

Economics of Tobacco for the Middle East and North Africa (MNA) Region

May 18, 2001

CONTENTS

I: Executive Summary	(2)
II: Cigarettes Consumption & Smoking Prevalence	(2)
III: Cigarette Taxes and Prices	(5)
IV: Health Issues	(6)
V: Tobacco Control Measures	(8)
VI: Production & Trade	(9)

Figures:

1: Percentage Shares of MNA Consumption in 1999.....	(2)
2: Cigarette Consumption in 1999 and Its Increase Over 1990 Consumption Level for Selected MNA Countries 3)	(3)
3: Cigarette Consumption Per Adult 15 Years Old and Over for Selected MNA Countries in 1999	(3)
4: Overall Smoking Prevalence and Average Consumption Per Adult Smoker in Selected MNA Countries in 1999	(4)
5: Prices of The Most Popular Brands and Total Cigarette Tax as % of Retail Prices in 1999	(5)
6: Tobacco Tax as % of Total Government Tax for Selected MNA Countries (1997-1999)	(5)
7: Import Duties on C.I.F. Value for Cigarettes in Gulf Cooperation Council Countries in 1999	(6)
8: Number of Deaths from Trachea, Lung, and Bronchus Cancer Per 100,000 Persons for MNA Countries, 1990	(6)
9: Number of Deaths from Lip, Oral Cavity, and Pharynx Cancer Per 100,000 Persons for MNA Countries in 1990	(7)
10: Results of Multivariate Regression for Cigarette Consumption	(8)
11: Tobacco Leaf Production and Its Percentage Share in The MNA Region, 1999	(9)
12: Cigarette Production and Its Percentage Share in The MNA Region, 1999	(9)
13: Tobacco Trade Net Surplus / (Deficit) for MNA Countries, 1997	(10)
14: Percentage of Increase in Net Trade Surplus/(Decrease in Net Trade Deficits) if Tobacco Deficit Did Not Exist, 1999	(11)

I: Executive Summary

The Middle East and North Africa (MNA) region includes 19 countries: Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates (UAE) and Yemen. In 1999, MNA accounted for 3.7% of the world's total cigarette consumption, and 5% of the world's population. In the MNA region, average cigarette consumption per person 15 years and older was 49 packs in 1999, not high by European standards. However, cigarette consumption shows an increasing trend in many MNA countries.

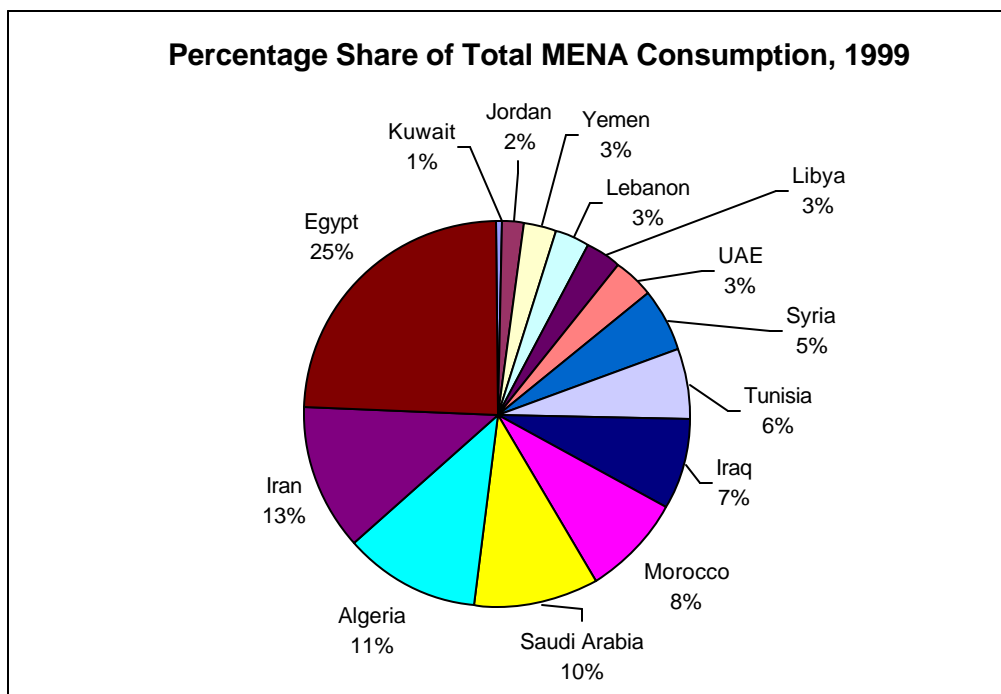
Price is an important determinant of cigarette consumption, and can be affected by tax levels. Cigarette taxes as a percentage of final price were 47% on average in the region in 1999. The average cigarette price was US\$0.93 per pack in 1999. This suggests good potential for tobacco tax increases in the MNA region. Non-price measures are also very important in discouraging smoking. A multivariate regression reveals that countries with more stringent tobacco control measures tend to have less smoking.

