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**“THE USE OF ECONOMIC INSTRUMENTS IN TRANSITIONAL CIRCUMSTANCES
AS A TOOL FOR SUSTAINABLE ENVIRONMENTAL POLICY:
CASE STUDY OF MACEDONIAN PATH TO MEET GLOBALIZATION CHALLENGES”**

ABSTRACT

The demand for harmonization of domestic policies across countries is seen as a precondition for globalization. Does globalization conflict with environmental protection? The relationship between two of them is too complex. From the viewpoint of its protection, the environment must be seen as a whole. In the same time, the utility function based on income and pollution, is not identical and homothetic across different countries. It appears that the diversity in environmental protection is legitimate.

In order to provide a sustainable environmental policy in transitional circumstances, the R. of Macedonia needs a balance between the goals of social development, economic progress and environmental protection. So far, because of the institutional development gap, only few economic instruments have been implemented in environmental protection in Macedonia. Consequently, the environmental policy including economic instruments should be considered with a view to balance the environmental achievements with its social and economic implications.

Key words: economic instruments, environmental protection, sustainability, globalization.

1. Introduction

The environmental pollution has become very serious worldwide problem for the last 20-30 years. Its relevance has spread far beyond the frontiers of the highly developed countries. Nowadays, there is not a single country that is not faced with the dilemma related to the harmonisation of the economic development process and the environmental protection. In the light of the previous, it is well understood the fact that the research interest for these problems has recently been gaining in its intensity. A number of different theoretical approaches are trying to find out an appropriate solution to the problem of environmental pollution especially from the point of view of developing countries. Of course, the tectonic changes that have been happening in recent years all around the world (especially in transition countries) have created an additional challenge regarding to the study of environmental dimension of the process of economic development.

Taking in consideration these facts, this paper is interested in investigation of the possibilities for an adequate environmental protection in correlation with the globalization and competitiveness of a single country. Why is it necessary to connect the problem of appropriate environmental standards with these issues? During the last few years, we have been witnesses of

¹ Note: the author is the first-time presenter.

growing demand for harmonisation of domestic policies across trading countries as a necessary precondition for globalization and free trade. Namely, from different points of view it comes the contention that globalization is possible only as a fair trade or level playing fields. This so-called conflict can be very easily recognised in the field of environmental standards. Different countries possess different systems of standards concerning the environmental protection and from this point of view the advocates of this demand for harmonisation argue that these differences represent an obstacle for globalization and free trade among countries.

Is the previous true? The analysis of these issues applied in this paper is more normative in the sense that it tries to offer some policy advises in order to overcome the confusions concerning relations between the globalization, competitiveness, and environmental protection in the case of the Republic of Macedonia. From the point of view of its protection, the environment must be seen as a whole. But, in the same time, it is differently valued across countries. In regard to the utility function based on the income and pollution, it can be noticed that it is not identical and homothetic across different countries as a result of the differences in their endowments and technology. Consequently, it appears that the diversity in approaches to environmental protection from country to country is quite legitimate.

The global Pareto optimal solution is possible to be reached with free trade between countries, when in the same time each of the countries possesses optimal pollution taxes within its own borders. Consequently, the optimal pollution taxes do not have to be equalized across the countries and diversity in these tax rates are both natural and appropriate, and also “legitimate”.

Finally, what can be derived from the previous regarding the Macedonia’s process of EU approaching? It seems finding an answer to this question, represent very exciting task.

2. Current economic situation in Macedonia

At independence in late 1991, the Republic of Macedonia was one of the least developed republics in the framework of Yugoslav federation. The break-up of the federation, the international sanctions against Yugoslavia (Serbia and Montenegro), and the disputes on the name of the country together with the economic blockades from the Greece, had disastrous effects on the country’s economy.

The start of the transition process was marked by the sharp decline of the industrial production between 1990 and 1995. Consequently, GDP decreased as well (decline of 30% between 1989 and 1995). Similar kinds of negative trends also applied to all other economic indicators. For instance, registered unemployment increased from 24.5% in 1991 to 36.6% in 1995. Inflation grew to almost 2000% at year level (in 1992).

The transition recession bottomed out in 1995. Fortunately, that year the Central Bank succeeded to put inflation under control. The next year (1996) GDP started growing. Even during the Kosovo conflict (1999), GDP continued to grow. However, in 2001, as a consequence of the internal conflict, it shrank (by more than 4%). The same trend applies to the industrial production (it fell by 2.6% in 1999, recovered in 2000, but fell again by 3.1% in 2001). For the last two-three years, GDP growth rates have been positive (2.8% in 2003, 4.1% in 2004, 4.1% in 2005, and 4.0% in 2006), but there are some problems with the industrial production. Namely, after the decline of –0.8% in 2002, it registered a growth of 6.6% in 2003, and again a decline of –2.1% in 2004². Due to some methodological confusions and misunderstandings in recording and researching the industrial production, it is difficult to say what really happened with this sector. There is no doubt about the decline of the industrial production, but no one can be precise what the reasons are for this decline, and how big is the fall of this production.

