



Brand Owners Protection Group (BPG)

Economic Impact Study
Analyzing Counterfeit
Products in the United Arab
Emirates

KPMG
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Table of Contents

1	NOTICE: ABOUT THIS REPORT	2
2	BACKGROUND TO THE STUDY	3
2.1	OBJECTIVES OF THE STUDY	3
2.2	SCOPE OF WORK	3
2.3	OVERALL APPROACH.....	3
2.4	LIMITATIONS OF THE STUDY	5
3	INTRODUCTION.....	7
3.1	DEFINITIONS	7
3.2	COUNTERFEITING AND ILLICIT TRADE IN THE UAE.....	8
4	EXECUTIVE SUMMARY	9
4.1	OVERVIEW OF COUNTERFEITING AND ILLICIT TRADE IN THE UAE	9
4.2	ECONOMIC IMPACT	10
4.3	CONCLUSION.....	12
5	COUNTERFEITING IN UAE ACROSS SECTORS.....	13
5.1	OVERVIEW OF UAE'S ECONOMY.....	13
5.2	COUNTERFEITING ACROSS VARIOUS INDUSTRY SEGMENTS	13
5.3	CONCLUSION.....	20
6	ECONOMIC IMPACT.....	21
6.1	METHODOLOGY	21
6.2	IMPACT ON THE INDUSTRY	23
6.3	IMPACT ON ECONOMY - OVERALL	23
6.4	IMPACT ON ECONOMY – BY SECTOR.....	24
6.5	IMPACT ON CONSUMERS.....	28
7	ON-GOING COMBAT EFFORTS	30
7.1	CURRENT MEASURES IN PLACE BY REGULATORY BODIES	30
7.2	SEIZURES AND RAIDS.....	31
7.3	OTHER INDUSTRY EFFORTS	31
8	METHODS ADOPTED BY REGULATORS WORLDWIDE	33
9	CONCLUSION.....	34
10	APPENDIX	35

1 NOTICE: ABOUT THIS REPORT

This Report has been prepared on the basis set out in our Engagement Letter addressed to Brand Owners Protection Group dated January 21, 2007 and should be read in conjunction with the Engagement Letter.

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Nothing in this report constitutes a valuation or legal advice.

2 BACKGROUND TO THE STUDY

The Brand Owner's Protection Group (BPG) of UAE, represents some of the largest trademark owning companies in the UAE. It was set up with the key objective of spreading awareness about the existence of counterfeit products as well as illicit trade in the GCC & Yemen and to work with the local authorities to restrict these counterfeits. BPG includes companies such as Beiersdorf, British American Tobacco, Daimler Chrysler, Estee Lauder, General Motors, Glaxo Smithkline, Johnson & Johnson, KAO Brands Company, Kraft Foods, Nestle, Philip Morris, Phillips, Proctor and Gamble and Unilever.

2.1 Objectives of the study

In order to understand the extent of counterfeiting and illicit trade in the UAE, BPG commissioned KPMG to assess the economic impact of counterfeits in the UAE, in terms of the potential losses to the industry, economy and consumers.

2.2 Scope of work

The study is focused on the UAE market for the following product categories:

- Fast Moving Consumer Goods (FMCG), which for the purpose of this study has been classified into Cigarettes & Others ('others' comprise fast food and packaged food, beverages, dairy products and other household products);
- Automobiles spare parts;
- Cosmetics; and
- Pharmaceuticals.

2.3 Overall approach

A number of studies have been made across the world on counterfeiting in different countries and regions. A few approaches have been developed to arrive at the level of counterfeiting and its impact on various stakeholders. This study has used similar approaches.

We had discussions with local economists and industry experts, including BPG members to gain insights and gather information/statistics.

The study was conducted in two phases:

- Phase 1: Data Collection - conducted in conjunction with BPG;
- Phase 2: Economic Impact Analysis - conducted by KPMG, on the basis of information received from BPG.

2.3.1 Phase 1: Data collection

Information was collected through a combination of secondary research and individual meetings with BPG members and government authorities.

During the secondary research phase, we used a range of sources such as the UAE Ministry of Economy, International Monetary Fund (IMF), International Anti-Counterfeiting Coalition and World Intellectual Property Organization (WIPO) among others.

2.3.2 Phase 2: Economic Impact Analysis

Counterfeiting is generally perceived by society as a victimless crime with ‘counterfeits’ simply constituting a cheap alternative purchase. At the same time, counterfeiters believe that it carries relatively lower risk as compared to the potential rewards. The level of punishment for counterfeiting is very low.

Nevertheless, international trade in counterfeit products is estimated to exceed 6% of the global trade. It is not only damaging for business and investment opportunities but also has negative impact on the society and global economy.

In this study, the economic impact of counterfeiting and illicit trade has been analyzed across three main aspects of industry, economy and consumers.

2.3.2.1 Impact on the industry

The direct costs of counterfeiting to industry and companies occurs in terms of reduced sales and profits as the genuine products compete with counterfeit products for market share. The indirect impact includes (a) loss of future sales from customers who buy the counterfeit products and associate the genuine product with poor quality, (b) negative impact on the brand image and the value of the business and (c) increased marketing expenses for brand protection.

There are three common methods of estimating the impact of counterfeiting on the selected industries/sectors in terms of lost revenues:

- (i) Estimating the percentage of counterfeiting in the selected industries/sectors and using these estimates to arrive at the value of the counterfeit market;
- (ii) Analyzing the value of legal raids and seizures of counterfeit products in the selected industries/sectors; and
- (iii) Via econometric models, which analyze equilibrium volume of sales under the two demand-supply scenarios of with and without counterfeits. The variance between the two indicates the loss in revenue due to counterfeiting.

However, in the absence of published information on the counterfeit market in the UAE (retail sales index, total seizures, etc), we have been unable to use approaches (ii) and (iii). Consequently, we have only used method (i).

This estimated value of counterfeits can be considered as a proxy for the loss in revenues for the industry. It has been later used in the macro-economic model to estimate the overall as well sectoral impact of curbing counterfeits on the UAE economy.

2.3.2.2 *Impact on the Economy*

The other adverse effect of counterfeiting is on the economy as a whole. The presence of counterfeits might shake the confidence of shoppers in product quality being available in the country, then attractiveness of UAE as a “shoppers’ paradise” could get damaged. Counterfeiters, attracted by low costs and high margins could even push genuine retailers out of the market affected by cost and profit pressures.

In the case of non-deceptive counterfeiting, where the consumer recognizes that the product is not authentic and so pays an adjusted price for it, the branded manufacturer would not be affected, as these consumers are unlikely to purchase the genuine product in the absence of counterfeits. However, this negatively affects the business and trading environment of the economy.

Further, since a large majority of products sold in the UAE are imported, the loss in industry revenues has a direct correlation with loss of customs revenue for the government, due to either undervaluation of counterfeit items, resulting in partial loss of customs revenues; or if smuggled into the country, a full loss of custom duties. Other losses could be measured in terms of reduction of non-oil GDP, employment levels, trade, etc. We have formulated a macro-econometric model to study effects of counterfeit goods, on the overall economy, as outlined in Appendix A.2.f

While it is useful to look at the scale of counterfeits at an aggregate level and study the impact of eliminating it, it is equally important to examine the impact by individual sectors as well. In this study, we have distributed the total incremental effect on the overall economy among the selected sectors.

2.3.2.3 *Impact on Consumers*

If a consumer purchases a counterfeit product unknowingly, he/she is likely to obtain a product that is of lower quality and perceived value than expected. Some counterfeit products (e.g. pharmaceuticals, food & beverage, toothpastes, automobile parts) also pose serious health and safety risks. This has been documented in a qualitative manner in this report.

2.4 *Limitations of the study*

The study has been limited to analyzing counterfeits in the local UAE market only and does not cover the free zones (transshipment seizures) in the UAE.

Market research findings and recommendations are within the confines of the scope of the research conducted and are therefore based on ‘ceteris paribus’ conditions (all other non-measured variables remaining equal). Recommendations therefore do not guarantee predicted

future behaviour as they may be influenced by factors outside of the research and changing market conditions.

The study has been conducted based on both primary (limited to the BPG members and government bodies) and secondary research. While every effort has been made to obtain comprehensive information, the quality, depth and scope of the assessment relies on secondary data used and the extent of cooperation received from the organization//individuals interviewed.

Since data was provided to us by only limited number of companies within an industry, we have made certain assumptions to extrapolate the given data, which has been discussed and agreed with BPG.

3 INTRODUCTION

This section outlines the terms used in the report and provides a brief overview of counterfeiting and illicit trade in the UAE.

3.1 Definitions

In this report, we have used certain terms as defined below:

Counterfeiting, is defined by OECD¹ as ‘manufacturing a product which so closely imitates the appearance of the product of another to mislead a consumer that it is the product of another’. Counterfeiting can be classified as both ‘Deceptive’, when both the counterfeit and the original product appear very similar to deliberately mislead a consumer and ‘Non-deceptive’, where the consumer recognizes that the product is not authentic and so pays an adjusted price for it.

Illicit Trade is defined as an illegal diversion of genuine products² or the illegal manufacture and sale of counterfeit products³. Illicit trade is more common in cigarettes and alcohol which face high custom duties and taxes in the UAE.

Contraband activities are goods that enter into the country without the payment of applicable taxes. These are included in the category of illicit trade.

There are two related areas which are not covered in this study. The first area of *look-alikes* is where firms with weaker brands and supermarket generic products attempt to make their products sufficiently similar in a variety of ways to a strong or leading brand. This is quite common in the area of fast moving consumer goods, where product names, packaging, shapes and wording can be manipulated to imitate strong brands⁴. The second area, of *parallel imports* (grey products), refers to genuine (i.e. non-counterfeit) products placed on the market in one country, which is subsequently imported into a second country without the permission of the owner of the intellectual property rights for the product in the second country⁵. This can be distinguished from illicit trade which involves the trade of *either* genuine or counterfeit products while parallel imports are of *only* genuine products.

NGDPC: Non-oil GDP at constant prices

TRADE: This is a variable to represent retail trade in the UAE. Of course, data on just retail trade are not available and the variable also includes wholesale trade and a few other items.

HFCE: Final consumption expenditures of households

TAX: tax collections by the government

WS: Government expenditure on wages and salaries

¹ Organization for Economic Co-operation and Development

² from their market of intended destination into other usually higher tax markets by means of large-scale transport/direct mail

³ Philip Morris press release

⁴ Counterfeiting and piracy: the state of the art, Derek Bosworth, May 2006

⁵ Wikipedia

LAB: Employment levels in the UAE

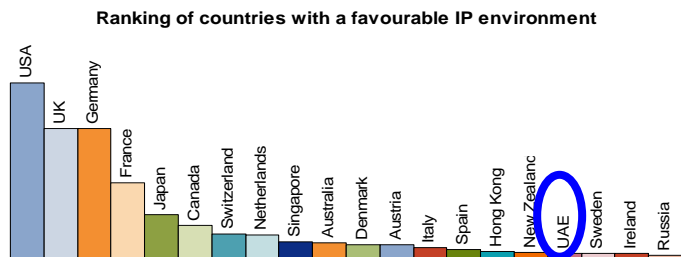
MC: Imports into the UAE at constant prices

3.2 Counterfeiting and illicit trade in the UAE

The UAE has traditionally been a trading hub across the region. It connects the various Gulf countries and Iran to other countries. In recent years, global trade has been increasing which has also been seen in the growth of UAE’s trade volume. While genuine products form bulk of the trade, counterfeiters have also seen an opportunity to ply their trade in the domestic market and/or for re-exporting/transshipping to other countries.

