



Brussels, 19.12.2012
SWD(2012) 452 final

Part 3

COMMISSION STAFF WORKING DOCUMENT

IMPACT ASSESSMENT

Accompanying the document

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of tobacco and related products

(Text with EEA relevance)

{COM(2012) 788 final}

{SWD(2012) 453 final}

A.2 DESCRIPTION OF THE TOBACCO MARKET, MANUFACTURING OF CIGARETTES AND THE MARKET OF RELATED NON-TOBACCO PRODUCTS

- A.2.1. The tobacco market..... 1**
 - A.2.1.1. Tobacco products..... 1
 - A.2.1.2. Tobacco manufacturing 6
 - A.2.1.3. Tobacco growing 8
 - A.2.1.4. Tobacco distribution levels..... 9
 - A.2.1.5. Upstream/downstream activities..... 10
 - A.2.1.6. Trade..... 10

- A.2.2. Tobacco and Society 11**
 - A.2.2.1. Consumers 11
 - A.2.2.2. Illicit Trade 11

- A.2.3. Main steps in the manufacturing process of cigarettes..... 13**
 - A.2.3.1. Growing and harvesting..... 13
 - A.2.3.2. Curing the leaf 13
 - A.2.3.3. First processing..... 14
 - A.2.3.4. Preparation of basic blends and making of cigarettes 14
 - A.2.3.5. Adding of humectants, flavors and flavourings..... 15
 - A.2.3.6. Packaging..... 16

- A.2.4. The market for related non-tobacco products..... 16**
 - A.2.4.1. Electronic cigarettes and other NCP for consumer use 16
 - A.2.4.2. Herbal products for smoking 18

A.2.1. THE TOBACCO MARKET

This annex provides an overview of the EU tobacco market including the main product categories. It sets out the value and volume of sales as well as manufacturing methods and consumption patterns.

The second part of this annex describes in detail the production process and main tobacco production-related economic activities in Europe including farming, product manufacturing, distribution and sales.

A.2.1.1. Tobacco products

The total value of the **EU Tobacco Market** at retail level **including taxes** was **136.5 bEUR in 2010**. The market consists of the five main tobacco products categories:¹

- 1. Factory manufactured cigarettes (FMC);
- 2. Roll-your own tobacco (RYO)
- 3. Pipe tobacco;
- 4. Cigars and cigarillos
- 5. Smokeless tobacco products (STP): oral, chewing and nasal tobacco.

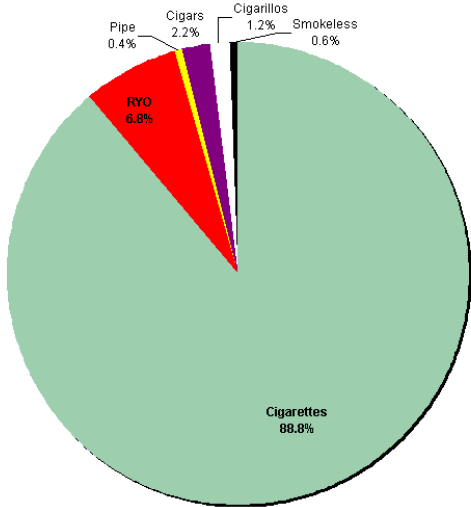


Figure 1: Comparison of relative market value of tobacco products in 2010

Source: Euromonitor, and industry estimates

The figure shows that FMC are by far the largest part of the market (almost 90%), followed by RYO (almost 7%). Nicotine containing products such as e-cigarettes are not part of the market tobacco markets. It is expected that in coming years a number of new tobacco products might be launched, which are allegedly less harmful.

The sales trends from 2000 to 2010 for the five main product categories are set out in the table 1. It can be observed that although volume has decreased in the ten year period between 2000 and 2010 by 19%, there has been an increase in the revenues (including taxes) by 37%. This increase can be attributed primarily to tax increases.

¹ This categorisation is in line with the Commission's merger practice. It is important to underline that the notion of a market in this impact assessment is not based on competition law terminology. Value includes excise tax and VAT. Merger cases: M4424, M4581, M5086.

Table 1: Market trends 2000-2010

Category	Value 2000	Value 2010	Change	Vol. 2000	Vol. 2010	Change
	(bEUR)	(bEUR)	(%)	(bsticks/ ttonnes)	(bsticks/ ttonnes)	(%)
Cigarettes	90.7	121.3	+33.8	793.7 bs	608.8 bs	-23.3
Roll-your-own	4.2	9.3	+123	53.1 tt	75.5 tt	42.2
Pipe tobacco	0.576	0.48	-17	6.33 tt	4.03 tt	-36
Cigars/cigarillos²	4.62	4.65	+0.6	7.81 bs	9.92 bs	27
Smokeless tobacco³	0.48	0.83	+73	5.3	5.9	10
Total⁴	100.6	136.6	+36			

Source: Matrix,⁵ based on Euromonitor data

A.2.1.1.1. Factory Manufactured Cigarettes

For the year 2010, was the value of the market for FMCs, by far the most significant sector of the tobacco market in the EU, 121.3 billion EUR.⁶ As illustrated in figure 1, FMCs represent almost 90% of the market value and the last ten years have seen an increase of 34% in the overall market value of FMCs despite a decline of 23% in volume sales over the same period. Taxes accounted for most of the turnover, net value of the cigarette market at retail level was calculated at 28.3 bEUR (23% of the total retail value) as shown below. Government taxes on tobacco products serve two aims; they act as a source of revenue for governments and increasingly as a public health measure against smoking, as by definition they render tobacco products more expensive and thus less affordable.

It is estimated that the margin of retailers and wholesalers accounts for approximately 40% of this amount, which means that the ex-factory revenues of the cigarette manufacturers amounted to 17 bEUR. These amounts do not capture illicit sales of cigarettes which according to Euromonitor represent more than 8% of the market.

Table 2: FMC revenue breakdown

Pre-tax value	28.345 billion EUR
Excise-tax	72.519 billion EUR
VAT	20.400 billion EUR
Total	121.264 billion EUR

Source: Euromonitor, DG TAXUD, Matrix 2012

Cigarettes containing the American blend, based on the combination of Virginia, Burley and Oriental tobacco varieties, continue to have the biggest share of the market compared to

² This covers also the so-called "eco-cigarillos" exempted from the definitions for cigars and cigarillos through Directive 2010/12/EC on the structure and rates of excise duty applied on manufactured tobacco.

³ The Euromonitor data on STP covers only a small number of countries: Sweden, Denmark, Slovenia and Germany. Sweden accounts for the most significant share of the STP market.

⁴ Total does not include cigars and cigarillos taking into account that average tobacco content of cigars and cigarillos vary and nowadays more cigarillos are sold. For FMC it was assumed that each FMC contains 1 gr of tobacco.

⁵ Economic analysis of the EU market of tobacco, nicotine and related products. Further referred to as Matrix report, 2012.

⁶ Euromonitor data processed by Matrix, and industry estimates.

Virginia and other blends. In 2010, American blend cigarettes accounted for 462.6 billion sticks (76% of the market), Virginia for 72 billion sticks (12%, in particular in the UK, Ireland, Cyprus and Malta), and other blends for 71.6 billion sticks (12%).

