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Topic: “The tobacco market and smokers’ behaviour in Greece”

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## **Abstract**

Smoking is one of the largest public health problems and a cause of major concern not only among European members such as Greece but also worldwide. Greece over the past years has been suffering from a smoking epidemic with harmful impacts on the economy and the cost of health services. Therefore, the purpose of this essay is to describe the extent of tobacco use, analyze the market in which developed, while examine the main reasons of anti-tobacco policy failure and the methods used to control tobacco consumption over the past decades in Greece.

## **1. Introduction**

Smoking is a phenomenon that has global pandemic proportions during 20th century. Given the devastating effects of tobacco on the cardiovascular, respiratory and other systems of the human body, combined with the dependence which is caused by nicotine, smoking is probably the more harmful factor for human health and the main cause of early mortality in developed countries. Despite this, it is common throughout the world. A number of countries have legislation restricting tobacco advertising, and regulating who can buy and use tobacco products, and where people can smoke.

The World Health Organization (National Plan of Action on Smoking 2008 – 2012, p. 14) estimates that one third of the world's adult population, i.e. 1.1 billion people are smokers and that tobacco causes 3.5 million deaths annually worldwide. Rate equivalent to 10,000 deaths per day from diseases associated with smoking, while due to smoking deaths are more than the sum of deaths from guns, drugs, suicide, AIDS and car accidents. At the current pace until the late 2020s, deaths will have risen to about 10 million annually. Smoking causes at least twenty-five threatening diseases or disease groups and a major risk factor in eight of the 16 leading causes of death of people aged more than 65 years. Also, the direct and indirect cost of treating diseases associated with smoking is a huge burden on health budgets, worldwide (WHO 2007).

Global consumption of cigarettes has been rising steadily since manufactured cigarettes were introduced at the beginning of the 20th century. While consumption is leveling off and even decreasing in some countries, worldwide more people are smoking, and smokers are smoking more cigarettes. According to World Health Organization, the numbers of smokers will increase mainly due to expansion of the world's population. By 2030 there will be at least another 2 billion people in the world. Even if prevalence rates fall, the absolute number of smokers will increase. The expected continuing decrease in male smoking prevalence will be offset by the increase in female smoking rates, especially in developing countries. The consumption of tobacco has reached the proportions of a global epidemic. Tobacco companies are cranking out cigarettes at the rate of five and a half trillion a year – nearly 1,000 cigarettes for every man,

woman, and child on the planet. Cigarettes account for the largest share of manufactured tobacco products, 96 percent of total value sales. Asia, Australia and the Far East are by far the largest consumers (2,715 billion cigarettes), followed by the Americas (745 billion), Eastern Europe and Former Soviet Economies (631 billion) and Western Europe (606 billion).

There are a number of reasons why Greece is an interesting context for the study of cigarette consumption. Firstly, Greece is the top smoking country worldwide in terms of per capita cigarette consumption (Global Link, 2004), and the country with the highest percentage of heavy smokers among the smoking population reaching 17% (BASP, 1994 cited in European Communities & WHO, 1998: 27). Secondly, the country was one of the biggest tobacco producers in the world (Onder, 2002). Thirdly, Greece is a country where cigarette consumption does not appear to be affected by cigarettes prices.<sup>1</sup>

According to the Foreign Agricultural Service, on 1995 Greece was on the fifth place of the top five exporters on the world following Turkey.

**Table (1): Exports of tobacco products**

| Country              | 1995      | 1996      | 1997      | 1998      | 1999*     |
|----------------------|-----------|-----------|-----------|-----------|-----------|
| <b>World total</b>   | 1.759.091 | 1.981.981 | 2.004.521 | 1.907.289 | 1.949.663 |
| <b>Brazil</b>        | 256.300   | 282.500   | 319.000   | 300.500   | 318.000   |
| <b>United States</b> | 209.482   | 222.316   | 221.512   | 211.917   | 230.000   |
| <b>Zimbabwe</b>      | 174.289   | 195.958   | 159.941   | 168.804   | 205.500   |
| <b>Turkey</b>        | 136.392   | 170.098   | 160.360   | 128.808   | 125.500   |
| <b>Malawi</b>        | 99.057    | 95.555    | 111.449   | 135.300   | 107.600   |
| <b>Greece</b>        | 133.000   | 130.250   | 103.000   | 97.179    | 100.000   |

\* Estimate, Source: USDA/FAS (Dec. 1999).

Also, according to the latest data of Organization for Economic Cooperation and Development (OECD), around 1990 the percentage of smokers in correspondence with the population in Greece was 38.5 percent, of which 26 percent were women and 51 percent men. In 2009 this percentage increased to 39.7 percent, with women occupying 33.5 percent and men 46.3 percent. This is a significant increase on the part of women. But what is more important to note is that while in other countries the rate of cigarette consumption decreased from 1990 to 2009, in Greece increased.

In addition, according to National Institute of Statistics and Economic Studies, on 1996 Greece was the first country on average daily cigarette consumption by adults.

<sup>1</sup> Antonopoulos, G. A. (2007) 'The Greek connection(s): The social organization of the cigarette-smuggling business in Greece', *European Journal of Criminology*, 5 (3), pp.263-288.

**Table (2): Daily average cigarette consumption by adults**

| Country        | Average cigarette consumption per day by adults aged over 15 |
|----------------|--|
| Greece         | 9.3  |
| Ireland        | 6.4  |
| Spain          | 6.1  |
| Germany        | 5.5  |
| Austria        | 5.4  |
| Portugal       | 5.4  |
| France         | 5.2  |
| Italy          | 5.0  |
| Belgium        | 4.9  |
| United Kingdom | 4.8  |
| Denmark        | 4.2  |
| Netherlands    | 3.4  |
| Sweden         | 3.2  |
| Finland        | 3.0  |

Source: CGE, No. 452, July 2000 (based on INSEE).

## 2. A brief history of tobacco

Tobacco has a long history in the Americas. The Mayan Indians of Mexico carved drawings in stone showing tobacco use. These drawings date back to somewhere around 9<sup>th</sup> century. Tobacco was grown by American Indians before the Europeans came from England, Spain, France, and Italy to North America.

Tobacco was the first crop grown for money in North America. In 1612 the settlers of the first American colony in Jamestown, Virginia grew tobacco as a cash crop. It was their main source of money.

The use of cigarette exploded during World War I (1914-1918), where cigarettes were called the "soldier's smoke". By 1923, Camel controls 45 percent of the U.S. market. In 1924, Phillip Morris begins to market Marlboro as a woman's cigarette that is as "Mild as May".<sup>2</sup>

<sup>2</sup> A history in Marketing of Marlboro Brand Cigarettes.  
<http://voices.yahoo.com/a-history-marketing-marlboro-brand-cigarettes-204451.html>

To battle this, American Tobacco Company, maker of the Lucky Strike brand, begins to market its cigarette to women and gains 38 percent of the market. Smoking rates among female teenagers soon triple during the years between 1925-1935.

In 1939, American Tobacco Company introduces a new brand, Pall Mall, which allows American to become the largest tobacco company in the U.S.

During World War II (1939-1945), cigarette sales are at an all time high. Tobacco companies sent millions of cigarettes to the soldiers for free, and when these soldiers came home, the companies had a steady stream of loyal customers.

During the 1950's, more and more evidence was surfacing that smoking was linked to lung cancer. Although the tobacco industry denied such health hazards, they promoted new products which were "safer", such as those with lower tar and filtered cigarettes.<sup>3</sup>

## **2.1 Timeline of tobacco in Greece:**

1909: The first cigarette making machines in Greece by the manufacturers Varka and Karavasili.

1913: Establishment of the general partnership tobacco merchant "Papastratou Bros." at Agrinio.

1931: Publication of the first advertising of cigarettes' company in Greece.

1939: Producers begin to reduce the consumption of aromatic smoke. The "people's cigarettes," despite the new tax and financial crisis acquire more customers.

1940: Manufacture of cigarettes "AERA" to strengthen the morale of the Greek soldiers.

1950: Circulation of the first cigarette with filter.

1971: Circulation of "Marlboro lights".

1978: The Health Minister Spyros Doxiadis, begins the first anti-smoking campaign in Greece.

1980: From the beginning of decade, almost all foreign brands of cigarettes are manufactured in Greece and gradually stopped been imported.

1995: Circulation of the brand "President" in an innovative package of 30 cigarettes, as a measure to promote and attract more consumers.

