

Determinants of OIC Countries' Customs Revenue vis-à-vis Implementation of WTO Customs Valuation Agreement

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This paper scrutinizes the determinants of customs revenue in the context of WTO member OIC countries. An econometric model of OLS, fixed effect and random effect calculations is employed with panel data of 1995-2007. The results suggest that increasing tariffs might increase customs revenue for big countries but not for small countries. Besides, the implementation of WTO Customs Valuation Agreement does not decrease customs revenue as its indirect undervaluation effect would be surpassed by its direct effect of less incentive for tax evasion. This paper suggests implementing information and communications technologies in the form of integrated single windows to tackle undervaluation issue as an alternative to Preshipment inspection course.

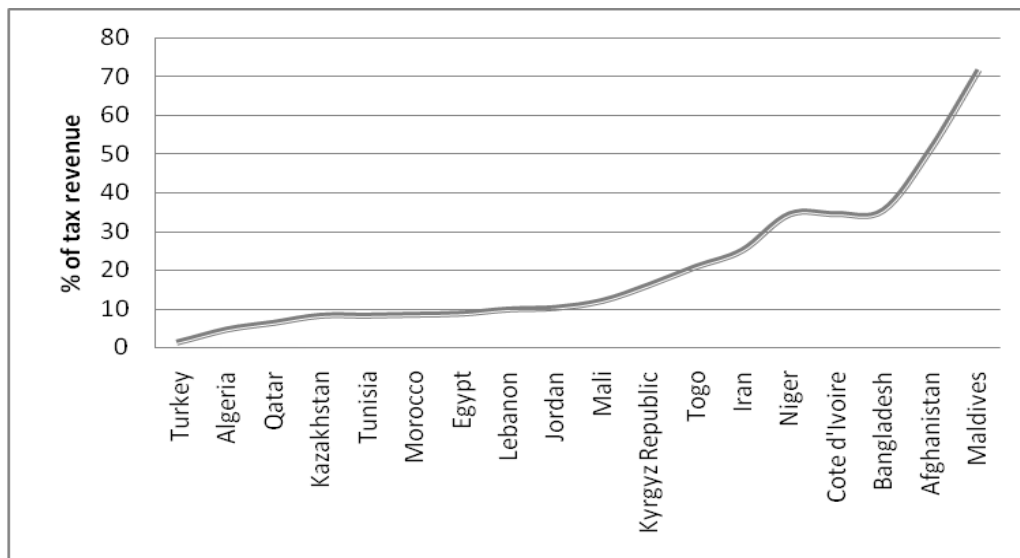
1. Introduction

Organization of Islamic Conference (OIC) countries are sometimes hesitant to transform in their customs as public authorities tend to associate any transformation in the form of trade liberalization or facilitation with decreased customs revenue. This worry is especially

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intense with Least Developed Countries as the customs revenue constitutes the bulk of the tax revenue (Figure 1). Among the OIC countries, share of customs revenue in tax is as meager as 2 per cent in the case of Turkey to 71 per cent in the case of Maldives. As WTO members, both are obliged to implement the WTO Customs Valuation Agreement. WTO defines customs valuation as a customs procedure applied to determine the customs value of imported goods as per the WTO Customs Valuation Agreement which intends to provide fair, neutral and uniform valuation in order to protect importers from the risk of arbitrary valuation by customs authorities. However, introduction of this agreement may give rise to some concern especially for those OIC countries having high customs revenue to tax revenue ratio as it may lead to revenue loss due to under invoicing by traders.²

Figure 1: Customs and other import duties (% of tax revenue) in 2007



Source: World Development Indicators (2007).

² According to Country Policy Review of WTO, Turkey implemented, albeit with some reservation, the WTO Customs Valuation Agreement as of 07/01/2003, while not surprisingly, Maldives did not.

A debate between domestic spinners and fiber importers to influence government for public discourse in their favor is a common issue and a good example of custom valuation matters. Customs duties can be in the form of specific duty such as USD 1 per kilo, ad valorem duty which depends on the value of the goods, or the mix of these two methods. For customs transaction under the ad valorem duty, determination of the value of the goods is very sensitive as the customs duty is calculated by multiplying customs valuation with ad valorem rate of the duty (e.g. 10 per cent of the customs valuation). Hence, the issue of customs valuation has implication far ahead of tax collection or transfer pricing as it can distort the prices in favor of some parties, while depriving others. For example, domestic spinners would pressure the government to sustain minimum price for customs value of fiber imported by arguing otherwise they cannot survive. In the same fashion, fiber importers, mainly textile and apparel producers, would ask government to accept actual price paid for customs value of the imported fiber so that they can stay competitive in the global market and retain their share in export markets. Given the sensitivity of the issue, customs valuation has been in the agenda of international trade negotiations for quite some time.

