Tourism and Sustainable Development

Ecological Price Setting

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Abstract: This article aims at highlighting the elements that need to be taken into consideration when setting prices, so that they support the effort of resource saving from production, distribution and consumption activities as well as pollution prevention efforts. Communication and price support these efforts. Market mechanisms are based on price so they will not recognize the importance of these issues and will favour bidders with lower unit prices. They will not reflect the efforts that are being made for recycling or destroying waste from the production process or even the damage caused by it. Also, the article highlights the taxes that demonstrate the importance of the environment, taxes on products and activities that are destructive to the environment, which will be the basis for the reform of national systems, the effects produced and conviction of some European countries for non-compliance with the Community environmental legislation. Although the article makes reference to the need to adjust the price, which does not have a direct connection with the generation and disposal of waste, it must also be looked at in an ecological context

Keywords: sustainable development; eco-prices; environmental taxes; green prices; carbon offset.

JEL Classification: Q52; Q53

1. Introduction

The issues related to the consumption of resources and reduction of pollution generated nearly two decades ago in the economic science of a new concept "sustainable development", meaning the relative and absolute saving of resources due to their scarcity. A sustainable society meets its needs without diminishing the prospects for the next generation. We can talk about the scarcity of resources if we start from their availability or lack of availability. Their consumption will lead to depletion of the limited stocks available in a shorter or longer period taking into account the conditions of their intensive or reasonable use.

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The concern of harmonising the economic activity with the environment demands the conduct of economic activities which aim at the interests of consumers and the interests of firms, their setting being made through the market, "regardless of whether trade is done through barter or cash" (Toffler, 1983) the main regulatory element being the price. The price of the goods produced will be affected when we take into account the ecosystems.

2. Price – An Element of Resource Recovery or Pollution Prevention?

"Green" prices aim at the integration of environmental protection spendings in the structure of unitary costs, so that prices reflect all costs associated with the processing of the resources into consumer products. (Fuller, 1999) When setting the price we must take into consideration, at the same time, the demands of different situations linked to the resource saving, by influencing and measuring these situations, that is the reflection of all costs in the price, including those related to environmental protection (the bigger the supplemetary costs (monetary or non-monetary) the more sensitive the customers become to the price of a product). (Tureac, 2006)

In order to include green prices in the product price, it is necessary to identify, to take into account and to keep a distinct evidence of all eco-costs, the ideal solution being the selling of all products for prices that have been added complete costs; consumers being willing to purchase them, they will assume a part of the ecological charge (recycled paper has 5-20% higher costs which will be reduced as a consequence of the increase of the requested quantity and of the implementation of new technology).

The significant difference in price for a certain product can even lead to the alteration of the decision to buy, taking into account the smaller incomes of some social categories. (Samuil, 2007)

The tendency to maximize profit still stimulates consumption, and it will continue to do so in the following decades, by increasing the manufactured quantity. (Dogaru, 2006) However, this tendency will support the resource consumption, their waste during the production process, including luxury goods or regrettable goods (weapons and similar products) production.

The institutional intervention in the economy will sanction the non-ecological products from the point of view of the eco-costs since these products will tend to have total costs, that is high prices. They will lose ground to those offering the same degree of usability and the same quality, but lower prices because they are manufactured in conditions of responsibility to the environment. (Bîrcă, July 31 - August 5, 2007) (Bîrcă, 22-24 November 2007)

The situation is reflected in the principle "the polluter pays" which is to be found even in the Romanian legislation or in the "Community ecological label" (it is a voluntary procedure which allows consumers to easily identify green products officially approved in the European Union (EU). The ecological label allows producers to show and communicate to their clients that their products meet the conditions of environment protection. The environment criteria are made so that they are reflected in the products and daily services for consumers (except food, drink and medicine). Until now the EU ecological label has been assigned to 28 groups of products. Ecological criteria are the result of some scientifical research and of some extended talks inside the European Union Committee for ecological labeling).

In a broader sense, the principle "the polluter pays" aims at charging the polluter with the social cost of the pollution created. This leads to the setting of a responsibility mechanism for the ecological damage which can cover all the negative effects of pollution, not only concerning the goods and people, but also the environment itself.

