

Externalities and Public Goods: Uses and Limits of Neoclassical Analysis of Environmental Issues

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Abstract

The article aims to present and discuss the explanatory power of the concepts of externalities and public goods constructed by mainstream Economics. It departs from a literature review to back a critical discussion of the relations between bare economic concepts and the environmentalist approach. It encompasses presenting the economic notions of externalities and public goods as basic notions to understand the relations between the Economy and the environment. Since legal literature and normative texts frequently misuse these concepts, the text provides a clear and linear presentation backed by a survey of the historical and recent literature. Thereafter, the article proposes a discussion of the limits of Economics as enough to explain and solve environmental problems. Economic theory cannot adequately cover many structural aspects of nature and the complex relations between humankind and the environment. The definitional economic problems—scarcity and material maintenance of human societies—fall short of biological, ecosystemic, and climatic dimensions of environmental questions.

Keywords

Environmental Economics, Externalities, Public Goods, Ecosystems

1. Introduction

This article treats the relationships between economic and legal approaches to environmental issues, which, as problems, go far beyond these disciplinary fields. To this end, it begins by studying some economic concepts, namely *externalities* and *public goods*. Then, it relates them to environmental issues and, finally, to possible legal approaches.

The central aim is to present the main economic concepts related to environmental problems: externalities and public goods (Cropper & Oates, 1992; Pearce, 2002). Therefore, the text provides simple explanations of these fundamental concepts backed by the study of the construction of modern notions of externalities and public goods in the historical and recent literature, focusing on their use to deal with environmental problems.

As a research problem, the paper approaches and critically discusses the use of economically constructed terms, particularly externalities and public goods, in the context of environmental discussion as a source of authority in driving both understanding and action. In other words, how does the misuse of economic terms blur environmentalist debate, and how can it be properly used?

To contribute to this discussion, the article focuses on the conceptual history of these terms, particularly the shift from an external to a collective space of effects, the focus transfer from positive to negative effects, and the high risks of taking Coase's Theorem approach as a baseline for externalities studies. The differences between the approaches of public goods and externalities, which are entangled, are also discussed.

The article is helpful as an initial introduction and a tool to avoid some common confusion in legal texts and literature. When addressing the use of these concepts to tackle environmental issues and the possible legal ways to do so, the text seeks to outline lines of reasoning and heuristic models that may be useful for the arduous task of systematising the legal treatment of the environment efficiently—in a broad sense, not merely neoclassical.

2. Externalities

Let us take an example: someone drives to work in their car; this person bears some costs, such as fuel, parking, vehicle maintenance, and taxes. Each time he or she makes the journey, however, harm is caused to others, such as air pollution, noise pollution, wear on the roadway, and traffic congestion. This circumstance implies 1) the uncompensated alteration of the well-being of other people and 2) the lack of an incentive to switch from other means of transportation to public transport or bicycles, for example.

This circumstance may be called an *external effect* of economic operations. In other words, the production of the transportation service took various costs into account but did not consider the damage caused to third parties. It is, therefore, external to economic calculation.

In this sense, externalities are currently defined as economic effects that are not accounted for in production and consumption operations. However, they do not always imply losses to third parties. Just as the driver of a car does not pay for the waste released into the atmosphere (negative externality or external diseconomy), the beekeeper does not receive payment for the flowers pollinated. (positive externality or external economy).

According to the current perspective, externalities are always harmful because

they contaminate the perfect rationality of economic decision-making and, thus, prevent maximising efficiency. For example, suppose the polluter had to bear the cost of the waste released into the atmosphere. In that case, they might employ scarce resources to produce another good—which would be more efficient in accounting for costs and benefits, maximising well-being. On the other hand, if the beekeeper could receive benefits from pollination, there would be an incentive 1) for more honey production and 2) for an allocation of the hives capable of maximising pollination, i.e. These benefits would imply greater efficiency, provided they were accounted for.