² Source: Ministry of Finance of the R. of Macedonia, *Bulletin*, March-April, 2005, Skopje, p. 8-9.

One of the biggest problems for Macedonia for the time being is unemployment. Here is a problem of registering and recording the actual unemployment. Still, it remains a fact that the rate of unemployment is very high (probably the highest in Europe). For the last few years rates have been above 35-36%. According to an IMF estimate, Macedonia started the millennium with a rate of unemployment of more than 32%, despite the fact that only 53% of working age population was in the labour force. Last year (2006), the rate of unemployment grew additionally, and it recorded 36.0%, compared to 31.9% in 2002.

The high unemployment is very closely connected with the problem of poverty. According to estimations from the World Bank, almost 25-30% of the population is affected by this problem, and may find them under the poverty line. As a result, the number of the households covered by programs for social protection, has grown from 60.000 in the middle of 1990s, to more than 80.000 in 2002 (more precisely 81.000, according to the Ministry of Finance). Last years, Ministry of Labour and Social Protection made some restrictions to the programs of social protection, and a significant number of households found they no more legible for social protection. Of course, this does not mean that the problem of poverty in country has been resolved.

3. Main actors and their respective roles in preparation and implementation of economic instruments

Ministry of Environment and Physical Planning plays a dominant role in framing the environmental policy of the country, and has done so for the last 7 years, i.e. ever since it was established as a separate Ministry out of the previous Ministry of Construction, Urban Planning and Environment, where it was a department only. However, the creation of a separate Ministry of Environment has not led to resolving of the fragmentation of the responsibilities of environmental monitoring, setting of standards, and even some overlaps in framing environmental policy³. The responsibilities of other ministries in regard to environment, notably the Ministry of Agriculture, Forestry and Water Economy, the Ministry of Transport and Communications, and the Ministry of Health, could offer some explanation of the inadequacy of legislative framework. But, what is more important, the very strong position of the Ministry of Economy and especially the Ministry of Finance in creating the overall macro-economic policy (and in this context the environmental policy), combined with a relatively weak position of the Ministry of Environment and Physical Planning (MOEPP), it is an important explanation for the current inefficiency and slowdowns.

In regard to the framing of environmental policy and especially the use of economic instruments, two departments in the MOEPP could potentially have very important roles. They are the Department for European Integration, and the Department for Sustainable Development. The first is relevant because of the fact that it was established to develop the EU integration policy. It co-ordinates its activities with the Department for European Integration of the Government, and the Ministry of Foreign Affairs, and obviously its role is very important in transferring the experience from the EU and its Member States. The latter one, i.e. the Department for Sustainable Development has a crucial role in the process of framing and implementing environmental policy in accordance with the concept of sustainable development. In theory this department is in charge with the process of creating policies based on a more favourable use of economic instruments.

The Ministry of Economy and especially the Ministry of Finance has a corrective role in framing an environmental policy based also on the use of economic instruments. Every proposal that relates to economic instruments in environmental protection comes from the MOEPP, should be analysed, and even verified by the Ministry of Finance and in some cases by the Ministry of

³ The functions and responsibilities of all State (Government) bodies, including ministries, are established in the Law on the Organisation and Work of the State Administration, and passed in 2000.

Economy, as well.

Regarding the roles of other Ministries, the Ministry of Agriculture, Forestry and Water Economy has very close competence with the MOEPP in the field of water management. Noting the risk of overlaps in responsibilities, the Law on Water must stipulate a clear division of the issues to be covered by each of these two ministries.

At the beginning of 2002, a new Law on Local Self-Government was adopted, but local authorities still lack real competence and, therefore play only a minor role in environmental planning, decision-making and enforcement. Therefore, there is a need for the entire institutional framework to be enriched with a strong public information system in order to mobilise a large number of entities in the achievement of environmental policy targeted to common problems, and based on the use of appropriate instruments.

Also, improved transparency in framing environmental policy could be supportive of this. For instance in terms of consulting with NGO in the process include also such institutions as the Chambers of Commerce through a process of consultation.

4. Revenues raised and their use

Almost all the fiscal revenues collected by some kind of environmental charges/taxes are directed towards central budget. At the local level, the municipalities are responsible for various public services, some of which are directly related to environmental protection, but they need more finances in order to fulfil the wide range of environmental duties. For the time being, they rely on Central budget allocations. However, the municipalities are gradually becoming self-financed, and with extended rights to set tariffs for municipal (public) services.

