Tobacco Economics in Egypt

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اقتصاديات التبغ فى مصر

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Abstract :

Tobacco as well as smoking and its several dangers are considered as some of the greatest economic, environmental, health, social and educational challenges facing the whole world states at all levels. It leads to the death of about 5.4 million people annually mostly from the third world states; it is expected that the death number will reach almost 10 million people in 2025. The economic cost and healthcare resulted from smoking at the world level are valued about $ US 200 billion dollars annually. Due to the increase of smoking and its negative effects, the World Health Organization members' states adopted an anti-smoking historic agreement; the framework agreement of smoking prevention in May 2003 which is expected to contribute to getting rid of smoking. Egypt is the ninth largest state of raw tobacco importing at the global level. Egypt is one of the largest states of tobacco consumption in the Arab world. The number of all-sort tobacco smokers in Egypt reached about 18 million smokers in 2015.The death number resulted from smoking in Egypt reached annually 170 thousand people. The annual treatment cost which Egypt undergoes for diseases resulting from all-sort smoking valued about L.E. 4 billion pounds.

The research aims to identify the world consumption and production of tobacco with concentration on the tobacco economics in Egypt in terms of manufacturing, consumption, employment and foreign trade. It clarifies the effect of imposing taxes on tobacco in Egypt to curb the subsequent increasing consumption and costs rates of smoking risks. It aims as well to identify the anti-tobacco exerted efforts in Egypt and indicate the most important economic and environmental effects resulting from the use of tobacco use.

Keywords: Tobacco, smoking, production, consumption, taxes on tobacco, economic effects, Egypt.

الملخص :

تتعدد الأخطار الناجمة عن التبغ والتدخين وتعد من أكبر التحديات الصحية والبيئية والاقتصادية والاجتماعية التي تواجه جميع دول العالم علي كافة المستويات. وحسب تقرير منظمة الصحة العالمية لعام ٢٠١٦ أن استهلاك التبغ والدخان يؤدى إلى وفاة نحو ٥.٤ مليون شخص سنوياً غالبيتهم من دول العالم الثالث ومن المتوقع تزايد عدد الوفيات ليصل إلى نحو ١٠ مليون شخص عام ٢٠٢٥. وتقدر التكلفة الاقتصادية والرعاية الصحية من جراء تدخين التبغ والسجائر على المستوى العالمي بنحو ٢٠٠ مليار دولار سنوياً، مما يستنزف جزء كبير من موارد الدخل القومي المخصص للنهوض بالمشروعات التنموية وبخاصة في الدول الفقيرة . ومع تزايد مخاطر التدخين وأثاره السلبية تبنت الدول الأعضاء في منظمة الصحة العالمية الاتفاقية الإطارية لمكافحة ومنع التدخين في مايو ٢٠٠٣ والتي من المتوقع أن تساهم في القضاء على التدخين مستقبلاً. وتعد مصر تاسع أكبر دولة مستورد للتبغ الخام في العالم، كما أنها من أكثر الدول استهلاكاً للتبغ في العالم العربي. ويقدر عدد المدخنين للتبغ والسجائر بجميع أنواعه في مصر عام ٢٠١٥ بنحو ١٨ مليون مدخن. ويقدر عدد الوفيات الناجمة عن التدخين في مصر بنحو ١٧٠ ألف حالة سنوياً. وتقدر التكلفة السنوية التي تتحملها مصر لعلاج الأمراض الناجمة عن التدخين بأنواعه بنحو ٤ مليار جنية مصري ، بجانب الفاقد الاقتصادي والمتمثل في خسائر الاقتصاد القومي بسبب التدخين والمقدر سنوياً بنحو٣٤ مليار جنية.

ويهدف البحث إلى التعرف على الإنتاج والاستهلاك العالمي من التبغ مع التركيز على اقتصاديات التبغ في مصر من حيث التصنيع والاستهلاك والتوظيف والتجارة الخارجية وبيان أثر فرض الضرائب على التبغ في مصر للحد من تزايد معدلات الاستهلاك والتكاليف المترتبة على أخطار التدخين ، بجانب التعرف على الجهود المبذولة لمكافحة التبغ في مصر وبيان أهم الآثار الاقتصادية والبيئية الناجمة عن تدخين التبغ، وأخيراً استعراض أهم نتائج وتوصيات البحث .

Introduction:

The agriculture, manufacturing, importing and use of tobacco in smoking at the global level is the most sensitive issue nowadays and has not got the researchers' adequate interest. Tobacco as well as smoking and its several dangers "brown plague" are considered as some of the greatest economic, environmental, health, social and educational challenges facing the whole world states at all levels. Tobacco types and quality differ according to its origin place of agriculture and use from a place to another (*Daoudi Ghalib ,2014*).

According to the World Health Organization report in 2016, the consumption of tobacco leads directly to risk increase of the cancer, heart, lungs tuberculosis diseases and other diseases which constitute about 35% of deaths at the middle age. It leads to the death of about 5.4 million people annually mostly from the third world states; it is expected that the death number will reach almost 10 million people in 2025.

The smokers' number at the global level reached about 1.3 billion people in 2015; it is expected to increase to more than 1.7 billion people in 2025. The number of cigarettes produced globally on year basis reached almost 6.3 trillion cigarettes whose annually world sales valued about $ US 800 billion dollars (*WHO,2016*).

The economic cost and healthcare resulted from smoking at the world level are valued about $ US 200 billion dollars annually. This exploits a large portion of the national income resources allocated for raising the development projects particularly in the poor states. Trading of smuggled cigarettes noticeably spreads in the black market at the world level. They are illegally sold with cheap prices to avoid paying taxes and lead to the increase of sales and consumption (*Sayginsoy, O. A.A. Yürekli and J.de Beyer ,2015*).

