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**THE COMPLIANCE COSTS OF EXCISE
DUTIES IN CROATIA**

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THE COMPLIANCE COSTS OF EXCISE DUTIES IN CROATIA*

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Abstract

The objective of this research is to calculate the costs of tax compliance faced by those in Croatia who have to pay special taxes, i.e., excises. The research was done face-to-face (interview survey) and by postal questionnaire, in the period from May to September 2002, relating to operations in 2001. The research was done partly by a market research agency (PULS) and by the investigator herself. The questionnaires were based on foreign research (Sandford 1989, Shekidele 1996, Haughton 1998) and partly on tax regulations regarding excise in Croatia. The selection of the sample, in comparison with that in studies related to compliance costs of other taxes, was relatively simple, since there are fewer entities liable to pay excises. The response rate was different per given excise, and a better response was obtained with a face-to-face interviews. The following were calculated: the costs of the time of employees expended, external costs, which include the fees paid to outside accountants and other advisors dealing with tax issues, the material and some other costs, but only those that were exclusively connected with excise matters. There were many restrictions here, such as the problem of the precise determination of the number of employees and the working time spent, because they were at the same time carrying out other matters related to accountancy and finance, as well as the determination of material costs that are not specifically shown according to place of origin. The respondents themselves estimated these magnitudes, which ultimately, after the processing of the questionnaire, might lead to unreliable conclusions; and yet, as Keynes said: "It is better to be approximately right than precisely wrong" (in Haughton, 1998).

Taking these restrictions into account, the results obtained suggest that the costs of those liable to pay excise are low and that the taxation procedure is relatively simple, particularly after the expiry of the initial phase in which the taxes were introduced. Since this is the first such investigation in Croatia and since such research is not common even in international dimensions, it can be considered an initial attempt that will be a point of departure for further research. It should correct the drawbacks and problems that occurred during the research, and hence improve the quality and reliability of future results.

JEL classification: H25, H32

Key words: excise (special taxes), excise compliance costs, Croatia

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1. Introduction

Although investigations of taxation compliance costs have been a feature in economic theory and practice for over fifty years or so, economists started to deal systematically with this phenomenon only in the 1980s. It was perceived, that is, that the actual taxation procedure itself created certain costs, to both the taxpayers and to the tax administration. Although the existence of costs in every economic activity is quite unavoidable, an attempt was made to identify the costs of taxation and to indicate how they might be reduced and a more rational taxation procedure be carried out. It was seen (Godwin, 1986; Pope, 1986; Sandford et al., 1989; Slemrod, 1989; Allers, 1990) that taxation costs were both relatively high and regressive, that is, that they were more of a burden on small taxpayers, and it was recommended that governments should identify these costs and pay attention to them while creating their tax policies.

This research has endeavoured to determine which costs are borne by persons liable to pay excise while complying with their tax liabilities and, according to the information acquired, to recommend to both taxpayers and to the tax administration (TA) where there are opportunities for a reduction in these costs. Croatia is a relatively young country that set up a new tax system a mere decade ago. The introduction of excises was itself a new departure and it was thus expected, which was confirmed by the investigation, that the costs of the taxation would be greater during the introduction of the new tax or during any major changes. The results have also been based on an analysis of the complexity of the tax system and the relationships between the taxpayer and the Tax Administration, which also has an impact on efficacy and hence the costs of compliance.

Hypotheses were defined according to theoretical and already implemented research abroad. The greatest emphasis was placed on the hypothesis that taxation costs are regressive. In the case of excises this hypothesis could not be tested since for most excises in Croatia there are between one (tobacco products, mineral oil products) and four (non-alcoholic beverages, beer, coffee, alcohol) major taxpayers, and in some cases (luxury products) a large number of mainly small taxpayers, and also because of practical difficulties in the administration of the questionnaire (see Chapter 7). The following are the hypotheses:

- the compliance costs of taxation are difficult to identify and quantify
- the methods of quantifying the amount of the costs are fairly unreliable, mainly being based on the estimates of the respondents
- the response rate is weak, and weakest of all in the postal questionnaire
- the face to face method is the best
- the research is very complex (demanding in time, expensive, carried out the first time in Croatia, unfamiliar to the taxpayers)
- the compliance costs of excise duties are relatively low
- the compliance costs are higher in the initial phase of the introduction of the taxation, that is during the running-in period for both taxpayers and tax administration.