Prior to the establishment of the MOEPP as a separate Ministry, total environmental expenditures were very limited, and it is almost impossible to assess them. In the last few years, environmental expenses have not grown significantly, but as a result of the establishment of a separate MOEPP, a clear proportion of the Central budget is allocated to the activities of this Ministry. The total amount has however not ever exceeded 0.5% of the GDP. That excludes however the revenues of the Environmental Fund. Also, budgetary funds are allocated for implementing programmes in other infrastructure activities, which are indirectly connected to the environment.

The Fund for Environment and Nature Protection (Environmental Fund) of Macedonia was established by the Law on Environment and Nature Protection and Promotion in 1997⁴. According to the Law on Environmental Protection (1996) the main objective of the environmental fund was to raise revenue for environmental protection. The Environmental Protection Law stipulates the institutional set-up of the fund as extra-budgetary legal entity administered by the Ministry of Environment.

The previous version Environmental Protection Law prescribed that the following duties are to be revenues of the fund:

⁴ Environmental Funds were institutions designed to channel public revenues earmarked for environmental protection purposes. Funds in CEE countries administer(ed) revenues from a number of sources, including environmental charges, central budget transfers, foreign loans or grants, and debt-for-nature-swaps, to provide subsidised financial assistance for investments and projects designed to achieve environmental policy goals. St. Petersburg Guidelines on Environmental Funds in the Transition to a Market Economy presents the rationale and challenges for using environmental funds as environmental policy instruments in the transition period to market economy. Some authors claim that in early 1990s, the emphasis on having environmental funds was on the need to overcome the environmental challenges of transition and to alleviate capital market failures. At present, as transition to a market economy has progressed, the arguments for the environmental funds has focused more on meeting the financial needs of complying with the EU environmental requirements.

- 4% of the amount for basic insurance of vehicles and vessels without catalytic converter;
- 2% of the amount for basic insurance of vehicles and vessels having catalytic converter;
- Non-compliance fees.

Furthermore, this Law gives provisions for introduction of “eco-tax” to be levied on installations listed in the cadastre of pollutants.

- Revenues of the Fund were about EUR 750,000 per year, to be used for environmental protection under a programme developed by the Fund but proposed for adoption to the Government. The Fund revenues were disbursed as grants.

The Fund revenues were highly insufficient to enable the Fund to play a major role in the implementation of environmental policy. However, the Fund has been abolished since the beginning of this year, and the subsidy scheme is now administered as an environmental programme under the MOEPP.⁵

5. Economic system and opportunities for economic agents

Having in mind the overall economic situation in Macedonia, it is not difficult to derive the conclusion that the period of transition has involved many problems for companies to establish themselves at the small and narrow Macedonian market, and to be successful in export. Moreover, if one takes in consideration the need for them to respect the environmental legislation and policy, then it will become clear that their competitiveness may suffer a lot in the short term by strengthening environmental policy. Also, on the other side, companies in Macedonia do not have any possibilities to finance environmental friendly technologies through soft loans designed for this purpose only. Namely, in the absence of sufficient revenue of the Environmental Fund, there are no other opportunities to obtain such loans in the Macedonian financial market. As a consequence of risk considerations (that lead to high interest rates and short payback times), and tight fiscal and monetary policy, loans at domestic financial market are still very expensive.

However, there is the possibility for Macedonian companies to be awarded a tax allowances under the profit tax. If a company import an environmental-friendly technology, then its tax base for calculating the profit tax would be reduced by 25%.

5.1. Driving forces in the use of economic instruments in Macedonia

The policy makers all around the World, since the mid 1980s have tended to search for more cost-efficient policy options. The interest in more market-based (economic) instruments for environmental policy was stimulated by a number of factors such as:

- new orientation towards market deregulation in public policy,
- increased recognition of the limitations of government in general,

⁵ According to OECD the institutional set-up and legal status of the environmental funds varied considerably across the EU and CEEC, from largely independent, extra-budgetary legal entities with their own institutional structure to essentially Ministry of Environment budget-lines administrated by MOEPP staff. Furthermore, some funds had been created as non-profit foundations (e.g. Polish Eco Fund) and some as government owned joint-stock companies (e.g. Slovenian Environmental Development Fund).

- increased concern that regulations might not adequately cope with emerging environmental problems,
- desire to further implement the polluter pays principle, and
- the need for more cost effective tools for achieving environmental progress.