The UAE is a member of the World Trade Organization (WTO) and World Intellectual Property Organization (WIPO). It has three intellectual property legislations in place since 1992 (Trade Marks, Patents and Copyrights).

According to some intellectual property experts, considering the young age of the country, intellectual property laws in place are relatively sophisticated and compliant with TRIPs (Trade Related Intellectual Property Rights). The reforms in the regulatory framework in the area of intellectual property resulted in the removal of UAE from the United State Trade Representative (USTR) Watch List in 2001⁶.



UAE has several free zones, which are independently regulated and controlled by the respective free zone authorities. These free zones have become increasingly popular in the region, especially for international players to access other Middle Eastern markets. These free zones have been witnessing increasing levels of counterfeit activities.

*“The global scope of piracy and counterfeiting requires stronger and more effective border enforcement to stop the import, export, and transit of pirated and counterfeit goods. For example, effective enforcement efforts are needed at the national and local levels in free trade zones in Belize, Panama, and the **United Arab Emirates**” - 2005 Special 301 Report, USTR.*

Goods passing through these free trade zones allow counterfeiters to disguise the true country of origin and to re-route them to either neighbouring and European countries. A press release by the EU Customs shows that goods from UAE formed about 2% of seized counterfeit articles by the EU Customs in 2003. The high volume of goods entering the free trade zones has made the detection of counterfeits in these zones challenging. The authorities are working with brand owners in identifying suspect containers and operators in the free zones.

⁶ canada.usembassy.gov

4 EXECUTIVE SUMMARY

4.1 Overview of counterfeiting and illicit trade in the UAE

The UAE due to its pre-eminence as a trading hub in the region has attracted counterfeiters to its shores as well. This is a global phenomenon which has spread to many parts of the world.

Certain sectors such as luxury goods, automobile spare parts and fast moving consumer goods (FMCG) are common targets for counterfeiters.

- Automobile Spare Parts - BPG members estimate that in 2005, the automobile spare parts market in the UAE was valued at around US\$ 3.8 billion. Our primary research with BPG members puts counterfeits at 12.5% of the total market. Counterfeit auto parts pose a major problem for the industry, not only in terms of its adverse effect on its brand value and image but also in dealing with product liability issues emanating from low quality of counterfeit products.
- FMCG: Cigarettes - The annual consumption of cigarettes in the UAE was estimated to be around 6 billion sticks in volume worth US\$ 309 million⁷. BPG members estimate that less than 5% of the total cigarettes market in the UAE is counterfeit. Primary research with BPG members also indicates that contraband activities are quite prevalent in the UAE, estimated to be around 40-47% of the total market⁸.
- FMCG: Food & Beverage - Annual sales of food and non-alcoholic beverages in UAE was valued at US\$ 3.5 billion in 2005⁹. This is expected to grow aggressively in the future due to high growth rate of the population. BPG members estimate that about 10-15% of the total market in the UAE for food and beverage products is counterfeit.
- FMCG: Household products - The total market for household products, including detergents, fabric conditioners, dishwashing liquids and household cleaners is estimated to be US\$ 86 million in 2005¹⁰. For the household products market, the level of counterfeits is around 3-5%.
- Cosmetics - In 2005, the cosmetics and personal care market in the UAE was worth more than US\$ 414 million in retail sales, an increase from US\$ 382 million in 2004¹¹. BPG members estimate that about 8-10% of the total market in the UAE is counterfeit which is similar to other international markets.
- Pharmaceuticals – BPG members estimate that less than 0.1% of the total market of US\$ 1.3 billion in the UAE is counterfeit, which is significantly lower than other international markets.

⁷ Source: BPG members

⁸ Source: BPG members

⁹ Source: Researchand markets: Analyzing Food Retail In The UAE

¹⁰ Source: BPG members

¹¹ Source: Ameinfo: Middle East beauty market still growing fast

4.2 Economic Impact

4.2.1 Impact on the industry

The direct costs of counterfeit to the industry and companies occurs in terms of reduced sales and profits as the genuine products compete directly with counterfeit products for market share.

Table 1: Estimated Percentage of Counterfeits and Total Value¹²

Sector	Market Size (US\$ million)	Estimated level of counterfeits (% of total)	Value of counterfeits (US\$ million)	Value of counterfeits (AED million)	% of total value
FMCG - Tobacco	309.7	< 5% *	< 15.49	<56.8	2.8%
FMCG – Food & Beverage	350.0	0.3% - 5%	1.05 – 17.5	3.9 – 64.2	3.1%
FMCG – Household Prdts)	86.0	3-5%	2.6 – 4.3	9.5 – 15.8	0.8%
Automobile Parts	3,814.7	12.5%	476.8	1,749.9	85.6%
Pharmaceuticals	1,300.0	0.10%**	1.3	4.8	0.2%
Cosmetics	414.0	8-10%	33.1 - 41.4	151.9	7.4%
Total	6,274.4		530.4 – 557.8	1,947 –2,041	100%

* Illicit Trade/Contraband activities is estimated to be around 40- 47% of the total market in value terms

** Dubai Customs, in 2006, seized around US\$ 2 million of counterfeit medicines in the free zone areas (airport, Jebel Ali). This is excluded from local UAE market estimates for the purpose of this study.

The above estimated value of counterfeits can be considered as a proxy for the loss in revenues for the industry, on the assumption that the elimination of counterfeits would see a full transfer of counterfeits to the genuine product market. Automobile spare parts account for the largest volume of counterfeits and consequently the impact of curbing counterfeits of automobile spare parts for this sector is the highest. At the other extreme, pharmaceuticals account for barely 0.1% of the total counterfeits.

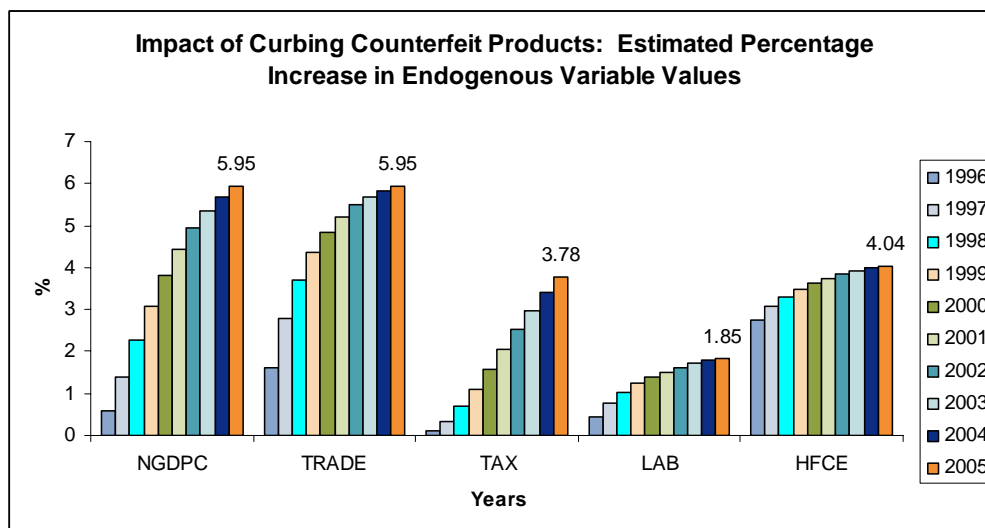
We have used the estimates given in the above table in conjunction with our estimated macro-econometric model to arrive at the impact of curbing counterfeit on the overall economy and by sector.

4.2.2 Impact on the economy - overall

Since, a large majority of products sold in the UAE are imported, counterfeiting has direct correlation with customs revenue losses for the government, either as partial loss due to undervaluation or full loss in case of smuggled goods. Other losses are measured in terms of the impact on non-oil GDP, employment levels, trade, etc.

The following graph outlines the impact of curbing counterfeits for the selected sectors over 1996-2005.

¹² Source: BPG members



The above graph shows the significant beneficial effects that curbing counterfeits would have on the economy. For the year 2005, non-oil GDP (NGDPC) would have increased by almost 6%, retail trade (TRADE) by almost 6%, tax collections (TAX) by almost 4%, employment (LAB) by about 2% and household final consumption expenditure (HFCE) by over 4%.

4.2.2.1 Impact on the economy – by sector

We have also estimated the beneficial impact of curbing counterfeit trade in each of the selected sectors.

Table 2: Incremental Impact on Some Macroeconomic Variables: Summary

2005	NGDPC	TRADE	HFCE	TAX	LAB (000)
Tobacco: Cigarettes	38.75	6.62	25.67	2.49	6.65
Food & Beverages	43.77	7.48	28.99	2.81	0.77
Household Products	10.74	1.83	7.11	0.69	0.18
Automobile Parts	1193.74	203.83	790.85	76.66	21.17
Pharmaceuticals	3.21	0.55	2.13	0.20	0.06
Cosmetics	103.71	17.71	68.71	6.66	1.84
Total	1,393.90	238.01	923.46	89.50	30.68

Note: NGDPC, TRADE, HFCE and TAX are measured in US\$ million.

In addition, for cigarettes there is a further problem of illicit trade/contraband activities. BPG members estimate that about 40-47 per cent of cigarettes brought into the country do not pay any duty or only pay duty partially. Considering that custom duties of 100% on CIF prevalent for cigarettes in the UAE, if this illicit trade is curbed, the tax collections indicated in the above table would be significantly improved.

Among the various sectors studied, Automobile parts seem most afflicted by counterfeits. Naturally, curbing counterfeits in this sector will yield maximum benefits. Overall, curbing trade in counterfeits in the selected sectors can yield significant benefits: Non-oil sector GDP

(NGDPC) rises by US\$ 1,393 million; Tax collection (TAX) rises by US\$ 89.5 million; and employment (LAB) rises by 30,680.

4.2.2.2 Impact on consumers:

Consumers are largely negatively impacted by availability of counterfeit products in a country.

- Consumers who purchases counterfeit products unknowingly are likely to use a product of lower quality and perceived value than expected;
- Some counterfeit products (e.g. pharmaceuticals, toys, food & beverage, toothpastes, car and airplane spares) pose serious health or safety risks;
- The consumer suffers from the impact of reduced profits for the legitimate producers through the producers cutting back on new product research and development. It can lead to lower availability of advanced product range.

The consumers could have some benefits of counterfeiting from price pressure on producers of genuine products.

The negative impacts generally outweigh the limited beneficial impact of counterfeiting.

4.3 Conclusion

Counterfeiting has a negative impact on the overall economy, industry and consumers. The study indicates that counterfeiting not only harms the four studied industries, but also reduces GDP growth and employment in the UAE economy. Though, counterfeits in the UAE are lower than in other international markets, the presence of such activities could deter the entry of new players, who might fear easy duplication of their products and in turn damage the 'shopping capital' image of UAE.

Recognizing this, the UAE has been active in the investigation and enforcement of intellectual property violations. However, brand owners consider penalties in UAE for infringement very light compared to the impact they have on the various stakeholders.

Apart from improving enforcement and raising public awareness on the adverse effects of counterfeiting, there is also an urgent need for the close engagement of all stakeholders to combat counterfeiting.

