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Corruption And International Trade

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CORRUPTION AND INTERNATIONAL TRADE

By

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A Research Paper
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RESEARCH PAPER APPROVAL

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AN ABSTRACT OF THE RESEARCH PAPER OF

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CORRUPTION AND INTERNATIONAL TRADE

MAJOR PROFESSOR: Dr. Scott Gilbert

Previous findings of economic literature pointed out that there is significant correlation between corruption and trade. However, this study was based on under developing countries. The model used in this study is similar to the model used by Wanjala and Pierre's gravity model but with few changes in the model.

This study develops and estimates the relationship between corruption and trade among developing nations and under developing nations. Wanjala and Pierre use the gravity model to estimate the effect of corruption on trade. In this paper I will use a similar model, but will not focus on border effects.

Paper concludes that decrease in corruption increases the trade flow. Further research needs to be done to examine if corruption helps increase in economic growth.

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CHAPTER 1

INTRODUCTION

There is considerable literature on corruption and the effect of corruption on growth in developing countries. Travares (2005) suggests that democratization plays an important role in creation of corruption in any particular country. He also suggests that the longer it takes the country to reform from a non-democratic to a democratized state, the higher the level of corruption. There is literature on how corruption effects growth in developing countries, and whether corruption increases or decreases trade.

Many studies suggest that corruption exists due to the reforms taken by the government. Dai Changzheng (2010) concludes that while China has made many reforms to combat corruption, it has failed to decrease corruption. Furthermore, he suggests that the solution is China should become a democratic country to combat corruption. Alan Heston & Vijay Kumar (Institutional Flaws and Corruption Incentives in India, 2008) suggest that India has achieved respectable high levels of economic growth, but the corruption level has also increased with growth. They argue that it's difficult for India to achieve its economic potential while the corruption level increases with growth of the economy.

Jacob Wanjala Musila and Simon Pierre Sigue (2010) conclude that corruption and international trade are related. They also find that the corruption in African countries and corruption in their trading partners adversely affects the flow of exports and imports. Wanjala and Sigue use empirical data to analyze the effect of corruption in African

nations. They study the effect of the level of corruption in both trading partners – in both exporting and importing countries.

In this paper I will estimate the effect of corruption on a few of the largest and fastest growing economies in South Asia and Southeast Asia. Wanjala and Pierre use the gravity model to estimate the effect of corruption on trade. In this paper I will use a similar model, but will not focus on border effects.

In Section 2, I will explain corruption in the selected Asian countries for the model. In Section 3 I will explain how corruption affects trade in Asian countries. Section 4 will explain the methodology and the data used to estimate the model. Section 5 will show reports of the estimation and Section 6 will give the conclusions of the model.

CHAPTER 2

CORRUPTION IN ASIAN COUNTRIES

Asia consists of the world's largest and fastest-growing economies. Asia also has the highest population in the world. I have chosen the following Asian countries, which include a mix of developed and developing economies: Bangladesh, India, China, Hong Kong, Singapore, Thailand and Malaysia.

"If you want to buy a Sherman tank, a Red Cross blanket, or simply speed up the installation of a telephone, there is probably no easier place in the world in which to do just that than in Asia – if you are willing to part with some cash, that is. With pathetically few exceptions, the countries in this region are so riddled with corruption that the paying of 'tea money' has become almost a way of life" (Far East Economic Review, 1974, 3).

India has the second largest population. Its ranking has dropped to 87 (out of 178) in being one of the more corrupted countries. Corruption is way of life. For example, opening an internet café would take more time if one follows procedure to get a permit from the government. The process goes much faster if officials are bribed. .

Riley (1998) classifies corruption in African societies into three categories- incidental, systematic and systemic. Incidental corruption is petty corruption like watching pirated movies, which only affects the profits of movie makers. Other examples include individual government employees or police. Border police taking bribes and allowing goods to be smuggled illegally will affect that particular goods market.

Systematic corruption is more pervasive, because it includes government organizations. For example construction contractors who bid to get a contract would

bribe the government organizations, then – in order to cover cost bribery – they decrease the quality of construction materials.