In the case of Macedonia, all these factors were more visible after the EU has opened the possibility to long-term integration of the country within its structures. Bearing in mind this fact, the driving forces for environmental policy in Macedonia comprise a number of external and local factors that positively influence the institutional and legal reforms and contribute towards creating viable and responsible policies for environmental protection. In particular, they could be clarified as:

- Obligations undertaken in the framework of the Stabilisation and Association Agreement with European Union⁶. The process of integration into European Union has been perceived as a main way out of the present economic situation and it is a main driving force for any decision-making in the country. Nevertheless, the EU integration process requires the Government to take environmental protection as a high priority while achieving positive economic growth. Actually, the possible enlargement of the European Union with the SEE Balkan countries (Albania, Bosnia and Herzegovina, Croatia, Macedonia, Serbia, and Montenegro) at present constitutes the main driving force in setting all the national policies in the countries. This has been further strengthened with the Stabilisation and Association Process (SAP, 2003), which now constitutes the European Community policy towards the countries of the SEE region.

The Stabilisation and Association Agreement with Macedonia is divided into sections and focuses on the establishment of an association between the European Community and its Member States and Macedonia with a transitional period of a maximum of ten years. One of the main commitments of Macedonia is to approximate and implement the “*acquis communautaire*”. According to article 103 of the SAA, there is strong emphasis placed on environmental issues. Based on the experience of the present candidate countries, the financial costs required to transpose and properly implement and enforce the key EU legislation in the areas of air, water and waste management is estimated to be very high.

Faced with forthcoming expenditures due to the approximation primarily of the heavy investment environmental directives, the use of economic instruments in a flexible manner is seen as a way to reduce the implementation costs through direct incentives. At present the Government has a modest assessment of the possible forthcoming costs of the approximation of about EUR 1.3 billion. However, according to the Ministry of Environment and Physical Planning there are two major revenue sources, which might cover the costs of the approximation. The first is the introduction of economic instruments, and the second one is opening negotiations for a Debt for Environment Swap source.

- Obligations undertaken in the framework of ratified Multilateral Environmental Agreements. In Macedonia, the transition process has impacted the implementation of the multilateral environmental agreements. Typically, the most significant barrier with respect to the implementation of the multilateral environmental agreements is the financial one. While formal implementation through the adoption of legislation and establishment of bodies and policies may be easily achievable, the lack for identifiable budget for multilateral environmental agreements regulated programmes and activities is an indication that compliance in the country goes no further than mere formality.

⁶ The Stabilisation and Association Agreement with European Union was signed on 12 April 2001.

Formal implementation as shown by establishment of co-ordinating bodies on national level is generally achieved, but it is difficult to find resources to commit to national programmes and initiatives. Consequently, from the one side, the Government is faced with a pressure from the international community to sign and ratify multilateral environmental agreements in order to comply with the global trends in environmental protection. From the other side, the Government is obliged to full implementation the agreements, but it is hampered by a lack of the institutional and financial capacity.

The implementation of the multilateral environmental agreements is a driving force for implementation of economic instruments for two reasons. First, the economic instruments can play a significant role in revenue rising of funds necessary to implement the agreements. Secondly, the economic instruments can help existing command-and-control measures through the establishment of special fees, such as waste disposal fees related to trans-boundary movements under the Basel Convention that help to increase the effectiveness of hazardous waste disposal on a national level. In this framework, pollution charges, water and natural resource extraction taxes, user fees, and other economic instruments can play a significant role in enforcement of the multilateral environmental agreements.

- Need for revenue rising for the central budget to combat pollution. Although the budgetary funds for environmental protection were increased in 1999, with the creation of a separate Ministry of Environment, the ability to achieve significant results, particularly in the implementation of the Multilateral Environmental Agreements, was still reduced due to lack of financing. Foreign assistance was not able to bridge the financial gap but it has created a sound basis for significant institutional reform.

The lack of funds, pressure from the public, and the know-how coming from the Sofia Initiative for Economic Instruments has inspired the Ministry of Environment and Physical Planning to conclude that the only way to solve the gap among the present and future expenditures in environmental protection is to initiate introduction of a wide range of economic instruments and to strengthen the institutional capacity of the Environmental Fund. At present, due to the low efficiency of the command-and-control instruments, the Ministry strongly believes that the introduction of economic instruments would create a basis for wide range interventions in environmental protection.

5.2. Barriers in the use of economic instruments in Macedonia

Despite the obvious advantages of economic instruments, defined in theory, there are some disadvantages and barriers to use of economic instruments. The relatively small amount of revenues could be one of the reasons for this conclusion. From the point of view of economic theory, the barriers for an enhanced and extended use of the economic instruments could be related to economic, social, and political conditions.

Differently to the increasing role of economic instruments in the developed countries, where the institutional capacity is well developed to cope with many obstacles for economic instruments implementation, the developing countries have much more limitation factors and barriers for their application.

