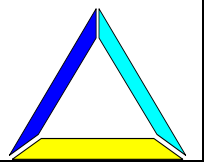
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Price distortions in the Ukrainian coal sector and how to overcome them

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0. Summary

The Ukrainian coal market is characterized by severe distortions of prices. Due to the devaluation of the Hryvnia in 1998 actual reference prices (prices which determine the level for subsidization) set for Ukrainian coking coal are not only lower than prices for imported coking coal but also lower then actual market prices for coking coal in Ukraine. This leads on the one hand to high losses or to high budget subsidies for the coal industry and on the other hand to tremendous rent seeking, mainly of intermediaries or to implicit subsidization of the metallurgical production.

In addition current price distortions create an artificial deficit of coking coal. As prices for raw coking coal are lower then prices for raw steam coal, power plant purchase coking coal in order to produce electricity.

The mining industry seems to suffer most from these price distortions and remains in bad conditions. Neither did the billions of Hryvnias subsidies from the state budget help to improve the conditions of the Ukrainian coal industry nor did the coal industry benefit from the fact, that the devaluation of the Hryvnia in 1998 made the officially indicated costs of coal production competitive. The amount of state subsidies did also not decline. On the contrary, the amount of direct budget subsidies increased from 1.591 bn UAH in 1999 to 1.844 bn UAH in 2000. The intention of the government to introduce auctions for coking coal in order to abolish the price distortions have not been successful so far.

The main of the presented analysis conclusions are:

- As far as **actual market prices** (prices of direct bilateral contracts with metallurgical plants) **for coking coal** (about 207 UAH/t) **are above the determined reference prices** (about 160 UAH/t), as a **first step**, current **reference prices should be raised up to this level.** This would **reduce the respective subsides** (difference between costs and reference price). Otherwise, coal mines will continue to sell their coking coal to intermediaries at the prices below market prices.

- On a **second stage**, **reference prices should be increased up to international market prices** (prices at which Ukrainian metallurgical and coke plants could import coking coal). This would enable a larger number of coal mines to cover their costs and to improve the performance of the whole sector.

- There is a relative but not an absolute technological dependence between metallurgical enterprises and the respective characteristics of coking coal. Although the organization of the whole coking coal market via auctions would not be realistic **spot markets of surplus coal could play a certain role, especially as reference for price setting mechanisms in long term contracts**. Spot markets could be organized as voluntary auctions of surplus coal (i.e. amounts not sold under long term contracts), but would not function until dependence of mines from intermediaries is reduced by raising the reference prices up to the contract prices. Such auction would also help to increase transparency of transactions of the Ukrainian coal market.

- **Privatization of profitable and potentially profitable coal mines** would also increase transparency of transactions and would allow mines to become independent from the intermediaries. **Restructuring of the current debts** of the mines would be a precondition for privatization. It would also help to make the mines independent from the intermediaries, but only if **simultaneously bankruptcy procedures** would **be consequently carried out** in order to avoid accumulation of new debts.

- Ukrainian government along with the Verchovna Rada should also **abolish cross-subsidization of the coal sector by other industries**. If the coal mines cannot pay regresses by themselves then they should be explicitly paid from the state budget.

- **Distribution of subsidized coking coke in accordance with a coking coal balance is a measure of soviet time planning** and is far apart form market mechanisms. In a market economy instead, there is freedom of contract and market prices are determined by demand and supply. **Selling coal at subsidized prices would in fact mean an indirect subsidization of the metallurgical production at the expense of the mining industry or the budget respectively.**

- **In cases where subsidies would still be necessary** - for example for mine closing and retraining of miners or until a mine would be closed - **they should follow a determined and transparent procedure and schedule and should be subject to public control**.

1. The Problem

The Ukrainian coal market is characterized by severe distortions of prices. This leads on the one hand to high budget subsidies for the coal industry and on the other hand to tremendous rent seeking, mainly of intermediaries. The mining industry seems to suffer most from theses price distortions and remains in bad conditions. Neither did the billions of Hryvnias subsidies from the state budget help to improve the conditions of the Ukrainian coal industry nor did the coal industry benefit from the fact, that the devaluation of the Hryvnia in 1998 made the officially indicated costs of coal production competitive. The amount of state subsidies did also not decline. On the contrary, the amount of direct budget subsidies increased from 1.591 bn UAH in 1999 to 1.844 bn UAH in 2000. The situation in the coal mines even worsen.