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<sup>3</sup> <http://academic.udayton.edu/health/syllabi/tobacco/history.htm#combo>

1996: The European law for banning the advertising of tobacco is passed on the Greek parliament with Health Minister, Mr. Gitona.

2004: The Papastratos Company is becoming “Philip Morris International”.

### **3. Some facts about tobacco usage**

Tobacco products are products made entirely or partly of leaf tobacco as raw material, which are intended to be smoked, sucked, chewed or snuffed. Tobacco is packed with harmful and addictive substances, like the highly addictive psychoactive ingredient, nicotine.

Scientific evidence has shown conclusively that all forms of tobacco cause health problems throughout life, frequently resulting in death or disability. Smokers have markedly increased risks of multiple cancers, particularly lung cancer, and are at far greater risk of heart disease, strokes, emphysema and many other fatal and non-fatal diseases. If they chew tobacco, they risk cancer of the lip, tongue and mouth. Women suffer additional health risks. Smoking in pregnancy is dangerous to the mother as well as to the embryo, especially in poor countries where health facilities are inadequate. Maternal smoking is not only harmful during pregnancy, but has long-term effects on the baby after birth.<sup>4</sup>

Cigarettes kill half of all lifetime users. Half die in middle age – between 35 and 69 years old. No other consumer product is as dangerous, or kills as many people. Tobacco already kills more men in developing countries than in industrialized countries, and it is likely that deaths among women will soon be the same. While 0.1 billion people died from tobacco use in the 20th century, ten times as many will die in the 21st century. Maternal smoking during pregnancy is responsible for many fetal deaths and is also a major cause of Sudden Infant Death Syndrome. Passive smoking at home, workplace, or in public places also kills, although in lower numbers. However, those killed do not die from their own habit, but from someone else’s. Children are at particular risk from adults smoking, and even smoking by other adults around a pregnant woman has a harmful effect on a fetus.<sup>5</sup>

In Greece the deaths from tobacco use as a percentage of total deaths for men 35-69 year olds is more than 25 percent, while for women is from 5 percent to 9 percent.<sup>6</sup>

“City areas, such as Athens, have higher smoking rates among men and women (51 percent of men and 39 percent of women) than rural areas. The difference is more noticeable between Greek women in cities and rural areas. Those of higher socioeconomic position are more likely

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<sup>4</sup> <http://www.who.int/tobacco/en/atlas9.pdf>

<sup>5</sup> <http://www.who.int/tobacco/en/atlas11.pdf>

<sup>6</sup> <http://www.who.int/tobacco/en/atlas11.pdf> (map)

to smoke than the less educated or those of lower income. Women in rural areas also smoke less, possibly owing to the existing traditional culture that regards female smoking a taboo.” (Vardavas and Kafatos, 2006).

According to EUROSTAT, Greece has 65.4 percent non-smokers and is at the same level with Estonia more or less. The occasional smokers are 7.1 percent, while the daily smokers are 27.6 percent following Norway which is 27.8 percent. More analytically the male non-smokers in Greece are 50.5 percent and one of the lowest rates of euro countries (with Bulgaria, Latvia, Lithuania, and Slovenia). Male daily smokers are 40.8 percent and are at the seventh position with Latvia ranking first with 50.6 percent. On the other side, the females non-smokers are 78.8 percent with Portugal first (91.8 percent). Moreover, the percentage of women daily smokers is 15.5 illustrating a significant difference from men.<sup>7</sup>

**Table (3): Smokers by intensity and then by sex %**

| Country        | Non-smoker | Occasional smoker | Daily smoker | Daily smoker/ males | Daily smoker/ females |
|----------------|------------|-------------------|--------------|---------------------|-----------------------|
| Belgium        | 71.5       | 4.4               | 24.1         | 28.3                | 20.1                  |
| Bulgaria       | 59.9       | 7.8               | 32.3         | 42.6                | 22.7                  |
| Czech Republic | 69.1       | 6.1               | 24.9         | 31.6                | 18.7                  |
| Denmark        | 63.0       | 2.9               | 34.1         | 36.3                | 31.9                  |
| Germany        | 67.5       | 6.2               | 26.3         | 30.9                | 22.0                  |
| Estonia        | 65.2       | 1.5               | 33.3         | 49.8                | 18.6                  |
| Ireland        | 73.8       | 4.3               | 21.9         | 23.9                | 20.5                  |
| Greece         | 65.4       | 7.1               | 27.6         | 40.8                | 15.6                  |
| Spain          | 69.0       | 2.8               | 28.1         | 34.2                | 22.4                  |
| France         | 73.9       | :                 | 26.1i        | 31.6                | 21.2i                 |
| Italy          | 75.5       | :                 | 24.5i        | 31.9                | 17.6i                 |
| Cyprus         | 72.3       | 3.8               | 23.9         | 38.1                | 10.5                  |
| Latvia         | 61.6       | 5.7               | 32.7         | 50.6                | 17.0                  |
| Lithuania      | 61.1       | 11.6              | 27.3         | 44.0                | 13.3                  |
| Hungary        | 66.1       | 3.4               | 30.5         | 37.7                | 24.7                  |
| Malta          | 73.8       | 2.8               | 23.4         | 29.9                | 17.6                  |
| Netherlands    | 66.0       | 5.8               | 28.2         | 31.6                | 24.9                  |
| Austria        | 54.9       | 8.8               | 36.3         | 40.7                | 32.2                  |

<sup>7</sup><http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=0&pcode=tps00169&language=en>

|                       |      |      |       |      |       |
|-----------------------|------|------|-------|------|-------|
| <b>Poland</b>         | 64.4 | 5.8  | 29.9  | 41.3 | 19.5  |
| <b>Portugal</b>       | 81.3 | 2.2  | 16.4  | 27.1 | 6.8   |
| <b>Romania</b>        | 69.5 | 9.6  | 20.8  | 32.3 | 10.1  |
| <b>Slovenia</b>       | 55.5 | 9.8  | 34.6  | 47.1 | 23.8  |
| <b>Slovakia</b>       | 72.4 | 8.5  | 19.2  | 27.8 | 11.7  |
| <b>Finland</b>        | 77.4 | 4.5  | 18.1  | 21.6 | 15.1  |
| <b>Sweden</b>         | 72.0 | 10.4 | 17.5  | 16.5 | 18.5  |
| <b>United Kingdom</b> | 73.3 | :    | 26.7i | 27.7 | 25.7i |
| <b>Iceland</b>        | 64.9 | 9.0  | 26.1  | 26.5 | 25.7  |
| <b>Norway</b>         | 61.8 | 10.4 | 27.8  | 28.8 | 26.7  |
| <b>Switzerland</b>    | 69.5 | 2.2  | 28.3  | 33.9 | 23.1  |

Source: EUROSTAT, : not available, see metadata. Data were collected in different years between 1996- 2003.

Table (4) below portrays the smokers between 15 and 24, by sex in euro-zone. In Greece the non-smokers are 65.8 percent, the occasional smokers 9.6 percent and the daily 24.6 percent compared Austria which has 40.9 percent. The percentage of male daily smokers in Greece is 33.4, while for the young girl is 16.5 percent.<sup>8</sup>

**Table (4): Smokers between 15 and 24 years old in total and then by sex %**

| <b>Country</b>        | <b>Non-smoker</b> | <b>Occasional smoker</b> | <b>Daily smoker</b> | <b>Daily smoker/ males</b> | <b>Daily smoker/ females</b> |
|-----------------------|-------------------|--------------------------|---------------------|----------------------------|------------------------------|
| <b>Belgium</b>        | 67.4              | 6.5                      | 26.0                | 27.6                       | 24.4                         |
| <b>Bulgaria</b>       | 58.8              | 10.7                     | 30.5                | 32.1                       | 28.8                         |
| <b>Czech Republic</b> | 67.4              | 8.8                      | 23.8                | 31.6                       | 15.7                         |
| <b>Denmark</b>        | 66.0              | 4.5                      | 29.5                | 32.3                       | 26.5                         |
| <b>Germany</b>        | 52.9              | 11.8                     | 35.3                | 40.6                       | 29.8                         |
| <b>Estonia</b>        | 64.6              | 2.2                      | 33.2                | 47.1                       | 19.0                         |
| <b>Ireland</b>        | 64.1              | 6.9                      | 29.0                | 29.7                       | 28.5                         |
| <b>Greece</b>         | 65.8              | 9.6                      | 24.6                | 33.4                       | 16.5                         |
| <b>Spain</b>          | 63.0              | 4.0                      | 33.0                | 34.8                       | 31.1                         |
| <b>France</b>         | 72.0              | :                        | 28.0i               | 31.3i                      | 24.8i                        |
| <b>Italy</b>          | 77.3              | :                        | 22.7i               | 28.0i                      | 17.2i                        |
| <b>Cyprus</b>         | 72.3              | 3.1                      | 24.6                | 38.0                       | 10.3                         |