Formal discussions on customs valuation goes back to the establishment of League of Nations but it was the general conference of United Nations for Trade and Employment in 1947 when the discussions on customs valuation issue had a common base to be incorporated in Article VII of General Agreement on Tariffs and Trade (GATT). The article defines the general principles of customs valuation based on the “actual value” of the imported merchandise on which duty is assessed, or of like merchandise while discouraging valuation based on the value of merchandise of national origin or on arbitrary or fictitious values. However, GATT contracting parties end up with different valuation

systems as the article allows countries substantial flexibility in defining the "actual value" of imports. The first international standards on customs valuation according to the Article-VII is developed in 1950, when 13 European governments then developed the Brussels Definition of Value (BDV), based on the concept of "normal price", in an effort to achieve greater harmonization of customs valuation practices. Many other countries adopted the same for their customs valuation practices.³ Indeed, the BDV suggests invoice price to be used for customs valuation purposes but flexibility is given to customs authorities in case invoice price cannot be used.⁴ Alternatively, customs authorities can use another method based on the normal price which can be determined by customs on the basis of the available information to them in the context of conditions and other circumstances for the specific valuation transaction.⁵ The application of the BDV caused widespread dissatisfaction among traders. Customs, with reference to normal price in her price list, would have had accept any declared price by importers to be up to 10 percent less than the normal price in the price list of customs. On the other, hand upward variation was fully taken into account. For example, customs taxes for declared value of polypropylene for \$80 would be calculated from price of \$90 in the best case if the normal price in the reference list of customs was \$100. On the other hand, in case of declared value of polypropylene for \$150, customs would calculate the tax based on declared price, that is, \$150. The level of traders' dissatisfaction would have grown even more when price changes were not reflected in the reference list by customs authorities on

3 Against the normal price concept of BDV, on the other hand, big countries such as Australia, New Zealand, Canada and United States used a "positive" concept of valuation laying down the standards based on the price actually agreed on in sale.

4 This clause is embedded to impede suspiciously under invoicing, transaction between related importer and export, goods on consignment, etc.

5 A normal market price is defined as "the price that a good would fetch in an open market between a buyer and seller independent of each other". Goorman, A and Wulf, L 2005, 'Customs Valuation in Developing Countries and the World Trade Organization Valuation Rules', in L Wulf and J Sokol (eds), *Customs Modernization Handbook*, World Bank, Washington D.C., pp.155-181.

time and subject transaction contains new or rare products not captured in the list. Obviously, more flexible and uniform valuation method was needed as per the Tokyo Round objective for achieving the expansion and ever greater liberalization of world trade through the progressive dismantling of obstacles to trade. In 1979, The Tokyo Round Valuation Code, or the Agreement on Implementation of Article VII of the GATT, concluded. The system introduced was based on the price actually paid or payable, namely “transaction value”, for the imported goods in order to provide a fair, uniform and neutral system for the valuation of goods for customs purposes, while accommodating commercial realities. Many developing countries were reluctant to join the new valuation agreement due to the fear of substantial loss of customs revenue triggered by undervaluation of imported goods by traders.⁶ This aversion came to an end with the establishment of WTO after Marrakesh Agreement which also replaced the Tokyo Round Code by the WTO Agreement on Implementation of Article-VII of the GATT (also known as WTO Custom Valuation Agreement) as the agreement became binding for all WTO members.⁷ WTO Customs Valuation Agreement (WTO CVA) is not intended to be used for combating dumping nor does it bring provisions for purpose of determining export duties, quota administration, internal taxation and foreign exchange controls. In essence, it is the same as the Tokyo Round Valuation Code which applied solely for levying ad valorem duties on imported goods.

6 The agreement officially came into force on January 1, 1981 and was adopted by various signatories from the mid 1980s onward. The Tokyo Round Valuation Code was signed by more than 40 contracting parties.

7 Came at the end of Uruguay Round, Marrakesh Agreement offered least developed countries an extra flexibility in implementing WTO agreements. Agreement on Implementation of Article-VII of GATT 1994, also known as WTO Customs Valuation Agreement, provides contracting developing countries with certain flexibility for implementation. For example, it is stated in Article-20 of the said agreement that developing countries not party to the Tokyo Round Valuation Code may delay application of the provisions of WTO Customs Valuation Agreement (CVA) for period up to five years. Besides, they may delay application of paragraph 2(b).iii of Article-1 and Article-6 (provisions related to computed value method) for additional three years.

This paper aims to shed light on the effect of tariffs reduction, imports and implementation of WTO Customs Valuation Agreement on customs revenue of OIC countries. Besides, relationship among tariffs reduction, imports and the agreement is to be scrutinized in the context of the OIC countries. The determinants of the OIC countries' customs revenue shall be examined with an econometric model where the level of customs revenue is explained by imports, tariffs and implementation of WTO Customs Valuation Agreement.

The paper is organized as follows: Section two goes through the WTO Custom Valuation Agreement. Section three briefly presents a review of the recent literature on customs valuation and revenue. Section four introduces the model specification, variables, the methodology and expected signs. Section five presents the results of the regressions. The final chapter concludes with some policy suggestions.