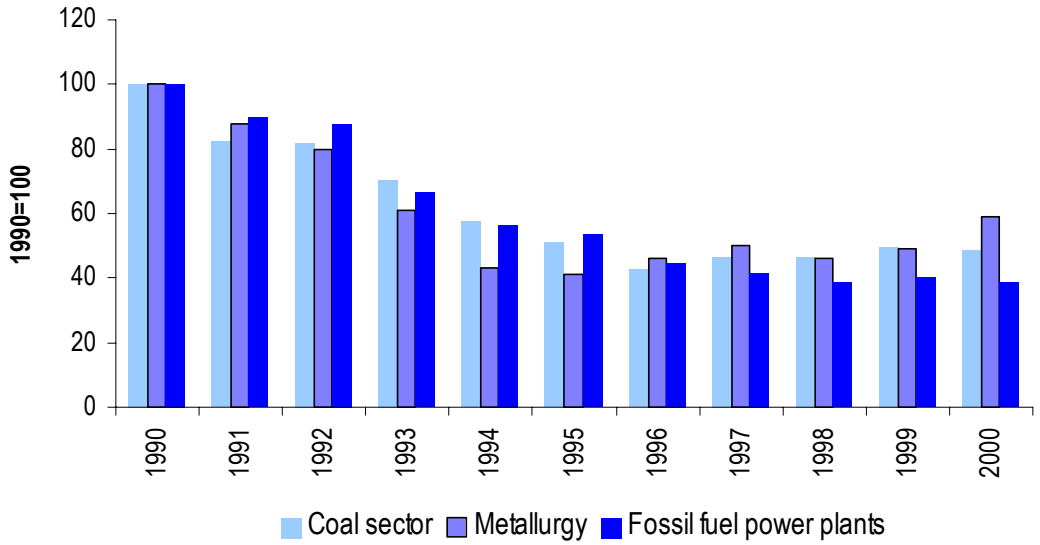
In order to abolish the price distortions the Ukrainian government intended to introduce obligatory purchasing of coal via auctions. Until now this plan was not implemented and it is unclear if coal auctions would be the appropriate measure for solving the problems.

The goal of the paper is to analyze the current state policy and other factors which influence coal price setting in Ukraine in order to eliminate price distortions and to identify sufficient measures which would make the coal market working efficiently. As far as there are different problems concerning coking coal and steam coal, there problems will be analyzed separately.

2. Supply and demand of the Ukrainian coal market

Since 1990 coal production declined considerably. This was due to shrinking demand of the metallurgy and fossil fuel power plants on the one hand and to growing difficulties in coal extraction and low quality of the Ukrainian coal on the other hand, which made the Ukrainian coal non competitive. Restructuring and modernization was very slow. In 2000 the output of the Ukrainian metallurgy increased by 20.7% compared to the previous year and demand for coking coal grew, but coal production remained the same (see Figure 1).

Figure 1. Coal, metallurgy and fossil fuel power plant production in 1990 – 2000 (1990=100)



Source: Ministry of Statistics of Ukraine, *National Security and Defense*, #2 2001, pp. 4.

In general, the Ukrainian demand of coal is highly satisfied by national coal extraction. Thus, in 2000 only about 8% of the total amount of coal supplied to Ukrainian customers was imported. Although for coking coal the share of imports was about 12%. However, a look into the Ukrainian coal balance makes obvious, that domestic production of saleable coking coal was practically equal to the domestic demand for coking coal (see Table 1). Thus, coal mines produced 27.7 mln. ton of coking coal whereas domestic demand of coking industry was 27.8 mln. ton. However, the lower price for raw coking coal (although its heating characteristics are better) compared to the price for raw steam coal (see Figure 3) led to usage of coking coal by power plants.[1] Metallurgical plants had to import coking coal at higher prices in order to satisfy their demand.

[1] Before 2000 coal mines preferred to sell coal to the metallurgical plants because of substantial non-payments of power plants. However, after the introduction of the special clearing accounts financial solvency of power plants significantly improved in 2000 and the current level of their payments for the obtained coal satisfied coal mines.

Table 1. Ukrainian coal balance in 2000 thousand. ton

	Total extraction	81055
	Steam coal	42412
	Coking coal	38623
I	**Total supply (saleable coal)**	68438
	Steam coal	36989
	Coking coal	31429
1.1	***Domestic extraction and production (saleable coal)***	62698
1.1.1	*Steam coal*	34968
1.1.2	*Coking coal*	27730
1.2	***Import***	5720
1.2.1	*Steam coal*	2021
1.2.2	*Coking coal*	3699
1.3	***Other supply***	
II	**Total demand**	64418
2.1	Total demand of the domestic market	67034
2.1.1	*Power sector*	28502
2.1.2	*Industry (coking)*	27867
2.1.3	*Coal sector own consumption*	3699
2.1.4	*State oblast administration*	1186
2.1.5	*Other consumers*	5780
2.2	***Export***	1384

