Under-invoicing of Cigarette Imports in Malaysia A good indicator for Smuggling?

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ABSTRACT

This paper examines the extent of under-invoicing in total cigarette imports in Malaysia over the period 2002-2009. Under-invoicing is defined as the discrepancy between US dollar value of cigarettes exported to Malaysia (as recorded by exporting economies) and US dollar value of cigarettes imported into Malaysia (as reported by Malaysia) using the UN Comtrade data. Results show that under-invoicing as a percentage of total value of cigarette imports was on a declining trend from 2002 to 2008, but it increased sharply in 2009. To what extent under-invoicing can imply smuggling in or out? This paper finds that consistently over the examined period, Singapore and Indonesia are the two economies with whom the discrepancy between the value of cigarette imports reported by Malaysia and that of the value of cigarettes reportedly exported by these economies to Malaysia are the greatest. This opens up to queries such as whether these cigarettes are smuggled into Malaysia or it is quite possible some of these cigarettes go to free-trade zones and duty free areas. This paper concludes that under-invoicing is not a good measure of smuggling. Better estimates of smuggling using can be obtained by comparing total consumption and tax-paid sales of cigarettes in the country. A much better estimate can be obtained through primary data collection of household or litter survey.

Keywords: Tobacco Control, smuggling estimation, under-invoicing of cigarette imports

INTRODUCTION

Tobacco control is now growing field of study with the adoption of a global convention on curbing the use and sale of tobacco. The World Health Organization's (WHO) Framework Convention on Tobacco Control (FCTC) was unanimously adopted by the 56th WHO Assembly on May 21, 2003 and enforced on February 27, 2005. Malaysia has since September 16, 2005 ratified the implementation of this global treaty. Article 15 of the FCTC deals specifically with illicit trade in tobacco products whereby "the [signatory] parties recognize that the elimination of all forms of illicit trade in tobacco products, including smuggling, the development and implementation of related national law in addition to sub regional, regional and global agreements, are essential components of tobacco control" (WHO 2003:13). The Article is part of FCTC's "measures relating to the reduction of the supply of tobacco" (ibid.). This paper examines the extent of under-invoicing of cigarette imports in Malaysia and seeks to determine whether it is a good measure for smuggling of cigarettes into Malaysia.

METHODOLOGY

The methodology employed in this research follows that of the expert advice from the Duke University –Southeast Asia Tobacco Control Alliance (SEATCA) - American Cancer Society (ACS) Capacity Building Research Project in Illicit Trade in Tobacco of which I attended in Bangkok on 1-3 April 2008. The Duke-SEATCA-ACS experts suggest that there mainly three methods to estimate cigarette smuggling. First, by looking at the gap between consumption and sales of cigarettes in the country. Second, by examining the discrepancies between US dollar amounts of cigarettes reported to be imported by Malaysia and US dollar amounts of cigarettes reportedly exported by exporting economies to Malaysia. In this case, under-invoicing is when the latter is larger than the latter. Third, is a primary survey that can in many forms such as household survey, litter collection, empty packs collection and so on. This paper employs the first two methods.

      The first method (call it Method 1) uses data sources as in Table 1. The challenge is to estimate the number of smokers in a country without actually doing the primary survey which may involve high monetary cost. Instead this paper employs readily available survey data on the number of smokers in the country from Rampal et al (2005) for the year 2004 and the Ministry of Health's Third

National Health and Morbidity Studies (NHMS III) (2007) for the year 2006. Mainly due to this availability of nationally representative data required for Method 1, this research selects only 2004 and 2006 as the years for which estimations are made. The fact that the NHMS comes out every ten years and the latest NHMS III reports on the 2006 survey actually plays a major role in our selection of the year.

The second method (call it Method 2) uses data from the UN Comtrade. This method requires the implicit assumption that all cigarettes lost between export and import are eventually smuggled into country designated as the destination country by the exporter and are not diverted to a third country. However, due to limitations inherent to the analysis of trade data, any trade discrepancy cannot be interpreted directly as smuggling. Hence, for Method 2, the discrepancy is defined as *under-invoicing*. We are interested in the extent (percentage) of under-invoicing in total cigarette import. To make selection of economies from which to obtain the import-export data, the following is a brief conceptual note. Since Method 2 measures the discrepancy of Malaysia's records of cigarette imports against the exporting economies' records of cigarette exports to Malaysia, it implicitly assumes the latter to be the "true" figure. Ideally, we should begin from the cigarette export table of each of the economies that export cigarettes to Malaysia and rank the economies according to export value. However, this procedure can be very cumbersome because it means that in each of the exporting economies' export table (in the UN Comtrade database), we have to identify Malaysia as a destination from among the many economies listed, and we have to do that for each of the years studied. An easier alternative is to explore from Malaysia's cigarette import table (as reported by Malaysia) that lists the source economies for cigarettes imported by Malaysia. We did this for each of the years from 2002 to 2009. Therefore, each of our trade discrepancy tables is built based on the list of economies from which Malaysia imports cigarettes. Then there is an issue of whether we should list only the top ten. Since the larger the number of economies included the better the results, we have decided to exhaust all the economies from which Malaysia imported cigarettes in each of the years from 2002 to 2009. For a particular year, if we find the total of Malaysia's cigarette imports purportedly coming from the selected economies is smaller than the selected economies' cigarette exports to Malaysia, then we have what is termed as *under-invoicing* of cigarette imports in the total cigarette imports. In this case, the total cigarette import refers to the total of those economies' cigarette exports to Malaysia. Under invoicing can be partly attributed to smuggling and/or attempts to smuggle.

RESULTS

Method 1 estimates that the percentage smuggling in Malaysia was 6.9% in 2004 and 16.5% in 2006 (see Table 2). These results are much lower than of the survey conducted by tobacco industry, represented by the Confederation of Malaysian Tobacco Manufacturers (CMTM), which are 14.4% and 21.0%, respectively (see Figure 1). This paper also does a sensitivity analysis of the results to possible under-reporting of consumption surveys (see Table 3).

Method 2 estimates the extent of under-invoicing, not smuggling, unlike does Method 1. The results show that under-invoicing was on a declining trend from 2002 to 2008 and it went up sharply in 2009 (see Tables 4 through 11 while Figure 2 summarizes).

DISCUSSIONS AND CONCLUSION

Based on the sensitivity analysis (see Figure 2), smuggling as percentage of consumption both in 2004 increases at lower margins (i.e., percentage points) with every 5% increase in under-reporting. Although the estimated percentage is higher for 2006, the margin of increase is lower than that in 2004.

We may conclude that under-reporting is a cause for concern. This is on top of consumption by unregistered foreign workers. The issue of foreign workers opens up another pandora box because the magnitude of smuggling could be higher since many Indonesian workers have access to smuggled kreteks. Evidence for this requires another survey, ideally primary data survey of workers from Indonesia and other main countries as well.

One implication from this exercise is that, since the tax-paid sales data from the Customs are regarded as correct, therefore the accuracy of our cigarette smuggling estimate depends entirely on the result of estimation of total cigarette consumption in the country, both by Malaysian citizens (from existing survey) and by foreigners in Malaysia (in this case is limited to foreign workers only). It is important to note that embedded in the consumption estimates are inaccuracies on the number of smokers (which is an outcome of each adult and adolescent smoking prevalence applied to their

population) and smoking intensity (number sticks smoked per day) along with consumption under-reporting that goes into both data, all of which are beyond the scope of this research. Nevertheless, our estimate is among the first for Malaysia.

Table 3 also compares our result with that of the CMTM. It appears that in 2004 we would need a 10% under-reporting, resulting in our smuggling estimate as percentage of total estimated consumption at 14.07% to be similar to that of CMTM's 14.4%. For 2006, an under-reporting of less than 10% but no less than 5% would be needed as a 10% under-reporting already yields 22.70% compared with CMTM's 21.00%.