<sup>8</sup> <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=0&language=en&pcode=tps00170>

|                       |      |      |       |       |       |
|-----------------------|------|------|-------|-------|-------|
| <b>Latvia</b>         | 60.0 | 9.9  | 30.0  | 41.7  | 18.0  |
| <b>Lithuania</b>      | 53.9 | 20.6 | 25.5  | 37.9  | 14.7  |
| <b>Hungary</b>        | 54.8 | 6.6  | 38.6  | 45.5  | 31.2  |
| <b>Malta</b>          | 67.2 | 6.3  | 26.4  | 28.9  | 24.2  |
| <b>Netherlands</b>    | 63.1 | 8.3  | 28.6  | 30.4  | 26.7  |
| <b>Austria</b>        | 46.6 | 12.5 | 40.9  | 44.7  | 37.0  |
| <b>Poland</b>         | 76.7 | 6.5  | 16.8  | 23.4  | 10.2  |
| <b>Portugal</b>       | 77.6 | 3.6  | 18.8  | 25.9  | 10.6  |
| <b>Romania</b>        | 72.5 | 13.5 | 13.9  | 18.8  | 8.8   |
| <b>Slovenia</b>       | 56.4 | 14.7 | 28.8  | 33.7  | 23.0  |
| <b>Slovakia</b>       | 70.6 | 11.7 | 17.7  | 23.1  | 13.3  |
| <b>Finland</b>        | 67.5 | 10.6 | 21.9  | 23.4  | 20.6  |
| <b>Sweden</b>         | 63.9 | 22.3 | 13.7  | 10.5  | 17.2  |
| <b>United Kingdom</b> | 66.3 | :    | 33.7i | 31.5i | 35.7i |
| <b>Iceland</b>        | 60.3 | 15.8 | 23.9  | 27.1  | 21.4  |
| <b>Norway</b>         | 58.2 | 16.0 | 25.7  | 24.3  | 27.2  |
| <b>Switzerland</b>    | 62.6 | 4.6  | 32.8  | 35.7  | 29.7  |

Source: EUROSTAT, : not available, see metadata. Data were collected in different years between 1996- 2003.

Adolescents in Greece have a major smoking problem. According to Constantine I. Vardavas and Anthony G. Kafatos (2006) study on the usage of tobacco among high-school students, smoking prevalence ranged from 10 to 32 percent for 15 year olds, to a maximum of 50 percent in 16–19 year olds. Smoking prevalence among university students ranged between 28 and 30 percent for medical students and between 42 and 44 percent for other university students. An alarming factor is the similar smoking habits between males and females, especially in the age group of 16–24.

Passive smoking and the effects of environmental tobacco smoke also affect the total population, but Greek children and adolescents are the most vulnerable. It is likely that they are already predisposed to start smoking, not only from growing up with the familiarity of cigarettes but also owing to environmental tobacco smoke addiction, which has been suggested as being an independent predictor of adolescent smoking. Also, many female adolescents smoke because they feel it will help them lose weight, and often do not consider the harm they are doing to their bodies.

Smoking among adolescents is a major concern because smoking long term poses many health hazards. Most of adolescents know what the long term effects of smoking are and many do not care, because they are not concerned with what might happen to them forty or fifty years

down the road. Adolescent smoking is a global issue because there is not a single country around the world where teens are not smoking.

#### **4. The tobacco market in Greece: The supply side**

The number of companies that make up the industry is very limited, both in production and the import sector. Specifically, in the production of cigarettes, there are four industries which undertake the production of internationally recognized foreign brands other than domestic brands. Moreover, some productive companies expand in foreign markets, establishing subsidiary companies to countries, mainly in Eastern Europe, in order to promote their products in those countries. Finally, taking into account the structure of the industry and the import trade, we realize that it is highly concentrated.

According to ICAP Group Sector Study on Tobacco-Cigarettes-Cigars (2010)<sup>9</sup>, domestic production of tobacco has fallen sharply; Greece currently produces only two varieties. Also, higher taxation and lower disposable incomes, as a result of the economic slump, are expected to affect the cigarette industry.

##### **4.1 Tobacco production**

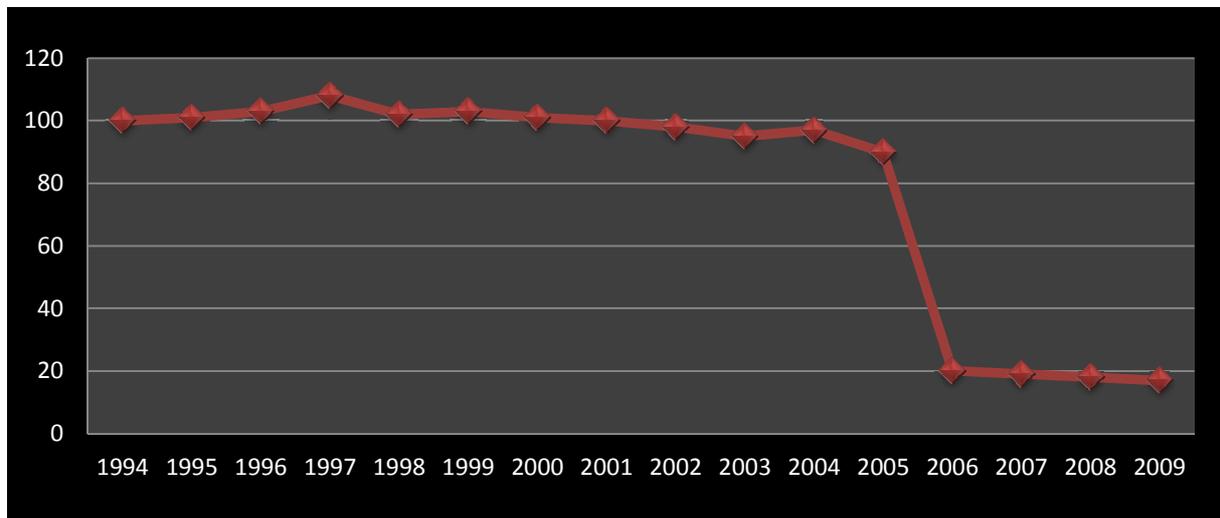
Tobacco production in Greece, following the implementation of the new CAP-which consisted in fully withdrawing Community aid from tobacco growers- has shrunk and only two varieties (Basmas and Katerini) are being produced since 2006. At present, just a few companies are still operating at full scale (purchasing-processing of new harvest tobaccos).

The overall purchased quantity of tobacco from 2000 onwards has generally been declining. In 2006, the first year during which the decision to entirely withdraw aid from the production of tobacco was implemented, many producers abandoned tobacco growing and production dropped by approximately 80 percent from 2005. Since then, it has remained low most of the time, slightly fluctuating from one year to the next.

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<sup>9</sup> <http://www.icap.gr/ECPage.aspx?id=1868&nt=149&lang=2&tabID=3>

**Figure (1): Purchased quantity of produced leaf tobacco over time (1994-2009)**



Base year: 1994=100

Source: National Tobacco Organization, OPEKEPE Agency, Ministry of Rural Development & Foods, ICAP

With respect to imported tobacco, there was a sharp increase of total imports between 2005 and 2008, reaching a 19.8 percent average rate of change per annum. Imports increased because of the need to respond to domestic demand, given the severe drop of domestic production. On the contrary, exports contracted between 2006 and 2008, at an average rate of 6.6 percent per year.

Up until 2005, the domestic apparent consumption of tobacco fluctuated. Since then, and as a result of the declining domestic production, the actual supply of tobacco in the domestic market dropped considerably, while stocks from previous harvests have been used to a great extent.

