



## Resources Scarcity and Sustainable Economic Growth

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### Abstract

Our current resource use pattern is such that future generations and developing countries accesses to their fair share of scarce resources is endangered. Resources are materials, energy, services, human, knowledge, or other assets that are transformed to produce goods and services and, in the process, may be consumed or made unavailable. Benefits of resource utilization may include wealth maximization, proper functioning of a system and enhanced well-being. This study aimed at providing background information, useful to quantitative global assessment of the implication of resource scarcity on man socioeconomic nature. This study also provides a detailed review of literature on resources, resources scarcity, its factors, types and causes of resources scarcity like; demand-induced scarcity, supply-induced scarcity and structural scarcity. The study further identified the socioeconomic implication affecting the productive system and how economic activities are also affected, destabilizing social effects, specifically: lower agricultural production, economic stagnation or decline and migrations from areas of resource scarcity to areas of perceived opportunity. Furthermore, it addresses what man must do because of scarce resource which includes; what to produce, how to produce, for whom to produce and what provision (if any) are to be made for economic growth. Finally, there are challenges in assigning appropriate values to resources and specifying allocation rules for dealing with resources scarcity. Few recommendations include; society producing and distributes as well as consumes an infinite amount of resources to satisfy the unlimited wants and needs of humans, improving resource efficiency by price resources in a way that fully reflects their life-cycle costs in both economic and environmental terms, introduction of standardized methodologies for analyzing product life cycles and others.

**Keywords:** Resource, Scarcity, Sustainable, Economic, Growth.

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### INTRODUCTION

The basic economic problem is considered to be how to manage or administer resources so as to minimize scarcity, that is, to minimize the “gap” between individuals' demand for commodities and the available supply of those commodities (Tisdell, 1972; Robbins, 1932). The scarcity problem explains the interest of society on the efficiency of alternative social mechanisms for resource allocation and their interest in economic growth and development.

A scarcity problem is generally agreed to exist because available resources are insufficient to satisfy fully the wants of everyone, and this situation is believed to continue to persist in the foreseeable future. Even though calls have been made for human beings, especially those with high incomes, to reduce their levels of consumption and demand on the whole such exhortations appear to have fallen on deaf ears (Daly, 1980).

However, even at lower levels of aggregate demand on resources, problems in economizing would still remain, despite widespread agreement among economists that scarcity is and will continue to be an important problem and sharp differences of opinion that exist whether it will become a more serious problem, especially as a result of natural resource depletion and environmental deterioration. Optimists argue that, particularly as a result of technological advancement, scarcity of natural resources is likely to become a diminished constraint on the fulfillment of human wants. Natural resource availability and environmental factors are not seen as providing significant limits to economic growth (Hauge & Tanja, 1998).

Krautkramer (2005) assert that most optimistic thinkers see economic growth as a positive means to reduce scarcity through the accumulation of capital and knowledge. Some growth optimists also see global advantages through greater economies of scale and argue that economic growth results in a faster rate of technological advancement. Optimistic views about the possibility of continuing economic growth (and the view that it is desirable) have dominated economic thought for the last 100 years or so. However, Daly (1980) views the prospects for continuing economic growth as not universal, with serious doubts been raised about the desirability of continuing economic growth.

Criticism of the optimistic economic growth position, which had already gained ground in the 1960s, became more intense in the 1970s as energy prices began to rise. The view was put that economic growth, is far from being a cure for the scarcity problem, which will exacerbate the problem in the future. A number of writers forecast that as a result of continuing economic growth, serious resource shortages were imminent and that a scenario of economic crisis and catastrophe for mankind was possible in the foreseeable future. One of the remedies suggested is to reduce the level of economic production or at least halt its growth via constraints on population increase on human consumption and level of consumption per head. Growth complainer argues that, contrary to the claim of the optimists, economic growth can be expected to intensify resource- scarcity.

Thus, the solution is seen as a problem. This is seen to be so for one or more of the following reasons:

- The more rapid economic growth becomes, the faster the depletion of non-renewable resources;
- Economic growth and production results in waste materials and pollution as a by-product, may lead to natural resources damage and also reduce productivity and economic value; and
- Higher rates of economic growth and production can be expected to result in the extinction of a large number of species of living things and thus will reduce the productivity of natural resources, if not immediately, then eventually.

