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WHY NO THINKER/RESEARCHER HAS NO YET WON THE NOBEL PRIZE FORENVIRONMENTAL/ECOLOGY ECONOMICS?

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Abstract: *The problem of energy, of renewal energy, of methods and tools to offer eco/green and cleaner activities and, by consequence, not-polluted environment has preoccupied human's thinking, especially economic, during the last half century. Using information and data from journals, media, personal opinions we managed to create an image of the subject under discussion and outline conclusions regarding future steps. The main conclusion is that this sensitive problem of energy, of circular/green economy is of utmost importance and that there are prerequisites for an author, or organization/team to obtain the Nobel Prize for Economics for this complex field.*

Keywords: Environment, circular/green economy, Nobel Prize for Economics, value added.

INTRODUCTION

Our present enterprise aims to highlight the achievements in this interference domain of the Economics and Environmental sciences and the prospects based on international meetings, such as COP26-Glasgow 2021 and COP27. More details about COP26: This conference/summit had an unusual ending and consisted, first of all, after 27 years of negotiations, in the mention of fossil fuels in the Final Document. The final Agreement included a last-minute amendment from India, which wanted to quell the criticism of coal mining (www.euronews.com/green/, 2021).

The amendment proposed by India was adopted by the Plenary Session of COP26 and consisted of replacing the term "phase out" with "phase down" with regard to the production of energy based on the exploitation of coal. The text of the Agreement stipulated in this sense that the efforts to gradually reduce (phase down) coal-based energy and phase out (phase out) ineffective subsidies for fossil fuels had to be intensified. The final text also does not establish specific financing facilities for loss and damage, a crucial demand of developing countries. Guinea, speaking on behalf of the G77 countries, said the bloc needed these sums to survive.

The best/favorable scenario is not so much a result, but rather a path to be followed to avoid the outcome of a possible negative/bad scenario. In fact, the decision-makers, especially in developed or emerging countries, must be united and ensure many tactical measures, let's say, such as those related to green houses, transport using alternative energy sources, the development of the recycling industry waste (especially plastics). The conference was a turning point in the entire social-economic-political life of the planet, an aspect summed up very well by the President of the Conference, Alok Sharma, who said that the drivers that can lead to progress relate to the problems of coal, cars and forests, aspects of particular significance to our populations and our planet.

Furthermore, the mainstream economic theory considers energy as an intermediate good, produced by an appropriate combination of capital and labour. Energy payments thus appear in national accounts as payments to certain industries, such as oil and gas, or electric power generation. One consequence of this accounting approach is that the energy sector’s share of payments in the national accounts is quite small, not more than a few percentages (indeed, as a normal fact, it is also about the field of Macroeconomics and its complex analysis).

In negotiations at COP27 2022 that went down to the wire over the weekend, countries climate crisis.reached a historic decision to establish and operationalize a *loss and damage fund*, particularly for nations most vulnerable to the climate crisis. While many praised the creation of the fund, many also worried not enough was done at COP27, held in the Egyptian resort town of Sharm El Sheikh, to reduce the greenhouse gas emissions (GHG) responsible for the climate crisis (www.unep.org, 2022).

The energy from waste and the importance of the circular economy studies and, generally speaking, the methods of using the massive quantity of waste are stimulated by the necessity of a better knowing and using of The Great Pacific Garbage Patch). With an area of approx. 1,600,000 square kilometers (3 times the area of France), the artificial-based formed island is floating between California

and Hawaii (Mazilu, 2023). It is a spectucular field of research for scientists (also economists), because a real ecosystem was discovered, with important communities of living things, such as crabs and small anemones.

Entrepreneurs and CEOs are called to support/endure effectively this profund action of re-structuring, re-furbishing, re-cycling goods, if they are convinsed that the circular/green economy is an opportunity for a higher qualitative and healthy life and economic activity.

In this paper presenting a complex of what to do for the environment preservation, for developng the circular economy, in a word, to develop a greener economy, a green movement around the world, our intention is not an obstinacy to see what personalities in Economics got the Noble Prize for Ecological/greener Economics. That is to see getting Nobel Prize not as the ultimate world scientific recognition, but a viable alternative to it in this analyzed issue. This alternate sound prize is known as *The Tyler Prize for Environmental Achievement*, often described as Nobel Prize for Environment. Shortly presented, this prize awarded outstanding results/researches in this field, including Economics, highlighting the environment/nature role in supporting human wellbeing (www.eurekalert.org, 2020). For the above-mentioned year, one of the laureates was Pavan Sukhdev, an Indian environmental economist. His studies are focused into the economic benefits of biodiversity and economic costs of its degradation and loss.