In terms of trade, almost all MNA countries are net tobacco leaf and product importers. The total net deficit in tobacco trade was one billion US dollars for the region in 1997.

II: Cigarette Consumption and Smoking Prevalence

In 1999, total cigarette consumption for the MNA region was 191,450 million pieces, accounting for 3.7% of the world total consumption (MNA's population was around 5% of the world total in 2000).

Figure 1: Percentage Shares of MNA Cigarette Consumption in 1999

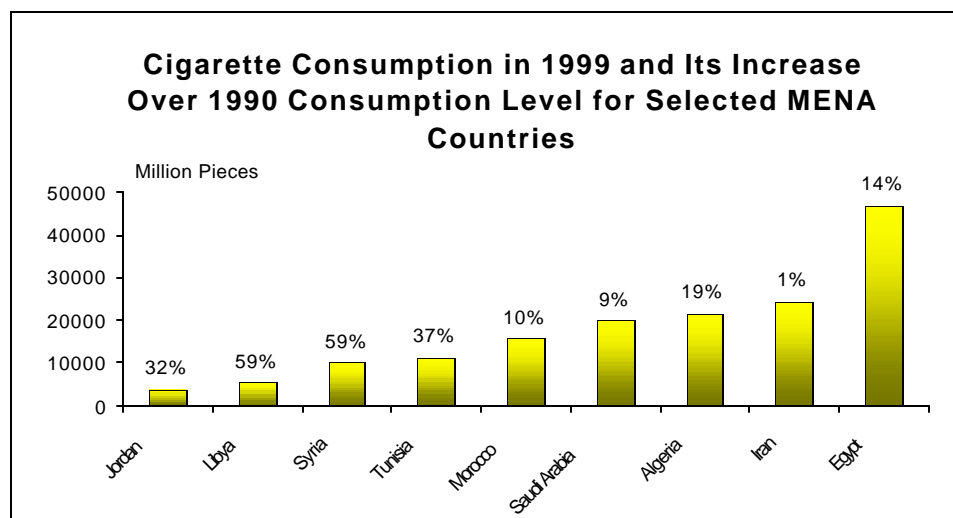


Sources: USDA and ILO

Note: Bahrain, Djibouti, Palestine, Qatar and Yemen are not included in the MNA total consumption due to lack of information. These countries are excluded from the population chart too for consistency purpose.

Cigarette consumption was been increasing in most MNA countries during the 1990s. However, the rates of increase vary considerably. In Iran, consumption was almost the same in 1999 as in 1990, while consumption in Libya and Syria increased by nearly 60% during that period. In 1999, Egypt was the biggest cigarette consuming country, with 46,600 million pieces cigarette consumed, or one fourth of the region's total.