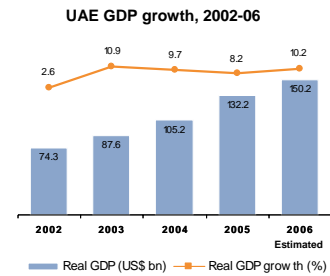
5 COUNTERFEITING IN UAE ACROSS SECTORS

5.1 Overview of UAE's economy

The UAE economy has demonstrated sustained growth over the last few years (CAGR of 10% from 2002 to 2006) and this is expected to continue in the future.

Wholesale & Retail Trade, which contributed approximately US\$ 12 billion to GDP, is the third largest industry after oil and gas and manufacturing. Re-export trade constitutes almost one-third of the entire trading sector. The country also entered the Global Retail Development Index 2006 for the first time at rank 16 and was estimated to have an annual retail growth rate of 11% in 2005¹³. The increasing importance of shopping malls in the rapidly developing retail environment of UAE is also a key driver of growth.

Continued growth in the population, fuelled largely by increase in the size of the expatriate workforce, will also underpin robust domestic demand. .



Source: Ports, Customs and Free Zone Corporation UAE, GulfNews, Country Outlook, November 2006, Gulf Investment House

Sector distribution of UAE GDP, 2005
(in US\$ billion)



Source: Gulf Investment House, EIU, Ministry of Planning

5.2 Counterfeiting across various Industry segments

In this section, we outline counterfeiting activities across various industries.

5.2.1 Automobile Spare Parts

Business Monitor International (BMI) estimated that the UAE's domestic auto market comprised 1.4 million vehicles in 2005¹⁴. This is expected to grow at 10% per annum over 2006-2010. BPG members estimate that in 2005, the automobile spare parts market was valued at around US\$ 3.8 billion.

Automobile parts are typically manufactured by Original Equipment Manufacturers (OEMs). These OEMs sell their products to automobile manufacturers and to the wholesale/retail market under their own brand name (E.g.: Bosch). These products are not classified as counterfeits by the brand owners.

¹³ The Global Retail Development Index ranks 30 emerging countries based on more than 25 macroeconomic and retail-specific variables

¹⁴ UAE car market to rise 28pc on rapid economic growth: Zawya

5.2.1.1 Global scenario

According to the Motor & Equipment Manufacturers Association, counterfeiting of automobile parts is a US\$12 billion global industry that has resulted in a loss of 750,000 jobs. In the U.S. alone, counterfeit parts market is estimated to be worth US\$3 billion¹⁵.

An estimated 30% of auto parts sold in Saudi Arabia are considered to be counterfeit. General Motors China estimates that 30-70% of auto parts sold in China's are counterfeit.¹⁶

5.2.1.2 Extent of counterfeiting in the UAE

Several estimates exist on the percentage of counterfeits in the auto spare parts industry in the UAE. According to the UAE Automobile Manufacturer's Association, counterfeit auto spare parts account for 12% of *their* estimated US\$ 545 million sales in the UAE, while Automechanika estimates it to be 30% of the total market¹⁷. Our primary research with BPG members puts counterfeits at 12.5% of the total market of US\$ 3.8 billion.

The reasons for purchase of counterfeit automobile parts are two-fold. At most times, for the consumer, it is difficult to detect counterfeits as the price differential between the counterfeit and genuine auto parts is minimal (only about 20-30%). On the other hand, a price conscious consumer (individual owners of older cars, unorganized automobile workshops) would also settle for a 'cheaper' counterfeit part. This is unlike Europe, where majority of the consumers only consider genuine OEM branded products as an alternate/cheaper option to branded auto parts.

5.2.1.3 Sources and points of sale

The products most vulnerable to counterfeiting are the ones replaced during a routine service. Brake pads, oil, oil filters, spark plugs and air filters are some of these 'fast movers'. The main source countries for counterfeits are China, Taiwan, Thailand, Turkey and Korea.

Counterfeit retailers are often situated in close proximity to genuine retailers, to deliberately mislead customers. Primary research meetings conducted with BPG members indicate that a large majority of counterfeit auto parts retailers operate in the Emirate of Sharjah. Dubai forms a transshipment point for counterfeit auto spare parts to other regional markets.¹⁸

5.2.1.4 Key industry initiatives

Counterfeit auto parts pose a major problem for the industry, in terms of its adverse effect on brand value/image and product liability issues. The consumers are put at risk, as in the case of counterfeit brake pads, windshields and also stand to lose their consumer warranty.

¹⁵ International Chamber of Commerce: BASCAP Sector Gateways

¹⁶ International Chamber of Commerce: BASCAP Sector Gateways

¹⁷ Ameinfo, Khaleej Times

¹⁸ BPG members

While several industry associations were formed in UAE to combat counterfeiting, namely GUARD (Genuine Auto Parts Retailers and Distributors) and Automotive Brand Protection Coalition (ABPC), they are no longer active. The counterfeiting combat activities are generally individual company led, working in conjunction with legal firms and intellectual property agencies. These agencies, on the go-ahead from the brand owners contact government authorities to facilitate raids and disciplinary measures.

Most brand owners also conduct periodic training for the UAE customs authorities to help them distinguish between counterfeit and genuine products, apart from launching public awareness campaigns to educate consumers on the dangers of using counterfeits.

5.2.2 *FMCG - Cigarettes*

The annual consumption of cigarettes in the UAE was estimated by BPG members, to be around 6 billion sticks worth US\$ 309 million.

The UAE is working towards controlling the consumption of Tobacco products. It has joined the WHO Framework Convention on Tobacco Control following which regulations are likely to become stringent in the coming years. The recent smoking ban in public places such as malls can be considered a step in this direction.

5.2.2.1 *Global scenario*

“In China, 190 billion counterfeit cigarettes are produced each year, making it a major source country for European-destined counterfeits.” (World Customs Organization, 2001). According to HM Revenue & Customs, trade in smuggled and counterfeit tobacco products causes a loss to the Treasury of more than £2.6 billion each year: more than £7 million each day.¹⁹

5.2.2.2 *Extent of counterfeiting in the UAE*

BPG members estimate that less than 5% of the total cigarette market in the UAE is counterfeit. Primary research with BPG members indicates that contraband activities are also prevalent in the UAE, where cigarettes are entering the country without payment of applicable taxes. BPG members estimate contraband cigarettes to constitute around 40-47% of the total market of 6 billion cigarette sticks.

5.2.2.3 *Sources and points of sale*

These cigarettes are mostly imported from China and even some regional markets into the UAE. According to BPG members, there are local manufacturers of counterfeit cigarettes within the UAE free zones²⁰.

¹⁹ www.tobaccoalliance.org.uk, August 2007

²⁰ BPG members

The counterfeit and contraband cigarettes are mainly sold in local groceries and supermarkets, especially in areas inhabited by blue collar workers and labourers. This class of consumers is usually unaware of the nature of these cigarettes and is misled into their purchase by attractive prices.

5.2.2.4 Key industry initiatives

As in the case of automobile spare parts, most anti-counterfeiting activities are led by individual companies. Training is conducted for customs officials to help identify counterfeit cigarettes and public awareness campaigns are conducted periodically.

5.2.3 FMCG - Others (Food & Beverage, Household products)

Food & Beverage - Annual sales of food and non-alcoholic beverages in the UAE was valued at US\$ 3.5 billion in 2005, and expected to continue to grow aggressively²¹.

Household products - The total market for household products, including detergents, fabric conditioners, dish wash liquids and household cleaners was estimated to be US\$ 86 million in 2005²².

5.2.3.1 Global scenario

Food & Beverages - According to the European Commission, seizures of counterfeit food products entering the EU increased by 77% from 2002 to 2003. The amount of counterfeit food and drinks entering the European Union grew by 200% in 2004, with counterfeits of Coca Cola, Nestle and Spirits Products accounting for 13% of all seizures. A report from the Michigan state university puts the global counterfeit food threat at US\$ 49 billion while the UK's Food Standards Board estimates the UK level of fraud around 10%.

Household products – Household products, which are fast-moving and high-sale products, also attract attention of counterfeiters. Counterfeit homecare products are quite rampant across markets, car boot sales and discount warehouse sales in the UK²³. However, we not been able to obtain any published statistics on the size of household product counterfeits in other international markets .

5.2.3.2 Extent of counterfeiting

Food & Beverage - BPG members estimate that about 10-15% of the total market is counterfeit²⁴. Counterfeiting in the UAE exists at levels similar to other international markets.

²¹ Researchand markets: Analyzing Food Retail In The UAE

²² BPG Members

²³ <http://www.timesonline.co.uk/tol/news/world/europe/article707970.ece>

²⁴ KPMG primary research with BPG members

Household products - For the household products market, the level of counterfeits is estimated to be lower, at around 3-5%²⁵.

5.2.3.3 Sources and points of sale

Counterfeit goods in this sector enter as complete unit, separate components or different packaging. These components are then assembled or packaged locally for re-export.

China, Indonesia, Syria and Thailand are considered the main source countries while the small local groceries across the UAE form points of sale for such counterfeit products. Transshipments from UAE to other countries, especially to Saudi Arabia, Europe, Oman and Yemen, are also prevalent.

5.2.3.4 Key industry initiatives

Public awareness campaigns along with training programs are conducted by individual companies in this sector. There are preliminary plans by some of the brand owners to create a FMCG Association in Saudi Arabia and UAE, to strengthen their efforts on this issue.

5.2.4 Cosmetics

Consumption of cosmetics and fragrances in the Gulf States is one of the highest per capita in the world with the average annual purchase estimated to be US\$ 317 per head. In 2005, the cosmetics and personal care market in the UAE was more than US\$ 414 million in retail sales, an increase from US\$ 382 million in 2004.²⁶ An estimated 90% of the cosmetics and fragrances are sold through four main distributors and only 10% occurs through unorganized stores.²⁷

Typically, a large part of the cost of a cosmetic product is fixed in nature. This includes costs of brand building and marketing. Since counterfeiters don't incur these costs, they have very low costs and high margins on sale of their counterfeit products. Counterfeiting of cosmetics is relatively easy as compared to other products.

5.2.4.1 Global scenario

Customs seizures of counterfeit cosmetics and perfumes across the 15 European Union countries was reported to have risen by almost 300% between 2001 and 2002. The European Commission says in 2003, in total 100 million counterfeit items were seized; fragrances and cosmetics accounted for nearly 1.1 million items of these seizures²⁸. MediaSec Technologies LLC reports that in China virtually 90% of cosmetics sold are counterfeit.

²⁵ BPG members

²⁶ Gulf News: Middle East's cosmetic-related sales expected to reach \$2.1b

²⁷ BPG members

²⁸ EU moves to curb counterfeit cosmetics trade, Cosmeticsdesign.com, Decision News Media SAS, 11/28/03

5.2.4.2 Extent of counterfeiting in the UAE

BPG members define counterfeiting as any trade outside of the four major cosmetics distributors in the UAE. They estimate that about 8-10% of the total market in the UAE is counterfeit²⁹ and exists at levels similar to other international markets. But the concern, as in the case of FMCG products remains transshipments, where goods enter the free zones and are then re-routed to countries in Europe.

Since most of the cosmetic trade in the UAE occurs through the exclusive distributors, counterfeits in the domestic market is quite limited, and mainly in the unorganized outlets. In countries such as Iran, Africa and Saudi Arabia, where organized retail levels are low, local counterfeit sales are relatively higher than the UAE.