In other words, the maximisation of efficiency depends on the complete internalisation of social costs and benefits, as otherwise, there are incentives for the underproduction of goods that generate positive externalities and the overproduction of goods that entail negative externalities. The maximisation of well-being, therefore, depends on the elimination of externalities. Still, in the presence of increasing external costs (net external diseconomies) or decreasing external costs (net external economies), the sector's equilibrium rate is socially suboptimal (Davis & Hulett, 1977: p. 4). Nevertheless, there is a tendency to focus the study of the topic on negative externalities, especially on the issue of pollution, as well as a growing interest in so-called *network externalities* (Krugman & Wells, 2011: pp. 376-375).

However, the notion has only sometimes had this structure. It is possible to trace the origin of the notion to Alfred Marshall, who contributed to the concept of “externality” through the development of the notion of *external economies of scale*, understood as those that are not directly provided by capitalists or workers but result from the *environment* in which the economy is organised. They are advantages in terms of cost or productivity that a company gains due to infrastructure, labour market presence, and education, among other indirect benefits. Although there is a concern with the *internalisation* of these economies through economies of scale, the idea of compensation for those who generate them has yet to be systematised. His work does not address external diseconomies.

Arthur Pigou, who frequently refers to Marshall (Pigou, 1932), was the one who established the notion based on the distinction between the *private* or *public* nature of costs and returns. This dichotomy brings two new aspects to light: 1) external *diseconomies*, understood as social costs, become relevant, and 2) the *environmental* effects are replaced by *social* effects.

The first difference adds negative impacts to the analysis of external effects and, thus, highlights the possibility of increasing overall well-being through reducing and controlling these effects. It is essential because economic agents seek to appropriate external economies and not only internalise them because of potential costs; however, no one wants to absorb external diseconomies. In the case of negative externalities, private economic agents do not move towards incorporating social costs into their accounting (Davis & Hulett, 1977: p. 7)¹.

¹As stated by: Davis & Hullet (1977): p. 7: “pecuniary external economies, unlike pecuniary external diseconomies, do not constitute a conceptually distinct phenomenon in the analysis of market failure under perfect competition.”.

The second difference incorporates the impact on economic agents into external effects, even if they disperse themselves among uncoordinated populations. In other words, although they are external to the production and consumption operations that cause them, they are not alien to economic well-being. They are more in the realm of *social effect* than *external effect* (Pigou, 1932: p. 102)². Using externalities to study environmental issues is vital: they are relevant when produced about people, not the environment.

Moreover, the social costs and benefits are challenging to calculate. These circumstances prevent those who benefit from or are harmed by external effects from reacting due to their lack of coordination and difficulty calculating and distributing costs and benefits.

The Pigouvian solution is obvious: the State should mediate the reduction of external diseconomies and the appropriation of external economies to *replace* them with an organised entity capable of making decisions and acting in the economy, which is guided by the pursuit of increasing well-being. Solutions in terms of taxation and control are typically proposed based on this analysis. It is done through *corrective taxes* equal to the *external costs*, capable—in this model—of restoring optimal productivity. In the same way, subsidy policies should compensate for positive external effects.

Pigou shares the neoclassical assumption that maximum efficiency derives from market decisions, which is a dogmatic assumption of his analysis. However, it seeks solutions to specific economic problems, even if they exist in areas beyond the reach of the market.

Ronald Coase's critique in *The Problem of Social Cost* (Coase, 1960), often called the "Coase Theorem," is that the market is sufficient to eliminate externalities. Agents affected by the external effect of a particular economic operation can bargain with those responsible for such effects and thus reach an optimal solution, regardless of the ownership of rights at the starting points.

For Coase, Economics should seek efficiency as its ultimate goal, without worrying about distribution, a topic beyond the economists' scope, and to be defined politically and adjusted technically by jurists in the treatment of property. Thus, the most efficient solution for the market—for example, whether a wall should be built or not—is independent of whether there is an authorisation or a prohibition for its construction because under conditions of perfect competition, even without transaction costs, the same solution would result from the market's own action, albeit with benefits and costs distributed differently among the participants. It favours the benefits of reducing transactional and coordination costs instead of state solutions—always inefficient from a neoclassical perspective.