However bear in mind that the CMTM data are based on the number of cigarette packs, which consist of the 20s and 14s and even 12s in the case of kreteks. There is a strong possibility that the CMTM result is overestimated for at least three reasons. First, as mentioned much earlier illicit cigarette packs can also come from counterfeits, both smuggled and non-smuggled (locally produced). Second, CMTM's data show that kretek formed about 42% of the illicit cigarette packs in 2004-2006, thus in the pack collection survey, the kretek packs of 12s and 14s would carry a higher count than warranted vis-a-vis the number of sticks contained. This applies to 14 whites as well. Third, litter collection locations – listed by the CMTM as night markets (flea market), football stadiums, other stadiums, wet markets, hawker areas, eating centres, shopping areas, and others – could exaggerate the finding. The possibility of finding smokers at a flea market is high and nowadays many handlers at flea markets are Indonesians who tend to smoke kreteks. A football stadium is a biased sampling location because of its "congregational" property – people with the same interest (in football) and most probably the same habit (in smoking) from various places of the country congregate in one space and time.

As a conclusion, the results from Method 1 are superior than that of Method 2 mainly because Method 1 actually estimates smuggling in sticks and it does not expose itself to inherent weaknesses as do the trade data. Smuggling increased over 2004 and 2006 against the background of a decline in total consumption (1.89%) and a larger decline in tax-paid sales (12.04%), i.e., a shrinking cigarette market in Malaysia (see Figure 3)

A check with Tables 10 and 11 reveals that although for both 2008 and 2009 the discrepancy was contributed largely by the trade data involving Singapore and Indonesia, in 2009 the steep increase in under-invoicing (from 46.14% to 72.18%) was attributable to the discrepancy with the latter.

There is a strong possibility that the CMTM result is overestimated for at least three reasons. First, as mentioned much earlier illicit cigarette packs can also come from counterfeits, both smuggled and non-smuggled (locally produced). Second, CMTM's data show that kretek formed about 42% of the illicit cigarette packs in 2004-2006, thus in the pack collection survey, the kretek packs of 12s and 14s would carry a higher count than warranted vis-a-vis the number of sticks contained. This applies to 14 whites as well. Third, litter collection locations – listed by the CMTM as night markets (flea market), football stadiums, other stadiums, wet markets, hawker areas, eating centres, shopping areas, etc. – could exaggerate the finding. The possibility of finding smokers at a flea market is high and nowadays many handlers at flea markets are Indonesians who tend to smoke kreteks. A football stadium is a biased sampling location because of its "congregational" property – people with the same interest (in football) and most probably the same habit (in smoking) from various places of the country congregate in one space and time.

This paper suggests that future direction of cigarette smuggling research in Malaysia ought to focus on at least two important aspects, the first of immediate concerns while the other may shape future research directions on a long-term basis. First, a study dedicated to under-reporting of cigarette consumption among residents in Malaysia, foreign workers included, should be undertaken. Another immediate need is to examine the nature and extent of cigarette smuggling from two prominent countries suggested by our analysis in Method 2, namely, Singapore and Indonesia, with whom Malaysia has the largest trade discrepancy. The study on cigarette trafficking from Singapore is also imperative in the city-state's role as a transshipment (transit) point. The proposed study not only includes tracking of illicit cigarettes that pass through the Singapore and land in Malaysia, but also includes those going out from and coming back to the country. Second, since our study is limited to only smuggling and the potential tax revenue loss, it is therefore instructive on a longer basis to examine the relationship between smuggling and cigarette prices/tax and to extend the research to implications once again on government tax revenue. More importantly for public health implications, research should focus on finding out at what price and/or tax level can smoking habits be curtailed while reducing and eventually eliminating alternative supplies of smuggled cigarettes.

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TABLE 1: Data sources for estimation cigarette consumption in Malaysia

Year	Smoker age category	Number of smokers	Smoking Intensity (sticks per day)
2004	Adults (18 years & above)	Rampal et al. = 3,884,400	ITCPEP = 13.80
	Adolescents (13-17 years)	GYTS = 497,500	ITCPEP = 6.02
2006	Adults (18 years & above)	NHMS III = 2,640,641 Adjusted to 3,739,200*	ITCPEP = 13.82
	Adolescents (13-17 years)	GYTS = 517,400	ITCPEP = 5.90

* Adjusted to the country's 2006 population because for some technical reasons the NMHS III derives this 2006
figure based on the country's 1996 population. Further details on this will be dealt with later in the text.

TABLE 2: Results of Method 1 - Estimated number of sticks of cigarettes smuggled and as a
percentage of total consumption

		2004	2006	% change
1	Estimated consumption (from survey data)	18,017,506,972.00	16,948,004,010.40	-5.94
2	Estimated consumption by legally registered foreign workers	3,460,045,560.21	4,122,704,113.42	19.15
3	Total estimated consumption (1) + (2)	21,477,552,532.21	21,070,708,123.82	-1.89
4	Tax paid sales (from official statistics)	20,004,896,283.00	17,597,116,408.00	-12.04
5	Estimated smuggling (3) - (4)	1,472,656,249.21	3,473,591,715.82	135.87
6	Estimated smuggling as percentage of total estimated consumption (5) / (3) x 100%	6.857%	16.485%	9.629

TABLE 3: Sensitivity analysis of smuggling results to under-reporting in consumption survey

CONSUMPTION AND SMUGGLING ESTIMATES (in sticks)		2004			2006		
		ESTIMATES	SENSITIVITY		ESTIMATES	SENSITIVITY	
			% change	% change from original (marked *)		% change	% change from original (marked *)
Initial Consumption Estimate (from survey data)		18,017,506,972.00	n.app.	n.app.	16,948,004,010.40	n.app.	n.app.
Adjusted Consumption Estimate (with foreign workers)*		21,477,552,532.21	19.20	n.app.	21,070,708,123.82	24.33	n.app.
Adjusted Consumption Estimate with consumption under-reporting at:	5%	22,378,427,880.81	4.19	4.19	21,918,108,324.34	4.02	4.02
	10%	23,279,303,229.41	4.03	8.39	22,765,508,524.86	3.87	8.04
	15%	24,180,178,578.01	3.87	12.58	23,612,908,725.38	3.72	12.07
	20%	25,081,053,926.61	3.73	16.78	24,460,308,925.90	3.59	16.09
	25%	25,981,929,275.21	3.59	20.97	25,307,709,126.42	3.46	20.11
Tax-Paid Sales (from Customs)		20,004,896,283.00	n.app.	n.app.	17,597,116,408.00	n.app.	n.app.
Initial Smuggling Estimate (without foreign workers)		(1,987,389,311.00)	n.app.	n.app.	(649,112,397.60)	n.app.	n.app.
Adjusted Smuggling Estimate with consumption under-reporting at:	0%*	1,472,656,249.21	n.app.	n.app.	3,473,591,715.82	n.app.	n.app.
	5%	2,373,531,597.81	61.17	61.17	4,320,991,916.34	24.40	24.40
	10%	3,274,406,946.41	37.96	122.35	5,168,392,116.86	19.61	48.79
	15%	4,175,282,295.01	27.51	183.52	6,015,792,317.38	16.40	73.19
	20%	5,076,157,643.61	21.58	244.69	6,863,192,517.90	14.09	97.58
	25%	5,977,032,992.21	17.75	305.87	7,710,592,718.42	12.35	121.98
ESTIMATED SMUGGLING AS % OF ESTIMATED TOTAL CONSUMPTION		ESTIMATES (%)	SENSITIVITY (% change)		ESTIMATES (%)	SENSITIVITY (% change)	
Initial Estimate (from survey)		(11.03)		n.app.	(3.830)		n.app.
Adjusted Estimate (with foreign workers)		6.86		n.app.	16.49		n.app.
Adjusted Estimate with consumption under-reporting at:	5%	10.61		54.69	19.71		19.59
	10%	14.07		32.62	22.70		15.16
	15%	17.27		22.76	25.48		12.22
	20%	20.24		17.21	28.06		10.13
	25%	23.00		13.66	30.47		8.59
CMTM's INCIDENCE OF COLLECTING ILLICIT CIGARETTE PACKS (%)		14.40	n.app.		21.00	n.app.	