2. WTO Customs Valuation Framework

In order to give a clear picture of the issue, concise explanation on the customs valuation system introduced by the new agreement (WTO CVA from the Annex-1A of Marrakesh Agreement) is provided below.⁸ The methods provided by the provisions in the Part-I of the agreement are organized as follows:

(a) Transaction value method governed by Article 1

The primary method of custom valuation is proposed to be transaction value. As stated in Article 1, the value is to be determined on the basis of the price actually paid or payable for the goods when sold for export

⁸ World Trade Organization (WTO) 1994, *Agreement on Implementation of Article VII of the General Agreement on Tariffs and Trade*, viewed 28 July 2009, http://www.wto.org/english/res_e/booksp_e/analytic_index_e/cusval_02_e.htm.

to country of importation after adjusted in accordance with Article 8.⁹ Price actually paid refers to total payment made or to be made in future by seller. Payment does not need to be in the form of money transfer. That is, payment can be direct or indirect. It can be in the form of Letter of Credit or bill of exchange for Documentary Collection. Transaction Value method would not be implemented in case:

- There are restrictions for the disposition or use of the goods.
- The sale of price is subject some condition or consideration for which a value cannot be determined with respect to the goods being valued.
- The part of any subsequent resale, disposal or use of the goods by the buyer is to be accrued by seller and appropriate adjustments cannot be made in accordance with the provisions of Article 8 of the agreement.
- The buyer and seller are related.

Article 15 defines the relatedness. Accordingly, persons are deemed to be related if they are officers or directors of one another's businesses; legally recognized partners in business or employer and employee. Besides, in cases where

- any person directly or indirectly owns, controls or holds 5 per cent or more of the outstanding voting stock or shares of both of them;
- one of them directly or indirectly controls the other;
- both of them are directly or indirectly controlled by a third person;
- together they directly or indirectly control a third person; or
- they are members of the same family;

⁹ Article-8 elaborates on portion to be added or subtracted to the price actually paid to be paid under the provision of Article-1. Among many of them are commissions, brokerage, cost of handling charges associated with the transport of the goods to the place of importation, the cost of packing, royalties and fees which are not included in the price actually paid or payable.

The parties in above mentioned standing are deemed to be related. However, relatedness itself would not necessarily make transaction value unacceptable if importer can demonstrate that the relationship did not influence the price.

(b) Transaction value of benchmark from identical or similar goods method by Article 2&3

In case the customs value of the imported goods could not be determined from the provisions of Article 1, importer may demonstrate the price of sales to any unrelated buyer in the same country for identical or similar goods at about the same time as the goods being valued. Transaction value of identical or similar goods needs to be at the same commercial level and in substantially the same quantity. If benchmark in the same commercial level and/or quantity is not possible, adjustment needs to be done accordingly. For example, exporter may apply certain discount for each quantity level. Upward or downward adjustment to the value can be done according to this information while benchmarking. This process is to be carried out by consultation between importer and custom authorities.

(c) Deductive value method by Article-5

In case the custom value of the imported goods could not be determined from the provisions of Article-1, Article-2 and Article-3, importer may ask for benchmark from the value of the identical or similar imported goods in the country. Benchmark is to be based on unit price of benchmarked imported goods in the “greatest aggregate quantity”. For example, in case benchmarked imported goods sold in two sales (first in 600 units with a price of 95 currency unit and second in 300 unit 100 currency unit), as the greatest number of unit sold is 600 the unit price in the greatest aggregate quantity of 95 currency unit would be base for

customs valuation. Then this would be subject to further deduction as the additions usually made for profit and general expenses such as transport, insurance, taxes, etc within the country in connection with domestic sale. Note that in any case, benchmark should be at or about the same time and between unrelated persons.

(d) Computed value method by Article-6

Again, in case the customs value of the imported goods could not be determined from the provisions of Article 1, Article 2, Article 3 and Article 5 importer may request for application of Article 6 for computed value method. However, as accorded in Article 4, importer may request to reverse the order of application of Article 5 and Article 6.

Computed value is consist of the cost/value of input used in production process, profit and general expenses of producer/exporter located out of the jurisdiction of importation country.¹⁰ Accordingly, use of computed value method is likely to be confined for those cases where the importer and exporter are related. Hence, exporter is ready to supply the necessary costings and provide facilities for any subsequent verification for the customs authorities of importation country.¹¹

In case customs value could not be determined from the provisions of Article 1 through Article 6, customs value is to be determined by reasonable means consistent with the provisions of Article 1 through Article 6 on the basis of data available in the importation country. That is, customs value is to be determined, to the greatest extent possible,

¹⁰ Where figures provided by the exporter on its own profit and general expenses are not consistent with those reflected in sales of the same class or kind of goods produced by the exporter for the importation country, customs authorities of importation country may base upon relevant information other than supplied from the exporter. On the other hand, whether certain goods are “of the same class of kind” as other goods is be determined arbitrarily on a case-by-case basis.

