

Scale up in Public Economics

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Abstract: The purpose of the paper is to present a modified model of an internalizing external costs caused by the operation of a manufacturing unit in conjunction with the new reality created. The environment is characterized as a public good. Public goods are goods that provide benefits for society as a whole or part of it, usually regardless of whether the individual people are willing to pay to have these benefits. All entities, whether individuals or businesses or public agencies, have some financial resources with which they seek to achieve specific objectives (e.g. profit maximization). To achieve a specific objective, usually there are many alternatives and possibilities. To be effective, i.e. to utilize the existing resources in the best manner possible, should be selected that the solution maximizes the desired outcome or minimizes the required sacrifices.

Key words: Goods, benefit public, cost, environment, optimization.

1. Introduction

The procedure for the selection process is called optimization, optimization or maximization. In the business world, almost all the decisions may be considered as optimization problems. The optimization can be applied not only to maximize profit and minimize the cost of production, the use of the optimal size ad in the employment of the highest quantity of a productive factor.

When you come from markets not operate effectively, the price does not reflect the true social costs them. With the CBA (Cost-Benefit Analysis) all critical parameters problem attributed to a single base assessment, which facilitates decision making process. The basis of evaluation is to compare benefits and costs. If the benefits are larger, then the project (or activity) is socially desirable otherwise considered socially beneficial. “Weak” Treaty Pareto: a project or a policy measure is socially acceptable when improving the welfare of every member of society. ‘Strong’ condition Pareto: a project or a policy measure is socially acceptable when ensure improved welfare even one person without reducing the welfare of another [1].

The Pareto principle is based on individual conception of welfare, whereby the people regarded as the best exponents of their own prosperity through their options. He has limited use, since there is almost no action to improve. As someone while continuing to deteriorate the position of others. Not discussed concepts such as social justice or income redistribution. The search for suitable instruments or for the best possible combination of the use of command and control and of economic instruments nowadays constitutes one of the most complex points of discussion on environmental economics. The environmental reassessment of economic procedures and the change in production and consumption of non-conservation friendly models, which constitute the fixed position of the European Union and the OECD, could be achieved by using suitable economic instruments. We are focalising the present study on environmental taxes, the most well-known and widespread category of economic instruments, by studying the advantages and disadvantages of their enforcement [2].

2. Methodology

According to the first theorem of economic prosperity, under certain conditions, a competitive

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economy guarantees a Pareto-optimal economic outcome. In other words, a competitive market leads to allocations of resources to the property that any position cannot improve not worsen the position of another. This allocation is done automatically through the price mechanism, e.g. where there is a demand the price goes up and when a bid price it falls.

With the adjustment of prices solves the problem of distribution of goods. The second fundamental theorem states that through the competition of firms that have objective the maximization of profits and consumers who view their maximize the benefits can be excellent (in Pareto) distribution of resources regardless the initial distribution [3].

Therefore it is necessary to have a central designer will decide who gets what in the economy. In fact, the free market is can lead to great disparities that can be removed by state intervention (e.g. taxation). According to the criterion of a Pareto distribution is effective when there is no other way allocation to improve one's position without diminishing someone else [4].

3. Implementation

The expression 'think globally, act locally' is frequently used as a slogan urging people to consider the health of the entire planet or a global system and to take action in their own localities. The same expression is also a Principle in Environmental Management suggesting decentralization as a basic method for sustainable development. Nevertheless, the decentralization degree D should not exceed an optimal value D_{opt} if maximum benefit $B_{max} = (B_1+B_2)_{max}$ is to be achieved, where the partial benefits $B_1(D)$ and $B_2(D)$ represent development of skills/capabilities and coordination achievement, respectively, as functions of D .

The former dependent variable, B , is an increasing function of D with a decreasing rate (i.e $dB/dD > 0$, $d^2B/dD^2 < 0$), because of the validity of the Law of diminishing (differential) returns (LDR). The latter

dependent variable, B_2 , is a decreasing function of D with a decreasing algebraic or an increasing absolute rate (i.e., $dB_2/dD > 0$, $d^2B_2/dD^2 < 0$ or $d|dB^2/dD|/dD > 0$), because of the validity of the LDR too. Evidently, D_{opt} is the abscissa of the equilibrium point in the tradeoff between B_1 and B_2 , where $d(B_1+B_2)/dD^2 < 0$ is confirmed for the D -value found by solving the equation representing the first order necessary condition ; in economic terms, $MB_1 = MB_2$, where $MB_1 = dB_1/dD$ and $MB_2 = |dB^2/dD|$ are the marginal benefits respectively [5].

By introducing expert systems in order to use case/models/rules based reasoning, for further support of skills/capabilities development, the B_1 -curve will move upwards to its new position B'_1 becoming also steeper, since the higher difference in B_1 -values will appear in the region of higher D -values, where the decline of the original curve is more expressed; as a result, D_{opt} is shifting to D'_{opt} , where $D'_{opt} > D_{opt}$. Similarly by introducing a controlled vocabulary within an ontological scheme/network for further support of coordination, the B_2 -curve will move upwards to its new position B'_2 becoming also more flat, since the higher difference in B_2 -values will appear in the region of higher D -values, where the needs for better coordination are more intensive; as a result, D_{opt} is shifting to D''_{opt} , where $D''_{opt} > D_{opt}$.