Below, a review is given of the system of excises in Croatia. In the chapters that follow, the costs of taxation are defined, as are the methodology and quantification methods, that is, the evaluation of these costs. Chapter Six shows how the research into the compliance costs of Croatian entities liable to pay excise was carried out and what problems occurred while administering the questionnaire, what the

scope of the investigation was, and what the response rate. In Chapter Seven the results of the investigation are given and the amount of the costs of the taxation are presented, as well as costs as percentage of excise collected. The last chapter contains conclusions based on the results of the investigation, and recommendations that could go towards a reduction of these costs.

2. Excises in Croatia

The system of taxation by excise in Croatia does not essentially differ from the systems introduced into other countries. It concerns a relatively small number of major taxpayers (major in terms of the amount of tax paid) as well as the taxation of products whose price elasticity is very low and which cannot easily be substituted for by other products (Sandford 1989: 154). This is shown by the taxation of mineral oils, tobacco products and alcohol, where there are just a few taxpayers, whose payments of taxes accounted for over 90% of all tax revenue per individual excise.

During the period from 1994 to 2002, Croatia saw the introduction of eight excises. In 2001, revenue from excise amounted to 4.2% of GDP, the same as the average of the countries of the EU¹, while as a percentage of overall tax revenue it came to 15.7%, which is almost 50% greater than the corresponding figure for EU countries (10.3% of tax revenue).

Excises in Croatia are paid by producers and by importers, and it is the Customs Administration that carries out the procedure, which is more or less the same as that in the countries of the EU.

Table 1 Excise duties in Croatia

Excise on	Tax base	Amount of the tax
Coffee	Kg of net weight of coffee or coffee product	1. not roasted HRK 5.00 2. roasted HRK 12.00 3. coffee endocarp and pellicle, HRK 15.00 4. coffee substitutes and concentrates made of coffee HRK 20.00
Mineral oils	At a temperature of +15 °C for petrol, diesel and heating oil (EL and LS), or kilo of jet fuel or aeronautical petrol, heating oil (L, S, T), paraffin and LPG	1. petrol (MB-98 and MB-86) and other kinds of leaded petrol HRK 2.14 per l 2. petrol (BMB-98, BMB-95 and BMB-91), HRK 1.90 per l 3. diesel fuel (D-1, D-2, D-3) and other kinds of it HRK 1.00 per l 4. heating oil (EL and LS) HRK 0.30 per l, 5. LPG HRK 0.10 per kg, 6. all kinds of paraffin HRK 1.40 per kg
Tobacco products	Cigarettes per pack and other tobacco products	cigarettes (per pack): 1. A group (popular) HRK 5.00, 2. B group (standard) HRK 5.40, 3. C group (extra) HRK 8.90, tobacco: HRK 38.00 per kg, cigars: HRK 1.10 per item, cigarillos: HRK 4.40 per pack
Beer	Hectolitre of produced or imported beer and beer obtained from concentrates	1. HRK 200.00 per hl beer, 2. HRK 60.00 per hl alcohol free beer (up to 0.5% vol/vol)
Non-alcoholic beverages	hl produced or imported non-alcoholic beverage and non-alcoholic beverage obtained by the dilution of syrups, powders and pastilles	HRK 40.00 per hectolitre
Alcohol	Litre of absolute alcohol in ethyl alcohol, distillates and alcoholic drinks at a temperature of 20°C	1. HRK 60 per l a.a 2. HRK 0.00 per l a.a of wine

¹ OECD, 2002, figures for 2000.