¹¹ Developing countries not party to the Tokyo Round Valuation Code are given option to delay the application of provisions related to computed value method for additional three years after five years of grace period of implementation of other provisions as stated in the Article-20 of the WTO CVA.

based on previously determined customs values. This is defined as Fall-back method by WTO. However, reference to Article 7, customs authorities need to refrain from customs valuation based on:

- Selling price of domestically produced products in domestic market
- Selling price of the goods in the market of exportation country
- Selling price of the goods in the third market
- The cost of production other than provisions of Article-6
- Arbitrary or fictitious values
- Minimum values

Developing countries are allowed suspend the application of minimum value restriction by making reservation. The provisions of the agreement consistently state that customs authorities are to select lower value of two alternatives. Accordingly, Article 7 restricts customs authorities to apply a system which provides for the higher of two alternatives.

Part-II of the agreement elaborates on administration, consultations and dispute settlement issues. Legal framework of WTO Committee on Customs Valuation and WCO Technical Committee of Custom Valuation is also provided in this part. Accordingly, WTO Committee on Customs Valuation shall annually review and inform the Council for Trade in Goods on implementation issues. Besides, flexibility with deadline for implementation of the agreement for developing countries is defined.

Obviously, WTO valuation system is very favorable for importers as it restrains customs authorities from challenging the declared value without documentary evidence and increasing value without opportunity to claim against.

3. Literature Review

Walsh (2003) defines Customs Valuation as an integral part of trade facilitation together with issues related to charges levied on imports, quota, licensing arrangement and the application of preference systems. He also explained provisions, together with their implementation procedures, of the WTO Customs Valuation Agreement. Finger and Schuler (2000) presents customs valuation within the wider sphere of reforms which are based on transparency, accountability, objectivity and balance. Rege (2002), after presenting historical background of customs valuation issue, accounts the resentment of developing countries for application of transaction values as it would supposedly decrease the customs revenue due to undervaluation.

Indeed, tax evasion in customs through misclassification and undervaluation of imports is a momentous issue especially in developing countries. King (2003) indicated common under invoicing and lack of effective valuation process in developing countries. He highlighted the importance of capacity building for implementation of any customs valuation system. On the other hand, Filmer (2003) presents the concerns of importers as there exist some threat of assuming higher value as well as delaying clearance in customs so as to direct importers for illegal settlements. In the same fashion, Ghimire (2005) identified the discretionary power of customs authorities as a major issue with customs valuation process. Finger and Schuler (2000) observes the lack of remedy and diagnose with WTO Custom Valuation Agreement for least developed countries for their problem with customs administrations. They suggest capacity building in the form of computer systems and database for sound implementation of the agreement as proper administrative environment does not exist in many developing countries.

There are many studies on tariffs and customs revenue. According to Pritchett and Sethi (1994) importers tend to evade tariffs as it gets higher. Hence, tariffs revenue increase less than proportionate to increase in tariffs. Accordingly, a decrease in tariffs would not necessarily mean decrease in revenue as lower tariffs decrease the marginal benefit to avoid taxation. Hence, customs revenue may increase as a result of increase in tax base. Both Ebrill et al. (1999) and Khattry and Rao (2002) worked on revenue-maximizing optimum tariffs rate. In regional focus, Abgeyegbe et al. (2004) examine the effect of trade liberalization on customs tax for not only aggregate but also subcategories for Sub-Saharan Africa. On the other hand, not much has been done for the quantitative effect of WTO Customs Valuation Agreement, tariffs and imports on OIC countries customs revenue.

4. Methodology and Data

4.1 Model specification

The functional form for determinants of customs revenue employed in this study is as follows:

$$CR^{it} = F_t(IMP^{it}, TRF^{it}, CVA^{it}, VAT^{it}, OCD^{it})$$

CR stands for customs revenue of OIC member countries. It is expected to depend on imports, tariffs, implementation of WTO Customs Valuation Agreement, value-added tax and other customs duties. According to Baunsgaard and Keen (2005), often more than half or more of the VAT is collected at the border in many developing countries. Although it is an important component of customs revenue for some countries, both other customs duties and value-added tax is dropped due to the difficulty in obtaining data. Then basic equation is augmented by including indirect effect of tariffs and implementation of WTO CVA through imports in order to fulfill the objectives of this study. Natural

logarithms of the variables are taken. Hence, customs revenue of of OIC countries is expressed in a log-linear form:

$$\ln CR^{it} = \beta_0 + \beta_1 \ln IMP^{it} + \beta_2 \ln(100 + TRF^{it}) + \beta_3 \ln IndTRF^{it} + \beta_4 CVA^{it} + \beta_5 \ln IndCVA^{it} + e^{it}$$

where superscripts i stands for the importer (an OIC member country) t denotes years.