5.2.4.3 Sources and types

Primarily imported from China to the UAE, a large volume is also re-routed to Europe from the UAE market. The products observed to be more prone to counterfeiting are fragrances, make-up and skin-care. Counterfeit goods in this sector may also enter the country as separate components (separate bottles, labels, etc). These components are then assembled or packaged locally for re-export.

5.2.4.4 Key industry initiatives

Combat activities are mostly company led including training programs for customs and other enforcement agencies and public awareness campaigns. Since most of the companies manufacture in fixed locations and employ exclusive distributors in the UAE, it is relatively easy to track any consignment outside of this shipment route. The industry has taken steps to inform customs officials of these shipment routes and assist them in identifying 'suspect' consignments.

5.2.5 Pharmaceuticals

The increasing population in the UAE has created a growing market for healthcare services and products. Initiatives such as the development of Dubai Healthcare City will ensure a sustained future demand as well. The UAE tops the list of Gulf and the other Arab countries in annual per capita consumption of medicines. While an individual spends an annual average of US\$ 52 on medicines in the Gulf countries and US\$ 20.3 in the other Arab countries, an individual in the UAE spends about US\$ 80 a year.³⁰ In general, medicine prices in the UAE are considered higher than other countries.

²⁹ BPG members

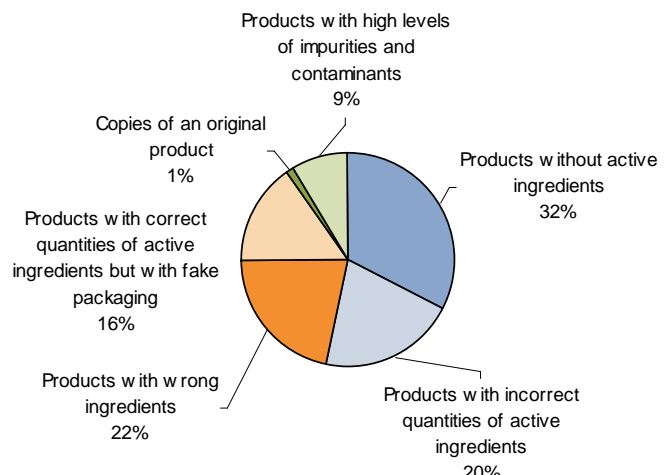
³⁰ Dubai Pharmaceuticals Market, 2004: Dubai Chamber of Commerce and Industry

5.2.5.1 Global scenario

A report released by the U.S. Centre for Medicine estimates counterfeit medicine sales to reach US\$ 75 billion in 2010, which would be 92% increase from 2005 levels. The World Health Organization (WHO) estimates that as much as US\$ 35 billion in counterfeit medicines or 10% of all prescription medicines sold globally are counterfeits.³¹

According to the WHO, counterfeit medicines can be grouped into six categories, which are illustrated in the adjoining graph³².

An estimated 25% of the medicines consumed in developing countries are thought to be counterfeit and in some countries, this figure may be as high as 50%³³. Counterfeiting of pharmaceutical products is not only a serious problem for the genuine manufacturers, but also poses significant health risks for consumers.



5.2.5.2 Extent of counterfeiting

The UAE experiences relatively very low levels of counterfeit medicines in the country. BPG members estimate that counterfeits account for less than 0.1% of the total market in the UAE,³⁴ which is significantly lower than other international markets or even other regional markets such as Lebanon, where counterfeits are significantly higher at around 10-15% of the total market³⁵.

The low penetration of counterfeit in UAE is attributed to stringent regulations and strict penalties enforced by the regulatory authorities for counterfeit in the pharmaceutical sector in UAE.

5.2.5.3 Sources and types

Counterfeit drugs are primarily manufactured in China. Also, in many countries, Internet-based and direct sales of pharmaceuticals are becoming a key source of counterfeit medicines. Some counterfeit drugs are stored in the various free zones of the UAE, as is evidenced by some of the recent seizures and raids conducted by the Dubai Customs authorities³⁶.

³¹ Ibid, General Information on Counterfeit Medicines, World Health Organization (WHO)

³² Ibid, General Information on Counterfeit Medicines, World Health Organization (WHO)

³³ Ibid, General Information on Counterfeit Medicines, World Health Organization (WHO)

³⁴ BPG members

³⁵ BPG members

³⁶ <http://www.arabianbusiness.com/500167-fake-drugs-worth-over-54mn-seized>

5.2.5.4 Key industry initiatives

Given the active efforts of the Ministry of Health and other regulatory bodies, brand owners in the UAE have a limited role in combating counterfeits.

5.3 Conclusion

Counterfeiting is a significant issue in most of the above sectors other than pharmaceuticals. Transshipments of counterfeit products is a growing concern for brand owners.

The table below summarizes the market size and level of counterfeiting in these sectors.

Table 3: Market size and level of counterfeiting by Sector

Sector	Market Size (US\$ million)	Estimated level of counterfeits (% of total market)
FMCG - Tobacco	309.72	< 5% *
FMCG – Food & Beverage	350.0	0.3% - 5%
FMCG – Household Products)	86.0	3-5%
Automobile Parts	3,814.7	12.5%
Pharmaceuticals	1,300.0	0.10%**
Cosmetics	414.0	8-10%
Total	6,274.4	

** Illicit Trade/Contraband activities is estimated to be around 40-47% of the total market in value terms*

*** Dubai Customs, in 2006, seized around US\$ 2 million of counterfeit medicines in the free zone areas (airport, Jebel Ali). This is excluded from local UAE market estimates for the purpose of this study.*

6 ECONOMIC IMPACT

6.1 Methodology

Counterfeiting has a serious impact on the revenues, profits, investment levels, employment levels, taxes (in the form custom duties) for various industry sectors. Counterfeiting reduces company revenues, stifles investment and innovation, and retards economic growth. Its effects on the general economy are observed directly through job losses and reduced GDP.

6.1.1 *Impact on the industry*

In the absence of published information on counterfeits and seizures in these sectors across the UAE, we have sourced the estimates of the percentage composition of counterfeiting in the selected industries/sectors from the BPG members and using these estimates to arrive at the size of counterfeits (in value terms);

Value of counterfeits = Sector Market Size (value) X Estimated level of counterfeits (% of the total market).

We have assumed that customers will buy genuine products in the absence of counterfeit items. Thus estimates of counterfeiting can be used as a proxy for the loss in revenues due to counterfeiting for the genuine industry.

We have also used the above estimates in conjunction with the outlined macro-econometric model to arrive at the sectoral impact of curbing counterfeits.

6.1.2 *Impact on the economy*

In the model that has been developed for this study, we have considered the effects on the economy as a whole as well as by sector. However, an important feature of UAE needs to be borne in mind: the counterfeits are not produced within UAE but are wholly imported from outside. This changes to some extent the conceptual framework that is usually employed in analyzing the effects of counterfeiting on producers. We will look at the conceptual framework as it has been proposed in popular literature on counterfeiting (Please refer Appendix A.1) and then indicate the differences that need to be introduced in the context of UAE.

In many ways, the problem being depicted here can be considered similar to the problem of the “Market for Lemons” that was pioneered by the economist George Akerlof³⁷. The Akerlof results states that when buyers are unsure of the quality of the product that they are buying, they will assume the worst: they will assume that all products are of inferior quality. This could lead to two effects:

- Sellers of high quality product are unable to charge a premium for their products since they will face buyer resistance.

³⁷ George Akerlof (1970) "[The Market for Lemons](#): Quality Uncertainty and the Market Mechanism", Quarterly *Journal of Economics*.

- Buyers, who are willing to pay a high price for premium products, will abandon the market due to quality uncertainty. They will move to markets which can enforce quality better.

Applied to this situation, most buyers in these sectors in the UAE are ill-informed of the true quality of the product when they purchase it, the counterfeits being very good imitation of the genuine products. However, buyers will become aware of the inferior quality of the product after using it.

As in the Market for Lemons situation, after some time will buyers will associate all products being sold in UAE with counterfeits. In the Akerlof solution, the willingness of buyers to pay a high price for any product comes down since buyers are uncertain if the products are counterfeit or genuine. There will then be a real danger that buyers will shun the UAE market altogether and do their shopping in other international centres of the world where the probability of buying counterfeits is lower. The value attached to Brand UAE could be eroded.

In this section, we have formulated a macro-econometric model to study effects of presence of counterfeit goods. We will consider the following variables in our model:

- 1 NGDPC: Non-oil GDP at constant prices
- 2 TRADE: This is a variable to represent retail trade in the UAE. Of course, data on just retail trade are not available and the variable also includes wholesale trade and a few other items.
- 3 HFCE: Final consumption expenditures of households
- 4 TAX: tax collections by the government
- 5 WS: Government expenditure on wages and salaries
- 6 LAB: Employment levels in the UAE
- 7 MC: Imports into the UAE at constant prices
- 8 DUM, DUM1 and DUM2: Three dummy variables to capture some shocks to the economy in the mid-eighties, 1998 and 1999.

The data-set spans the period from 1980 to 2005. More details on the model are provided in Appendix A.2.

6.2 Impact on the industry

Outlined below are the estimates of market size and counterfeiting in each of the selected sectors:

Table 4: Estimated Percentage of Counterfeits and Total Value³⁸

Sector	Market Size (US\$ million)	Estimated level of counterfeits (% of total)	Value of counterfeits (US\$ million)	Value of counterfeits (AED million)	% of total counterfeits
FMCG - Tobacco	309.72	< 5% *	< 15.49	<56.83	2.8%
FMCG – Food & Beverage	350.0	0.3% - 5%	1.05 – 17.5	3.9 – 64.2	3.1%
FMCG – Household Prdts)	86.0	3-5%	2.6 – 4.3	9.5 – 15.8	0.8%
Automobile Parts	3,814.7	12.5%	476.8	1,749.9	85.6%
Pharmaceuticals	1,300.0	0.10% **	1.3	4.8	0.2%
Cosmetics	414.0	8-10%	33.1 - 41.4	151.9	7.4%
Total	6,274.4		530.4 -557.8	1,947–2,041	100%

Illicit Trade/Contraband activities is estimated to be around 40-47% of the total market in value terms

*** Dubai Customs, in 2006, seized around US\$ 2 million of counterfeit medicines in the free zone areas (airport, Jebel Ali). This is excluded from local UAE market estimates for the purpose of this study.*

The total value of counterfeits in the four selected sectors is estimated to be in the range of US\$ 530.4-557.8 million. The above estimated value of counterfeits can be considered as a proxy for the loss in revenues for the industry, on the assumption that the elimination of counterfeits would see a full transfer of this to the genuine product market.

6.3 Impact on economy - Overall

A number of estimates exist for the level of counterfeiting in total world trade.

- As per the OECD,³⁹ the level of counterfeiting was 3% of world trade in 1990 which increased to 5% in 1995. However, this estimate was criticised as being an underestimate.⁴⁰
- The World Intellectual Property Organisation (WIPO)⁴¹ estimates the level to have gone up to 7% by around 2003.

Since counterfeit trade has only been increasing, we have used a benchmark figure of 10% for our computations. If we were to assume that counterfeits constitute 10% of all goods sold, an

³⁸ Source: BPG members, researchandmarkets, Datamonitor

³⁹ OECD (1998) *Economic Impact of Counterfeiting*, OECD, Paris.