It is worthwhile noting that the vectors $(D'_{opt}-D_{opt})$ and $(D''_{opt}-D_{opt})$ have the same direction, denoting a very tendency for increasing decentralization in environmental decision making and subsequent implementation of respective decision. In a similar way, we can reach an identical conclusion by setting the Centralization Degree C , as the independent variable, in order to find C_{opt} in the Discussion section of the present work, where certain other factors are also examined [6].

4. Suggestion

When there is a clearly defined system of property

rights, the market mechanism will lead to an efficient allocation of resources. In environmental policy, the polluter (whether company or individual, or the State) pays applicable in several countries the world. This is automatically an incentive to reduce pollution at least at the level where the marginal cost of reducing pollution equals the marginal cost of damage causing this pollution. Also, many countries apply the system of subsidies for the pollution control. This suggests that property rights are particularly importance in the formation of environmental policy.

Who should have rights property the polluter or the victim worked the R. Coase (1960). In theory places great emphasize the importance of ownership of natural resources and to negotiate between those who pollute and those who suffer from pollution. One of the conclusions of R. Coase was that under certain conditions the creation of property rights can be lead the parties are on opposite sides have interest to negotiate among themselves to find an agreed solution on the level pollution would be considered socially acceptable [7].

The adoption sustainable development as a central policy choice, but as a principle of both international and European and domestic legal systems (especially after the revision of Article 24 of the Greek Constitution) creates new standards for the role, nature and function of environmental policy tools.

In particular, the passage of regulatory approach to environmental protection, which was based mainly on the use tools of direct intervention on the strategic and integrated approach, which requires an overall strategy for sustainable development. Main aim towards sustainable development is the environmental redefinition of economic processes a fixed position of the European Union and OECD agreed at the World Johannesburg [8].

Environmental redefinition of economic processes and changing unsustainable patterns of production and consumption agreed at Johannesburg, cannot achieved with tools to intervene directly, but rather the use of

economic tools. The same should be accepted and to solve the environmental problems the second generation, such as climate change, biodiversity loss and soil erosion, as taking effective measures in this direction requires the use of other tools except those of direct intervention. The key feature of economic instruments is that the type of conduct which guides the operators of production processes associated with a particular economic advantage.

The logic function consists in particular to internalize partially or completely, of “externalities” (externalities), i.e. the impact on the environment, which is secondary effects of production processes and consumption and which are not calculated as a cost to those who cause it. This is also an established position in economic theory. It should also be noted that all financial instruments not show the same degree of compatibility with the market mechanisms (e.g. permits emissions have the greatest degree of compatibility with respect to subsidies, which a minimum) [9].

These tools provide economic incentives for environmental change behaviour either through direct changes in the levels of prices and costs through fees products, duties on carbon or on raw materials, or through indirect changes in prices or the cost through financial and fiscal instruments such as direct subsidies, loans, or end through creating new markets for environmental goods, such as tradable licenses etc [10].

The production and consumption of goods and services has resulted create adverse impacts on the environment. Starting thus with the principle “I live, so be foul” and realizing that one cannot speak for the elimination of pollution, the problem lies in “how much pollution.” In other words, in what will be the “optimum” level of environmental pollution or environmental protection from pollution, based on various economic, technological, social, psychological and other parameters that apply to a society in a given period [11-13].

5. Conclusion

Externalities or external economies (externalities) occur when a person acts or a business affect other people or companies when a company imposes a cost on others, but does not compensate, or end, when a company brings benefits in other businesses but does not receive remuneration for providing this benefit. We can distinguish two types of externalities, public e.g. air pollution, the water that affects the welfare of many people and private e.g. a person casts trash in the yard of neighbour. (This movement affects the welfare of the neighbour and any other).

The cases where the activity of an individual or business impose costs others refer to as negative externalities or external costs. When induced positive externality in the production of a commodity, the social costs production is less than the private cost. The optimal quantity of good Q optimum is greater than the equilibrium quantity Q market. Notice that in both either cases us external charges, or has external economies, the price mechanism does not give enough information to the recipient of decisions. In one case, the values do not represent the actual cost and the other is not represent a real benefit. We say market failure.

According to Pigou, in his 'The economics of Welfare', taxation is a effective tool for addressing the external charge. In the case foreign economy is given subsidy represents the real benefits of business. Unlike the Coase in his 'The problem of social cost,

1960' as a way of supporting addressing externalities awarding property rights over natural resources. He argues that if the contaminant obtains a right of victims of pollution, then pollution will pay the first to stop or reduce the polluting activity. Unlike the pollutants to be able to benefit from the natural resource should compensate the victims, which have acquired the right to operate.

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