Due to the increase of smoking and its negative effects, the World Health Organization members' states adopted an anti-smoking historic agreement; the framework agreement of smoking prevention in May 2003 which is expected to contribute to getting rid of smoking. The WHO determines 31th May of each year as the world day of tobacco abstention (*WHO,2016*).

The Research Problem:

Egypt is the ninth largest state of raw tobacco importing at the global level. Egypt is one of the largest states of tobacco consumption in the Arab world. The number of all-sort tobacco smokers in Egypt reached about 18 million smokers in 2015, of them almost 9 million people smoke cigarettes. The death number resulted from smoking in Egypt reached annually 170 thousand people; 90% of them are males. The annual treatment cost which Egypt undergoes for diseases

resulting from all-sort smoking valued about L.E. 4 billion pounds. The economic losses represented in smoking-due to- national economic losses are annually valued about L.E. 3٤ billion pounds (*Heba, Nassar, 2003 and WHO,2016*).

The largely increasing rate of tobacco addiction and cigarettes consumption per individual due to economic openness and foreign trade linearization and the current relative reduction of tobacco products prices in Egypt with actual income increase. Curbing tobacco addiction and risks, it is necessary to impose further high-rate taxes on tobacco to curb its addiction and lessen the economic and health risk at one hand and collecting new revenues of the state public budget at the other hand.

The question to be raised if tobacco and smoking have large negative health, economic, environment effects why states and companies do not stop producing and manufacturing tobacco? How could tobacco and smoking be transferred from economics of losses and harms into economics of gains and benefits? What is the optimal tax that should be imposed on tobacco and cigarettes to curb their negative risks and effects? Why does the ministry of health approve the entry of harmful materials in case of tobacco and cigarettes importing and then at the same time create anti-tobacco and smoking departments and allocate annual budget for them?

Remarkably, the economic theory considers consumers as the best to quantitatively and qualitatively control spending on goods and services. When consumers realize the related benefits and risks of their consumption trends, the community resources are then allocated at their maximum potential efficiency. Is it applicable to the smoking and tobacco economics?

The Research Aims:

The research aims to identify the world consumption and production of tobacco with concentration on the tobacco economics in Egypt in terms of manufacturing, consumption, employment and foreign trade. It clarifies the effect of imposing taxes on tobacco in Egypt to curb the subsequent increasing consumption and costs rates of smoking risks. It aims as well to identify the anti-tobacco exerted efforts in Egypt and indicate the most important economic and environmental effects resulting from the use of tobacco use. Finally, it displays the most important findings and recommendations.

The research approach:

The research has relied on an analytical descriptive approach to achieve its aims through reviewing the topic-related previous studies. In addition, it has used the available data from the central

system of public mobilization and statistics in Egypt on tobacco and cigarettes, the WHO reports and reports individually issued by some states regarding tobacco and cigarettes consumption. The Laffer curve has been used to indicate the relation between tobacco tax rate and tax revenues. In addition, the research has relied on findings of the published relevant studies.

The Research Hypotheses:

The research has based on two main hypotheses, namely the local and imported tobacco products in Egypt has negative effects on the Egyptian economy and the taxes increased on tobacco products leads to a decrease in tobacco consumption rates.

The Research Plan:

The research is divided into five parts :

First : theoretical framework and previous studies.
Second : Tobacco world production and consumption.
Third : Tobacco economics in Egypt.
Fourth : economic effects resulting from tobacco smoke.
Fifth : research findings and recommendations .

First : *theoretical framework and previous studies.*

The conventional analysis of taxes imposed on tobacco stipulates that individuals consume tobacco just as they consume other commodities. Thus, any spending or benefits are considered as internal variables (personal) and do not subject to the state intervention. Therefore, the only pretext behind the state intervention would be external effects which the smokers impose on other people. The theory of Pigouvian stipulates in particular, in regard with imposing taxes on tobacco (*Gruber J, Koszegi B,2014*), that taxes imposition on a particular product should be equal to its external effects imposed by using that product and those taxes should not depend on the effects per se (internal or personal variables).

There are several reasons for raising cigarette excise taxes such as; to increase government revenue, to protect children and youth, to improve public health and to correct externalities. These entire reasoning further pose a question as to what is the optimal tax that should be imposed on cigarette. From the economic perspective, the optimal tax can be achieved when the marginal cost of the last cigarette consumed equals to its marginal social benefits. However, according to (*Warner et al,2012 and Chaplouka et al,2014*) evaluation and identification of the negative externalities associated with direct smoking and direct environmental effect from tobacco smoke are abundant and complicated. Therefore for a country to set the level of tax, it should take into account the national health objectives and also

depends on societal value such as the extent to which the children should be protected from the effect of smoke polluted environment. Apart from the health and social objectives of imposing tax on cigarettes, some governments may levy taxes with the intention of maximizing revenues.

An empirical evidence from a study in South-East Asia reports on the potential revenue generated from tobacco taxes (*Arunatilake,2014*). This study assumes that the real GDP per capita in the region was growing at 4% annually and a 5% increase in real cigarette prices induced by higher taxes would generate substantial additional revenue for the region by 2020.

The fundamental principle related to efficiency of taxation is that the generated tax revenues from higher cigarette price due to increase in cigarette tax should minimize the welfare losses. As stated by (*Baumol and Bradford,2009*), the criteria for economic efficiency in taxation are; it should have the effect of reducing demand for all commodities in the same proportion, it should distort consumer choice as little as possible, and direct tax payers as little as possible to less preferred patterns of consumption. Taxes discourage people from buying the products and lead to an efficiency loss. This efficiency loss is called the 'excess burden of tax' or 'deadweight loss' (*Zee, Howell H, 2012*).