Systemic corruption is organized corruption which involves the government, where it is irrational to be honest because being corrupt is the only way to live. Examples of countries with systemic corruption are Sierra Leone and Zaire. In Sierra Leone's case, systemic corruption was associated with President Siaka Stevens' one-man rule of 1968–85 and the one-party All People's Congress regime that lasted until 1992. These corruption cases involved extensive theft of government revenues, which were mainly generated through official and smuggled export trade in diamonds, gold, other minerals and agricultural produce. Another example: the famous Bofors Gun Scandal in India, where the late Prime Minister Rajiv Gandhi was accused of receiving kickbacks up to Rs.400 million from Bofors AB.

These types of corruption are more or less found in every developing country. In the international business arena, corruption is more difficult to define and control, since the perception of right and wrong (both morally and legally) tends to vary extensively from culture to culture (Wines and Napier, 1992). Corruption varies from culture to culture: for instance in Africa, South Asia and South east Asia, corruption is similar but occurs at different levels of organization. Habib Zafarullah and Noorealsam Siddique (2001), suggest that corruption in the public sector in Bangladesh does not work in isolation: it is fostered by corrupt acts of political leaders in power. The politicians in Bangladesh are believed to be involved in large-scale corruption – which is administrative corruption or systemic corruption.

CHAPTER 3

CORRUPTION TRADE NEXUS

Recent literature suggests that corruption can affect international trade in many different ways. In some areas, it can actually improve trade, but it is not healthy for the economic growth. Corruption can also impact investment or FDI. According to Drabek and Payne 2001, and Smarzynska and Wei (2000), advanced firms are less willing to invest in a country where corruption is high.

There are many papers on the relationship between corruption and international trade. Some researchers have shown that corruption reduces total capital imports (Lambsdorff, 1999). A few researchers (Bai and Wei, 2001) also suggest that more corrupt countries are more likely to impose capital controls as government's ability to collect tax revenue decreases. Some suggest that capital controls may breed corruption (Edwards 1999).

Channels through which corruption effects trade include the efficiency channel, transactions cost or price mark-up, and contract awarding. The efficiency channel can improve economic growth, or it might backfire and impede economic growth. An example: bribing officials to speed up the permit process to open a liquor bar. This type of corruption helps the economy grow. Leff (1964) and Huntington (1968) suggest that efficiency channel corruption will make the government officials work harder, and also suggest that bribes can bypass bureaucratic delays. This can backfire, if those same officials have taken bribes to delay the process. Myrdal (1968) suggests that corrupt government officials can also create unwanted bureaucratic delays in order to get more

bribes. Kaufman and Wei (1999) suggest that firms that pay more bribes are likely to spend more time managing bureaucrats in negotiating deals, which results in higher cost of capital.

In the case of transaction cost or price mark-up channel, Shleifer and Visny(1993) and Bardhan (1997) suggest that government agents may levy bribes that are lower than the official tax. In such cases, shipments can get into the country at a lower transaction cost. This decreased cost will reduce the price of that good and will in turn increase trade. In other situations, agents might levy taxes higher than the government taxes, which will impact prices and decrease trade. This kind of corruption is found more with customs officials at airports or harbors. In these situations, exporters and importers will be forced to make an extra payment to the agent, which is tantamount to a monthly salary for the agent. If exporters and importers do not pay the extra tax to the agent, then there is a good chance the shipment will be lost. In order to cover this tax, the exporter or the importer has to increase the price of goods, which will in turn decrease the demand for that good and will decrease trade.

The third channel is the contract-awarding channel, where the contractors or the dealers pay the bribe in order to get the contract from the government. One good example is the Bofors Gun Scandal in India, where Prime Minister Rajiv Gandhi was accused of taking an award of Rs. Rs.400 million. This demonstrates that exporting and importing firms are willing to engage in corrupt practices and to gain advantage over those who cannot afford to pay bribes.

Jacob Wanjala and Simon Pierre have studied Africa – a continent with more than 45 countries rich in natural resources, but with a high level of corruption. They have used

47 African countries with 180 trading partners to test the effect of corruption on trade. I am choosing seven countries from Asia which have similar cultural beliefs and diversity. These Asian countries have been colonized by Britain and have diverse populations.

CHAPTER 4

DATA DESCRIPTION

The countries that I have selected are Bangladesh, India, China, Hong Kong, Malaysia, Singapore and Thailand. These seven countries have backgrounds similar to African nations. Countries like India, Bangladesh, Malaysia, Singapore and Thailand have diverse cultures, and these cultures have different definitions of corruption. China and Hong Kong have the same government but different trade policies.