- All figures are in percent.
- Figures in parenthesis refer to incidence for Total Illicit Whites.
- Illicit Cigarettes Packs are defined as packs with at least one of the following features: absence of / unregistered importers with the Royal Malaysian Customs (RMC), absence of / unregistered manufacturers with the RMC, absence of the Malaysian Health Warning Clause consistent with Control of Tobacco Product Regulations (CTPR) 2004, absence of Malaysian Tar & Nicotine label consistent with CTPR 2004 (as of 1st June 2009: absence of the Malaysian Graphic Health Warning), packs with fake Malaysian banderol or security mark, packs without Malaysian banderol or security mark, packs with non-Malaysian banderol, unregistered Brand with the RMC, pack size with less than 14 sticks.
- The 2009 March-May Survey was based on based on a sample size of 44,521 empty discarded cigarette packs collected in Peninsular Malaysia, Sabah & Sarawak .
- All other years' surveys employed the same methodology using roughly the same sample size conducted on average three times per year, each covering a period of roughly two months. For example, in 2006 there were three surveys: February-March, April-June, and October-December surveys.
- CMTM is an industry organization of Philip Morris International Affiliates in Malaysia, British American Tobacco (Malaysia) Berhad and JT International Berhad.

Source: Adapted from the Confederation of Malaysian Tobacco Manufacturers (CMTM) "Illicit Cigarettes Study in Malaysia Year 2009 (Mar-May)" presented to the Task Force on Enforcement of Laws & Regulations and Preventive Efforts Related to Tobacco & Tobacco Products, October 22, 2009.
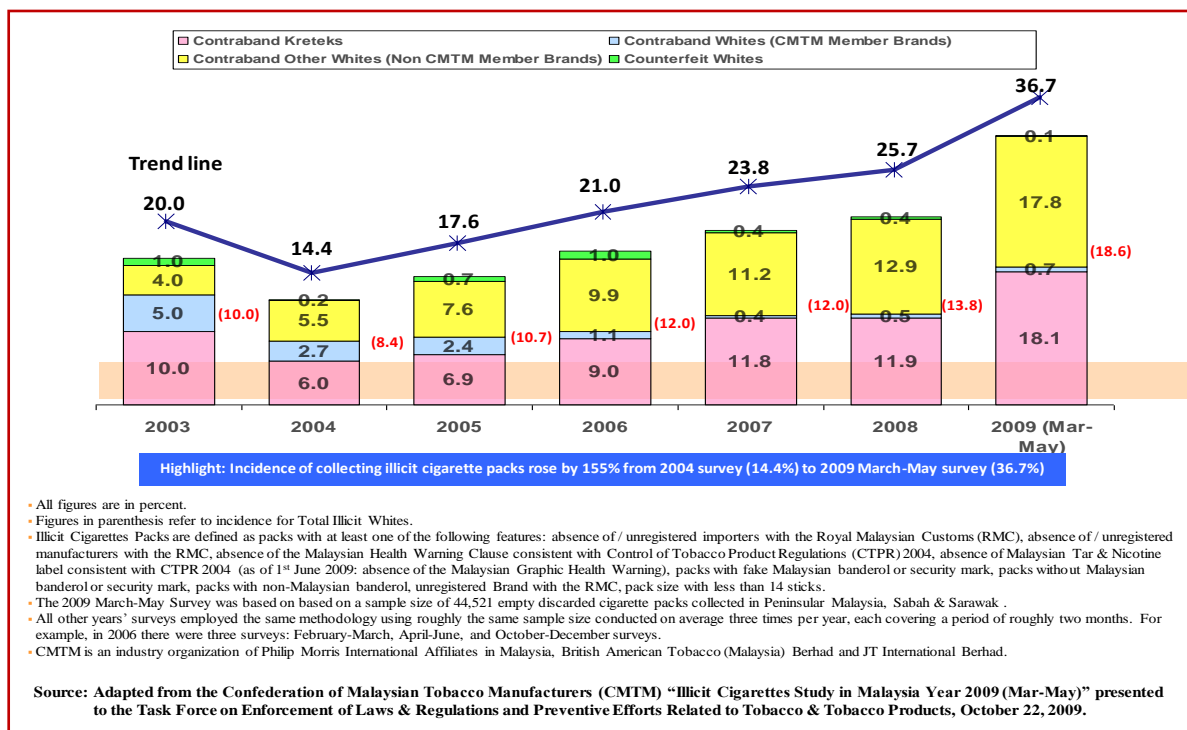
FIGURE 1: Tobacco industry's results on cigarette smuggling in Malaysia based on the incidence of collecting illicit cigarette packs

TABLE 4: Trade Discrepancy, 2002

| | EXPORTS AS REPORTED BY EXPORTING ECONOMIES | | | IMPORTS AS REPORTED BY MALAYSIA | | | DISCREPANCY | |
| | (I) | | | (II) | | | (I) - (II) | |
	VALUE (USD)	WEIGHT (KG.)	USD/KG	VALUE (USD)	WEIGHT (KG.)	USD/KG	BY VALUE	BY WEIGHT
WORLD	n.a.	n.a.	n.a.	28,490,838	1,635,896	17.42	n.a.	n.a.
China	10,288,192	737,430	13.95	8,866,856	444,875	19.93	1,421,336	292,555
HK	3,906,774	199,868	19.55	5,544,964	308,562	17.97	-1,638,190	-108,694
Indonesia	32,993,814	3,151,886	10.47	3,547,692	266,250	13.32	29,446,122	2,885,636
Singapore	79,291,977	4,171,597	19.01	1,796,657	104,464	17.2	77,495,320	4,067,133
Switzerland	3,614	98	36.88	1,780,588	69,238	25.72	-1,776,974	-69,140
Germany	282,000	15,000	18.8	1,522,082	59,242	25.69	-1,240,082	-44,242
Philippines	440,187	88,247	4.99	1,511,403	112,878	13.39	-1,071,216	-24,631
Japan	777,220	75,199	10.34	1,353,109	100,082	13.52	-575,889	-24,883
UK	934,420	87,694	10.66	845,385	63,394	13.34	89,035	24,300
USA	134,753	n.a.	n.a.	841,918	41,289	20.39	-707,165	n.a.
S. Africa	n.a.	n.a.	n.a.	751,348	54,421	13.81	n.a.	n.a.
Thailand	263,654	16,539	15.94	60,019	2,750	21.83	203,635	13,789
India	518,119	100,362	5.16	50,384	6,812	7.4	467,735	93,550
Other Asia, nes	n.a.	n.a.	n.a.	9,909	273	36.3	n.a.	n.a.
Vietnam	16,456	n.a.	n.a.	6,561	1,187	5.53	9,895	n.a.
Sri Lanka	1,893	152	12.45	1,963	179	10.97	-70	-27
TOTAL	**129,853,073**	**8,644,072**	**15.02**	**28,490,838**	**1,635,896**	**17.42**	**101,362,235**	**7,008,176**

UNDER-INVOICING OF IMPORTS AS SHARE IN TOTAL IMPORTS (%)	**78.06**
UNACCOUNTED IMPORTED CIGARETTES (1 KG = 1,000 STICKS) AS SHARE IN TOTAL IMPORTS (%)	**81.07**

Notes:

1. Under-invoicing of imports as a share in total imports is defined as:

The share of total value of discrepancy in the total value of exports as reported by exporting economies

Therefore, it equals to the (VALUE OF DISCREPANCY / TOTAL VALUE OF EXPORTS) x 100% = (USD101,362,235 / USD129,853,073) x 100% = 78.06%

2. Unaccounted imported cigarettes as share in total imports is defined as:

The share of total discrepancy (assumed 1kg = 1,000 sticks) in the total exports as reported by exporting economies

Therefore, it equals to the (DISCREPANCY IN KG x 1,000 / TOTAL EXPORTS IN KG x 1,000) x 100% = (7,008,176 x 1,000 / 8,644,072 x 1,000) x 100% = 81.07%

3. The selection of economies included is derived from the list of economies from which Malaysia imports cigarettes containing tobacco (HS240220) in 2002

4. n.a. denotes either zero or data are not reported

Source: http://comtrade.un.org/db/dqBasicQueryResults.aspx?cc=240220&px=HS&r=458&y=2002&p=ALL&rg=1&so=8&qt=n (accessed June 1, 2011).