Dependent variable is customs revenue of country i , an OIC member country, for the period of 1995-2007. IMP^{it} is imports of country i at year t . TRF^{ht} is weighted tariffs rate of country i imposed on products imported in year t .¹²The coefficient for tariffs is expected to be positive as revenue is calculated in ad valorem.

One variable as proxy for the effect of implementation of WTO Customs Valuation Agreement is introduced. CVA^{it} is dummy variable taking the value of 1 for the observations if country i implemented WTO Customs Valuation Agreement in year t .¹³This dummy variable captures the change in customs revenue as a result of the implementation of the agreement. Hence, if there is decrease in customs revenue it should be interpreted as negative direct effect of the implementation of WTO CVA and vice versa.

Both tariffs and Implementation of WTO CVA is expected to have indirect effect on customs revenue through imports. An increase in tariffs or the implementation of WTO CVA may decrease imports, hence, decrease customs revenue. In order to estimate the indirect effects, two variables are created through multiplying existing tariffs and CVA

12 This variable denotes weighted average tariff rate in the percent ad valorem term which is specific to the trading partners, product categories and year and includes the lowest applicable rates as well as all available preferential rates. Bilateral trade values are used as weight. To avoid log zero in case tariff level is zero, 100 is added.

13 All countries of destination, importers, in this model are OIC members.

variables by existing imports variable. $IndTRF^{it}$ captures the indirect effect of tariffs thorough imports on customs revenue while $IndCVA^{it}$ captures the indirect effect of the implementation of WTO CVA through imports on customs revenue.¹⁴ For both, coefficient would be negative if higher tariffs and the implementation of WTO CVA lead to less import.

4.2 Data and data sources

Imports and weighted average of applied tariffs rates is obtained from the World Integrated Trade Solutions (WITS).¹⁵ Customs revenues are derived from World Development Indicator (WDI). The most challenging part of data collection turns to be the identification of WTO Customs Valuation Agreement implementation year for each country. The Agreement allows developing member countries to delay the implementation for a transition period of five years from their entry to WTO. Besides, developing countries are opted to request a further extension from Committee on Customs Valuation for additional extension. Many OIC countries got this additional extension.¹⁶ Hence, implementation year is identified by digging into the WTO Trade Policy Reviews for each WTO member OIC country accessed through WTO website.¹⁷

5. Results

The correlation between imports and customs revenue is straight forward. More trade is associated with more customs revenue. However, relationship between tariffs and customs revenue does not so as tariffs

14 See Greene (2007) for the standard explanation.

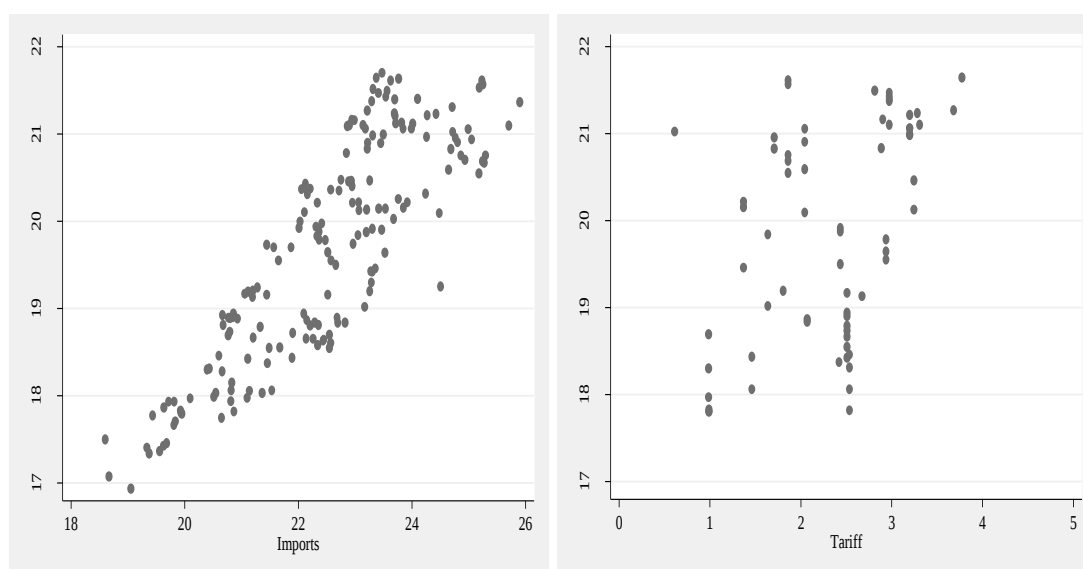
15 Please refer to WITS for the formula of weighted applied tariff rate. <http://wits.worldbank.org>

16 Indeed, as Rege (2000) identified the lack of ownership as the main reason for delays in implementation.

17 World Trade Organization (WTO) 2009, "Trade Policy Reviews" viewed 15 July 2009, http://www.wto.org/english/tratop_e/tpr_e/tp_rep_e.htm#chronologically.

would have both direct effect and indirect effect through imports on customs revenue. Increasing tariffs would enhance customs revenue if decrease in imports as a result of higher tariffs does not surpass the said direct effect. The relationships can be observed from Figure 2, scatter plot for the sample of this study.