In economical terms, this principle might translate into the internalization of the external spendings (the theory of externalizations). In a limited sense given by the Organization for Economical Cooperation and Development (O.C.D.E.), this principle requires that the polluter assumes the spendings for the fight against pollution.

Applying this principle should take into account a real depolluting which would allow communities and each individual to live in an adequate environment. (Eg the reasons for implementing these public policies in the vehicle sector have the purpose to reduce the impact on the environment starting from the present problems of the vehicle market situated in the maturity phase of the lifecycle until the consumer's preoccupation for the environment. (Sasu & Ariton (Bălău), 2011)

For the polluter to face such depolluting, one might take into account a series of measures which, together, could be efficient. A system of pollution taxes, the forcing of restrictive directions (against pollution) and some diverse financial mechanisms: compensations, tax remission etc. E.g. discounts due to the use of ecological fuels, tax remissions for vehicles using alternative energy sources, or intermodal transportation.

The finite product will generate eco-costs produced by the addition of ecological attributes, by changing the manufacturing of the product, the energy consumption, by altering the materials and raw materials used (Eg. the use of package made from recyclable materials).

The cost of ecological campaigns can also be added to the price, campaigns which will have important meanings concerning the image of the company (Eg. taking

into account the responsibilities to the environment, Canon[1] has been the pioneer of the ink cartridge collecting campaigns since 1990 when it started collecting and recycling them. The company donated 50 cents for each recovered cartridge during the Clean Earth for World Wild Found or Nature Conservacy campaign. All these recycling programs reduced the new resources used by 110.000 tones and the carbon bioxide (CO2) emissions by 310.000 tones).

Production processes, production capacity, production management, human resources management, transportation systems can be modified – all which will influence the total costs by the eco-costs component (Eg. In May 2004 the International Finance Corporation (IFC), the private sector arm of the World Bank, approved a corporate loan of up to USD 100 million to LNM Group for use in Kazakhstan (ArcelorMittal Temirtau) and Romania (Galati). According to the IFC the project's main purposes were to:

- improve the environmental performance of the plants;
- create and maintain an environmental and worker health and safety system on a corporate level, so that it can help ensure that all its current and future operations will meet World Bank Group and/or European Union standards; and
- rehabilitate, de-bottleneck and provide working capital and cash support to its subsidiaries. (Turtureanu, 2010)

3. Intermodal Transportation - A Measure to Reduce Emissions

Transport policy in EU (Fistung, 2007) is based on the present modal division (road 44%, railroad 8%, river 4%) which is considered to be alarming especially since it hides a tendency to increase road traffic by 50% until 2010, and because of the lack of directing the goods flow to the other transportation means. (as a result of the analysis and the protocol signed in Kyoto (10.12.1997) EU agreed to reduce its CO2 emissions by 8% until 2012).

In order to do this, EU stimulates intermodal transport development, especially the river and railroad ones (funds given to România in order to modernize the great speed corridors Constanţa – Bucureşti – Braşov – Deva – Arad - Curtici and Constanţa – Bucureşti- Braşov – Cluj Napoca - Episcopia Bihor). The advantages of this way of transportion compared to other means of transportation can be vizualised in figure no. 1.

[1] htpp:// www.canon com/environement/history/2000 html

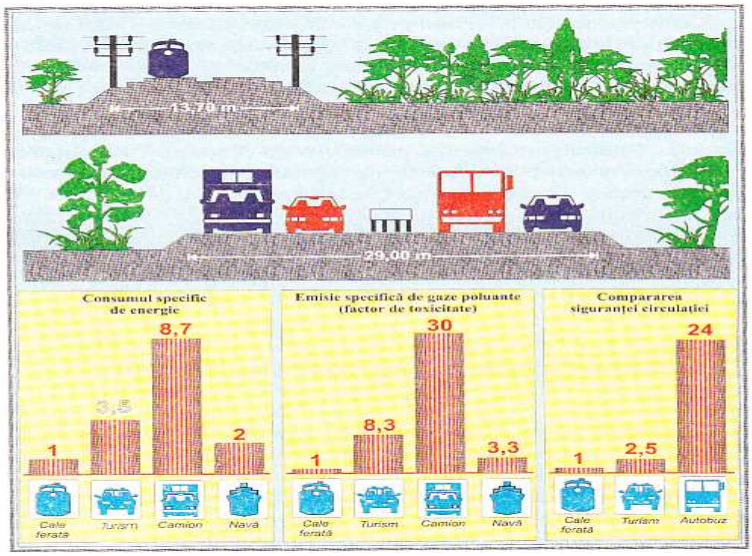

Figure 1. Advantages of the railroad transportation compared to other means of transportation

Source: (Simuț, 2001, p. 36)

In the case of airlines which are big polluters, a series of actions have been implemented, these actions aiming at reducing emissions even in the case of traffic increase.

