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# NEWSLETTER

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## Some Characteristics of the “Boat Tax” in Croatia

*The introduction of any form of taxation causes many different consequences for the economy, and this is particularly true of excise taxes. Therefore establishing which market participants will actually bear the tax burden is only superficially simple. By using a specific economic model we show that an increase in the excise tax on boats in Croatia may especially hit producers in the small boat industry, and indirectly – due to the fall in production and the increase in prices – boat buyers. The increase in excise tax on boats was motivated both by intention to increase total tax revenue and by the desire to increase the tax burden on individuals with higher “ability to pay”. However, in the process the production factors in the small boat industry could suffer “collateral damage”.*

### Introduction

By increasing the special tax on boats<sup>1</sup> Croatian government wishes to increase its tax revenue, but also to show that consumers with greater spending abilities will bear an appropriate proportion of the crisis tax burden. But citizens were not particularly comforted by that gesture,

and they are still protesting about the “crisis tax” on their income.<sup>2</sup> At the same time domestic small boat producers, those who pay excise on boats, are predicting the collapse of that industry and the loss of 2500 jobs.

In this article we are trying to answer an important question: who will bear the burden of the increase in excise tax on boats? To start with we have to say something important about the nature and methodology of this analysis. We applied an economic theory to an example from real life, which is the increase in excise on boats. In this, the economic model we use was not created for the specific analysis of excise tax on boats, but to analyse the general effects of excise duties. This approach is usual in economics and is founded on the assumption that the introduction of excise tax will create certain effects regardless of the products or industry on which excise tax is imposed. Therefore, although we do not know the specific character of the production and market of small boats in Croatia and the world, we can still say something of value about the trends that result from excise tax. We cannot predict exactly what will happen with the boat industry, prices of boats and tax revenue, but we can warn

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<sup>1</sup> The special tax does not apply to all vessels, but to ships and yachts or boats for use on internal waterways used for leisure, sport or recreation.

<sup>2</sup> The public’s attention has been directed mainly these days at the “crisis tax”, also known as “solidarity tax” or “harač” (a tax charged in the Ottoman Empire), which has thus been given at least three “aliases”. The new version of the Act on Special Tax on Personal Vehicles, other Motor Vehicles, Vessels and Planes has been given an alternative title: “Luxury Tax”, which is not an appropriate title, because it suggests that it deals with some new form of tax on luxuries (actually it is a reshaping of the existing excise tax, which is even charged on cars with a sales price of less than 50,000 kuna). Moreover in Croatia we already have a *special tax on luxury products* (which is charged on watches, jewellery etc).

The Institute of Public Finance deals with economic research and analysis related to various forms of public finances such as the budget, taxation and customs duties. Its orientation is thus to the various economic, legal and institutional topics that are important for the sound long-term economic development of the Republic of Croatia. So that the public should be able to have a better insight into certain issues, the Institute of Public Finance is launching its Newsletter, in which it will from time to time publish informed and independent analysis of economic questions. The views expressed in the articles published in the Newsletter will reflect the opinions of the authors, which do not necessarily coincide with those of the Institute as institution. Full text of Newsletter is also available on Institute’s Web site: <http://www.ijf.hr/newsletter>.

of possible problems and difficulties related to achieving the goal of the increase in excise tax, which is the increase of the burden on persons with high income.

## Consumption tax

The aim of *consumption tax* on a product, as its very name suggests, should be to tax consumption by a person who uses that product. The main consumption tax in Croatia is Value Added Tax (VAT) and there are special consumption taxes or excise taxes (*trošarine*). VAT is charged on the supply of almost all goods and services, whilst excise tax is paid on certain groups of products such as fuel, coffee, tobacco, beer, cars etc. However, payers of the consumption tax are not the buyers but the producers or sellers of goods. This is because there are as a rule a great deal fewer sellers on the market than buyers, so it is easier and cheaper for Croatian government to collect tax from the smaller group.