A good tax policy by the government is to set taxes for products which creates the least economic distortion. (*Warner, K.2012*) designs an optimal tax theory that identifies distortion minimizing tax policy and the second best levels of taxes. He argues that the second best tax policy should prescribe tax rates on different commodities as inversely link to their demand elasticity. The "Warner Rule" states that tax rate should vary inversely with the elasticity of demand for products by holding the elasticity of supply constant. Products with very inelastic demand such as cigarettes should bear the highest tax rate due to its addictive capacity. This will minimize consumer's loss of utility associated with a tax by minimizing the need to forego consumption they would prefer in order to avoid paying the tax. (*Chaloupka et al. ,2014*) find most estimation for the price elasticity of demand for cigarettes from the literatures on high-income countries is between -0.25 to -0.50. In contrast, demand is more responsive among low-income and middle-income countries that are in the range of -0.50 to -1.00. Given this evidence of inelastic demand for cigarettes, taxes on cigarettes appear to satisfy the Ramsey Rule. Not only that increases in taxes lead to significant reductions in cigarette smoking but also at the same time leads to significant

increase in tax revenue. In an estimation by (*Sunley, Yurekli and Chaloupka ,2015*), an increase of 10 % in cigarette taxes would lead to an increase of almost 7 % on average in cigarette tax revenues.

The rate of cigarette excise tax that maximized revenue can be explained using the Laffer curve. A Laffer curve is showing the relationship between tax revenue and the tax rate. There is a negative relationship between tax rates and tax bases. Changes in tax rates have two effects on revenues: the arithmetic effect and the economic effect. The arithmetic effect is simply when tax rates are lowered, tax revenues per dollar of tax base will be lowered by the amount of the decrease in the rate. And, the reverse is true for an increase in tax rates. The economic effect from lower tax rates gives the positive impact on work, output, and employment and thus providing incentives to increase these activities. However, raising tax rates have the opposite economic effect by penalizing participation in the taxed activities. The arithmetic effect always works in the opposite direction from the economic effect. Therefore, the combination of both effects will not give an obvious consequence of the changes in tax rates on total tax revenue. The economist, (*Arthur Laffer,1986*) suggests that beyond some tax rate, higher tax rate will shrink the tax base so much that revenues will actually decline.

The revenue generated from taxing cigarettes can be used to support anti-smoking activities such as tobacco-related education and prevention effort, media campaigns and other public health efforts. Countries like Egypt and Nepal earmark the tax revenue to subsidized medical expenditures for low income families .Moreover, cigarette tax increases that are earmarked for anti-tobacco media campaigns, prevention program and subsidization of tobacco cessation products generate even larger reductions in cigarette use and improvement in health.

A study by (*Kazem ,1995*) used tax simulation modeling to assess the effect of a price increase due to an excise tax rise on government revenue, the company revenues and the present value of company. Price and income elasticities of demand were estimated, and used to project consumption and company and tax revenues for 1995-2000. The study found that in Egypt cigarettes were price- inelastic (-0.3) and income-elastic (1.02), which agrees with the theory of demand for cigarettes in developing and developed countries, and is similar to estimates found in other countries. The implication is that cigarettes are a normal commodity, and consumption rises as income increases and falls when the real price increases. The study examined two different policy scenarios for the government. In scenario 1, the

price increased by the rate of inflation (9%), and government tobacco revenues grew at a uniform rate of 4%, the rate of growth of GDP. In scenario 2, the excise tax rose by 10 piastres (LE 0.1). Supply is assumed to be perfectly elastic, so all of the tax increase is passed on to consumers. In both scenarios, government revenue and company revenue grew by 5.9% in 1993 and by 6.2% in 1994. The study concluded that scenario 1would generate higher revenues and share values for the company.

A study of the economic consequences of smoking in Egypt (*Sherif Omar, 2009*).The study reported that because prices for tobacco products were set by the government the Eastern Tobacco Company faced significant financial difficulties. It did not consider the effect of prices on consumption and government revenue. Advertising expenditure by the tobacco industry was minimal. It was estimated that 20% of adults used tobacco products. On average, each family whether urban or rural, spent approximately 5% of its income on tobacco products more than spending on medical care, culture or sports. The main contribution of this study was a calculation of the costs of smoking, including health care costs, lost income and lost productivity from tobacco-attributable premature mortality.

Second: Tobacco world production and consumption.

Tobacco world production is doubled at the end of the last century particularly in the developing countries as production increased by 138% 1995-2015 and it is constantly increasing. Tobacco is agriculture in 103 states as some competing international companies encourage and finance its agriculture and its related industry and trade. Among the results of this competition, tobacco prices are not stable as they are reduced by 39% 1995-2015 and thus its consumption increases at the world level (*WHO Report,2009 and 2016*).

The United States comes on top of tobacco producing countries followed by China, India, Russia, Japan, Brazil, Italy, Melawi and Syria. In 2015 there were 33 states among 161 states imported tobacco leaves in a higher rate exporting it. There were 19 countries realized negative trade balance in tobacco products exceeding $ US 100 million dollars including Cambodia, Malaysia, Nigeria, Korea, Romania and Vietnam (*Hana, R. and Nabilla, A. M. ,2016*).

The number of global smokers in 2015 is almost 1.3 billion smokers including about 47% males and almost 12% females. The smokers' rate in the third world is almost 61.5% of the world total smokers (about 800 million smokers). Expectedly, this number will

increase in the world to more than 1.7 billion smokers by 2025. The third world smokers' rate represents about 48% males and 7% females. In the developed states, this ratio represents almost 42% males and 24% females. The number of annually world produced cigarettes is almost 6.3 trillion cigarettes. That is, 900 cigarettes annually per individual in the world, 25 billion of cigarettes annually, almost 400 thousand tons annually of tobacco in other forms of smoking. The annual world cigarettes sales are valued almost 800 billion dollars. Total annual spending on tobacco industry is about 30 million dollars. China consumes more than 30% of the world cigarettes as 70% of males are smokers. The most five states of consuming cigarettes are China, United States, Russia, Japan and Indonesia (*WHO,2016 and Van Walbeek, C. P. ,2015*).