The phrase used by the company "**We think green to keep the sky blue!**" aims to demonstrate that air traffic growth is possible within the limits imposed by the environmental protection measures, that is all emissions produced by Tarom flights should be counterbalanced by various measures including the offset[1] ones. (Păuna, 2011) To reach these goals, Tarom implements a responsible policy on burnt fuel efficiency by trying to meet the requirements for managing carbon emissions under the EU Emissions Trading Scheme, EU ETS (in aviation, a tonne less of used fuel leads to a reduction in carbon dioxide emissions equivalent to 3.5 tonnes; a reduction in the duration of a flight by 29 minutes can lead, in only one year, to savings of over 25 million kg of fuel and to the decrease by more than 81 million kg of carbon dioxide emissions).

[1] Offset operations. Carbon offset is a reduction in carbon dioxide gas emissions or greenhouse gas emissions in order to counterbalance other emissions. Compensation is usually achieved through financial support, through projects that reduce emissions of greenhouse gases in the short or long term. The most popular type for this type of project is renewable energy such as wind farms, biomass energy, hydroelectric dams or other projects including energy efficiency, destruction of industrial pollutants and agricultural products, the destruction of landfills that emit methane.

The same phenomenon can be met in the case of public transportation. All over the EU the efforts of promoting public transportation are emphasized. The implementation of ABC[1] Dutch system in the Union has the purpose of reducing individual traffic and of increasing public traffic, which aims at the increase of the population density and the improvement of city life (Muscalu 2007). In the ABC system the areas are distributed according to their accessibility, A areas are very accessible to local and regional public transportation, vehicle movement must not exceed 10-20% of the total number of movements, B areas are accessible both to local and regional public transportation and to other vehicles, and the movements must not exceed 35% of the total, and C areas are accessible to vehicles. The decrease of vehicle traffic will lead to the diminishing of environment protection problems, of transportation costs, of the investment for auto infrastructure and an improvement of urban occupation.

The operations of fixing the problems caused by accidents, accidental discharging and eliminating pollutant, dangerous, toxic or radioactive substances generate significant spendings for depolluting operations, the necessary equipments, administrative expenditures, at which we can add insurance costs, trial fees, fines. (E.g. Exxon Valdez case in 1989, an oil ship of Exxon Valdez American company discharged in "Prince William" narrows in Alaska – an old and rich fishing spot – 37.000 tones of oil, about 256.000 barrels or the equivalent of 125 olympic swimming pools. 2.5 billion dollars were spent for depolluting only, and 286,8 million dollars represented damages for the fishermen in Alaska)

4. Environment Taxes – A Goal for the Change of Trader's Behaviour

For some EU member states environment taxes amount to 5-10% from the total revenues from taxes. In fact, according to Eurostat data, most of these taxes are linked to the energy sector (76% of the total revenues from environment taxes), to transportation (21% of the total revenues from environment taxes), thus remaining a small percent of the pure taxes obtained from the environment's pollution. So, one can notice that in the entire Eu Denmark and the Netherlands hold the first position with almost and even exceeding 10%. Compared to the same taxes in 2004 and 2005, the situation in 2008 is presented in the next chart:

[1] Master Plan of Urban transportation - Bucharest, Sibiu and Ploiesti. Final Report Ploiesti Europe Aid/123579/D/SER/RO CFCU – Central Unit of Finance and Contracts November 2007.

