

# From an Old Assessment to the New Perspectives of Environmental Policies<sup>1</sup>

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[...], capitalism must be regarded as an economy of unpaid costs, “unpaid” in so far as a substantial proportion of the actual costs of production remain unaccounted for in entrepreneurial outlays; instead they are shifted to, and ultimately borne by, third persons or by the community as a whole [...].

K. William Kapp<sup>2</sup>

The environmental issue runs over the general problem of the relationship between the human activities and the environment and refers to the complexity to contemporarily realize the rational exploitation of the natural resources, the economic development, the protection of the environment.

From the beginning of the last century the environmental problem gains relief at international level. Progressively, the environmental protection is not seen anymore as an isolated problem, but as an essential condition for the enhancement of a sustainable economic growth.

The adopted policies have been initially aimed at command and control measures which have subsequently underlined rigidity and scarce adequacy in facing the emergent environmental problems, also imposing significant economic costs.

In the nineties, under the push for a new orientation of the public policies toward market and deregulation, political actors' interest moved to market based instruments with the aim to individualize efficient and effective ways for the attainment of the environmental results. Nevertheless, this choice has left unsolved the problem of the correct use of different approaches to different environmental problems.

In this framework it can be useful to provide a renewed reflection on the environmental policy instruments in the light of the recent developments in the law and economics analysis.

## **Advantages and limits of the approaches until here used in the light of the Law & Economics literature.**

With reference to the wide literature of Law and Economics is possible to affirm that the environmental regulation - represented either by "decentralized" market solutions or by "integrated" organizational solutions - answers to the need to bring a *liberty-exposure* situation (Commons)<sup>3</sup>, that produces an externality on the exposed subject, back to a more general *right-duties* relationship that a correct definition of property rights implies, whereas the transaction costs are not negligible and therefore hinder the free bargaining among the parties toward a mutually advantageous solution (Coase)<sup>4</sup>.

From such a premise various implications, broadly discussed by the prevailing doctrine, come down underlining the advantages and limits of the adopted policies:

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<sup>1</sup> First draft.

<sup>2</sup> Kapp K.W. (1950), *The Social Cost of Private Enterprise*, p. 231, Harvard University Press, Cambridge, Massachusetts.

<sup>3</sup> Commons J.R., *Legal Foundations of Capitalism*, New York, Macmillan, 1924.

<sup>4</sup> Coase, R., (1960), "*The Problem of Social Costs*", *Journal of Law and Economics*.

- Trade-off between policy intervention and predisposition of a private system for the resolution of the controversies – private orderings – in the definition of the property rights (Williamson<sup>5</sup>);
- Consequences, in terms of fairness, from the attribution of a property right (Cooter et Al.<sup>6</sup>, Shavell-Kaplow<sup>7</sup>);
- Role of property rights definition in increasing the entity of the transaction costs (Nicita-Pagano)<sup>8</sup>;
- Role of inertia in preventing the conclusion of mutually advantageous transactions even in the absence of remarkable transaction costs (Franzini-Nicita)<sup>9</sup>;
- Public intervention in the case of diffused externalities (Holmes-Sustein<sup>10</sup>, Shapley-Shubick<sup>11</sup>);
- Role of contractual opportunism, free-riding, bounded rationality of the economic agents in preventing the attainment of pareto-superior positions. (Simon<sup>12</sup>, Hart<sup>13</sup>, Cooter et Al.<sup>14</sup>, Stephen<sup>15</sup>, Williamson<sup>16</sup>);
- Environmental regulation and impact on competitiveness - role of technological innovation, complementary measures, firm location strategies (Carraro-Soubeyran)<sup>17</sup>.

The question concerning whether property rights are up to the “polluter” or to the “polluted” has relevant consequences in terms of fairness: it deals with defining who possesses the common resources (Barca-Brioschi)<sup>18</sup>.

The economic theory states that the market is a neutral system with reference to the distributive conditions, therefore, any economic policy that contemplates a better welfare distribution doesn't have to affect market rules, but it should balance the initial conditions and let the market reach the efficient solution. Nevertheless, the presence of income-effects (Green-Laffont<sup>19</sup>), high transaction costs and informational asymmetries (Kreps-Wilson)<sup>20</sup> prevents the normal attainment of such result.