At the world level, smoking and tobacco addition results in early death of about 5.4 million people annually. Long ago, smoking rate in high-income sates remarkably decrease. However, in the low and medium income states, smoking rate increases year after another due to free cigarettes trade that led to consumption increase in those states. Reasons and ratios of smoking vary from a community to another according to economic situations, social factors (unemployment and leisure time), cultural, psychological and time circumstances (*Omar Aloui, 2014*).

The individual smoking average at the world level reached in 2015 about 3900 cigarettes, about 3170 cigarettes annually in (The United States), almost 3100 cigarettes (Canada), almost 2800 cigarettes (Sweden), about 1400 cigarettes annually in (England, France, and Australia). Concerning tobacco other derivatives, Sweden comes on top as the individual consumes about 5.4 KG annually followed by the United States in the second rank as the individual consumes about 4.8 KG and Canada comes in the third rank as the individual consumes almost 4.5 KG (*Ahmad, S. and Franz, G. A.,2016*).

The German federal statistics bureau in 2016 indicates that almost 29% of people smoke in spite of the increase of tobacco products tax, their spending on smoking increased by 4.9% in 2015 and smoking total spending reached almost 6.8 billion Euros. On the contrary to Italy, France, Spain and Britain, Germany opposes that public areas smoking should be banned. Remarkably, the German government annually collects about 14 billion Euros as tobacco taxes revenues equal to 1.5% of the state public budget. Smoking cost in China is annually valued about 7.5 billion dollars. The number of

smokers in Israel exceeds a million smokers annually spending almost 1.2 billion dollars (*Hu, T. W. ,2015*).

In Yemen, The number of smokers reached about 15 million smokers ,the per capita of tobacco consumption increases from 820 to 892 cigarettes annually during the period of 2000-2014. This leads to the increase of total consumption from 7206 to 9744 million cigarettes annually. Smoking in Yemen is associated with the addiction of the Qatt drug (*Hisham Said, Ibrahim Hafez ,2015*). Among the odds, Lebanon spends $ US 400 million dollars annually on tobacco against only $ US 40 million dollars on wheat (*Mohammed, el-bar ,2013*). In Saudi Arabia, tobacco imports during the period of 2000-2015 reached 380 thousand tons and totally valued more than 19 billion Riyals in addition to unofficial imports which represent a large portion of economic losses (*Abdul Rahman , Al-Qurashy, 2016*).

At the family level, smoking spending constitutes in Bulgaria ,Indonesia, Niger, Nepal and Palestine about 12.7%, 15%, 11.3%, 10.9%, and 5.2% respectively of the family budget annually (*Sayginsoy, O. Yürekli and J.de Beyer, 2015 and Omar Aloui, 2014*).

Smoking losses are not restricted on the direct cost valued billion of dollars in some states whose budgets do not exceed $ US five billion dollars. The economic and health care cost of smoking at the world level valued almost 200 billion dollars annually. It exploits a large portion of the national economy allocated for raising the development projects particularly in the poor countries.

Trade of the smuggled cigarettes spreads in the black market, which are illegally sold with cheap prices in order to evade from paying taxes; this helps increases sales and consumption. The rank of Arab states in terms of smokers' number is Egypt, Jordan, Iraq, Saudi Arabia and Tunisia successively (*Sherif, Omar ,2009*).

With increasing risks and negative effects of smoking, the WHO states adopt an anti-smoking historic agreement which is a framework agreement to prevent smoking in May 2003; it is expected to contribute towards getting rid of smoking. The agreement comes in response to globalization traits and the wide spread of tobacco. It aims to diminish the burden of disease and death resulting from tobacco consumption through reducing tobacco supply and demand and through the increase of process and taxes of tobacco products, full ban and promotion on tobacco, the negligence of tobacco industry to sponsor local and world events. The member states are committed, in addition, to put health warning image labels on tobacco packets and ban smoking in the public areas and enact legislations that encourage

individuals give up smoking (*Norashidah, M. N. ,2014 and Ross H. ,2015*).

The contribution of the civil community is essential to realize the desired purpose at the national, regional and world levels in order to reduce the spreading rate of tobacco addiction. A various group of other factors through which tobacco can globally spread including liberalization of trade, direct foreign investment, tobacco world marketing, advertising, promotion and sponsor through countries and the international increase of smuggled counterfeit cigarettes (*Scollo M, Lal A, Hyland A, Glantz SA.,2014*).

The WHO has declared 31th May of each year as the world day of tobacco abstention. In March 2004, Ireland, New Zealand, and Norway have become among the early states of the world to enact legislations in order to pave the way in the closed public places and office to be free of smoking. Since then, several states and cities followed their steps such as Italy, Uruguay, Hong Kong and several large areas in Canada, the United States, England, Australia, Spain, Singapore, Guinea, Niger, Uganda, and others (*Jha, P. and Chaloupka, F. J. ,2010*).

Third: Tobacco economics in Egypt.

Egypt is considered as one of the largest consuming states of tobacco in the Arab world as the tobacco addiction and consumption per capita remarkably increases from a year to another. Because of the relative low prices of tobacco products in Egypt, imposing high taxes on tobacco will contribute towards the curbing of its addiction and lessening its health and economic risks at one hand and collecting new revenues on the other.

Egypt imposes a ban on the agriculture of tobacco long ago for more than 200 years. A little portion of tobacco is illegally cultivated in the Upper Egypt for family consumption. Therefore, tobacco leaves used in the tobacco products are imported as Egypt is considered as the largest ninth importer of raw tobacco in the world. Among the most important tobacco exporting countries to Egypt are India, China, Brazil, Italy, America, Syria and Melawi. The Eastern Company for smoking dominates the cigarettes market in Egypt and constitutes about 80% of the market share (*Kazem A., 1995*).