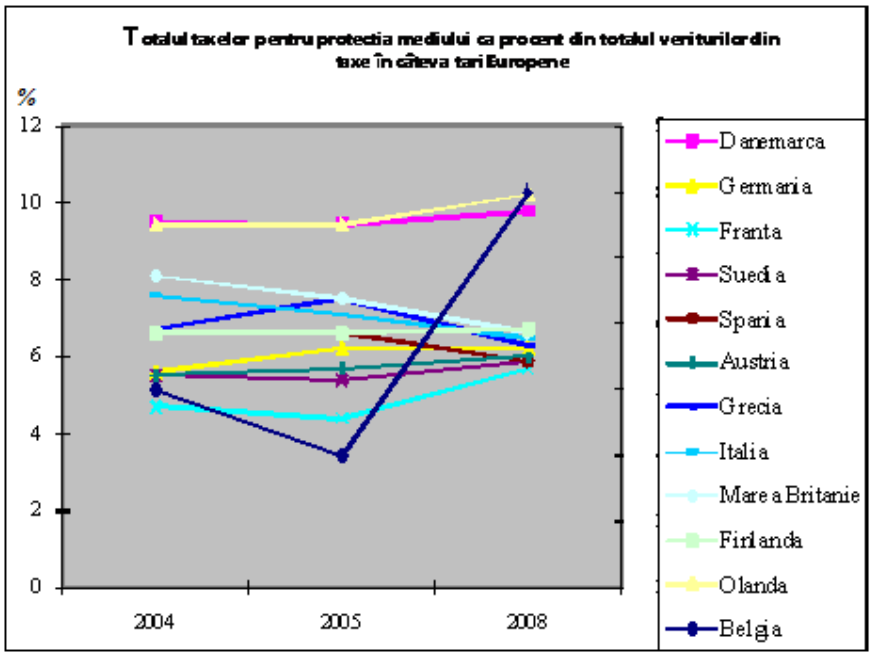

Chart 1. The total taxes for environment protection as percent from the total revenues from taxes in some countries in Europe

Source: Eurostat 2010

At EU level we can talk about taxes that prove the significance of environment. Many countries have imposed taxes on products and activities that damage the environment, at the same time reducing the contributions for social protection and income taxes, the idea being that of shifting taxes towards the activities that have a negative impact on the environment's quality and to change the behaviour of traders, public and each individual.

This shift has happened so far at a lower level, about 3% of the taxes gathered at world level. Prices will eventually have to reflect costs producing the desired chages in the individuals' behaviour. (Brown, Larsen, & Roberts, 2003)

Taxes for the environment reform (Environmental tax reform (ETR)) will represent the basis of reforming the national systems. In order to exemplify, we show a series of ecological taxes, the effects they produced and the conviction of European countries for not obeying the Community environment legislation.

Denmark

Denmark was one of the first countries in Europe introducing a CO_2 tax on top of already existing energy taxes levied on oil products, coal and electricity consumption but not on petrol. The Danish ETR reform process can be distinguished between three phases.[1]

- 1993 Tax Reform/Phase 1: period 1994 – 1998 (The first ETR implemented in Denmark concerned mainly households. The political objective underlying this tax reform was to bring down the marginal tax rates on personal income.)

- The 1995 Tax Reform/Phase 2: period 1996 – 2000 (The business sector was not affected by the 1993 Tax Reform and revenues were therefore recycled back to households. However, the government already announced at that time that new environmental taxes would be introduced targeting industry)

- The 1998 Tax Reform/Phase 3: period 1999 – 2002 (The 1998 Tax Reform affected again mainly the household sector. (Brown, Larsen, & Roberts, 2003) The reduction in personal income taxes mainly affected lower and medium income owners and it also included compensation for pensioners. As mentioned above the main revenue raising policy was to increase solely energy tax rates and not CO_2 tax rates. (Final Report to the European Commission). This is insofar of significance because the business sector is not too affected when energy taxes are being increased because of special tax provisions. (Jensen, 2001)

All these tax shifting programmes have been designed to be revenue neutral although the last reform process should only guarantee revenue neutrality over a time period which itself was not clearly determined.

Germany

ETR – were implemented between 1999 – 2003 and later they were stopped

- Environment objectives: Environment protection and especially reducing the greenhouse gas emissions

- Economical objectives: decreasing employees' contributions to the retirement funds and increasing taxes for transportation, for methane gas, and introducing taxes for electricity.[2]

[1] Competitiveness Effects of Environmental Tax Reform, Final Report to the European Commission DG Research, DG Taxation and Custom Union (2007), contract number SCS8-CT-2004-501993/ 2004.
[2] European Environment Agency, 2005.