In addition, growth complainer argues that there is no reason to suppose that technological advancement will continue to be more than to counteract the forces making for greater scarcity, even though it has been able to do this in the past. Of course, not all views about the relationship between economic growth and resource-scarcity are black and white, in the sense of being absolutely optimistic or absolutely pessimistic. Another view worth considering is

that as economic growth proceeds, the risks of resource-scarcity increase. However, even in relation to rising risks of resource-scarcity or economic disaster due to resource-depletion, several events are possible.

These include the following:

- The probability of resource-disaster may rise;
- Penalty of resource-exhaustion may increase;
- Large or catastrophic losses may become possible even though the expected probability of resource disaster does not rise greatly;
- Large global losses with low probability may become possible as economic growth proceeds; and
- The dispersion of production possibilities, that is, the uncertainty of possibilities, may become greater as growth proceeds.

These possibilities are not necessarily incompatible; it is possible to hold some without necessarily accepting all the others, or to accept them all as a prediction of future consequences of continuing economic growth. But the adoption of one or more of the above propositions can be expected to make human more cautious about advocating economic growth as a means of reducing resource scarcity and recommend that economic growth be constrained or made to satisfy particular conditions. Any one of the above possibilities may be sufficient for risk-avoiders to reject economic growth as an acceptable policy for reducing resource-scarcity. Those rejecting such a policy cannot all be classified as pathological complainer; they may be acting rationally that is in accordance with their objectives and reasonable perceptions of reality.

Humphreys (2005) have argued that risk avoidance should result in economic growth not being favored or persisted as a policy intended to reduce resource-scarcity. Lecomber (1979) has however criticized this view, suggesting that the risks to reduced scarcity if economic growth does not continue may be greater than if it does. While Lecomber (1979) accepts the proposition that there is great uncertainty about the eventual effects of continuing economic growth, he is unclear about whether the growth option should be rejected, especially since continuing economic growth may be associated with greater technological advancement. Whether or not economic growth will increase or reduce resource-scarcity, and in what ways, is far from being a cut-and- dried question.

Despite the waves of optimism and pessimism about this subject, the issue is a constant one, with pessimism and optimism appearing to reflect short-term events. A sudden rise in energy or natural resource prices is likely to trigger off a wave of pessimism, and vice versa, and it is not only the general public that is subject to such waves but also many economists and academics. This may be because of a view that there is a genuine change in trend or because of the dangerous propensity to extrapolate short-term experience to the future. Diamond (1994) also added, that it may reflect as the opportunism of some economists (and other academics) as they attempt to ride on waves of public opinion.

## **CONCEPTUAL CLARIFICATION**

### **Resources**

Etymologically, 'resource' refers to two separate words 're' and 'source' that indicate any thing or substance that may occur unhindered many more times. The term 'Resource' had no special significance till the early part of the twentieth century. A resource is a source or

supply from which a benefit is produced and that has some utility. Resources can broadly be classified upon their availability they are classified into renewable and non-renewable resources. As a source of supply, support or aid, especially one that can be readily drawn upon when needed as a resources and collective wealth of a country or its means of producing wealth. Usually resources as available means afforded by the mind or one's personal capabilities: to have resource against loneliness.

The word resource does not refer to a thing or a substance but to a function which a thing or a substance may perform or to an operation in which it may take part, namely, the function or operation of attaining a given end such as satisfying a want. In other words, the word resource is an abstraction reflecting human appraisal and relating to a function or operation. So, resource satisfies individual human wants and also attains social objectives. It is also been refers to the positive interaction between man and nature. Man is of course, the most important and integral part of resource creation, as he is situated in the top of the hierarchy of resource consumption. Only the satisfaction of human beings converts anything or a substance into resource.

A thing or substance is not considered as resource when it fails to give satisfaction to human beings. Proven reserves of petroleum in the midst of inaccessible terrain or in the void are not considered resource as they fail to yield any satisfaction to either society or individual. Geo-thermal energy in this contemporary world is considered to be the most useful resource, but, till recently, this heat-flow was not considered as resource- because man was absolutely ignorant about its uses.

### **Resource must possess two Important Properties:**

- Function ability, and
- Utility.