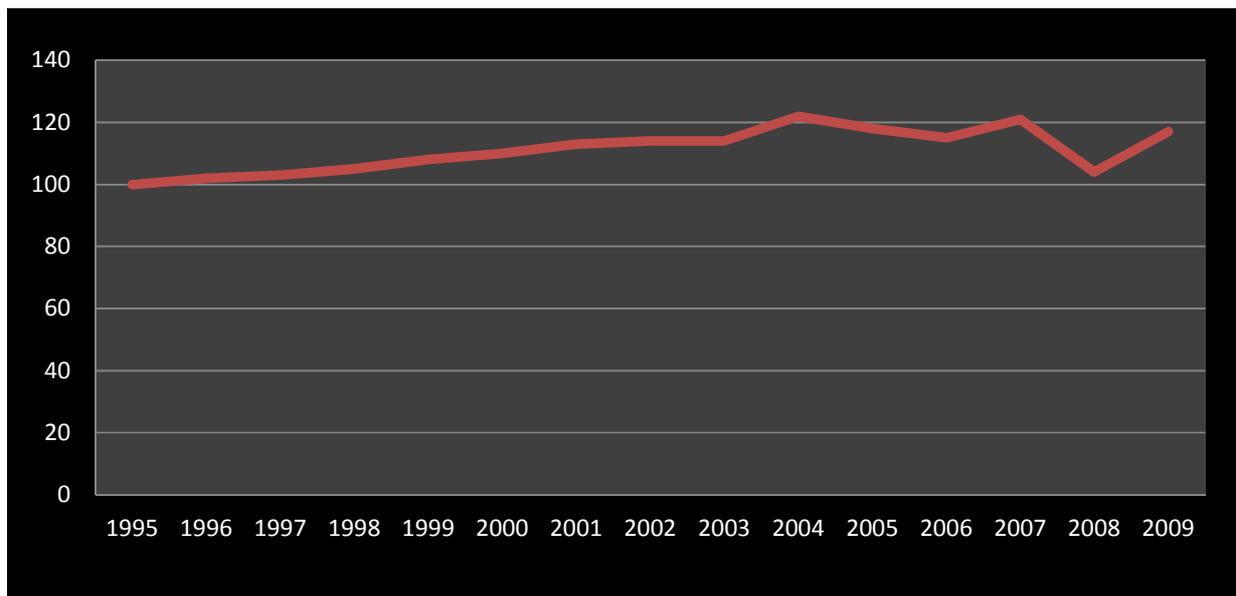
According to the analysis of the consolidated balance sheet (of sampled companies that published a balance sheet while still in operation), the total sales of these 10 businesses registered an 8.5 percent increase from 2007. Likewise, their gross profit rose (by 12.9 percent) whereas interest expenses and other operating expenses remained more or less the same. As a result of the above changes, profits (before taxes) advanced 36.7 percent. EBITDA<sup>10</sup> also grew in 2008, by 20.7 percent.

<sup>10</sup> EBITDA: Earnings before Interest, Taxes, Depreciation and Amortization.

## 4.2 Cigarettes-Cigars

The cigarette industry consists of a small number of companies and a high level of concentration, both in the field of production (which basically comprises 4 companies) and in terms of imports (essentially subsidiaries of multinational groups)

**Figure (2): The domestic apparent consumption of cigarettes over time (1995-2009)**



Base year 1995=100

Source: Statistical Service, Ministry of Finance, Market assessments-ICAP

The total domestic production of cigarettes, which has been fluctuating in recent years, is believed to have increased slightly in 2009. In 2008, cigarette-cigar imports registered a 1.7 percent increase in relation to the year before. On the other hand, cigarette-cigar exports were more or less on the rise between 1999 and 2008 (with an average growth rate of 2.73 percent), reaching a ten-year high in 2008.

The domestic consumption of cigarettes fluctuated between 2000 and 2009 (reaching a 0.66 percent average rate of change per year). In 2008, consumption fell considerably (down 13.9 percent) compared to 2007, whereas in 2009 it bounced back (according to the temporary data

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EBITDA = Revenue – Expenses (excluding tax, interest, depreciation and amortization)

<http://www.investopedia.com/terms/e/ebitda.asp#axzz2CBwJA6np>

available).

Between 2006 and 2009, the cigar market was on the rise (with an average growth rate of 2.36 percent per year).

The analysis of the consolidated balance sheet that was drawn up for the four producers (Papastratos, Karelia, Sekap, Georgiadis) which published their financial data for 2007-2008, reveals the following:

The sales of the companies in the sample advanced 3.8 percent in 2008/2007. Because of the increase of the cost of sales, the gross profit fell by 2.4 percent. However, the other operating expenses dropped by 11.4 percent, leading to a higher operating margin and profits before taxes (up 2.2 percent). EBITDA increased considerably (+15.7 percent).

The analysis of the consolidated balance sheet that was drawn up from a sample of importers reveals the following:

Their total sales registered a 17 percent increase in 2008 and their gross profit rose 12.8 percent. However, the increase of other operating expenses made the operating margin drop (by 4.2 percent). Finally, and as a result of the non-operating income plummeting by 63.3 percent, profits before taxes were 27.9 percent lower in 2008 as opposed to 2007.

#### **4.3 Advertising expenditure of Cigarettes-Cigars**

The anti-smoking campaign, which is promoted by the EU in recent years to protect the health of its citizens, leads to increasingly adopting stricter measures in both taxation and regulation of the promotion of tobacco products. Initially, the first prohibition of tobacco products' promotion was made in 1987, leading companies in the industry to alternative ways of advertising. But according to a new EU directive from July 2005, tobacco advertising is now banned in the print media (newspapers, magazines, etc.), radio and sponsorship of events (including the free distribution of tobacco products or selling at a lower price). Eventually by Law 3730 of the Official Journal on 11 December 2008, any kind of advertising of tobacco products is prohibited (even at kiosks), including those with external form of tobacco products and electronic cigarettes.

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<sup>11</sup> [http://www.aueb.gr/pages/news/attachments/N3730\\_2008.pdf](http://www.aueb.gr/pages/news/attachments/N3730_2008.pdf) (Article 2, par.1)

According to Vardavas and Kafatos (2006), television and radio advertisements of tobacco products have been banned since 1979, but on August, 2005 Greece started to comply with the European directive 2003/3/EC on the advertising and sponsorship of tobacco products, forbidding their free distribution, promotion, sponsorship, or advertising. The newly passed Greek law forbids advertisement of such products in magazines and the press but allows tobacco companies to freely advertise using posters and billboards.

#### 4.4 Competitive landscape - Distribution Network of Tobacco Products

As far as competition in the sector of the domestic tobacco industry is concerned companies that operate in Greece are PAPASTRATOS CO (which joined the multinational group of Philip Morris in 2004, while it introduces in Greece signs of Altadis), KARELIA TOBACCO SA, SEKAP SA, GEORGIADIS SA and KERANIS SA (which has ceased operations in 2006 due to major economic problems), while the largest import partners are BRITISH AMERICAN TOBACCO HELLAS SA, IMPERIAL TOBACCO HELLAS SA, ALTADIS, JAPAN TOBACCO INTERNATIONAL HELLAS SA , GALLAHER HELLAS SA, SCANDINAVIAN TOBACCO HELLAS SA (House of Prince) (the last three companies have in common exclusive distributor Athanasiou SA).

The shares in the total market of manufactured cigarettes in 2006 were approximately: PAPASTRATOS 54.9%, KARELIA 32.8%, SEKAP 11.3%, GEORGIADIS 0.95%.

Based on the data in table 5 below, the total sales of the reporting companies followed a decreasing path in the period 2002-2006, with an average annual rate of change 14.2% and amounted to € 505.2 million in 2006.

**Table (5): Cigarette sales of domestic tobacco industry**

| Company                        | 2002        | 2006        |
|--------------------------------|-------------|-------------|
| <b>PAPASTRATOS CO</b>          | 373.290.278 | 277.367.881 |
| <b>KARELIA TOBACCO SA</b>      | 117.689.977 | 165.838.440 |
| <b>SEKAP SA</b>                | 61.530.987  | 57.215.211  |
| <b>GEORGIADIS SA</b>           | 23.261.297  | 4.791.416   |
| <b>KERANIS SA</b>              | 21.767.739  | -           |
| <b>PHILIP MORRIS HELLAS SA</b> | 172.753.320 | -           |
| <b>Total</b>                   | 770.293.598 | 505.212.948 |

Source: ICAP - published accounts

The distribution of tobacco products in Greece is achieved in two ways: In the large urban centers, Athens, Piraeus, Patra and Thessaloniki distribution is via the operator (wholesale) who holds all manufactured cigarettes available in the Greek market and supply retail selling points in their geographic area. Outside these geographical limits, the distribution is done by dealers which cooperate with any tobacco and importing company and in remote areas by common distributors who retain the right to sell competing products as well. Most companies manufacturing and / or marketing of tobacco until today had concluded contracts with dealers and common distributors, but not with the station that operated from their founding by informal long-term good cooperation. Station operators are organized into Associations / Unions by region. According to a study by ICAP (2008), the Association station operator of cigarettes of Athens and suburbs is numbering 126 members, the Union station operators of Piraeus 40 members, the Club station operators 20 members and the Club of Patra 5 members, while “according to statements by the stakeholders, the above mentioned links carry around 65 percent of total wholesale trade of tobacco products” (ICAP 2008, page 14).