TABLE 5: Trade Discrepancy, 2003

| | EXPORTS AS REPORTED BY EXPORTING ECONOMIES | | | IMPORTS AS REPORTED BY MALAYSIA | | | DISCREPANCY | |
| | (I) | | | (II) | | | (I) - (II) | |
	VALUE (USD)	WEIGHT (KG.)	USD/KG	VALUE (USD)	WEIGHT (KG.)	USD/KG	BY VALUE	BY WEIGHT
WORLD	n.a.	n.a.	n.a.	38,751,277	2,078,697	18.64	n.a	n.a.
China	8,896,534	731,368	12.16	11,831,320	569,875	20.76	(2,934,786)	161,493
Switzerland	4,139,442	151,500	27.32	5,979,927	214,437	27.89	(1,840,485)	(62,937)
Hong Kong	8,608,868	437,949	19.66	5,263,177	337,812	15.58	3,345,691	100,137
Indonesia	41,476,146	3,615,312	11.47	4,281,518	279,562	15.32	37,194,628	3,335,750
Singapore	68,999,156	3,944,338	17.49	3,656,218	198,554	18.41	65,342,938	3,745,784
Japan	154,227	14,187	10.87	1,419,120	87,468	16.22	(1,264,893)	(73,281)
UAE	n.a.	n.a.	n.a.	1,330,302	69,222	19.22	n.a.	n.a.
UK	788,037	83,774	9.41	955,080	68,843	13.87	(167,043)	14,931
Mexico	n.a.	n.a.	n.a.	564,254	29,339	19.23	n.a.	n.a.
Germany	143,000	10,200	14.02	550,959	23,300	23.65	(407,959)	(13,100)
Other Asia, nes	n.a.	n.a.	n.a.	447,725	22,734	19.69	n.a.	n.a.
Philippines	644,148	131,731	4.89	447,220	57,132	7.83	196,928	74,599
South Africa	n.a.	n.a.	n.a.	446,161	17,300	25.79	n.a.	n.a.
USA	1,046,517	n.a.	n.a.	421,097	22,437	18.77	625,420	n.a.
Chile	n.a.	n.a.	n.a.	359,385	14,687	24.47	n.a.	n.a.
Mauritius	n.a.	n.a.	n.a.	241,262	12,437	19.40	n.a.	n.a.
Thailand	171,816	12,454	13.80	176,017	8,687	20.26	(4,201)	3,767
Iran	n.a.	n.a.	n.a.	159,501	29,000	5.50	n.a.	n.a.
Cyprus	260,732	14,560	17.91	102,470	1,437	71.31	158,262	13,123
Vietnam	863,775	n.a.	n.a.	47,282	1,875	25.22	816,493	n.a.
India	492,599	n.a.	n.a.	23,819	2,625	9.07	468,780	n.a.
Romania	n.a.	n.a.	n.a.	19,150	4,187	4.57	n.a.	n.a.
Bangladesh	2,517	3,050	0.83	12,456	4,687	2.66	(9,939)	(1,637)
South Korea	129,238	2,290	56.44	10,052	179	56.16	119,186	2,111
Myanmar	n.a.	n.a.	n.a.	5,160	796	6.48	n.a.	n.a.
Sri Lanka	6,682	1,400	4.77	645	85	7.59	6,037	1,315
TOTAL	136,823,434	9,154,113	14.95	38,751,277	2,078,697	18.64	98,072,157	7,075,416

UNDER-INVOICING OF IMPORTS AS SHARE IN TOTAL IMPORTS (%)	71.68
UNACCOUNTED IMPORTED CIGARETTES (1 KG = 1,000 STICKS) AS SHARE IN TOTAL IMPORTS (%)	77.29

Notes:

1. Under-invoicing of imports as a share of total imports is defined as:

The share of total value of discrepancy in the total value of exports as reported by exporting economies

Therefore, it equals to the (VALUE OF DISCREPANCY / TOTAL VALUE OF EXPORTS) x 100% = (USD98,072,157 / USD136,823,434) x 100% = 71.68%

2. Unaccounted imported cigarettes as share in total imports is defined as:

The share of total discrepancy (assumed 1kg = 1,000 sticks) in the total exports as reported by exporting economies

Therefore, it equals to the (DISCREPANCY IN KG x 1,000 / TOTAL EXPORTS IN KG x 1,000) x 100% = (7,075,416 x 1,000 / 9,154,113 x 1,000) x 100% = 77.29%

3. The selection of economies included is derived from the list of economies from which Malaysia imports cigarettes containing tobacco (HS240220) in 2003

4. n.a. denotes either zero or data are not reported

Source: http://comtrade.un.org/db/dqBasicQueryResults.aspx?cc=240220&px=HS&r=458&y=2003&p=ALL&rg=1&so=1001&qt=n (accessed June 1, 2011)

TABLE 6: Trade Discrepancy, 2004

| | EXPORTS AS REPORTED BY EXPORTING ECONOMIES | | | IMPORTS AS REPORTED BY MALAYSIA | | | DISCREPANCY | |
| | (I) | | | (II) | | | (I) - (II) | |
	VALUE (USD)	WEIGHT (KG.)	USD/KG	VALUE (USD)	WEIGHT (KG.)	USD/KG	BY VALUE	BY WEIGHT
WORLD	n.a.	n.a.	n.a.	50,864,194	2,775,127	18.33	n.a	n.a.
China	10,440,967	725,870	14.38	10,814,911	590,057	18.33	(373,944)	135,813
Indonesia	34,327,176	3,459,647	9.92	8,157,813	445,087	18.33	26,169,363	3,014,560
Singapore	78,354,876	4,348,612	18.02	6,850,094	373,738	18.33	71,504,782	3,974,874
Switzerland	7,395,884	258,148	28.65	6,553,241	357,542	18.33	842,643	(99,394)
USA	1,293,367	n.a.	n.a.	4,267,947	232,857	18.33	(2,974,580)	n.a.
Malaysia	n.a.	n.a.	n.a.	3,363,642	183,519	18.33	n.a	n.a.
Hong Kong	5,039,324	202,464	24.89	2,663,617	145,326	18.33	2,375,707	57,138
Japan	77,691	734	105.85	2,109,190	115,076	18.33	(2,031,499)	(114,342)
Philippines	1,009,941	224,404	4.50	1,006,492	54,914	18.33	3,449	169,490
South Africa	n.a.	n.a.	n.a.	768,442	41,926	18.33	n.a	n.a.
Macao	1,133,320	58,864	19.25	660,826	36,054	18.33	472,494	22,810
South Korea	228,441	15,121	15.11	604,252	32,968	18.33	(375,811)	(17,847)
UAE	n.a.	n.a.	n.a.	582,779	31,796	18.33	n.a	n.a.
Vietnam	3,022,520	n.a.	n.a.	532,106	29,031	18.33	2,490,414	n.a.
Germany	364,000	24,800	14.68	395,904	21,600	18.33	(31,904)	3,200
Chile	n.a.	n.a.	n.a.	374,503	20,433	18.33	n.a	n.a.
UK	406,629	34,919	11.64	334,660	18,259	18.33	71,969	16,660
Thailand	72,369	4,891	14.80	285,456	15,574	18.33	(213,087)	(10,683)
Sri Lanka	39	4	9.75	129,621	7,072	18.33	(129,582)	(7,068)
India	372,830	n.a.	n.a.	97,264	5,307	18.33	275,566	n.a.
Mauritius	79,309	n.a.	n.a.	75,601	4,125	18.33	3,708	n.a.
Ireland	n.a.	n.a.	n.a.	68,901	3,759	18.33	n.a	n.a.
Italy	n.a.	n.a.	n.a.	57,915	3,160	18.33	n.a	n.a.
Other Asia, nes	n.a.	n.a.	n.a.	37,187	2,029	18.33	n.a	n.a.
Cambodia	53,824	11,616	4.63	36,519	1,992	18.33	17,305	9,624
Egypt	n.a.	n.a.	n.a.	27,270	1,488	18.33	n.a	n.a.
Myanmar	n.a.	n.a.	n.a.	7,984	436	18.31	n.a	n.a.
Australia	n.a.	n.a.	n.a.	58	3	19.33	n.a	n.a.
TOTAL	143,672,507	9,370,094	15.33	50,864,195	2,775,128	18.33	92,808,312	6,594,966