However, if the taxpayers are the sellers, how then can we say that these are taxes on consumption, which are borne by the consumer? It is assumed that the taxpayer – the producer or the trader – can simply and easily shift the tax to the buyer. All participants in the production-trade chain shift the tax to the next link in the chain – but the final link – the consumer of the final product – cannot do so and therefore bears the full burden of the tax.

If a new consumption tax of 20% on the cost of production is introduced, the producer’s total operating costs are increased by  $P \times Q \times 20\%$  where  $P$  is the price and  $Q$  the quantity of the sold product on which excise tax has been imposed. The term consumption tax assumes the following: the increase in costs caused by paying the new tax will be resolved by the producer in a simple and painless manner – he will raise the price of his product by 20% whereby he will achieve additional revenue of  $P \times Q \times 20\%$  precisely the amount he needs to compensate for paying tax. The tax burden is thereby transferred to the buyer, who pays 20% more for each individual product.

The arguments are quite simple, and amongst the conclusions that arise the following is particularly important: if a group of citizens consumes the majority of the supplied quantity of a product X, and we want to impose an additional tax burden on that group (or increase the contribution of that group to the total tax income), a sim-

ple possibility arises: impose a special consumption tax on product X.

## Changes to the Act on Special Taxes

Precisely this is the idea behind the recent changes to the Act on Special taxes on passenger cars, other motor vehicles, vessels and aircraft<sup>3</sup>. Tax amounts are changed for the cars and motorcycles with the sales price<sup>4</sup> above 400,000 kuna. Three new tax brackets have been introduced with marginal rates of 53, 58 and 63%. So on a car with a sales price of a million kunas, excise tax is payable of as much as 492,500 kuna. However, there has been a much greater change in the taxing of boats and planes – for them the tax base was previously *boat* or *plane* and the amount of tax was calculated on the basis of their characteristics (length and existence of cabins for boats, or the number of seats in a plane), but now the base is *sales price*, as it is for cars and motor bikes, and the same tax brackets are used. So, for a boat costing one million kuna, 492,500 kuna in tax will also be paid; for the sake of comparison, previously the highest excise tax was 150,000 kuna, paid on boats with a cabin and longer than 15 meters.

The changes to this tax occurred in a fiscal package along with the introduction of the “crisis tax” on income and excise tax on mobile communications services<sup>5</sup> and the increase in VAT rate from 22% to 23%. By changing the taxes on *cars*, *boats* and *planes* the Government probably wanted to ease the negative reaction from citizens to the increases in the other three taxes. So, the increase in excise tax should lead to individuals with high incomes contributing more than before to government revenue.

But is it all really that simple? Will the higher tax on boats only bring a frown to the face of future buyers who will now have to pay a much higher price? The situation is not at all that simple and we will see why below.

## It would all be very easy if there was no domestic ship building industry...

This comment is motivated by the events after the changes to the law of excise tax, which were described in the article by Gordana Galović in *Jutarnji list*.<sup>6</sup> Most of the article is dedicated to a description of the changes to ex-

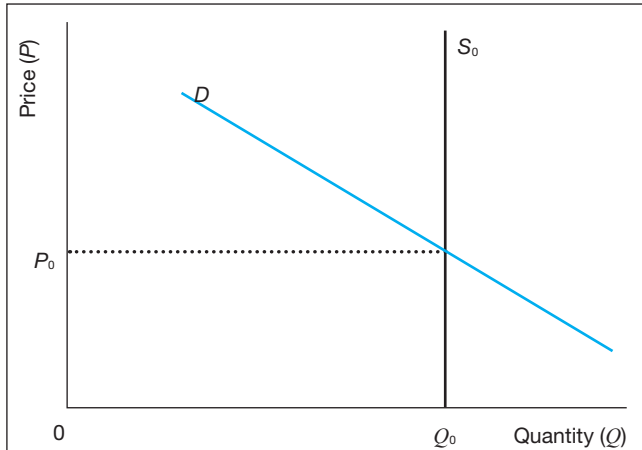
<sup>3</sup> Hereinafter: the Act (Official Gazette: 136/02, 44/03, 95/04 and 94/09).

