IMPACT OF ECONOMIC AND ENVIRONMENTAL POLICIES FOR SUSTAINABLE DEVELOPMENT IN ALBANIA

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Abstract
The purpose of the paper is to present the economic and environmental policies of Albania, the approaches and studies that should be undertaken and implemented to scientifically guide the processes that lead to the long-term sustainable development of Albania, in the next decades of the XXI century In order to achieve this objective, some of the main factors that enable the achievement of the harmonization of economic activities with the preservation of natural resources have been defined. This study shows that for more than half a century the development of Albania was unstable. It is imperative that the use of natural resources is consistent with the speed of their regeneration and an integral part of the sustainable development strategy, as one of the main guarantees for long-term sustainable development and higher well-being. for the inhabitants of Albania. Statistical methods of data collection, analysis, synthesis have been used for the study of long-term sustainable development and to help economic and environmental policy makers. Albania to determine the most optimal paths for the future development of Albania during the 21st centur

Keywords: Globalization, Carrying capacity, Natyre – economy interaction, Sustainable development, Welfare, Ecological criteria,

Introduction

Economic growth is considered the main indicator of economic development and social well-being and is measured through gross domestic product (GDP) per unit of time. The goal of continuous GDP growth in various countries of the world has caused excessive consumption of natural resources, consuming them without any criteria, with the main goal of obtaining maximum profits.

The concept of "sustainable development" aims to harmonize economic development with the preservation of natural resources on which the existence and development of human society is based. This harmonization should enable the use of natural resources by today's generations, preserving them for the well-being of future generations. In summary, these ideas are also reflected in a UN report, called the "Brundtland Report", which gives this definition for sustainable development: "Sustainable development is development that meets the needs of generations living now, but without harming the ability of future generations to meet their own needs" [WCED, 2008].

Natural resources are, in most cases, considered public goods because they form the basis of existence for all people. Many countries of the world, especially the most developed ones, try to mitigate these conflicts through numerous studies that aim to scientifically determine the conditions that make economic growth possible and at the same time conserve natural resources. In this material, efforts have been made to highlight some of the most interesting ideas that have been realized from previous studies, suggesting some solutions that may have positive effects for Albania so that the country's economy is oriented towards sustainable developments in the specified recommendation from the Brundtland Report.

1. Economic development in the perspective of sustainable development

Economic indicators, although they are very important to evaluate the economic performance of a country, an economic sector or a certain production unit, have not been able to solve the problem of degradation of natural resources due to their indiscriminate use, economic activities.

Traditionally, sustainable development has been treated as the task of economists. If we were to observe the studies that have been done to solve the problems related to sustainable development, we would notice that the solutions were mainly sought through econometric approaches at the macro and microeconomic level. For example, at the macroeconomic level, GDP, fixed capital depreciation, savings (investment) rate, consumption, inflation, employment level, wage level, etc., dominate the vast majority of studies [Economic Indicators, 2009; Georgescu_Roegen, 1976; Global Footprint Network, 2013, CEM; Hong Kong Ecological Footprint Report, 2013]

When economists discuss the ways in which sustainable development should be achieved, they look to the solution of problems mainly to the continuous growth of GDP as the only way to improve the well-being and long-term development of a country. Based on empirical data at the international level, macroeconomic theory advises that "the fastest increase in well-being per person is achieved when the rate of savings (or investment for the regeneration of productive capital) is 18–20% of gross domestic product" [Mankiw, 2012: 45-48]. Increasing the annual savings rate above 18–20% of GDP increases productive capital per employee, but does not affect rapid welfare growth for each person.

For this reason, this theory recommends achieving the steady state of fixed capital by equating the savings rate with the annual depreciation of capital, as well as by consuming the rest of the GDP to the maximum. In this way, the steady state of capital for an employee and maximum consumption are simultaneously achieved, which are summarized in the golden rule of the capital stock. From 1997 to 2007, the annual rate of savings (investment) for the capital stock fluctuated between 34% and 29% [INSTAT, 2016]. While in the interval of 2008-2016, the annual percentage of fixed capital formation fluctuated between 18.8 % (year 2008) and 22%. This decrease in investment for the fixed capital stock has influenced the labor force and TFP (which represents technological improvements and the effectiveness of the use of investments), to be the two most important factors for the growth of GDP for the period 2008-2016 in Albania.