⁴⁰ <http://www.ft.com/cms/s/d85dbe70-fd01-11db-9971-000b5df10621.html> (accessed on 14 Sept., 2007)

⁴¹ World Intellectual Property Organisation (2006) *Guidelines for a Successful and Sustainable IP Enforcement Strategy*, http://patentagenda.wipo.int/edocs/mdocs/enforcement/en/wipo_ace_3/wipo_ace_3_15.pdf (accessed 14 Sept., 2007)

elimination of counterfeits will raise, as per the conceptual framework, the demand for genuine products by a similar quantity. This, given our assumption that all imports pertain to genuine products only, will mean that imports rise by 10%. The table below gives the effect of this policy change on the endogenous variables of the model.

Table 5: Impact of Curbing Counterfeit Products - Estimated Increase in Endogenous Variable Values (%)

	NGDPC	TRADE	TAX	LAB	HFCE
1996	0.58	1.60	0.11	0.45	2.76
1997	1.40	2.79	0.34	0.78	3.07
1998	2.26	3.69	0.68	1.04	3.30
1999	3.08	4.35	1.10	1.23	3.48
2000	3.81	4.85	1.57	1.39	3.62
2001	4.43	5.22	2.05	1.51	3.74
2002	4.94	5.49	2.53	1.62	3.83
2003	5.35	5.69	2.98	1.71	3.91
2004	5.69	5.84	3.40	1.78	3.98
2005	5.95	5.95	3.78	1.85	4.04

The results of Table 5 show the significant beneficial effects that curbing of counterfeits will have on the economy. Every aspect of the economy stands to benefit. In the final year of the Policy Scenario, Non-oil GDP rises by almost 6%, Retail Trade too rises by almost 6%, Tax collections rise by almost 4%, employment rise by about 2% and household final consumption expenditure rises by over 4%.

6.4 Impact on economy – By sector

It may be noted from Table 1 that Automobile Parts account for the largest volume of counterfeits and, naturally, the impact curbing counterfeits for this sector will be strongest. At the other extreme, pharmaceuticals account for barely 0.2% of the counterfeits in Table 4. Obviously, the impact of curbing counterfeits in this sector will be quite low.

Table 6: Sector: FMCG - Cigarettes

	NGDPC	TRADE	HFCE	TAX	LAB(000)
1996	0.38	0.17	1.32	0.01	0.15
1997	0.99	0.32	1.62	0.03	0.29
1998	1.72	0.44	1.74	0.08	0.38
1999	2.50	0.54	1.90	0.14	0.48
2000	3.32	0.62	2.15	0.11	0.6
2001	4.15	0.72	2.84	0.19	0.71
2002	5.03	0.82	2.96	0.29	0.83
2003	5.94	0.91	3.31	0.41	0.94
2004	6.87	0.99	3.69	0.54	1.07
2005	7.83	1.08	4.14	0.69	1.2
TOTAL	38.75	6.62	25.67	2.49	6.65
Note: NGDPC, TRADE, HFCE and TAX are measured in million US\$.					

During 1996-2005, curbing counterfeit cigarettes would have increased non-oil GDP by US\$ 38.75 million, Retail Trade by US\$ 6.62 million, final consumption expenditures of households by US\$ 25.67 million, tax collections by US\$ 2.49 million, and employment opportunities by about 6,650.

In addition, for cigarettes there is a further problem of illicit trade/contraband activities. Approximately, 40% to 47% of cigarettes brought into the country do not pay any duty or pay duty only partially. Considering that custom duties of 100% on CIF is prevalent for cigarettes in the UAE, if this illicit trade is curbed, the tax collections indicated in the above table would be significantly improved. than indicated in Table 6.

Table 7: Sector: FMCG – Foods & Beverages

	NGDPC	TRADE	HFCE	TAX	LAB(000)
1996	0.43	0.19	1.49	0.01	0.02
1997	1.12	0.36	1.83	0.04	0.03
1998	1.95	0.50	1.96	0.09	0.04
1999	2.83	0.61	2.15	0.16	0.06
2000	3.75	0.71	2.43	0.13	0.07
2001	4.69	0.82	3.21	0.22	0.08
2002	5.68	0.93	3.34	0.33	0.1
2003	6.71	1.03	3.74	0.46	0.11
2004	7.77	1.12	4.17	0.61	0.12
2005	8.84	1.22	4.67	0.78	0.14
TOTAL	43.77	7.48	28.99	2.81	0.77
Note: NGDPC, TRADE, HFCE and TAX are measured in million US\$.					

During 1996-2005, curbing counterfeits in food and beverage products would have increased non-oil GDP by US\$ 43.77 million, Retail Trade by US\$ 7.48 million, final consumption expenditures of households by US\$ 28.99 million , tax collections by US\$ 2.8 million, , employment opportunities by about 770.

Table 8: Sector: FMCG – Household Products

	NGDPC	TRADE	HFCE	TAX	LAB(000)
1996	0.11	0.05	0.37	0.00	0
1997	0.28	0.09	0.45	0.01	0.01
1998	0.48	0.12	0.48	0.02	0.01
1999	0.69	0.15	0.53	0.04	0.01
2000	0.92	0.17	0.60	0.03	0.02
2001	1.15	0.20	0.79	0.05	0.02
2002	1.39	0.23	0.82	0.08	0.02
2003	1.65	0.25	0.92	0.11	0.03
2004	1.90	0.28	1.02	0.15	0.03
2005	2.17	0.30	1.15	0.19	0.03
TOTAL	10.74	1.83	7.11	0.69	0.18
Note: NGDPC, TRADE, HFCE and TAX are measured in million US\$.					

In this period, curbing counterfeits in household products would have increased non-oil GDP by US\$ 10.74 million, Retail Trade by US\$ 1.83 million, final consumption expenditures of

households by US\$ 7.11 million, tax collections by US\$ 0.69 million and employment opportunities by about 180.

Table 9: Sector: Automobile Parts

	NGDPC	TRADE	HFCE	TAX	LAB(000)
1996	11.82	5.12	40.57	0.27	0.49
1997	30.63	9.73	49.81	1.02	0.92
1998	53.08	13.59	53.49	2.34	1.22
1999	77.17	16.68	58.69	4.28	1.53
2000	102.30	19.22	66.34	3.56	1.9
2001	127.83	22.35	87.63	5.90	2.27
2002	154.95	25.33	91.12	8.89	2.62
2003	182.93	28.11	102.07	12.50	3
2004	211.77	30.57	113.65	16.65	3.4
2005	241.26	33.14	127.49	21.26	3.82
TOTAL	1193.74	203.83	790.85	76.66	21.17

Note: NGDPC, TRADE, HFCE and TAX are measured in million US\$.

In the same period, curbing counterfeits in automobile parts would have increased non-oil GDP by US\$ 1193.74 million, Retail Trade by US\$ 203.8 million, final consumption expenditures of households by US\$ 790.85 million, Tax collections by US\$ 76.66 million and employment opportunities by about 21,170.

Table 10: Sector: Pharmaceuticals

	NGDPC	TRADE	HFCE	TAX	LAB(000)
1996	0.03	0.01	0.11	0.00	0
1997	0.08	0.03	0.13	0.00	0
1998	0.14	0.04	0.14	0.01	0
1999	0.21	0.04	0.16	0.01	0
2000	0.28	0.05	0.18	0.01	0.01
2001	0.34	0.06	0.23	0.02	0.01
2002	0.42	0.07	0.25	0.02	0.01
2003	0.49	0.08	0.28	0.03	0.01
2004	0.57	0.08	0.31	0.04	0.01
2005	0.65	0.09	0.34	0.06	0.01
TOTAL	3.21	0.55	2.13	0.20	0.06

Note: NGDPC, TRADE, HFCE and TAX are measured in million US\$.

In the same period, curbing counterfeits in pharmaceuticals would have increased non-oil GDP by US\$ 3.21 million, Retail Trade by US\$ 0.55 million, final consumption expenditures of households by US\$ 2.13 million and tax collections by US\$ 0.2 million.

Table 11: Sector: Cosmetics

	NGDPC	TRADE	HFCE	TAX	LAB(000)
1996	1.03	0.44	3.53	0.02	0.04
1997	2.66	0.84	4.33	0.09	0.08
1998	4.61	1.18	4.65	0.20	0.11
1999	6.70	1.45	5.10	0.37	0.13
2000	8.89	1.67	5.76	0.31	0.16
2001	11.11	1.94	7.61	0.51	0.2
2002	13.46	2.20	7.92	0.77	0.23
2003	15.89	2.44	8.87	1.08	0.26
2004	18.40	2.66	9.87	1.45	0.3
2005	20.96	2.88	11.08	1.85	0.33
TOTAL	103.71	17.71	68.71	6.66	1.84

Note: NGDPC, TRADE, HFCE and TAX are measured in million US\$.

In the same period, curbing counterfeits in cosmetics would have increased non-oil GDP by US\$103.7 million, Retail Trade by US\$ 17.71 million, final consumption expenditures of households by US\$ 68.71 million, tax collections by US\$ 6.66 million and employment opportunities by about 1,840.

**Table 12: Incremental Impact on Some Macroeconomic Variables
All Selected Sectors**

	NGDPC	TRADE	HFCE	TAX	LAB (000)
1996	13.80	5.98	47.37	0.31	0.7
1997	35.77	11.37	58.16	1.19	1.33
1998	61.99	15.87	62.46	2.74	1.77
1999	90.11	19.48	68.53	4.99	2.22
2000	119.45	22.44	77.47	4.16	2.75
2001	149.27	26.09	102.32	6.89	3.29
2002	180.93	29.58	106.40	10.38	3.8
2003	213.60	32.82	119.18	14.59	4.35
2004	247.28	35.69	132.71	19.44	4.93
2005	281.71	38.69	148.86	24.82	5.54
TOTAL	1393.90	238.01	923.46	89.50	30.68

Note: NGDPC, TRADE, HFCE and TAX are measured in million US\$.

Overall, curbing trade in counterfeits in the select sectors can yield significant benefits. Non-oil sector GDP (NGDPC) rises by US\$ 1,393.9 million. Tax collection (TAX) rises by over US\$ 89.5 million; this will be even more if illicit trade in cigarettes is curbed (see the computation after Table 6). Finally, employment (LAB) rises by around 30,680.

Table 13: Incremental Impact on Some Macroeconomic Variables: Summary

By Yr 2005	NGDPC	TRADE	HFCE	TAX	LAB (000)
Tobacco – Cigarettes	38.75	6.62	25.67	2.49	6.65
Food & Beverages	43.77	7.48	28.99	2.81	0.77
Household Products	10.74	1.83	7.11	0.69	0.18
Auto Spare Parts	1193.74	203.83	790.85	76.66	21.17
Pharmaceuticals	3.21	0.55	2.13	0.20	0.06
Cosmetics	103.71	17.71	68.71	6.66	1.84
Overall	1,393.90	238.01	923.46	89.50	30.68
Note: NGDPC, TRADE, HFCE and TAX are measured in million US\$. 1 US\$ = 3.67 United Arab Emirates AED					

Among the various sectors studied, Automobile parts seem most affected by counterfeiting. Naturally, curbing counterfeits in this sector will yield maximum benefits (Table 9).

Extending the crackdown on all counterfeit trade can deliver significant benefits. Just focusing on some sectors has shown what is possible and is an indication of what is being lost to the economy. Last, but not the least, is the non-quantifiable, but nonetheless very significant benefit of the policy of curbing counterfeits is that the adverse of effects of the *Market for Lemons* situation will be avoided: Brand UAE will retain its lustre and act as a magnet for shoppers from around the world.

