

MPRA

Munich Personal RePEc Archive

Analysis of the relationship between cost, price and profit in lignite extraction

anca ciumag and marin ciumag

University of Constantin Brancusi Targu Jiu, Romania

27. November 2010

Online at <http://mpra.ub.uni-muenchen.de/30969/>

MPRA Paper No. 30969, posted 19. May 2011 09:48 UTC

Analysis of the relationship between cost, price and profit in lignite extraction

Ciumag Anca, economist, PhD
DGFP ILFOV

Ciumag Marin, economist, doctor
DGFP GORJ

ABSTRACT

From the point of view of coal consumers, which is visible to the naked eye is the price and size and its size dynamics is necessary for attention to anyone, due the fact that directly or indirectly, everyone in the situation of power buyer.

In the area of lignite extraction, it is maintaing the relationship between the cost and profit. The law of demand and supply makes also the demand causes by the price and also the obvious changes in demand lead to changes in production.

Production cost level is the critical threshold of profitability and as such, the manufacturers will be willing to supply at a price below cost. Dependence of the price arises also to the cost.

At the same time, between the costs and profits, there is an inverse relationship. In order to maximize profits, in the extraction of lignite areas, is required to identify solutions to reduce production

Key words: cost, price, profit, lignite, production.

The relationship between cost, price and profit

In recent years in Romania, the economic literature seems to have overlooked the issue of costs to be avoided, probably because inflation has brought to the forefront of general attention – the prices. From the consumer point of view what the eye sees is the price, and size and its dynamics are necessary attention to anyone because everyone is in the position of the buyer. People in their position of "last evaluators" of goods, can not do a cost analysis or have no alternative than buying from the market. As happens with most traders who can not afford to import needed goods directly.

As well as in other activity fields, in lignite extraction area is maintaining mutual conditioning of cost and profit. The law of supply and demand here is that the application is subject to price and demand changes obviously lead to changes in production. In turn, influences the price change by changing production direct influence on the cost of lignite fixed costs, underlying cost pricing.

Production costs level is the critical threshold of profitability and as such, manufacturers will be willing to supply at a price below cost. Dependence of price arises as to the cost.

At the same time, between the costs level and profits achieved, there is an inverse relationship. In order to maximize the profits, coal producers working to identify solutions to reduce production costs. This explains our guide to the cost analysis below.

Obviously, between price and profit is a directly proportional relationship, but such pricing is based on supply and demand should increase their efforts to reduce costs.

The market economy has another way to perceive and treat the cost of products completely different, even opposed to the centralized. In the past, it was enough to argue more or less thoroughly increased costs to support an objective that should take place increasing the price. In a market economy the price requires the cost. No one produces a good if could not sell it and can not gain from such an action. But for this, he must start from what the market says and especially at the price that is formed here by bidding, according to market supply and demand.

A manufacturer enters the market when and if its cost is less than the price, in this way will do everything to lower their costs. He will leave the market, but will leave when its cost becomes higher than the price for that loss. It will come as the price for imposing market manufacturer, and he can act directly only on the cost.

In terms of appropriate rules, the price should remain a fixed size of the market situation. Of course, competition law may provide certain exceptions, but we seen the rule. Compared to such a possibility, the realities of our country are lagging behind. Insufficient transformation of the economy, keep our old procedures within the fuel areas.

Four major causes keep high costs related to the lignite extraction energy: the state monopoly or virtual monopoly they have on the market, inertia of old economic mechanism, the dissolution of managerial authority and unleash the consumption and labor rights without reasonable limit compared with other industries.

Stiffness costs to decreasing resulting not from achieving organizational and technical boundaries, but from the fact that nature trials are likely to diminish their weaknesses, inconsistent, difficult to initiate, spray responsibilities, have numerous drawbacks because the owner is still in full public support to stoicism depersonalization or even favors.

It can not make the problem so as the price to determine the cost. Competition is lacking or is only mimicked, the owner is or becomes insensitive to losses only under careful constraints of the IMF and World Bank require of these institutions when pursuing their own interests. It was like us the prices to impose the costs of mining lignite process.

Production costs structure

By definition, the cost is relevant to resources consumed size.

Production costs are thus the sum of all expenses for consumption all factors of production which entities carry out for the production and sale of material goods or services. From this brief definition it states the followings:

a) cash cost of production is a form of expression in the consumption of both material and human factors in the production of material goods and in services;

b) the production cost includes in everything that expenditure (consumption factors) reported by manufacturers, both for actual production of goods and for their disposal;

c) the production cost expressing the form of spending money, regardless of their size and importance, allowing a common denominator to bring the cost of different inputs and have therefore become possible to measure and compare them.

The production cost is a main factor in the success or failure of a firm. The cost may depend on the size of the firm activity and especially the size of profit obtained.

In order to obtain a given volume of production entrepreneur uses raw materials, materials, energy, middle-made twchich has to be processed, equipment, workers of different skills. The cost function links the production cost of optimal product qualities. The entrepreneur problem in such cases is to choose the level of production for which its profits will be highest, they create the conditions necessary for any level of product price will be of an associated company of which offer ways of formation and characteristics must be specified.