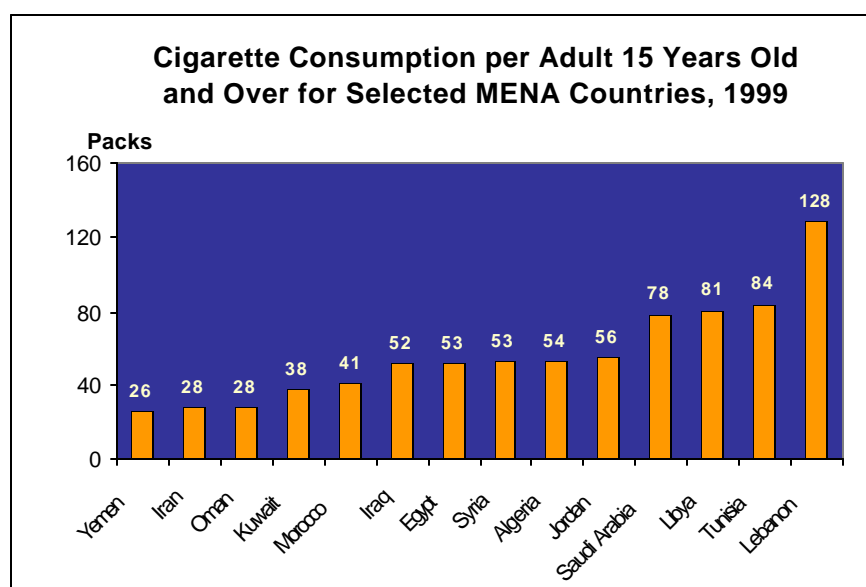
Figure 2: Cigarette Consumption in 1999, Increase since 1990, Selected MNA Countries



Sources: USDA and FAO

The scenario is quite different for cigarette consumption per person 15 years and older, which was highest in Lebanon, Tunisia, Libya and Saudi Arabia.

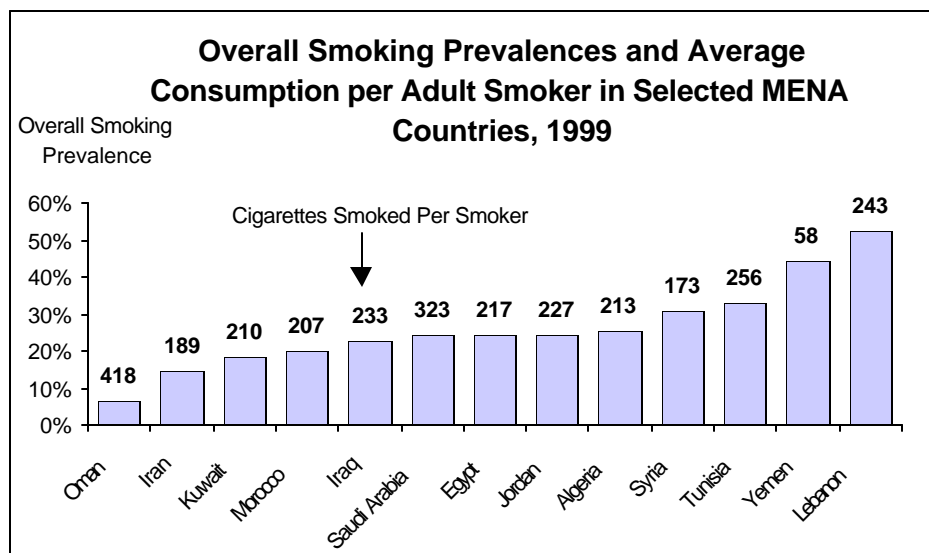
Figure 3: Cigarette Consumption per Person 15 Years and Older, 1999, Selected Countries



Source: World Bank Estimates

Smoking prevalence differs greatly among MNA countries, from 7% in Oman to 53% in Lebanon. Overall, 23% of adults in the region are smokers and average annual consumption for these smokers was 212 packs in 1999.

Figure 4: Overall Smoking Prevalence and Average Consumption Per Adult Smoker in Selected MNA Countries in 1999

