ASPECTS OF TAXATION OF CIGARETTES IN THE EUROPEAN UNION

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Abstract

Method of taxation of cigarettes in the European Union brings also many negative effects except stable budgetary income, it discourages from harmful consumption or it takes into account the social costs of smoking. Except value added tax also excise composed of part of specific tax and part of ad valorem tax is there imposed on cigarettes. This causes a significant multiplication distorting the market and impacting the consumers in the case of an increase in the costs of producers of cigarettes. The mechanism of calculation of taxes imposed on cigarettes also causes a creation of a duty to pay taxes on taxes.

The significant fact is that indicators measuring these effects between 1995 and 2008 are growing or at least are not declining and neither probable future regulation of harmonization of the taxation of cigarettes in the European Union brings any reparation of the given situation. Taxation of cigarettes is not generally transparent, the rate of taxation is based on inconsistent bases and objectives that should be achieved and probably they are not the priority for many countries of the European Union.

Keywords: excise, cigarettes, multiplier, European Union.

Introduction

Products in the EU member states are liable to general excise duty thus to the value added tax. Furthermore the excise duty called excise is imposed on selected types of goods. In the most cases the excises have the form of unit tax unlike the value added tax (Siroky, 2007). An exception is excise imposed on cigarettes which has the form of a composed tax. Part of the tax is a specific and part is imposed ad valorem. The quantity of cigarettes in pieces and also at the same time the price for the final consumer enters into the tax base. The amount corresponding to the relevant excise enters into the basis for the calculation of the general excise duty and thus the economic impact of excise duty increases (Siroky, 2008).

The aim of the imposition of tax on consumption was initially to affect turnovers and profits, but retailers learned to move such taxes into the prices and so consumers have become the real payer (Kubatova, 2003). Imposition of excises, unlike the value added tax which is imposed primarily because of the need of sufficient budgetary income, is often justified that they also serve to other special purposes. Practically it is evident that also excises are imposed mostly in order to ensure adequate budgetary incomes of the state. Demand for products taxed by excise duties is very little elastic. Space for the possible distortion of the market caused by the imposition of excise duties is relatively small. The existence of excises is also possible to explain by the necessity to cover the external costs which producers or consumers of such taxed products transfer to other subjects. Marginal external costs of subjects should then be equal to burden imposed on consumption or manufacture of products which these externalities are causing. Imposition of excises is often justified by the harmfulness of consumption of such taxed products and therefore by the possibility of reducing harmful consumption by imposition of excise in the sufficient range. However as it was already mentioned the demand for such taxed products is generally highly inelastic. If we look closer at individual categories of consumers of products liable to excises then we find out that especially among young people the price elasticity of demand for products liable to excises is higher (Cnossen, 2005). That is the reason why it is possible to speak in connection with excises also about purpose of discouraging from harmful consumption, although this fact appears to be in conflict with the fiscal functions of these taxes. Furthermore the excises can be used to increase the progressivity of the tax system by their imposition on luxury products. Excises also find their application in the implementation of protective measures of domestic producers and domestic natural resources through the imposition of export taxes on natural resources and import taxes on selected products. It is possible to discriminate imports of excised goods and advantage domestic producers by appropriate adjustment of ratio of components of excise rate in the case of composed excise (Cnossen, 2005). Operation of excises and also fulfillment of their presumed functions is highly dependent on the method of their construction. There may be a reduction in justice of tax systems by imposition of these taxes (David, 2007).

Excises, as well as value added tax, are in the EU member states harmonized because they are reflected into the prices and may thus become an obstacle to free trade between EU member states (Kubatova, 2006). The initial idea was to harmonize both the structure of excises and tax rates, which currently again has appeared as necessary because the spontaneous harmonizing effect in the field of rates does not work despite earlier presumptions (Nerudova, 2008).