Despite the general decline in FMC sales, sales of slim cigarettes, particularly popular among female and younger smokers, grew, according to the Euromonitor data, by 50% from 23,855 million sticks in 2000 to 35,673 million sticks in 2010. A small increase has also been observed in the segment of menthol cigarettes (+2.4%), a product which is particularly suitable for smoking initiation.⁷ In addition a range of cigarettes with fruit, candy and alcohol flavours have been recently introduced to the market as well as some unusual ones such as black tea, cassis, lemongrass and natural rose oil.⁸ Flavourings are often used to enhance the taste and reduce the harshness of tobacco smoke and thus to make the product more attractive and palatable to consumers.

A.2.1.1.2. Roll Your Own

RYO cigarettes are usually made of fine cut tobacco, the oldest form of smoking tobacco. The RYO market in the EU was reported to be worth 9.3 billion EUR (incl. taxes) in 2010.⁹ Part of these sales can be attributed to the segment of MYO ("make your own" using a specialised equipment), which has grown and contributed significantly to the expansion of the market in recent years, most likely as a result of higher FMC prices and more favourable tax regimes for fine-cut tobacco. The net value of the RYO market was estimated at 3.0 bEUR in retail prices (33% of the total revenue) as shown in Table 3.

Table 3: RYO revenue breakdown

Pre-tax value	3.019 billion EUR
Excise-tax	4.734 billion EUR
VAT	1.534 billion EUR
Total	9.287 billion EUR €

Source: Euromonitor, DG TAXUD, Matrix

In the context of the Commission's merger control practice¹⁰ the conclusion was reached that FMC and RYO are not part of the same "product market". At the same time, tobacco manufacturers acknowledged there could be a degree of switching between FMC and RYO tobacco in view of differing excise treatment and consumer preferences. This discussion is of limited relevance for the purpose of this impact assessment.

Between 2000 and 2010, the size of the RYO market in the EU grew by 42.2% and Euromonitor estimates that this market segment will continue to grow up to the year 2015.¹¹ The Member States in which RYO has a significant share of tobacco sales are Germany, Belgium/Luxembourg, the Netherlands, France, Spain, the UK and Poland.

⁷ Addictiveness and Attractiveness of Tobacco Additives, SCENIHR Opinion of 12 November 2010.
⁸ Euromonitor. Trend Watch – Flavoured cigarettes controversy rages on, 23 April 2008.
⁹ Euromonitor data processed by Matrix and industry estimates
¹⁰ M.4424 / Gallaher; M.4581 Imperial Tobacco / Altadis; M.5086 BAT/ Skandinavisk Tobakskompagni
¹¹ Matrix report, 2012.

A.2.1.1.3. Pipe Tobacco

Compared to other tobacco products, the segment for pipe tobacco is quite small, reported to be worth 0.48 bnEUR in the EU in 2010 at retail level including taxes.¹² The primary markets are Germany, France, Denmark and the United Kingdom.¹³ Pipe tobacco is considered to be a niche product, generally sold in small quantities by specialist shops. According to European Smoking Tobacco Association (ESTA), the typical pipe tobacco consumer is male, 80% over the age of 60 years. The industry association recognises that its market is decreasing, as the current consumer is getting older and younger consumers are not choosing pipe tobacco.¹³ Most varieties of pipe tobacco are flavoured and these flavours are added to pipe tobacco at higher quantities than is the case for other tobacco products.¹⁴ The cut and flavour differentiate pipe tobacco from RYO. The legal definition of pipe tobacco has been recently amended to avoid substitution between pipe tobacco and fine-cut tobacco¹⁵.

A.2.1.1.4. Cigars and Cigarillos

Cigars are rolls of tobacco with an outer wrapper of natural tobacco or of reconstituted tobacco. They are produced and sold in a significant variety of models, sizes, brands, types of packaging and prices. Cigarillos are in principle following the same definition (outer wrapper), but they can contain a filter and until recently the outer wrapper normally consisting of tobacco could be made of other material (so called eco-cigarillos). In 2010, according to Euromonitor, **1.98 billion cigars** and **7.94 billion cigarillos** were sold across the EU. The largest market for cigars during the ten year period was the United Kingdom, where 20% of all cigar purchases in the EU took place.¹⁶ The cigarillos market is largely made up of sales from three countries: 47% of the cigarillos market in 2010 consisted of German sales, whilst French and Spanish sales made up 16% and 14% of total sales, respectively.

Producers of **cigars** argue that their product, similarly to the pipe tobacco, is not targeted at younger consumers. Absolute cigar sales decreased over by 1.2 billion units (a 38% fall) between 2000 and 2010. Approximately 15-20% of their products contain added flavourings, of which 80% are coffee, vanilla and caramel-like flavours.¹⁷ Estimates from European Cigar Manufacturing Association suggest that the demand for cigars and cigarillos (in line with their definition in the taxation legislation) in the EU between 2002 and 2010 experienced a more modest decrease i.e. a fall from 6,712 million units in 2002 to 6,252 million units in 2010.¹⁸

This statement seems not in line with the information provided by Euromonitor (see figure 2). However the difference can be explained by the reclassification of so-called **eco-cigarillos** as cigarettes in the amended EU tax legislation.¹⁹ These products are presented as cigars/cigarillos in order to benefit from the reduced tax rate, despite being similar in function, taste, filter and presentation to a cigarette.²⁰ However, these products are classified

¹² Euromonitor, and industry estimates

¹³ ESTA European Smoking Tobacco Industry: Facts and Figures for DG Sanco (ESTA 2011-2012)

¹⁴ ECMA Data: Annex III: Estimated Size of the EU Cigar Market 2002 and 2010

¹⁵ Council Directive 2011/64/EU

¹⁶ Matrix report, 2012.

¹⁷ ECMA Data: Annex III: Estimated Size of the EU Cigar Market 2002 and 2010

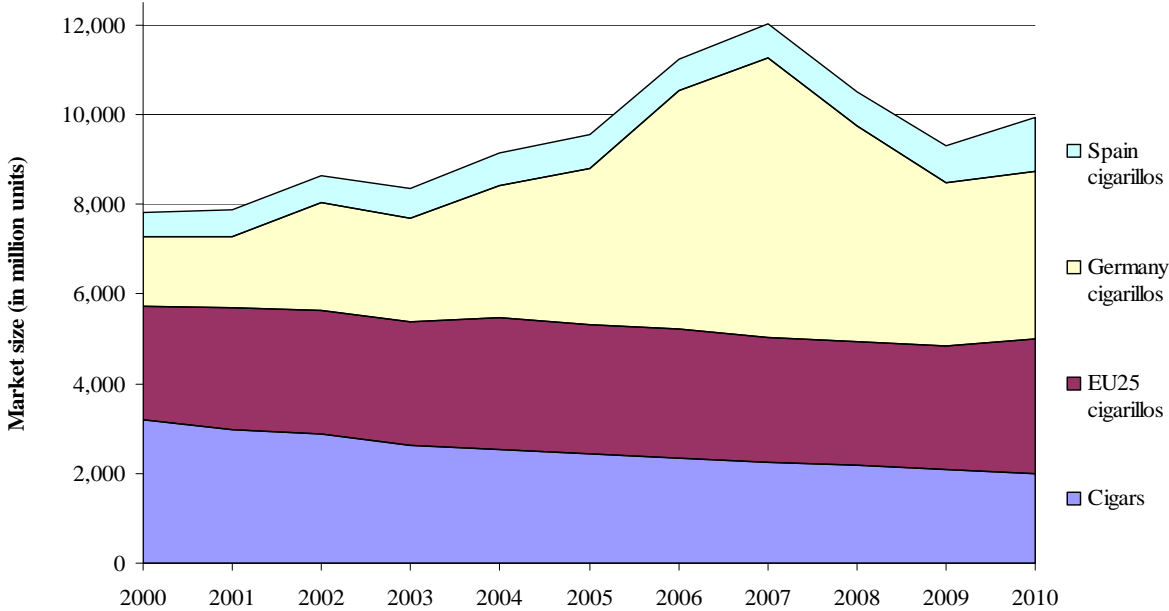
¹⁸ Meeting with Industry Stakeholders and DG SANCO, 19th December 2012