<sup>4</sup> The sales price is the price before VAT, and on imports it is the customs value increased by the amount of customs duty (thus, the sales price does not include excise tax).

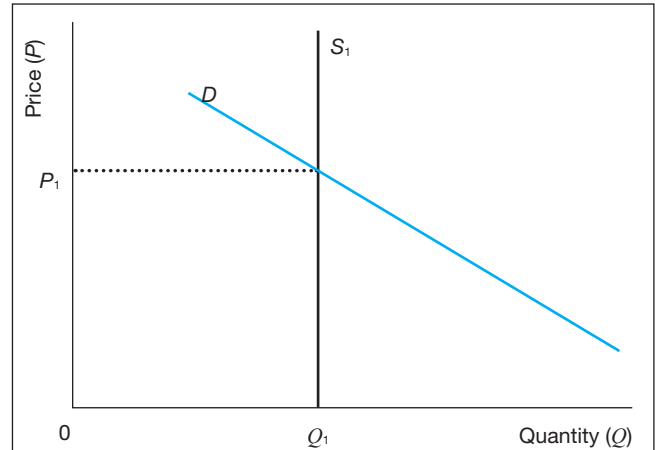
<sup>5</sup> According to the Act on Payment for Provision of Services in Mobile Electronic Communications Networks (OG 94/09).

<sup>6</sup> Galović, Gordana: “Advance payments made for 5 of the latest Ferraris, each worth half a million euros” (*Zakapareno 5 najnovijih Ferrarija, a svaki vrijedi pola milijuna eura*), *Jutarnji list*, 14/15 August 2009, with a separate article on excise tax on boats entitled “As much as 12 times larger tax on boats” (*Za brodove čak 12 puta više*). Available on the *Jutarnji list* web site: <http://www.jutarnji.hr/vijesti/clanak/art-2009,8,13,172787.jl>

Graph 1 The market of product Y at the time of the introduction of excise tax



Graph 2 The market of product Y after the change in excise tax



cise tax we have already mentioned, and the possible reactions of buyers on the luxury car market. But the accompanying article in relation to tax on boats is disturbing. “The new excise tax will destroy Croatia’s small boat builders... This is a major blow to our production because sales have already been falling drastically. With even higher prices due to excise tax, small boat industry, on which more than 2500 workers depend, will collapse”, claims Mario Križman, director of a cluster group of small boat builders, which gathers 29 of the one hundred manufacturers in that industry. Small boat builders want to talk with government representatives about the new duties and ask for exemption from taxation.

If we recall the discussion at the beginning, we have to ask ourselves the following questions: How is it possible that the injured party due to *consumption* tax are the *producers* – that is the owners of businesses and their workers? How is it that they cannot increase the prices of their boats by the amount of the excise and shift the tax forward to their “rich” customers? Is this actually an attempt to obtain special privileges from the government? There is something illogical in the whole story...

## “Logic of Economics”

Fortunately, we know where to find the answers to these uncomfortable questions: in the book *Power and Mar-*

*ket* (subtitled *Government and the Economy*) by the American economist Murray N. Rothbard, translated to Croatian two years ago by the Institute of Public Finance.<sup>7</sup> In this book Rothbard gives a thorough analysis of various forms of state intervention, and a large chapter is dedicated to taxation. The introduction of any form of tax creates a complex cycle of effects on the entire economy and a good economic foundation is necessary in order to understand them. *Power and Market* provides us with that foundation and we describe below what happens when excise tax is introduced, in order to explain the events in Croatia related to taxation on small boats.

