI, ODA associated positively with imports. This indicates that ODA redirected to increase individuals and public demand that increase prices and enlarge non-tradable sectors. This actually crowds out domestic savings, investment and impact

negatively on growth, which agreed previous work in the area, Sabra and Eltalla (2016). Furthermore, government policies, in the context of trade liberalization, foreign aid managing finance public spending that enhance more expenditure and cause more imports. These policies reflects inconvenient governmental behavior in gathering various local and international capital resources toward bridging saving-investment gap and realize economic development. These policies support rent-seeking behavior that cause more aid dependency and may raise conflict between political parties participate in power, Adam (2005), Djankov et al. (2006), Stevens (2003), Rajan and Subramanian (2005), Adam and Bevan (2005).

Openness lowers trade barriers and enhance international trade that cause more exports and imports. Openness coefficient shows a high espouser in the area that is required to attract FDI, and in addition result of ODA, which reduces barriers between donors and host recipient countries. Openness associates positively with government size, in theory, Rodrik (1998), and empirically in MENA, Sabra (2016). In fact, this allows the government to seek aid as "easy resources" and absorb more aid to finance its current spending considering the aid fungibility that allows higher public spending. The final impact on economy must detect the impact on exports and trade balance.

Government expenditure associates positively with imports. In addition, the result is expected and well known in economic literature. Government behavior in region expands current spending including huge salary bills and expenditure on public services that for economic and social and political purposes. This requires a new restructuring plan to attract FDI and reformulate aid for development goals.

CPI positively associates with imports and shows deterioration of trade terms in the selected countries. ODA flows appreciate the local currencies, increases demand, causes shrinking in tradable productive sectors in favored of expansion in non-tradable sectors, causes higher wages and prices that increase imports. Therefore, the positive association of ODA and CPI with imports get in accordance with each other. Furthermore, it provides an evidence on the ODA role in the Dutch disease presence in the countries. In addition, these results are in accordance with previous related work in the region.

8. Conclusions and recommendations

FDI and ODA are an important international capital inflows, especially for the developing countries, which impacts on various macroeconomic variables. Host country policies, institutions and economic environment are crucial factor in attracting and beneficiating these inflows. Our results show that FDI would participate in development in recipient countries, which improve trade balance through replacing imports, and of course, creating jobs, increase incomes and potential increase in exports. This encourages attract more FDI, especially with the low coefficient value suggests a higher marginal effect (potential). On contrary, ODA crowds savings out, increase prices, public spending and imports. This points out easy resources are inefficient, distort local and public spending behavior, taking into consideration low level of governance and high level of corruption. CPI, openness and government expenditure positive impacts on imports, explain each other, supports these results.

In fact, this encourages to recommend of an ambitious serious of policies to improve legal, institutional and business environment, which manage various resources of capital inflows and spending side. Attracting more FDI that creates jobs, increasing production and exports and replacing imports. On the other hand, profiting ODA to complement saving, investment and infrastructure instead of supporting public budget, humanitarian aid and enhancing imports. Suggested reforms should expand productive sectors that should increase government local direct revenues instead of depending on rent finance such as ODA or exporting raw materials, that enhance private and public consumption behavior, from one side, and depending on indirect tax revenues such as customs. In fact, enhancing consumption can realize temporary growth, but it creates aid dependency and crowds out the sustainable growth induced through savings, investment and capital accumulation. These reforms have to include banking and financial system to redirect credit to investment and production instead of consumption and smuggling money abroad.

In fact, restructuring spending toward investment enforce public sector efficiency and private sector productivity. Furthermore, institutional reforms reduce transactional costs, shadow economy, corruption, rent-seeking in government behavior, such as natural resources exports and attracting foreign aid, and enhances doing businesses indicators. Finally, this, besides imports substitution policy, in comparative advantage sectors, would positively and strongly impacts on creating more jobs, enhancing human capital, physical capital and economic growth, considering the multidirectional impacts when reducing imports, increasing inward FDI and ODA use in development.

Note

(1) Reservation wages decreases probability to find acceptable jobs for workers.

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