¹⁹ <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1149&format=HTML&aged=0&language=EN&guiLanguage=en>

²⁰ See for example: <http://www.tabak-brucker.de/themes/kategorie/index.php?kategorieid=591>

as cigarettes (exceptions apply for Germany and Hungary until 2014). In **2007, cigarillos consumption peaked in Germany** at 6.2 billion sticks, the bulk of which consisted of eco-cigarillos.

Figure 2: Cigars and cigarillos market size, EU27, in million units, 2000-2010



Source: Euromonitor. EU25 exclude sales in Spain and Germany which are shown separately

Despite the amendment of the EU definition the sales of filter cigarillos soared in a number of countries in 2010. These products are sold in packs of twenty units similar to those of cigarettes. Unlike traditional cigarettes, the paper wrapping of a stick is not white but brown, and its flavour is more intense. Given this formula, consumers have turned to these products as substitutes for the classic cigarettes. **In Spain** a price of a pack of "minicigarritos" marketed under the brands Coburn, Braniff, Rex, Friends or Salsa starts from 1.20 EUR, 2.75 EUR less than a pack of cigarettes. Their sales **grew by more than 300%** in the first eight months of 2010.²¹ Introduction of economy Partner cigarillos by Philip Morris **in Latvia and Lithuania** in early 2010 caused cigarillo sales to skyrocket **from 4 million sticks to more than 100 million sticks** in both countries **within one year period**, as many smokers switched from cigarettes to twice cheaper Partner cigarillos.²²

Since the cigar/cigarillos market ranges from hand-made premium cigars to machine-made mass market products and the so-called little cigars or cigarillos, overall market trends needs to be analysed also **in value terms**. The overall market value of cigars and cigarillos sold across the EU in 2010 was €4.65 billion, with **cigars constituting 64%** of the total market value (€2.98 billion) and **cigarillos 36%** of the total market value (€1.67 billion). In 2000, the value of the total market was €4.62 billion, i.e. market value increased by 0.6% over the ten years. The relatively constant market value over the time period is to be attributed to the fact

²¹<http://www.expansion.com/2010/10/11/empresas/1286821650.html?a=385a9cdddfda0b345033eaf5a569dc47&t=1331819951>

²²<http://www.euromonitor.com/tobacco-in-latvia/report>

that cigars are, on average, more expensive than cigarillos and their reduction in sales has offset the increase in value from more cigarillos being sold.

A.2.1.1.5. *Smokeless Tobacco Products*

Smokeless Tobacco Products (STP) can be defined in a broad sense as non-combustible tobacco products, including chewing tobacco, nasal tobacco and oral tobacco (snus, snuff et alia).²³ Marketing of oral tobacco is banned in the EU according to the current Directive, except for Sweden having an exemption in its Accession Treaty²⁴. In general, Eurobarometer statistics indicate that daily use of tobacco products other than FMC and RYO is low, at just 1% per category.²⁵ The market for nasal and oral tobacco is small, comprising just **0.6% of the EU tobacco products** market.

Sweden is the largest market for STP market, consisting mainly of oral tobacco (snus). Other significant markets are Denmark (chewing and nasal tobacco consumption), Slovenia (chewing tobacco) and Germany (chewing and nasal tobacco) and the UK (use of chewing tobacco is largely restricted to members of the Indian, Pakistani and especially Bangladeshi communities). The sales of chewing tobacco increased by 255% between 2000 and 2010 in Denmark (from 4 tonnes to 14.2 tonnes) and sales are expected to increase further by 4 tonnes up to the year 2015.²⁶ For Slovenia and Germany a decline was observed, but German sales of nasal tobacco grew again in recent years, possibly in reaction to the smokefree environment policy.

A.2.1.2. Tobacco manufacturing

EU FMC manufacturing is increasingly concentrated and dominated by four large multinational companies. In 2010, British American Tobacco (BAT), Imperial Tobacco (IT), Japan Tobacco (JT), and Phillip Morris International (PM) – collectively often referred as Big Four - together shared 91.41% of the European Union cigarettes market, up from 59.4% in 2000. This increasing consolidation is attributed to both organic growth and acquisitions.²⁶ The only other companies with a market share above 0.5% are Bulgartabac Holding Group and Karelia Tobacco Co Inc.

Case study 1

In 1990's, the German company Reemtsma acquired and upgraded a number of production facilities in Central Europe which had benefited from considerable tax benefits from the national governments. In 2002 Reemtsma was acquired by Imperial Tobacco. Shortly after EU enlargement in 2004, Imperial Tobacco closed the facilities in Hungary, Slovenia and Slovakia in order to remove over capacities. Imperial claimed to save around £20m a year as a result of the restructuring exercise cutting 940 jobs.

²³ Commission Staff Working Document accompanying the proposal for a Directive of the European Parliament and of the Council on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of Tobacco Products.

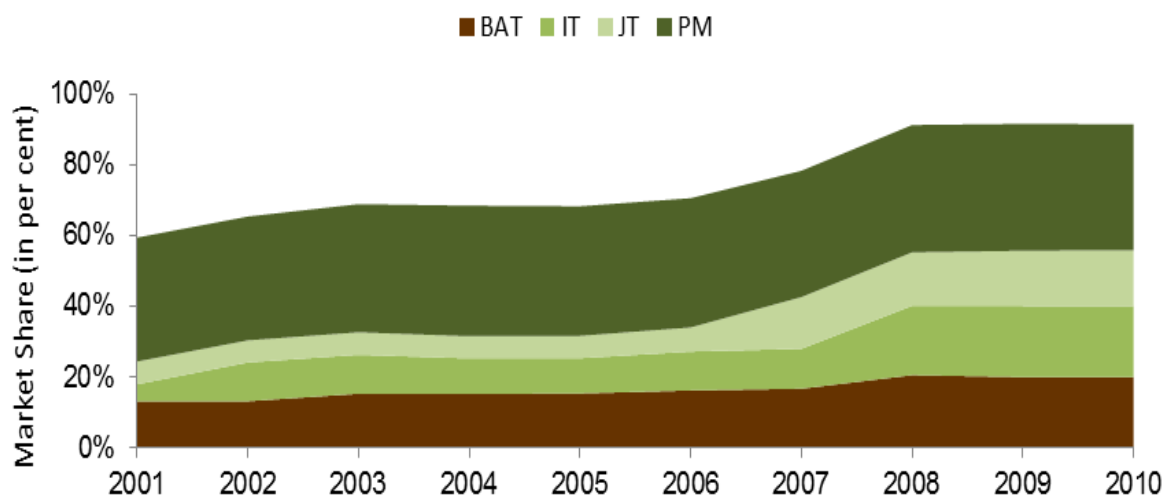
²⁴ Treaty concerning the accession of Norway, Austria, Finland and Sweden to the European Union, 24th June 1994