1999- taxes for household heating fuels raise

2000- taxes for vehicle fuels and electricity raise

2006- European Court of Justice convicted Germany for not obeying the Community environment legislation.

There is a decrease in the sales of vehicle fuel.

The United Kingdom

ETR in the UK were introduced since 1996 in 3 phases, 1996, 2001 şi 2002.

Environment objectives

- Complex sorting technologies (Recyclers started using complex technologies (with infrared beams) to sort package waste in hypermarkets. These scan and sort plastic and aluminium.)

Making a comparison, we can conclude that:

➢ In the UK ETR have increased through the three taxes, that meant 2,7 billion euro in 2008, that is 0.15% of GDP (Gross Domestic Product) and 2,1% of the social contributions;
➢ In Germany ETR represents about 18 billion euro, which in 2008 was 0,8% of GDP and 5% of the social contributions

At European level ETR, as GDP percent, can be seen in the next chart:

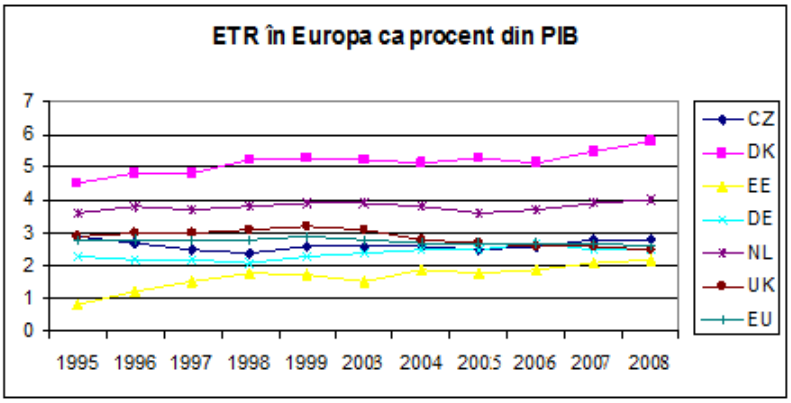

Chart 2. Taxes for the environment reform in some countries in Europe, as a percent of GDP, between 1995 - 2008

Source: Eurostat 2007 and 2010

Greece

In 2006 it had to pay daily fines of 20.000 euro for illegal landfills in Crete.

Austria

Waste is "intercepted" on its way to the landfill by a network of specialized firms which fix tens of thousand of articles, especially appliances and clothes. These are later sold at discounted prices.

Countries that joined the EU in 2004 had in 2005 a very low rate of package recycling, except for Czech Republic that managed to recycle 15%. According to Eurostat, Cyprus and Lithuania recycled 0% of the produced waste and Latvia, Malta, Hungary and Poland –1% each.

Romania

Setting a legislative system in this field has proven extremely difficult for the political powers governing Romania after December 1989. Both the complexity and the dynamics of this field make it extremely hard to regulate through organizing and functioning regulatory documents. As well, aiming at an important budgetary source, the legislative system of taxes must be well-structured according to well-defined criteria obeying the European provisions.

The revenues of the Fund for the environment are made up of:

a) a 3% contribution from the selling of ferrous and non-ferrous waste made by those detaining this kind of waste, natural or legal person;

b) taxes for pollutant emissions in the air taken form the traders;

c) taxes from traders that use new lands for dumping waste that can be valorized;

d) a tax of 1 leu (RON)/kilo of the weight of the packages introduced on the national market by packed goods and package producers and importers;

e) a contribution of 2% of the value of the substances considered dangerous for the environment, sold by producers and importers, except those used to make medicine;

f) in the case of selling uncut wood, the contribution to the Fund for the environment is established by applying 3% to its selling value. The amount is taken from the buyer along with the value of he wood;

g) in the case of exploiting uncut wood by the administrator or the owner of the forest on their own or through an intermediary, the contribution to the Fund for the environment is established by applying 3% to the value of the wood types obtained;

h) the contribution for wood processing is established by applying 3% to the selling value of the obtained products and it is paid by the trader that processed the wood;

i) a tax of 1 leu (RON)/kilo of tire, taken from the producers and importers that introduce on the market new and/or used tires intended to be used again;

j) a contribution of 3% of the amount paid yearly for managing hunting funds, paid by the administrators of the hunting funds;

The local projects of using package waste are few and not very important and the obligations for the environment we have as a Eu country concerning packages and package waste have been transposed into the national legislation by the Government Decision 621/2005. According to this decision by the end of 2008 we had to recycle minimum 60% of the paper waste and minimum 50% of the metallic waste.

