CONSIDERATIONS REGARDING REMUNERATION OF THE FACTOR OF PRODUCTION "ORE" - THE MINING RENT SYSTEM IN ROMANIA

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ABSTRACT: *The setting mechanism of the remuneration proper to the factors of production is not different from the merchandise price determination, in this case the type of the market pattern being. When the price of the production factors is determined it must be considered both the type of the market where the goods are sold (as output of the manufacture process) and the type of the market where the production factors are provided (engaged). Among the incomes determined by using the production factors mix, the rent represents a very important one. Due to its long term existence, the revenue of rent is one of the economical notion, which has the largest application and the most different signification. For a long time, the rent was attached to the use of the natural resources, especially to those of the earth. Nowadays the application area of this notion has been extended over some other factors of production. In Romania, on the ground of the mining branch development, there were not too many reason of the economic efficiency and the theoretical developments with reference to the costs generated by using the factors of production were ignored. The correct substantiation of the decisions with reference to the application of the national mineral potential can't ignore the costs generated by the remuneration of the production factor in the mining revenue system.*

KEY WORDS: *factor of production; mining industry; deposit of useful minerals; mining rent; economical rent; differential rent; absolute rent; monopoly rent; exhaustibility rent.*

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1. THE SYSTEM OF MINING RENTS

The deposits of useful mineral substances display singular features, not possessed by any other factor of production. The engineering dimension of their commissioning is unprecedented and the economic issue generated is highly complex. The mining rents system reveals a microeconomic dimension of the process and it represents the object of regulations at a macroeconomic level. Knowledge on the aspects related to their manifestation and determination forms is essential in the approach of a correct setting out the costs influencing the decisions on the factors of production deposit and capital.

1.1. THE ECONOMICAL RENT

The classic economic theory shows that when establishing the price of variable factors of production, on the basis is their marginal product. However, the fixed factors of production do not have a marginal product. In consequence, their prices should be explained and determined in some other ways. The theory of setting out the production factors with a fixed offer is based on the concept of economic rent. The economic rent represents that what is to pay additionally to a production factor, related to the requested remuneration in order to sustain it in its current use. In other words, "the economic rent represents the amount paid to a factor of production, above its opportunity cost" (Simionescu & Mangu, 1999). If a factor of production does not have an alternate use, that means it is characterized by an opportunity cost equal to zero, i.e. its whole remuneration is economical rent.

1.2. THE DIFFERENTIAL RENT

David Ricardo had developed a vast analysis concerning the formation of differential rents in agriculture and taking possession of them by the landholders. With small alterations, the conclusions he reached to are applicable in the case of useful mineral substances exploitation as well. However, the landholder will be replaced, at least in case of Romania, by the state, in its quality of proprietor of all mineral reserves in the soil. Taking possession of the differential rent by the enterprises in the extracting branch of industry is done in the same manner as in the case of agriculture. If the deposit is identified and attracted into the economic circuit by the state and if there is no competition in the mining industry (if similar deposits are not leased to private economic agents), the differential rent will fully revert to the state. Though, the deposits of useful mineral substances cannot be a priori wholly known and by this they cannot be adequately assessed both from the point of view of the volume of reserves and the opening and exploitation expenses. However, unlike agriculture, in the mining industry taking possession of differential rent is not a simple division but depends upon whether deposit proprietors exist or not, upon the applied strategies and upon the relations existing between the mining units. In practice, the newly discovered deposits are characterized by lower contents in useful elements and/or more difficult exploitation conditions, these natural factors determine higher exploitation costs and implicitly the mode of getting differential rent from these new deposits.

1.3. THE ABSOLUTE RENT AND THE MONOPOLY RENT

The absolute rent is represented by “the income received by all deposit proprietors regardless of their quality and it results as a difference between the selling price of the resulted mining products and the production costs involved” (Răducanu, 2000). The monopoly rent represents “the supraprofit obtained by the proprietor of a deposit having special features, that produces and offers in small amounts, mineral products with special qualities” (Răducanu, 2000). This type of rent is not based on the “natural” property over the deposit but on the ability of those who exploit it to control the offer. The absolute rent's maximum is determined by the market price of that useful mineral substance's substitute.