I have several reasons for choosing these countries: Asian countries represent 60% of the world's population; while India and China combined represent 37% of world's population. In terms of economic development, India and China have the largest economies. Singapore is a developed country with relatively low corruption (compared to other Asian countries.)

One of the main reasons for selecting these countries is that all these countries export similar goods and also import similar goods. These countries export most of their goods to developed countries and there is considerable competition between countries for these markets. According to UNCTAD, China exported ICT goods valued at $356 billion in 2009, followed by Hong Kong with $142 billion. The United States tops the list of ICT importers. India's exports increased by a dramatic 244% and Malaysia by 18%. Countries like India and Malaysia have high corruption but are still able to increase trade with countries which are among the least corrupted or are only moderately corrupted.

Lambsdorff (1998) and Anderson and Marcouiller (1999) both have used the gravity equation formulation in their cross-country analyses. The gravity equation treats

corruption as a trade deterrent or catalyst variable. This will allow both the possibilities: that corruption can increase, or corruption can decrease trade between a pair of countries. The main question is if corruption increases or decreases trade flow in Asian countries. According to the gravity model of bilateral trade, the flow of trade is related to the size of and distance between the trading partners. The combined effect of the size and distance factors can be expressed as the product of the output of the two trading partners, divided by the distance between them. In this paper, the gravity parameter is calculated as the product of the gross domestic product of trading partners, divided by the distance between them.

Jacob and Simone's model consists of other factors: common geographic border, common language (CL) as cultural factor, and common currency and regional trade agreements (RTA) as regulatory factors. In this paper, I have ignored some of the parameters like common border, regional trade agreements, and common currency. These are more applicable for African nations as all the countries are in one continent and most of these countries have different tribal languages and also have regional trade agreements. The countries selected for this paper are more globalized and have a high flow of trade volume, which shows that they have flexible trade agreements and have less border effect.

CHPATER 5

METHODOLOGY OF ESTIMATIONS

I have focused on gravity parameter, common language (cultural differences) and corruption. The equation used in this paper is more simplistic than Jacob and Simone's paper, as the countries selected for this paper are only seven and do not share the same factors that affect trade. The focus of this paper is to test the effect of corruption in south Asia and Southeast Asian countries using the gravity model.

Equation I

Log(imports) = β +β1log(gravity)+ β2 Cl(common language) + β3CF (Freedom from corruption).

Equation II

Log(Exports) = β +β1log(gravity)+ β2 Cl(common language) + β3CF (Freedom from corruption).

I have tested these equations for each individual country (Parent Country: Bangladesh, India, China, Hong Kong, Malaysia, Thailand and Singapore). ***Imports*** are all the imports from parent countries to their trading partners and ***exports*** are all exports from the parent country to their trading partners. ***Gravity*** is the product of GDP in current billion dollars of parent countries to their trading partners. For measurement of corruption I have used the ***freedom from corruption*** parameter from the Heritage Foundation.

Corruption erodes economic freedom by introducing insecurity and uncertainty into economic relationships. The score for this component is derived primarily from Transparency International's *Corruption Perceptions Index* (CPI) for 2009, which measures the level of corruption in 180 countries. The CPI is based on a 10-point scale in which a score of 10 indicates very little corruption and a score of 0 indicates a very corrupt government. In scoring freedom from corruption, the *Index* converts the raw CPI data to a scale of 0 to 100 by multiplying the CPI score by 10. For example, if a country's raw CPI data score is 5.5, its overall freedom from corruption score is 55. I estimate the empirical model in Equation 1 using annual data for the period 1996 to 2006 of seven south Asian and southeast Asian countries, to and from 66 trading partners. The nominal GDP is obtained from International Financial Statistics /International Monetary Fund's *World Economic Outlook Database*. The export and import data (in millions of dollars) are obtained from the International Monetary Fund's *Direction of Trade Statistics (DOTS)* yearbooks.

CHAPTER 6

ESTIMATION OUTPUTS AND CONCLUSION

I have used the basic estimation technique (i.e. ordinary least squares method) and have estimated the data for each country for each year – which showed different results. The results of specific years showed that for certain years, there is a positive relationship between gravity and trade, and for certain years it showed that there is negative relationship. Since we have used freedom of corruption (assuming there is positive relationship between trade and freedom of corruption), then it means that less corruption will lead to more trade. I have tested the average data for ten years for each parent country and the results indicate that there is a positive relationship between flow of trade, and gravity, and freedom from corruption. The empirical analysis shows that corruption decreases trade, and corruption is trade barrier.