It should be emphasized that the free market economy has no tendency to move by itself towards the state called the golden rule of the capital stock. This movement can only be realized through interventions in the economy by economic policy makers. TFP measures the share of GDP growth that does not come from capital and labor, but from other factors such as, for example, improvements in production technology that lead to improved use of raw materials and energy used in the production process. production, as well as changes in economic policies and institutions dealing with these policies [CEM, 49-50].

The downward trends of TFP for the periods 2009-2013 and 2015-2016 show that despite the increase in GDP throughout the period 2009-2016, during this same period the effectiveness of the economy has decreased due to the aforementioned factors, which are summarized in the TFP indicator. Although from studies and statistical data at the macroeconomic level such as those mentioned above, some important conclusions can be drawn about the state of the economy, it is impossible to understand how GDP and production factors have affected natural resources. This happens because economic studies are mainly based on the calculation of indicators that are

measured in monetary units, with the exception of data related to the progress of demographic changes, employment, inventory of materials, etc., which are measured in physical units.

The same is observed in studies that are based on statistical data at the microeconomic level, which are related to the performance of specific production sectors or specific enterprises within a sector. Although people can perceive more concretely what happens at the microeconomic level, such as the number of enterprises, the number of employees, the inventory of materials, etc., even at these levels it is difficult to understand precisely what happens to natural resources that create the necessary raw materials for production.

The lack of serious studies that deal with solving the problems that determine long-term sustainable development. The basis for solving these problems is the study of the interaction between economic activities and natural processes that create raw materials. These types of studies are called multi-disciplinary (or inter-disciplinary) because they aim to combine the achievements of different fields of knowledge to solve the complex problems of long-term sustainable development.

In this direction, there have been efforts to integrate macroeconomic indicators with natural resources. One of these efforts has been concretized by preparing an economic model in which the economic performance and the effectiveness of the use of natural resources are integrated together, which is expressed by the following inequality:

- Productivity of the active labor force,
- Annual economic growth,
- The effectiveness of the use of natural resourcesduring the production process,
- Total natural resources used in production process,
- The total gross product (GDP) of a country,
- Active labor force.

The above formula is part of an economic model that includes all the important elements that simultaneously affect economic growth and the consumption of natural resources. Through this economic model, numerical simulations have been made that have resulted in the harmonization of economic growth with the reduction of consumption of natural resources (increasing the effectiveness of the use of natural resources).

But this model, as well as other similar models, although it can reduce the consumption of natural resources at the same time as the GDP increases, does not take into account the fact that economic activities cannot be developed without consuming a necessary amount of raw materials money in the form of materials and various forms of energy, without which production is impossible.

This model is designed for medium-term economic activity [Spangenberg & alii, 2002: 430-436] because it cannot solve the problems of long-term economic developments due to not taking the biophysical limits of nature: natural resources are not infinite because they require short or long time intervals for to regenerate without human intervention. The rate of regeneration makes natural resources limited for economic consumption [CEM].

Figure 1

Real GDP growth rate by variables and year (1999- 2020)

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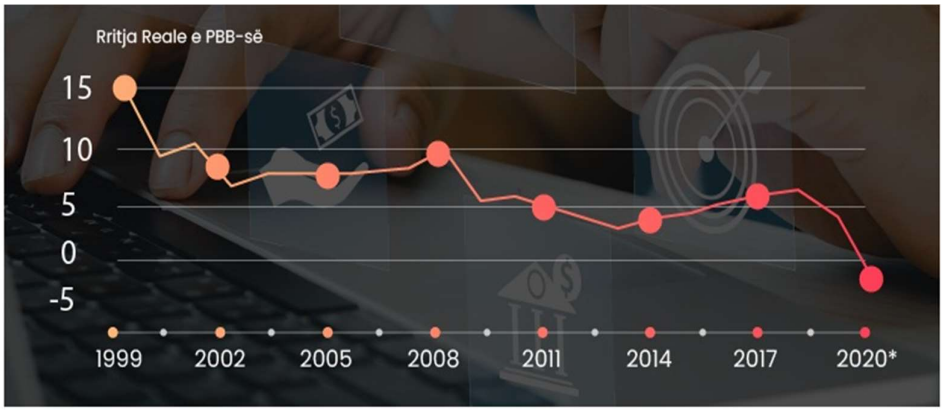


Source INSTAT 2021

In 1997 and 1998, the economy slumped, but soon after it took off. In the early 2000s, the GDP growth rate was around 5% per year. However, in 2008 a financial crisis spread throughout the world, which also affected the Albanian economy. This is because exports fell and Albanian emigrants had less money to send to their families or to spend in Albania. In 2020, as a result of the COVID-19 pandemic, economic growth suffered a decline in real terms of 3.48%. This decline was influenced by the continuous closures, which caused the contraction of economic activity.