This company is considered as the largest cigarettes manufacturing company in the Middle East as it was founded in 1920 and till 1995 it was totally owned by the government. The company was gradually transferred from a company monopolized by the government to a private company since Egypt has transferred to the market economy. In 1995, 20% of its shares were sold to the private

sector and then 17% of its shares were sold in 1999. In early 2008, the Egyptian government dominates the largest share of the company by 52.8% while the private sector owns about 37.2% of share and about 10% of shares owned by the company staff (*Eastern Tobacco Company report, 2014*).

The company produces its branded cigarettes and other multinational brands according to particular granted licenses; mostly important are the license agreements concluded with the international company of Philip Morris, the Us-British tobacco company which constitutes about 15%-3.7% of the cigarettes total production in 2015. The growth of such companies has contributed to the decline of the share of the Easter Company in the market from 93.5% to 76.8% during the period of 2002-2015 (*Eastern Tobacco Company report, 2016*).

It products branded 'Cleopatra' cigarettes are the most promoted cigarettes in Egypt due to it cheap price by 80% of total cigarettes consumption in 2015. There are about 30 other tobacco companies in Egypt which produce the molasses to be used in the Hubble Bubble. The Eastern Company of smoking has dominated the molasses market by 65% followed by Nahkla tobacco company whose share in the market reached about 31%, while other companies have very little shares (*Heba, Nassar, 2003 and CAPMAS,2016*).

As to the Egyptian exports of cigarettes, a little portion of cigarettes produced by the Eastern Company of smoking is exported to other countries in the region. Saudi Arabia, Yemen, Libya, the Gulf States and Malta are the most important importers of the Egyptian cigarettes which are mostly consumed by the Egyptian labors in these countries. Since 2008, these exports represent less than 0.5% of total cigarettes production (*CAPMAS,2015*).

The imports of cigarettes and other tobacco products are limited due to the constraints imposed on the imports. The ban imposed on cigarettes importing helps reinforce the monopoly status of the Eastern Company of smoking. Although the ban on importing lifted in 1991, the imported cigarettes did not constitute 1% of the market share. In 2002, the imports were noticeably soared with an increase by 0.7% of the consumption of 2002 to 6.2% in 2015 and it is relatively stable right now (*Heba, Nassar, 2003 and CAPMAS,2016*).

The imported cigarettes from Greece, Poland, Cyprus and France reached about 90%. The reduced imported share in the market is generally attributed to the high prices of imported cigarettes which subject to an importing fee valued 85% and a higher sales tax than that imposed on the locally produced cigarettes.

Due to the ban on tobacco agriculture in Egypt, the number of employment relying on tobacco in Egypt is very limited under the absence of tobacco agriculture. The production of cigarettes is restricted to the Eastern Company of smoking. In 2009, the number of staff at the Eastern Company of smoking in manufacturing, production services and distribution is about 21700 people of the total labor power which reached about 22.300 million people. This means that the labor power in cigarettes production only represents almost 0.097% of the total labor power (*Khaled Hanafy, Ashraf Salah El-Din and others, 2010*).

In the light of low rates of tobacco addiction due to the increased taxes or others anti-tobacco measures, it will have a weak effect on the employment opportunities in Egypt as funds were previously spent on the tobacco products which are now spent on other goods and services. This creates employment opportunities to compensate losses of tobacco based employment.

The number of tobacco smokers of all its kind in Egypt in 2015 is about 18 million smokers; out of them 9 million people smoke cigarettes. The rate of tobacco smokers generally constitutes about 42% males and 4% females. The rate of smokers among doctors is about 44% and 23% of young men under 38%, 35% of university youths, and 52% of illiterates. About 38% people are exposed to negative smoking at homes, 34% people at the public transportation, 60% people qt the work places and 43.7% at the public places, shopping centers and hotels. Although the smoking rate was low among females, it soars up in the recent years and exceeds that spread among males because of the relaxation of social criteria that opposed smoking of females (*Heba, Nassar, 2003 and CAPMAS,2016*).

Tobacco consumption increases yearly from 12 billion cigarettes in 1975 to 52 billion cigarettes in 1997. Then, it reached 90 billion cigarettes in 2015. The number of smokers was doubled with rapid rates reached 8% annually. The per capita of cigarette consumption increases during that period by about 50% as it reached 1250 cigarettes annually and there are 25 new smokers appear in Egypt on hour basis. The daily cigarettes consumption average among males is about one packet of cigarettes, while it reached a half packet among females (*Khaled Hanafy, Ashraf Salah El-Din and others ,2010 and CAPMAS,2016)*.

Some uses of tobacco in Egypt is represented in cigarettes smoking followed by addiction of smokeless tobacco. The addiction of the Hubble Bubble exceeds the half rate of tobacco types' addiction except cigarettes. There are three types of the Hubble Bubble

'AlGouza", "Al-Bouri" and the Hubble Bubble where the addiction of each type is related to a particular social class and educational level. The type of tobacco called molasses is used in all types of the Hubble Bubble. Tobacco manufacturing develops to give it various fragrant smells with certain special materials. Estimates indicate that the Hubble Bubble addiction among males reached about 7% in 2015 and 1% among females. In addition, 5% of males and 0.3% of females use smokeless tobacco (*Khaled Hanafy, Ashraf Salah El-Din and others ,2010 and CAPMAS,2016*).

Tobacco prices in general and cigarettes in particular in Egypt are characterized with low process compared to the individual high incomes. The increase of actual income is related to Egypt transfer into the economy market. This leads to higher purchasing power of tobacco.