6.5 Impact on consumers

The impact of counterfeiting on consumers operates through a series of mechanisms:

- i. if the consumer purchases a counterfeit product unintentionally, they are likely to obtain a product that is of lower quality and perceived value than expected;
- ii. some counterfeit products (e.g. pharmaceuticals, toys, food & beverage, toothpastes, car and airplane spares) pose serious health and/or safety risks. Counterfeit consumer products or medicines could result in severe allergies, permanent disabilities, internal injuries or fatalities. Counterfeit cigarettes confiscated in the UK had 75% more tar, 28% more nicotine and about 63% more carbon monoxide than the genuine product. Counterfeit shampoos can cause excessive hair loss, allergic reactions on the scalp, eyes and skin. Such counterfeit products affecting the health of the consumer can also create a strain on the country's public health system.
- iii. the consumer suffers from the impact of reduced profits for the legitimate producers through the producers cutting back on new improved product research and development and hence the consumer has lower availability of advanced product range in the future;
- iv. counterfeiting is likely to have links to organized crime attracted by the large profits and low risks in this illicit trade; and

- v. However, there are some minor offsetting consumer gains in some areas (e.g. counterfeit clothing in those circumstances where the consumer knows that the product is counterfeit) where part of the producers' loss is a gain to the consumer⁴².

Although these mechanisms operate in different directions, it is likely that the negative impact outweighs the positive impact.⁴³

⁴² *Centre for Economics and Business Research Ltd, June 2000*

⁴³ *Centre for Economics and Business Research Ltd, June 2000*

7 ON-GOING COMBAT EFFORTS

Curbing counterfeit products has been a growing concern for the industry, consumers and government authorities in the UAE. The UAE is one of the leading transshipment points in the world and counterfeiting poses a threat to its reputation as a leading business hub and tourist destination.

Most counterfeiting combat efforts are focused on ‘Awareness’ and ‘Enforcement’. Awareness involves the launch of public awareness campaigns for consumers, while enforcement includes both legislation and execution, in the form of penalties.

7.1 Current measures in place by regulatory bodies

Three laws in the UAE relate to unfair competition, fraud and counterfeiting - Commercial Transactions Law No 18 of 1993, Federal Law No 4 of 1979 for Combating Fraud and Counterfeiting in Commercial Transactions and Trademark Law No 37 of 1992.⁴⁴

The UAE joined the World Intellectual Property Organization (WIPO) in 1975. As a member of the WIPO, the UAE acceded to the Paris Convention for the Protection of Industrial Property in 1996, following the implementation of the three intellectual property laws.

The first ever UAE Copyright Law and its Implementing Regulations came into force on 12 April 1993 and 1 September 1994, respectively. This Law was repealed on 14 July 2002 by publication in the Official Gazette of UAE Federal Law No. 7 of 2002 regarding Copyright and Related Rights (hereinafter referred to as the “Law”).

As the UAE is a signatory to the World Trade Organization (WTO), its provisions relating to intellectual property as stated in the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), including reciprocity, are applicable to the UAE.⁴⁵ Brand owners in the UAE, however, consider penalties for intellectual property infringement relatively light.

The penalty on importation, bringing in, buying from unlicensed vendors, or selling of counterfeit goods in the markets of Dubai starts from AED 5,000 (1st violation), AED 15,000 (2nd violation), AED 20,000 (3rd violation), and/or minimal or no imprisonment.⁴⁶ The authorities, acknowledging this, have taken steps to address the issue and are in the process of implementing increased penalties for intellectual property infringers. Primary research conducted with the Authorities revealed that plans were underway to increase the penalties and introduce imprisonment charges, in line with international benchmarks.

The Authorities also work closely with brand owners and legal firms to prevent the entry and sale of counterfeit goods in the country. The recently formed IP department within the Dubai Customs and Commercial Protection Section within the Dubai Economic Development Department points favourably in this direction.

⁴⁴ http://www.trenchlaw.com/w_article/article_view.asp?articleid=730

⁴⁵ *Al Tamimi & Company: Copyright Law*

⁴⁶ *Khaleej Times: Strict enforcement of laws to check fake products urged*

Dubai Customs has planned to adopt advanced technologies to assess the risk of containers brought into the UAE in place of the current x-ray procedure of detection. Such a risk assessment method, existent in several European customs, detects the 'risk' of every container, based on the source country, ports passed through, sender and receiver names, etc

7.2 Seizures and raids

Exclusive authorities for the prevention and confiscation of counterfeit products such as the Trademark and Copyrights sections, the Department of Police, the Department of Economic Development and individual Municipalities in different Emirates are quite active.

There is no official published data available on the volume and value of seizures and raids of counterfeits aggregate for all of the UAE Emirates. The Intellectual Property unit within Dubai Customs, during the year 2006, seized fake merchandise exceeding 3 million pieces/packs in Dubai. The value of these products was approximately AED 23.87 million. Most of the merchandise seized was DVDs, auto parts and mobile phones accessories. Approximately 23,643 pieces/packs of smuggled merchandise was also caught during this period with a value of AED 7.71 million⁴⁷.

A select compilation of seizures and raids of counterfeit products from news articles in the UAE media, shows a total of AED 69 million from February 05 till March 07⁴⁸.

7.3 Other industry efforts

Most counterfeiting combat activities are individual company led, based on leads from legal firms and intellectual property companies. There are a range of service providers including law firms, investigators and other consultancies.

Most of the brand owners in the UAE conduct training of UAE and GCC customs officials periodically to create awareness and to help them distinguish counterfeit products from the genuine ones.

Several industry groups were formed in the UAE to fight counterfeiting, but have focused on lobbying activities. Most of them are no longer active. Nevertheless, some associations are very active in supporting their members in combating counterfeiting, such as the Business Software Alliance (BSA) and the International Federation of the Phonographic Industry (IFPI). The latest international initiative is the Global Anti-counterfeiting Group (GACG), a forum to increase awareness of the health and safety risks of counterfeit products.

Close association between the BSA and government authorities has resulted in the UAE witnessing low software piracy levels (34%) in the UAE. This is not only the lowest in the Middle East and North Africa (MENA) region, but even lower than some European countries,

⁴⁷ Al Tamimi and Company

⁴⁸ Gulf News, Khaleej Times, Zawya, KPMG Analysis

France (45%), Greece (62%), Ireland (38%), Portugal (40%) and Spain (43%).⁴⁹ This is the result of several awareness and enforcement efforts, including:

- Launching public awareness campaigns such as the "Stop Street Vendor Piracy" campaign and the "UAE Web Awards 2005" campaigns;
- Conducting several anti-piracy raids and confiscation of unlicensed software and the legal prosecution of the perpetrators.⁵⁰

This points to the need for close engagement of all stakeholders (industry bodies, regulatory authorities, enforcement agencies) to combat the counterfeiting issue.

⁴⁹ *SABA Bulletin*

⁵⁰ *SABA Bulletins*

8 METHODS ADOPTED BY REGULATORS WORLDWIDE

As intellectual property right issues are on the rise across the world, governments are strengthening their regulatory infrastructures to respond better to this issue. This section provides some preliminary suggestions for all the stakeholders for addressing counterfeiting in the UAE. These suggestions revolve around improving enforcement, raising public awareness and building a stronger association between all the stakeholders in the UAE (brand owners, distributors, government, enforcement agencies and consumers) and have been compiled from feedback received from stakeholders and reinforced by some examples observed in other countries:

- Designate counterfeit and smuggling as criminal violation (currently construed as civil violations) with stricter penalties (jail term and higher fines). Also, shorten the time required to action legal cases and reduce bureaucratic barriers;
- Impose heavy fines for local counterfeiters if they are caught producing counterfeits of health related foods and medicines;
- Impose heavy fines on not only importers, but also on retailers of such counterfeit products;
- Publicize the enforcement actions and penalties for all types of counterfeit and illicit trade activities to increase public awareness and deter future potential violators;
- Establish specialized Intellectual Property tribunals to handle civil and criminal cases, at least in major emirates;
- Where possible, recover costs of investigation, detection and destruction of counterfeit products from perpetrators;
- Encourage the general public to report counterfeits by introducing a system of rewards and leading public awareness campaigns (a consumer hotline);
- Install a risk assessment system for customs, which could identify the potential ‘risk’ of imported containers depending on the country of import, importer identity, etc;
- Provide additional resources and training to facilitate border enforcement, including against goods in transit, especially in the free trade zones of UAE; and
- Creation of coalition entities with membership of brand owners, industry bodies, legal firms and government bodies).

The above list is not exhaustive, but can serve as broad guidelines for an overall programme to combat counterfeit activities.

Raising public awareness about the problems associated with counterfeit products should become a key priority for all stakeholders. Extensive support from consumers for anti-counterfeit activities is required to make the process of detection and investigation less challenging.

9 CONCLUSION

As a major trading hub, UAE also has its share of counterfeiting trade. Sectors such as luxury goods, automobile parts and fast moving consumer goods (FMCG) have been particularly vulnerable to counterfeiting. Counterfeiting has a serious impact on the revenues, profits, investment levels, employment of the four sectors studied. The economic impact of counterfeiting in the UAE has been measured as follows:

- Total value of counterfeits and resultant loss in revenues for the four selected sectors is estimated to be in the range of US\$ 530-558 million in 2005.
- If counterfeiting was curbed, it is estimated that the non-oil GDP would have increased by over 6%, retail trade by over 6%, tax collections by almost 4%, employment by about 2% and household final consumption expenditure by almost 4% over the period 1996-2005.
- More specifically for the four sectors studied, the following table outlines the estimated impact of curbing counterfeits over the period of 1996-2005.

Table 14: Incremental Impact on Some Macroeconomic Variables: Summary

Yr 2005	NGDPC	TRADE	HFCE	TAX	LAB (000)
Tobacco – Cigarettes	38.75	6.62	25.67	2.49	6.65
Food & Beverages	43.77	7.48	28.99	2.81	0.77
Household Products	10.74	1.83	7.11	0.69	0.18
Auto Spare Parts	1193.74	203.83	790.85	76.66	21.17
Pharmaceuticals	3.21	0.55	2.13	0.20	0.06
Cosmetics	103.71	17.71	68.71	6.66	1.84
Overall	1,393.90	238.01	923.46	89.50	30.68
Note: NGDPC, TRADE, HFCE and TAX are measured in million US\$.					

Among the various sectors studied, automobile parts seem most affected by counterfeits and curbing counterfeits in this sector will yield maximum benefits. Overall, curbing trade in counterfeits in the select sectors can result in Non-oil sector GDP (NGDPC) increasing by US\$ 1,393.9 million; Tax collection (TAX) by US\$ 89.5 million; and employment (LAB) by 30,680.

Though, counterfeits in the UAE are significantly lower than other international markets, the presence of such activities could deter the entry of new players, adversely affecting the business and trading reputation of the country. Raising public awareness about the adverse effects of counterfeits and close engagement of all stakeholders remains key pivots to combat counterfeiting.