1.4. THE EXHAUSTIBILITY RENT

In case of exploitation of useful mineral substances deposits, in the attempts of giving an answer to the issues regarding the way of determining the absolute rent and the monopoly rent, Harold Hotelling identified a new type of rent, the exhaustibility rent, as an answer to the question: “what is the minimum amount below which a proprietor would never consent to lease a deposit for mining purposes?” (Hotteling, 1931). The depletable character of the useful mineral substances deposits rises though another legitimate question: “what amount should the proprietor be given for his property rights over the deposit, right that would be transferred to the one who is exploiting the deposit, since by leasing he loses definitively any possibility of future profit?” (Răducanu, 2000). The exhaustibility rent represents, in case of a perfect competition between the deposit owners, absolute rent's ceiling.

2. DIVIDING THE RENT AMONG PROPRIETORS AND THE ONES LEASING DEPOSITS FOR MINING

Within the mining branch, the way of obtaining a rent differs from the one in agriculture, due to the fact that there is a clear distinction between the rents obtained through own efforts and the ones created “by the market” as object of challenge among competitors.

In the first case we talk about the absolute rent, created and obtained as effect of fiscal measures imposed by the state owning the useful mineral substances deposits.

In the second case differential rents can be found, as well as the so-called “temporal rents”, obtained only in certain short periods of time. In both cases, for economical reasons more or less known, the high variations of prices for raw mineral materials and energy are disregarded. In fact, the temporal or conjectural rents are included in the absolute rent's category because they are obtained by all proprietors of deposits in exploitation and they occur for as long as the prices for raw mineral materials are high. When the prices decrease, the marginal mines start to work in losses, so that the ones who exploit deposits having better geological-mining conditions get the differential rent, obtaining profit as well. Thus, the previously shown rents may be considered as “structural”, since they are obtained above the conjectural rents levels - which are as higher as the variation in the exchange rates on the currency market is higher.

The principle of sharing the conjectural rents is simple enough because, without great difficulty, all participants and each of those obtain big profits in case of a favorable exchange rate, profits that could help in compensating the losses within the decline period of time. The fiscal policies of the state, that ensures this way of dividing the rents, can lead to difficulties in applying them without solving the essence of the problem in possession of the absolute rent.

The biggest difficulties occur regarding taking possession of the differential rents, considered “a nature's gift”, so incomes that cannot be automatically allotted to one or another of the participants. In this case, the arguments that both parties could have is the issue in question.

In case when the state is the owner of the mineral resource reserves that are in exploitation, this one assesses the deposits thus also the differential rent that it could obtain in relation to other competitors. If there is a competition between the state and the capital owners, the state has the power of taking possession of all the differential rent. Moreover, its sovereignty over the marginal mines leads to not exploiting them, if the state cannot obtain a minimum profit to cover its expenses in these mines. In other words, when the problem of reconstruction is posed, at least theoretically, of the marginal mines, those deposits that can get a differential rent and a minimum of absolute rent are considered.

In case when the mining companies have as a fundamental long term objective to recover the invested capital, the problems showed below occur.

From an entrepreneur's point of view, it's normal that the biggest part of the rent to belong to him in order to cover at least the technological research expenses made and the infrastructure built, as well as the so-called risk bonus justifies by the exploratory activity that is much more risky than any other type of industrial activity. So, the profit rate took from the activity of discovering of new reserves to be higher than the one took from exploitation process itself would be the problem posed. Such an outlook is based on the fact that the investor has the credit, at least partially, of discovering a deposit of mineral resources without state's money, this deposit being previously unknown. If the investing companies impose this point of view, there is a danger, at least at a local level, in order to have successful exploration operations, a high rate of profit to be needed. In this manner, the mean rate of profit per branch would be superior to the others in other branches of industry, with little risks, without the market price to surpass the production cost in marginal mines. Otherwise, it means that the hope for profit, mathematically speaking, is no higher in the extractive branch than in other branches showing lower risks, fact that could determine the investors to change their decision regarding exploration of new perimeters. There are opinions defending the idea that this part of the rent should be rightfully granted as mining rent to those who actually exploit the deposit in cause, motivated by the fact that this activity has a high degree of risk.

From a point of view of the state, it seems legitimate the claim from companies for a medium (normal) return of the capital directly invested in the state's deposits, but it's disputable that these companies claim a part of the rent which is determined by the deposit's quality, the natural capital quality, part that represents, as a matter of fact, a risk bonus, difficult to assess but which is used in practice for exploring the whole land.