The number of deaths resulted from smoking in Egypt reached about 170 thousand cases in 2015; out of them 90% are males. The annual cost which Egypt bears in treating diseases resulted from all types of smoking valued about L.E. 4 billion pounds. In addition, the economic waste represented in the national economic losses because of smoking which is annually valued about L.E. 33 billion pounds. There a waste of about 88 million working days compared to the economic yield resulted from sales of cigarettes, taxes and customs fees annually valued about L.E. 1.7 billion pounds. At the family level, smoking spending constitutes almost 13% of the family budget besides lessening the labor productivity by 27% and the cost of work cease because of smoking. In addition, the increased number of vacations because of the sabbatical leaves resulted from the smoking diseases and the treatment cost of the smoking diseases which all lead to the reduction of family income by a rate ranges between 30% - 50% (*CAPMAS,2016*).

- impact of imposing taxes on tobacco in Egypt.

Egypt imposes a set of taxes on tobacco and its products and limited importing fees on the tobacco leaves and products. It also imposes public sales taxes on tobacco products, limited taxes and special valuable taxes. Taxes outcome imposed on cigarettes in Egypt reached about L.E. 10.4 billion pounds. Taxes represented 46-61% of the retail prices. In May 2008, the specific taxes on cigarettes were lifted while the public sales taxes of most brands increased by 20-30%. Taxes imposed on the higher prices cigarettes increased by 86-91%. Taxes imposed on the kilogram of the tobacco used in the Hubble Bubble reached almost 100% of the pre-tax price. In July 2010 the tax structure was changed in order to consist of valued-limited tax

of L.E. 1.25 pounds per each cigarette packet, a value-tax reached 40% of the retail price. These taxes represent in average about 65% of the retail prices. In addition, another tax known as "manufacturing and printing" tax is imposed and valued 4 piaster per each cigarettes packet of the foreign banded cigarettes which are locally produced. Another type of tax imposed on all cigarettes valued 10 piaster per each cigarette packet is also enforced (*Khaled Hanafy, Ashraf Salah El-Din and others ,2010*).

Since 1992 the revenues of these taxes are used in spending on the students' health insurance. As to the other products of tobacco, value-taxes are imposed according to the product value and minimum taxes are imposed on the least prices products. Due to the over time changes of the cigarettes taxes and the stable taxes of manufacturing and printing and taxes allocated to the health insurance, the real value of taxes imposed on cigarettes decreases gradually over times (*Heba, Nassar, 2003*).

Cigarettes prices in Egypt remain relatively cheap as cigarettes are a public strategic commodity. Therefore, the Eastern Company for smoking reduced the prices of the most promoted cigarettes. Although prices increased due to the latest taxes increase in 2010, the price rising of tobacco products in Egypt is still an important necessity through imposing additional taxes.

Some relevant studies to demand on tobacco products in Egypt indicated that each increase estimated 10% of prices will lead to the reduction of tobacco addiction by 4%. In addition, taxes increase by 65% of the retail prices will lead to the reduction of cigarettes consumption by 19% and the increase of cigarettes taxes yields to almost L.E. 4 billion pounds. About 1.600 million Egyptians will be as well prevented from smoking and also giving up smoking. At the health level, this increase is expected to reduce the early death numbers predicted to exceed a half million cases (*Khaled Hanafy, Ashraf Salah El-Din and others ,2010*).

Some studies indicated that the increase of cigarettes taxes average to L.E. 4.08 pounds per each packet; that is by 70% of the retail price, will prevent the occurrence of 600 thousand cases of early death among the current and future smokers and increase the cigarettes taxes yields by about L.E. 5.2 billion pounds (*Heba, Nassar, 2003*). Other studies believe that imposing taxes on tobacco leads to the prices rising and the decrease of cigarettes sales and subsequently to permanent losing further employment opportunities. It will also reduce the government revenues and the rising prices will encourage smuggling of large amounts of cigarettes (*Sherif, Omar, 2009*).

Egypt avoids adopting anti-smoking measures such as implementation of imposing higher taxes and overall ban on cigarettes advertisements and promotion, imposing restrictions related to smoking prevention at the public areas because of fearing that such measures will decrease the taxes income and losing the employment opportunities. On the contrary, other studies indicated the policies related to tobacco curbing demand such as taxes increase will not cause losing of employment opportunities at the long term; but smoker will turn from buying tobacco to buying other products. Cigarettes prices increase in Egypt will not only cause the curb of consumption, but will increase the government income. Other study indicated that cigarettes prices increase in Egypt by about 10% will lead to the increase of government income in spite of the expected demand reduction by 4-5% (*Khaled Hanafy, Ashraf Salah El-Din and others ,2010*).

- *Anti-tobacco efforts in Egypt.*

Egypt is considered as one of the states signed on the WHO framework agreement of anti-tobacco. It signed the agreement in June 2003 and approved it in February 2005. In spite of the failure of Egyptian anti-tobacco policies in realizing what the framework agreement called for concerning anti-tobacco, Egypt has achieved progress in tobacco advertising and imposes restrictions on tobacco sponsorship and promotion besides putting the warning images and promoting for smoking free cities whether in the work places or the public areas. There are other forms of anti-tobacco mostly prominent are the issuances of legal verdicts which prohibit tobacco smoking in 1999. In addition, Egypt adopts a national anti-tobacco strategy as an anti-tobacco department was created in 2008 whose annual budget valued about L.E. 70 thousand pounds. Some health clinics and hospitals provide consultancy to give up smoking (*Ministry of Economy in Egypt ,2009*).

In Egypt the law number 154 for 2007 was issued regarding the protection against smoking harms which stipulates in Article (3) on the adherence of rules included in the anti-tobacco framework agreement which bans any smoking attractive slogans, the necessity of smoking warning fixed on each tobacco or cigarette packets "be wary, smoking damages health and leads to death" with a published image which emphasizes the harms of smoking. Article (2) of the law also stipulates on total ban of smoking of all its kinds in different health, education, government offices, sports clubs, youths centers and other places. A decree issued by the health minister binding for the authorities concerned to take necessary actions to prevent smoking

and those violate the decree will be punished according to the stipulated sanctions. Article (6) of the law stipulates that the government will take necessary actions to adopt pricing and taxation policies to increase tobacco prices as being an effective means of consumption curbing. The increase outcome should be allocated to sustain the health services. In addition, a high anti-tobacco committee was created to devise anti-tobacco policies and coordinate the efforts among the ministries and authorities in following up the implementation of such policies and the establishment of a specialized department at the ministry of health to fight against the harms of smoking.