This text is focused on excise duty imposed on cigarettes in the EU countries. Objective of the article is calculation of relevant dynamic characteristics and identification of negative effects resulting from actual regulation of the excise duty. Identification of the ratio of tax calculated from the price of cigarettes and from part of tax calculated from the previously imposed other tax and also multiple of the price including taxes compared with price without taxes is appropriate. From the calculation of the characteristics of the multiplier is evident how the structure and amount of tax burden on cigarettes affect producers, prices and consumers. Values of relevant characteristics are calculated on the basis of identified values of imposed taxes (ad valorem part of excise duty and value added tax) on cigarettes in the EU countries from 1995 to 2008.

The research introduced standard methods of scientific work, especially methods of the analysis, synthesis, induction, deduction, comparison, identification and calculation. Introduced methods are considered to be the means to achieve the set results which are mainly the formulations of recommendations regarding taxation of cigarettes in the EU member states on the basis of previous analysis of the situation in the given field, calculation of the relevant dynamic characteristics and identification of negatives resulting from the current regulation of excise. Where it refers (in this text) to the selling price of cigarettes in the individual EU states, it is the price of the most popular price category of cigarettes in the country. Theoretical findings are based on specialized publications of generally accepted authors in the given field. All sources of information are listed in the final section.

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Results

It is possible to achieve various goals in the field of fiscal policies of individual states, cigarette consumption and protection of domestic market by the regulation of excise imposed on cigarettes in the EU member states. Existence of excise is justified by an effort to reduce harmful consumption producing high social costs and also by mentioned fiscal aspects. There is no need to develop the debate on the harmfulness of cigarette consumption, although the decision on consumption should be free to all individuals. However it is possible to argue about the amount of social costs of cigarette consumption (Pekurinen, 1992; Lightwood et al., 2000). Smokers, however, tend to live shorter lives than non-smokers, which saves on pension payments and healthcare costs of age-related diseases (Shoven et al., 1989). Smoking is the biggest single form of avoidable death in the EU and one of the leading causes of morbidity and mortality, with about 650,000 smoking-related deaths per year in the EU (Commission of the European Communities, 2008). The costs of environmental tobacco smoke are usually considerably underestimated (Chaloupka & Warner, 2000). Market distortions and other negative consequences of existence of excise are not possible to justify by the stability of yield or by the administrative advantages in its selection. If some certain products should be taxed more than others through excise, it should be on the basis of taking into account the additional social costs resulting from the consumption of these products.

Excise imposed on cigarettes in the EU member states was in the course of time regulated through Council Directive No. 72/464/EEC of 19th December 1972 on taxes other than turnover taxes which affect the consumption of manufactured tobacco, Second Council Directive No. 79/32/EEC of 18th December 1978 on taxes other than turnover taxes which affect the consumption of manufactured tobacco, Council Directive No. 92/12/EEC of 25th February 1992 on the general arrangements for products subject to excise duty and on the holding, movement and monitoring of such products, Council Directive No. 92/79/EEC of 19th October 1992 on the approximation of taxes on cigarettes, Council Directive No. 95/59/EC of 27th November 1995 on taxes other than turnover taxes which affect the consumption of manufactured tobacco, Council Directive No. 1999/81/EC of 29th July 1999 amending Directive No. 92/79/EEC on the approximation of taxes on cigarettes, Council Directive No. 92/80/EEC on the approximation of taxes on manufactured tobacco other than cigarettes, Council Directive No. 95/59/EC on taxes other than turnover taxes which affect the consumption of manufactured tobacco, Council Directive No. 2002/10/EC of 12th February 2002 amending Directives No. 92/79/EEC, No. 92/80/EEC and No. 95/59/EC. Selected future direction of fiscal policy of the European Union in the field of taxation of cigarettes is evident from the current proposal for a Council Directive COM (2008) 459 in the final wording. Except the replacement of the concept of the most requested price category by weighted average of retail selling price of cigarettes we speak about setting of a minimum requirement of € 64 from 1 000 cigarettes (since 2014 shall be 90 EUR) regardless of their price.

Furthermore the amount of 101 EUR from 1 000 cigarettes shall be set as a limit for the possibility of non-fulfilment of the requirement of minimum of 57% (since 2014 shall be 63%) of excise from the weighted average of the retail selling price. Possible extent of the specific component of excise shall increase from 5% - 55% to 10% - 75%. From 2014 there shall be another changes in the minimum of excise to 90 EUR from 1 000 cigarettes regardless of their price. Furthermore the amount of 122 EUR from 1 000 cigarettes shall be set as a limit for the possibility of non-fulfilment of requirement of minimum of 63% of excise from the weighted average of the retail selling price.