Passenger cars, other vehicles, vessels and aeroplanes	A 1) new: <ol style="list-style-type: none"> cars and motorcycles: sales price (not inc. VAT) or customs base) vessels: <ul style="list-style-type: none"> dependent on length in m dependent on cabin, planes: number of seats A 2) used cars and motorcycles a) special sales tax: sale price	A 1) new: <ol style="list-style-type: none"> HRK 0-50,000: tax 10%, HRK 50,000-350,000: tax HRK 5,000-87,500 +15-45% <ul style="list-style-type: none"> no cabin HRK 6,000-48,000, cabin HRK 15,000-150,000; HRK 7,000 – 300,000, A 2) the tax increases from 50-100% a) 5%
Luxury products	Sales value of the product (not inc. VAT) or customs base (clocks and watches, jewellery, similar products, clothing and footwear of fur and skin of reptiles, arms, pyrotechnical products)	30%

3. Definition of the costs of excise compliance

The compliance costs of excise duties are incurred by taxpayers when, in accordance with the currently valid tax regulations, they meet their tax liabilities. These costs do not include the amounts of tax paid, which means that they would not exist if there were no tax liability. Different authors define them differently, and they can be internal and external (Allers 1994: 33), one-off, occasional or recurring (Sandford, Godwin et al. 1981: 21) or monetary, temporal or psychological (Sandford, 1989; Haughton, 1998). Since the last group is more comprehensive, in the sequel a detailed explanation of the meaning of these concepts is given. There will also be a consideration of the previous definition. It is certainly important to point out that it is difficult to classify any given cost in terms of only one category. Their existence and significance can often be defined in terms of several features.

1. Monetary costs include monetary expenditure for staff, both those in-house and other persons who carry out certain matters connected with taxation and yet are not employees of the firm (tax advisers, accountants, external experts, computer services and so on). In the case of excises, they are mainly employed in firms where the jobs are carried out either by special departments (in most major taxpayers there are special sections for taxes and customs duties) or accounting departments. Staffing costs can include the costs of various seminars or conferences related to taxation.

Temporal costs are also monetary costs, i.e., those that derive from the gap between the payments of the tax to collection on the products sold. The temporal cost is most marked with importers, because taxation of imported goods by excises is carried out at the moment of customs clearing, while collection on goods sold is realised a few weeks later or at most up to two months. In the case of domestic producers, the temporal cost is smaller, because the tax is calculated while the products leave the warehouse, and the tax has to be paid within 30 days.

Also monetary costs are those costs related to obtaining bank guarantees as security instruments for the payment of excise. However, a guarantee is also sought for the security of overall payment, of customs, VAT and excise² and it is thus difficult to distinguish what the costs of customs are, and what of taxation.

Monetary costs, in addition, include expenditures for the procurement of forms, trade literature (books, magazines, *Official Gazette*), telephone and postal costs, costs of procuring equipment and software. Extra problems show up in their classification into given taxes, since there is never any record of how much they have come to per given tax.

² Customs Law, Official Gazette 78/99, 94/99, 73/00 and 92/01.

Spillage, wastage and breakage that are incurred with products that are taxed by excises are also a kind of cost for the taxpayer if the TA does not acknowledge them, and in this case they do not have any right to the refunding of tax already paid.

Sandford (1989: 160) also says that during taxation by excises an additional cost might be brought about by the legal obligation to use special customs or production warehouses, as well as special measuring instruments (for mineral oils or alcohol), for the making of which special permits of certain bodies of the state administration are required.

From the point of view of costs, nor should the fact about which way the tax liability is met be ignored, that is, at what level of technology and information. In systems with high quality computer support and linkage, and with a developed networking system in tax and customs departments, the costs are certainly lower.

2. Costs in time comprehend the time spent by all those involved in the taxation process, such as owner of the firm, and accountancy, financial, managerial, technical and other auxiliary officers. Since these figures can through the use of various different methods (most often by evaluating the gross hours spent by a given employee) be expressed in monetary terms, these costs could also be classified as monetary costs.

With respect to the temporal frequency of the appearance of a given tax, it is held that costs are much greater while the tax is being introduced, and also when there are major changes in the tax regulations so that a certain time period for getting to know and mastering the modifications is necessary, that is for running-in both the taxpayers and the tax administration.

The cost that derives from the actual nature of excises also should not be ignored, although it is also difficult to quantify it in money terms. Sandford (1989: 159) thinks that for producers and importers, an additional operational burden is the relatively high tax burden and hence the high price of taxable products. For this reason, every change in the tax system, especially where the amount of excise is concerned, has a large impact on the prices of these products, which for the producers constitutes an extra risk and uncertainty in their operations.