Source: Ministry of Economy of Ukraine

3. Current price policies concerning coal in Ukraine and in the world

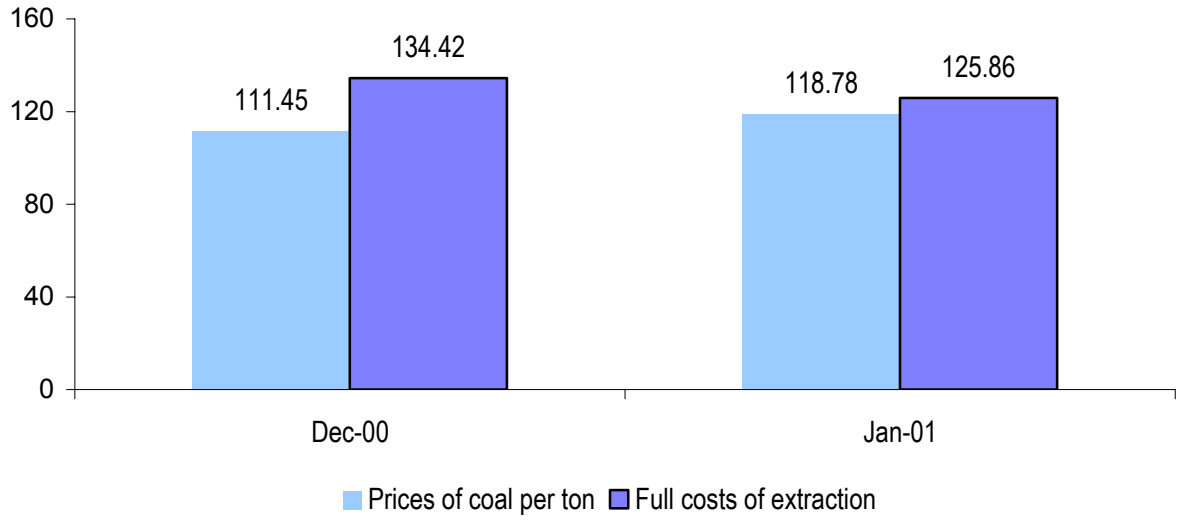
3.1. Costs and prices in Ukraine

Average production costs for Ukrainian coal steadily increased during the last years. Official statistics reported average costs of Ukrainian coal (non-specified quality standards) of about 88.9 UAH/t in 1997. In January 2001 average costs were about 125.86 UAH/t. At the same time average prices on the Ukrainian coal market were about 71.2 UAH/t and 118.78 UAH/t respectively (see Figure 2).

Production costs varied significantly between different production associations and mines.[2] According to World Bank accounts in 1995 production costs of about 40% of all coking coal and 35% of all steam coal producing Ukrainian mines were higher then the level of costs of comparable imports.

[2] For example the Zassyadko coal mine had a costs of coal extraction of about 109 UAH/t in January 2001 whereas it sold its coal at a price of 190.5 UAH/t. At the same time coal extraction costs of the Butivka-Donetska mine were about 239.51 UAH/t and sold its selling price was 58.07 UAH/t at the same period. (Data refer to non specified quality standards.)

Figure 2. Average selling price of mines and average production costs (UAH/ton)



Source: Ministry Economy of Ukraine

However, average prices measured in USD give a different picture. In 1997 the average price for Ukrainian coal of non specified quality standards was about 44.8 USD/t. As result of the devaluation of the Hryvnia in 1998, in January 2001 the average price of non specified quality standards was only about 21.9 USD/t.

As far as concentrated coking coal is concerned the current market prices in Ukraine are higher than the reference prices which are set by the government and used in the process of subsidies calculation. The reference price for concentrated coking coal of rank j is 160[3] UAH/t whereas some metallurgical plants buy coking coal at 207 UAH/t (which is about 38.12 USD/t[4]). In 1999 the average EU costs for coking coal imports from Non-EU Countries were about 49.17 USD/t and for steam coal imports they were 34.33 USD/t.[5] Thus, the devaluation of the Hrivnia at a first sight made the Ukrainian coal more competitive.