Calculation of characteristics enabling determination of specific conclusions and formulation of recommendations in the filed of excise imposed on cigarettes in the EU states is carried out primarily through the following relations.

$$M = 1/(1 - (ADV + VAT)) \qquad (1)$$

Where M is the multiplier, ADV is the part of ad valorem rate of excise and VAT is value added tax rate.

$$\Phi M = (M_1 + M_2 + .. + M_n)/n \qquad (2)$$

Where ΦM is the average value of multiplier in the given year in the EU member states, $M_1 + M_2 + .. + M_n$ are values of multiplier in the individual EU member states and n is number of EU member states in the given year.

$$\Delta M = M_t - M_{t-1} \qquad (3)$$

Where ΔM is change of value of multiplier, M_t is the amount of multiplier in the given year, M_{t-1} is the amount of multiplier in the previous year according to periodicity of the recorded data.

$$T = VAT_E + ADV_{VAT} \qquad (4)$$

Where T is total part of price defined as tax on tax, VAT_E is value added tax on excise, ADV_{VAT} is part of ad valorem excise from value added tax.

$$VAT_E = (S + ADV) \times VAT; ADV_{VAT} = (S + VAT) \times ADV \quad (5)$$

Where S is specific part of excise expressed in percentages from the selling price of the most popular price category of the cigarettes in the EU member states, ADV is part of ad valorem excise, VAT is value added tax rate set retroactively as a percentage from the selling price of the cigarettes.

$$\Phi T = (T_1 + T_2 + .. + T_n)/n \qquad (6)$$

Where ΦT is the average value of taxes from taxes in the given year in the EU member states, $T_1 + T_2 + .. + T_n$ are values of taxes from taxes in the individual EU member states and n is number of EU member states in the given year.

$$\Delta T = T_t - T_{t-1} \qquad (7)$$

Where ΔT is change of value taxes on taxes, T_t is the amount of taxes on taxes in the given year, T_{t-1} is the amount of taxes on taxes in the previous year according to the periodicity of recorded data.

How structure and the amount of the tax burden on cigarettes affect producers, prices, and therefore also consumers is evident from the calculation of the characteristic of the multiplier M, which reflects the amount of increase in price for consumers during the growth and projection of costs of producer or his simple effort to increase the income by one currency unit. Multiplier values are calculated on the basis of identified values of imposed taxes on cigarettes in the EU member states, particularly as regards the ad valorem part of excise and value added tax. We obtain a dynamic look at the given issue suitable for identification of the relevant trends by the inclusion of time series from 1995 to 2008 into the introduced calculation.

The value of multiplier (of the increase in price for consumers during the growth and projection of costs of producer or by his simple effort to increase the income by one currency unit) increases with increasing rate of value added tax and also with the growing part of ad valorem excise. The amount of the specific part of excise imposed on cigarettes does not influence the value of the multiplier. The results of examination show significant values of calculated multiplier in the range of 1.25 to 3.91. The absolute maximum, absolute minimum, maximum in 2008 and a minimum in this year are marked in bold in Table 1. The results show that the countries growing tobacco reach high values of the multiplier. For local producers it is rather an advantage, because their prices are normally lower than the prices of imported cigarettes. This is a deliberate favoring of domestic producers of cigarettes and therefore it is deformation of the market environment.