The state has full justification to adopt such an attitude, rather than wait for the moment when the deposit will be exploited by a national public company that would take possession over the whole differential rent. These two positions are contradictory, fact that imposes finding a compromise for dividing the differential rent: how much has to be allotted for the company that invested in deposit exploration and assessment and how much allotted for the state. In practice, this compromise is materialized in different fiscal dispositions, as the commissions for deposits reconstruction, that authorize companies to provide certain deductible sums from the dutiable income, in conditions if these amounts would be reinvested locally. This type of compromise will not completely regulate the conflict. In reality, the part due to investor companies and the part due to the state depend upon the ratio of the two parties forces, as well as upon the multitude of factors as each one's ability to surpass the other or to place him at an inferior level in the competition fight on the market. These factors are influenced by the political and geopolitical environment, and most of all by the manner the foreign capital can be attracted for investment in the mining branch of industry.

The consequences of rent dividing differ from one country to another and from one deposit to another. Generally, the companies are not interested in the level of exploitation costs themselves for a certain deposit, but in that what is due after selling the mining products, respectively after payment of fiscal duties. Thus, if the manufacturing countries possess deposits in the best geo-mining conditions, they will obtain different forms of rents, and exploitation would be performed by private companies or public companies. In case when the governs of those countries wish to make the capital invested efficient, the companies would direct towards the zones with low fiscality, even if the production costs are higher and the risks involved in exploiting these deposits are also higher. In this zone the state retains most of the rent because it assumes the risk of geological researches, and their intensity depends upon its own long term development strategies and politics. In these conditions, it can be assessed that the manner of dividing the rent on geographical areas explains extendedly the exploiting methods for the useful mineral reserves that, at their turn, will have an influence over the future offer structure.

Therefore, if the producing states hold a big part of the rent without reinvesting it in exploration, thus without design it for covering the underground research expenses and the risks assumed by the companies specialized in geological research, then the extractive branch of industry is unable to self-finance. Without a capital infusion from outside this branch or from govern authorities, thus without an exterior risk assumed by these, the exploration activity will be insufficiently financed from inside the branch due to the lack of capital, and the volume of the discovered reserves will progressively decrease, fact that will lead to a pronounced shortage in raw materials and energy, implicitly leading to occurrence and/or stressing the economical imbalances.

In order to eliminate these imbalances, the countries with reserves of mineral resources practice a price named “for the exploitation rights” that, theoretically, is equal to “the present value of the future incomes foreseeable to be granted to the investors, thus equal to the updated value of the rent” (Răducanu, 2000).

But the value of these rents is impossible to be accurately foreseen; the effective cost of exploiting a deposit reflects in reality the participant's prognosis regarding the price evolution for the useful mineral substances extracted, as well as the evolutions of fiscal policies and any other factor that could influence the size of the rent in the future.

In conclusion, the differential rents will always exist, but the manner of sharing and taking possession of, according to the microeconomic logics, is influenced by political and geopolitical factors, as well as by the competition level among the processing branches and among the proprietors of deposits of useful mineral substances.

Geographically, rents division is influenced also by the specialty companies according to their exploratory objectives, thus to offer alteration in a certain time horizon, that at its turn depends upon the outcome of the marginal mines, upon the importance and location placing.

3. THE MINING RENTS AND THE FISCAL LEGISLATION IN ROMANIA

If at a microeconomic level the issue of the mining rents is solved from a theoretical point of view, we cannot say that things are the same at a macroeconomic level.

In Romania, according to the Constitution, the mineral wealth underground cannot become the subject of private property, but only of public property. Bringing them into use can be though carried out by enterprises with private capital. In other words, the legal framework was created to regulate the private capital participation both in prospecting and exploring mining activities and in the development and exploitation activities. In fact, at present, authorized voices suggest that the Romanian mining surviving itself is connected to the way it will be able to attract private capitals.

Through the present Law of Mines, a taxation system was established for the mining activities. This system doesn't take into account the source of capital in the mining operators and shows two fundamental components: one that encompass the form of taxes as lump sums and another one in form of the due.

The amount of taxes accompanying mining activities was established as below, the following levels: for the prospecting activity, 250 lei/km^2; for the exploration activity, 1.000 lei/km^2 (the values increase twofold after 2 years and become 5 times higher after 4 years); for the exploitation activity, 25.000 lei/km^2.