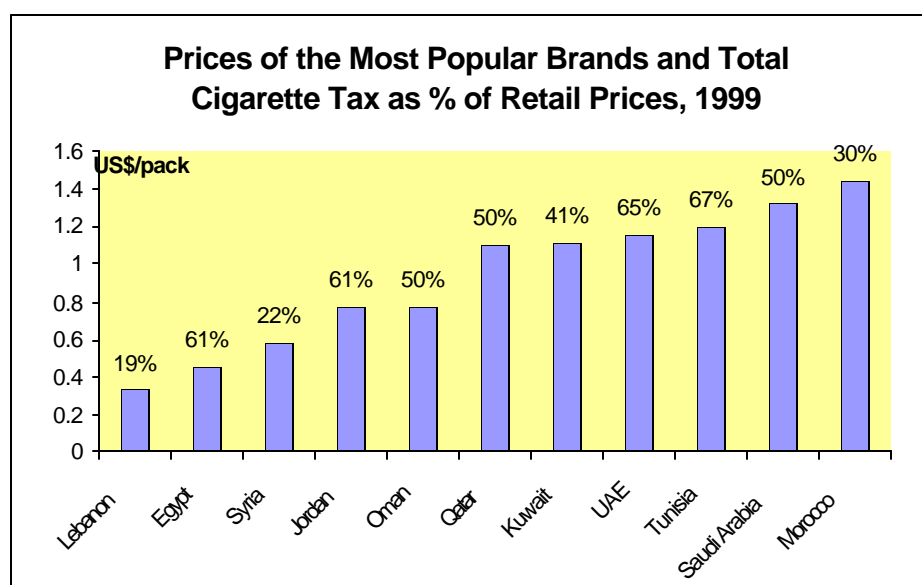


Source: World Bank Estimate

III: Cigarette Taxes and Prices

In 1999, total cigarette taxes as a percentage of retail price (excise, VAT and import taxes) varied from 19% in Lebanon to 67% in Tunisia. Prices of the most popular brand varied considerably as well, with a pack of cigarettes costing one US dollar or less in many countries in the region.

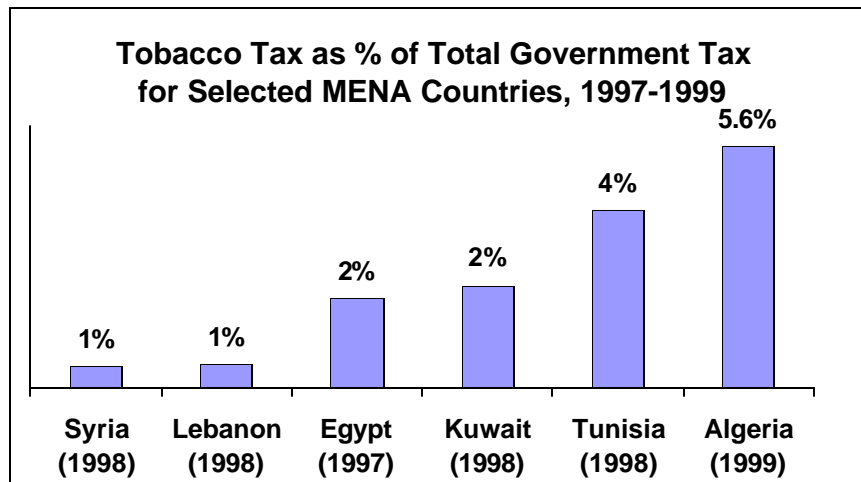
Figure 5: Prices of Most Popular Brand; Total Cigarette Tax as % of Retail Price, 1999



Source: World Bank Estimates: Cigarette tax as % of retail price is estimated for domestic and imported cigarettes together. Tax revenues from imported cigarettes (includes excise+VAT+import duties) and domestic cigarettes (excise+VAT taxes) are divided by expenditures on imported and domestic cigarettes.

The importance of tobacco tax as a source of government revenue also differs widely across the MNA region. For countries for which information is available, the share of cigarette taxes in total government revenue is shown below.