The application of the "polluter-pays-principle" has until now represented a fundamental cornerstone in the environmental policy management.

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<sup>5</sup> Williamson O. E. (1985) *The Economic Institutions of Capitalism*. The Free Press, New York.

<sup>6</sup> Cooter, Ulen, Mattei, Pardolesi, Monateri (1999), *Il Mercato delle Regole*, Il Mulino, Bologna.

<sup>7</sup> Shavell S., Kaplow L. (2001), *Fairness versus Welfare*, Harvard Law Review, 961-1388.

<sup>8</sup> Nicita A., Pagano U. (2003), *Le Istituzioni del capitalismo alla prova della globalizzazione*, SIMPLE Siena Memos and Papers on Law and Economics No.7, University of Siena. Available on [http://www.unisi.it/lawandeconomics/simple/002\\_NicitaPagano.pdf](http://www.unisi.it/lawandeconomics/simple/002_NicitaPagano.pdf)

<sup>9</sup> Franzini Maurizio, Nicita Antonio (2003), *Externality, efficiency and fairness: understanding inertia in coase theorem*, SIMPLE Siena Memos and Papers on Law and Economics No.7, University of Siena. Available on [http://www.unisi.it/lawandeconomics/Simple/007\\_Franzini.pdf](http://www.unisi.it/lawandeconomics/Simple/007_Franzini.pdf).

<sup>10</sup> Holmes S., Sunstein C. R. (1999) *The Costs of Rights: Why Liberty Depends on Taxes*. W.W.W. Norton & Company, New York and London.

<sup>11</sup> Shapley Lloyd S. and Shubik Martin [1969] "On the Core of an Economic System with Externalities," *American Economic Review* 59, 678-684.

<sup>12</sup> Simon, Herbert A. (1979), *Rational Decision – Making in Business Organizations*, The American economic review, n.4, vol 69, September (Nobel lecture).

<sup>13</sup> Hart O. (1998), *Imprese, contratti e struttura finanziaria*, Giuffrè, Milano.

<sup>14</sup> Ibidem (note 5).

<sup>15</sup> Stephen F. H., (1988) *The Economics of the Law*, Wheatsheaf Books.

<sup>16</sup> Ibidem (note 4).

<sup>17</sup> Carraro C., Soubeyran A. (1998), *R&D cooperation, innovation spillovers and firm location in a model of environmental policy*, Fondazione Eni Enrico Mattei Working Paper No. 23.98.

<sup>18</sup> Barca F., Brioschi F. (1995), *Allocazione della proprietà e del controllo ed efficienza economica*, in *Diritti di proprietà e privatizzazioni*, a cura di Pippo Ranci Bologna, Il Mulino.

<sup>19</sup> Green, J., Laffont, J.-J. (1977). "On the revelations of preferences for public goods". *Journal of Public Economics*, vol. 8, pp. 79–94.

<sup>20</sup> Kreps David M., Wilson B. (1982), *Reputation and imperfect information*, Journal of Economic Theory.

Yet, as Coase says, the traditional approach tends to hide the real nature of the choice: we are dealing with a problem of mutual nature. Therefore, the principle of Pearce<sup>21</sup> has necessarily to be correlated to the "victim-pays-principle" with the purpose to individualize fair and efficient solutions, whose success is tightly connected to the presence of an efficient juridical system able to reduce the degree of incompleteness of the markets (Cooter et Al.)<sup>22</sup>.

The national and international environmental commitments are constantly increasing. The problem of the environmental performance - in other words, how many commitments are indeed respected - is central for the credibility of the governments in the eyes of public opinion, other governments and international community.

The introduction of the environmental economic instruments raises a number of technical problems - impact on competitiveness, subsidizations, exemptions, regressive effects on the lower income population, distraction of the environmental tax revenues to purposes different from the environmental finalities, etc. - and economic and political obstacles - first of all, the problem of the "political continuity" that has to be guaranteed in order to attain the success of the intervention measures, whose effects are appreciable only in the long run.