To define anything or substance as resource, one must critically examine whether it has the property of either utility or function ability. The presence of both utility and function ability is mandatory for resource creation. For example, a bottle of poison has function ability but has no utility value as food. The function ability is also a function of space and time. The resource of yester years may not be considered as resource today and again, resource considered by one country may be considered as waste product by another country.

### **Scarcity**

Scarcity refers to the basic economic problem, the gap between limited that is, scarce resources and theoretically limitless wants. This situation requires people to make decisions about how to allocate resources efficiently, in order to satisfy basic needs and as many additional wants as possible. Scarcity is the limited availability of a commodity, which may be in demand in the market or by the commons. Scarcity also includes an individual's lack of resources to buy commodities. Scarcity, also known as paucity, is an economics term used to refer to a gap between insufficient resources and the many theoretical needs that people.

Scarcity or paucity in economics refers to limitation – limited supplies, components, raw materials, and goods-in an environment with unlimited human wants. It is the fundamental economic problem of having what appears to be limitless human wants in a world with limited resources. Scarcity is the result of people having "Unlimited Wants and Needs," or always wanting something new, and having "Limited Resources." Limited resources mean that there are never enough resources, or materials, to satisfy, or fulfill, the

wants and needs that every person have. The problem of scarcity is regarded as the fundamental economic problem arising from the fact that, while resources are finite, society's demand for resources is infinite. Scarcity is a relative rather than an absolute concept - water is scarcer in the desert and less scarce in the rainforest.

Scarcity implies the resources that we value; time, money, labor, tools, land, and raw materials that exist in limited supply. There are simply never enough resources to meet all our needs and desires. This condition is known as scarcity. At any moment in time, there is a finite amount of resources available. Even when the number of resources is very large, it is limited. Because these resources are limited, so are the numbers of goods and services we can produce with them. Combine this with the fact that human wants seem to be virtually infinite, and you can see why scarcity is a problem.

## **Resources Scarcity**

Resource scarcity is the lack of availability of supplies required to maintain life, or a certain quality of life. Scarcity is a perpetual problem for economic theory, which often assumes that humans have unlimited wants but must find ways to fulfill these wants using scarce resources. Environmental scarcity refers to the declining availability of renewable natural resources such as freshwater or soil. Demand-induced scarcity, population growth or increasing consumption levels decrease the amount of limited natural resources available to each individual.

Resource scarcity is defined as a situation where demand for a natural resource is exceeding the supply-leading to a decline in available resources. When we talk about scarce resources, we usually imply that current use is unsustainable in the long-term. Scarcity can involve non-renewable resources, such as oil, precious metals and helium. It can also involve potentially renewable resources, which are being consumed faster than their ability to replenish (e.g. over-fishing, excess use of fresh water). An increase in natural resource scarcity is defined as a reduction in economic well-being due to a decline in the quality, availability, or productivity of natural resources. In various ways, these models project increasing scarcity of food in the future.

Natural resources for example; natural gas, petrol, coal, gold and minerals are scarce. These resources are made by nature and since so many centuries we are extracting and using them. Supply would not last forever but demand is rising.

## **Types of Scarcity**

Scarcity falls into three distinctive categories: demand-induced, supply-induced, and structural. Demand-induced scarcity happens when the demand of the resource increases and the supply stays the same. Supply-induced scarcity happens when a supply is very low in comparison to the demand.

**Supply-Induced Scarcity:** Environmental degradation decreases the overall amount of a limited natural resource, decreasing the amount available to each individual. A human-induced decline in the quantity or quality of a renewable resource leads to worsening supply induced scarcity.

**Demand-Induced:** Population growth or increasing consumption levels decrease the amount of limited natural resources available to each individual. Demand-induced scarcities are caused by the effects of population growth, which reduces a resource's per capita availability

by dividing it among more and more people. Induced demand related to latent demand and generated demand is the phenomenon that after supply increases, more of a good is consumed

**Structural Scarcity:** It is often caused by a severe imbalance in the distribution of wealth and power that results in some groups in a society getting disproportionately large slices of the resource pie, while others get slices that are too small to sustain their livelihoods. Such unequal distribution or structural scarcity is a key factor in virtually every case where scarcity contributes to conflict. Often the imbalance is deeply rooted in institutions and class and ethnic relations inherited from the colonial period. Other types includes:

**Material scarcity:** This reflects a physical rarity of a thing or product.

**Contrived scarcity:** Is a reflection of a systemic effort to make a thing scarcer in the mind of the buyer (eg., diamond industry, loans industry and qualifications industries). On the surface, these are easily described by any set of actions that place artificial barriers to access for something that is desired.