#### Importing companies

The number of importing companies is also limited, and several of them are subsidiaries of multinational companies. With the importation of cigarette deal some production companies in the industry, which were presented in the previous paragraphs. In recent years the number of importing companies has diminished. In particular, the Puros Tabacos SA was absorbed by the company Keranis SA in 2004, the company Nollas G.A. Nollas & Co is inactive since 2002, while companies Holiday Land SA, Big Planet SA and Mi Theta Groups SA are not importing cigars from the years 2001, 2002 and 2004 respectively. Additionally, the companies World Cigars and Tobacco kiosk Hellas SA are inactive since 2005 and from November 2007 respectively.

The shares in the total market of imported cigarettes in 2006 were approximately: IMPERIAL TOBACCO HELLAS S.A. 24.5%, J T INTERNATIONAL HELLAS A.E.B.E. 16.1%, GALLAHER HELLAS S.A. 14.7%, BRITISH AMERICAN TOBACCO HELLAS A.E.E. 25.6%, ATHANASIOU S.A. 12.8%, BALLI S.A. 3.6%, UNIFLAME A.E.E.&B.E. 2.5% and TOBACCO KIOSK HELLAS S.A. 0.15%. Based on the data in table 6 below, the total sales of the reporting companies illustrate a slight increase in the period 2002-2006, with an average annual rate of change 1.54% and total sales reached 288.7 million euro in 2006.

**Table (6): Cigarette sales of importing companies**

| <b>Company</b>                                | <b>2002</b>        | <b>2006</b>        |
|---|--------------------|--------------------|
| <b>IMPERIAL TOBACCO HELLAS S.A.</b>           | 35.573.489         | 70.610.135         |
| <b>J T INTERNATIONAL HELLAS A.E.B.E.</b>      | 59.000.186         | 46.493.629         |
| <b>GALLAHER HELLAS S.A.</b>                   | 40.423.545         | 42.564.241         |
| <b>BRITISH AMERICAN TOBACCO HELLAS A.E.E.</b> | 91.834.471         | 74.004.629         |
| <b>ATHANASIOU S.A.</b>                        | 35.955.555         | 36.955.755         |
| <b>BALLI S.A.</b>                             | 2.960.170          | 10.362.961         |
| <b>UNIFLAME A.E.E.&amp;B.E.</b>               | 4.502.389          | 7.253.326          |
| <b>TOBACCO KIOSK HELLAS S.A.</b>              | -                  | 421.012            |
| <b>WORLD CIGARS S.A.</b>                      | 1.148.649          | -                  |
| <b>MI THETA GROUP S.A.</b>                    | 172.082            | -                  |
| <b>PUROS TABACOS A.E.E.</b>                   | 26.875             | -                  |
| <b>Total</b>                                  | <b>271.597.411</b> | <b>288.665.688</b> |

Source: ICAP - published accounts

## **5. The tobacco market in Greece: The demand side**

The demand for tobacco products is determined by some factors such as the price of cigarettes, the disposable income of consumers, the price of other consumer goods, advertising expenditures, consumer preferences, demographic trends, the legislation restricting smoking in public places, anti-smoking campaigns, seasonality (due to tourism and this is most pronounced in cigarettes of international brands) etc.

The elasticity of the demand curve of a product generally depends on several factors, but one of the most important is the existence of product substitutability for other goods. But in the case of tobacco products the element of addiction should be taken into account. Indeed, if smokers are addicted to tobacco, an increase in the price of cigarettes does not reduce their consumption much; hence, this is one of the most preferred objects of taxation. However, in case of a price increase of trademark cigarettes, the elasticity of demand for the particular brand or brands will be higher, because there is the possibility for substitution by other cheaper brands.

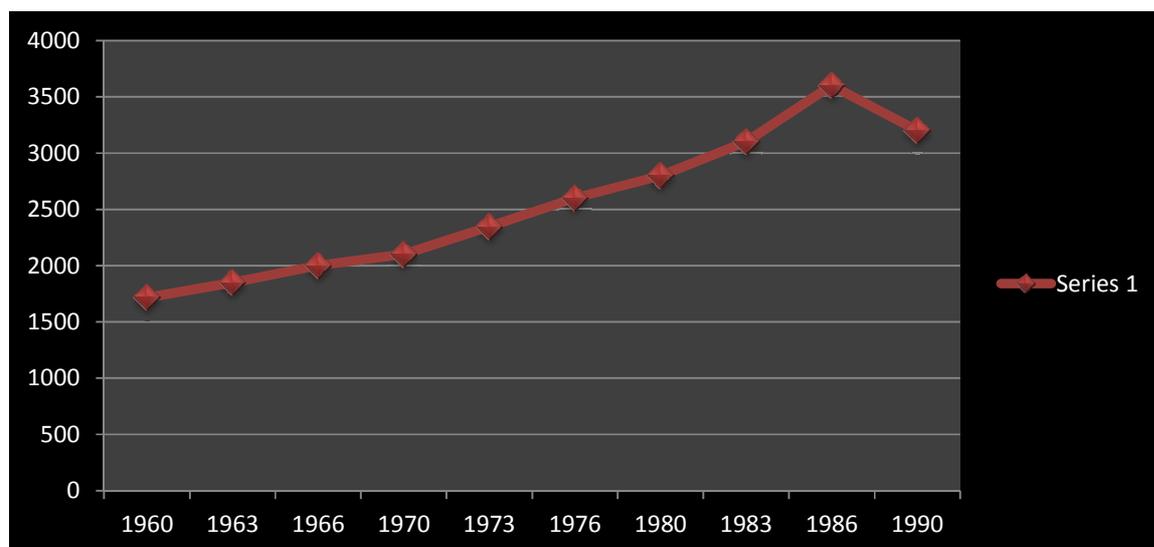
## 5.1 Empirical analysis of cigarette consumption

Hondroyiannis and Papapetrou (1997) presents an empirical analysis of cigarette consumption in Greece, using the recent Johansen cointegration procedure for the period 1960–1990, while income and price elasticities for the long-run and short-run period are estimated.

The demand function is given by the following equation:  $QDt = f(Pt, Yt, \pi t, At, Xt)$ , where  $QDt$  is the quantity demanded of cigarettes in period  $t$  ( $t = 1, \dots, N$ ),  $Pt$  is the price of cigarettes,  $Yt$  is the disposable income,  $At$  is the advertizing expenditures,  $\pi t$  the price of other goods and  $Xt$  is a vector of other variables such as information regarding the health risks of cigarette smoking, society's preferences for cigarettes and the existence of legislation restricting smoking in public places.

The data comes from the Ministry of Finance and is the total number of cigarettes produced and imported in Greece in various years. All variables used in the analysis are in logarithmic form  $LTCONS$ ,  $LTPRICE$  and  $LCYD$ , while  $DLTCONS$ ,  $DLTPRICE$  and  $DLCYD$  are the first differences respectively. Moreover, due to the non-availability of data on advertising, dummy variables are used to capture the effect of advertisement of cigarettes as well as the existing legislation regarding the restriction of smoking advertising on media and the health warning labels on cigarette packages. Specifically,  $D1$  is the dummy to capture the effect of cigarette advertising through television which started in 1970 and stopped in 1979.  $D2$  is the dummy to capture the effect of an anti-smoking campaign from 1979 to 1982. Finally,  $D3$  is the dummy to capture the effect of health warnings on packages and other smoking advertising efforts from 1987–1990. The figure illustrates cigarette consumption per adult over 15 during the period 1960–1990. This consumption reached the maximum 180 packages per year in 1986 and was followed by a decrease immediately after the anti-smoking campaign.

**Figure (3): Cigarette consumption**



The findings suggest that there is a negative relationship between price and quantity and positive among income and quantity. The impact of price on consumption is measured by the price elasticity of demand, where the elasticity is defined as the percentage change in the quantity consumed resulting from a one-percent increase in price. So, the price elasticity of demand for cigarettes in the period under examination is -0.6 in the long-run and -0.33 in the short run while the income elasticity is 0.54 and 0.35 respectively. These results indicate for example that a 10 percent increase in the price of cigarettes will decrease the consumption of cigarettes by 6 percent in the long-run and 3.3 percent in the short-run, while a 10 percent increase in income implies an increase in consumption by 5.4 percent long-run and 3.5 percent short-run.