These complex interrelations require, therefore, an accurate analysis by every government, that will have to endow itself with more flexible policies to face the potential conflicts among different interests.

In order to respect the commitments and the attended objectives, we need strategies able to assure the sustainable development in the context of a market based economy, that asks for the elimination of the distortions caused by the externalities and of the forms of subsidies that, directly and indirectly, damage the environment.

Political regulations are often cause of costs that pose a burden on the public and private budgets. Particularly they produce costs, both in the phase of adoption of the regulation, and in the phase of implementation, maintenance and enforcement.

The determination of such costs and the analysis of the impact that they determine in the choice of the more suitable tools of policy can be considered together, on one hand, a mean for the individualization of alternative tools of regulation, on the other hand, a tool of control of the effectiveness of the adopted regulations.

## **Aim of the project**

Up to now, the policies for the improvement of the quality of the regulation - though they represent an irremissible passage - have concerned single regulations, maintaining the same institutional frame, and particularly the same procedures of regulation mechanism. This implies that one of the fundamental aspects - deserving further investigation - is represented by the necessity to give a punctual answer regarding the correct institutional order able to minimize the above mentioned transaction costs, or more correctly the greatest number of mutually beneficial transactions that could absorb the presence of environmental externalities. Whereas such order is not considered as an exogenous variable of the analysis, but, on the contrary, as the main actor both in determining and in solving the presence of an environmental externality. This is worth, particularly, in the approach to environmental problems generating global impacts, for which the adoption of

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<sup>21</sup> Pearce D. (1989), *The polluter-pays-principle*, Mimeo.

<sup>22</sup> Ibidem (note 5).

cooperative strategies is essential to individualize rules and institutions able to cover in geographical terms the global space in which private institutions now operate.

In developed countries, property rights are circumscribed by fears for the environment. Although the law can try to clarify to the best such questions, controversies are frequent and must be resolved with judicial actions. Fortunately, in a rule of law system it is confided that this happens in a fair and correct way, nevertheless this cannot be guaranteed in developing countries, characterized by a weak juridical-institutional infrastructure (Stiglitz)<sup>23</sup>.

It is, therefore, necessary - with the purpose to effectively affect the functioning of the regulative processes - the adoption of new strategies of policy management characterized by a constant attention to the interactions among different regulations, to the effects of new regulations on the firms and on the individuals, to the results achieved in the middle-long run.

The objective we want to pursue is to make efficient the regulative process and the adopted regulations using methodologies that allow to measure ex-ante the social cost of the regulations in order to be able to appraise the opportunity of alternative tools and, finally, to analyse ex-post the effects of the adopted regulation in terms of achieved social benefits. In this framework, for the definition of social cost and benefit we will resort to the pioneer contribution of W. K. Kapp<sup>24</sup> integrating it with the contributions coming from the New Institutional Economics (hereafter NIE). Following Kapp's formulation, the remarkable questions are:

1. the presence of a false dichotomy between ends and means - ends are not given but dependent from means, the relationship between ends and means is not univocal but mutual, and the economic problem consists of reciprocally suiting the ends for the means through a process of investigation that consists on the search of the possible alternatives, included the introduction of new technologies and the institutional change. It appears therefore correct to set up regulations on the performance they realize - rather than on aspects of command-and-control - to guarantee the maximum degree of flexibility in the adopted measures for the attainment of the objectives as well as to appraise the opportunity to use market incentives to favour the attainment of the objectives;
2. the correct definition of social costs and benefits - the social costs can be defined as the harmful effects and damages suffered by the economy resultant from the private productive activities. Social costs become diseconomies for the fact that they are borne by third party or by the society as a whole. Such costs are damages suffered by the economic system that could be avoided under other institutional conditions. This type of analysis inevitably raises the question of what is the institutional form to adopt and what are the economic policies to undertake to eliminate or minimize the social diseconomies. Besides it allows to verify the existence of a relationship of proportionality among the benefits and the costs that the individuals and the firms will have to sustain after the regulation. Moreover, this approach helps us to define some regulations able to achieve the objectives of protection of the environmental resources and to reduce to the least the burdens on firms, individuals, and the same institutions;
3. the distinction between "value of exchange" and "value of use" - according to Kapp, in the analysis of the economic process, it is necessary to move the attention from the values of exchange to the values of use; this implicates the renouncement to describe the efficiency of a productive process or the social benefit using data deriving from procedures of aggregation

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<sup>23</sup> Stiglitz Joseph E. (2002), *Globalization and Its Discontents*, W.W. Norton & Company, June.