Table 1. Multiplier values M in the EU states from 1995 to 2008

State/year	1995	1997	2000	2003	2005	2007	2008
BE	3.03	3.06	2.72	2.72	3.46	3.31	3.31
BG	-	-	-	-	-	3.41	2.07
CZ	-	-	-	-	1.67	1.75	1.78
DK	1.70	1.70	1.70	1.70	1.51	1.51	**1.51**
EE	-	-	-	-	1.70	1.70	1.76
FI	3.13	3.13	3.13	3.13	3.13	3.13	3.13
FR	3.40	3.52	3.52	**3.91**	3.90	3.90	**3.90**
IE	1.52	1.52	1.56	1.55	1.55	1.54	1.55
IT	3.26	3.26	3.44	3.44	3.50	3.50	3.50
CY	-	-	-	-	2.36	2.36	2.36
LV	-	-	-	-	1.43	1.67	1.90
LT	-	-	-	-	1.43	1.43	1.54
LU	2.87	2.87	2.36	2.36	2.51	2.53	2.53
HU	-	-	-	-	1.43	1.80	1.81
MT	-	-	-	-	3.00	3.00	3.00
DE	1.61	1.61	1.56	1.61	1.64	1.68	1.68
NL	1.56	1.56	1.56	1.57	1.58	1.57	1.57
PL	-	-	-	-	1.97	2.07	2.27
PT	3.39	3.80	1.87	1.64	1.68	1.68	1.68
AT	2.36	2.42	2.42	2.42	2.48	2.48	2.48
EL	3.24	3.24	3.24	3.24	3.31	3.31	3.31
RO	-	-	-	-	-	1.75	1.75
SK	-	-	-	-	1.64	1.64	1.67
SI	-	-	-	-	2.46	2.49	2.49
ES	2.76	3.10	3.10	3.10	3.42	3.42	3.42
UK	1.54	1.56	1.59	1.58	1.58	1.58	1.58
SE	**1.25**	1.57	2.45	2.45	2.45	2.45	2.45

Calculated values of the multiplier indicates that if the electricity prices, raw material prices or wages of the employees shall increase, then during their growth by one currency unit the price of the product shall increases in 2008, for example in France up by 3.90 of currency units provided that the producer shall want to maintain the same income. Producers of excised goods are in this way very disadvantaged compared with producers of other products; however this disadvantage should be reduced to a certain extent by the low elasticity of demand for their products (in this case demand for cigarettes).

Development of multiplier values in all EU member states from 1995 to 2008 is evident from Table 1. Overall it is preferable to evaluate this development on the basis of determination of the development of total indicators which can be obtain by further processing of the multiplier values.
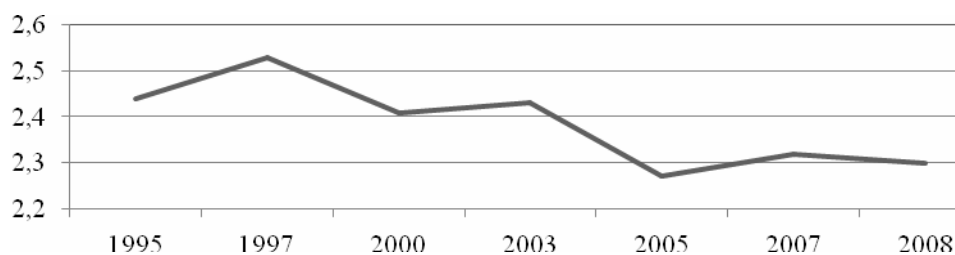

Figure 1. Average value of multiplier ΦM in the EU member states from 1995 to 2008

It is clear that the period of growth and of decline of the average value of the multiplier ΦM regularly varies in the EU member states from 1995 to 2008 as we can see in Figure 1. Overall there is a reduction in the value of this characteristic namely from 2.44 to 2.30 in the given period. This suggests a positive trend justified in the previous text. Observed development of the average value of multiplier is significantly distorted by entry of new states into the EU in 2004 and 2007. Average value of the multiplier in 2003 in entering countries in 2004 was 1.8 and in EU member states was average value of the multiplier 2.9 in 2003.