The complexity of the tax system itself (Allers, 1994:33) can also be a lasting cause of costs of taxation that are higher than they would be if the system were simpler.

3. In the third group there are the psychological costs to the taxpayer, such as for instance concern, unease, uncertainty and other stress situations (strict adherence to the deadlines and the obligation to meet tax liabilities in time, forced collection and so on), which do certainly exist; however, it is almost impossible to quantify them and express them in value terms.

4. Theoretical and practical issues concerned with the evaluation and quantification of costs

In the preceding chapter, the kinds of costs that taxpayers can incur during excise compliance are outlined. However, there are many conceptual and practical issues, primarily to do with their identification and evaluation, and ultimately hence of their quantification, that is, of stating them in terms of monetary value.

The first problem occurs in the determination of who is employed, that is, who spends time, and how much time they spend, on carrying out matters related to taxation exclusively via excises. The problem is more marked when it is to do with employees in-house than with those who do particular out-sourced jobs for the taxpayer. The cost of them is relatively easy to determine, according to the invoices they render for a certain job or service, especially if the invoice shows which jobs it was they did. However, in this case too they can do tax work to do with several taxes, so it will not be possible to distinguish what part of the job pertains to a certain tax. Nevertheless, in most excise payers, these jobs are carried out by employees in the firm, except for excises on luxury products, alcohol and non-alcoholic beverages, where there are large number of small taxpayers (small according to criterion of tax paid and according to the criterion of size of annual import or production). It is largely accountants that work on tax questions, financial experts, but some clerical and other personnel are involved (copying, procurement of forms, postal delivery, supply, transport to tax office and so on). Yet these employees simultaneously carry out other financial tasks, and it is mainly the estimates of the actual respondents about the number of persons and hours, or days in the year that then are translated via records of their gross wages bill into terms of monetary value that are used. For excise, these data are perhaps rather reliable, because in the large firms that are liable to pay excises for tobacco and mineral oils there are special departments related to taxation and customs clearing, which are carried out at the same time with importers, and even certain persons who perform individual tax-dedicated tasks. In the calculation of time spent by other staff, an attempt was made to define precisely what jobs they carried out, and how much time they spent only on taxation by excises.

The costs of financial losses or benefits because of the time difference between the payment of the tax and the collection on products sold could be measured using the annual interest rates. If this cost is looked at from the point of view of the total costs of taxation that include the administrative costs (i.e., those incurred by the tax administration) and the costs of the actual taxpayer, it might be concluded that the final effect of this is actually neutral.³ If the taxpayer pays excise a month or two before it makes a sale, this constitutes a financial loss for it, while the tax administration has at that time the amount of the tax collected, which is a financial gain for it.

Material costs such as the procurement of forms, office material, postal costs, transport costs, procurement and maintenance of equipment also have to be estimated, because these are costs that are incurred while other tax or accountancy matters are being carried out.

5. Methodology

As in similar investigations in other countries, the only possible and useful method was chosen, that of administering a questionnaire. In the case of excises, the choice of respondents was quite simple, since for some excises there is only one or just a few major taxpayers, unlike, for example, income tax payers, of which there are almost 2.4 million in Croatia (Kesner-Škreb, Madžarevic-Šujster, Newsletter, IFJ, no. 9, 2003). In drawing up the questionnaires we drew upon questionnaires used in research abroad (Shekidele, 1996; Haughton, 1998), because the excise system in Croatia is conceptually based on the tax systems of more developed European countries.

³ Assuming the application of identical rates of interest.

Before composing the questionnaires, we collected figures from the Ministry of Finance and its statistical department about those liable to special tax payment and the amounts of tax paid in during 2001. The questionnaires were based on the excise laws and on the regulations that detail taxation procedures and contain the forms that are used therein. The forms are mainly identical with small differences because of the specific features of each excise (e.g., tobacco products and alcohol, the use of stamps). Employees of the Finance Ministry in the Taxation and in the Customs Administration were also consulted. Prior consultations with individual taxpayers were also carried out during the making of the questionnaire, so that the final questionnaire should be as intelligible and precise as possible. During the creation of the questionnaire, the market research agency PULS was also consulted.