## CAUSES OF RESOURCES SCARCITY

Environmental scarcity is caused by the degradation and depletion of renewable resources (e.g. a specific tract of cropland), the increased demand for these resources, and/or their unequal distribution. Population growth and increased per capita resource consumption can cause depletion and degradation, which can in turn produce a decrease in total resource supply or, in other words, a decrease in the size of the total resource 'pie'. A shortage occurs when more people want to buy a good at the current market price than what is available.

There are three main reasons why a shortage can occur:

- Increase in demand (outward shift in demand curve);
- Decrease in supply (inward shift in supply curve). Resource scarcity refers are also caused by the declining availability of renewable natural resources such as freshwater or soil; and
- Demand-induced scarcity: Population growth or increasing consumption levels, and the decrease amount of limited natural resources available to each individual. Increased consumption is also a cause of demand induced scarcity, whether as a result of higher demand in local markets or from distant markets.

Meanwhile, scarcities are been created according to the scarcity principle:

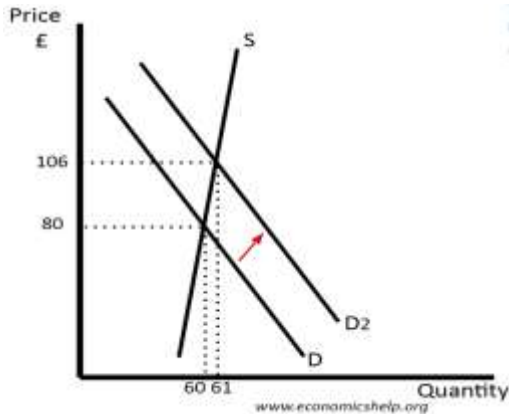
- The price of a good, which has low supply and high demand, rises to meet the expected demand. Marketers often use the principle to create artificial scarcity for a given product or good and make it exclusive in order to generate demand for it;
- The price of products is also as a measure of natural resource scarcity; and
- The market signal of natural resource scarcity (resource price, rents, and extraction cost.

### Other Causes of Scarcity Includes:

- Demand-induced – High demand for resource;
- Supply-induced – supply of resource running out;
- Structural scarcity – mismanagement and inequality; and

- No effective substitutes.

### Demand-Induced Scarcity



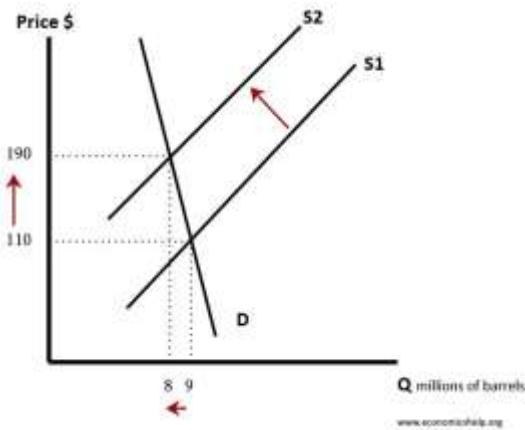
A rise in demand can cause a resource to become scarce. For example, when a society has a small population, freshwater is abundant with hardly any opportunity cost. However, with a rising population, a well or reservoir may fail to keep up with the increase in demand. For example, between 1960 and 2019, the population of Nigeria increased from 45,138,458 people, to 200 million creating increased pressure on the limited resources.

The Nigeria population has increased from 2 billion people in 1927 to 7.7 billion as of November 2019. This dramatic increase in people (combined with rising incomes and economic output) has put a greater strain on much natural resources-causing greater scarcity amongst some resources and new forms of scarcity-such as rising sea levels.

Demand induced scarcity could occur due to:

- Growth in population;
- Growth in real GDP and incomes enabling people to consume more resources than before; and
- Changes in preference, e.g. growth in demand for mobile phones, places greater demand on certain metals, like cobalt and nickel used in the production of lithium batteries.