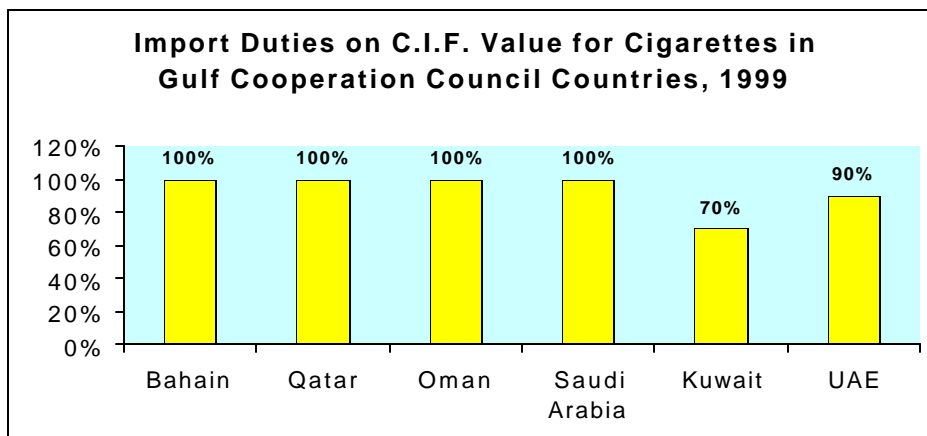
Figure 6: Tobacco Tax as % of Total Government Tax, Selected Countries (1997-1999)



Source: World Bank Estimates

At present, import duties are quite high for the countries with no domestic cigarette production. The six-nation Gulf Cooperation Council (GCC) agreed in 1996 on a phased increase in customs duties on tobacco and related products to 100 percent by 2000 from below 30 percent in the 1980s. Saudi Arabia, Bahrain, Qatar and Oman have already raised the duty to 100 percent. UAE raised it to 90 percent in 1999 and Kuwait to 70 percent in 1997.

Figure 7: Import Duties on c.i.f. Value for Cigarettes in Gulf Cooperation Council Countries in 1999