At all times, including the moment when a tax is introduced or raised, the firms keep the price of their products at the level where the profit is maximized. The supply of the product at the moment when the tax is introduced cannot be changed, and the demand for the product does not change because the increase in excise tax does not affect the demand for goods. This is shown in graph 1: the market demand curve *D* shows how many units of product Y the buyers on the market want to buy at every possible price; it is falling because more units can be bought at lower prices. The market curve of supply *S*<sub>0</sub> is vertical because the supply of product Y is fixed at all times, with the quantity of *Q*<sub>0</sub> units.<sup>8</sup> The price the product can attain at a given moment is *P*<sub>0</sub>. “The market dictates the price” it is said, and precisely that is what is

<sup>7</sup> Rothbard, N. Murray: *Power and Market*, Institute for Humane Studies, 1970. Murray N. Rothbard (1926-1995) is one of the most important representatives of the “Austrian” economic school which was named after the country of origin of its founders, Carl Menger, Eugen von Böhm-Bawerk and Ludwig von Mises. Although founded on a marginal theory of value, it differs from other economic doctrines in its conclusions due to its different methodological approach. There is a strong emphasis in the work of the “Austrians” on economic argumentation of the harmfulness of government intervention in the economy. The book *Power and Market* is part of Rothbard’s major economics textbook on “Austrian” economics, entitled *Man, Economy, and State*.

<sup>8</sup> In mainstream economic analysis the supply curve is rising because it reflects the time aspect: businesses can increase production, under the condition of a higher price for the product to cover increasing costs. In the “Austrian” analysis “the market price is determined *only* by the interaction of already produced stock with the subjective utilities and demand schedules of consumers for that stock” (Rothbard, Murray N.: *The Consumption Tax: A Critique*, *The Review of Austrian Economics*, 7(2), 1994.)

shown in graph 1<sup>9</sup>. Graph 2 shows the situation after the introduction of excise tax, but we will return to a description of this after we describe the process which occurs as a result of the imposition of the new tax.

After the introduction of excise tax, the firm will bear the additional cost of excise tax for each product sold. Since the price cannot be raised at that moment, the firm has to reduce its other costs. Therefore, the demand for the factors of production of labour and land employed in the taxed industry is reduced. The demand for that industry’s suppliers is reduced, and as a result wages and rents paid by the suppliers also tend to fall. Therefore the factors of production endeavour to move to other branches of production, seeking greater rewards than those in the branch on which the excise tax has just been imposed. Some of them will succeed in this, especially the non-specific factors of production (e.g. accountants, managers and cleaners, and raw materials and equipment which may be used for various purposes), but the market absorbs them with a fall in returns on the entire market for that factor of production. The other factors of production, which are the specific factors of production, (for example narrowly specialized engineers, owners of the land on which the business is located<sup>10</sup>, capital equipment which cannot be used for other purposes), cannot move into other sectors and will have to accept lower wages and even unemployment. It is similar with suppliers to the taxed industry, i.e. with their factors of production and their suppliers, etc.

Whether we are talking about specific or non-specific factors, the increase in costs resulting from the excise tax imposed will lead to problems of moving and uncertainty over future employment. The higher the excise tax, the greater the problem. Some producers will not be able to continue in this “market game” where Croatian government has imposed new rules, and they will have to leave it. As a result the entire branch will shrink, and new, higher prices will be set. All factors make less income, whilst the “specific factors are hit particularly hard, and consumers suffer as the allocations of factors and the price structure are distorted in comparison with what would have satisfied their desires”, according to Rothbard.

What specifically happens to the owners of small boat yards? They simultaneously appear in several roles: (a) as the owners of the factors of production who earn wages and rents, (b) as entrepreneurs who direct the factors of production into the various branches in order to earn entrepreneurial profit (if they do not succeed in this endeavour they will experience entrepreneurial losses) and (c) as capitalists who loan businesses the monetary capital needed (external loaners also appear in this role: owners of share capital and owners of business debts, e.g. banks) and earn interest on it. We have already described what happens to the owners of factors of production. As entrepreneurs the owners will need to show their personal skill in conditions of major changes caused by the excise taxes; the more skilled will survive the blow and remain in the contest; the others will have to look for some other work. In view of the contraction of the industry, some of the capitalists, or loaners of financial capital, will leave the branch so the uniform interest rate will remain for the entire economy.<sup>11</sup> The business profit of the entire branch is reduced, and in line with the estimates of future profit, the market value of the firms also changes.