10 APPENDIX

A.1 Conceptual Framework

The economic theory underlying the losses that producers of genuine products make can now be put forward. First, consider a situation where there are no counterfeits in the market. The situation is as shown in diagram below:

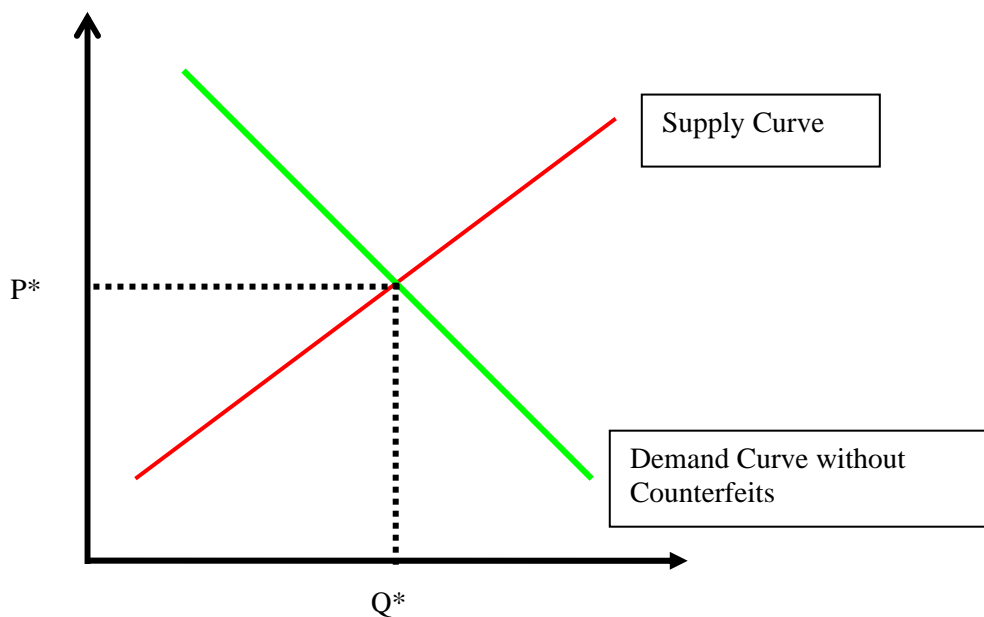


Figure 1: Equilibrium with no Counterfeit Goods

In the above figure, we have the demand and supply curves for a product in absence of any counterfeits. This yields the equilibrium in this market with P^* as the equilibrium price and Q^* as the equilibrium quantity. The entry of counterfeits in this market does the following:

- Leaves the equilibrium price (P^*) and quantity (Q^*) unchanged
- Leaves the Supply Curve unchanged, on the assumption that the behaviour of those who produce counterfeits and those who produce genuine products is the same and this is captured by the common supply curve.
- The crucial change is in the demand for genuine products. Since some of the buyers will now be deceived into buying counterfeits, the demand for genuine products at the same price will now decrease. This is technically known as **shift in the demand curve**.

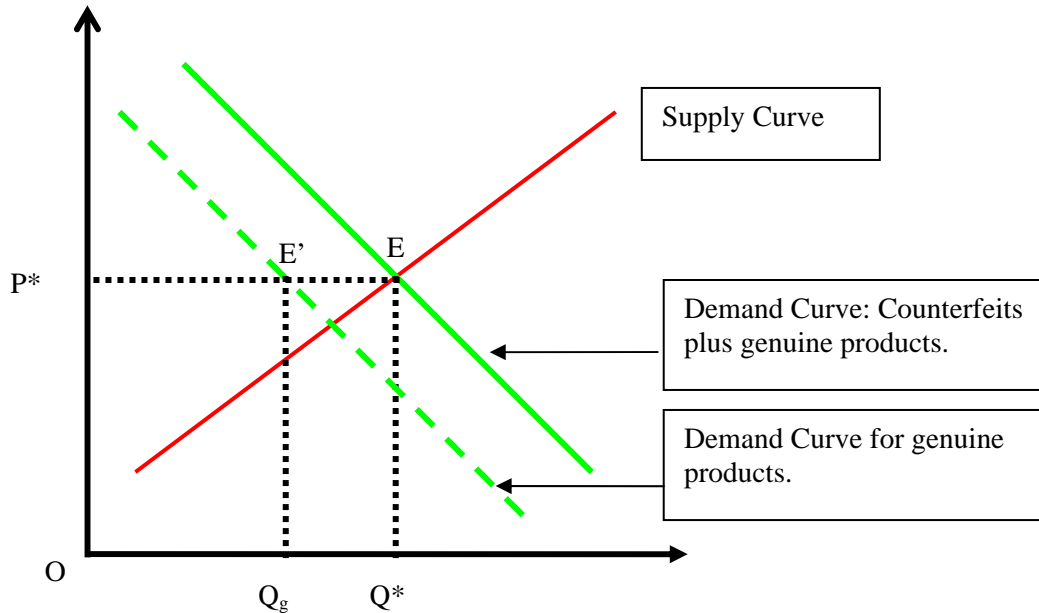


Figure 2: Change in Equilibrium with Counterfeit Goods

The shifting of the demand curve for Genuine Products (the broken line), reduces the quantity of goods sold by the genuine producers i.e. Q_g instead of Q^* , which would have been sold in the absence of counterfeits. Notice that the total amount of the product sold (Q^*) and price (P^*) does not change; all that has changed is the amount of products sold by the genuine sellers. Naturally, this will lead to a reduction in the amount of revenue earned by them.

In the absence of counterfeits, the revenue earned by the genuine sellers would have been given by the area of the rectangle P^*EQ^*O . After the entry of counterfeits, the revenue earned by the genuine sellers falls to $P^*E'Q_gO$, i.e. a reduction of $E'EQ^*Q_g$.

If the situation prevailing in Figure 2 is the current situation i.e. with a mixture of counterfeits and genuine products in the market, a policy of eliminating the counterfeits will improve the revenue earned by the genuine producers. The quantum of improvement in revenue earning will depend on what proportion of total sales are counterfeits.

A.2 Macroeconometric Modeling in the Presence of Counterfeit Goods

Using the model developed and tested in this Appendix, we now examine this conceptual proposition and quantify the benefits that would accrue to the economy as a whole.

In the context of the UAE, the entry of counterfeits is via formal or illegal imports. To the extent that counterfeits are smuggled into the country, the data on imports that we have used represents imports of genuine products only. However, to the extent that counterfeits enter the country through legal channels, albeit disguised in some form that escapes detection, the data on imports is a mixture of genuine and counterfeit products. This makes it difficult to study the impact of a scenario where policy is employed to curb counterfeits: since the data on imports is a mixture of counterfeits and genuine products we cannot quantify the increase in the imports of genuine products. Hence, we assume for the purpose of this analysis that all data on imports pertains to genuine products only.

In the discussion on conceptual framework in Appendix A.1, we have stated that an elimination of counterfeits from the market would result in an increase in the demand and hence sales of genuine products. This, of course, assumes that the total demand for the product remains unchanged after the elimination of counterfeit products.

All the variables have been transformed into natural logarithms and then estimated; this is indicated below by a pre-fix of the letter 'L' before each variable name. The estimated equations are as under. The numbers in brackets below the coefficients are t-statistics.

In equation (1) below we relate LNGDPC to its own lagged value, to the level of employment as reflected by LLAB, to the contribution of the retail and other trade sector (LTRADE).

$$\begin{aligned}
 \text{LNGDPC} &= -0.0209 & + 0.6595 \text{ LNGDPC}(t-1) & + 0.0981 \text{ LLAB} \\
 &(-0.07) & (6.69) & (1.81) \\
 &+ 0.3377 \text{ LTRADE} & & \\
 &(3.02) & &
 \end{aligned} \tag{1}$$

$$\begin{aligned}
 \text{Adjusted } R^2 &= 0.9968 \\
 \text{D.W.} &= 1.78 \\
 \text{Durbin's } h &= 1.30
 \end{aligned}$$

The quality of the equation is uniformly good with high Adjusted R^2 and no evidence of serial correlation.

In equation (2) below we model the retail trade sector (LTRADE) as a function of its own lagged values (LTRADE (t-1)), and level of imports (LMC).

$$\begin{aligned}
 \text{LTRADE} &= 0.6525 & + 0.7395 \text{ LTRADE}(t-1) & + 0.16624 \text{ LMC} \\
 &(2.02) & (10.28) & (4.72)
 \end{aligned} \tag{2}$$

$$\text{Adjusted } R^2 = 0.9914$$

D.W. = 2.02
Durbin's h = - 0.56

The quality of equation (2) is excellent with all variables significant, high Adjusted R² and no evidence of serial correlation.

Equation (3) has simple specification where the level of tax collections (LTAX) are related to the non-oil sector GDP (LNGDPC), lagged tax collections and a dummy variable.

$$\begin{aligned}
 \text{LTAX} &= 0.7909 \text{ LTAX}(t-1) & + 0.18429 \text{ LNGDPC} & - 0.6497 \text{ DUM2} \\
 &(11.64) & (3.47) & (-3.59) \\
 \text{Adjusted R}^2 &= 0.9273 \\
 \text{D.W.} &= 1.94 \\
 \text{Durbin's h} &= 0.0054
 \end{aligned}
 \tag{3}$$

Equation (3) captures the phenomenon of tax collections very adequately and the equation shows no evidence of serial correlation.

In equation (4) employment levels in the UAE (LLAB) are modeled as a function of lagged employment levels, government expenditure on wages and salaries (LWS), along with the level of household final consumption expenditures (LHFCE) to capture the demand side of the market and tax collections which allow government employment to expand. In addition, we have a dummy variable in the equation.

$$\begin{aligned}
 \text{LLAB} &= -0.8977 & + 0.6205 \text{ LLAB}(t-1) & +0.1644 \text{ LHFCE} \\
 &(-2.03) & (6.56) & (4.20) \\
 &+0.0219 \text{ LTAX} & +0.1785 \text{ LWS} & -0.0479 \text{ DUM} \\
 &(2.82) & (1.90) & (-2.05) \\
 \text{Adjusted R}^2 &= 0.9974 \\
 \text{D.W.} &= 1.86 \\
 \text{Durbin's h} &= 0.23
 \end{aligned}
 \tag{4}$$

This equation is also of excellent quality with only the dummy variable not being significant but we have kept it in the equation in the interest of model performance.

Finally, in equation (5) we model household final expenditure (LHFCE) as a function of levels of employment (LLAB) and levels of imports (LMC). In addition, we have a dummy variable.