In the case of Macedonia, the main limitation factors and barriers for application of economic instruments are mainly caused by the institutional development gap due to the recent instability in the region. Consequently, the main barriers for application of economic instruments

can be identified as:

- *Position of environmental policy in the overall development goals.* Although the Stabilisation and Association Agreement with the EU highlighted environmental protection as one of the major development issues, economic growth, and reduction of unemployment and poverty alleviation are still the main driving forces for setting national policies. Macedonia is unlikely to give a high priority to environmental protection unless it is seen as an effective means of escaping stagnation and achieving high rates of economic growth. This has significant implications and constitutes a barrier to the introduction and application of economic instruments. Furthermore, the effect of economic instruments on economic growth is not assessed and is of great concern. Also, the implications of the economic instruments on the country's export is very often discussed but not fully assessed.
- *Low institutional and legal capacity.* Besides the general understanding of the benefits of economic instruments, the Ministry of Environment and Physical Planning is coping with the lack of capacity to produce a strategy for green budget reform. This also applies to other relevant governmental bodies, such as the Ministry of Finance, which must be involved in the development of any proposal that contains financial implications. Moreover, the Government as a whole has shown a lack of capacity to cope with the problem of grey economy. Therefore, a precondition for introducing economic instruments is strengthening the institutional capacity of the institutions involved and creating sound and enforceable legal framework.
- *Low level of implementation.* However, in line with the SAP as a main driving force and generous bilateral and multilateral assistance, the institutional development of the country is progressing more rapidly than in the beginning of 1990s. A clear direction has been set, mostly related to the approximation of the European Community regulations.
- *Enforcement and compliance.* If the legal instruments and institutions are weak or not well developed, as is the case in Macedonia, instruments that rely on legal action for enforcement are unlikely to be fully effective. Furthermore, the weak legal liability system disables the enforcement of any instruments. This constitutes a serious barrier to the successful application of economic instruments. Examples include command and control regulations, such as effluent standards or mandated technology, which provide for fines, prosecution, and closure in the case of non-compliance.

The non-compliance fees are determined by the court and very rarely meet the expected amounts. They are paid to the central budget but there is no information whether are earmarked for environmental protection. Application of economic instruments would face serious problems of enforcement unless followed by adequate regulatory or policy reform.

The improvement of the enforcement system is closely linked with the quality of the permitting system that is beginning to be more integrated due to the obligations to start approximation of the IPPC directive (1996).

- *Resistance of the business sector and current economic problems.* Since the economic instruments seek to put the financial burden on the polluters in order to recover the costs and to minimise environmental pollution, the business sector constitutes the biggest and most serious limitation for introduction of EI. In growing economy with a target to achieve fast economic growth and improve the living standard, the business sector in Macedonia has very strong and influential position. The Government is reluctant to introduce policies that might reduce profitability of the companies and slow the economic growth.

The level of cooperation and information exchange between the Ministry of Environment and the Ministry of Economy and Chamber(s) of Commerce is not so substantial on issues such as enforcement of environmental legislation and introduction of new mechanisms for environmental management. In general the business community strongly believes that any environmental protection measures, which will put the burden for the pollution on the pollutant, will have significant effect on their sustainability and their profitability. There are four reasons for this:

1. insufficient participation of the business sector in preparation environmental policies, plans or regulations;
2. lack of funding and financial incentives to promote cleaner production, and lack of awareness for the benefits of cleaner production,
3. lack of sound environmental investment projects.
4. low level of environmental awareness and education within the businesses;

Furthermore the Ministry of Economy in line with the desire to improve the economic growth have a tendency to introduce policies that will enable business development and opportunities. In this respect introduction of economic instruments if not properly discussed and agreed with the business sector might face difficulties in the implementation and in compliance.

- *Lack of the pressure from the public.* For the time being, in Macedonia could be registered a lack of the pressure from the public. Modest development opportunities for Macedonia and the need for environmental protection have been in conflict during the entire process of transition. Unfortunately, the choice between these two in Macedonian case, has depended only on existing levels of income, and not on other factors such as minimising the health impacts of environmental protection (actually they have been marginalized).

It must be noticed that the environmental movement in Macedonia, started with the establishing of the first NGOs 15-20 years ago. The environmental NGOs were the first civil groups established since the country started the transition process. Unfortunately, despite the fact that this movement have made some pressure on the decision-makers and did realize public awareness campaigns, the level of awareness in the public have not raised significantly.

One of the main reasons for this lack of the pressure from the public could be addressed to the first National Environment Action Plan for Macedonia (NEAP). Namely, the first NEAP identified the problems and proposed solutions, but did not discuss the way to implement them or the financial support needed to implement the tasks. So it led to modest pressure from the public.

6. Instruments currently in use

Information available provided points to the following gross list of taxes and charges currently in use in Macedonia:

- Taxes on petrol and diesel
- Import duty on vehicles that favours new vehicles
- Vehicle taxes in general

Subsidies are scarce. Noting that the Water Fund, and the Environmental Fund have been the major subsidy mechanisms i.e. institutions for allowing financial incentives such as grants. Unfortunately, a few years ago they have been abolished following IMF recommendations.