So, the first to be hit by the excise tax are not the buyers but the factors of production in the production of those goods. But that does not mean that the buyers do not lose too. After the fall in supply, the price of the product rises, so buyers have to choose cheaper products or pay more than before for the same product. This is shown in graph 2. The market supply  $Y$  falls to  $Q_1$  units, and the price increases to  $P_1$ .<sup>12</sup>

However, as Rothbard points out, this phenomenon – that buyers pay higher prices after excise tax – cannot be called *tax shifting* in the sense we mentioned at the beginning of this article. We pointed out there that tax shifting should be a simple and painless process in which the producer only raises the price by the amount of excise tax. A rise in price did occur, as we have seen, but only as a result of the difficult process in which entire companies may collapse, everyone’s income is reduced and an undesirable model of consumption and production is

<sup>9</sup> However it is necessary to mention that on markets with a relatively small number of buyers and sellers (such as the small boats market), the price may also be established in certain intervals around the price  $P_0$  and whether the price will be greater or smaller than  $P_0$  depends on the negotiating abilities of the seller and buyer.

<sup>10</sup> In this example the land is only suitable for that specific purpose – building a shipbuilding yard. We presume it is neither arable nor desirable for building houses or holiday homes, or for tourism.

<sup>11</sup> Terms such as specific and non-specific factors of production, entrepreneur, entrepreneurial profit, capitalists, interest, uniform interest rate, have a specific significance in “Austrian” economics. For more details about their meaning, see for example, Rothbard’s book *Man, Economy, and State* or passages on the web site of the Mises Institute: [www.mises.org](http://www.mises.org)

<sup>12</sup> Mainstream economic analysis of the introduction of excise tax comes to the same conclusion: production of the taxed goods is lower and the price increases, but it is believed that firms can shift part of the new tax on to consumers in the process of market adjustment itself. How large the shifted part will be depends on the elasticity of the supply and demand curves. Contrary to that, Rothbard believes that it is impossible to shift tax *forward* (from the firm to the consumer), but it is only possible to shift it *backwards* (from the firm to the factors of production).

established. Who, then, pays the price of excise tax, and are the goals attained?

### Not in the same basket with importers!

A fact which we cannot overlook is that 70-80% of domestic small boat production is sold on the domestic market. In the reverse case – if we exported the major part of what is produced – we would not be so sensitive to the excise taxes introduced in Croatia. A problem would arise for Croatian small boat builders if excise taxes were introduced in the largest importing countries of their boats. In contrast, when excise tax is imposed on products not produced in Croatia, then the effects on production are hardly noticed here. The effect of higher excise tax on cars in Croatia, of course, will not shake the world car industry and will not cause their owners and workers to protest, but there will be a certain negative effect – in proportion to the size of our market in relation to the world market. We tend to overlook the negative effects of our excise taxes on German or Czech workers, and the only thing we notice is the increase in price of cars for domestic buyers.

Let us go back to small boatyards in Croatia and analyze another important problem. Their representative presented an interesting request: not to be put in the “same basket as importers”. In other words, they will ask the government to exempt domestic producers from paying excise taxes, but they would put importers in the basket the government has put them in. However, if the government were to accept this proposal, the excise taxes only on imported small boats would force foreign competition off the market or put it in a significantly weaker position; importers would lose their jobs; this move would not please foreign producers, the governments of their countries, nor the European Commission, who takes care of maintaining competition. This selective excise tax, from which domestic producers would be exempt, would have the same effect as protective tariff – it would permit a larger income for the domestic small boat industry (roughly the opposite effects would occur to those we described in the case when excise duty is introduced for all suppliers of boats), and a much higher price for buyers. In the long-term this could lead to a fall in efficiency of domestic producers, who, after they have been protected from competition, would have less incentive to improve their work.