²⁵ Attitudes of Europeans towards Tobacco, Special Eurobarometer 385, May 2012.

http://ec.europa.eu/health/tobacco/docs/eurobaro_attitudes_towards_tobacco_2012_en.pdf

²⁶ Matrix report, 2012

Figure 3: EU24 market (size, in million sticks) share of 'Big Four' (in per cent), 2000-2010



Source: Euromonitor. No data on Cyprus, Luxembourg or Malta. Refers to the global brand owner.

Case study 2

Japan Tobacco International (JTI), the world's third-biggest tobacco manufacturer, planned to close down its cigarette factory in Hainburg in Austria and to move the operations to two plants in Central Europe: in Gostkow Stary near Lodz and in Bucharest, romania.insider.com reported. The relocation is expected to take place by the end of the year.²⁷ The Hainburg factory with 320 employees had the capacity to make 10 billion cigarettes a year and produced brands such as Benson&Hedges or Memphis. Japan Tobacco built the Gostkow plant in 2009 at a cost of \$100m (€70m), creating more than 400 jobs. The company said at the time that its initial annual capacity of 5.5 billion cigarettes would rise to more than 20 billion in 2011. The factory is located near an existing tobacco factory which JTI acquired from Gallaher of the UK as a result of a merger that propelled it to number three cigarette maker in the world.

The **RYO** market consists of a larger number of companies, and, at the moment, is considered less concentrated than the FMC market. Nevertheless, "Big Four" account also for approximately 70% of the RYO market.

In contrast, **cigars, pipe tobacco, nasal and chewing tobacco** are mainly produced by SME's.²⁸ For cigars and cigarillos in particular, only two companies have a market share of more than 10% and the market share of Big Four is just above 20%.²⁹ Contrary to common assumptions, about 90% of the EU cigar market is in the hands of EU producers. The production is said to be labour intensive and cigar manufacturing industry employs approximately 5,000 people.³⁰ In the case of Pipe Tobacco, there are more than 750 different brands available on the EU market; the majority of these are manufactured in Germany or Denmark by small and medium enterprises.³¹ Swedish Match is the market leader in snus, but

²⁷ <http://www.romania-insider.com/jti-to-move-cigarette-production-from-austria-to-romania-poland/23187/#>

²⁸ European Cigar Manufacturers Association, ECMA and European Smoking Tobacco Association, EST contributions to DG SANCO

²⁹ Matrix Report, 2012

³⁰ Meeting with Industry Stakeholders and DG SANCO, 19th December 2011

³¹ ESTA European Smoking Tobacco Industry: Facts and Figures for DG Sanco (ESTA 2011-2012)

it is also engaged in the production of US mass-market cigars and chewing tobacco.³² The market leader for chewing tobacco in Denmark and Sweden is House of Oliver Twist, with a market share of 82.4%.³³

There were 48,500 people employed in tobacco manufacturing in the European Union in 2009.³⁴ Tobacco manufacturing is highly concentrated in geographical terms. Three Member States (United Kingdom, the Netherlands and Germany) account for more than 50% of total EU production.

A.2.1.3. Tobacco growing

As far as **raw tobacco** is concerned, the EU accounts for approximately 280,000 tonnes (4.1%) of world production.³⁵ Inside the EU, approximately 118,190 hectares are devoted to tobacco growing, according to 2009 estimates, which represents a decrease of 38% from the year 2000.³⁶ Tobacco production in the EU can be subdivided in four main variety groups; Virginia, Burley, Dark (Dark air-cured and Fire-cured) and Oriental. Virginia varieties represent about 46% of the EU production, Burley 21% and the others together about 33%. The EU counts about 86,000 tobacco farmers.³⁷ Bulgarian farmers represent 50% of them, followed by Poland and Greece (both 17%). The tobacco production is often limited to small regions carried out by family businesses. The average area (1.6 ha per farmer) differs considerably according to the varieties grown, with Burley and Oriental varieties requiring more labour force than Virginia varieties.³⁸ As a consequence, 81% of EU tobacco farmers are involved in Burley or Oriental growing, while 15% grow Virginia varieties. According to tobacco producers, certain ingredients, including sugar, are indispensable for the use of certain tobacco varieties (Burley and Oriental). This is because these varieties lose their sugar content during the drying process whereas other varieties, such as Virginia, keep it.

In addition, there are around 100 **first processors** of tobacco in the EU. The first processors collect the raw tobacco cured by the farmers and make a first process before selling it to the industry producing cigarettes, cigars or manufactured tobacco. 44% of the first processors are located in Bulgaria and 22% in Italy. **Second processors** subsequently purchase, process, blend pack, store and ship tobacco to meet each specifications of manufacturers of cigarettes and other consumer tobacco products. Two U.S. based leaf tobacco merchants - Alliance One Int. and Universal Corporation - with substantially similar global market shares, control most of the EU market, e.g. Alliance One delivered in 2011 54% of its tobacco sales to customers in Europe (approx. **800 million EUR**)³⁹. Recently, the Commission fined the company's subsidiaries in Spain, Italy and Greece for operating cartels and but the outcome of the appeals process is still ongoing.

³² <http://www.swedishmatch.com/en/Our-company/Financial-fact-sheet/> (Financial Fact Sheet for Swedish Match, 2010 figures)

³³ Matrix Final Draft Report

³⁴ Eurostat Statistics 2008/2009

³⁵ Member States statistics communicated to DG AGRI

³⁶ <http://www.who.int/tobacco/en/atlas41.pdf>

³⁷ Member States statistics communicated to DG AGRI. In addition to the farmers, a number of people (including seasonal workers) are employed on the farms. Copa-Cogeca (European farmers and agri-cooperatives) has estimated this figure to 400 000.