The questions were structured into three groups:

- questions that the respondents had to answer with concrete data from their financial reports – number of employees, total revenue, expenditure, amount of tax paid);
- questions where they themselves had to estimate the time spent or certain money amounts spent, on the basis of their own figures (number of employees, time spent, value of an hour according to the value of the gross pay of an employee, given accounts for the payment of individual goods or services);
- a third group, in which they provided their viewpoints or recommendations (a grading of the taxation system and of the work of the customs or tax administration).

6. Features of the sample and procedure for administering the questionnaire

When the final questionnaires had been set, the respondents and the manner of administering the questionnaire were determined. The biggest and most important importers or producers according to amount of tax paid (Table 2) were selected, as well as a few smaller importers or producers, wherever possible, since the intention was to test out the hypothesis that the compliance costs were regressive, that is, that the costs incurred by the large taxpayers were smaller than those paid by the smaller taxpayers.

Table 2 Taxpayers liable to excises and the number of them selected for the questionnaire

Excise	Total number of taxpayers liable	Total amount of tax paid in 2001 (in million kunas)	Number selected for the questionnaire	Excise paid by those selected as % of total amount of tax paid
Mineral oils	5	4,194.3	1	94
Tobacco products	3	2,094.7	1	81
Beer	42	463.3	8	98
Passenger cars, other vehicles, planes and vessels	300	410.1	11	32
Alcohol	94	260.4	9	63
Coffee	234	108.9	16	73
Non-alcoholic beverages	339	87.4	16	90
Luxury products	260	15.3	23	77
Total	1,277	7,634.5	85	76

Of the 1,277 taxpayers liable to excises, 85 of them were selected for the questionnaire. Although this is about 7% of the total number, in terms of amount of tax paid they constitute the bulk of the taxpayers (76%). For six excises (mineral oils, tobacco products, beer, coffee, alcohol and non-alcoholic beverages) the sample comprehended the taxpayers whose average tax paid constituted 90% of the total tax. In these groups there are mainly one or two large taxpayers. The greatest difficulty lay in determining the sample for the payment of excise on luxury products (a large number with relatively small amounts of tax paid in) and for the payment of excises on cars, other motor vehicles, vessels and planes, because it was difficult to identify them due to the possibility that firms might be registered for other things apart from the import of cars – servicing, selling spare parts, rental and so on.

The questionnaire was carried out by PULS, and the investigator herself, during the period from June to September 2002, referring to the operational period of 2001.

The agency took on the polling of 76 taxpayers, and the investigator 9 large taxpayers, for some excises the only taxpayers. Although it was most demanding in terms of time and hence most expensive, which was confirmed at the end of the administration of the questionnaire, the face-to-face interview was considered the best way for the acquisition of the highest quality answers (Sandford, 1989).

However, the agency cut down the number of taxpayers to be the questionnaire right at the beginning, and Table 3 gives a review of how many questionnaires they administered and sent out, and the numbers in brackets show how many questionnaires were really administered.

Table 3 Numbers of questionnaires and rate of response

Excise	PULS		PULS-Really administered (in %)	Investigator-Face to face	Investigator-Really administered (in %)
	Face to face	Postal			
Mineral oils	-	-	-	1	(1) 100
Tobacco products	-	-	-	1	(1) 100
Beer	4 (1) ⁴	2 (0)	(1) 17	2	(1) 50
Passenger cars, other motor vehicles, vessels and planes	5 (2)	5 (0)	(2) 20	1	(1) 100
Alcohol	6 (2)	3 (2)	(4) 44	-	-
Coffee	10	5 (1)	(1) 6	1	(1) 100
Non-alcoholic beverages	3 (3)	6 (0)	(3) 33	3	(2) 67
Luxury products	13 (4)	10 (2)	(6) 26		
Total	41 (12)	31 (5)	(17) 24	9	(7) 78

An accompanying letter was sent with the questionnaire that was intended to explain to the respondents what the costs of taxation were, since most of them were not aware of the existence of these costs or the possibility of quantifying them, as well as the purpose and objective of the research.