According to Agelike Nikolaou (2007), high-income countries such as: US, Canada, the UK, Ireland, Finland, Austria, Switzerland, Spain, Italy, Greece, Australia, Japan, and others, clearly demonstrate that increases in taxes on cigarettes and other tobacco products lead to significant reductions in cigarette smoking and other tobacco use.

In the study of Nikolaou (2007), the estimated price elasticity of the demand for cigarettes, ranges among -0.25 and -0.50 (-0.3 to -0.5 respectively according to Ross, 2002) indicating that a 10 percent increase in cigarette prices will affect negatively cigarette smoking by 2.5 to 5.0 percent

Higher taxes increase both the number of attempts at quitting smoking and the success of those attempts. In U.S.A, U.K and other countries, increases in the price of cigarettes have had the greatest effect on smoking among the lowest-income and least educated populations. It was estimated that smokers in U.S. households below median income level are four times more responsive to price increases than smokers in households above median income level.

Moreover, economic theory suggests that demand in low-income countries is likely to be more sensitive to price than demand in more developed countries given the relatively low incomes and the empirical evidence (as we see in the following paragraph) are consistent with theory.

The empirical evidences of the effects of higher taxes on cigarettes and other tobacco products in low- and middle- income countries result to significant reduction in the consumption of these products. The estimates of the price- elasticity of demand for China, Taiwan, Turkey, South Africa, Brazil (low- and middle- income countries), fall in the relatively wide range from -0.1 to -1.0, with most in the range from -0.5 to -1.0. In addition these studies are consistent with economic theory of addictive behavior, which suggest that less educated and lower income persons will be more responsive to changes in monetary prices than those with more education and higher incomes (Chaloupka and Warner, 2000).

However, there are studies, most of them from the United States, which investigate differences in the price elasticity of cigarette demand by age. So, a common argument is that youth

smoking will be more responsive to the price than adult smoking. However, theoretical economic models suggest a number of complex issues. The majority of the empirical studies conclude that an inverse relationship exists between price elasticity and age with estimates for youth price elasticity of demand up to three times compared with those obtained for adults. However, the results are more mixed for subgroups, with some estimates suggesting low or non-existent price responsiveness, among adolescent girls, white youths and younger teens. Some older studies suggest that youth smoking may not respond to price at all. Furthermore many recent studies have begun to explore the differential effect of cigarette prices on youth smoking initiation, indicating that higher prices result in preventing young people of being regular smokers. (Nikolaou, 2007).

The above results have some useful policy implications. An increase in taxes on cigarettes could decrease the consumption by increasing simultaneously the tax revenue of the government since the percentage change in quantity is smaller than the percentage change in price. However, the policy maker should be very careful on the amount taxes could be raised because a sharp increase in the price of cigarettes could encourage black market phenomena and illegal imports.

## **6. Market Failures and Reasons for Government Intervention**

Today, about one out of three adults, that is more than 1.1 billion people, smoke. According to the World Health Organization (WHO, 1997), about 82 percent live in low- and middle-income countries, and the total number of smokers is expected to reach about 1.6 billion by 2025 (Jha et al., 2002). While smoking among men has been increasing since 1970 in low and middle-income countries, there has been an overall decline among men in the high-income countries during the same period. Moreover, in the above countries, among certain groups, such as young women and teenagers, the proportion of smokers has grown after 1990s.

In the low- and middle-income countries, particularly in the recent years, the increased trade liberalization has increased cigarette consumption. The removal of trade restrictions has increased competition, and that resulted in lower prices, greater advertising and promotion, and other activities that affect positively the demand for the tobacco products (Jha et al., 2002), (Nikolaou 2007).

According to Vardavas and Kafatos (2006), the price of tobacco products is one of the main causes of the problem. Tobacco products, mainly cigarettes, are still relatively cheap compared with the price of cigarettes in other country members of the European Union and, therefore, easily accessible to adolescents, even those with limited spending power. So, taking into account the low price of cigarettes and the nonexistence of any law forbidding the sale of tobacco products to minors, children are susceptible to tobacco advertising and are targeted by tobacco companies. Anti-tobacco education is not incorporated into the school curriculum, and although school smoking prevention legislation does exist, it is not always enforced. Smoking by

students and teachers in school grounds does take place, thus, demonstrating the inadequate enforcement of such legislation.

Many factors are responsible for Greece's current anti-tobacco policy failure. Smoking is a socially accepted habit and is embraced by a large part of the culture in which tolerance and freewill play an important role. Greece is also a tobacco producing country where the agricultural produce in some regions is largely tobacco, thus, creating a pro tobacco norm. As shown above, with such a high smoking prevalence and with a culture and economy that supports in certain areas tobacco use, there is insufficient basis for the efficient implementation of anti-smoking campaigns. During 1978–1980, Greece attempted and, for a limited time, efficiently conducted its only ever nationwide anti-smoking campaign. The national ban on tobacco advertising on broadcasting media enforced in 1979 gave rather unimpressive results. However, when the campaign became rather aggressive with repeated anti-smoking messages and the circulation of posters, the annual increase in tobacco consumption dropped to nearly 0 percent. When the campaign stopped 2 years later tobacco consumption returned to prior rates. (Vardavas and Kafatos, 2006)

Today, there is large and growing number of deaths from tobacco. Half of all tobacco users will die as a result of their addiction, and half of these deaths will be of people aged between 35 and 69. Each day, 80,000 – 100,000 more young people begin to use tobacco, and most of them live in developing countries. In many countries, the scale of this health problem is greatly underestimated. Many decision makers don't know which interventions and policies are most effective to reduce tobacco use. And many governments hesitate, because they don't want to lose the jobs and revenues from tobacco products, or because smoking, or chewing tobacco is a widely accepted social activity.

According to WHO, it is predicted that tobacco use will cause 8.4 million deaths by 2020, 70% of which will occur in developing countries. Of the 100 million projected tobacco-related deaths over the next 20 years, about half will be of people in the productive ages of 35-69. In general, 9% of women in developing countries and about 22% in developed countries currently smoke. Without robust and sustained initiatives, these figures are expected to rise dramatically, with today's 250 million women smokers rising to 340 million by 2020.

Economic theory suggests that, if consumers make rational and informed choices after evaluating the costs and benefits of purchases and bears all costs of their choice, there is no justification, on efficiency matters, for government to intervene in a market (Warner, 2000).

However, there are three market failures of tobacco market (Nikolaou, 2007). Firstly, many smokers are not fully informed of the major private cost of smoking which is high probability of disease and death. Secondly, there is an information failure about the risks of tobacco addiction. Most smokers and especially teenagers, underestimate the tobacco addiction problem. There is also evidence that children and teenagers are not capable to assess any information about the health effects of smoking. The two market failures above, can result in high private costs of premature death and disability due to tobacco related diseases. (Jha et

al.,2000). Finally, there is evidence that smokers impose costs on other individuals, both directly and indirectly. These external costs of smoking constitute the third market failure.

People do not know the risks of tobacco use. Also, most smokers start young and the society has to protect youth. Nicotine is very addictive and tobacco users impose costs on others such as passive smokers.

So why should governments intervene? There are three strong reasons for governments to intervene. The first is to deter children from smoking. The second is to protect non-smokers from others' smoke and thirdly to provide adults with good information so they can make well-informed choices

## **7. Assessing the tobacco control policies**

A few years ago, the World Bank worked closely with World Health Organization (WHO), Centers for Disease Control (CDC) and others to put together a team of world-class researchers to review, analyze and summarize the existing evidence and data on tobacco control interventions. There were about 30 people on the team, and the work was carefully reviewed at meetings with policy makers and researchers from around the world. The result of research has the title "Curbing the Epidemic" with seventeen full background papers published in "Tobacco Control in Developing Countries".

Most interventions for tobacco control are effective and cost-effective. The best results will be achieved by making use of all of the options available including the following.

### **7.1 Demand approach**

As concerns non-price measures governments have to inform the consumers, as example with large clear warning labels. According to Ross (2002), the information shock in early 1960's caused by publication of US and UK reports linking smoking to lung cancer led to significant reductions in cigarette smoking, with initial declines of 4 to 9 percent, and longer-term cumulative declines of 15 to 30 percent. Similar declines accompanied information dissemination on tobacco harm in low and middle-income countries several years later. Even now, mass media anti-smoking campaigns still have the potential to reduce smoking prevalence by 4-12 percent if sufficiently funded and combined with other tobacco control policies. There is still much to be done in health education: new evidence about the harmful effects of tobacco use needs to be disseminated, and many individuals, particularly in low- and middle-income countries, need to be persuaded about the risks of tobacco use.