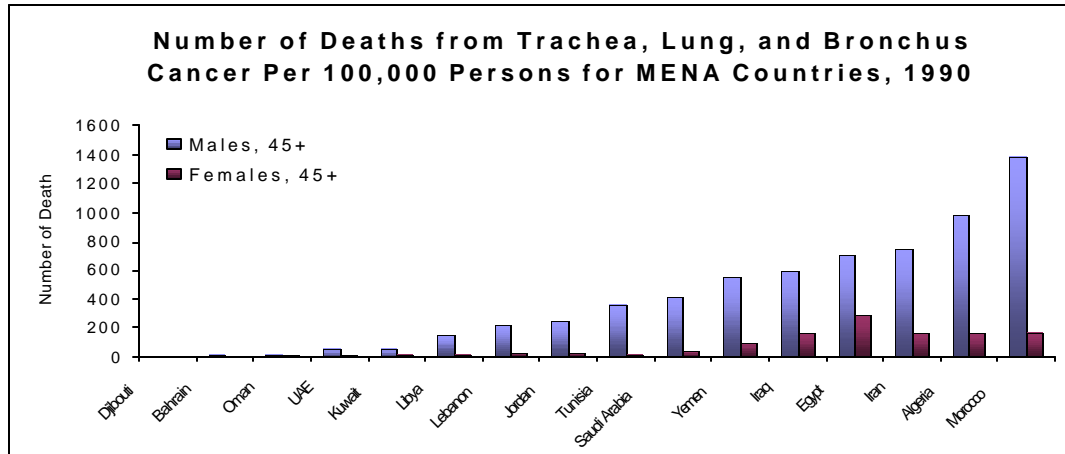


Sources: USDA and the World Bank

IV: Health Issues

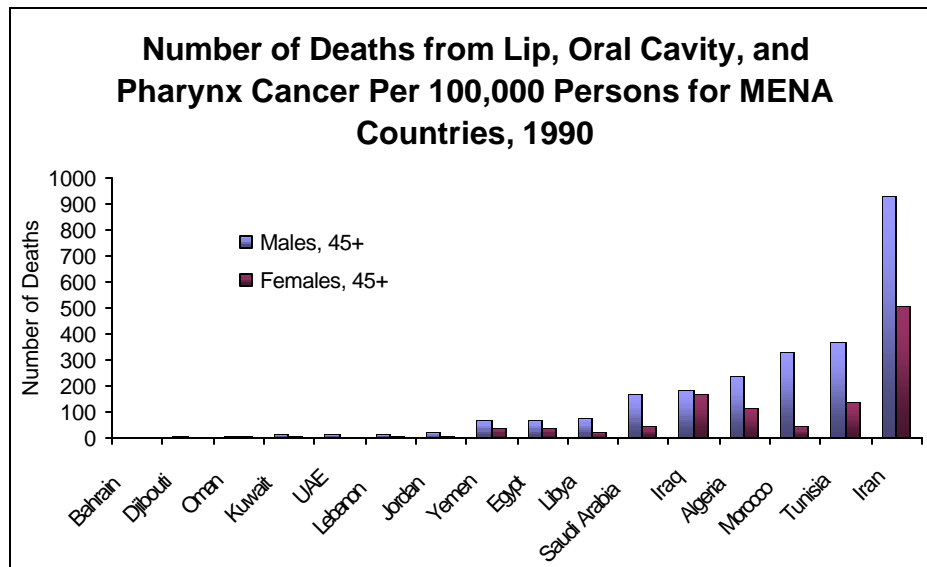
For all MNA countries, mortality from smoking related diseases is much higher for men than for women, reflecting much higher historical smoking prevalence rates among men. However, as in other countries where a much higher percentage of women have become smokers in recent decades, women’s mortality rates will soon begin to reflect the serious health impact of smoking.

Figure 8: Deaths from Trachea, Lung, and Bronchus Cancer Per 100,000 Persons for MNA Countries, 1990



Source: Ferlay, J., Parkin, D.M., & Pisani, P. (1998) *GLOBOCAN 1: Cancer incidence and Mortality Worldwide*. [CD-ROM]. International Agency for Research on Cancer.

Figure 9: Deaths from Lip, Oral Cavity, and Pharynx Cancer Per 100,000 Persons for MNA Countries in 1990



Source: Ferlay, J., Parkin, D.M., & Pisani, P. (1998) *GLOBOCAN 1: Cancer incidence and Mortality Worldwide*. [CD-ROM]. International Agency for Research on Cancer.

V: Tobacco Control Measures

Overall the MNA region has quite a good record on tobacco control. The Ministries of Health in most countries are the national authority responsible for tobacco control. By 1980, most countries had issued regulations to restrict or ban smoking in closed public areas. By 1995, most countries had placed a ban or some restriction on smoking in workplaces, schools, and health care facilities. (However, information is not available on the extent to which these regulations are respected or enforced.)

We have constructed a tobacco control index for each MNA country, which aggregates information on five policy areas. For each country, we ask the following questions: (1): Are cigarette packages required to carry a health warning and list of contents? (2): Are there any restrictions on cigarette advertisements? (3): Are sales to minors allowed? (4): Are there health education programs and anti-smoking campaigns? (5): Is smoking restricted or banned in public places? For each question, scores are assigned as follows: 2 for strong tobacco control measures, 1 for mild control, and 0 for very weak or no control. Scores to the 5 questions are aggregated to arrive at a total scores for each country. Kuwait has the most strict tobacco control measures; Yemen scored lowest.

A simple multivariate regression was run, to explain cigarette consumption as a function of per capita GDP, most popular brand price and the tobacco control index (all are 1999 data). The adjusted R-square is 0.51, so these three explanatory variables explain a substantial part of the variance of per person 15+ consumption. The F statistic is significant at the 10% level. All three variables have the expected signs. Per capita GDP and the tobacco control index are statistically significant (the price variable is not). The estimated income elasticity is 0.57, a reasonable level.

Figure 10: Results of Multivariate Regression for Cigarette Consumption

<i>Regression Statistics</i>	
Multiple R	0.81934095
R Square	0.6713196
Adjusted R Square	0.5069794
Standard Error	32.4091008
Observations	10