The theoretical contributions and the Coasean perspective are highly influential

²Pigou (1932): p. 102: "The source of the general divergences between the values of marginal social and marginal private net product that occur under simple competition is the fact that, in some occupations, a part of the product of a unit of resources consists of something, which, instead of coming in the first instance to the person who invests the unit, comes instead, in the first instance (i.e. prior to sale if sale takes place), as a positive or negative item, to other people."

in discussing the mutual influences between Law and Economics, especially in New Institutional Economics (Alston, 2018: pp. 9484-9493; Ménard, 2014: pp. 541-565). In particular, the assumption that, under conditions of perfect competition, the initial ownership of rights is irrelevant for achieving the most efficient possible outcomes regarding Pareto optimality has inspired and continues to inspire much debate regarding the best strategies for reducing external economic effects. From this, two possible approaches roughly derive 1) the one that prioritises efforts to achieve perfect competition through the eventual reduction of transactional costs and 2) the one that seeks to understand the effects of ownership distributions to increase efficiency and take social justice into account. Nevertheless, the reference to the Coase Theorem almost always arises as a basis for the first perspective, as if it were indeed possible to eliminate transaction costs and external effects... In real world, it is not.

The relationships between externalities and the environment will be discussed in the third topic of this chapter.

3. Public Goods

Imagine a neighbourhood where, due to security issues, it would be economically efficient to install a guardhouse and hire a security guard. Suppose, for example, that the monthly service fee is £3000.00 and benefits 20 households, corresponding to a unit cost of £150.00 per month. The market offers as an alternative the hiring of a residential alarm and monitoring company for £200.00 per month. Both security alternatives are, for this example, equivalent. Assume, furthermore, that all the residents evaluate the benefit as being more significant than £250.00. What would be the most efficient solution? What is the solution provided by the market?

The most efficient solution is obvious: install the guardhouse and hire a guard, which provides security for everyone for £3000.00 or £150.00 for each person. However, the one effectively given by the market is the individualised hiring of the exclusive service, which is inefficient: £4000.00 in total and £200.00 each.

Why does this happen?

First, the market is, by definition, an interactional field in which goods are exchanged for money between individual actors whose identities are irrelevant. It is a clearly horizontal structure for organising value flows without bosses or leaders (Polanyi, 1957)³. In the market, for example, no seller wins over customers with friendliness or the three friends who team up to buy the promotional pack of three for the price of two.

Therefore, the consumer's preference for a cheaper and equally efficient collective service does not emerge in the example context. The total amount is too high for anyone to want to bear the cost of hiring the service alone, unlike what could happen in a bar with a jukebox. There is no "neighbourhood" as a consumer in the market. Someone must organise everyone's interests and offer each individual

³For the concepts of kinds of economic integration, see Polanyi (1957).

a good or service. It implies coordination costs among economic actors, which presupposes a form of vertical organisation. It can be a resident, an association, or a company: either someone organises and offers, or the solution does not materialise. For example, if these costs exceed £1000.00 monthly, the individualised solution will be more efficient.

However, assuming coordination costs are low enough, why do companies not offer collective surveillance? Is it reasonable to hire this service for, say, R \$170.00?

The question arises: What would be *the best decision for the individual consumer*?

Disregarding ethical and social standards, irrelevant to the *homo oeconomicus*, the rational decision is not to hire⁴. That is because if the other neighbours hire, he will benefit without contributing. If they do not hire, his or her contribution would be irrelevant. The rational behaviour of the economic agent under market conditions is that of a free rider.

Therefore, more than the market is needed to provide public goods, even when these are more efficient than their exclusive, individualised substitutes. Coordination among agents is foreign to the market and effectively seen in various contexts as detrimental. It is worth remembering: it is no coincidence that competition protection regulations act against the concertation of practices. The market, by itself, does not directly coordinate the actors. It is a deviation, as it would lead to an inefficient allocation of resources compared to situations of perfect competition. Public goods, however, resist being subjected to the logic of perfect competition and, in this field, challenge this assumption and require the impositive activity of the State as a prerequisite for their correction.