Furthermore, energy prices are relatively subsidised and there are some specific subsidisation schemes.

As regards user fees, there are user fees in place for the following municipal services mainly: electricity, waste disposal charge, water supply, waste water discharge, waste water treatment, irrigation, etc. The municipalities set the fees and should in principle be cost-recovery based. However, the fees are capped since 1995.

Fees and service levels vary from one municipality to the other. However, there are few general points to note, viz.:

- Only one landfill in Macedonia meets the environmental standards
- Only 3 of the 35 water & wastewater utilities have wastewater treatment facilities
- Collection rates are low, and have been declining. Estimates provided indicate a collection rate of about, or slightly below, 50% in the case of water (including discharges and wastewater treatment) and municipal waste. In the case of irrigation, the collection rate is estimated to be as low as 25%.
- Enforcement mechanisms are highly limited. The law does not provide for the option that utilities can cut off supplies to non-payers. Rather, they need to initiate resource demanding court procedures.

There are some product charges, e.g. charges related to transport, and penalties and fines for non-compliance. In addition, a number of fees exist to protect nature and biodiversity. These fees include logging fees, fisheries and hunting fees.

7. Establishment of generic criteria for assessments

The suggested generic criteria to use for assessing economic instruments are developed on the basis of criteria developed by OECD, but supplemented with more explicit social criteria in order to provide for a sufficient coverage of the three pillars of sustainability.

The argument is that the R. of Macedonia today faces so many difficult problems in the social, economic and environmental area. The difficulties are to a large extent due to a lack of sufficient funds. In order to provide for a sustainable development, the R. of Macedonia thus needs to strike a delicate balance between the goals of social development, economic progress and environmental protection.

OECD recommends the following principal criteria to evaluate specific economic instruments⁷:

- *Environmental effectiveness* - an assessment of the degree to which the instrument in question contributes to achieving the policy objective.
- *Economic efficiency* - as assessment of whether the instrument is more cost-effective than other types of measures, typically command-and-control.
- *Administration and compliance costs* - they may ultimately be the barrier to an effective implementation of a given economic instrument. This observation is of

⁷ *Evaluating Economic Instruments for Environmental Policy*, OECD, Paris, 1997 (and used in *The Use of Economic Instruments for Pollution Control and Natural Resource Management in EECCA*, OECD/DANCEE, 2003.

particular relevance in a Macedonian context where public budgets and resources are scarce. An assessment of these costs should compare to other more simple designs of the instrument in question and to other possible types of instruments such as command-and-control.

- *Revenue impact* - depending on the objectives of the instrument, the revenue effect can be a key feature of the operation of a policy instrument.
- *Impacts on innovation* - while the economic instruments certainly stimulate innovation, they are only one among a multitude of drivers in that process, and.
- *Wider economic effects*, which include among other things impacts on the price level, income distribution, employment and trade.

In the present context, the later criterion, i.e. these wider economic effects are quite important. It may be argued that many of the wider economic effects are short termed reflecting mainly adjustment costs. However, the difficult current economic situation of the country does make it highly relevant to pay much attention to these effects in order to avoid excessive, and maybe irreversible, adjustment costs. Therefore, separate discussions should be elaborated on at least the following issues:

- *Effects on equity*. Given that more than 20% of the population were categorised to live below poverty line, equity is a crucial issue. It is typically argued that this should not be a concern of the economic instruments per se. Very vulnerable groups of society should be compensated through other means. However, the reality is that affordability is a key issue of concern, and it may be difficult to realise such compensating policies. As many economic instruments tend to be of a regressive nature, this is an important aspect to shed light on.
- *Effects on competitiveness*. Economic instruments may affect the competitiveness of Macedonian industry relative to other countries, but they may also affect the competitiveness domestically. It is therefore essential to investigate whether certain industries, or parts of a sector, are so much affected that they will have to cease to operate (*the extreme case though*).
- *Employment and regional implications*. Some industries tend to be centred in certain regions, and it needs to be investigated to what extent the regional employment and economy is unintentionally much affected.

8. Assessment of instruments currently in use

The strength of applying these criteria is that they provide for a simultaneous coverage of all the pillars of sustainability, i.e. social and economic development and environmental protection, and to make the trade-offs between the three types of concern explicit. The overall conclusions from the analyses are that:

- The vehicle taxes and the fuel taxes are in essence fiscal instruments, and they perform well in that role providing also some environmental benefits. Vehicle taxes and fuel taxes tend to affect those with cars more than others, and therefore they do not affect the poorest parts of the population as much as the rest. Their economic efficiency can only be assessed on the basis of their fiscal purpose.
- The user fees for environmental infrastructure are highly ineffective today. Essentially, that is due to a set-up that attempts - implicitly - to protect industry and to exercise social policy through the way that the user fees are implemented and enforced. Substantial

gains could be harvested simply from decoupling these two concerns (i.e. social/competitiveness on the one hand, and environmental on the other hand) from one another.