### A ray of hope?

There are two ways in which the negative effects of excise tax on production may be eased: one is in the hands of the producers themselves, and the other depends on the reaction of domestic small boat buyers. Boat builders may export a larger part of their production than before. Exporters are exempt from paying excise taxes in Croatia, and their products are only taxed in the importing country.

The Act allows exemption from paying excise tax even if the boat is bought by a domestic buyer, if it is used as a means of providing new services. This possibility was introduced in the amendments to the Act in 2004, but only for boats, whilst those who use cars, motorbikes and planes as factors of production do not have such favourable treatment.<sup>13</sup> So over the past five years some boats have been exempt from excise tax, and on some boats excise tax has been payable. If the structure of domestic demand were to change in comparison with before – where the number of buyers of boats who run registered businesses increases, and the number of people who buy boats for “pure pleasure” is reduced - the burden on boat builders caused by excise tax would be reduced.<sup>14</sup>

Let us mention one more possible effect of excise tax, which is the registration of boats under foreign flags. “People will buy boats and register them abroad, and our marines will begin to empty” according to Romano Pičuljan, president of the *Udruga hrvatske nautičke proizvodnje* (Association of Croatian Nautical Producers) for *Novi list*.<sup>15</sup> So it could happen that domestic buyers purchase their domestic boats abroad and register them there. This would also reduce the burden on the boatyards: the fall in production would be smaller, and no excise tax would be paid because these are exports.

### Conclusion

The protest by representatives of small Croatian boat builders against the recent increase in excise tax on boats led us to the paradoxical conclusion: the special tax on boats – increased in order to *tax the consumption* of buyers with high purchasing power – will actually only greatly endanger *production* in the small boat building industry!

<sup>13</sup> The Act (OG 94/09), Art. 4, item. 3: “Special tax is not paid on vessels – ships or small boats (yachts) or rowing boats for inland navigation which are imported or supplied for use by a registered business”.

<sup>14</sup> In this context, it is possible that some buyers will decide to run a “fictitious” business but use the boats for their own pleasure, whereby they obtain them at a lower price, and the seller does not have to pay excise tax. If there is a tax inspection, the owner can justify themselves saying they have poor turnover.

<sup>15</sup> Šuljić, Branko: Trošarine će ugasiti malu brodogradnju, (Excise Tax will kill off small boat builders) *Novi list*, 5. August 2009. Available on the web site of *Novi list*: <http://www.novolist.hr/2009/08/13/trosarine-ce-ugasiti-malu-brodog.aspx>

We found confirmation and a scientific explanation for this in the book *Power and Market* by the American economist Murray N. Rothbard. We also studied and briefly presented his economic model on the effect of introducing excise tax on the economy. On the basis of these theoretical conclusions we try to discover what the possible consequences may be of introducing excise tax for production, income, prices and consumption.

The introduction of excise tax increases the costs for the business which cannot be simply shifted onto the consumer in form of the increase in price, as is usually assumed. Excise tax reduces the income of all factors of production, and some businesses have to withdraw from the market because they cannot compensate for the new costs. After adjustment to the tax, the price of the product paid by the consumer also increases.

Who will *actually pay the tax* is not simple to define. The introduction of excise tax on goods we produce domestically punishes both domestic and foreign producers, and

consumers. If we do not produce them domestically, we punish foreign producers and domestic consumers. This is true for all excise taxes. The Croatian government can give businesses who pay excise taxes certain privileges as compensation, e.g. a monopoly position, subsidies or protective tariffs. But *we must not* accept these solutions because then “the inefficient are given the legal right to ride on the backs of the efficient” as Rothbard puts it. We could add to this the following: with privileges the efficient will in time become inefficient.

The increase in excise tax on boats was, alongside the increase in tax revenue, also motivated by the intention of increasing the tax burden on individuals with high “ability to pay”. In this analysis we have shown that in this way the factors of production in the small boat industry would suffer “collateral damage”.

How could we satisfy the “principle of equity” in taxation in a different way? You will be able to read about that in the next newsletters.