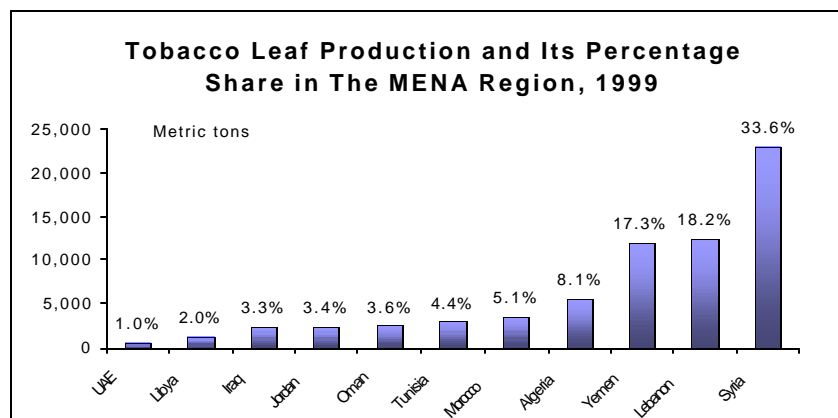
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	12871.84299	4290.6143	4.08493845	0.067364686
Residual	6	6302.098874	1050.3498		
Total	9	19173.94187			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	152.388623	74.10111972	2.0564956	0.08547
Tobacco Control Index	-16.270935	8.127142712	-2.0020487	0.0921643
Retail Price of Most popular brands (US\$/pack)	-10.897025	33.11915307	-0.3290249	0.7533182
Per Capita GDP (US\$)	0.00581447	0.001932862	3.0082183	0.023755

VI: Production and Trade

Very little tobacco is grown in MNA countries. In Egypt, which is the biggest cigarette manufacturing and consuming country in region, there is a law against growing tobacco. In 1999, Syria was the biggest tobacco growing country in the region, and produced only 23,048 metric tons of tobacco leaves, 33.6% of the region's total, but less than 0.3% of the world's total volume, putting Syria about 30th in a ranking of all countries by volume of tobacco grown.

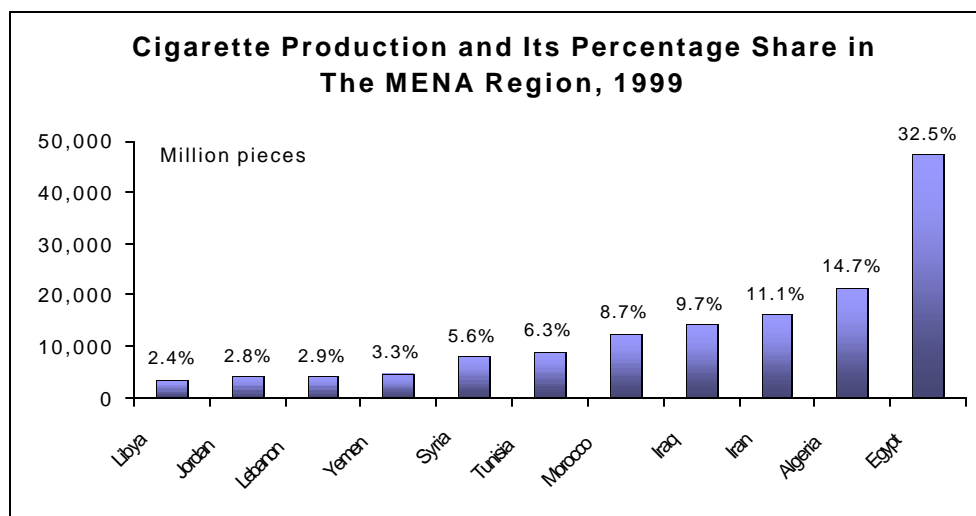
Figure 11: Tobacco Leaf Production and Percent of MNA Total, 1999



Source: FAO

There are 11 countries manufacturing cigarettes in the MNA region. In 1999, they collectively produced 146,350 million cigarettes. Egypt is the largest cigarette producer in the region, with 47,500 million cigarettes, or 32.5% of the region's total in 1999. Bahrain, Djibouti, Kuwait, Oman, Qatar, Saudi Arabia, and UAE do not produce cigarettes.