### Supply-Induced Scarcity



If the supply of a resource is depleted or put under threat, it will cause a shortage of the good and scarcity with the growth of the Gobi desert reducing land.

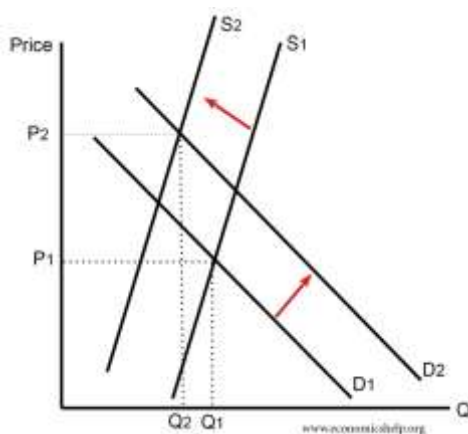
Supply induced scarcity can also be due to:

- Bad weather/crop failure: A localized scarcity can occur if there are particular problems. For example, a fungal disease could decimate a crop like olive trees, causing a shortage of olives; and
- Degradation of supply. Another form of scarcity is when the resource is polluted making it unfit for consumption. For example, a nuclear power disaster causes radiation which makes drinking water and farmland unusable in the surrounding area.

### Structural Scarcity

This occurs when the problem is one of distribution. There is abundant water in the world, but in certain areas, there may be a shortage of supply due to lack of access. A country with great inequality may cause scarcity for some. For example, resources may be owned by a small percentage of the population and the poor may be unable to afford to buy the water supply.

### Combined Effects



Often scarcity is caused by a combination of demand and supply induced effects. A rise in demand, e.g. due to rising population causes overcrowding and population migration to other fragile ecological areas. The increased farming and use of these fragile areas can lead to resource degradation causing a further fall in the supply of viable land. This creates a



negative feedback loop with scarcity causing more strain on the limited resources and therefore more pressure to cause more scarcity.

## **EFFECT OF RESOURCE SCARCITY**

Scarcity refers to the basic economic problem, the gap between limited that is, scarce resources and theoretically limitless wants. This situation requires people to make decisions about how to allocate resources efficiently, in order to satisfy basic needs and as many additional wants as possible. In pricing theory, the scarcity principle suggests that the price for a scarce good should rise until equilibrium is reached between supply and demand. If the scarce resource happens to be grain, for instance, individuals will not be able to attain their basic needs. Various forms of scarcity can lead to a number of potentially destabilizing social effects, specifically: lower agricultural production, economic stagnation or decline, migrations from areas of resource scarcity to areas of perceived opportunity.

### **The Socioeconomic Effect of Resource Scarcity**

According to Meriam-Webster economy is the process or system by which goods and services are produced, sold, and bought in a country or region. So an economic implication means that it will affect the productive system of a territory or the ability to purchase goods, usually in a negative way.

Resource scarcity increases negative emotions, which affect our decisions. Socioeconomic scarcity is linked to negative emotions like depression and anxiety. These changes, in turn, can impact thought processes and behaviors. The effects of scarcity contribute to the cycle of poverty. Resource Scarcity, or limited resources, is one of the most basic economic problems we face. We run into scarcity because while resources are limited, we are a society with unlimited wants.

Scarcity of resources such as land, labour and capital are limited in relation to their demand and the economy cannot produce all that people required to satisfy themselves. Production, distribution and disposition of goods and services are the basic economic activities of life. In the course of these activities, every society faces scarcity of resources. Because of this scarcity, every society has to decide how to allocate the scarce resources.

### **Resource Scarcity and Economic Growth**

The basic economic problem is considered to be how to manage or administer resources so as to minimize scarcity, that is, to minimize the "gap" between individuals' demand for commodities and the available supply of these (Tisdell, 1972). The scarcity problem explains the interest of economists in the efficiency of alternative social mechanisms for resource allocation and their interest in economic growth and in development.

A scarcity problem is generally agreed to exist because available resources are insufficient to satisfy fully the wants of everyone, and this situation is believed to continue to persist in the foreseeable future. Even though calls have been made for human beings, especially those with high incomes, to reduce their levels of consumption and demand on resources (Daly, 1980), on the whole such exhortations appear to have fallen on deaf ears. However, even at lower levels of aggregate demand on resources, problems in economizing would still remain. Despite widespread agreement among economists that scarcity is and will continue to be an important problem, sharp differences of opinion exist about whether it will become a more serious problem, especially as a result of natural resource depletion and environmental deterioration. Optimists argue that, particularly as a result of technological

advancement, scarcity of natural resources is likely to become a diminished constraint on the fulfillment of human wants.