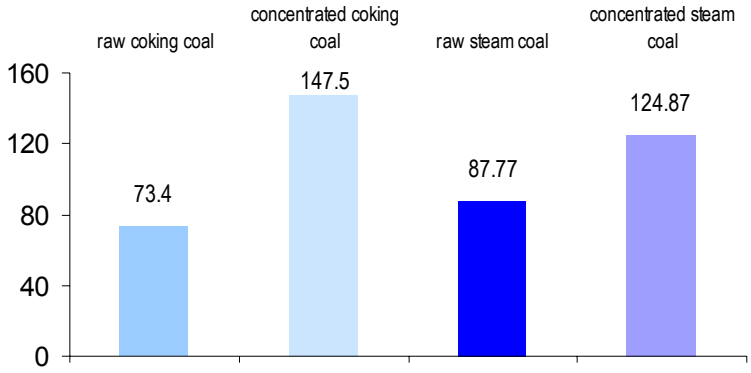
Concerning steam coal the problems are a somehow different. Here the difficulties are intra-industry non-payments. Power generation plants did not pay for consumed coal due to non-payments of other consumers whereas coal mines do not pay for consumed electricity. However, in the second half of 2000 power stations

[3] Decree of Ministry of Fuel and Energy #549, December 08 2000
[4] At an official exchange rate of 5.43 UAH/USD.

substantially increased payments for consumed coal and coal mines even began delivering coking coal to the power plant because the price of raw coking coal is lower than price of raw steam coal but heating qualities are higher (see Figure 3).

Figure 3: Prices for coking and steam coal in Ukraine

Source: Ministry of Economy



Since actual coal prices at which coal is sold in Ukraine do not cover costs of extraction coal production is highly subsidised. In 2000 the officially stated losses of coal extraction reached 616 m UAH for a total of 60.5 m. tons of saleable coal extracted[6]. However, concerning the estimation of costs of coal extraction, officially declared costs are supposed not to reflect true costs. The Ukrainian accounting standards are different from western ones. Required fixed capital investments are not included into the costs.

3.2 The system of subsidisation

At present the government compensates to the coal mines the difference between their costs and a certain reference price, which is considered the market price for Ukrainian coal[7]. It also compensates fixed capital investments and expenditures for maintaining the mines' social sphere. Planned subsidies from the state budget for coal industry amounted to 1.591 bn UAH in 1999 and in the year 2000 the respective

[5] IEA, Energy Prices & Taxes, 1st Quarter 2001, p. 24 and p. 19.
[6] Figures for coal extraction differ in various reports of the Ministry of Economy of Ukraine
[7] If a coal mine sells the coal above the reference price the government compensates the difference between full costs and the price at which coal was sold.

budget subsidies amounted to 1.844 bn. UAH[8]. That was around 6.3% and 6.6% respectively of the state budget's total expenditures.

Current subsidies procedure set in January 1999[9] is rather simple. Coal mines are divided into four groups: 1) profitable that could finance required expenditures; 2) profitable that could finance only part of the required fixed capital investments; 3) unprofitable but after state support may be transferred into the first or second group; 4) unprofitable that should be closed. Coal mines of the first group cannot obtain state support, coal mines of the second group may obtain state support only for fixed capital investments and for the maintenance of the social objects (according to the Ukrainian accounting standards these expenditures are not included into total expenditures before profit calculation), coal mines of the third group may obtain state support in the loss covering amount, plus money for the fixed capital investments and maintenance of the social objects, coal mines of the fourth group obtain funds for the expenditures associated with coal mine's liquidation and maintenance of the social objects.

However, the amount of subsidies from the state budget cannot cover all expenditures of the coal mines due to the low reference price of the Ukrainian coal and large costs of the coal mines conditioned by the peculiarities of the coal extraction in Ukraine. As a result, cross-subsidization by other industries also takes place. According to the recently enacted law "On the state obligated insurance on the accidents in the production process that caused professional decease or loss in the ability to work" all industrial enterprises have to transfer a determined insurance fee to a special fund. The expenditures which have to be transferred according to the new law are much higher for the enterprises in 'solvent' industries than they would have to pay for injury cases in their plants.[10] Therefore, the current performance of the coal market not only requires substantial budget expenditures but also causes significant distortions within the economy.

In general, subsidisation did not create any incentives to improve the efficiency of production. On the contrary, it deteriorated the financial situation of the mines which

[8] Source: State Treasury Reports

[9] Governmental decree "On the procedure of the determining coal mines that should obtain state support and the mechanism of its provision" #26, January 6, 1999.

[10] For example the Ilyich Iron & Steel Works has to transfer a sum of about 3.05% of its wage fund while a sum of about 1.06% of its wage fund would cover the enterprise's expenditures on injuries at the plant. The difference is about 9.1 mln. UAH per year.

performed better. Thus, the number of mines belonging to the group of competitive mines decreased seriously from 90 in 1996 to only 4 in 1998. The devaluation of Hryvnia improved the competitiveness of only two the coal mines, which moved now into the first group (profitable coal mines).