Also it is very effective bans on cigarette advertising and promotion, or counter-advertising. Most economic studies investigating the relationship between cigarette advertising and cigarette demand have produced mixed results, with the majority of them concluding that advertising has a small positive impact on demand. Analyzing advertising and promotion bans

provides more direct evidence on the effect of advertising. For example, a recent study predicted that a comprehensive set of tobacco advertising bans in high-income countries could reduce tobacco consumption by over 6 percent, in contrast with partial bans which have little impact on smoking behavior. In addition, qualitative methods complimenting the economic research in this area support the hypothesis that increased exposure to advertising leads to higher cigarette demand. To summarize, economic research has demonstrated that demand side interventions are highly effective in reducing the demand for tobacco products. Widespread adoption of these measures would reduce the public health toll from tobacco.

Also restrictions and bans on smoking in workplaces and other public places are effective policies. Negative health consequences of passive smoking, particularly for children lead to direct adoption of restrictions on smoking. These restrictions also reduce smokers' opportunities to smoke, protect the health of non-smokers, do not harm business and encourage smokers to quit. In Western populations, comprehensive restrictions on smoking result to 5 -15 percent reductions of smoking rates, while change the social standard concerning smoking behavior, especially among youth. Smoking bans in workplaces generally reduce quantity smoked by 5-25 percent, and prevalence rates up to 20 percent (Ross, 2002). The non-smoking policies seem to be most effective when strong social standards against smoking help to make smoking restrictions self-enforcing.

In addition to the previous paragraph the results from WHO are the following:<sup>12</sup>

- Less than 11 percent of the world's population is protected by comprehensive national smoke-free laws.
- The number of people protected from second-hand smoke more than doubled to 739 million in 2010 from 354 million in 2008.
- Almost half of children regularly breathe air polluted by tobacco smoke.
- Over 40 percent of children have at least one smoking parent.
- Second-hand smoke causes more than 600 000 premature deaths per year.
- In 2004, children accounted for 31 percent of the deaths attributable to second-hand smoke.

So, since older legislation in Greece was not very efficient a new, stricter law was passed. "Effective from 1 September 2010, this law bans smoking and consumption of tobacco products by other means, in all working places, transportation stations, in taxis and passenger ships (in trains, buses and airplanes smoking is already prohibited), as well as in all enclosed public places including restaurants, night clubs, etc., without any exception. Fines are particularly heavy for smokers who do not comply (fines range from 50 to 500 Euros) as well as for the working places or companies, i.e. restaurants, night clubs, pubs, etc. (fines range from 500 to 10,000 Euros). Finally for those companies that violate the law for the 5th time in a row, the law orders for the closure of the specific company."<sup>13</sup> Although, two years have passed since then and there has been no real law enforcement.

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<sup>12</sup> <http://www.who.int/mediacentre/factsheets/fs339/en/index.html>

<sup>13</sup> [http://en.wikipedia.org/wiki/Smoking\\_in\\_Greece](http://en.wikipedia.org/wiki/Smoking_in_Greece)

In addition the last and cost-effective intervention is taxes. They are especially powerful in influencing the decisions of young people, and people with low incomes, who tend not to respond very strongly to information and public education efforts. Tobacco taxes are usually used to generate revenues, but recently they become to play an important role in reducing smoking.

There are significant differences across countries in the level of tobacco taxes (Ross, 2002). The World Bank data shows that taxes tend to be absolutely higher and account for a greater share of price in high-income countries compared to low- and middle-income countries. Numerous studies from high-income countries demonstrate that increases in tobacco taxes lead to significant reductions in cigarette smoking and other tobacco use. In addition, research confirmed an inverse relationship between price elasticity and age, with estimates for youth price elasticity of demand up to three times those obtained for adults. Several studies have explored differences in the price sensitivity of cigarette demand by income, education, and/or socioeconomic status. They demonstrated that less educated persons, lower income individuals and people with lower socioeconomic status reduce their tobacco consumption more in response to price increases than people who are more educated, have higher income levels, and have higher socioeconomic status.

So, governments should increase taxes on all tobacco products. The tax should constitute approximately 70 percent – 80 percent of the total price and should be increased regularly to keep pace with inflation. Also, a portion of tobacco tax revenues should be earmarked for tobacco control programmes.

## **7.2 Taxation of cigarettes**

Tobacco products are consumer goods with the highest taxes in the world. Taxes, which are the single most effective means of tobacco control (WHO, 2003), are often more than half of the retail price, providing huge government tax revenues annually.

Governments achieve multiple goals by imposing taxes on tobacco. Excise duties and other fiscal measures used by governments to generate revenue. Tax policies can be used to promote public health objectives by reducing tobacco consumption. Tax policy is, for example, the main point of the Framework Convention on Tobacco Control (FCTC) of the World Health Organization. According to Article 6 of the FCTC, pricing and tax measures are an effective and important way to reduce tobacco consumption by various sections of the population, especially young people.

The taxation of tobacco began in Greece in 1883 and today is an important source of revenue. The evaded taxes from cigarettes seized by the Hellenic Coast Guard only from 1998 to 2004 reach EURO 107,948,634.42 (Hellenic Coast Guard, 2005)<sup>14</sup>.

The taxation of cigarettes is imposed by directives and regulations of the EU. Specifically according to law 2960/2001, tobacco products bear taxes which include: a specific excise duty per unit of the product, an ad valorem excise duty calculated on the basis of the maximum retail selling price and a VAT proportional to the retail selling price.

According to the council directive 2011/64/EU of 21 June 2011, “the overall excise duty (specific duty and ad valorem duty excluding VAT) on cigarettes shall represent at least 57 percent of the weighted average retail selling price of cigarettes released for consumption. That excise duty shall not be less than EUR 64 per 1 000 cigarettes irrespective of the weighted average retail selling price” (article 10, paragraph 1).

Moreover, “from 1 January 2014, the overall excise duty on cigarettes shall represent at least 60 percent of the weighted average retail selling price of cigarettes released for consumption. That excise duty shall not be less than EUR 90 per 1 000 cigarettes irrespective of the weighted average retail selling price” (paragraph 2).

As far as the rest of tobacco products concerned, the overall excise duty (specific duty and/or ad valorem duty excluding VAT) is:

“(a) cigars or cigarillos: 5 percent of the retail selling price inclusive of all taxes or EUR 12 per 1 000 items or per kilogram,

(b) fine-cut smoking tobacco intended for the rolling of cigarettes: 40 percent of the weighted average retail selling price of fine-cut smoking tobacco intended for the rolling of cigarettes released for consumption, or EUR 40 per kilogram,

(c) Other smoking tobaccos: 20 percent of the retail selling price inclusive of all taxes, or EUR 22 per kilogram”, (article 14, paragraph 2).

According to WHO (2011), table 7 below presents the taxes on the most popular brand of cigarettes in Greece:

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<sup>14</sup> Antonopoulos, G. A. (2007) 'The Greek connection(s): The social organization of the cigarette-smuggling business in Greece', *European Journal of Criminology*, 5 (3), pp.263-288.

**Table (7): WHO's comparable estimate of price of pack and the corresponding taxes.**

|  | WHO's comparable estimate<br>for 2008 | WHO's comparable estimate<br>for 2010 |
|--|---------------------------------------|---------------------------------------|
| <b>Price of most sold brand,<br/>pack of 20 cigarettes</b> |                                       |                                       |
| <b>In currency reported by<br/>country</b>                 | EUR<br>3.00                           | EUR<br>3.20                           |
| <b>In US\$ at official exchange<br/>rate</b>               | USD<br>4.18                           | USD<br>4.17                           |
| <b>Taxes on this brand (% of<br/>retail price)</b>         |                                       |                                       |
| <b>Total taxes</b>   | 73                                    | 86                                    |
| <b>Specific excise</b>                                     | 4                                     | 9                                     |
| <b>Ad valorem excise</b>                                   | 54                                    | 58                                    |
| <b>Value added tax (VAT)</b>                               | 16                                    | 19                                    |
| <b>Import duty</b>   | -                                     | -                                     |
| <b>Other taxes</b>   | 0                                     | 0                                     |

There have been suggestions in order to enforce higher taxes and to raise the price of tobacco products. Such actions would probably lead to a decrease in tobacco consumption and to an increase in the population's health status. But on the other hand, since Greece has been classified as a medium tobacco smuggling country (with a contraband market share of 8 percent), and taking into account its geographical location one can infer that efforts to raise prices and taxes would possibly be counterbalanced by an increase in tobacco smuggling. (Vardavas and Kafatos, 2006.)