Natural resource availability and environmental factors are not seen as providing significant limits to economic growth. Indeed, the most optimistic thinkers see economic growth as a positive means to reduce scarcity permanently through the accumulation of capital and knowledge and other effects. Some growth optimists see global advantages through greater economies of scale and argue that economic growth results in a faster rate of technological advancement. Optimistic views about the possibility of continuing economic growth (and the view that it is desirable) have dominated economic thought for the last 100 years or so. However, rosy views about prospects for continuing economic growth are not universal, and serious doubts have been raised about the desirability of continuing economic growth. Criticism of the optimistic economic growth position, which had already gained ground in the 1960s, became more intense in the 1970s as energy prices began to rise. The view was put that economic growth, far from being a cure for the scarcity problem, will exacerbate the problem in the future.

A number of writers forecast that as a result of continuing economic growth 2 serious resource shortages were imminent and that a scenario of economic crisis and catastrophe for mankind was possible in the foreseeable future. One of the remedies suggested is to reduce the level of economic production or at least halt its growth via constraints on population increase and on the level of consumption per head. Growth complainer argues that, contrary to the claim of the optimists, economic growth can be expected to intensify resource-scarcity. Thus, the solution is seen as a problem.

This is seen to be so for one or more of the following reasons:

- The more rapid economic growth becomes, the faster is the depletion of non-renewable resources;
- Economic growth and production results in waste materials and pollution as a by-product, and this may damage natural resources and reduce their productivity and economic value; and
- Higher rates of economic growth and production can be expected to result in the extinction of a large number of species of living things and thus will reduce the productivity of natural resources, if not immediately, then eventually.

In addition, growth complainer argues that there is no reason to suppose that technological advancement will continue to more than counteract the forces making for greater scarcity, even though it has been able to do this in the past. In fact, the complainer dismisses the possibility that technological advancement will be sufficient to more than offset the forces making for greater scarcity of commodities. Of course, not all views about the relationship between economic growth and resource-scarcity are black and white, in the sense of being absolutely optimistic or absolutely pessimistic. A third view worth considering is that as economic growth proceeds, the risks of resource-scarcity increase.

However, even in relation to rising risks of resource-scarcity or economic disaster due to resource-depletion, several events are possible. These include the following:

- The probability of resource-disaster may rise;
- The penalty of resource-exhaustion may increase;

- Large or catastrophic losses may become possible even though the expected probability of resource disaster does not rise greatly. Large global losses with low probability may become possible as economic growth proceeds; and
- The dispersion of production possibilities, that is, the uncertainty of possibilities, may become greater as growth proceeds.

These possibilities are not necessarily incompatible; it is possible to hold some without necessarily accepting all the others, or to accept them all as a prediction of future consequences of continuing economic growth. But the adoption of one or more of the above propositions can be expected to make us more cautious about advocating economic growth as a means for reducing resource- scarcity and may lead us to recommend that economic growth be constrained or made to satisfy particular conditions. Any one of the above possibilities may be sufficient for risk-avoiders to reject economic growth as an acceptable policy for reducing resource-scarcity. Those rejecting such a policy cannot all be classified as pathological complainer; they may be acting rationally-that is in accordance with their objectives and reasonable perceptions of reality.

Common and Pearce (1973) have argued that risk avoidance should result in economic growth not being favored or persisted with as a policy intended to reduce resource-scarcity. Lecomber (1979) has however, criticized this view, suggesting that the risks of reduced scarcity if economic growth does not continue may be greater than if it does. While Lecomber (1979) accepts the proposition that there is great uncertainty about the eventual effects of continuing economic growth, he is unclear about whether the growth option should be rejected, especially since continuing economic growth may be associated with greater technological advancement. Whether or not economic growth will increase or reduce resource-scarcity, and in what ways, is far from being a cut-and- dried question.