UNDER-INVOICING OF IMPORTS AS SHARE IN TOTAL IMPORTS (%)	64.60	
UNACCOUNTED IMPORTED CIGARETTES (1 KG = 1,000 STICKS) AS SHARE IN TOTAL IMPORTS (%)		70.38

Notes:

1. Under-invoicing of imports as a share of total imports is defined as:

The share of total value of discrepancy in the total value of exports as reported by exporting economies

Therefore, it equals to the (VALUE OF DISCREPANCY / TOTAL VALUE OF EXPORTS) x 100% = (USD92,808,312 / USD143,672,507) x 100% = 64.60%

2. Unaccounted imported cigarettes as share in total imports is defined as:

The share of total discrepancy (assumed 1kg = 1,000 sticks) in the total exports as reported by exporting economies

Therefore, it equals to the (DISCREPANCY IN KG x 1,000 / TOTAL EXPORTS IN KG x 1,000) x 100% = (6,594,966 x 1,000 / 9,370,094 x 1,000) x 100% = 70.38%

2. The selection of economies included is derived from the list of economies from which Malaysia imports cigarettes containing tobacco (HS240220) in 2004

3. n.a. denotes either zero or data are not reported

Source http://comtrade.un.org/db/dqBasicQueryResults.aspx?cc=240220&px=HS&r=458&y=2004&p=ALL&rg=1&so=1001&qt=n (accessed June 1, 2011)

TABLE 7: Trade Discrepancy, 2005

	EXPORTS AS REPORTED BY EXPORTING ECONOMIES			IMPORTS AS REPORTED BY MALAYSIA			DISCREPANCY	
	(I)			(II)			(I) - (II)	
	VALUE (USD)	WEIGHT (KG.)	USD/KG.	VALUE (USD)	WEIGHT (KG.)	USD/KG.	BY VALUE	BY WEIGHT
WORLD	n.a.	n.a.	n.a.	47,022,121	2,565,508	18.33	n.a.	n.a.
China	13,682,032	n.a.	n.a.	12,931,054	705,513	18.33	750,978	n.a.
Switzerland	1,298,544	137,986	9.41	6,860,688	374,316	18.33	-5,562,144	-236,330
Indonesia	29,161,781	2,956,460	9.86	6,028,793	328,928	18.33	23,132,988	2,627,532
Hong Kong	13,703,545	n.a.	n.a.	5,223,265	284,979	18.33	8,480,280	n.a.
Singapore	69,416,450	3,682,492	18.85	3,439,359	187,650	18.33	65,977,091	3,494,842
USA	1,071,716	85,737	12.5	2,971,910	162,146	18.33	-1,900,194	-76,409
Australia	940,740	47	20015.74	1,795,927	97,985	18.33	-855,187	-97,938
Japan	n.a.	n.a.	n.a.	1,536,343	83,822	18.33	n.a.	n.a.
U.K.	69,027	3,796	18.18	1,371,719	74,840	18.33	-1,302,692	-71,044
Germany	535,000	24,000	22.29	875,234	47,752	18.33	-340,234	-23,752
Philippines	336,282	199,107	1.69	862,665	47,067	18.33	-526,383	152,040
Malaysia	n.a.	n.a.	n.a.	791,661	43,193	18.33	n.a.	n.a.
UAE	220,507	14,718	14.98	761,888	41,568	18.33	-541,381	-26,850
South Africa	n.a.	n.a.	n.a.	618,875	33,766	18.33	n.a.	n.a.
Macao	2,015,684	97,642	20.64	354,073	19,318	18.33	1,661,611	78,324
India	136	n.a.	n.a.	130,598	7,125	18.33	-130,462	n.a.
South Korea	186,234	7,373	25.26	94,716	5,168	18.33	91,518	2,205
Cambodia	n.a.	n.a.	n.a.	89,736	4,896	18.33	n.a.	n.a.
Vietnam	3,348,179	n.a.	n.a.	70,378	3,840	18.33	3,277,801	n.a.
Other Asia, nes	n.a.	n.a.	n.a.	69,349	3,784	18.33	n.a.	n.a.
Bangladesh	3,558	4,625	0.77	50,368	2,748	18.33	-46,810	1,877
Venezuela	n.a.	n.a.	n.a.	46,166	2,519	18.33	n.a.	n.a.
Thailand	n.a.	n.a.	n.a.	43,112	2,352	18.33	n.a.	n.a.
Canada	n.a.	n.a.	n.a.	3,011	164	18.36	n.a.	n.a.
Myanmar	n.a.	n.a.	n.a.	641	35	18.31	n.a.	n.a.
France	n.a.	n.a.	n.a.	591	32	18.47	n.a.	n.a.
TOTAL	135,989,415	7,213,983	18.85	47,022,120	2,565,506	18.33	88,967,295	4,648,477

UNDER-INVOICING OF IMPORTS AS SHARE IN TOTAL IMPORTS (%)	65.42
UNACCOUNTED IMPORTED CIGARETTES (1 KG = 1,000 STICKS) AS SHARE IN TOTAL IMPORTS (%)	64.44

Notes:

1. Under-invoicing of imports as share of total imports is defined as:

The share of Total Value of Discrepancy in the Total Value of Exports as Reported by Exporting Economies

Therefore, it equals to the (VALUE OF DISCREPANCY / TOTAL VALUE OF EXPORTS) x 100% = (USD88,967,925 / USD135,989,415) x 100% = 65.42%

2. Unaccounted imported cigarettes as share in total imports is defined as:

The share of total discrepancy (assumed 1kg = 1,000 sticks) in the total exports as reported by exporting economies

Therefore, it equals to the (DISCREPANCY IN KG x 1,000 / TOTAL EXPORTS IN KG x 1,000) x 100% = (4,648,477 / 7,213,983 x 1,000) x 100% = 64.44%

3. The selection of economies included is derived from the list of economies from which Malaysia imports cigarettes containing tobacco in 2005

4. n.a. denotes either zero or data are not reported

Source: http://comtrade.un.org/db/dqBasicQueryResults.aspx?cc=240220&px=HS&r=458&y=2005&p=ALL&rg=1&so=1001&qt=n (accessed June 4, 2011)