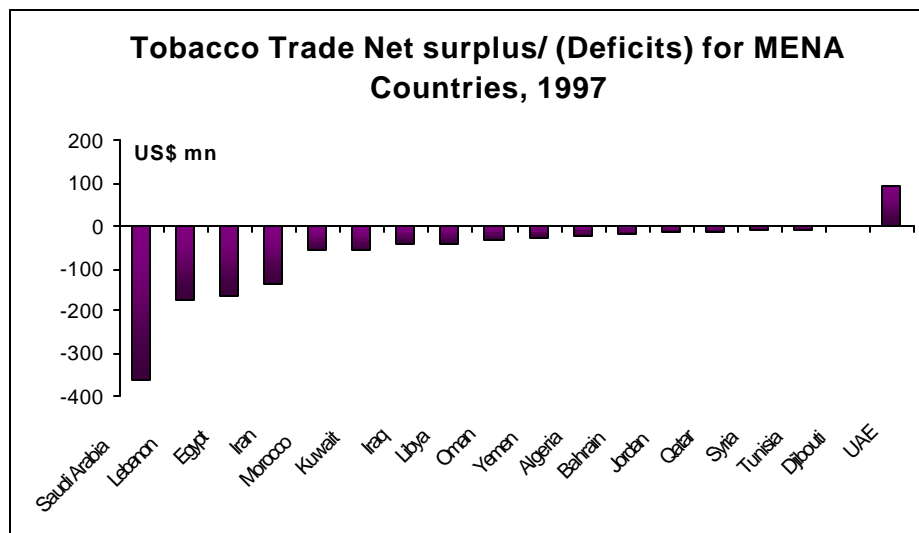
Figure 12: Cigarette Production and Percent of MNA Total, 1999



Source: USDA

Overall, all but one of the MNA countries are net tobacco importers. In 1997, all MNA countries except the UAE had a deficit in tobacco trade, with the total deficits adding up to one billion US dollars for the region.

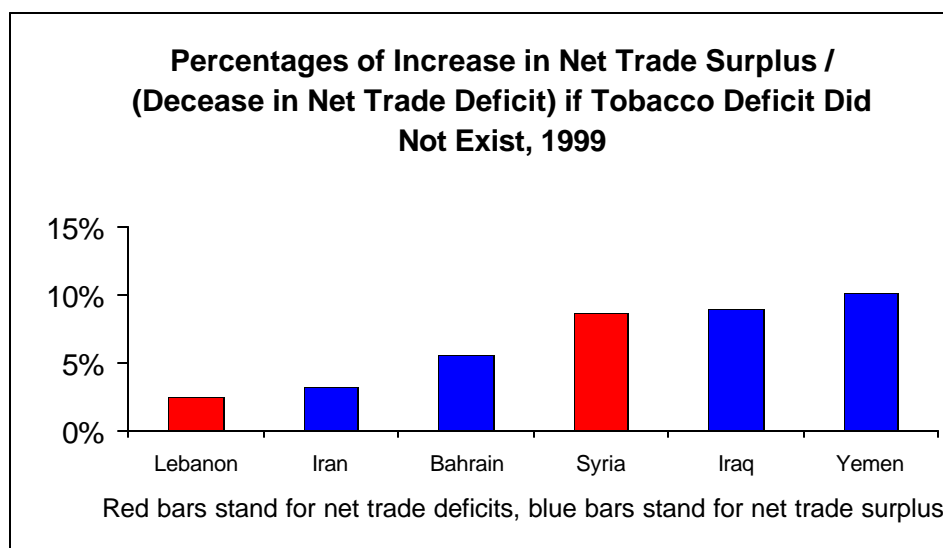
Figure 13: Tobacco Trade Net Surplus / (Deficit) for MNA Countries, 1997



Source: FAO

For some countries, the tobacco trade deficit may be a serious economic burden. In 1997, tobacco products accounted for 8.7% of Syria's net trade deficit. In 1997, although Yemen and Iraq both had a net surplus in overall merchandise trade, the tobacco trade deficit was equal to 10% and 9% of the total trade surplus, respectively. Reducing tobacco deficits could substantially improve the overall trade balance.

Figure 14: Percent Increase in Net Trade Surplus/(Decrease in Net Trade Deficits) if Tobacco Deficit Did Not Exist, 1999



Source: FAO

Note: Countries included in this regression are Egypt, Iran, Jordan, Kuwait, Libya, Morocco, Oman, Saudi Arabia, Syria and UAE.

*M:\tobacco\country briefs&data\Middle East & Northern Africa (MNA)\MNA.doc
Joy'd edited version, May 25, 2001 12:26 PM*