The issue of public goods and their relationship with the need for societal action is not new. The passage in which David Hume, nearly three hundred years ago, depicts the problem deserves to be reproduced (Hume, 1740: p. 538; Dougherty, 2003):

“Two neighbours may agree to drain a meadow, which they possess in common; because ‘tis easy for them to know each others mind; and each must perceive, that the immediate consequence of his failing in his part, is the abandoning the whole project. But ‘tis very difficult, and indeed impossible, that a thousand persons shou’d agree in any such action; it being difficult for them to concert so complicated a design, and still more difficult for them to execute it; while each seeks a pretext to free himself of the trouble and expence, and wou’d lay the whole burden on others. Political society easily remedies both these inconveniences.”

From the standpoint of common sense, Hume’s argument is inescapable. His

⁴This article intentionally excludes the discussion of the public choice theory as proposed by Olson (1975), as well as its further developments. We choose to keep an approach close to the neoclassical mainstream of Economics. This does not mean that we deny the central role of larger groups’ decision-making dynamics in setting environmental policies. This decision seeks to keep the discussion’s unity and cohesion.

former secretary, Adam Smith (Smith, [1776] (1902): p. 86), revisited it 36 years later:

“The third and last duty of the sovereign or commonwealth is that of erecting and maintaining those public institutions and those public works, which, though they may be in the highest degree advantageous to a great society, are, however, of such a nature, that the profit could never repay the expense to any individual or small number of individuals, and which it therefore cannot be expected that any individual or small number of individuals should erect or maintain.”

The modern economic formulation of the problem would have to wait much longer.

Paul Samuelson articulated the modern treatment of public goods by Economics in two articles from the mid-1950s (Samuelson, 1954, 1955). They are seminal works in the field of public expenditure analysis, mainly contributing to the analytical definition of collectively consumed goods, the characterisation of the optimal allocation of the production of these goods, and indications regarding an economically efficient tax system. They focus on the so-called pure collective consumption goods, that is (Samuelson, 1954: p. 387), “which all enjoy in common in the sense that each individual’s consumption of such a good leads to no subtractions from any other individual’s consumption of that good”. In other words, when the marginal utility remains constant despite the aggregation of more consumers or, still, as goods whose consumption is non-rival.

In principle, the maximisation of satisfaction resulting from a pure public good occurs with its availability to everyone. Additional costs to expand the scope of the offering (e.g., providing visible policing in peripheral neighbourhoods) or the reduction of satisfaction beyond a certain number of consumers (e.g., on a congested road or a crowded public park) would alter the pure collectivity of the good. Nevertheless, this kind of public good appears sporadically. Maybe it is only an ideal concept. In reality, there are different degrees or intensities of rivalry, and it is not difficult to perceive the difference between national security, perhaps the best example of a pure public good, and a highway, for which there is a certain level of traffic saturation.

Notwithstanding the immense importance of Paul Samuelson’s articles, especially regarding the theme of revenue and public spending, Richard Musgrave’s 1959 book highlighted the incorporation of *non-exclusivity* as an additional criterion, which would come to reshape the notion (Musgrave, 1959)⁵.

From this, one of the proposed solutions to address the problem of demand for public goods under market conditions is mediated by the *creation of exclusivity*. It would replace allocation by the Public Administration with market decisions.

⁵Musgrave (1959). Specially, P. 8: “Social wants are those wants satisfied by services that must be consumed in equal amounts by all. People who do not pay for the services cannot be excluded from the benefits, they will not engage in voluntary payments. Hence, the market cannot satisfy such wants. Budgetary provision is needed if they are to be satisfied at all.”

In this hypothesis, enclosing and restricting access to a sports complex—making it exclusive to paying customers—would redistribute coordination costs (the interested party must seek the administrator, for example) and resolve opportunism, keeping exploiters out. It is the solution called “club goods.” It is possible for goods with a low cost of exclusivity, but not for all goods.

However, the understanding of public goods incorporated a second dimension: in addition to 1) low consumption rivalry, the definition includes 2) high costs of exclusivity, which are essential for the configuration of pure public goods.