<sup>24</sup> Ibidem (note 1) and Kapp K.W. (1991), *Economia e Ambiente*, Otium, Ancona.

founded on the relationships of equivalence established by the markets. The values of use can enter the economic reasoning only through the construction of a complex system of social indicators. Such approach allows to improve the effectiveness and the efficiency of the regulation;

4. the importance of the ethical costs in the economic evaluation - the importance of ethics in the economy is a fundamental aspect of Kapp's thought. The solution he advances is founded on considering objective determined needs, which is possible only recognizing the absolute meaning of determined values. Following Kapp, the evaluation of the economic process should be based upon two essential ethical norms: the continuation of the human life on the earth must not be endangered; human suffering must be minimized. This favours the formation of a greater conscience of the Governments about the economic effects of the regulation, increasing in this way the degree of responsibility and awareness of the finished choices.

Integrating the analysis of Kapp with the NIE, four principal aspects emerge: the importance of the self-enforcement (Greif)<sup>25</sup> as mechanism of sustainability and implementation of rules of behaviour with the purpose to reduce the existing legislative stock; the rules of bargaining (Nash<sup>26</sup>, Kalai and Smorodinsky<sup>27</sup>, Rubinstein<sup>28</sup>, Shapley<sup>29</sup>) and the Public vs. Private Choice - analysis of the choice among public and private institutions (Hart)<sup>30</sup> - are remarkable aspects in favouring the effective contribution of individuals, firms and public organizations in the choice of the available alternatives. In this framework, the institutional comparative analysis is a crucial tool for the selection of the most useful configuration of the regulative intervention (Coase<sup>31</sup>, Aoki<sup>32</sup>, Pagano and Rowthorn<sup>33</sup>) with the purpose to appraise the opportunity of alternative and more flexible regulatory approaches that allow diversified applications in relation to the heterogeneities of the regulated situations.

Building on this approach the proposed new environmental regulatory policy will be based on the search of the widest consent adopting instruments that are different from those based on a command-and-control structure, through paths that facilitate the eco-compatible behaviours, inside a wider context of shared responsibility.

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<sup>25</sup> Greif A. (1998), *Historical and comparative institutional analysis*, American Economic Review (May, No. 2).

<sup>26</sup> For his main essays, *The essential John Nash*, edited by Harold W. Kuhn and Sylvia Nasar Princeton : Princeton University Press, (2002)

<sup>27</sup> Kalai, Smorodinsky (1975), *Other Solutions to Nash's bargaining problem*, Econometrica, vol. 43, No. 3 May.

<sup>28</sup> Rubinstein Ariel, *Strong Perfect Equilibrium in Supergames*, International Journal of Game Theory 9 (1980), 1-12. Available on <http://arielrubinstein.tau.ac.il/papers/07.pdf>

<sup>29</sup> Shapley, Lloyd (1953), *A value for n-person Games*, Princeton University Press.

<sup>30</sup> Hart Oliver (2001), *Incomplete Contracts and Public Ownership: Remarks, and an Application to Public-Private Partnerships*, The Economic Journal (March No. 113). Available on <http://post.economics.harvard.edu/faculty/hart/papers/pub3vs.pdf>

<sup>31</sup> Idem (note 3).

<sup>32</sup> Aoki M. (2001) *Towards a Comparative Institutional Analysis*. MIT Press, Cambridge.

<sup>33</sup> Pagano U., Rowthorn R.(1994) *Ownership, Technology and Institutional Stability. Structural Change and Economic Dynamics*. Vol.5 No 2 pp. 221-243.