For Bangladesh, estimation of Equation 1 shows that there is a positive relationship between trade and these three factors: distance, common language, freedom from corruption. If freedom from corruption increases, then flow of imports increases. But for exports, increase in distance would decrease the flow of exports.

For China, the estimation of Equation I show that there is a negative relationship between language and imports, which indicates that not having a common language, is barrier. Estimation for the countries of India, Malaysia and Thailand have indicated that a decrease in corruption will increase the flow of trade.

The hypothesis is that corruption decreases trade. We fail to reject the hypothesis, because estimation for all our selected countries shows that decrease in corruption

increases the flow of trade. However there are examples which show that corruption can increase unilateral trade. For example, consider two firms: firm A (foreign country) and firm B (home country) in an open economy with single good market. Firm A (from a foreign company) can bribe the government officials in the home country, and export its goods into the home country. This will increase the imports of this product in the home country. In this case (assuming that firm A is more efficient than firm B), firm B will shut down and this will affect the welfare of the home country. Unless the government of home country enacts policies which will help firm B to survive in this situation, it will be difficult for firm B to stay in the market.

However more research needs to be done on such cases to show that corruption improves trade but is bad the for the country's economy. There could be many other co-factors like literacy rate or poverty, which encourage corruption to effect flow of trade. Further research needs to done on these factors and co-factors.

Table 1

Bangladesh Imports and Exports

Dependent Variable: LOG(IMPORT)
Method: Panel Least Squares
Date: 05/05/11 Time: 11:16
Sample: 1996 2006 IF IMPORT>0 AND BANGLADESH_GRAVITY >0
Periods included: 11
Cross-sections included: 41
Total panel (unbalanced) observations: 370

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.461591	0.743725	3.309813	0.0010
LOG(BANGLADESH_GRAVITY)	0.045079	0.126299	0.356926	0.7214
COMMON_LANGUAGE	3.180944	0.411618	7.727909	0.0000
CORRUPTION_FREEDOM	0.049051	0.005311	9.236565	0.0000

R-squared	0.249194	Mean dependent var	5.286872
Adjusted R-squared	0.243040	S.D. dependent var	2.890977
S.E. of regression	2.515250	Akaike info criterion	4.693373
Sum squared resid	2315.493	Schwarz criterion	4.735682
Log likelihood	-864.2741	Hannan-Quinn criter.	4.710179
F-statistic	40.49201	Durbin-Watson stat	0.058194
Prob(F-statistic)	0.000000		

Dependent Variable: LOG(EXPORTS)
Method: Panel Least Squares
Date: 05/05/11 Time: 11:21
Sample: 1996 2006 IF EXPORTS>0 AND BANGLADESH_GRAVITY >0
Periods included: 11
Cross-sections included: 44
Total panel (unbalanced) observations: 414

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.365446	0.700705	0.521539	0.6023
LOG(BANGLADESH_GRAVITY)	-0.320165	0.119752	-2.673558	0.0078
COMMON_LANGUAGE	1.589603	0.396493	4.009159	0.0001
CORRUPTION_FREEDOM	0.048157	0.004911	9.805356	0.0000

R-squared	0.213712	Mean dependent var	4.719016
Adjusted R-squared	0.207959	S.D. dependent var	2.799608
S.E. of regression	2.491558	Akaike info criterion	4.673309
Sum squared resid	2545.224	Schwarz criterion	4.712206
Log likelihood	-963.3749	Hannan-Quinn criter.	4.688691
F-statistic	37.14592	Durbin-Watson stat	0.064641
Prob(F-statistic)	0.000000		

Table 2

China (Imports and Exports)

Dependent Variable: LOG(IMPORT)
Method: Panel Least Squares
Date: 05/05/11 Time: 11:16
Sample: 1996 2006 IF IMPORT>0 AND CHINAMAIN_GRAVITY >0
Periods included: 11
Cross-sections included: 52
Total panel (unbalanced) observations: 461