The most striking conclusion from the instruments currently in place is the inefficiency of the current user fee schemes. Collection rates are very low. The possibilities for utilities to enhance enforcement of collection are limited. Also, the fact that the levels have been capped since 1995 is an issue that further makes it difficult for utilities to deliver environmentally sound service levels.

There is an urgent need to look into how to enhance the performance of these systems. This should be given a top priority. In the lack of funds, the environmental infrastructure that is in place will gradually weaken and municipalities that today suffer from inadequate or very low service levels will not experience any improvements. Uncontrolled waste deposits and possible lack of waste collection do represent health hazards to the population as does also uncontrolled discharges into surface waters. Drinking water supplies suffer from polluted ground water and surface waters and from poorly maintained infrastructure for and purification of drinking water supply.

Another striking conclusion is the relatively few economic instruments that are in place in support of *polluter pays principle* (PPP), and thereby to promote environmental-friendly behaviours in society. The instruments that are in place relate to vehicles and to fuels. Such instruments are a very common means throughout Europe for generating government revenue, and thus they mainly serve a fiscal purpose, although they may have environmental effects as well. While the instruments may be worked upon to improve their environmental contributions, they nevertheless though remain a mainly fiscal instrument. It may however be considered to introduce more differentiation into the fuel taxes in favour of e.g. low sulphur fuels and to control the level of benzene in petrol. Also, it may be considered to introduce more differentiated annual taxes that reward energy efficient vehicles, i.e. vehicles with a high mileage/litre.

The analyses undertaken in this paper, points to a highly limited use today of economic instruments in the field of nature conservation and environmental protection. Apart from fees related to nature use, user fees for environmental infrastructures are in place as are also vehicle taxes and fuel taxes.

However, legislation currently under preparation does point to an enhanced use of economic instruments. Thus, the Law on environmental protection emphasises effluent charges as well as taxes, and substantially strengthens the natural resource rent that is to be captured through concession fees for raw materials and minerals.

In line with what is the case elsewhere, the vehicle taxes and the fuel taxes mainly serve a fiscal purpose and they do that in an effective manner. Also, some differentiation mechanisms are used that provide for some additional environmental effects.⁸ They include fuel tax differentiation in favour of unleaded petrol and a lower customs duty for new vehicles than for old ones. The former incites a shift from leaded to unleaded petrol, whereas the latter provides an incentive to purchase newer cars. All other things being equal, newer cars tend to perform better in terms of safety, energy efficiency and combustion including catalytic converters.

As regards user fees, the fees that apply to environmental infrastructures suffer from important deficiencies:

- Collection rates are very low - i.e. in the order of 50% - and enforcement is difficult.
- Rates have been capped since 1995 despite the fact that costs (in particular energy costs) have increased.
- Solid waste rates are set on the basis of m² of premises, which relates only poorly to

⁸ Apart from the mere fact that increased costs of cars and fuels lead to a decline in demand for cars and for transportation.

the likely level of service use.

Further, the existing service level as regards water supply, wastewater treatment and solid waste management is relatively low. Only 3 utilities out of more than 30 have WWTP and there is only one landfill in the country that complies with the existing environmental standards.

As regards energy prices, they are subsidised leading to excessive energy demand and decelerating developments towards innovation and cleaner technologies to save energy.

Today, the remedies for providing financial support for environmental purposes consist of the Environmental Fund and of a scheme which provides a 25% reduction of the tax base for profit taxes in case of imports of cleaner technologies. There is a need to ensure that such mechanisms continue to exist in order to incite cleaner technologies, cleaner production and ensure that finance is available for smaller municipal environmental investments.

However, the Fund was abolished by 1st January 2005 and it was replaced by a programme under MOEPP and for the moment the revenues are the same as before.

Another emerging conclusion is that the capacity to develop economic instruments in MOEPP is highly limited. This, combined with the current lack of inter-ministerial collaboration in such matters, substantially hinders a pro-active effort in this regard, and it may also lead to ineffective policies. The process today means that the MOEPP, or any other relevant body, drafts the initial proposal seeking ad-hoc consultations with other ministerial stakeholders. It is only when a draft is ready, that the consultation process becomes formal. Actually, the analyses seems to indicate that the lack of inter-ministerial collaboration and the lack of sufficient capacity to significantly promote economic instruments are the key reasons why the intentions to promote economic instruments have not materialised, yet. These deficiencies imply that affordability concerns (in relation to industry as well as households) and concerns in relation to the public reactions become major barriers to an accelerated use and to improvements in the use of user fees.