Figure 2: Correlation of Imports and Tariffs with Customs Revenue¹⁸



Source: Calculated by the author

From Figure 2, one may discern the diminishing return on tariffs and some pattern of Laffer Curve.¹⁹ The effect of tariffs increase on customs revenue diminishes as the tariffs level soars. This can be seen more obviously from the result of regression analysis illustrated in Table 1. As the results of fixed and random effect calculation suggests, both direct

¹⁸ Both X and Y axes are in logarithmic form.

¹⁹ The Laffer curve suggests that tax increases do not necessarily associate with increase in tax revenue. Defining and applying the optimal tax rate is important as any increasing beyond the optimal rate would decrease tax revenue. Popularized by Arthur Laffer in 80s, the discussion of the idea goes back to the Muqaddimah of 14th century North African Ibn Khaldun. Keynes also accounts how increasing tax after a certain point would lower the revenue in his “General Theory of Employment, Interest, and Money”.

effect and indirect effect of tariffs are statistically significant and positive direct effect of tariffs on customs revenue is stronger than negative indirect effect of tariffs through decreased imports. Hence, overall effect of increased tariffs on customs revenue seems to be positive although this effect is curbed by decreased imports as result of higher tariffs.

Table 1: Regression result for the determinants of OIC countries' customs revenue

	OLS	Fixed Effect	Random Effect
Log of Imports	1.205* (0.179)	-0.090 (0.250)	0.427* (0.209)
Direct Effect of Tariffs	-3.685* (1.375)	12.673* (0.170)	3.735* (1.800)
Indirect Effect of Tariffs	0.188* (0.060)	-0.526* (0.170)	-0.150* (0.077)
Direct Effect of WTO CVA	3.162 (1.910)	5.822* (0.980)	5.565* (1.183)
Indirect Effect of WTO CVA	-0.142** (0.084)	-0.266* (0.043)	-0.250* (0.052)
Constant	-6.166 (4.105)	23.685* (5.922)	11.092* (4.881)
Number of Observations	64	64	64
R ²	0.87	0.70	0.75

Notes: Regressand: Log customs revenue of OIC countries.

Hausman test fails as model fitted on these data fails to meet the asymptotic assumptions of the Hausman Test.

Standard deviations are in the brackets.

Again going through Table 1, negative and significant indirect effect of WTO CVA may suggest that introduction of WTO CVA gives rise to under valued declaration of imports. This justifies the concerns of public authorities on loss in custom revenue with implementation of the agreement. Upon implementation of the agreement, under invoicing translates into lower imports level in statistics, hence, lower customs revenue. The reason is obvious, customs taxes are collected as multiplication of ad valorem tax and imports. On the other hand, direct effect of implementation of WTO CVA agreement turns to be positive with fixed and random effect calculation. This might be interpreted as revenue increase from increased transparency in customs and less incentive for tax evasion. Importers might prefer to declare transaction value and pay customs tax accordingly rather than going through a hustle of avoiding taxation. Accordingly, one may not argue that the implementation of the agreement decrease the customs revenue as the coefficient of direct positive effect of WTO CVA is bigger than that of indirect negative effect with this calculation.

On the other hand, the relationship between imports and customs revenue from Figure 2 gives rise to a question of validity of those relationship explained with the model for all countries. As one may observe, variance increases as the imports increase suggesting that the effect of explanatory variables might be in different degrees for small and big countries. Then it is worth to run the model for small and big countries separately. For this purpose, sample average is taken and an observation defined to be for big country if the GDP is greater than US\$ 40 billion, small otherwise. Table 2 summarizes the result of the regression analysis for OLS, fixed effect and random effect calculations for small and big countries.

Table 2: Regression result for the determinants of OIC countries' customs revenue by economic size of country²⁰

	OLS		Fixed Effect		Random Effect	
	Small	Big	Small	Big	Small	Big
	Country	Country	Country	Country	Country	Country
Log of Imports	1.343*	-0.636	-0.247	-0.906	1.129*	-0.232
	(0.232)	(0.426)	(1.062)	(0.233)	(0.410)	(0.230)
Direct Effect of	-5.455*	11.437*	13.153	13.941*	-3.217	12.787*
Tariffs	(1.660)	(4.509)	(9.650)	(3.040)	(3.123)	(3.849)
Indirect Effect	0.270*	-0.457*	-0.570	-0.576*	0.162	-0.524*
of Tariffs	(0.076)	(0.188)	(0.428)	(0.124)	(0.142)	(0.158)
Direct Effect of	6.644*	9.445*	9.071*	9.226*	5.562*	8.808*
WTO CVA	(2.830)	(4.294)	(2.942)	(1.999)	(2.461)	(2.660)
Indirect Effect	-0.303*	-0.396*	-0.419*	-0.404*	-0.252*	-0.385*
of WTO CVA	(0.130)	(0.177)	(0.136)	(0.082)	(0.114)	(0.109)
Constant	-9.245**	37.041*	26.471	23.331*	-4.804	27.061*
	(5.090)	(10.093)	(23.692)	(5.622)	(9.019)	(7.231)
Number of	34	30	34	30	34	34
Observations						
R ²	0.851	0.559	0.63	0.90	0.53	0.87