However from 1 January 2013, the overall excise duty on fine-cut smoking tobacco shall represent at least 43 percent of the weighted average retail selling price, 46 percent in 2015, 48 percent in 2018 and 50 percent in 2020. And this rise on tobacco taxes proposed European Commission on 15 July of 2008 in order to reduce smoking and smuggling.<sup>15</sup>

There is clear evidence on a set of highly cost-effective policies and interventions to reduce tobacco use that could provide substantial gains in health outcomes and save many lives. The experience of countries that have implemented effective tobacco control activities and careful analysis shows that tobacco control can be pursued in a sound economic framework. The alleged losses in jobs, incomes, advertising and other revenues etc usually are greatly exaggerated by those with strongly vested interests. Tobacco control will not harm most economies and the public health gains are likely to be substantial.

<sup>15</sup> [http://ec.europa.eu/news/economy/080716\\_1\\_en.htm](http://ec.europa.eu/news/economy/080716_1_en.htm)

### **7.3 Supply approach**

From the other side there are interventions that are not effective in reducing tobacco use. In contrast to the effectiveness of demand side interventions, there is very little evidence that reducing the supply of tobacco is effective in curbing the tobacco epidemic (WHO, 1997). For example, limiting youth access to tobacco was not yet clearly linked to less tobacco use. The effective implementation and enforcement of these policies also requires infrastructure and resources that are difficult to ensure. However, a way to reduce the supply of tobacco is crop substitution and diversification programs. On the other side, there are not enough evidences that these programs significantly reduce supply, because the incentives for tobacco growing attract new farmers who replace those who do move out of tobacco farming. While trade liberalization has contributed to increases in tobacco use, particularly in low- and middle-income countries, restrictions on trade in tobacco that violate international trade agreements may result in retaliatory measures harming the whole economy.

However, the key intervention on the supply side is the control of cigarette smuggling, which currently estimated to amount for 6 – 8 percent of global consumption. While differences in taxes and prices across countries suggest a motive for smuggling, a recent analysis showed that corruption within countries is a stronger predictor of smuggling than price.

### **7.4 Smuggling of tobacco**

The illicit trafficking of tobacco is a multibillion-dollar business today, fueling organized crime and corruption, robbing governments of needed tax money, and spurring addiction to a deadly product. So profitable is the trade that tobacco is the world's most widely smuggled legal substance.

The smuggling of tobacco and cigarettes is a problem within the European Union. Tobacco and cigarettes smuggled by criminal groups into the European Union come from China and other countries in Asia, Russia, Ukraine, the Baltic States, the Middle East and Africa. Cigarettes that are smuggled into EU are in most cases aimed for the Nordic market and the United Kingdom.

Antonopoulos (2007) states that smuggled cigarettes account for 6 to 8.5 percent of the total cigarette consumption<sup>5</sup>, and that for every truckload of cigarettes smuggled into the European Union US\$ 1.2 million (about EURO 992,000) in taxes are lost. According to EUROPOL, countries with high taxation on cigarettes are vulnerable to cigarette smuggling however, very interestingly cigarette smuggling may be more prevalent in countries in which cigarettes are cheaper. Spain and Italy for instance, that are two countries of the EU associated with large-scale cigarette smuggling for several decades now. Greece is a source, transit and destination

country for smuggled cigarettes, as well as a country with relatively cheap cigarettes. According to official figures obtained by the Hellenic Coast Guard, in the period 2000-2004 there were 39,941,392 packs of cigarettes seized and the evaded taxes were exceeding EURO 107 million. In addition, it should be noted that Greece is the top smoking country worldwide in terms of per capita cigarette consumption as well as a country with a relatively large population of smokers that reaches 40 percent of the population.

To increase profits, illegal tobacco is produced with cheap materials, and with little regard for health and quality controls. These cigarettes are sold to smokers instead of genuine products, which meet certain standards. Counterfeits generally contain much higher levels of tar and nicotine than genuine brands, and produce more harmful carbon monoxide. They could incorporate a seriously unhealthy mix of cancer-causing chemicals including arsenic, cadmium, benzene and formaldehyde — far greater than genuine cigarettes. Seized counterfeit cigarettes have even been found to contain mites, insect eggs, fungi and faeces. Counterfeit and smuggled tobacco products are sold on open markets and customers are often unaware that they are buying illegal products. The money they pay goes directly to criminal groups, funding other areas of serious organized crime and terrorism.

Cigarettes are the world's most widely smuggled legal consumer product. They are smuggled across almost every national border by constantly changing routes. Between 300 and 400 billion cigarettes were smuggled in 1995, equal to about one third of all the legally imported cigarettes. In the same year the estimated smuggled cigarettes in Greece were 5 to 9 percent of the domestic sales.<sup>16</sup>

Cigarette smuggling causes immeasurable harm. International brands become affordable to low income consumers and to image conscious young people in developing countries. Illegal cigarettes evade legal restrictions and health regulations, and while the tobacco companies reap their profits, governments lose tax revenue.

EUROPOL estimated that the illicit tobacco trade costs the European Union about EUR 10 billion annually in lost revenue. Tobacco smuggling is not a victimless crime. The lost government revenue is vital money that could have been spent on essential public services, such as schools, hospitals, roads and law enforcement. For that reason, Europol supports law enforcement agencies in preventing and combating the activities of organized crime groups (OCGs) illegally manufacturing and trafficking cigarettes and tobacco products.

Some governments are now suing tobacco companies for revenue lost due to smuggling activities allegedly condoned by the companies. Measures needed to control smuggling should include monitoring cigarette routes, using technologically sophisticated tax-paid markings on

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<sup>16</sup> <http://www.who.int/tobacco/en/atlas20.pdf>

tobacco products, printing unique serial numbers on all packages of tobacco products, and increasing penalties.

Moreover, the European Commission and British American Tobacco at 15 July 2010 in Brussels signed an agreement in order to combat illicit trade in tobacco. The European Commission announced a multi-year agreement to cooperate with the British American Tobacco (BAT) for tackling the illicit trade in tobacco products. Under the legally binding agreement, BAT will work with the European Commission, with the Commission office OLAF to combat fraud, and with the law enforcement authorities of the Member States to help combat the smuggling and counterfeiting / counterfeit cigarettes. The agreement includes substantial payments by BAT to the Commission and the Member States, totaling 200 million dollars (134 million euro) over the next 20 years. So, it is expected that this agreement will contribute significantly to the EU's efforts to combat the illicit trade in tobacco products, which robs the EU and Member States billions of euro annually.

## 8. Conclusion

Since Greece's smoking epidemic mostly seems to affect adolescents and students, (male and female) one can see the need for anti-tobacco intervention programmes aimed at the younger people. High smoking rates in these populations will inevitably lead to higher adult smoking rates in the future, continuing the tobacco epidemic. School-based health intervention programmes have been implemented in certain areas in Greece leading to a decrease in smoking among children in the targeted group, even though, and as stated in numerous reviews; there are relatively no long-term effects from such intervention programmes on their own. Combinations of social influence interventions and school-based interventions have never been enforced but would probably produce more positive results, even though the population's pro tobacco norm might make the implementation of such measures difficult. A national anti-smoking movement in combination with continuous school and socially based intervention programmes would probably give the best results, since it has been shown to be effective on the Greek population in the past.

According to Vozikis (2008), the best results are achieved when a comprehensive set of measures to reduce the use of tobacco are implemented together. Many countries have succeeded in reducing smoking prevalence dramatically, and consequently reduced cancers, heart disease and other circulatory diseases, respiratory diseases, and low birth weight incidence.

Price increases are the most effective and cost-effective deterrent – especially for young people and others with low incomes, who must, of necessity, be highly price responsive. A price rise of 10 percent decreases consumption by about 8 percent in low- and middle-income countries. Higher taxes will generate additional government revenue. In almost all countries, as people switch expenditures from tobacco to other goods, there will not be net job losses.

In summary, tobacco policies that exist in Greece have been ineffective in combating a habit that affects the population so widely. Most measures to reduce supply are ineffective (prohibition, youth access restrictions, crop substitution efforts and trade restrictions). Control of smuggling is the exception, and is the key supply-side measure to pursue. Since tobacco-related diseases have a high health and economical cost, it is obvious that the strict enforcement of a nationwide anti-tobacco policy must be a priority on the national health agenda, if we are to ever effectively combat the high prevalence of smoking in Greece.

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