The government anti-tobacco efforts in Egypt are faced with several challenges represented in restrictions imposed on the companies regarding tobacco marketing, restrictions on smoking in public areas and in work places, weak activation of banning on tobacco selling to minor people, limited efforts exerted to increase the level of awareness of tobacco harmful consequences and the limited resources allocated for anti-tobacco (*Ministry of Health and Population in Egypt, 2014*).

Fourth : economic effects resulting from tobacco smoke.

The anti-tobacco decision in most countries in the world is faced by economic justifications from the trade, economy and fund sectors under the pretext that tobacco has economic benefits represented in income and collected yield without taking into considerations the economic harm which tobacco causes to the governments, businesses, individuals, and environment represented in the public health and protection of the population health, reducing the costs of tobacco-related diseases (direct medical costs). In addition, the consideration of the economic waste caused by tobacco, the source of that waste represented in the health and medical cost, the lost productivity cost, consequences of the exacerbation of fire dangers and their related insurance payments besides the misuse of the agricultural lands that could be used to produce food crops. In addition, the other costs related to renovation and cleanliness of the smoking areas.

The study by the World Bank on the tobacco economic benefits and its investment indicated that the healthcare cost of the infected people of tobacco addiction related diseases costing the world states more than $ US 200 billion annually. Smoking in additional to its health harms constitutes a large drain of the financial resources of the individuals and governments whether through the purchasing or treatment costs (*World Bank, 2015*).

A study estimated in 2015 as well the smoking related diseases will lead to the increase of the medical costs in the United States of more than $ 80 billion dollars annually. In addition, exposure to the smokes of negative tobacco costs the United States annually almost $ US 10 billion dollars in the form of direct and indirect medical costs due to disability and wasted wages. The professional safety and health authority in the United States stated that the clean air increases the productivity in the United States by 3.5%; a matter which saves for the American business owners $ US 15 billion annually. The estimated annual value of the direct medical costs, long term care, and wasted productivity due to exposure to negative tobacco smokes in the administrative Hong Kong valued about $ US 156 million dollars annually (*Corrao, M. G. E. Guindon, N. Sharma and D. Shokoohi.,2015*).

Some believe that smoking ban at restaurants, cafes and the hotel and hospitality sector in general will lead to negative economic damages in that sector. It is a misconception as the spending cost of treating the health harms resulting from the negative smoking is the double of losses of that sector (*Baltagi, B. H. and Levin, D. ,2014)*.

The economic effects resulting from tobacco smokes are as follows (*Czart, Pacula and Chaloupka,2015 and Chaloupka,& Warner,2014*): Increase in diseases related smoking lead to pay additional expenses from the government for medical care or health insurance and life insurance. The enlightened category in the developing countries is the most consuming categories of tobacco. Subsequently, the early death among this category which is caused by tobacco-related diseases will diminish the scientific efficiency and their provided services to the society. The developing countries produce 73% of the world tobacco. This entails allocating large spaces of lands for the agriculture of tobacco at the expense of land spaces allocated for the agriculture of the basic food crops.

Therefore, governments will be forced to import the agricultural crops and pay more expenditures than if they locally produced the food crops such as the case in Jordan where tobacco agriculture was at the expense of wheat agriculture till it was prevented in the early 2002. Cigarettes cause 25% at least of fires and thus governments are forced to pay more expenditure to the fire extinguishing services besides the expenditures of rebuilding the government buildings, reestablishment of forests and repairing the fire traces. There are additional expenditures paid by the government for the maintenance of government buildings and the public area and their cleanliness from the cigarettes butts, cigarettes packets, matches

packets and matches. Smokers in the developing countries including Egypt spend at least 25% of their incomes on smoking. This negatively affects the inability to meet other basic needs of the family.

In addition, smoker loss part of their daily wages or monthly salaries due to be absent from work because of tobacco-related diseases. Smoking is fatal and kills smokers at early ages at the culmination of their productivity. Therefore, it deprives their families from the income for several years; a matter that leads them to poverty. In addition, there is the alternative chance cost resulting from the waste time of the family individuals' times in caring for the ill smoker in the house or the hospital (*Cutler, D., J. Gruber, and others 2014*). The smoking labors are less productive that their non-smoking counterparts. This lead s to training and rehabilitating new labors to replace those labors. The cease of work by the smoking labors to a certain period of time leads to losing part of the work as one cigarette's consumption requires 10 minutes. Labors of tobacco agriculture and manufacturing in circumstances which lack professional health and safety as they suffer from more profession-related diseases and work incidents which increases the insurance cost of work injuries. In addition, children and women are used in tobacco agriculture which increases the instances of work injuries and diseases at early ages.

The environmental effects resulting from tobacco smoke are as follows (*Behan D, Eriksen M, Lin Y.,2015*):The tobacco product manufacturing requires drying the tobacco leaves by using hot air. This entails the use of amounts of woods as drying a feddan of tobacco requires the consumption of a feddan of wood forests. About 12% of trees are cut in order to dry tobacco such as the case of Tanzania which leads to sabotage of forests. The packing, binding and advertising of cigarettes require using a large amount of papers. There are other environmental factors such as using the pesticides, fertilizers in the tobacco crops, increased waste resulting from the cigarette butts, packets, matches packets and matches and their caused fire and other environmental effects.

Fifth : research findings and recommendations.