Notes: Regressand: Log customs revenue of OIC Countries

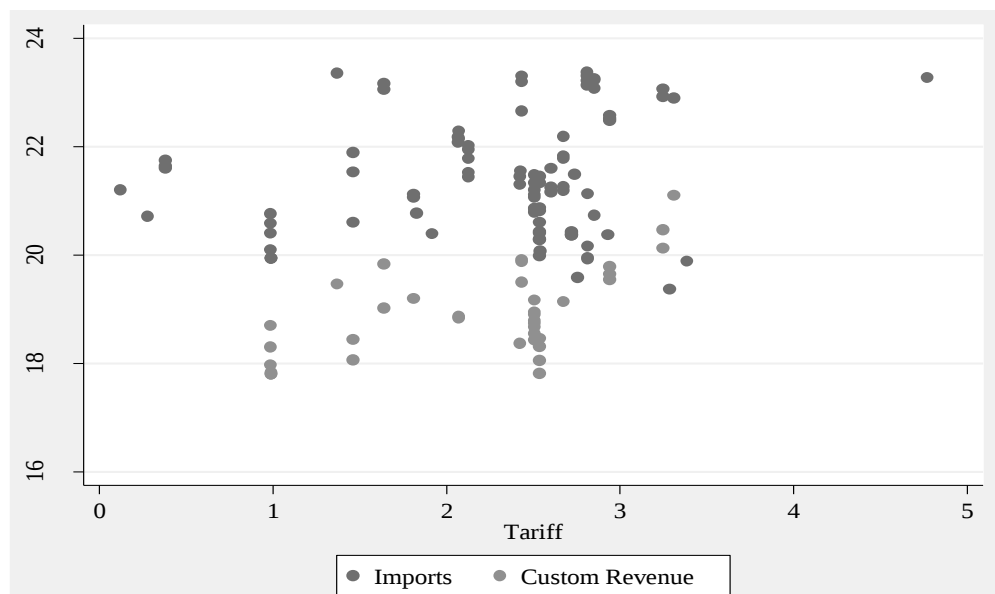
* Values are significant at 5% level; ** Values are significant at 10% level

Hausman test fails as model fitted on these data fails to meet the asymptotic assumptions of the Hausman Test.

²⁰ Unexpectedly, coefficient of imports is turned to be, albeit insignificant, negative for some estimations. This might come from omitted variable, i.e. VAT and other customs duties, bias inter alia decreased number of observations due to split of the data set for separate calculation for small and big countries.

The result of fixed effect and random effect calculations suggest that unlike big countries, both direct and indirect effects of tariffs on customs revenue are not significant for small countries. However, we were expecting that increase in tariffs would have positive direct effect on customs revenue. We were also expecting realization of negative indirect effect of tariffs on customs revenue as any increase in tariffs would decrease imports and favor domestic substitute products. Going through Figure 3, one may not observe a statistically significant correlation between imports and tariffs for small countries. On the other hand, one may discern a slight uplift in customs revenue suggesting positive direct effect, albeit statistically insignificant according to regression calculations, of tariffs on customs revenue.