Based on these two dimensions, a quadripartite classification was established:

| | Cheap exclusivity | Expensive exclusivity |
|--------------|--|--|
| Low rivalry | Club goods (soccer field, theatre performance) | Pure public goods (public safety, public lighting) |
| High rivalry | Exclusive goods (potato chips, toothpaste) | Common pool resources (seabed ore, sea fishes) |

Chart I, by the authors.

It is important to emphasise that, in reality, the relationships between rival and non-rival and between exclusive and collective are not of binary complementarity. They develop on a greater or lesser intensity continuum, with many shades in the transition from black to white. In the first axis, for example, if a French fry is rival in use (after being eaten by one, it no longer generates utility for another consumer) and public lighting is non-rival, there are intermediate rivalries, such as those of a motorcycle, a car, or a bus. Similarly, it is cheaper to make the use of a public square exclusive for circulation by enclosing it than to do so for its aesthetic benefits.

The fact that these are not binary notions but poles of continuous distribution allows for the critical notion of *common pool resources*, encompassing goods whose rivalry does not induce exclusivity. However, they suffer from *congestion* problems, including *overexploitation*, understood as the depletion of renewable resource stock above its efficient rate of replenishment or recharge.

Having clarity regarding the variations in the *intensity* of both dimensions that comprise the notion of a public good is essential to understanding the possible approaches to seeking an economical solution—always understood as the pursuit of efficiency maximisation. The first, intuitive one, is the offer by the State financed by taxation. From this perspective, the economic issue is placed in the field of public finance, precisely the focus of Pigou, Samuelson, and Musgrave (Pigou, 1932; Samuelson, 1954, 1955; Musgrave, 1959), among others. Here, the issue of rivalry matters for calculating the potential and actual scope of the benefits; on the other hand, the costs of exclusivity are related to the benefits of directing the revenue to the beneficiaries, such as toll road users, in light of the expenses with the implementation of the control system. Moderation taxes are also addressed, which

is essential to avoid frivolous use and congestion (Gillette & Hopkins, 1987).

The second, less obvious one, highlighted by Coasean understanding, is based on the presumed insuperability of resource allocation by the market in order to favour solutions that, in some way, avoid public authority participation in the collection and distribution of resources, always considered Pareto-inferior to the autonomous functioning of the economy. In the real world, situations of perfect competition do not exist, and consequently, the necessary conditions for solving problems of externalities and public goods cannot be without the intervention of the State. Nevertheless, the idea that investing in reducing exclusivity costs can be helpful to enhance an incentive system capable of maximising the production of benefits is quite seductive, as can be observed in the discussion of intellectual property rights (Landes & Posner, 2003; Picciotto & Campbell, 2009; Costa & Bercovici, 2020).

These discussions also affect environmental issues and stand out as necessary starting points for discussing the economic aspects of environmental protection, without which much of the debate gets lost in inaccuracies and preferences turned into ideologically oriented opinions. Thus, the discussion of externalities and public goods is proposed in the face of typical environmental issues so that the utility and limits of the economic approach as a guide for environmental policies can be better understood.

4. Environmental Aspects

It is, therefore, essential to understand the relationship between the economic notions of externality and public goods and the environment. This discussion involves a matter of multidisciplinary, as the environmental issue is constructed from various perspectives. To give an example: the disappearance of a species is a fact that can be studied by Biology but with possible links to physical, chemical, climatic, and geographical studies, and whose impacts on people can be evaluated from anthropological, sociological, and historical perspectives. The economic and legal approaches are obviously possible. It is, however, risky, if not outright misguided, to reduce environmental issues to consumer preferences and producer benefits.

For a better analysis, it is crucial to define what is meant by “environment.” It is, of course, an expression whose use is quite elastic and variable. Here, we adopt a work definition of environment as *everything human life is involved with* (ONU, 1997: p. 28; Silva, 2007: p. 226)⁶. This option, intentionally, does not place the organism or the individual as the starting point for identifying what involves them