³⁸ Nomisma report

³⁹ AOI 2011 Annual Report, <http://phx.corporate-ir.net/phoenix.zhtml?c=96341&p=irol-reportsannual>, accessed on 29 February 2012

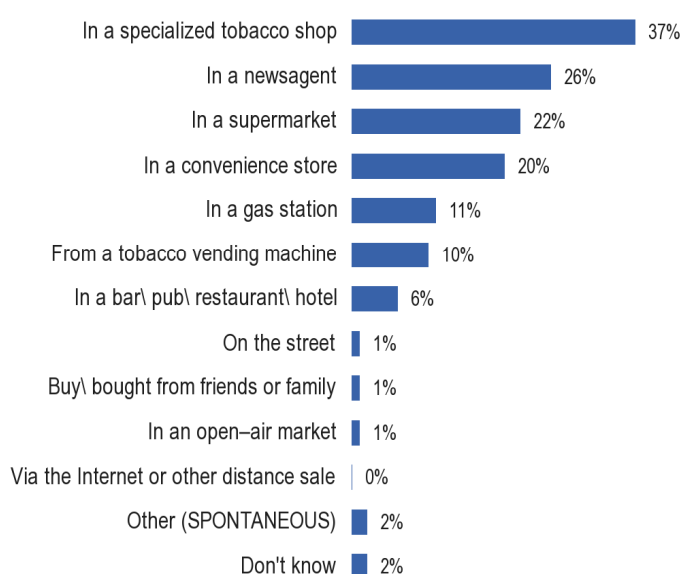
A.2.1.4. Tobacco distribution levels

In terms of distribution, there were 2784 enterprises and 45,900 employees, involved in tobacco **wholesale** in the EU in 2009. In a number of MS's are the wholesale activities, formerly part of national tobacco monopolies, operated by the large tobacco manufacturers. However in other MS's the wholesalers are often involved in distribution of various product categories and therefore only part of their revenue would be impacted.

The tobacco **retailers'** market is quite varied across the EU. For instance, the tobacconists in France need a license, whilst the Belgian newsagents, supermarkets and corner shops do not.

Figure 4: The place of purchase of tobacco products in the EU

QD16. Where do/did you regularly buy tobacco products?



Source: Eurobarometer 2012

According to the European Retail Association, in the EU-27 there are almost a million points of sale for tobacco products (988,480 points of sale recorded, excluding vending machines.)⁴⁰ For the Member States where such information has been made available, 229,012 of these outlets are recorded as being either kiosks, tobacconists or convenience stores. According to European Confederation of Tobacco Retailers (CEDT) estimation that there are approximately 1.45 employees per point of sale, 332,067 people are said to be employed in the specialised retail of tobacco, although such figures seem to be overstated, particularly in relation to larger retail outlets.⁴¹ Considering the whole added value⁴² generated by cigarettes and RYO in the retail sector 7.825 bnEUR (in average 25% margin applied) and the average salary in the sector provided by Eurostat (12,879 EUR), the total number of people involved in the sales of tobacco products should not exceed 600,000 FTE's⁴³.

40 Tobacco Retailers Figures, CEDT, sent in January 2012

41 According to figures provided by Federazione Italiana Tabaccai

42 This is a hypothetical assumption as besides the labour the whole range of other cost occurs in the retail sector: rent, energy, transportation, furniture, cost of financial transactions etc.

43 Full Time Equivalent

A.2.1.5. Upstream/downstream activities

A number of other upstream- and downstream activities are associated with the tobacco manufacturing process and might be impacted by the proposal considered in this impact assessment. This includes suppliers of flavourings, papers, filters and packaging as well as producers of a number of accessory products such as tobacco vending machines and pipes.

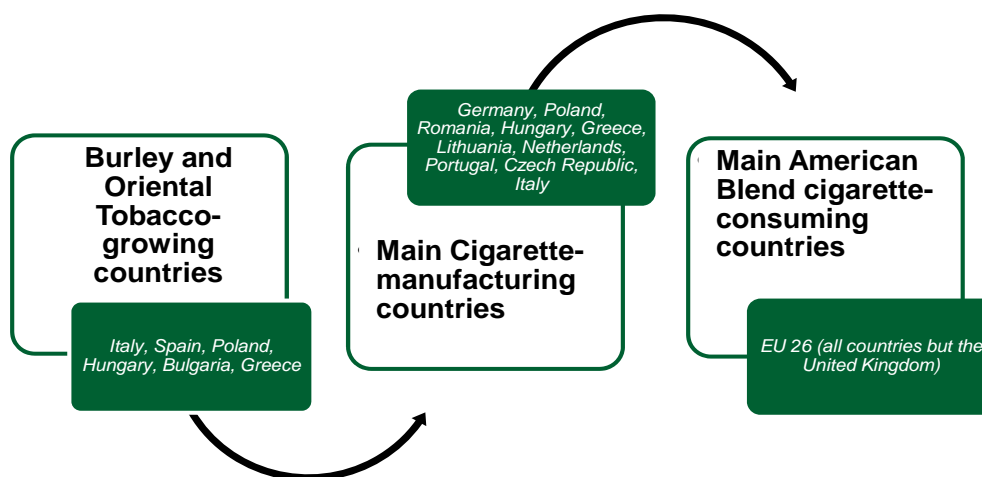
The European Carton Makers Association (ECMA) represent 500 carton producers which account, by volume, for 90% of the European carton market (corresponding to approximately 8.1 bnEUR in turnover). Only 10% of their total turnover (approximately 800 mEUR) is derived from tobacco products and only 6% of employees of companies represented by ECMA work in cigarette carton manufacturing in the EU.⁴⁴

In the case of filters, a prominent manufacturer of filters estimates that 37.5% of their total turnover of 200.7m GBP, (i.e. circa. 75m GBP) came from the EU market.⁴⁵ New and more innovative variants of filters are being developed by filter manufacturers, which could potentially make the associated tobacco products more attractive to consumers.⁴⁶

A.2.1.6. Trade

As far as **trade** is concerned, EU imported about 600,000 tonnes of raw tobacco and exported about 170,000 tonnes in 2010.⁴⁷ This corresponds to a value of 3,164,087,504 EUR for exports and 2,366,294,046 EUR for imports of manufactured tobacco.⁴⁸ There is also substantial intra EU trade with about 268,000 tonnes of raw tobacco being subject to such internal trade between Member States in 2010. The overall value of tobacco products traded within the EU in 2010 was 9.5 bnEUR.⁴⁹ Figure 5 illustrates the main trade intra-EU flows in the production of American blend cigarettes.

Figure 5: Trade flows between tobacco-growing, tobacco-producing and tobacco-consuming countries



Sources: Industry respondents, Euromonitor, FAOSTAT, DG AGRI

⁴⁴ Minute of Meeting of Industry Representatives and DG SANCO, Feb.6th 2012

⁴⁵ www.filtrona.com

⁴⁶ <http://www.filtronafilters.com/poverview.htm>

⁴⁷ EUROSTAT This figure includes normal trade and inward processing, i.e. tobacco imported and processed in the EU for export to third countries.

⁴⁸ Eurostat Statistics, 2010

⁴⁹ Eurostat (Procom), 2008

A.2.2. TOBACCO AND SOCIETY

A.2.2.1. Consumers

While the number of smokers in the EU has been decreasing in the past decades, 28 % of all EU citizens and 29% of young people 15-24 years still smoke.⁵⁰ The prevalence levels differs widely between Member States with a range in the proportion of smokers between 13% and 40%. The prevalence levels of smoking also vary between different socio-economic groups differs greatly within the Member States.