Thus, lack of public acceptability and strong resistance from industrial sectors and agriculture are important barriers to an enhanced use of economic instruments.

9. Conclusions

Bearing in mind all the previous, in Macedonian circumstances a top priority should be given to redesigning the schemes for user fees. The motivation is the following:

- The relatively low rates, and the low level of collection, provides revenue that falls substantially short of what is needed to maintain current service levels and to carry out essential improvements in areas where that is urgently needed.
- The process of EU approximation will involve heavy costs related to environmental infrastructures. While substantial financial assistance from EU can also be expected, this nevertheless also imposes a substantial burden onto the domestic economy. While international loans, including soft loans, are other options to address the issue of financing, such loans need nevertheless to be serviced at some point.
- The building up of the credibility of the system to establish an understanding that such services are to be paid for in line with any other service that is purchased.

Affordability is typically noted as the main reason for the current low performance level of the user fee system, and it is certainly an issue that should be considered carefully. However, the current set-up where social objectives are pursued by means of setting overall relatively low fee levels, tolerating non-payment and offering limited opportunities for utilities to enforce payment, is highly inefficient. Given that the objective is to protect the poorest parts of the population and

providing a certain level of environmental service to be - at least partly - financed through cost recovery, it is essential to consider carefully how to address these two objectives in the best possible way.

Rather than having the affordability of the poorest (including also industries in difficult financial situations) determine fee levels and enforcement intensity, it would be much more efficient to set fees at an overall affordable level which can provide a certain service level, and to compensate the less well off parts of the population through specific subsidies. This means that the affordability of the poorest becomes a social issue, rather than one to be solved through the environmental policy, and that fees are set at a level which is reasonable and which can actually be paid by the rest of the population. Thereby, enforcement can also be strengthened substantially since the poorest have been provided with the possibility for paying through subsidies.

Also, it can be pointed the need for addressing these issues not only in terms of substance, but also with regard to the underlying structures and mechanisms. These include for example issues related to the use of the principle of cost recovery, clarity about ownership structures and responsibilities and to the effectiveness in management and operations.

Another affordability concern relates to industry, and it is necessary to analyse more which industries or specific important enterprises, would be most seriously hit. Also, it may prove necessary, but beyond the scope of this paper, to conduct financial viability of possible “critical” enterprises in order to assess their options for obtaining loans to facilitate their adjustment.

Having in mind that the capacity to develop economic instruments is limited, and that the level of inter-ministerial collaboration in that regard is highly limited during the process of Macedonia’s process of EU approximation, these points to the following emerging conclusions should be derived from the analyses of the existing situation:

- A high priority should be given to improvements in regard to user fees for environmental infrastructures. The motivation is threefold: first, affordability concerns should be addressed through social policies rather than having the affordability of the poorest setting the general fee levels, second, an effective system of user fees that generates significant revenue it is essential for the successful process of EU approximation which imposes high costs on the environmental infrastructures, and third; the longer term credibility of the system needs to be built up to establish an understanding that these services are provided at a price similarly to any other service acquired. Last, the issue of the poor service level in itself also points to the need for finance to ensure appropriate levels of maintenance, repair and allow for upgrading.
- Under the difficult economic, social and environmental conditions that the country currently faces, any policy including also initiatives on economic instruments should be considered and prepared with a view to balancing its environmental achievements with its social and economic implications. In support of that, policy packaging, policy integration and careful considerations as regards the cost-efficiency of the economic instruments under consideration compared to other possible instruments should be promoted. To that end, a process should be established for inter-ministerial collaboration in preparing suggestions for economic instruments based on generic and agreed assessment criteria and which takes as the starting point for the environmental issue at hand, rather than the desire to implement a specific economic instrument. In further support of this, and in order to build up sufficient capacity to drive the process towards an enhanced use of economic instruments, capacity building is needed. This exercise should be anchored within MOEPP, but an effort should be taken to extent it to cover also other relevant ministries.
- While the former Environmental Fund has been abolished and replaced by a Programme under the MOEPP, the need for mechanisms to provide domestic financial

support for environmental investments must be addressed. The MOEPP Programme is one means by which to provide this, but other additional mechanisms should be considered such as further earmarking of revenues (e.g. also from improved enforcement of existing instruments such as the emission charges), recycling mechanisms or policy packaging. The latter implies that a certain environmental problem may be sought solved through the simultaneous launch of several mutually supporting instruments.

- Possible areas for new economic instruments should be developed with a view to the net benefits that the instruments can provide, to their distributive implications (including possible effects on industry), and the support they can provide to the pursuit of the Government's priorities. Areas for new economic instruments should be identified in accordance with, and in support of, relevant planned or in-force legislation such as the laws on environmental protection, water and minerals concessions. When considering new economic instruments, attention should be paid to effluent charges and taxes, to product taxes and to subsidy schemes.

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