Targets raise a lot until December 31st 2013 when România must recycle at least 55% of the total weight of materials contained in the package waste.

The Fund for the environment collected 180.108.351 lei in 2007 which represented 120,07 % of the predicted revenue value. The Fund for the environment financed projects for educating the public and for managing wastes, and also "Rabla" program (to call in old cars).

The collecting targets Romania has agreed to will be difficult to reach in the future since there is not an efficient package waste collecting system yet. Now all the collecting systems are based on those taking PETs out of garbage cans and landfills in order to get 0,4-0,6 lei per kilo.About 70-75% of the plastic is collected by buying it back from people and from the sanitation companies.

The main reason for introducing environment taxes in Romania is of financial-budgetary nature. These are the reasons for the introduction of this measure:

1. The Ministry of Labour will have to offer, between 2007-2018, a total co-financing of about 15 billion euro in order to attract European funds. That means a necessary of supplementary funds of over 1 billion euro/year (about 1% of Romania's present GDP). The Fund for the environment, currently available to the Ministry of the Environment, can barely attract 1 million euro/year, that is the thousandth part of the necessary amount (there are also difficulties collecting even this small amount).

2. Currently, Romania has budgetary revenues from environment taxes of under 0,1% of GDP, while central and east-European countries have 3,4% of GDP in Slovenia, 2,7% of GDP in the Czech Republic or Hungary, 2,5% of GDP in Latvia, 2,2% of GDP in Lithuania etc. Moreover, the excises and royalties established until now and which could have had an environment component (special tax for

vehicles, mining royalty, oil royalty) do not have it and, as such, those revenues are already given to other ministries.

3. Budgetary spendings for environment protection, about 0,2% of GDP, are among the smallest in Europe (Hungary 0,66% of GDP, Poland 0,45% of GDP etc.).

4. Romania's consolidated budget itself urgently needs to increase its revenues, from 31−32% of GDP, to 34−35% of GDP.

5. Paradoxically, the ecological reasons themselves play a less important part in explaining the necessity of increasing environment taxes. Due to the dramatic decrease of industrial activity after 1990, Romania easily meets the targets set by the Kyoto protocol to reduce by 8% greenhouse gas emissions until 2008 − 2012 (in Romania this reduction is already one of 46%). However, a clean environment is a public good whose inner value can not be underestimated.

6. On the contrary, there is an argument for raising environment taxes such as energy conservation. Despite the reduction by one third of the energetic intensity of economy between 1993 and 2008, Romania keeps having one of the largest oil consumption per production unit. Thus, the intensity rate of energy in Romania is 1226,95 kilos equivalent oil /1000 euro, compared to the Czech Republic (851,83), Hungary (534,05) and Poland (596,59).

All of the above lead to the conclusion that it is necessary to introduce environment taxes (others than the moderate ones that currently fuel the Fund for the Environment) of at least 1 billion euro/year.

A comparative analysis with central and east European countries shows that, without exception, about 85−90% of the environment taxes are connected to the fuel (gas and Diesel fuel). These are the most important budgetary source of environment taxes. Other fields which could pay taxes (air pollution, water pollution, household waste) do not bring, in any of these countries, more than 10−15% of the total revenues related to the environment.

5. Conclusion

Although the underlying reasons for implementing ETRs in EU member states are alike, the design of these tax shifting programmes differ. Design issues vary depending on the affected economic sectors as well as adopted recycling mechanism. However, the various reform processes have in common addressing multiple political objectives leading to an improvement in environment (an environmental benefit) and support for employment (an economic/employment benefit). Problems and discrepancies emerge when analysing the effects of ETRs in more details as such assessments crucially depend on the benchmark.[1]

Are there green prices higher than the conventional products? Basically no (Eg.plastic bags cost more than the paper ones), this seems to be the answer for the following years. Sooner or later, the firms will have to act taking into account and assessing each eco-costs component so that they can act to prevent pollution and to save resources.

Taxes for the environment reform will be the basis of reforming the national systems, these being the most important source of budgetary taxes.

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