Since PULS, or its pollsters, had not previously had any experience with this kind of questionnaire, preliminary meetings were held. An endeavour was made to explain certain questions to them, and give instructions about how to get the highest quality answers. This unfortunately did not help them a great deal in administering the questionnaire, because they came upon many problems and difficulties. At the very beginning, the selected subjects were not very cooperative, and not very willing to agree to an interview, often alleging shortage of time. There was in fact a certain amount of distrust concerning the

⁴ In brackets are the numbers of questionnaire that are really administered.

actual substance of the research. Although the respondents were assured that this was an independent scientific investigation and totally anonymity was guaranteed, they were not very willing to give out data related to taxation or business performance. The survey started in June and was completed in September 2002, and for the whole of the period, in some firms, there were repeated attempts to carry out the poll. An additional difficulty was that this was vacation period, and some agreements had to be put off until the autumn. The response rate or the success rate in carrying out the questionnaire was, then, for all of these reasons, quite low, and in PULS came to only 24%.

The investigator did not have such problems in administering the questionnaire, since she arrived at the respondents by personal contacts, which was the best way of getting at people who in terms of function and expertise were the most suitable for the survey. Thanks to recommendations, the interviewees were the most competent corporate officers for financial operations (directors of financial and accountancy departments or their deputies, deputies of the general managers, CEOs)⁵ who were very approachable and through talks with them other useful information was obtained (about business operations, problems in contact with the TA, proposals for changes in taxation). Although there were relatively few interviewees, this lasted about a month, from the many phone calls and setting of meetings, to the actual interviews, which in spite of the relatively short and simple questionnaire (in comparison with the questionnaires for customs duties and income tax) would last for up to three hours. The investigator was able to complete seven out of nine questionnaires, which meant that the response rate was 78%. All these questionnaires were carried out with face-to-face interviews, while the two that produced no responses were sent by post. This confirmed the hypothesis that the best quality and most successful interview is the face-to-face variety, and that there is a very low rate of response to a postal questionnaire.

Table 4 Response rate in the administration of postal questionnaires in foreign researches and in Croatia

Researcher	Country, Year	Response rate (%)
Kuo	Canada (in Houghton, 1998)	20-25
Sandford et al.	UK (1982-3) (alcohol)	16
Shekidele	Tanzania (1995-6)	64
Pope	Australia (1990)	27
Pope	Australia (1993)	24
Kuliš	Croatia (2001)	15

7. The Compliance costs of excise duties in Croatia

Analysis of the results showed that the most significant costs of compliance are labour costs, which constitute from 74 to 95% of total costs (Table 6). As with the foreign investigations, the problem was to estimate both the number of persons carrying out tasks exclusively related to excises and also the number of hours spent on these tasks. In one large taxpayer (mineral oils) there is a separate department that carries out matters related to customs and taxation and that coordinates other departments that process the data (financial and accounting departments). In the other taxpayers the matters were mainly seen to by the accountancy and financial departments, and in two smaller taxpayers (luxury products) these matters were outsourced to an accountancy firm. Apart from these departments, also taken into

⁵ I would like to thank several leading officers in the financial departments of certain large firms who with their kindness, knowledge and patience enabled me to obtain high-quality responses, as well as other information that I would not have obtained only on the basis of the questionnaire.

account was the time spent by clerical and other staff (copying, delivery, transport and so on). The respondents themselves estimated the numbers of hours spent the number and structure of persons employed, supplying figures about their gross wages. For all persons, only part of their working time was taken into consideration, since they did not carry out matters only related to excises. With those who mentioned only hours and the number of persons who carried out the work, but did not show the time spent in money terms, an estimate was made according to the monthly gross wages per employee⁶ for the activity for which the taxpayer is registered.

Table 5 Structure of costs of respondents as compared with total costs in %

Costs	Mineral oils	Tobacco products	Beer	Cars, other vehicles, planes, vessels	Alcohol	Coffee	Non-alcoholic beverages	Luxury products
Labour costs	5.7	29.7	94.4	73.8	44.9	81.7	81.7	87.5
Material costs	0.4	0.2	1.4	16.2	8.0	9.3	9.3	3.8
Stamps	-	68.8	-	-	36.4	-	-	-
Misc. costs	0.0	0.0	4.2	10.0	0.0	9.0	9.0	5.0
Spillage, wastage and breakage	93.8*	1.3	0.0	0.0	10.7	0.0	0.0	3.8
Total costs	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* A non-allowed loss shown in the mineral oil excise taxpayer makes up 99% of the total costs, which means that if this cost, that appeared in 2001, did not exist, employee costs would amount to 92% of all costs.