It may be useful, for illustrative purposes, to look at the demographic trends as they present themselves on the level of the individual Member States. For example, 2011 estimates by the Bundesministerium für Gesundheit in Germany that 22% of women smoke and this estimation rises to 38% for young women. Smoking prevalence amongst women with lower levels of education and amongst single mothers in Germany is said to be 'remarkably high'.⁵¹ Statistics for certain EU countries suggest that in the last fifteen years, there has been a trend towards **increasing numbers of young people starting to smoke**, although overall statistics suggest that there are less people smoking now than in the 1980s or 1990s. Tobacco consumption among young people in Slovenia increased from 16% in 1993-96 to 26% in 1997-2001.⁵² Statistics in Hungary from 2003 show that 38.2% of Hungarian adult males and almost one quarter of Hungarian adult females are smokers and that in spite of more men than women smoking there, school-age girls are far more likely to initiate smoking cigarettes than boys (27.9% for girls as opposed to 15% for boys.)⁵³ In Slovakia, where the rate of smoking in the adult population in 2003 was 30.1% for men and 17% for women, an increase in occasional smoking amongst women during the 1990s has been attributed to a change in societal attitudes towards women smoking.⁵⁴

On average EU smokers are smoking 14.4 cigarettes a day. The retail price of cigarette packages differs widely between Member States, with a range between 1.48 EUR and 8.45 EUR within the EU.

A.2.2.2. Illicit Trade

The issue of illicit trade in tobacco products has been recognized as fundamental by regulators, enforcement administrations and by tobacco industry. In the EU, the main problem area is the illicit trade in manufactured cigarettes. This illicit trade has to be clearly distinguished from legal non-domestic consumption, for example cross-border shopping in another EU country in legal amounts in order to avoid higher taxation.

In the context of the Tobacco Products Directive, the main problem is that illicit products undermine the existing EU wide regulations as regards, for example, health warnings and maximum yields for tar, nicotine and carbon monoxide, ingredients regulations. Similarly they undermine measures at national level like the prevention of underage smoking.

⁵⁰ Special Eurobarometer 385, May 2012.

⁵¹ http://ec.europa.eu/health/tobacco/docs/eurobaro_attitudes_towards_tobacco_2012_en.pdf

⁵² <http://www.drogenbeauftragte.de/drogen-und-sucht/tabak/tabak-und-frauen.html>

⁵³ http://www.who.int/tobacco/surveillance/Slovenia%20GYS%20Report-Year2002_2003.pdf

⁵⁴ http://www.who.int/tobacco/surveillance/HUNGARY_REPORT_2003--.pdf

⁵⁴ http://www.who.int/tobacco/surveillance/Slovakia%20Country%20Report_2003.pdf

As explained in the IA report (section 2.2. problem identification) one needs to distinguish between **genuine products which are diverted into the illegal supply chain** (mostly for sale in high tax/price Member States - contraband⁵⁵) – and **falsified products**, which are counterfeits of genuine products, **made for the illegal supply chain**⁵⁶. 'Illicit/cheap whites' – often referred to as a third and rapidly growing area of concern – are in principle genuine products, but do not respect the regulatory safeguards of the Tobacco Products Directive nor pay the appropriate taxes and have insofar common features with both contraband and counterfeit.

According to the information collected by **OLAF** (the Commission's antifraud office), the total loss in tax revenues amount to €10 billion⁵⁷ annually, which corresponds to a market value in the legal supply chain (retail level excluding taxes) of €3 billion. Overall, 50% of these lost sales are attributed to **contraband** and 50% to **counterfeits**, with variations in the Member States.

In all categories, the main threat comes from large-scale smuggling (estimated by Euromonitor of being 70 % of all illicit trade), by highly organised criminal actors. Besides large-scale smuggling there is also “bootlegging”, the trafficking of relatively small quantities of contraband by making journeys across the border with small amounts of cigarettes. Another way of illicit supply is the use of internet sites to sell and ship tobacco products by post worldwide to evade taxation. There are also instances of illicit manufacturing of (mostly) cigarettes, without the crossing of a border, therefore not "smuggled" (for example on a site not licensed or registered for manufacturing or an undeclared (over) production on a legal site).

As regards the volume, it lies in the nature of illicit trade that precise figures are difficult to obtain. Although some data are available, generally speaking, transparent, publicly available data on illicit trade are very limited. According to Euromonitor, illicit trade in cigarettes in the EU amounts to **8.25 % of total trade**, with a significant variation across EU countries⁵⁸.

The “STAR project”⁵⁹, a study carried out by KPMG for PMI International in the context of the legally binding agreement between the company and the EU, comes to the following result: In 2010, **9.9 % of total cigarette consumption** could be regarded as contraband or counterfeit. Similarly, from a study done at global level, the estimate for high income countries (in which category the EU falls) is, that **9.8 % of the cigarette market is illicit**⁶⁰.

According to OLAF, in 2010, Member States reported seizures of around 4.6 billion cigarettes. If these seized cigarettes had penetrated the EU markets, it is estimated that the losses to the EU and Member States' budgets in 2010 would have been approximately 1 billion euros. According to OLAF figures, illicit trade represents annual revenue losses of 10 billion euros for the EU and its Member States⁶¹.

⁵⁵ For the purpose of this impact assessment the notion of "contraband" is used to describe all situations in which a genuine product is diverted into the illicit supply chain, i.e. also if the product is produced in the country of destination, but no appropriate taxes are paid.

⁵⁶ Falsified (counterfeit) cigarettes also circulate without appropriate taxes having been paid

⁵⁷ http://ec.europa.eu/anti_fraud/media-corner/press-releases/press-releases/2011/20110315_01_en.htm

⁵⁸ See MATRIX report 2012

⁵⁹ http://www.pmi.com/eng/tobacco_regulation/illicit_trade/documents/Project_Star_2010_Results.pdf

⁶⁰ Joossens L, Merriman D, Ross H, Raw M. How eliminating the global illicit cigarette trade would increase tax revenue and save lives. Paris; International Union Against Tuberculosis and Lung Disease; 2009

⁶¹ <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/1179>

A.2.3. MAIN STEPS IN THE MANUFACTURING PROCESS OF CIGARETTES

A.2.3.1. Growing and harvesting

Tobacco is initially grown in outdoor frames called seedbeds. In warm regions, the frames are covered with mulch or a cotton top sheet; in cooler regions, glass or plastic shields are installed to protect the plants. After 8-10 weeks, when the seedlings are almost 10 inches (25 cm) tall, they are transplanted to the fields. Although transplanting machines are available, the vast majority of the world's tobacco plants are still planted manually. As the plants grow, the heads are broken off by hand so the leaves will grow fuller, a process called *topping*. The plants stay in the field 90-120 days before they are harvested.

Tobacco plants are harvested in three times between July and September and in many regions this is done manually. The plants are harvested by one of two methods, *priming* or *stalk-cutting*. In the priming method, the leaves are gathered and brought to a curing barn as they ripen. In the stalk-cutting method, the entire plant is cut and the plants are allowed to wilt in the field before being taken to the curing barn.

Growers are often organized into farmer cooperatives or other producer groups.