Despite the waves of optimism and of pessimism about this subject, the issue is a constant one, with pessimism and optimism appearing to reflect short-term events. A sudden rise in energy or natural resource prices is likely to trigger off a wave of pessimism, and vice versa, and it is not only the general public that is subject to such waves but also many economists and academics. This may be because of a view that there is a genuine change in trend or because of the dangerous propensity to extrapolate short-term experience to the future. Or it may reflect, as Georgescu-Roegen (1976, p. ix) suggests, the opportunism of some economists (and other academics) as they attempt to ride on waves of public opinion. However, long-term advance of knowledge requires the following of a steadier path.

## **BASIC PROBLEMS OF AN ECONOMY, ARISING FROM THE CENTRAL PROBLEM OF SCARCITY OF RESOURCES**

- What to produce?
- How to produce?
- For whom to produce?
- What provisions (if any) are to be made for economic growth?

In nutshell, an economy has to allocate its resources and choose from different potential bundles of goods (What to produce), select from different techniques of production (How to produce), and decide in the end, who will consume the goods (For whom to produce).

### **What to Produce**

This problem involves selection of goods and services to be produced and the quantity to be produced of each selected commodity. Every economy has limited resources and thus, cannot produce all the goods. More of one good or service usually means less of others. For example, production of more sugar is possible only by reducing the production of other goods. Production of more war goods is possible only by reducing the production of civil goods. So, on the basis of the importance of various goods, an economy has to decide which goods should be produced and in what quantities. This is a problem of allocation of resources among different goods.

Further, an important choice among scarce resources and the production of goods as well as resource allocation is to be decided about what amounts of consumer goods and capital goods are to be produced. As shall be made clear later, this decision about the allocation of resources between consumer goods and capital goods is of crucial importance from the point of view of economic growth.

Society has to decide not only the relative amounts of consumer and capital goods to be produced but it has also to determine the specific quantity of each type of capital good and each type of consumer goods. More generally, in answering the question what goods shall be produced, society would have to choose somehow or other among scores of goods such as cars, hospitals, schools, houses, radios, televisions, nuclear bombs, wheat, rice, cloth, machinery, steel, soap, lipsticks, terylene, nylon, etc. But this decision is only half the battle.

Once society has decided which goods shall be produced, it must then give proper weights to each of the good it selects to produce. Suppose society has decided to produce wheat, hospitals, schools and cloth from the above list. The fact that resources are scarce means that society cannot produce unlimited amounts of even these selected goods. Only the question of what quantity of each of the goods is to be produced would have to be decided.

***The Problem of 'What to Produce' has two aspects:***

- What possible commodities to produce: An economy has to decide, which consumer goods (rice, wheat, clothes, etc.) and which of the capital goods (machinery, equipment's, etc.) are to be produced. In the same way, economy has to make a choice between civil goods (bread, butter, etc.) and war goods (guns, tanks, etc.).
- How much to produce: After deciding the goods to be produced, economy has to decide the quantity of each commodity that is selected. It means, it involves a decision regarding the quantity to be produced, of consumer and capital goods, civil and war goods and so on.

***Guiding Principle of 'What to Produce':*** Allocate the resources in a manner which gives maximum aggregate satisfaction.

**How to Produce**

This problem refers to selection of technique to be used for production of goods and services. A good can be produced using different techniques of production. By 'technique', we mean which particular combination of inputs to be used. Generally, techniques are classified as: Labour Intensive Techniques (LIT) and Capital-Intensive Techniques (CIT). This also implies the combination of resources that a society decides to produce goods within the available time. A combination of resources (or factors) implies a technique of production. Usually, there are various alternative techniques of producing a commodity and the society has to choose among them, each technique using a different combination of resources like labour and capital;

- In labour intensive technique, more labour and less capital (in the form of machines, etc.) is used; and
- In Capital intensive technique, there is more capital and less labour utilization.

For example, textiles can be produced either with a lot of labour and a little capital or with less labour and more capital. Availability of factors and their relative prices helps in determining the technique to be used. The selection of technique is made with a view to achieve the objective of raising the standard of living of people and to provide employment to everyone. For example, in India, LIT is preferred due to abundance of labour, whereas, countries like U.S.A., England, etc. prefer CIT due to shortage of labour and abundance of capital.

***Guiding Principle of ‘How to Produce’;*** Combine factors of production in such a manner so that maximum output is produced at minimum cost, using least possible scarce resources.