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.386524	0.088057	61.17075	0.0000
LOG(CHINAMAIN_GRAVITY)	0.837100	0.011081	75.54655	0.0000
COMMON_LANGUAGE	-0.791523	0.092871	-8.522779	0.0000
CORRUPTION_FREEDOM	0.010090	0.001377	7.325148	0.0000

R-squared	0.944922	Mean dependent var	4.723198
Adjusted R-squared	0.944561	S.D. dependent var	2.708664
S.E. of regression	0.637770	Akaike info criterion	1.946960
Sum squared resid	185.8849	Schwarz criterion	1.982825
Log likelihood	-444.7743	Hannan-Quinn criter.	1.961082
F-statistic	2613.455	Durbin-Watson stat	0.038531
Prob(F-statistic)	0.000000		

Dependent Variable: LOG(EXPORTS)
Method: Panel Least Squares
Date: 05/05/11 Time: 11:21
Sample: 1996 2006 IF EXPORTS>0 AND CHINAMAIN_GRAVITY >0
Periods included: 11
Cross-sections included: 51
Total panel (unbalanced) observations: 443

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.780318	0.345790	10.93241	0.0000
LOG(CHINAMAIN_GRAVITY)	0.381138	0.042481	8.972048	0.0000
COMMON_LANGUAGE	0.167408	0.357317	0.468515	0.6396
CORRUPTION_FREEDOM	0.029873	0.005371	5.561386	0.0000

R-squared	0.296257	Mean dependent var	4.882749
Adjusted R-squared	0.291448	S.D. dependent var	2.888586
S.E. of regression	2.431483	Akaike info criterion	4.623868
Sum squared resid	2595.415	Schwarz criterion	4.660830
Log likelihood	-1020.187	Hannan-Quinn criter.	4.638445
F-statistic	61.60248	Durbin-Watson stat	0.033963
Prob(F-statistic)	0.000000		

Table 3

Hong-Kong (Imports and Exports)

Dependent Variable: LOG(IMPORT)
Method: Panel Least Squares
Date: 05/05/11 Time: 11:16
Sample: 1996 2006 IF IMPORT>0 AND HONG_KONG_GRAVITY >0
Periods included: 10
Cross-sections included: 50
Total panel (unbalanced) observations: 411

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.636822	0.592899	6.133961	0.0000
LOG(HONG_KONG_GRAVITY)	0.428600	0.113136	3.788351	0.0002
COMMON_LANGUAGE	1.789665	0.350627	5.104181	0.0000
CORRUPTION_FREEDOM	0.057436	0.004715	12.18072	0.0000

R-squared	0.286546	Mean dependent var	4.720929
Adjusted R-squared	0.281287	S.D. dependent var	2.737917
S.E. of regression	2.321121	Akaike info criterion	4.531663
Sum squared resid	2192.755	Schwarz criterion	4.570773
Log likelihood	-927.2567	Hannan-Quinn criter.	4.547134
F-statistic	54.48814	Durbin-Watson stat	0.216109
Prob(F-statistic)	0.000000		

Dependent Variable: LOG(EXPORTS)
Method: Panel Least Squares
Date: 05/05/11 Time: 11:21
Sample: 1996 2006 IF EXPORTS>0 AND HONG_KONG_GRAVITY >0
Periods included: 10
Cross-sections included: 59
Total panel (unbalanced) observations: 517

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.009180	0.577401	5.211594	0.0000
LOG(HONG_KONG_GRAVITY)	0.253723	0.110390	2.298431	0.0219
COMMON_LANGUAGE	1.905036	0.366515	5.197700	0.0000
CORRUPTION_FREEDOM	0.052070	0.004445	11.71308	0.0000

R-squared	0.231276	Mean dependent var	4.336435
Adjusted R-squared	0.226781	S.D. dependent var	2.889103
S.E. of regression	2.540472	Akaike info criterion	4.710284
Sum squared resid	3310.900	Schwarz criterion	4.743150
Log likelihood	-1213.608	Hannan-Quinn criter.	4.723162
F-statistic	51.44665	Durbin-Watson stat	0.157058
Prob(F-statistic)	0.000000		

Table 4

India (Imports and Exports)

Dependent Variable: LOG(IMPORT)
Method: Panel Least Squares
Date: 05/15/11 Time: 23:41
Sample: 1996 2006 IF IMPORT>0 AND INDIA_GRAVITY >0
Periods included: 9
Cross-sections included: 51
Total panel (unbalanced) observations: 378