As a former Managing Director at Deutsche Bank, Sukhdev was perhaps an unusual choice of environmental leader. A financial markets professional for twenty-five years, he was uniquely placed to put the consequences of environmental decline into financial and business terminology, and help politicians and business leaders to understand the consequences of their policy and business choices, revolutionizing how decision-makers would come to view the natural world.

Sukhdev's transformative ideas have earned him high praise from distinguished colleagues, such as the world-renowned ecologist and Tyler Prize Laureate. And like other specialists in this field, Pavan Sukhdev is well-renowned on "this road", but not at the level that his researches to find support in getting the ultimate award.

In 2021 the Tyler Prize was won by dr. Daniel Pauly, a marine biologist and dr Rashid Sumaila, a professor in interdiscplinary Ocean and Fisheries Economics., at the Institute for the Ocean and Fisheries

and the School for Public Policies and Global Affairs, University of British Columbia. This last scientist interests us, because he is specialist in the specific field of Economics.

Specifically, dr. Rashid Sumaila' researches involve, amongst others: the understanding othe nature, amounts and effects of governments subsidies on global fisheries; thedocumenting the employment necessities in fisheries and competing uses of living marine resources; rebuilding the fish stocks, including the support and spread of the concept "High Seas", meaning setting up a large marine reserve for the world (www.oceans.ubc.ca).

METHODOLOGY

The methodology consists in qualitative research that is the observation, survey, articles and, after that, analyses of the information and data and, finally, a synthesis conclusion regarding the subject in discussion.

Following the COP26 and COP27 results, the activity in this domain (circular/green economy), the researches and achievements in the world, we have drawn some conclusions regarding the situation of the economic mainstream that must include deeper research in the field of Ecology Economics. The actions can be better valued and used by obtaining some reference awards, such as the Nobel Prize for Economics in the current case.

THE EXPOSURE OF THE ISSUE APPROACH

In a chronological own order, the first author to be mentioned and who would has deserved to win the Nobel Prize for Economics in this respect was Kenneth Boulding. His leading work/article in this field of interference of Economics with the Environment (energy, ecology and others) is that of 1966, entitled *The Economics of the Coming Spaceship Earth* (Cheong, 2019).

We want to highlight the following aspect of Boulding's work: the link between the economic system and GDP that is in the sense of Macroeconomics analysis and support. Boulding, in 1966, considered that GDP was influenced by the amount of throughput from the factors of production (those considered classic) and output into the so-called reservoirs of pollution. All these aspects work in open systems, which are translated in our days in the fact that the economy is reliant on the levels of production and consumption within *the econosphere* (Thompson, 2010). *Econosphere*, coined and spread by Craig Thomas, a well-known economist and environmentalist, or our economy (there is no difference between the economy and this term), provides the essential signals that allowed for the upward ascension of

humanity. It is exactly like biosphere which provides us the raw materials for life and atmosphere which provides us oxygen.

Two famous economists of our times, William Nordhaus and Amartya Sen won the Nobel Prize for Economics in 2018, respectively in 1998. The first one is closest to the idea of the present material, because the award was for *integrating climate change* (our emphasis) in the long-term Macroeconomic analysis. Of course, the climate changes are indispensable for understanding the complexity of Macroeconomics on medium and long-term.

Furthermore, Nordhaus and Paul Anthony Samuelson (the laureate of the Nobel Prize for Economics in 1970) wrote the best printed-book for students in Economics, suggestively titled *Economics* (1989). Amartya Sen is an Indian economist and received the Nobel Prize for his contributions to welfare economics. Of course, the welfare and the well-functioning of economies, societies also depend on the quality of the environment and positive changes of it. However, from my own point of view regarding this guiding thread of the issue, the thinker/economist who would have most deserved to win the Nobel Prize in Economics for the field of Ecology is the American physicist and economist Robert Ayres, born in 1932.