The mining due was settled out as a percentage of the mining production amount, differentiated on categories of useful mineral substances, as the following: coal, ferrous ores, non-ferrous ores, aluminum ore and aluminous rocks, noble metals ores, radioactive metals ores, rare and dispersed metal ores, mine waste by-products, bituminous rocks, 4%; non-metallic minerals, 10%; ornamental rocks and precious and semi-precious gemstones, 15%; haloids salts, 10%.

From a fiscal point of view, the mining enterprise don't benefit of any special treatment. Additionally to the current fiscal tasks, these companies are subject to the previously presented taxation system. In relation to this, at least two aspects can be called upon: lack of a rigurous scientific base of establishing the amount of these fees, respectively the manner these are spent by the collectors (The National Agency of Mineral Resources, respectively the State Budget).

4. CONCLUSIONS

The theory of income distribution shows that the process of establishing the prices for the factors of production isn't different in any way, as concept and methodology, from the process of establishing the prices for the merchandises, the determining factor is still the type of market structures. Moreover, the Euler and Clark-Wicksteed-Walras theorems (named the theorems of "product's exhaustion") show that a factor of production remuneration will never be performed in the prejudice of others.

As factor of production, the deposit shows a special feature: the fixed offer (perfectly inelastic or very less elastic). This particularity imposes taking into account, in the process of price defining, the cost concepts for economical opportunity and rent. As the offer is less elastic, the economical rent of the production factor is higher. When the offer is completely inelastic, the whole remuneration of the factor of production is rent.

Having as a marker the agriculture, David Ricardo approached the issue of ground rent developing the concept of differential rent. The conclusions Ricardo reached to, and the concept itself, are applicable in the case of exploiting useful mineral substances too (where the diversity of conditions and features is highly amplified in report to the categories of agricultural terrains).

In the past 50 years, worldwide, the increasing importance of the mining branch of industry led to growing concerns relates to the rents issue. The theoretical basis was developed and its field of applicability was extended. The concepts of monopoly, absolute and depletion rent became common in the works within the mining branch economy. Unfortunately we cannot say the same about Romania.

Issues of the above mentioned nature can be solved only if started from the form of property over the mineral resources in Romania and if taken into consideration the experience of the states rich in mineral deposits of public property (as for example is Russian Federation). Having this in view, a model for identification and defining the size of rent components should be created. In consent with the worldwide unanimously accepted opinions, exploitation of useful mineral deposits which are public property must ensure compensations for:

- the land withdrawn from economic circuit as consequence of mining activities (at the level of the profit that would be brought by the best use of the land, in the conditions of a medium value of agricultural or forest production), thus a rent for the land;
- the damages inflicted to the terrain as consequence of mining activities (affecting especially the water supplies and vegetation), at the level of the additional

expenses involved by an identical utilization of the land with the previous one, thus a “loser's rent”, a rent of the one supporting the damages;
- the whole people as proprietor of reserves (at a level left open for discussions), thus a civil rent;
- reserve depletion, considering their non-regenerating character (that what already was mined cannot be restored in historic times), thus a rent of depletable resources;
- the capital proprietor invests it in the mining branch, this way avoiding other uses, thus a mining rent.

Even if at the base of the present taxation system for the mining activities in Romania lay maybe, considerations similar to the previous ones, the lack of accurate provisions regarding the destination of financial resources accumulated at the level of the state departments having responsibilities in this field, results in a non-efficient system in its present form. In the countries with a developed mining, such a system was conceived in favor of this branch, but in Romania this goal is far from being attained.

Considering the above presented, a few conclusions can be drawn:
- the mathematical model of rent calculation should be based upon consolidated macroeconomic indicators, that could reflect the overall efficiency of the national mining branch;
- the mechanism of rent establishing and collecting is not possible to efficiently operate if it is isolated from the mechanism of rent distribution at national level;
- each citizen is co-proprietor of the national mineral wealth and is authorized to obtain (in form of public interests works and actions initiated by the central authority) his adequate share from the mining rents;
- the rent issue connected to deposit exploitation is a complicated one and it must be looked upon in the light of the new relationships at international level, between the resource owners and the ones which exploits them;
- a special training in the field of the mining rents is necessary, but Romania, to the best of our knowledge, didn't take any action in this direction.

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