2. Ecology and impact on sustainable development

The ecological footprint approach enables the measurement and comparison of the rate of physical consumption with the rate of regeneration of natural resources, this approach converts all types of natural resources into a common unit called global hectare/year (gha/year). Details on how to calculate the ecological footprint, biocapacity, ecological deficit, etc., can be found in many studies [Spangenberg & alii, 2002; Tyukanov, 2011; Wackernagel, 2002]. Leaving aside the details of this methodology, it should be emphasized that the calculation of the speed of degradation, due to the consumption of natural resources, is done through an indicator called "ecological deficit" which is calculated as follows:

The United Nations uses the human development index to measure the average level of well-being of a country's population in several areas, such as standard of living, health, education, etc.In order to qualify the different countries of the world regarding the level of well-being, the United Nations has defined the index value of 0.8 as the minimum threshold for a human development index to be considered high for any country in the world. Figure 2 shows that the countries with the highest economic development have the highest human development index.

For example, Norway, Canada, Australia and the USA have human development indices above the 0.95 level, but the consumption of natural resources of these countries is 3–4 times higher compared to the regenerative capacity in their countries. In the perspective of the approach called "ecological footprint", although the above-mentioned countries have a high level of well-being, their development is not sustainable for long periods of time [Spangenberg & alli, 2002: 429-443]. While Cuba, which has a relatively high human development index (≈0.85), consumes a smaller amount of natural resources compared to the aforementioned countries, which is approximately equal to the regenerative capacity in the country.

For this reason, Cuba meets the minimum condition that qualifies it as a country with

well-being and at the same time does not exceed the regenerative capacity of natural resources in the country, potentially qualifying as a country with long-term sustainable development.

For Albania, the human development index for 2017 was 0.785.

The regenerative capacity of natural resources at the global level has decreased over the years: 3.13 in 1961, 1.79 in 2005 and 1.68 in 2014. Figure 5 shows that the countries with the highest economic development have the highest human development index. For example, Norway, Canada, Australia and the USA have human development indices above the 0.95 level, but the consumption of natural resources of these countries is 3-4 times higher compared to the regenerative capacity in their countries.

In the perspective of the approach called "ecological footprint", although the aforementioned countries have a high level of well-being, their development is not sustainable for long periods of time. While Cuba, which has a relatively high human development index (≈0.85), consumes a smaller amount of natural resources compared to the aforementioned countries, which is approximately equal to the regenerative capacity in the country. For this reason, Cuba meets the minimum condition that qualifies it as a country with well-being and at the same time does not exceed the regenerative capacity of natural resources in the country, potentially qualifying as a country with long-term sustainable development.

For Albania, the human development index for 2017 was 0.785. The regenerative capacity of natural resources globally has decreased over the years: 3.13 in 1961, 1.79 in 2005 and 1.68 in 2014. While the consumption of natural resources has increased 2.29 in 1961, 2.76 in 2005 and 2.84 in 2014. This shows that natural resources globally and in individual countries are being consumed faster and faster over the years. The two main reasons for this negative trend are:

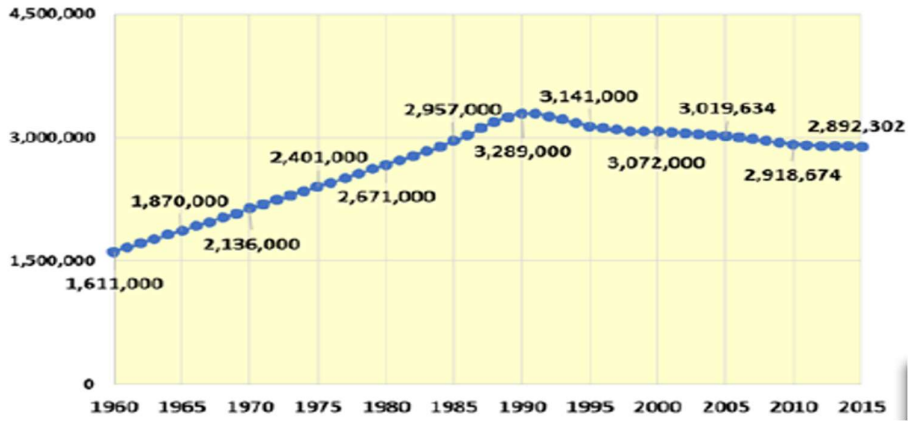
1. Population increase, which directly affects the increase in the demand to consume more natural resources compared to nature's capacity to replace them,
2. Increasing the level of well-being, better meeting people's needs, especially in poor and developing countries.