TABLE 8: Trade Discrepancy, 2006

| | EXPORTS AS REPORTED BY EXPORTING ECONOMIES | | | IMPORTS AS REPORTED BY MALAYSIA | | | DISCREPANCY | |
| | (I) | | | (II) | | | (I) - (II) | |
	VALUE (USD)	WEIGHT (KG.)	USD/KG	VALUE (USD)	WEIGHT (KG.)	USD/KG	BY VALUE	BY WEIGHT
WORLD	n.a.	n.a.	n.a.	53,567,259	346,292	154.69	na	na
Hong Kong	17,892,931	n.a.	n.a.	14,203,454	10,141	1,400.60	3,689,477	n.a.
China	14,944,037	n.a.	n.a.	10,185,139	194,521	52.36	4,758,898	n.a.
Switzerland	1,694,314	271,383	6.24	7,435,948	n.a.	n.a.	(5,741,634)	n.a.
Indonesia	41,222,327	5,288,794	7.79	6,419,796	n.a.	n.a.	34,802,531	n.a.
USA	339,833	n.a.	n.a.	3,862,860	n.a.	n.a.	(3,523,027)	n.a.
Japan	59,261	1,360	43.57	3,409,865	n.a.	n.a.	(3,350,604)	n.a.
UAE	n.a.	n.a	n.a.	2,165,104	16,016	135.18	n.a.	n.a.
Singapore	48,847,696	2,636,826	18.53	2,020,409	n.a.	n.a.	46,827,287	n.a.
Cambodia	n.a.	n.a.	n.a.	1,186,108	n.a.	n.a.	na	n.a.
Philippines	337,836	134,311	2.52	487,665	n.a.	n.a.	(149,829)	n.a.
Areas, nes	n.a.	n.a.	n.a.	446,252	n.a.	n.a.	n.a.	n.a.
Netherlands	148,248	*10,574*	14.02	383,002	n.a.	n.a.	(234,754)	n.a.
Germany	417,000	26,400	15.80	351,412	100,000	3.51	65,588	(73,600)
UK	25,305	1,524	16.60	235,232	n.a.	n.a.	(209,927)	n.a.
India	15,204	n.a	n.a.	206,758	12,155	17.01	(191,554)	n.a.
South Korea	502,682	27,351	18.38	170,225	5,250	32.42	332,457	22,101
Other Asia, nes	n.a.	n.a.	n.a.	165,037	n.a.	n.a.	n.a.	n.a.
Australia	286,178	*7*	40,882.57	105,571	n.a.	n.a.	180,607	n.a.
Vietnam	1,886,431	n.a.	n.a.	58,253	n.a.	n.a.	1,828,178	n.a.
Bangladesh	50,320	28,406	1.77	42,384	8,035	5.27	7,936	20,371
Ukraine	33,898	2,130	15.91	13,601	n.a.	n.a.	20,297	n.a.
Greece	9,691	817	11.86	8,791	n.a.	n.a.	900	n.a.
Myanmar	n.a.	n.a	n.a.	3,155	173	18.24	n.a.	n.a.
France	n.a.	n.a.	n.a.	626	n.a.	n.a.	n.a.	n.a.
Thailand	22,308	1,287	17.33	613	n.a.	n.a.	21,695	n.a.
TOTAL	**128,735,500**	**8,431,170**	**15.27**	**53,567,260**	**346,291**	**154.69**	**75,168,240**	**8,084,879**

UNDER-INVOICING OF IMPORTS AS SHARE IN TOTAL IMPORTS (%)	**58.39**
UNACCOUNTED IMPORTED CIGARETTES (1 KG = 1,000 STICKS) AS SHARE IN TOTAL IMPORTS (%)	**95.89**

Notes:

1. Under-invoicing of imports as share of total imports is defined as:

The share of Total Value of Discrepancy in the Total Value of Exports as Reported by Exporting Economies

Therefore, it equals to the (VALUE OF DISCREPANCY / TOTAL VALUE OF EXPORTS) x 100% = (USD75,168,240 / USD128,735,500) x 100% = 58.39%

2. Unaccounted imported cigarettes as share in total imports is defined as:

The share of total discrepancy (assumed 1kg = 1,000 sticks) in the total exports as reported by exporting economies

Therefore, it equals to the (DISCREPANCY IN KG x 1,000 / TOTAL EXPORTS IN KG x 1,000) x 100% = (8,084,879 / 8,431,170 x 1,000) x 100% = 95.89%

3. The selection of economies included is derived from the list of economies from which Malaysia imports cigarettes containing tobacco in 2006

4. n.a. denotes either zero or data are not reported

Source: http://comtrade.un.org/db/dqBasicQueryResults.aspx?cc=240220&px=HS&r=458&y=2006&rg=1&so=8&qt=n (accessed May 30, 2011).

TABLE 9: Trade Discrepancy, 2007

	EXPORTS AS REPORTED BY EXPORTING ECONOMIES (I)			IMPORTS AS REPORTED BY MALAYSIA (II)			DISCREPANCY (I) - (II)	
	VALUE (USD)	WEIGHT (KG.)	USD/KG	VALUE (USD)	WEIGHT (KG.)	USD/KG	BY VALUE	BY WEIGHT
WORLD	n.a.	n.a	n.a.	69,609,135	3,905,535	17.82	n.a.	n.a.
Indonesia	52,376,970	6,250,936	8.38	20,736,091	1,150,627	18.02	31,640,879	5,100,309
Hong Kong	19,073,377	1,853,975	10.29	14,337,798	930,158	15.41	4,735,579	923,817
Singapore	42,253,985	2,729,787	15.48	8,660,844	539,130	16.06	33,593,141	2,190,657
China	13,464,183	1,308,749	10.29	8,506,112	442,807	19.21	4,958,071	865,942
Switzerland	1,935,012	266,947	7.25	6,399,867	162,836	39.30	(4,464,855)	104,111
USA	52,256	5,079	10.29	3,031,677	243,357	12.46	(2,979,421)	(238,278)
Korea	728,132	45,407	16.04	1,654,529	102,322	16.17	(926,397)	(56,915)
Japan	n.a.	n.a	n.a.	1,106,074	35,812	30.89	n.a.	n.a.
UK	n.a.	n.a	n.a.	965,749	21,391	45.15	n.a.	n.a.
Malaysia	n.a.	n.a	n.a.	931,577	52,068	17.89	n.a.	n.a.
Philippines	548,718	207,494	2.64	680,932	28,925	23.54	(132,214)	178,569
UAE	500	25	20.00	608,040	33,524	18.14	(607,540)	(33,499)
Vietnam	2,180,860	211,985	10.29	512,938	80,657	6.36	1,667,922	131,328
Germany	923,000	33,100	27.89	477,501	14,615	32.67	445,499	18,485
Cambodia	n.a.	n.a	n.a.	349,406	23,903	14.62	n.a.	n.a.
Australia	173,145	16,830	10.29	235,283	7,451	31.58	(62,138)	9,379
Other Asia, nes	n.a.	n.a	n.a.	160,876	7,069	22.76	n.a.	n.a.
India	22,270	2,165	10.29	72,649	6,214	11.69	(50,379)	(4,049)
Bangladesh	20,421	9,734	2.10	68,276	11,900	5.74	(47,855)	(2,166)
Thailand	654,677	56,562	11.57	31,293	1,600	19.56	623,384	54,962
Ukraine	11,149	1,000	11.15	25,018	1,200	20.85	(13,869)	(200)
Zimbabwe	n.a.	n.a	n.a.	16,397	3,000	5.47	n.a.	n.a.
Brazil	2	1	2.00	13,111	2,400	5.46	(13,109)	(2,399)
Netherlands	82,370	8,007	10.29	11,228	102	110.08	71,142	7,905
Turkey	n.a.	n.a	n.a.	10,203	1,470	6.94	n.a.	n.a.
Morocco	n.a.	n.a	n.a.	5,666	1,000	5.67	n.a.	n.a.
TOTAL	**134,501,027**	**13,007,783**	**10.34**	**69,609,135**	**3,905,538**	**17.82**	**64,891,892**	**9,102,245**

UNDER-INVOICING OF IMPORTS AS SHARE IN TOTAL IMPORTS (%)	**48.25**	
UNACCOUNTED IMPORTED CIGARETTES (1 KG = 1,000 STICKS) AS SHARE IN TOTAL IMPORTS (%)		**69.98**

Notes:

1. Under-invoicing of imports as share of total imports is defined as:

The share of Total Value of Discrepancy in the Total Value of Exports as Reported by Exporting Economies

Therefore, it equals to the (VALUE OF DISCREPANCY / TOTAL VALUE OF EXPORTS) x 100% = (USD64,891,892 / USD134,501,027) x 100% = 48.25%

2. Unaccounted imported cigarettes as share in total imports is defined as:

The share of total discrepancy (assumed 1kg = 1,000 sticks) in the total exports as reported by exporting economies

Therefore, it equals to the (DISCREPANCY IN KG x 1,000 / TOTAL EXPORTS IN KG x 1,000) x 100% = (9,102,245 / 13,007,027 x 1,000) x 100% = 69.98%

3. The selection of economies included is derived from the list of economies from which Malaysia imports cigarettes containing tobacco in 2007

4. n.a. denotes either zero or data are not reported

Source: UN comtrade http://comtrade.un.org/db/dqBasicQueryResults.aspx?cc=240220&px=HS&r=458&y=2009&p=ALL&rg=1&so=1001 (accessed February 1, 2011)