The next cost covered related to material costs. With most of the taxpayers, irrespective of the amount of tax paid, these are not very large. The problem was how to estimate them. Most of the taxpayers stated that it was difficult to distinguish these costs related to the actual procedure of excise payment, which was carried out at the same time as payment of customs duties and VAT, and that most forms, documents and equipment were simultaneously used for such matters. It was the same with telephone and postal costs. In an analysis of those that were stated, the aggregate amount of material costs was estimated by taking 30% of the amount stated.

The special stamps that indicate an excisable product, which are a cost of the taxpayer, are a considerable cost of those liable to tax on tobacco products (almost 70%) and on alcohol (over 35%).

For taxpayers liable to pay excises, wastage, spillage and breakage that are not allowed also represent a cost. This means that products on which excise has already been paid are either destroyed, or lose their value, and the previously paid tax was not refunded. Refunding can be done in certain cases (official destruction of faulty products, statutorily allowed amount of spillage, accidents and so on). In the analysis of the questionnaire, the amounts that the respondents stated were used.

Other costs that are incurred are related to an increased amount of time spent by employees, related to the introduction of a new tax, or in the event of any important changes in the tax regulations and taxation procedures. Under other or miscellaneous costs we put the costs of time spent by employees during control visits from the officials of the taxation or customs administration. As well as time spent, certain material costs were also taken into account (copying, using special premises of the taxpayer, telephoning, use of equipment), costs incurred during such inspection visits.

⁶ Statistical Chronicle Republic of Croatia, 2002, p. 155.

The costs of non-financial benefits that arise from the temporal difference between the payment of tax to collection on products sold are not taken into account in this analysis. The first reason is that the taxpayers themselves do not hold this a cost, because according to them they occur in the initial phase of introducing the tax, after which there is a continuous sequence of payments for products sold, and this cost is explained like any other cost in the production of any product. Raw materials and other materials have to be bought at the beginning of the production cycle, and there are also other costs, and collection on a finished product always occurs after a certain period of time. The other reason why these costs are not taken into consideration is that ultimately they do not have an impact on total costs of taxation (administrative and compliance) (Sandford 1989) because while they are a loss for the taxpayer, for the TA they are a financial gain.

According to the total costs (Table 6) that the excise payers have to bear it can be concluded that they are low, and that as a percentage of totally paid excise they range from 0.21% (tobacco products) to 3.5% (luxury products). It should be observed that in the determination of the total costs of the taxation of luxury products, because of the shortcomings of the questionnaires and the unreal estimates of the respondents (as compared with the other questionnaires) an estimate of the total costs was made according to the questionnaire of only a single taxpayer.

Table 6 Amount of excise compliance costs

Excise	Total excise duty in Croatia (in million kunas)	Total costs (in million kunas)	Costs as a percentage of total excise duty (%)
Mineral oil	4,194.3	1.5	0.25
Tobacco	2,094.7	4.4	0.21
Beer	463.4	1.3	0.28
Cars	410.1	1.9	0.45
Alcohol	260.4	0.6	0.25
Coffee	108.9	3.2	2.93
Non-a. beverages	87.4	1.4	1.63
Luxury products	15.9	0.5	3.50
Total	7,634.5	23.8	0.31

In comparison with research in other countries (Table 7) done for the same excises it can be concluded that, save for the exception of Tanzania, there are no major discrepancies.