The set refers to a short period in which a manufacturer can increase its profit, as far as production capacity allows it. Short period is therefore characterized by using the same equipment, changing production levels is done by changing the amount of labor and raw materials. The long period is defined as the occurring changes in the size of production and technically equipment. Short and long period are therefore defined in terms of time calendar, they will vary depending on the type of entity or product.

Cost of production is an indicator for use with a long areas, his calculation takes place in all entities producing goods, as well as those providing services. Economic and financial autonomy of economic activity requires a thorough knowledge of measurement and cost.

Also the cost of production is an economic indicator with a great reflection of the quality work force. Cost criterion serves as the foundation of the options and decisions of each producer, where the effects or results of the drafts are identical, the criterion for choosing the optimal variant is the lowest cost

There is a typhology which contains many types of costs:

A. The total cost is defined as all the costs which are related to a given production volume. Such are:

1. Cost (costs) fix (fixed), independent (independent) to production volume. These are costs incurred by the company under any circumstances, whatever its level of activity: rent, insurance, routine maintenance, depreciation of fixed capital, interest, some of these overheads. All these are expenses to be incurred regardless of production levels, even if it is zero.

2. Cost (costs), variable (variable) changes depending on the quantities produced. Some of these costs may vary in strict proportion to output: for example, raw material consumption. Other costs may vary disproportionate technical reasons. Production costs will therefore be an increasing function with varying production levels;

3. The total cost represents the entirely sum of all fixed costs and variable costs.

B. The marginal cost is defined as the increase caused by increased production by one unit. As this increase in the cost depends to the increased of production, analysis the reasoning, is based on increases small tiny (in the case of divizable production factors) and the cost marginal appears as cost function derived of total cost function and of course that the derived of variable cost function.

C. Average Cost (unit) is the cost per unit of product or effective unit.

We will distinguish, resuming types of overhead costs highlighted above, three types of average cost:

1. Average fixed cost - fixed cost is borne by each unit. Average fixed cost decreases as production levels increase;

2. Average variable cost - variable cost is borne by each unit. Average variable cost is generally reduced when increasing production;
3. The average total cost - total cost is borne by each unit. It also reduces the overall average cost for output growth.

The cost – expense relationship

In the specialty literature there is a diversity of views on the concepts: cost, production cost, cost, price cost, both in theory terminology as well as in economic practice is not uniform.

Worldwide, the first attempts to define these categories specific to economic production process took place in Germany by N. Nicklisch professor, foundation theoretical concepts concerned by Professor E.Schamallenhach and further developed by K. Mellewicz.

In the context of the definition given by Schamallenhach “the expense is the expression value of the goods they consume, there are or are lost at the expense of the enterprise with or without distinction within or outside the enterprise perimeter”.

Z, Szipeti, considering the definition of Schamallenhach considered “for employment of consumption in the category of expenditure is not important the place and purpose to be carried out, only the period of time”.

In the production process, by making the changes of production factors clear inputs the products required the company and on the other hand the costs of production that locates on the product, becoming the inside elements of production cost. Costs are designed in some studies as part of the cost of production, namely the part related to final production. After these views the difference between production costs and costs is the cost of unfinished production. From the theoretical point of view, differences between production costs and the costs would be that while production costs would be generated by consumers the better value for periods determined by the values of the products within a given period, allowing calculation of production cost.

In the entities frame, the costs and expenses shall be made successively, not simultaneously.

In a didactic and scientific works published in our country, there are divergent views on the concept of production costs or to replace it with the cost of production or maintenance of both concepts, since the location of production costs by product would lead to production costs. According to some opinions, the concepts of the production expenses and production costs are encountered in practice outside the cost price category. These theorists consider that the concepts of production expenses and production costs thus identify both concepts expressed in the form of money, consumption of inputs to manufacture a product and the price includes the addition of cost and expenses of the company sales and and consumer items that are not inputs.

Knowing the cost of production content requires consideration of its relation to the sale price.

Between production cost and selling price there is a relationship as part of the whole, because the cost of production must always represent a part of the sale price that is only what is an expense borne by the producers of goods and services provide cost price selling surplus production is generally known as profit.

In market economy conditions, maximizing this surplus represent the goal that aim the producers.

Classification of expenditures and their contents in lignite mining framings

Classification of expenditures on primary expenditure items, input consumption ranks in the cost structure, having their economic nature, as follows:

- raw materials, basic and auxiliary materials (outside);
- recovered waste (minus);
- fuel, energy, water (outside);
- depreciation of property;
- works and services performed by third parties;
- other material expenses.

All this made TOTAL MATERIALS COSTS. When we have added:

- expenditure on wages and other similar rights;
- insurance and social protection;
- work with other living expenses

resulting TOTAL LIVING EXPENSES WORK.