⁶In Brazil, the National Environmental Policy (Política Nacional do Meio Ambiente-Act 6.938/1981) defines environment as “the set of conditions, laws, influences, and interactions of physical, chemical, and biological order that allows, encompasses, and regulates life in all its forms”. Is the same concept adopted by the Glossary of Environment Statistics (ONU, 1997: p. 28), that defines environment as “the integrality of all external conditions that affect life, development and survival of an organism.” Silva (2007: p. 226) defines “a healthy environment [as] corresponding to the set of elements, space, and means that regulate, influence, and determine the life itself” (“o meio ambiente sadio [como] corresponde ao conjunto de elementos, espaço e meio que regem, influenciam e condicionam a própria vida”).

but encompasses that set of goods and relationships without which the full development of human capacities is diminished. Therefore, human life is understood here in a collective and structured sense: it involves not only a set of individuals but also their social and economic interactions, including the goods resulting from productive processes. Therefore, it is essential to emphasise that natural resources and raw materials are not economic goods but elements eventually extracted from the environment through productive processes, understood as those in which human labour transforms the environment, adapting it to meet consumptive or productive needs (Marshall, 1930)⁷.

On the other hand, the *encompassing* nature of the environment suggests its proximity to human life as materially relevant, including geographical space, resource stock, and waste deposit. The environment is also the place of origin of catastrophic events that affect humanity, such as hurricanes, earthquakes, tsunamis, and prolonged droughts. Therefore, its material relationship with life—without even considering the numerous symbolic constellations it represents—extends to understanding life's *fragility or vulnerability*.

It should be noted, moreover, that the relationship between humanity and the environment does not occur solely in the material realm. It is structured in symbolic terms, which extend from the mythological understanding of the resources given to humanity by the gods to the scientific understanding of biology, ecology, and meteorology. The world's *disenchantment*, understood as part of Weberian modernising rationalisation, replaced religious explanations about structure and relationships with the environment with scientific considerations, informing the relationships between humanity and nature—the latter itself a social product (Eder, 1996). The exploration and exploitation of resources, the disposal of waste, and the prediction of catastrophic natural events have come to be guided by quantitative models and, therefore, are capable of suggesting calculated measures to produce or mitigate impacts that are also measurable.

The environment, therefore, becomes the subject of science, which initially occurred under the banner of increasing human control over nature. Later, in the face of the forecast of anthropogenic environmental crises, environmental awareness questioned this possibility. For example, Kenneth Boulding's economic critique (Boulding, 1966), well expressed in the contrast between the cowboy's infinite prairies and the spaceman's limited spaceship, is clearly related to the finiteness of resources and as a threat to human life. The notion of environmental crisis is also present in the report on the limits to growth by the Club of Rome (Meadows et al., 1972) and in Rachel Carson's *Silent Spring* (Carson, 2002)⁸, among other milestones of environmental awareness. It characteristically links anthropogenic

⁷Marshall [1891] 1930: p. 54, defines goods as “things which satisfy human wants directly or indirectly” and makes clear that the choice of the term “goods” is a work technical definition, stripped from the natural language meaning: “In the absence of any short term in common use to represent all desirable things, or things that satisfy human wants, we may use the term Goods for that purpose”.

⁸Carson (2002) This book was originally published in the magazine *New Yorker* in three consecutive editions in 1962.

action to the loss of nature's capacity and resilience, compromising the ability to reproduce human life's material conditions adequately.

From these considerations, however, it becomes clear that a relationship is proposed between humanity and the environment beyond economic life. Indeed, it does not bend to the narrow neoclassical conception based on radical individualism, idealised conditions of perfect competition, the notion of goods separated from productive processes, and efficiency in terms of Pareto optimality.

Nor, however, does it exhaust itself in broader notions of economics, such as classical, Marxist, and political economy itself. The interrelations mediated by the natural sciences and human conceptions in cultural and symbolic terms also participate in this relationship. In this sense, the relationship between environmental crises and human activity goes far beyond economic issues and extends to other sciences, worldviews, and political activity. In this field, the notions of *externality and public goods* must be taken into account, and, as such, the neoclassical assumption of seeking efficiency as an essential purpose must be abandoned.