A.2.3.2. Curing the leaf

Curing is the process of drying freshly harvested tobacco with partially or fully controlled temperature and moisture schedules. It is done by the growers. Different curing processes are used for different tobacco varieties as illustrated in the table below:

<i>EU variety groups</i>	<i>Features for curing</i>	<i>Main varieties in the EU</i>	<i>Final destination</i>
I	<i>Flue-cured: tobacco dried in ovens with controlled air circulation, temperature and humidity</i>	<i>Virginia, Bright</i>	<i>Non blend and American Blend cigarettes</i>
II	<i>Light air-cured: tobacco dried in the air under cover, not left to ferment</i>	<i>Burley, Mariland</i>	<i>American Blend cigarettes</i>
III	<i>Dark air-cured: tobacco dried in the air under cover, fermented before being marketed</i>	<i>Paraguay, Havana, Badischer, Beneventano</i>	<i>Dark cigarettes and cigars</i>
IV	<i>Fire-cured: tobacco dried by fire</i>	<i>Kentucky, Salento</i>	<i>Cigars and Toscano (strong cigars)</i>
V	<i>Sun-cured: tobacco dried in the sun "oriental tobacco"</i>	<i>Xanti-Yakà, Erzegovina</i>	<i>Aromatic for American Blend cigarettes</i>
VI	<i>Sun-cured: Basmas varieties</i>	<i>Basmas</i>	<i>Aromatic for American Blend cigarettes</i>
VII	<i>Sun-cured; Katerini varieties</i>	<i>Katerini</i>	
VIII	<i>Kaba-Koulak (classic) and similar Sun-cured</i>	<i>Kaba-Koulak, Ellassona</i>	

Virginia tobacco leaves contain a higher carbohydrate (e.g. sugars) level and lower nitrogen level than Burley leaves. The natural drying of the Burley leaves at relatively low temperatures allows plant respiration which continues to consume sugars during the process, leaving negligible sucrose and (reducing) reduced sugars in the cured leaf. Burley leaves contain higher levels of nitrogen than Virginia leaves. The smoke of Virginia or flue-cured leaves is more aromatic and less alkaline than that of Burley tobacco, with a slight acidic taste resulting from the high levels of natural sugars. Burley tobacco produces a more alkaline smoke than flue-cured tobacco and therefore imparts a bitter aroma and taste to cigarettes. Oriental leaves tend to have a low nitrogen content and moderate levels of carbohydrates, but fewer proteins, than the other varieties.⁶² Burley and Oriental varieties require much more labour force and/or investments for curing than Virginia varieties.⁶³

A.2.3.3. First processing

Raw tobacco leaves are sorted into grades based on size, color, and quality. Grading is performed by first processors. The first processing step includes the following activities:

- Leaves are sorted by quality to form homogenous lots which are then delivered to manufacturers.
- The leaves are beaten in order to separate the leafy material from the stalks; this is done for some varieties only.
- The tobacco is re-dried to stabilize it and thus enable long-term storage.
- The tobacco is re-sorted to form homogenous lots.
- The tobacco is aged and fermented to assist long terms storage.
- Tobacco strips are prepared ready for industrial use; this is done for some varieties only.
- Packaging for delivery to manufacturers.

A.2.3.4. Preparation of basic blends and making of cigarettes

This is performed by second processors and cigarette manufacturers.

Blending is the selection and thorough mixing of the tobacco-based components plus any associated casings, humectants and flavouring required for a particular product or brand. The tobacco based components may include the leaf lamina, cut and rolled stem, reconstituted sheet and expanded tobacco. The tobaccos stored in bales are broken up, cut into specific dimensions, and combined with other blend components such as casing and top dressing, and the moisture content is adjusted.

The final shredded tobacco is dispersed over a continuous roll of cigarette paper. A machine rolls the shredded tobacco into the paper and cuts it to the desired length. A device then grabs each cigarette and fastens a filter in one end. Modern cigarette machines can produce 25-30 cigarettes a second.

⁶² Addictiveness and Attractiveness of Tobacco Additives, SCENIHR Opinion of 12 November 2010

⁶³ Factsheet on the Production of Raw Tobacco in the EU: European Commission DG AGRI, Directorate C.3. : Wine, alcohol, tobacco, seeds and hops.

The process for the manufacture of cigarettes incorporates the use of 'Fine Paper Products', such as cigarette paper, plug wrap paper and tipping paper.⁶⁴

A.2.3.5. Adding of humectants, flavors and flavourings

There are no fixed rules as to where humectants, flavourings and other additives are added to the processed tobacco but generally the more volatile additives are added as late as possible in the production process in order to prevent losses.

Tobacco blends that contain flavourings are usually held in a bin to allow for equilibration across the blend before it is passed to the making machine as the final blend. Top flavourings are generally applied to the total tobacco blend as one of the last steps in processing. They are usually carried in an alcohol base. They are used to improve quality of smoke and to impart a pleasant pack aroma and side-stream aroma. Flavourings are used to enhance the taste of tobacco smoke, to make the product more desirable to consumers.⁶⁵ Menthol may be added at any of the following stages; spraying onto the final blend, through addition to the filter via a thread, or by application to the cigarette paper or the foil used to wrap the cigarettes. Due to the high level of volatility of menthol, different manufacturers have over the years developed a variety of methods for producing mentholated products that are as consistent as possible in terms of their finished product menthol levels.⁶⁶

Casing refers to the sauce composed of a variety of ingredients such as humectants, sugars, cocoa, liquorice and fruit extracts.⁶⁷ Additives such as cocoa may be used as a means of dilating the airways, which allows the smoker to inhale the smoke deeper into their lungs, which leads to a more intense exposure to nicotine and to tar.⁶⁵ The basic material of casing for reducing harshness is sugar. A commercial solution of tannin also sweetens and softens the smoke of tobacco. The best known example of an additive that changes markedly and even masks the taste of tobacco is the use of cloves. Addition of menthol is another example, but in this case the tobacco taste is still discernible. Burley leaf has the ability to absorb up to 25% of its weight of added material.⁶⁸

Casings are usually applied to tobacco strips or leaf early in the primary processing scheme to tone down or mute the strength or harshness of tobacco smoke, enhance the processing potential of tobacco and add deep flavour notes to the smoke. Casings are traditionally added to US blended styles of product that contain significant proportions of Burley type tobacco blends. These casings are added to the Burley tobacco line through the means of the casing cylinder or Cased Leaf Dryer.

Ammonia technology has been used mainly in American blend products containing cased Burley tobacco. Ammonium salts could be added at the Cased Leaf Dryer (CLD) stage or with the manufactured reconstituted tobaccos.

In cigarettes, flavours may be added to tobacco, cigarette paper, or the filter, in a plastic pellet placed in the filter or the foil wrapper, in an attempt to enhance the tobacco flavour, mask

⁶⁴ Factsheet 'Fine Paper Industry': Meeting with DG SANCO, Feb 6th 2012 (Benkert, B. and Brinker, A.)

⁶⁵ MATRIX report, 2012

⁶⁶ Response submitted to the SCENIHR Committee "call for information" by British American Tobacco; 2010. Accessed 22 June 2010 from:

http://ec.europa.eu/health/scientific_committees/consultations/calls/scenihr_call_info_08_en.htm

⁶⁷ Hoffmann D, Hoffmann I. The changing cigarette, 1950-1995. *J Toxicol Environ Health* 1997;50:307-64.

⁶⁸ Akehurst BC. Tobacco. 2nd ed. London: Longman; 1981.

unpleasant odour, and deliver a pleasant cigarette-pack aroma. Internal industry documents reveal additional flavour technologies such as flavour microencapsulation in the paper, carbon beads, and polymer-based flavour fibres inserted into the filter, flavoured tipping etc. (WHO 2007b).