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.504022	0.921123	1.632815	0.1033
LOG(INDIA_GRAVITY)	-0.033598	0.202962	-0.165536	0.8686
COMMON_LANGUAGE	2.514542	0.375127	6.703175	0.0000
CORRUPTION_FREEDOM	0.056711	0.005354	10.59302	0.0000

R-squared	0.256814	Mean dependent var	4.839122
Adjusted R-squared	0.250853	S.D. dependent var	2.861616
S.E. of regression	2.476823	Akaike info criterion	4.662356
Sum squared resid	2294.360	Schwarz criterion	4.703995
Log likelihood	-877.1853	Hannan-Quinn criter.	4.678882
F-statistic	43.07959	Durbin-Watson stat	0.315124
Prob(F-statistic)	0.000000		

Dependent Variable: LOG(EXPORTS)
Method: Panel Least Squares
Date: 05/15/11 Time: 23:49
Sample: 1996 2006 IF EXPORTS>0 AND INDIA_GRAVITY >0
Periods included: 9
Cross-sections included: 59
Total panel (unbalanced) observations: 469

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.395304	0.842363	2.843553	0.0047
LOG(INDIA_GRAVITY)	0.114627	0.187193	0.612345	0.5406
COMMON_LANGUAGE	1.588391	0.367974	4.316585	0.0000
CORRUPTION_FREEDOM	0.050933	0.004834	10.53685	0.0000

R-squared	0.201833	Mean dependent var	4.366290
Adjusted R-squared	0.196684	S.D. dependent var	2.859847
S.E. of regression	2.563221	Akaike info criterion	4.728899
Sum squared resid	3055.097	Schwarz criterion	4.764298
Log likelihood	-1104.927	Hannan-Quinn criter.	4.742827
F-statistic	39.19504	Durbin-Watson stat	0.277675
Prob(F-statistic)	0.000000		

Table 5

Malaysia (Imports and exports)

Dependent Variable: LOG(IMPORT)
Method: Panel Least Squares
Date: 05/15/11 Time: 23:41
Sample: 1996 2006 IF IMPORT>0 AND MALAYSIA_GRAVITY >0
Periods included: 11
Cross-sections included: 53
Total panel (unbalanced) observations: 472

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.019201	0.511394	3.948430	0.0001
LOG(MALAYSIA_GRAVITY)	0.066942	0.074095	0.903460	0.3667
COMMON_LANGUAGE	2.758684	0.317532	8.687882	0.0000
CORRUPTION_FREEDOM	0.056174	0.004786	11.73732	0.0000

R-squared	0.261717	Mean dependent var	4.880436
Adjusted R-squared	0.256984	S.D. dependent var	2.864464
S.E. of regression	2.469121	Akaike info criterion	4.654040
Sum squared resid	2853.189	Schwarz criterion	4.689268
Log likelihood	-1094.353	Hannan-Quinn criter.	4.667897
F-statistic	55.30106	Durbin-Watson stat	0.066046
Prob(F-statistic)	0.000000		

Dependent Variable: LOG(EXPORTS)
Method: Panel Least Squares
Date: 05/15/11 Time: 23:49
Sample: 1996 2006 IF EXPORTS>0 AND MALAYSIA_GRAVITY >0
Periods included: 11
Cross-sections included: 61
Total panel (unbalanced) observations: 590

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.008525	0.452173	4.441943	0.0000
LOG(MALAYSIA_GRAVITY)	0.035759	0.068576	0.521450	0.6023
COMMON_LANGUAGE	1.933334	0.304370	6.351922	0.0000
CORRUPTION_FREEDOM	0.051983	0.004193	12.39752	0.0000

R-squared	0.223465	Mean dependent var	4.368470
Adjusted R-squared	0.219490	S.D. dependent var	2.852683
S.E. of regression	2.520246	Akaike info criterion	4.693346
Sum squared resid	3722.060	Schwarz criterion	4.723042
Log likelihood	-1380.537	Hannan-Quinn criter.	4.704915
F-statistic	56.21151	Durbin-Watson stat	0.046902
Prob(F-statistic)	0.000000		

Table 6

Singapore (Imports and Exports)