What Ayres proposes for the economic sciences is in the same vein as what Einstein proposed for the physical sciences: *a fundamental relation between energy, raw materials and materials, and their transformation into goods and services.* The major contribution of Robert Ayres is that energy is a physical input into the entire economy and links economics and the physical sciences. In addition, through theoretical and empirical work, Ayres has shown that the role of energy tends to be underplayed and underestimated, leading to major dysfunctions in the economy and hampering the formulation of appropriate energy, resource, and environmental policies (www.ua.cat/doc/ICTA_UAB, January 2022).

After more than 60 years of multi-disciplinary investigations *integrating physics, economics, and ecology* (our emphasize) to tackle many questions and multiple deep-dive research activities, we agree that the main take-away from Ayres's contribution is the need to understand "*energy as work*," and not just as a special and indispensable commodity, sold on the market at some price.

Also from the above-mentioned document supporting Robert U. Ayres to be awarded with the Nobel Prize, we found the idea that Robert Solow confirmed in private correspondence with Ayres (2008), *that he always saw energy as an intermediate commodity* (our emphasis), a product of resource

extraction and processing sectors, each themselves the result of accumulated capital and labor. And, from this approach, a possible answer for our dilemma: Economics is often succinctly defined as being concerned with the efficient allocation of resources. At the beginning of his career, Ayres produced several interesting studies shedding new light on these basic questions. An early and fundamental contribution was to demonstrate the huge inefficiencies involved in automobile transport, which he estimated to be around 1.5% when considering that the goal was to move people and merchandises.

And, we consider another result of the information received is linked to a possible country (in fact a sub-continent) which could become the core of the world efforts, theoretical and practice, towards new paradigm in energy and green/circular economy: India. Indeed, the logo, or better said, the policy to follow-up is "*recycle-and-reuse*" and this country is favorable for this activity, not only by its number of population (forecasts indicate a reversal of the first two places in the world in terms o population), but merely, by the quality of the "gray matter".

As we know, the COP27 meet brought to fore a circular economy's relevance in mitigating carbon emissions for India by ensuring responsible consumption and sustainable resource management. A circular economy focuses on minimising waste while maximising utilisation, and calls for a production model aiming to retain the most value to create a system that promotes sustainability, longevity, reuse, and recycling. Though India has always had a culture of recycle and reuse, its rapid economic growth, growing population, impact of climate change and rising environmental pollution, the adoption of a circular economy is more imperative now (Thaplyal et al., 2022).

One of the major contributing factors is lack of a clear vision towards the end-goal of India's circular economy mission and gaps in actual implementation of the policies. Industry is also reluctant in adopting the circular economy model due to supply chain limitations, lack of incentives to invest, complex recycling processes and lack of information to support participation in reusing/ recycling/re-manufacturing processes.

But, with joint efforts, with the support of economic theories in the field, the knowledge and ability to combine them in an efficient way, they will succeed to reap the benefits of circular economy. By 2030, the transition to a circular economy could result in an additional US$ 4.5 trillion in global economic environment. For India, the circular economy development route could generate an annual value of US$ 218 billion. This country is expected to become the 3rd economy of the world by GDP, but with a

population in urban areas of around 400 million people who produce approximately 55 million of tonnes of Municipal Solid Waste/year, including organic waste, paper, plastic, wood, glass (IBEF, 2023). In this case, the consideration of the Nobel Prize for a certain organization/team that distinguished itself in this activity is not to be neglected either.

CONCLUSIONS

Indeed, the scientists in physics, chemistry, biology, are the first to see the importance of that natural accumulation of plastics waste, The Great Pacific Garbage Patch, meaning that the ocean plastics pollution would allow the creation of new floating ecosystems, favorable to support the existence of living things, which normally would be no able to develop in the seas. After that, it follows the economists' job to see the impact of the waste under that form on human life and activities. Nevertheless, the environment/ecology activities mean important parts of the work of the above-mentioned thinkers, laureates of the Nobel Prize in Economics, BUT as support for the larger domain of Macroeconomics.

On the other hand, although the issue of the environment/circular economy is becoming very sensitive in recent years, based on COP decisions, this issue is not considered as important as it really is and affects our lives and economies. Under this auspice, we consider that Robert U. Ayres is a perfect candidate to be awarded in Environmental/Ecology Economics. It is not a large wave in economics mainstream to see the environment, green/circular economics in their complexity and importance as challenges for economies and communities in their development towards sustainability.

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