Enviromental tax reform: experiences in Europe and possibilities in Hungary

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Summary findings, conclusions, recommendations

Due to aggravating environmental problems and the continued high rate of unemployment, the introduction of environmental tax reform has become a pressing issue. Adjustments in existing taxes are expected to have a positive impact on the environment and on employment figures. Several European countries have put the concept into practice. Hungary needs to step up as well and take part in the prevention of global environmental problems and slow down the depletion of natural resources.

Reasons for environmental tax reform

Over the past decades, several European countries have reconsidered their attitude to environmental problems and their social aspects, and transformed their systems accordingly. Environment-conscious thinking is so prevalent that governments hope to expand the positive effects over all segments of society. Previously, the emphasis was on certain elements of subsidisation, which proved to be detrimental, as the beneficiaries often became insensitive to the market *(Takács – Takácsné György, 1999)*. The resulting wasteful use of resources is contrary to the social expectation that economic activities should enhance sustainable development and especially its economic and social aspects.

As for the general public, some measures require acceptance (e.g. multi-lateral agreements on cutting emissions), others call for active cooperation and individual incentive (e.g. switching to ecological production). However, the efficiency of the former is questionable because of the reluctance of certain countries to comply, whereas the success of the latter depends on the reactions and the liquidity of the market *(Takács, 2007)*. Taxes linked to environmental incentives are more common, and Hungary has to take up the challenge soon.

At present, the economic value of goods is based on assets and labour, considered renewable resources; the system fails to levy adequate taxes on the depletion of non-renewable resources and public goods.

Environmental tax reforms are budget neutral: new taxes are only levied with the precondition that at the same time, other taxes are reduced to the same extent. Ecological tax reform comes in different shapes and sizes due to economic and social differences, but it always comprises the transformation of the existing system of taxation, the introduction of new forms of taxation, and the withdrawal of exemptions or subsidies that foster environmentally unfriendly practices.

Lots of emphasis has been put on the predicted double benefit of ecological tax reform. First of all, the environment is expected to improve; secondly, extra costs caused by new taxes are compensated for by cuts in other forms of taxation, resul-

ting in positive impact on employment, GDP, and efficiency *(Pataki et al., 2003)*.

As Hungary has comparatively high taxes on labour, and the costs of energy are relatively low, environmental tax reform seems to be a solution; however, several special issues related to the country's social and economic conditions have to be considered *(Kiss, 2002)*.

Accomplished and planned tax reforms

Most of the Northern and Western European countries have undertaken a major ecological tax reform. Generally, tax rates are low and favourable regarding energy intensity. Most taxes are levied on energy consumption. Budget neutrality only applies to the national economy as a whole, as sectors are affected differently depending on their labour intensity and energy intensity.

The more developed environmental policies are in general, the more likely the introduction of environmental tax reforms. Its success depends on a key question: how to win over the general population and the companies if heavy taxes are levied on all forms of energy.

Table 1

Accomplished tax reforms

Country	Effects of tax reform	Affected sectors	Measures	Use of revenues from green taxes
Sweden	- lower income for households - moderately positive for environment	- households, processing industry, service sector 1991-2004	• Environmental taxes on: - CO_2 - SO_2 - NO - electricity - diesel oil - insecticides • Exemption: - no excise tax on bio fuel - no CO_2 and electricity tax on consumption with no CO_2 emission	- decrease in income tax
Denmark	no negative effects on incomes	households 1994-1998	• extension of capital tax • introduction and gradual increase of environmental tax on: - fuel - carbon - electricity - drinking water - sewage - plastic bags - trash - light duty trucks • Compensation for households with low income	- decrease in income tax
	positive effects on employment, modernisation	industry and commerce 1996-2000	• tax on CO_2 • exemption for energy intensive users	• decrease in social security taxes • compensation for pensioners • subsidy for energy-saving investments
	positive effect in available income	households 1998-2002	• increase in energy tax • increase in real estate tax	decrease in income tax