The research findings indicated that tobacco and smoking are considered as one of the biggest health, educational, social, environmental and economic challenges facing the world states at all levels. The number of tobacco smokers at the world level reached in 2015 about 1.3 billion smokers and lead to the death of almost 5.4 million people annually; most of them belong to the third world states. Annual cigarettes sales valued about $ US 800 billion dollars. The

economic cost and healthcare resulted from smoking at the world level valued about $ US 200 billion annually. This drains a large portion of the national income resources allocated for raising the development projects particularly in the poor countries. Egypt is the ninth largest importing country of raw tobacco in the world and is considered as one of the most tobacco consuming states in the Arab world. The number of tobacco smokers of all its kind in Egypt reached almost 18 million smokers in 2015. The death number resulted from smoking in Egypt reached about 170 thousand cases annually. The annual cost which Egypt bears in treating all-kind tobacco related diseases is about L.E. 4 billion pounds. In addition, the economic waste represented in the national economy losses due to smoking which annually valued almost L.E. 34 billion pounds. With the increased actual incomes of individuals in Egypt, the higher imposed taxes on tobacco may contribute towards curbing its addiction and lessening the health and economic risks at one hand and the collection of new revenues for the state public budget at the other.

Based on the foresaid findings, the WHO recommends the protection of man from the harmful effects resulting from the smoke of tobacco through directing the national policies and legislations and decision makers at the world states to establish a 100% smoking-free environment for the protection of human health (*WHO,2009*). This entails the necessity of issuing binding legislations and laws for the closed work areas to be totally free of smoking while the voluntary policies will not constitute an accepted solution in this concern. In addition, it is necessary to implement cultural awareness strategies using all potential means of communication in the work places, educational and health institutions, sports clubs, youth centers to diminish smoking. The legislations related to imposing taxes on tobacco and increase its prices should be modified through implementing taxation policies and high pricing policies in order to curb tobacco consumption and ban or restrict all tobacco products which are exempted from taxes, customs fees to the travelers or importing by them. Finally, an overall ban on tobacco advertisement should be imposed by all means in order to eliminate all forms of tobacco illegal business including smuggling and illegal manufacturing.

There is a set of policies and measures that should be implemented to fight against tobacco and its various products and curb smoking and their resulting in negative effects. These are as follows:

- The increase of taxes according to the authorized rates by states which have overall anti-tobacco policies as a world criterion that constitutes a tobacco tax rate of about 70% of the retail price of the higher prices cigarettes brands in all category of the prices categories. Subsequently, there will be a noticeable increase in tax yields imposed on cigarettes. This will have a great impact on the public health at the same time will lessen the economic burden resulting from smoking in Egypt.
- Realization of a long term aim through implementing high and unified specific taxes on all types of cigarettes to diminish large differences in the prices of highly expensive brands and low priced brands due to the great price difference which creates a shift to cheaper cigarettes in a response to tax increase (*Brill, A. and Hassett, K. A. ,2013*).
- Implementation of annual modification of the specific taxes in order to maintain its real value over times as the real value of that tax diminish over times due to the inflation rates increase if they were not modified. In the last years, there was inability to increase the specific taxes rates in accordance with the inflation rate. This led to the decline of the cigarettes actual prices and increased its consumption rates besides the resulted in effects on health and economy.
- Increase taxes imposed on Hubble Bubble tobacco and other tobacco smokeless products to curb their addiction as taxes represent about 70% of the retail process of these products after the tax increase by almost 233% of the pre-tax price. Since 2010, a tax imposed on Hubble Bubble tobacco estimated 100% of the pre-tax price. This can lessen the possibility of shifting to other products due to the high prices of cigarettes. It leads at the same time to further tax yield for the Egyptian government.
- Annual modifications of tobacco tax should be carried out in order to increase tobacco products prices. This increase should be equal at least to the income increase (*Hu, T. W, Xu, X. P. and Keeler, T., 2014*).
- Partial allocation of the new collected yields from cigarettes taxes increase and other tobacco products in order to sustain anti-poverty programs, programs of tobacco addiction and protection and other exerted efforts to reinforce the health of economically deprived categories.
- Benefiting from the research and studies' findings that were conducted on the reasons behind smoking; the consequences and costs of anti-tobacco at the world, local and regional levels and

cooperation with the parties of the WHO new framework agreement in technology and knowledge transfer and financial aids, relevant expertise, in order to devise and implement effective anti-tobacco programs at all levels. The most important one of them is giving anti-tobacco a priority in the programs and policies of the UN agencies.

- Adopting necessary measures against tobacco smuggling through observing and data collection of tobacco products dealing over the borders including the illegal dealing, information exchange between customs and tax authorities and other authorities. In addition, further bilateral, regional and world agreements should signed on tobacco smuggling and the appropriateness between imposed taxes on tobacco to lessen incentives urging for smuggling. In addition, tax stamps and warning labels written in the local languages should be placed on the cigarettes packets besides implementing strict punishments and firm constraints in order to deter the smugglers. This will lead to the improvement of the government revenues resulting from the increase of the taxes imposed on tobacco and its products.
- Replacing tobacco agriculture by other crops as a means to diminish the displayed tobacco and diminish its consumption through cancellation of large financial incentives and aids provided to the farmers to produce and cultivate tobacco in the high-income states. These financial incentives and aids should be directed to other alternative crops to help tobacco poor farmers who will be expectedly be affected due to the implementation of anti-tobacco programs in the developing countries particularly at the transformational stage into other new crops and resources (*Krasovsky, K., Andreeva, T 2015*).
- Imposing restrictions on tobacco trade and imposing an overall ban on tobacco products advertisement and promotion through the world mass media and adopting media measures such as launching anti-campaigns in the mass media, sticking information on the cigarettes packets which warn against the health dangers and consequences of smoking besides imposing restrictions on smoking in the workplaces, educational institutions and public areas.

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