Table 7 Comparative review of excise compliance costs as percentage of the amount of excise paid

	1986-1987 Sandford UK	1989 Allers, Holland	1995-96 Shekidale, Tanzania	1997 Plamondon, Canada	2001 Kuliš, Croatia
Mineral oils	0.23	-	28.67	-	0.25
Tobacco	0.06	-	18.22	-	0.21
Alcohol	0.31	0.60	0.60	-	0.25
Beer	-	-	0.04	-	0.28
Sprits	-	-	9.92	-	-
Total	0.20	1.00	15.57	0.20⁷	0.31

After questions that related exclusively to the indicators of business operations and costs that are incurred by tax compliance came a group of questions meant to elicit responses about the problems met

⁷ For calculation of the total costs, the research of Sandford (1986-7), or rather his calculation of the total costs of taxation by excises as a percentage of totally collected excise, has been used.

by the taxpayers in the tax procedure. More than half of the respondents thought the procedure of taxation was not complex or demanding, particularly after the passage of the initial period from the introduction of the tax. It is the same with the forms that are used in the taxation procedure. At the beginning there were some unclarities, however, during the last few years since the introduction of excises they have gradually been sorted out with the TA. In general, matters related to taxation do not constitute any kind of difficulty, especially if they have accountancy software that use the data once entered for all financial and accountancy purposes, and think that they do not represent any additional cost. To the question of what is the most complex and what takes up the most time, the taxpayer liable to pay excise on tobacco products said that it was the procedure related to the control stamps, and the mineral oils excise payer alleged the degradation of the goods, spillage and breakage and the use of measuring units in the calculation of the tax that are different from the units used for the procurement and sale of the goods. The others thought the procedure complex with respect to export and the refunding of the tax paid.

As for the work and collaboration with the TA and the CA, most were on the whole satisfied, grading their work with an average grade of 3 (out of 5), while a smaller number of respondents were not satisfied with the work, thinking them not sufficiently expert, objective, courteous, and that the procedure sometimes took longer than was necessary. Apart from that they were of the opinion that the regulations changed too often, which had an effect on the efficiency of the customs and tax officers on the ground.

Proposals of respondents to improve the efficacy of taxation and hence the reduction of costs were that the customs and taxation procedures be simplified and accelerated, better collaboration with the TA and CA, clear definition of taxable products and a definition of the tax base, and a solution for the problem of acknowledging spillage and wastage on products for which tax has already been paid.

Although it is not related to the costs of taxation, those liable to excise on non-alcoholic drinks think that this tax should be abolished as being discriminatory as against the non-taxation of other food products. There were also proposals about the reduction of the tax burden (particularly to do with the excise on beer, where the burden is greater than the European average).⁸

9. Conclusions and recommendations

Most of the hypotheses put forward at the beginning of the investigation proved accurate. The costs of taxation are difficult to identify and quantify, and the methods of quantification of the amount of the costs are unreliable, and mainly based on the respondents' free estimates. Response was poorer in the postal questionnaire than in face-to-face interview, which turned out to be a much more reliable and higher quality method. A circumstance that made things more difficult was that this was the first investigation of its kind carried out in Croatia, and was hence unfamiliar to the respondents.

The costs are low, amounting from 0.2 to almost 3% of the totally paid excise, and do not essentially differ from those recorded abroad. The respondents stated that costs were greater in the early stages of the introduction of the tax, especially the running-in phase between taxpayers and tax administration, as well as in periods when there were major modifications to the regulations. The actual taxation process does not give rise to any particular difficulties, and after the initial period has become a routine matter.

⁸ In Arbutina, Kuliš and Pitarević (2003).

The respondents did point out certain difficulties in the taxation procedure and in communication with the TA and CA officers, the removal of which would make the system more effective and hence cheaper.

At the end, the assumption was confirmed that this investigation would be complex and demanding in terms of time. The costs of the research were very high, taking into account the time spent, the number of investigators and other, material, costs.

The fundamental recommendation that arises out of this investigation is that the tax system should be stable, without frequent changes, for this makes operations more difficult for both taxpayers and the tax administration. All the provisions of the law should be clear and precise so there should not be any unnecessary alternative interpretations in their implementation. In connection with this, close cooperation, on a basis of equality, between taxpayer and customs and tax officials is required so that problems noticed should be settled to their mutual advantage.

A recommendation to any investigators carrying on with this research in the future is that according to the experience of this work, the problems that occurred during this investigation should be avoided and an attempt made to improve the reliability of the results of the investigation by the use of a larger and more representative sample, and by personally administering face-to-face interviews, which in the case of excises is very possible.

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