Country	Effects of tax reform	Affected sectors	Measures	Use of revenues from green taxes
Germany	• increase in number of jobs and legal employment • decrease in CO_2 emission, fuel consumption, volume of overland transport • increase in use of mass transit • positive effect on construction, consumer goods and service sector • negative effect on energy sector, raw material producers, chemical industry	households, transportation, services 1999-2004	• Increase in the extent of environmental taxes on - fuels - electricity - natural gas • Exemptions: ~ partial: processing, construction, electricity, agriculture, mining sectors ~ total: combined power plants	• decrease in retirement security fund tax • development of renewable resources
Netherlands	no redistribution between sectors, effects due to changes in prices	households, transportation, small enterprises 1996-2001	carbon-regulating energy tax on: - fuels - electricity	decrease in company tax, income tax, social security tax
		2002	extension of environmental taxes on: - pesticides - surface mining - fireworks	
England	positive effect on the environment	industry, business, public sector 1997-2002.	• environmental taxes on: ~ landfills ~ aggregates levy ~ climate change tax on: - carbon - natural gas - electricity - light petrol gases • Exemptions: - fuels not used for generating energy - power plants - double use (e.g. steel production) - combined power plants - central heating - partial: for electricity - partial: for energy-intensive users - Northern Ireland: natural gas - orchards and gardens - imported energy • agreements with energy-intensive user groups	• decrease in social security taxes • subsidies for investments and modernisation
Switzerland			Environmental taxes on : - volatile organic compounds - light gas fuels with sulphur content over 0.1%	decrease in health insurance tax

Source: own construction

As an increase in environment-related taxes reduces the competitiveness of certain energy-intensive sectors, reforms primarily affect households (except in England, Denmark, Holland). Positive effects cannot be questioned; however, it is difficult to quantify the achievements. Calculations prove that limited reform and low tax rates mean limited success for employment (exception: Germany). Decreased

competitiveness can be boosted by cutting general taxes or social security taxes, or by subsidising technology-related investments *(Kiss, 2006)*.

Table 2

Goals and start of tax reforms

Country	Start of tax reform	Measures	Use of revenues
Switzerland	2004	- introduction of CO_2 tax - tax on non-renewable energy sources	decrease in indirect taxes and social security tax
Finland	1990 onwards	increase in taxes on energy use and communal trash	decrease in income tax
Norway	1990	• setting up the Environmental Tax Commission • predictions: - positive effect in macro-economic figures and environmental indicators	
Austria	1996	• Environmental tax on natural gas and electricity • predictions: negative effect on energy-intensive sectors, positive effect on technology-intensive and labour-intensive sectors	improve the balance of the budget
Belgium	1993	• increase in fuel tax • extend tax to communal trash	decrease in social security tax
France	the 1999 tax reform draft was rejected by the Constitutional Council	• taxes on - polluting activities (TGAP) - water pollution - engine fuels • introduction of new energy tax in the industrial sector	decrease in social security tax
Italy	not for households, transportation depending on EU negotiations in industrial sector 1998-2003	tax on fuels	decrease in social security tax, compensation schemes, environmental programs
Spain	2002	increase in tax on engine fuel	health care, environment protection

Source: own construction

Neccesary steps in Hungary

In Hungary, the most comprehensive theoretical and practical research on environmental tax reform has been conducted by Clean Air Action Group *(Levegő Munkacsoport)* and by the Institute of Environmental Sciences, Corvinus University. Since 1992, they have drawn up a draft green budget annually.

However, several steps need to be taken before a comprehensive reform. The budget deficit has decisive effect on sustainable development. The most important decision to be made is the elimination of direct and indirect subsidisation that distorts competition and keeps the price of products and services well below their real costs, despite the harm done to the envi-

ronment. The only exception should be the production of public goods and services.

At the moment, the market prices of raw materials and resources do not reflect their limited availability (e.g. taxes on mining and the use of agricultural land), and provide unjustified advantage to their users. When the consequences of polluting practices are suffered by outsiders, the polluter itself gets indirectly subsidised; this distortion could be rectified if external effects were shifted back onto the polluters (e.g. tolls for overland transportation of goods).

In fact, the budget deficit expressed in raw numbers compares favourably to the intangible deficit we have suffered in terms of environmental degradation, the depletion of resources, and the wasteful use of human resources. Prior to drafting the budget and introducing taxes, thorough impact studies should be conducted. It is also essential to change the public morale regarding the attitude to public goods and responsibilities.

The idea of green GDP should be elaborated on, considering the depletion of natural resources, harm done to the environment, and social impact as well. Traditional GDP figures only measure the output, not the process itself; in fact, environmental disasters and pollution can easily lead to increased GDP.

State subsidies should only be provided for the production and maintenance of public goods and services, whereas other sectors should be floating free on the market. It is therefore essential to define public goods effectively.

In order to change the population's attitude and mindset and adapt to the requirements of sustainable development, information and education are essential. Non-government organisations provide the major form of checks and balances in this process. At the same time, the state sector has to increase its efficiency and cut down on corruption *(Lukács –Pavics, 2006).*

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