Figure 3: Effect of Tariffs on Imports and Customs Revenue for Small Countries²¹

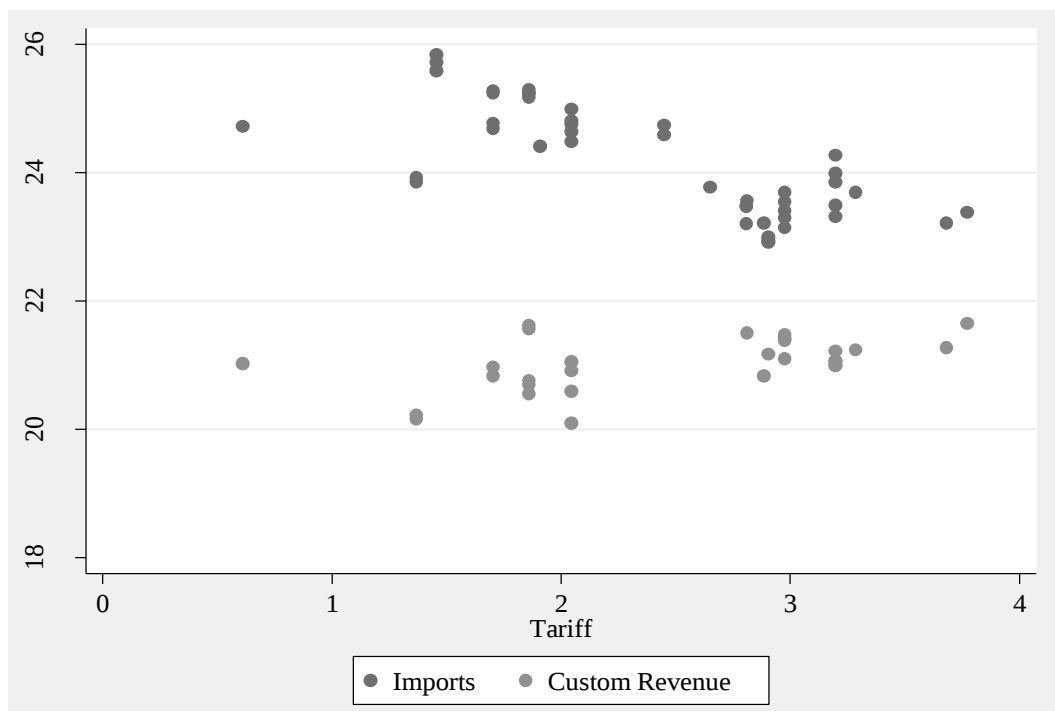


Source: Calculated by author.

²¹ Both X and Y axes are in logarithmic form.

As production capacity of small countries would very often be limited, traders may not have the option of domestic substitutes for their imports, hence, increasing tariffs rate would not discourage them from imports. However, insignificant increase in customs revenue suggests the lack of capacity or ability of customs authorities to leverage this situation in favor of government in the case of small countries. This suggestion might be further consolidated as both direct and indirect effects of implementation of WTO Customs Valuation Agreement are the same for both small and big countries.

Figure 4: Effect of Tariffs on Imports and Customs Revenue for Big Countries²²



Source: Calculated by author.

²² Both X and Y axes are in logarithmic form.

Going through Figure 4, one would see the effect of tariffs on customs revenue and imports as expected in the case of big countries. Tariffs has negative correlation with imports and positive correlation with customs revenue. That is, direct effect of tariffs on customs revenue surpassed its indirect effect through decreased imports as a result of increase in tariffs.

The results suggest that what matters for customs revenue, evidenced from significant effect of WTO CVA for both small and big countries, is the ability of customs authorities to collect tax rather than tariffs rate. This would especially hold for small countries. Gatti (1999) refers to the discretionary power of customs officials to compel importers for bribing which translates into government revenue loss, importer's surplus loss and efficiency loss in the context of small open economy.²³

6. Policy Recommendation and Conclusion

The results of this study show the importance of customs authorities' capacity to collect tax rather than higher tax rates for improving customs revenue especially for relatively smaller countries. Although the implementation of WTO Customs Valuation Agreement cannot be argued to decrease customs revenue as its direct effect evidently boost customs revenue, the results suggest certain level of undervaluation with the implementation of the agreement for both big and relatively small countries. Hence, capacity building in the customs of developing countries to ensure fair revenue for governments emerges as an important issue to make multilateral trade system attractive for them. In this regard, more attention is needed to develop a system to impede undervaluation, sustain certain level of revenue for the governments of

23 Gatti, R. (1999), *Corruption and Trade Tariffs, or a Case for Uniform Tariffs*, World Bank Policy Research Working Paper No.2216, Washington D.C.

developing countries and hence make multilateral trade system attractive for developing nations.

Indeed, many countries implement verification system in compliance with WTO Agreement on Preshipment Inspection by which authorized inspection companies inspect the goods in the country of exportation for verification of customs classification, quality, quantity, and price including exchange rate and financial terms. This might be a useful tool to prevent undervaluation and fraud in the classification of the goods. However, the process itself creates additional burden on importers, especially in developing countries, as inspection would not be free and increase imports cost. Besides, the integrity of inspection companies might also be of a question. Any misconduct of inspection companies would defeat the purpose.

Increasing the capacity of customs authorities in developing countries and developing a system for integration or at least efficient cooperation among customs across the globe might serve better to prevent undervaluation. This approach is also in compliance with Doha Ministerial Conference decision to direct Committee on Customs Valuation to identify and assess practical means for the exchange of information among customs authorities for export values. In this regard, capacity building activities to enhance ability of customs authorities to efficiently process transaction and collect duties by information and communications technology solutions is crucial. Establishment of single windows in national level, possibly to be integrated to other countries' single windows as planned by ASEAN countries, for one-time submission and collection of trade documents, hence, computerization of trade procedures in the form of online customs declaration, imports licensing transactions, electronic payments, or any other cross-border

transaction might more effectively address the undervaluation issue. This direction would also be in compliance with WCO Safe Framework.

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