(Cnossen, 2005).Characteristic of the average change in value of the multiplier ΔM in the EU states always in comparison with the previous analyzed period has certainly higher explanatory power on the development of the multiplier in the EU states.
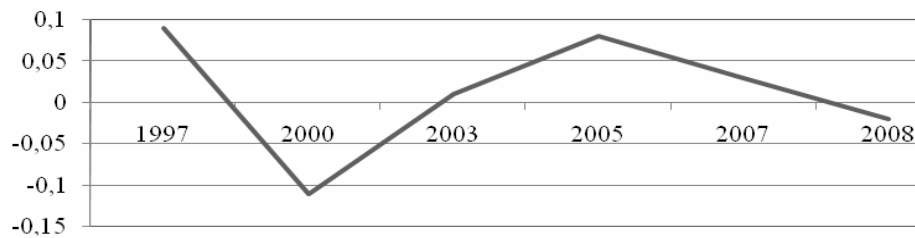

Figure 2. Average change of value of multiplier ΔM in the EU states compared to the previous period

There is an elimination of percussive effect of entry of states into the EU through the indicator of the change. We obtain a clean look in terms of the direction of development of the multiplier in the EU from Figure 2. During the surveyed period there are the growth and decline in the average value of the multiplier in respect of previous period. Growth was recorded in four periods and a decrease in only two periods. During surveyed period average change of the multiplier reaches the value of 0.1 in the EU. Though it is a low value, it is clear that this is a growth. It is good to mention here that value of multiplier has grown on the average by 0.04 in the EU countries from their entry into the EU until 2008. The value of multiplier has declined only in four EU member countries - namely Bulgaria, Denmark, Luxembourg and Portugal in the period of the membership in the European Union.

If we look aside from the actual amount of burden with excise, so process of determination of value added tax from price of cigarettes including excise and determination of part of ad valorem excise from the price including value added tax and specific part of excise seems to be meaningless. By quantification of characteristic T we find out what part of the selling price of cigarettes in each country is made up of tax calculated from other tax.

Table 2. Ratio of taxes on taxes T from the selling price of cigarettes in the EU states

State/year	1995	1997	2000	2003	2005	2007	2008
BE	22.21%	22.05%	22.97%	22.97%	21.42%	22.84%	23.54%
BG	-	-	-	-	-	22.00%	27.11%
CZ	-	-	-	-	18.57%	22.01%	24.97%
DK	25.74%	25.45%	25.16%	21.93%	19.25%	18.82%	18.82%
EE	-	-	-	-	19.50%	18.68%	22.63%
FI	23.16%	23.72%	23.47%	23.17%	23.05%	22.93%	22.82%
FR	19.88%	21.34%	21.42%	21.52%	23.49%	23.49%	23.49%
IE	20.11%	20.44%	22.22%	21.91%	21.36%	21.26%	21.43%
IT	19.57%	19.57%	20.74%	20.74%	20.93%	20.94%	20.94%
CY	-	-	-	-	19.98%	19.98%	19.97%
LV	-	-	-	-	14.88%	20.01%	29.93%
LT	-	-	-	-	12.24%	15.22%	**17.24%**
LU	13.92%	13.92%	15.89%	15.93%	18.24%	18.71%	18.71%
HU	-	-	-	-	15.66%	27.02%	22.44%
MT	-	-	-	-	21.96%	21.96%	22.30%
DE	19.29%	18.77%	18.58%	20.61%	21.43%	22.16%	22.16%
NL	19.19%	19.19%	20.16%	19.86%	19.91%	19.87%	19.87%
PL	-	-	-	-	23.95%	26.46%	**34.67%**
PT	24.15%	26.14%	24.72%	22.45%	23.34%	23.68%	23.82%
AT	22.90%	23.03%	23.07%	22.36%	23.70%	23.70%	23.44%
EL	18.94%	18.94%	18.94%	18.94%	19.75%	19.75%	19.75%
RO	-	-	-	-	-	20.38%	19.58%
SK	-	-	-	-	19.59%	23.64%	29.08%
SI	-	-	-	-	23.05%	23.37%	23.37%
ES	17.87%	18.88%	17.31%	17.61%	20.88%	20.56%	20.56%
UK	20.93%	21.71%	22.44%	22.40%	21.64%	21.29%	21.16%
SE	**9.84%**	19.72%	22.35%	22.00%	21.60%	23.22%	23.41%

The ratio of part of selling price consisting of taxes on taxes increases with the increasing rate of value added tax, with increasing value of part of ad valorem excise and with the increasing proportion of the specific part of excise on the selling price of cigarettes. If the price of cigarettes increases then the ratio of specific part of excise from the price of cigarettes relatively decreases and so also the relative ratio of taxes on taxes on the selling price of cigarettes decreases. Amounts of taxes of ad valorem excise and also of value added tax grow with growing price of the cigarettes and so the amount of taxes on taxes increases in the absolute formulation.