This cost structure of the primary expenses items is used by SNLO and subordinate units as follows:

A. Material expenses consisting of:

- Raw materials and materials for production;
- Energy and water from outside;
- Depreciation of tangible and intangible;
- Works and services performed by third parties for the production of:
 - Maintenance and repair costs;
 - Fees, expenses, premises management and rentals;
 - Expenditure on studies and research;
 - Transportation costs of goods;
 - Postal charges and telecommunication charges;
 - Rents for personnel housing costs;
 - The cost of coal and heating allowances;
 - Transportation costs of goods and personnel by third parties;
 - The cost of preparing meals;
 - The cost of security objectives, performed by third parties;
 - Spending Christmas tree;
 - Expenses for advertising and publicity;
- Advertising and other expenses:
 - Other expenditure falling material;
 - The cost of inventory items;
 - Expenditure on materials not stored;
 - Spending on goods;
 - Expenditure on packaging;
 - The cost of discovery of reserves;
 - Other operating expenses.

B. Living labor expenses consist of:

- Staff salaries for production;
- Insurance and social protection for production staff;
- Other expenses that alive work we have:
 - The cost of insurance premiums;
 - staff costs;
 - Commissions and fees expenses;
 - Entertainment expenses;
 - Travel expenses, secondments, transfers;
 - Banking and similar expenses;
 - Other taxes, fees and similar;
 - Expenditure of staff training;
 - Geological expenses;
 - Taxes on land;
 - Tax on buildings;
 - Fee for checking the measuring devices;
 - Fee for transportation;
 - Charge of sanitation;
 - Auto insurance premiums;
 - Premiums can tell is personal;
 - Bank interest;
 - Prime retirement age;
 - Penalties allowances;
 - Death grants;
 - Other expenses that alive work.

Classification of production cost calculation items (which represents expense's destination) shall calculate the cost per unit of product.

Production cost structure to a minimum form can be presented as such.

- Raw materials and direct materials;
- Waste recoverable;
- Direct salaries;
- Fees based on salary and other personal rights.

All this constitutes TOTAL DIRECT COST. If we add:

- Equipment maintenance and operation costs;
- Overheads of the department

will obtain COST SECTION. Adding also:

- General costs will undertake to obtain FACTORY COST. To this we bring:
- Cost of sales

and we get FULL COMMERCIAL COST.

Within SNLO frame we use the following cost structure calculation items, adopted to specific needs and lignite mining activity:

- Direct aids and materials;
- Depreciation of property,
- Repairs
- Direct salaries,
- Salan-related contributions,
- Overburden,
- The discovery of reserves,

- Special services

All these items constitute DIRECT EXPENSES. Then we add:

- Equipment to maintenance and operation costs;
- Common costs of the department

and we will get SECTION COST. Adding here:

- General administrative expenses

and obtain FACTORY COST also adding:

- Cost of sales

we get the FULL COST COMMERCIAL.

Conclusions

Given the new economic realities and transformations that they have imposed to life entities, we conclude that the orientation of management accounting is required to calculate the lignite cost to the following objectives:

- shift from the concept of product cost (product concept is becoming increasingly new: a composite of physical and difficult to characterize services) to the concept of cost of activity (according to the new vision - all main activities are in the process of production or distribution);
- transition from cyber tuning system (which work against a stable structure) to apprenticeships(requires the constant changes imposed by the current environment) under the today conditions(the normal situation of the company incyberspace mode) becomes excellent, and imbalance becomes the normal situation, and the system should be improved and cyber integrated in a larger system of apprenticeship or self – organization).
- shift from costs mastery to value mastery by putting in the foreground the value creation process.

The implementation of these objectives creates conditions for the management entity to control and monitor expenditure on each activity in order to take operational measures to reduce them. A first step in this direction is to establish activities settlement and spending of their size. In this way it ensures the continuous comparison of actual expenses with pre-operatively expenses to determine deviations, then by analyzing the cases can proceed to establish measures to control the situation and return to normal cost activity, responsibility for managing the business value is delegated to the task manager. Breakdown of expenditure within an activity must be conducted so as to ensure their appropriate control without the need for detailed calculations reduces the efficiency with which it must be carried over.

By delegating authority and assuming different responsibilities at work activity level, on cost control is aimed not to only to reduce those costs but also achieve this reduction at the right time, not having gone through a long period of time and finding cost overrun for a scheduled energy product.

Calculation of expenditure to the activity level, analysis and application of ways to continually reduce the cost provide real opportunities for profitable participation of the establishment of material market.

References

1. G.A. Frois – Political economy, Humanitas Publishing House, Bucharest, 1994.

2. Schamallenbach, E. – Kostenrechnung und Preiapolitic, Kola, 1963.
3. Szipeli, Z. – Contributions to the concept of specifying the charges and the cost price of industrial production, Journal of accounting no. 7 / 1971.
4. Staicu C. and collective – Accounting of economic entities, Universitaria Publishing House, Craiova, 2009
5. Hennie von Greuning – International Financial Reporting Standards, Practice guide, Irecson Publishing House, 2007
6. Accounting Law no. 82/1991, republish, amended, Official Gazette no 454 / 18.06.2008.