TABLE 10: Trade Discrepancy, 2008

| | EXPORTS AS REPORTED BY EXPORTING ECONOMIES | | | IMPORTS AS REPORTED BY MALAYSIA | | | DISCREPANCY | |
| | (I) | | | (II) | | | (I) - (II) | |
	VALUE (USD)	WEIGHT (KG.)	USD/KG	VALUE (USD)	WEIGHT (KG.)	USD/KG	BY VALUE	BY WEIGHT
WORLD	n.a.	n.a.	n.a.	102,845,000	235,339,551	0.44	n.a.	n.a.
Indonesia	55,686,418	6,486,444	8.59	41,203,442	155,531,280	0.26	14,482,976	(149,044,836)
Hong Kong	16,459,923	1,401,748	11.74	21,461,635	1,677,983	12.79	(5,001,712)	(276,235)
Switzerland	2,696,490	319,606	8.44	9,681,839	460,457	21.03	(6,985,349)	(140,851)
Areas, nes	n.a.	n.a.	n.a.	7,767,914	69,028,184	0.11	n.a.	n.a.
China	14,140,497	1,204,223	11.74	6,727,596	423,887	15.87	7,412,901	780,336
Singapore	83,404,804	5,225,203	15.96	6,423,442	2,579,830	2.49	76,981,362	2,645,373
Philippines	596,088	112,523	5.30	2,963,002	1,006,349	2.94	(2,366,914)	(893,826)
USA	9,548	813	11.74	1,883,668	251,719	7.48	(1,874,120)	(250,906)
Vietnam	4,204,338	358,047	11.74	1,172,116	1,163,198	1.01	3,032,222	(805,151)
S. Korea	4,294,355	294,498	14.58	1,114,020	47,741	23.33	3,180,335	246,757
Macao	2,686,973	116,640	23.04	719,239	45,901	15.67	1,967,734	70,739
UAE	2,614	372	7.03	387,360	24,799	15.62	(384,746)	(24,427)
Germany	454,000	26,100	17.39	385,681	13,500	28.57	68,319	12,600
Cambodia	1,656,084	300,852	5.50	248,086	22,642	10.96	1,407,998	278,210
Bangladesh	n.a.	n.a.	n.a.	128,376	3,015,000	0.04	n.a.	n.a.
Thailand	4,191,706	580,525	7.22	115,086	2,012	57.20	4,076,620	578,513
Japan	45,408	989	45.91	114,182	1,071	106.61	(68,774)	(82)
India	280,478	23,886	11.74	106,196	15,584	6.81	174,282	8,302
Netherlands	64,838	4,401	14.73	95,803	4,844	19.78	(30,965)	(443)
UK	n.a.	n.a.	n.a.	72,543	2,392	30.33	n.a.	n.a.
Canada	n.a.	n.a.	n.a.	33,054	3,600	9.18	n.a.	n.a.
Morocco	n.a.	n.a.	n.a.	13,233	1,000	13.23	n.a.	n.a.
Romania	8,882	86	103.28	9,881	1,000	9.88	(999)	(914)
Myanmar	n.a.	n.a.	n.a.	7,236	15,015	0.48	n.a.	n.a.
Other Asia, nes	61,392	4,677	13.13	5,409	304	17.79	55,983	4,373
Brazil	n.a.	n.a.	n.a.	1,948	85	22.92	n.a.	n.a.
Australia	1,735	5	347.00	1,362	79	17.24	373	(74)
Poland	1,375	11	125.00	1,151	77	14.95	224	(66)
Sri Lanka	n.a.	n.a.	n.a.	403	3	134.33	n.a.	n.a.
Pakistan	n.a.	n.a.	n.a.	121	3	40.33	n.a.	n.a.
Denmark	n.a.	n.a.	n.a.	105	10	10.50	n.a.	n.a.
Russia	n.a.	n.a.	n.a.	70	2	35.00	n.a.	n.a.
TOTAL	**190,947,946**	**16,461,649**	**11.60**	**102,845,199**	**235,339,551**	**0.44**	**88,102,747**	**(218,877,902)**

UNDER-INVOICING OF IMPORTS AS SHARE IN TOTAL IMPORTS (%)	46.14	
UNACCOUNTED IMPORTED CIGARETTES (1 KG = 1,000 STICKS) AS SHARE IN TOTAL IMPORTS (%)		(1,329.62)

Notes:

1. Under-invoicing of imports as a share of total imports is defined as:

The share of total value of discrepancy in the total value of exports as reported by exporting economies

Therefore, it equals to the (VALUE OF DISCREPANCY / TOTAL VALUE OF EXPORTS) x 100% = (USD88,102,747 / USD190,947,946) x 100% = 46.14%

2. Unaccounted imported cigarettes as share in total imports is defined as:

The share of total discrepancy (assumed 1kg = 1,000 sticks) in the total exports as reported by exporting economies

Therefore, it equals to the (DISCREPANCY IN KG x 1,000 / TOTAL EXPORTS IN KG x 1,000) x 100% = (-218,877,902 / 16,461,649 x 1,000) x 100% = -1,329.62%

3. The selection of economies included is derived from the list of economies from which Malaysia imports cigarettes containing tobacco (HS240220) in 2008

4. n.a. denotes either zero or data not are reported

Source: UN comtrade http://comtrade.un.org/db/dqBasicQueryResults.aspx?cc=240220&px=HS&r=458&y=2009&p=ALL&rg=1&so=1001 (accessed December 1, 2010)

TABLE 11: Trade Discrepancy, 2009

	EXPORTS AS REPORTED BY EXPORTING ECONOMIES			IMPORTS AS REPORTED BY MALAYSIA			DISCREPANCY	
	(I)			(II)			(I) - (II)	
	VALUE (USD)	WEIGHT (KG.)	USD/KG	VALUE (USD)	WEIGHT (KG.)	USD/KG	BY VALUE	BY WEIGHT
WORLD	n.a.	n.a.	n.a.	63,062,514	27,374,269	2.30	n.a.	n.a.
Indonesia	94,335,428	9,263,472	10.18	23,091,920	13,998,601	1.65	71,243,508	(4,735,129)
China	15,114,154	1,151,476	13.13	11,485,022	9,379,360	1.22	3,629,132	(8,227,884)
Philippines	5,045,892	773,938	6.52	9,836,627	421,541	23.33	(4,790,735)	352,397
Singapore	98,995,900	6,352,469	15.58	4,110,019	2,350,829	1.75	94,885,881	4,001,640
Hong Kong	4,728,916	360,274	13.13	4,076,117	327,843	12.43	652,799	32,431
Switzerland	119,477	2,566	46.56	2,630,495	59,820	43.97	(2,511,018)	(57,254)
S. Korea	4,304,326	33,050	130.24	2,463,198	132,121	18.64	1,841,128	(99,071)
Vietnam	n.a.	n.a.	n.a.	1,808,469	416,689	4.34	n.a.	n.a.
Bangladesh	n.a.	n.a.	n.a.	761,538	83,415	9.13	n.a.	n.a.
Macao	2,223,887	79,068	28.13	675,520	32,360	20.88	1,548,367	46,708
Turkey	229,076	14,256	16.07	493,792	34,206	14.44	(264,716)	(19,950)
Germany	384,000	19,900	19.30	381,790	12,694	30.08	2,210	7,206
Cambodia	n.a.	n.a.	n.a.	291,278	36,308	8.02	n.a.	n.a.
UAE	n.a.	n.a.	n.a.	289,365	44,691	6.47	n.a.	n.a.
USA	18,025	1,373	13.13	175,860	14,570	12.07	(157,835)	(13,197)
UK	1,117	47	23.77	168,590	7,049	23.92	(167,473)	(7,002)
Areas, nes	n.a.	n.a.	n.a.	92,275	2,910	31.71	n.a.	n.a.
Br. Virgin Islands	n.a.	n.a.	n.a.	65,926	5,100	12.93	n.a.	n.a.
India	1,048,084	79,849	13.13	58,943	6,204	9.50	989,141	73,645
Japan	24,496	170	144.09	51,877	2,597	19.98	(27,381)	(2,427)
Brunei	n.a.	n.a.	n.a.	43,639	4,300	10.15	n.a.	n.a.
Other Asia,nes	n.a.	n.a.	n.a.	8,819	931	9.47	n.a.	n.a.
Australia	52,653	10,466	5.03	525	65	8.08	52,128	10,401
Russia	n.a.	n.a.	n.a.	421	24	17.54	n.a.	n.a.
Netherlands	61,392	4,677	13.13	413	40	10.33	60,979	4,637
Sweden	n.a.	n.a.	n.a.	76	1	76.00	n.a.	n.a.
TOTAL	226,686,823	18,147,051	12.49	63,062,514	27,374,269	2.30	163,624,309	(9,227,218)