The results of the examination show higher parts of taxes on taxes from the selling price of cigarettes in the EU member states in the range of 9.84% to 34.67% in Table 2. The absolute maximum, absolute minimum, maximum in 2008 and a minimum this year are marked in bold in Table 2. Calculated values show that as a result of the imposition of more taxes on cigarettes and the mechanism of their calculation, taxes on taxes make up to 34.67% of the selling price of cigarettes.
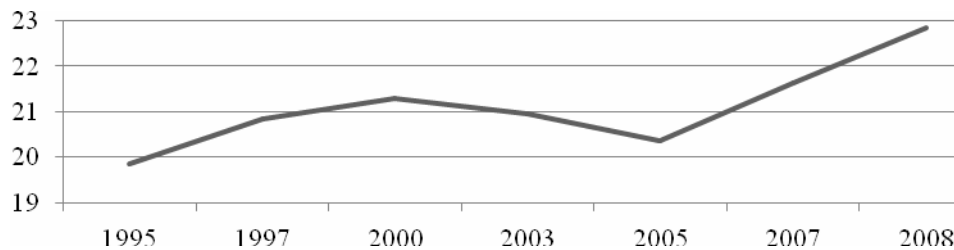

Figure 3. Average value of taxes on taxes ΦT (%) in the EU states from 1995 to 2008

The average value of taxes on taxes ΦT in the EU states from 1995 to 2008 ranges from 19.85% in 1995 to 22.86 % in 2008. Overall there is an increase in the value of this characteristic by 3.01% during given period. It is clear from the growing trend of the average value of taxes on taxes apparent from Figure 3. that it is not in the interest of the European Union to reduce this negative impact on consumers or even to eliminate it.

Indicator of taxes on taxes has also a significant explanatory power in terms of the trend of the determination of average value of change in the ratio of taxes on taxes ΔT in the EU member states.
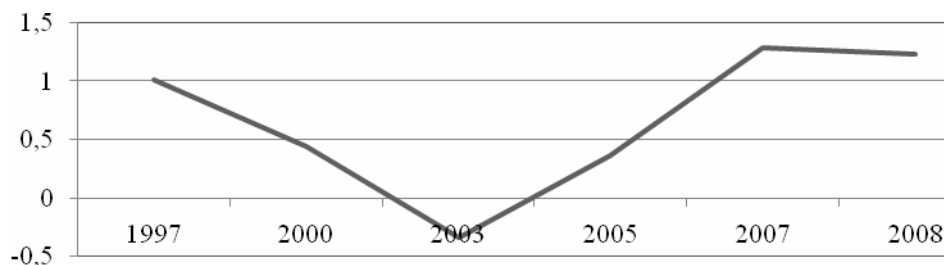

Figure 4. Average change of value of taxes on taxes ΔT (%) in the EU compared with the previous period

Similarly in the multiplier we achieve also in the values of characteristic of taxes on taxes the elimination of percussive effect of entry of states into the European Union through the indicator of change. During the surveyed period the ratio of taxes on taxes always grows compared with this value from the previous period, with the exception of 2003 which is shown in Figure 4. During the surveyed period ratio of taxes on taxes from price of cigarettes grows on average by 0.67% compared to the previous period.

Compared to the value from 1995 or the period of entry of states into the EU ratio of taxes on taxes has grown on average by 3.13% until 2008. Not only the absolute value of selected taxes therefore has increased but also values of a quite negative effect of paying tax on other tax. The decrease in ratio of taxes on taxes appears only in five EU countries, in Denmark, Finland, Portugal, Romania and Cyprus in the given period.