Specifically, regarding negative externalities, commonly used almost as a synonym for pollution, it is essential to revisit the previous observation about the scope of social costs. These are specifically economic and represent only the eventual disutilities experienced by actors outside the economic operation, which does not account for this loss. Well, these are external effects to the accounting of the costs and benefits of the economic operation that produces them, but, by definition, they are not external to the economy. It is because they must necessarily impact actors capable of suffering utility losses. The impact on the environment cannot be confused with the impacts on economic actors; it would be like confusing the discomfort suffered due to polluted air with air pollution and its multiple effects on ecological processes.

In other words, the externality is not external to the economy but within the field of economically relevant human action. Nevertheless, it also has effects that impact the ecologically articulated environment. In this sense, moreover, the economic study of the use of natural resources, whether renewable or not, takes place in a field where the costs of exploration and exploitation are typically accounted for; nevertheless, ecological impacts also arise from implementing extractive activities.

On the other hand, significant global issues, such as climate change and biodiversity conservation, tend to be treated as problems associated with public goods. Indeed, goods such as “a predictable and suitable climate for human life” and “the maintenance of intra—and interspecific biological diversity” can be thought of as public goods: low rivalry, high cost of exclusivity, and therefore, absence of expressed demand for a stable climate and a biodiverse environment. In the same way, however, focusing on the individual perception of economic value—the assumption of revealed preference—can hardly be equated with the actual impacts on an ecologically healthy and balanced environment.

Thus, the fallacy of the economic treatment of environmental issues becomes

apparent. Economics deals with economic issues, which is expected and quite reasonable. Mistaken is the expectation that these will adequately address the entirety of ecological issues. Even from a human perspective, which observes the environment from humanity's egoistic viewpoint, the economic vision is limited: it lacks scientific, symbolic, and political considerations.

5. Research Findings

From the economic literature survey and the critical discussion in the face of an environmentalist perspective, the following findings may be stressed:

1) The historical construction of the economic concepts of externalities and public good show a close relation to the shift from classical to neoclassical paradigm as the mainstream of Economics.

2) The notion of value in neoclassical theory is severed from the production process and structure. Therefore, it is not possible to freely transfer conceptual categories born therein to the environmental question, which is posed from a perspective of essential structures that cannot be reduced to the utility function.

3) A proper use of *externalities* and *public goods* in environmental discussions shall be carefully kept as auxiliary theories that can be employed as tools to shape efficient public policies, though never as central concepts capable of establishing and limiting the finalities and aims of such policies.

4) Coase's Theorem, an enlightening economic theory, cannot be regarded as a presupposed better solution to environmental problems. This is due to the disconnection between the neoclassical economic approach and environmental issues and the limits imposed by reality, where transactional costs are pervasive and unlikely to be efficiently set aside.

6. Conclusion

It would be strange to conclude this chapter by denying the economic approach's usefulness in addressing environmental issues, especially since it would have been inappropriate to spend several pages discussing externalities and public goods, especially externalities and public goods, which is very important for several reasons. First of all, these topics expose the neoclassical school's narrowness, whose cost of mathematical sophistication is the adoption of methodological assumptions that radically distance it from reality. The fallibility of these models in addressing environmental issues becomes even more evident due to the ethical distortion resulting from the centrality of abstract efficiency as the purpose of the Economy. The ecologically balanced world, just like human happiness, cannot be reduced to such concepts.

Secondly, it is essential to clarify the existence of alternative economic strategies to address these market failures. The discussion of public finance regarding Pigouvian taxes and the possibility of public policies oriented towards accounting for external effects as instruments for correcting market functioning is quite essential. They may not be a panacea but as instruments for implementing ecological and

social policies whose purposes, objectives, and goals must be established and evaluated scientifically and politically. Therefore, the exposition of some conceptual and functional elements in this chapter may be helpful for readers interested in Economic Law, Environmental Law, and Public Policies.

Finally, the exposure of the fallacy of reducing environmental issues to the economic themes of externalities and public goods is fundamental for adequately understanding the relative nature of the goals and evaluation instruments derived from economic thought. Again, this does not mean a devaluation or belittlement of essential and appropriate theoretical instruments to assist in the design and evaluation of policies; it is merely an expression of the recognition of their limitations, sometimes unnoticed by eyes still dulled by the glimpse of new and challenging worldviews, often presented with ideological bias, by the way.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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