3. Assessment through “Ecological Footprint” and “Diet Structure” in Albania

The ecological deficit increases when the population increases. When the population decreases, while the consumption of natural resources per person does not change, it decreases. But what can be the maximum number of inhabitants that can live in Albania without creating an ecological deficit of natural resources, with the data of 2014? The answer is that:

The number of inhabitants according to this approach would be approximately 1,420,444 inhabitants, if the development was based only on the internal natural resources of Albania without any kind of imported products. Of course, this approach has its limitations. When the ratio of plant foods/animal foods in the human diet is between 80/20 and 75/25 percent. If it were assumed that the entire population of Albania would be vegetarian, i.e. would consume only plant products, the maximum number of people who could be fed normally during a year with the country's products would be over 5 million. If the population were to include animal products in their diet at levels of 5, 10, 15, 20, 25, 30 or more percent, the maximum number of people that could be fed would decrease rapidly, because Albania's natural resources would not were enough for him. When plant products are consumed by animals, about 90% of plant energy is consumed for all animal life activities and about 10% of it is transformed into animal products: meat, milk, eggs, etc.

Figure 2.
Population of Albania 1960-2015



Source: World Popolation by Country 1960-1990, INSTAT 1991-2015.

This low rate of conversion of plant energy into the energy of animal products is a law of nature and is the main reason that Albania is an importer of food products from other countries of the world to best meet the needs of the country's population for food. If the population of a country wants to increase its well-being, it is forced to consume more of the natural resources of the country until the moment when these resources are not enough.

In this case, this country is forced to import food products that are created through the consumption of natural resources of other countries, which with the increase in exports of local products gain more monetary value, depleting at the same time the country's natural resources due to theirs excessive consumption. As a result, both groups of countries, exporting and importing, create ecological deficits in natural resources and their long-term development is unsustainable.

Dividing the two figures of table 2: (5.38 x1012) /(5.59x1011) that represent the ratio between Albania's Emergency/Albania's GDP with the World Emergency/World Economic Production, for the year 2007 it is 9.6. This means that in international trade, for every dollar earned from exports, Albania lost 9.6 times more natural resources, compared to the world average. So, in addition to the negative balance in monetary values, Albania lost much more natural resources, compared to many countries of the world.

The limitations that nature dictates to people have recently been recognized by economists William Nordhaus and Paul Romer, winners of the Nobel Prize in Economics for 2018. In their studies, they state that economics is about managing limited resources. Nature dictates many constraints on economic growth, and our knowledge determines how we should deal with these constraints. The idea of finite natural resources has been addressed by ecologists many years ago.

According to our prediction, the growth of population and physical capital will gradually force human society to spend more capital to solve the problems created by a combination of constraints. By consuming more and more capital to solve these problems, it will become impossible to be further supported growth of industrial production. When industry declines, human society finds it impossible to achieve higher productivity in other sectors of the economy:

food, services and consumption. When these sectors do not grow, population growth stops.

Conclusion

The consumption of natural resources for 50 years has been out of proportion to nature's ability to regenerate them at the rate that economic activities consume them. Albania's development is classified as unstable.

Despite the continuous growth of GDP in Albania for the period 1997-2016, this constitutes only one component of development; the economic one. Although in the past there have been several studies aimed at harmonizing economic development with conservation of natural resources, these efforts have not been able to address long-term development relationships.

In the years 1997-2016, the total productivity factor (TFP) has fluctuated related to the use of raw materials and energy during production processes, as a result of improvements or deteriorations of technological production processes and changes in economic policies and institutions dealing with these policies. .

In particular, the use and exploitation of natural resources should be considered an integral part of the sustainable development strategy in accordance with the speed of their regeneration.

It is requested to carry out further studies that will help the drafters of the economic and environmental policies of Albania. to determine on a scientific basis the most optimal paths for the future developments of Albania during the 21st century.

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