A.2.3.6. Packaging

Packaging contributes to the overall costs of producing and marketing cigarettes and is the final stage of cigarette manufacture. The completed cigarettes are normally packed 20 to a package. The packs are mechanically sealed in cellophane and hand-placed in cartons. The size of cigarette packages, in terms of the quantity of cigarettes contained therein, is regulated by some of the Member States. Current TPD bans misleading terms such as 'light', 'mild', or 'low tar' and requires that all tobacco products sold in the EU display two text warnings: the first compulsory warning is either "tobacco kills" or "tobacco can seriously harm you and others around you". The second warning is selected from a list of 14 warnings (text and a corresponding picture) developed by the European Commission.

Cigarette carton manufacturing follows a very specific process, which produces the cartons in 'flat form', which are then sent to the cigarette manufacturers for assembly to be completed. According to information from one major manufacturer, **pre-printed flat packages are purchased from suppliers** generally at a price around 0.02 EUR, however costs differ significantly between different types of packages and between packages used in different countries.

The proposed mandatory use of pictorial health warnings on cigarette packages would involve the use of three standard process colours; cyan, magenta and yellow plus black. Overall, the labelling of branded cigarette cartons involves the use of complex process colours (so called 'spot colours'.) There are also metallic finishes and structural varnishes which can be used in the manufacturing of cigarette cartons. Compared to the colours needed to produce a graphic health warning, it is claimed by industry representatives that ten to twelve colours are used in the production of typical hinged lid or soft packet packaging. According to the ECMA, specifications for particular colours have very tight 'control tolerances.' The process of foil stamping and embossing takes place after the carton has been manufactured.⁶⁹

A.2.4. THE MARKET FOR RELATED NON-TOBACCO PRODUCTS

In addition to the traditional tobacco market, recent years have seen a diversification of nicotine containing- and other novel and niche products which can be associated with tobacco use.

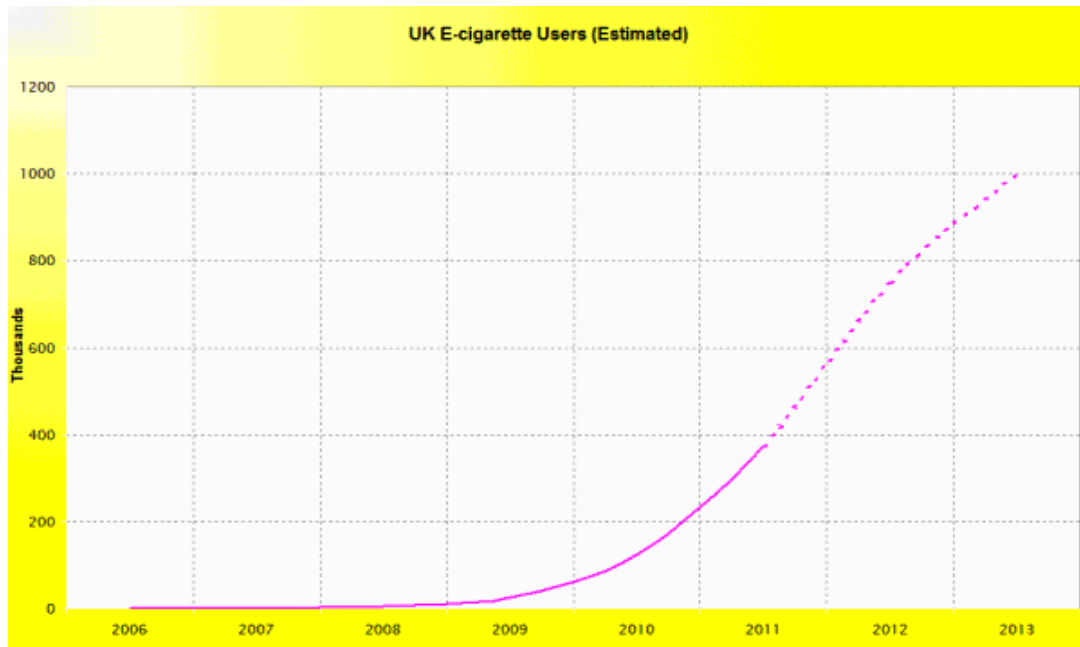
A.2.4.1. Electronic cigarettes and other nicotine containing products for consumer use

Electronic cigarettes appear to be the most commonly available nicotine containing consumer/leisure product in the EU. The EU **electronic cigarette** market is growing rapidly and it is difficult to estimate the total value. The electronic cigarette supplier, Red Kiwi, estimates that the current value of the German market is around 100 mEUR and that the total value of the EU27 e-cigarette market (including devices and refills) is between 400 and 500

⁶⁹ Document from European Carton Makers Association; *Production Explained*

mEUR.⁷⁰ The Electronic Cigarette Industry Trade Association (ECITA) estimates that they represent 60-70% of the volumes sold on the UK market and reports that the market is growing 20-30% monthly.⁷¹ ECCA UK estimates that in 2012 there will be 750,000 electronic cigarette users (see the figure below).⁷² Red Kiwi estimates the figure for Germany to be 1.2 million for the year 2011.⁷⁰

Figure 5: Estimation of the use of electronic cigarettes in the UK



Graph adapted from <http://www.eccauk.org/index.php/uk-sitrep.html>

For non-electronic cigarettes, the brand "Similar" has reported sales of one million packs per annum in 2010.⁷² Other nicotine containing consumer products (such as nicotine drinks and sweets) appear, at this stage, to be less common in the EU, but it cannot be excluded that a further market development will take place in coming years.

Many of the nicotine containing consumer products are manufactured in third countries (most electronic cigarettes are produced in the Shenzhen region of China) and the EU market is characterised by a large number of distributors rather than manufacturers.⁷² Many of these are SMEs, but there is a growing interest from bigger companies to enter into this business. For example, British American Tobacco has recently launched its own subsidiarity company "Nicoventures" for the purpose of developing non-tobacco nicotine products, with similar moves from Philip Morris International.⁷³ Electronic cigarettes are most often bought in bulk from the manufacturers and sold, via the internet or in physical shops, re-branded in the EU. Once imported to the EU market, these products are subject to significant cross-border trade.

⁷⁰ Matrix insight. 2012. (Interview with Red Kiwi, 16 December 2011)

⁷¹ DG SANCO meeting with ECITA, 20 June 2012:
http://ec.europa.eu/health/tobacco/docs/ev_20120703_mi_en.pdf

⁷² Matrix Report 2012

⁷³ <http://www.nicoventures.co.uk/>;
<http://online.wsj.com/article/SB10001424052702304066504576347513991162274.html>

A.2.4.2. Herbal products for smoking

The overall size of the market of herbal cigarettes has grown in recent years, from around 40,603,000 units in 2000 to 49,953,000 in 2010.⁷⁴ These products are available from numerous internet sites and health food stores (e.g. Holland and Barrett in the UK). The products are marketed in a range of different flavours, including vanilla and ginseng and are often suggested as a help for quitting smoking.

⁷⁴ Matrix report, 2012