### **For Whom to Produce**

This problem refers to selection of the category of people who will ultimately consume the goods, i.e. whether to produce goods for poorer and less rich or richer and less poor. Since resources are scarce in every economy, no society can satisfy all the wants of its people. Thus, a problem of choice arises. Goods are produced for those people who have the paying capacity. The capacity of people to pay for goods depends upon their level of income. It means, this problem is concerned with distribution of income among the factors of production (land, labour, capital and enterprise), who contribute in the production process.

***The problem can be categorized under two main headings:***

- Personal Distribution: It means how national income of an economy is distributed among different groups of people.
- Functional Distribution: It involves deciding the share of different factors of production in the total national product of the country.

***Guiding Principle of ‘For whom to Produce’:*** Ensure that urgent wants of each productive factor are fulfilled to the maximum possible extent.

### **What Provision should be made for Economic Growth**

Both an individual and a society would not like to use all its scarce resources for current consumption only. This is because if all resources are used for producing consumer goods only and no provision in terms of allocating some resources for investment, that is, for production of capital goods, is made, the future resources or productive capacity would not increase.

This implies that incomes or standards of living of the people would remain stagnant. Indeed, if no such provision is made for future, the future productive capacity and hence the levels of living may decline. For, in the absence of this provision, the stock of capital would fall due to depreciation as a result of its use for producing consumer goods in a period.

This is better expressed by quoting an old Chinese saying which states. “He who cannot see beyond the dawn will have much good wine to drink at noon, much green wine to cure his headache at dusk and only rain water to drink for the rest of days.” Therefore, a wise individual or a society likes to provide for its growth of productive capacity. This requires that a part of its resources should be devoted to the production of capital goods and for

promotion of research and development activity. The capital accumulation and technological advancement achieved in this way would enable the society to produce more of consumer goods in the future and ensure higher living standards for its people.

It follows that provision for capital accumulation and technological advancement implies sacrifice of some current consumption. Therefore, a society has to decide how much saving and investment (that is, how much sacrifice of current consumption) should be made for future economic advancement. The pangs of the sacrifice of some current consumption for promoting economic growth are greatly felt in less developed countries like India where not only the present consumption levels are very low (and therefore any sacrifice of current consumption is handwriting) but also the need for economic growth is very pressing.

## **CONCLUSION AND RECOMMENDATION**

The natural resources of any country contribute significantly to its economic development through increasing production and manufacturing, securing energy supply, increasing export revenues and reducing costs for local businesses and households. The extraction of natural resources can be done on a number of scales. The study further highlights how scarcity dictates what economic decisions to be made regularly in order to manage the availability of resources to meet human needs. Though scarcity of environmental resources and services may be very high in certain regions of the world, the economic value generally placed on them is often underestimated and close to zero. In many cases this has led to an unsustainable path of economic growth. Scarcity falls into three distinctive categories: demand-induced, supply-induced, and structural. Demand-induced scarcity happens when the demand of the resource increases and the supply stays the same. Meanwhile, scarcity affect the socioeconomic in various ways which includes; destabilizing social effects, specifically: lower agricultural production, economic stagnation or decline, migrations from areas of resource scarcity to areas of perceived opportunity. While few recommendations were made;

- Scarcity, or limited resources, is one of the most basic economic problems we face. We run into scarcity because while resources are limited, we are a society with unlimited wants. Society should produce, distribute, and consume an infinite amount of everything to satisfy the unlimited wants and needs of humans.
- Efforts should also be made to improve resource efficiency by price resources in a way that fully reflects their life-cycle costs in both economic and environmental terms.
- Introduction of standardized methodologies for analyzing product life cycles. Such methodologies like the use of manual on measuring material flows and resource productivity and carried out should take into account that reserves of raw materials can be dynamic.
- Introduce a single, consistent method of measuring the sustainability of specific sources of materials, taking into account the impact of economics, advances in geological understanding and new technologies.
- Policymakers can influence the supply of, and demand for, resources in a myriad of ways, such as through regulation, feed-in tariffs, taxation, targeted research, international cooperation and, to some extent, by guiding market forces through

- communication campaigns and public-private partnerships. With so many causes and potential solutions, it is tempting for policymakers to tackle all the varied facets of the resources market at the same time.

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