UNDER-INVOICING OF IMPORTS AS SHARE IN TOTAL IMPORTS (%)		72.18
UNACCOUNTED IMPORTED CIGARETTES (1 KG = 1,000 STICKS) AS SHARE IN TOTAL IMPORTS (%)		(50.85)

Notes:

1. Under-invoicing of imports as a share of total imports is defined as:

The share of total value of discrepancy in the total value of exports as reported by exporting economies

Therefore, it equals to the (VALUE OF DISCREPANCY / TOTAL VALUE OF EXPORTS) x 100% = (USD163,624,309 / USD226,686,823) x 100% = 72.18%

2. Unaccounted imported cigarettes as share in total imports is defined as:

The share of total discrepancy (assumed 1kg = 1,000 sticks) in the total exports as reported by exporting economies

Therefore, it equals to the (DISCREPANCY IN KG x 1,000 / TOTAL EXPORTS IN KG x 1,000) x 100% = (-9,227,218 / 18,147,051 x 1,000) x 100% = -50.85%

3. The selection of economies included is derived from the list of economies from which Malaysia imports cigarettes containing tobacco (HS240220) in 2009

4. n.a. denotes either zero or data are not reported

Source: UN comtrade http://comtrade.un.org/db/dqBasicQueryResults.aspx?cc=240220&px=HS&r=458&y=2009&p=ALL&rg=1&so=1001 (accessed December 1, 2010)
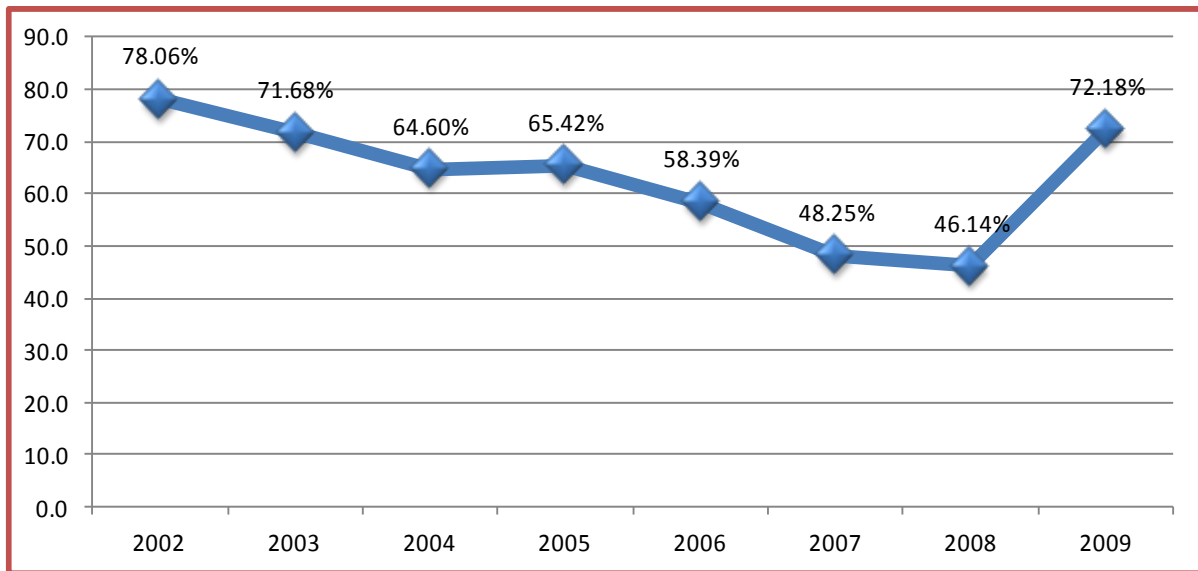
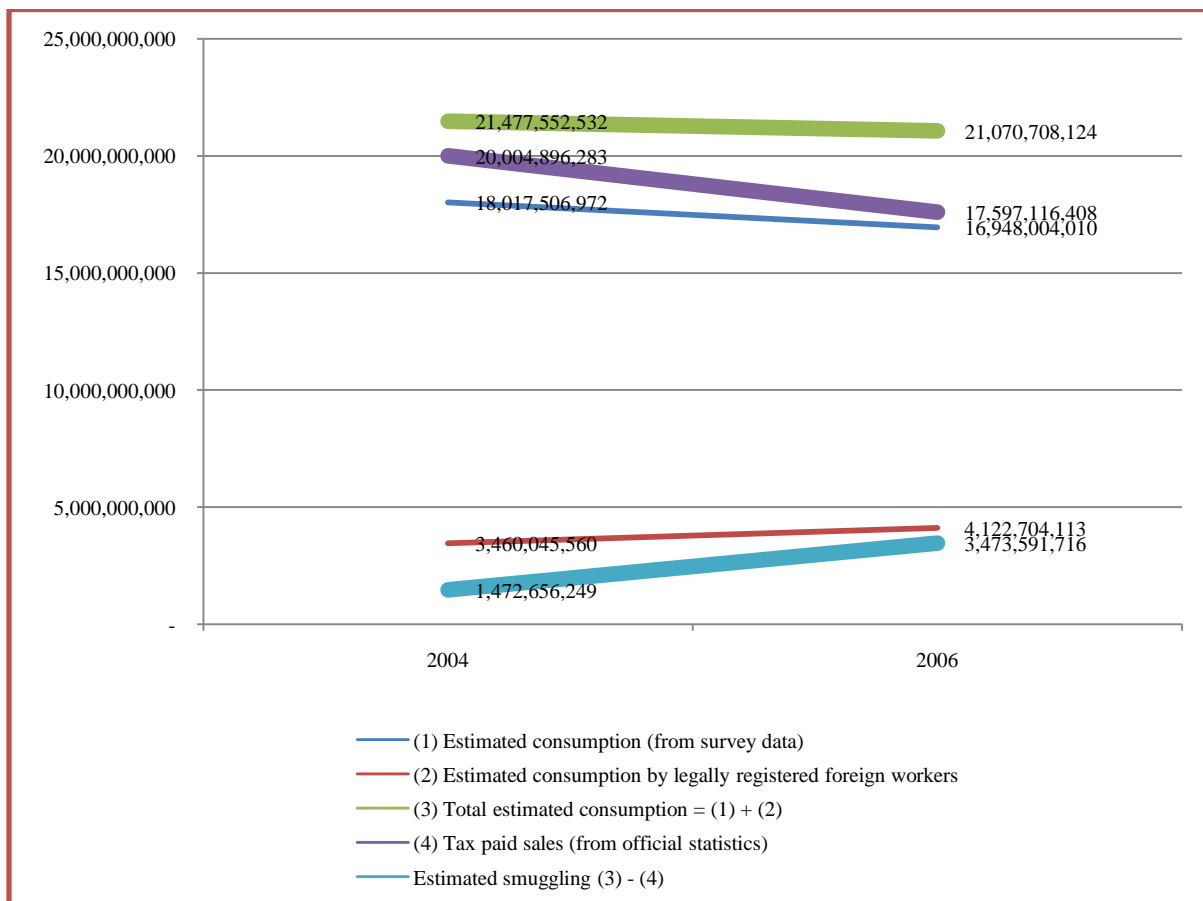FIGURE 2: Under-invoicing as percentages of total imports

FIGURE 3: Cigarette smuggling increased over 2004 and 2006 against the backdrop of shrunk cigarette market in Malaysia