Conclusion

Calculated values of the multiplier M which approximate the value of 4 within the EU member countries in 2008 highlight the complicated situation of cigarettes producers. If we look aside from the moral, environmental and other often subjectively complexioned aspects and we shall consider cigarettes as a product like any other, then the given situation is very unfair and distorts the market. From many already here mentioned reasons, it is necessary to tax cigarettes by other way than the other products - more than others. The average value of the multiplier ΦM decreased (from 2.44 to 2.30) from 1995 to 2008 in the EU however the real development is here distorted by the entry of many countries into the European Union. Real stable or slightly increasing trend of value of multiplier is evident when setting the indicator of average change of the value of indicator in comparison with the previous period ΔM. Value of multiplier has grown on the average by 0.04 in the EU countries from their entry into the EU or from 1995 until 2008. From the neutrality of the multiplier to the amount of specific tax is evident that there shall be its increase in many EU countries by the application of proposal for a Council Directive COM (2008) 459 in the final wording. Tobacco taxes in the EU are the highest in the world (Cnossen, 2005).This would have been most effective single intervention to prevent smoking. A price increase of 10% decreases consumption on average by about 4% in high income countries among adults. Importantly, the impact of higher prices is likely to be greatest on young people, who are more responsive to price rises than older people (Commission of the European Communities, 2008)

However, the system of taxation of cigarettes in the EU member states is currently very complicated, for ordinary consumers non-transparent and opposes some basic principles of appropriate imposition of tax. Specific tax and ad valorem tax are imposed on cigarettes and cigarettes are also liable to value added tax. The amount of specific tax for each cigarette or a percentage from the selling price of ad valorem tax or value added tax may not seem excessively high to consumers. The amount of ad valorem tax is calculated from the price including specific taxes and also value added taxes. Also value added tax is calculated from the price including both parts of excise imposed on cigarettes. Overall therefore taxes on taxes T amounts to nearly 35% in the EU states in 2008. In the surveyed period from 1995 to 2008 can be seen quite a significant increasing trend of the average value of taxes on taxes ΦT in the EU (from 19.85% in 1995 to 22.86 % in 2008) supported also by the development of the average change of the value of taxes ΔT (on average by 0.67% compared to the previous period). Evidently there shall be another growth of these negative characteristics of the taxation of cigarettes in the European Union by the application of proposal for a Council Directive COM (2008) 459 in the final wording.

Mainly it is necessary in frame of cigarette taxation in the EU states to eliminate paying taxes on other taxes, determine costs implications of the consumption of cigarettes and compare them with the costs during exclusion of the consumption of the cigarettes, consistently reduce the external costs of cigarette consumption, simplify the rules regulating the taxation of cigarettes in the EU states and persist on observance of these rules, which must be established on the basis of general consensus on the objectives of regulation and harmonization of excise imposed on cigarettes.

References

1. Cnossen, S. (2005). Theory and Practice of Excise Taxation. Oxford: Oxford University Press.
2. Chaloupka, F. J. & Warner, K. E. (2000). The economics of smoking. In A. J. Cuyler and J. P. Newhouse (eds), Handbook of health economics. Amsterdam: Elsevier.
3. Commission of the European Communities. (2008). Proposal for a Council Directive COM (2008) 459/2. Amending Directives 92/79/EEC, 92/80/EEC and 95/59/EEC on the structure and rates of excise duty applied on manufactured tobacco. Brussels: Commission.
4. David, P. (2007). Theory of tax incidence with practical application. Brno: CERM.
5. Kubatova, K. (2006). Tax theory and policy. Prague: ASPI.
6. Nerudova, D. (2008). Harmonization of the tax systems of EU member states. Prague: Aspi.
7. Lightwood, J. & Collins, D. & Lapsley, H. & Novotny, T.E. (2000). Estimating the costs of tobacco use. In P. Jha & F. J. Chaloupka (eds), Tobacco control in developing countries. Oxford: Oxford University Press.
8. Pekurinen, M. (1992). Economic aspects of smoking: Helsinki: VAPK Publishing.
9. Shoven, J. B. & Sundberg, J. O. & Bunker J. P. (1989). The social security cost of smoking. In D. A. Wise (ed), The economics of aging. Chicago: University of Chicago Press.
10. Siroky, J. (2007). Taxes in the EU. Prague: Linde.
11. Siroky, J. (2008) Tax theory with practical application. Prague: C. H. Beck.