Dependent Variable: LOG(IMPORT)
Method: Panel Least Squares
Date: 05/15/11 Time: 23:41
Sample: 1996 2006 IF IMPORT>0 AND SINGAPORE_GRAVITY >0
Periods included: 9
Cross-sections included: 52
Total panel (unbalanced) observations: 387

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.938191	1.198567	6.623068	0.0000
LOG(SINGAPORE_GRAVITY)	1.266086	0.234488	5.399370	0.0000
COMMON_LANGUAGE	2.026164	0.362066	5.596119	0.0000
CORRUPTION_FREEDOM	0.057905	0.005078	11.40284	0.0000

R-squared	0.315284	Mean dependent var	4.912377
Adjusted R-squared	0.309921	S.D. dependent var	2.868124
S.E. of regression	2.382579	Akaike info criterion	4.584526
Sum squared resid	2174.170	Schwarz criterion	4.625440
Log likelihood	-883.1058	Hannan-Quinn criter.	4.600750
F-statistic	58.78543	Durbin-Watson stat	0.367617
Prob(F-statistic)	0.000000		

Dependent Variable: LOG(EXPORTS)
Method: Panel Least Squares
Date: 05/15/11 Time: 23:49
Sample: 1996 2006 IF EXPORTS>0 AND SINGAPORE_GRAVITY >0
Periods included: 9
Cross-sections included: 61
Total panel (unbalanced) observations: 485

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.728037	1.141354	4.142482	0.0000
LOG(SINGAPORE_GRAVITY)	0.575457	0.220067	2.614914	0.0092
COMMON_LANGUAGE	1.573438	0.363867	4.324212	0.0000
CORRUPTION_FREEDOM	0.051431	0.004638	11.08792	0.0000

R-squared	0.229677	Mean dependent var	4.358748
Adjusted R-squared	0.224872	S.D. dependent var	2.871762
S.E. of regression	2.528338	Akaike info criterion	4.701215
Sum squared resid	3074.790	Schwarz criterion	4.735723
Log likelihood	-1136.045	Hannan-Quinn criter.	4.714773
F-statistic	47.80438	Durbin-Watson stat	0.283548

Table 7

Thailand (Imports and Exports)

Dependent Variable: LOG(IMPORT)
Method: Panel Least Squares
Date: 05/15/11 Time: 23:41
Sample: 1996 2006 IF IMPORT>0 AND THAILAND_GRAVITY >0
Periods included: 9
Cross-sections included: 52
Total panel (unbalanced) observations: 388

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.159648	1.173510	3.544622	0.0004
LOG(THAILAND_GRAVITY)	0.481931	0.214391	2.247913	0.0251
COMMON_LANGUAGE	2.434361	0.374067	6.507819	0.0000
CORRUPTION_FREEDOM	0.056892	0.005214	10.91239	0.0000

R-squared	0.279750	Mean dependent var	4.900034
Adjusted R-squared	0.274123	S.D. dependent var	2.864157
S.E. of regression	2.440217	Akaike info criterion	4.632307
Sum squared resid	2286.589	Schwarz criterion	4.673142
Log likelihood	-894.6675	Hannan-Quinn criter.	4.648497
F-statistic	49.71597	Durbin-Watson stat	0.160057
Prob(F-statistic)	0.000000		

Dependent Variable: LOG(EXPORTS)
Method: Panel Least Squares
Date: 05/15/11 Time: 23:49
Sample: 1996 2006 IF EXPORTS>0 AND THAILAND_GRAVITY >0
Periods included: 9
Cross-sections included: 61
Total panel (unbalanced) observations: 487

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.293505	1.048033	2.188390	0.0291
LOG(THAILAND_GRAVITY)	0.105046	0.192715	0.545084	0.5859
COMMON_LANGUAGE	1.875596	0.361975	5.181568	0.0000
CORRUPTION_FREEDOM	0.052767	0.004687	11.25767	0.0000

R-squared	0.225021	Mean dependent var	4.327551
Adjusted R-squared	0.220207	S.D. dependent var	2.883267
S.E. of regression	2.546094	Akaike info criterion	4.715178
Sum squared resid	3131.094	Schwarz criterion	4.749578
Log likelihood	-1144.146	Hannan-Quinn criter.	4.728692
F-statistic	46.74749	Durbin-Watson stat	0.131982
Prob(F-statistic)	0.000000		

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