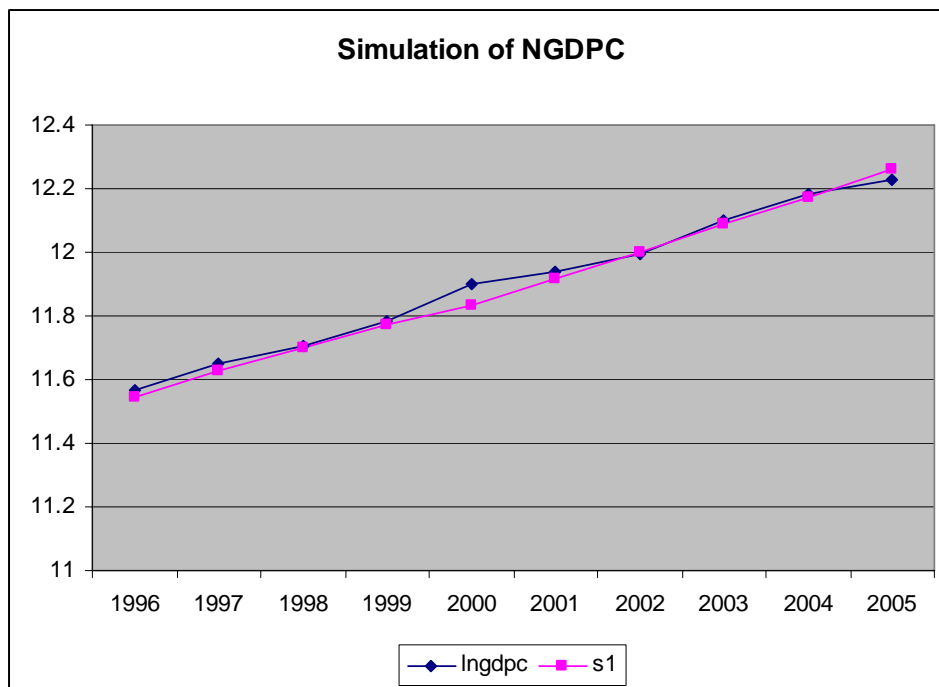
$$\begin{aligned}
 \text{LHFCE} &= 1.8838 & + 0.8959 \text{ LLAB} & +0.2435 \text{ LMC} \\
 &(2.58) & (5.06) & (1.93) \\
 &+0.8316 \text{ DUM} & & \\
 &(1.99) & & \\
 \text{Adjusted R}^2 &= 0.9922 \\
 \text{D.W.} &= 1.58
 \end{aligned}
 \tag{5}$$

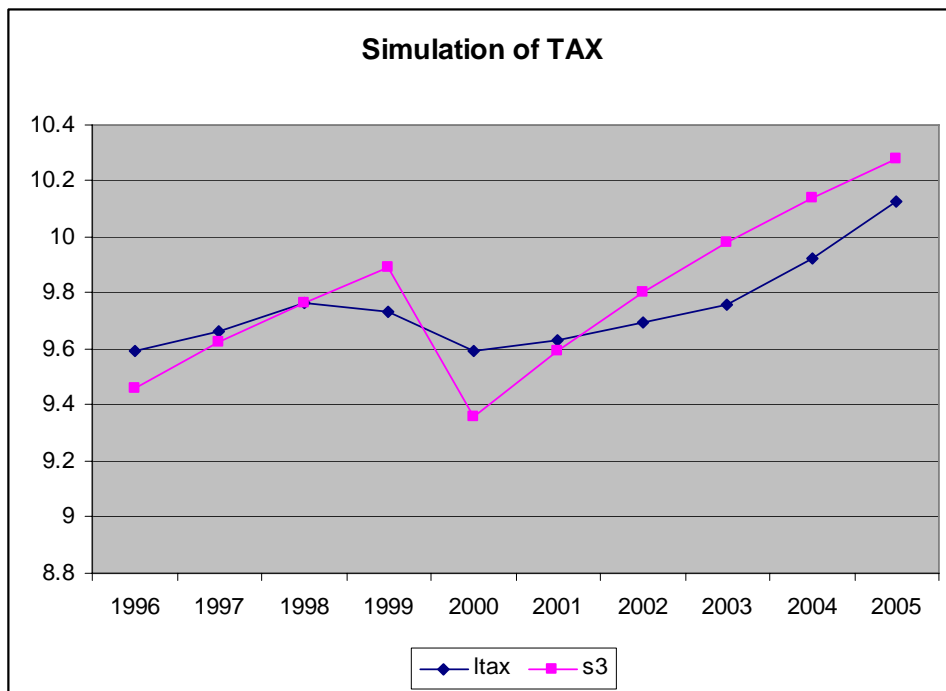
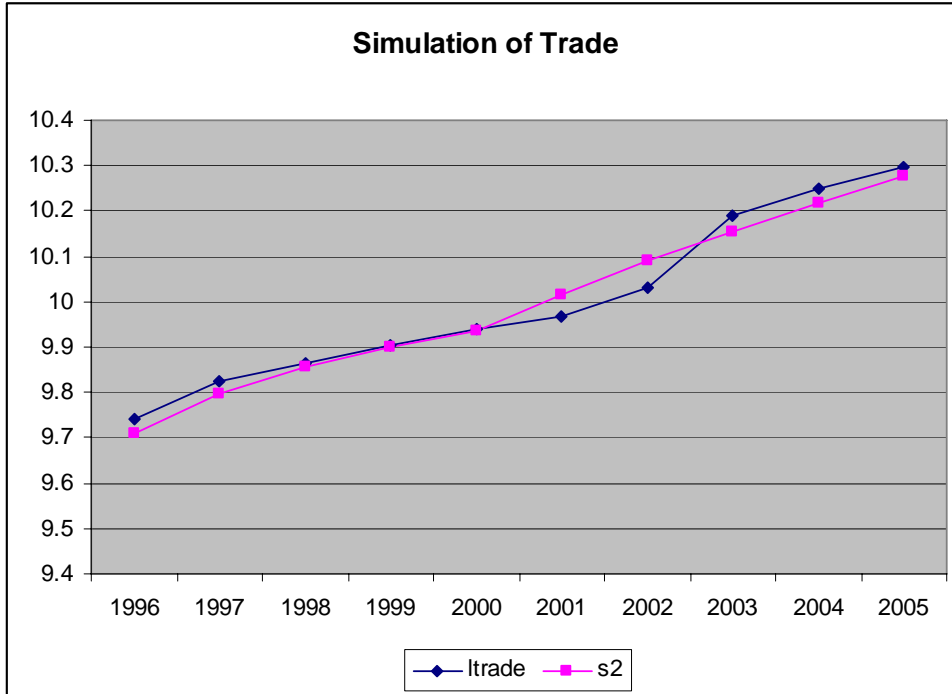
The quality of the final equation, bearing in mind its simplicity, is very satisfactory. The D.W. statistic is on the low side but acceptable.

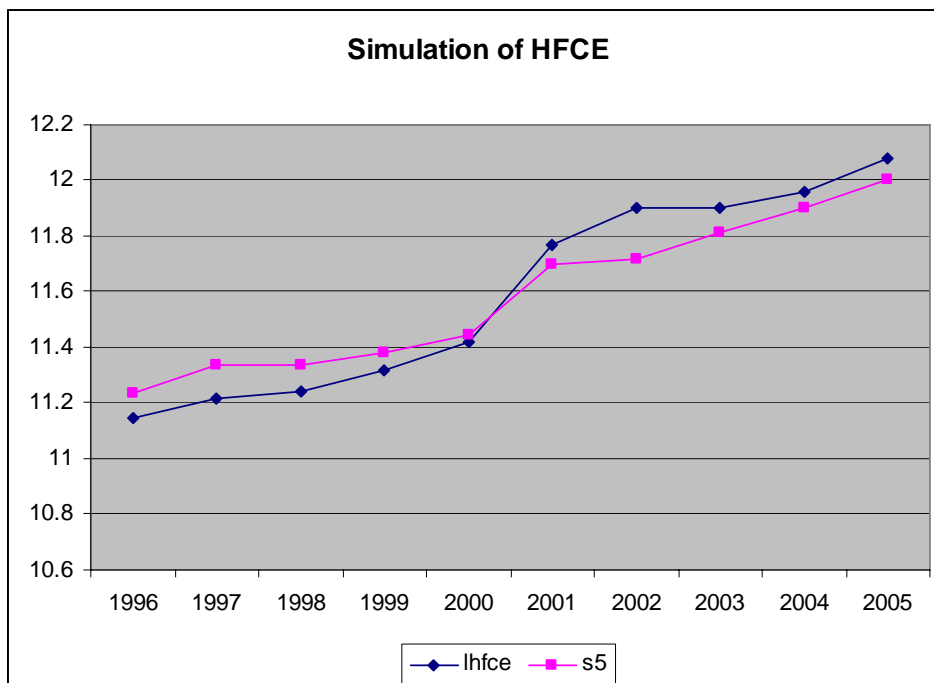
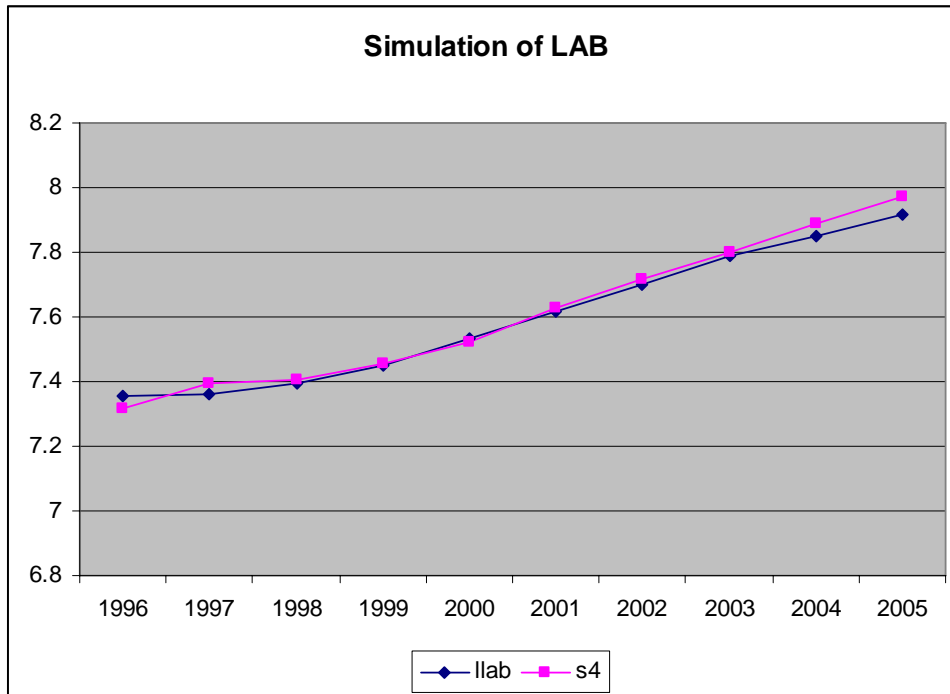
It may be noted that, since all equations are in double-log form, every coefficient is a measure of elasticity between the dependent variable and the relevant explanatory variable. This was one of the main advantages of employing a double-log specification for the entire model. Illustratively, from equation (1) a 1% rise in retail trade raises NGDPC by 0.33%.

Evaluation of the Model: Dynamic Simulation

Having estimated the individual equations of the model, we now evaluate the performance of the model using the technique of dynamic simulation. In the plots given below we give the results of the simulation exercise carried out over the period 1996 -2005.







The plots of the simulated values of the variables against their actual values shows a close match and this leads us to accept the model in view of its performance in terms of replicating the past.

A.3 Sectoral impact of counterfeit goods

It may be noted that the total level of counterfeits for the sectors listed in Table 1 is about 0.8054% of total imports into the UAE for the year 2006. We shall assume that this level of 0.8054% remains constant over the period 1996 to 2005.

We then proceed, as we had done while presenting the results of Table 5, by supposing that imports of counterfeits in the select sectors listed in Table 4 are completely curbed. It is reasonable to assume that the demand for these products is invariant i.e. those who were inadvertently consuming counterfeits would now be purchasing genuine products.

Thus, total imports would rise by 1% as a result of these curbs. As imports rise, its effects are felt, via the estimated macroeconomic model, on a variety of macroeconomic variables such as NGDPC, TRADE, HFCE, TAX and LAB. Specifically, for example, we will be able to estimate the increment that will be experienced in NGDPC after curbing of counterfeits as compared to the level of NGDPC when counterfeits found their way into the UAE. Likewise, we can estimate the incremental impact on all other macroeconomic variables.

We then distribute these total incremental effects listed in Table 5 among the sectors in terms of their shares in counterfeit trade.