4. Market structure and institutional reasons for price differences

The Ukrainian coal industry consists of about 19 coal-mining holding companies (137 mines and 31 coal enrichment plants), nine coal-coal producing associations (39 mines and one enrichment pant) and 13 independent mines.[11] Almost all of the mines are state owned. The mines are allowed to sell their coal directly to the market, to final customers or to intermediaries even if they are the part of the coal-mining holding company.

On the manufacturing side there are 16 coke plants and 12[12] metallurgical plants. The amount of their production and turnover differ significantly. All of them were built in the Soviet times according to command system criteria and their location is related to each other and to the coal mines. Before the breakdown of the Soviet Union coking coal and coke were delivered according to state orders. Since 1991 the situation has changed significantly. Today a few firms, which act as intermediaries, control practically 100% of the coking coal market.[13] The "Industrial Donbass Union" and the "ARS" controll 75% of the coking coal market and also own or control some of the coke and of the metallurgical plants including the largest coke plant "Avdevskiy KHZ" and the Mariupol based "Azovstal" - one of the largest and potentially one of the most profitable companies. Three other big firms – "Danko", "Concern Energo", and "Embrol Ukraina ltd", realize practically the remaining 25% of the coking coal.

The largest among the coke plants is Avdevskiy KHZ which has a market share of about 40%. Other four enterprises produce additional 40% of the Ukrainian coke. Most of them are fully or partly privatized or managed by private companies. The largest of the metallurgical plants are "Krivorizstal", Ilyich Iron & Steel Works",

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Source: Estimates of the Economic Department of Ilyich Iron & Steel Works

[11] The Concept of the State Energy Policy of Ukraine trough 2020 (UCEPS draft), in:National Security & Defence, 2/2001, p. 6.

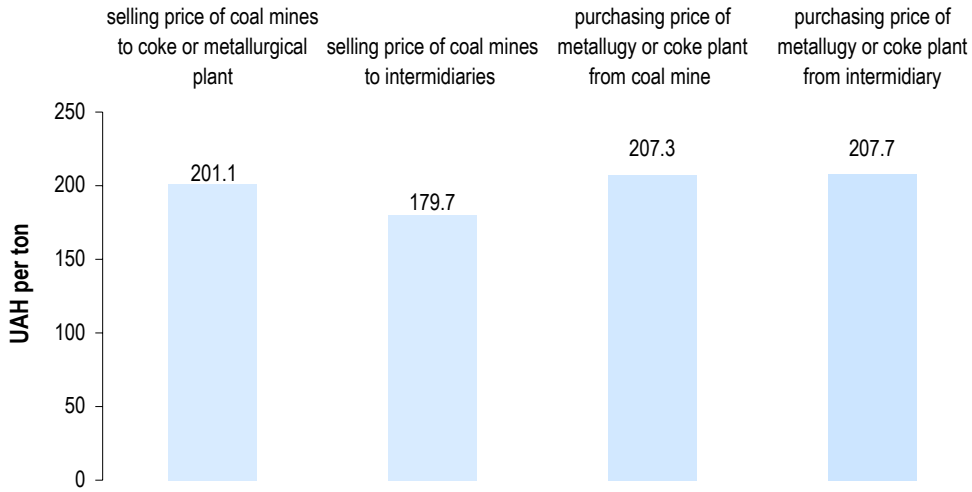
[12] Suhorukov A. I. *Results of the Economic Experiment in Mining and Smelting Complex*. Round table " Security of Economic Transformation. 2000-2001: from positive trends in the economy to the sustainable growth."

[13] In an interview with the director general of the firm "ARS" – Igor Gumenuk. In: Pansheko G. Coking distribution. *Energy Policy of Ukraine*. #4 (October) 2000. (Industrial Donbass Union is after Naftogaz Ukrainy on the second place in Ukraine concerning the amount of revenues.

"Azovstal", "Zaporizstal" and "Alchevsk Metallurgical Plant" which have the market shares of 25%, 20%, 16% 12% and 10% respectively and[14] in 1999 ranked third, fourth, sixth, ninth and twelfth among Ukrainian enterprises concerning the amount of revenues. The two firsts of them occupied the 33rd and the 36th place in world list of metallurgical plants concerning volumes of production. [15]

The intermediaries purchase coal directly from mines at a lower price than the metallurgical plants offer (see Figure 4)[16]. Moreover, the level of non-monetary transaction between coal mines and intermediaries is extremely high and the real price at which intermediaries buy coking coal is supposed to be even lower then the price indicated in Figure 4. They buy raw coking coal, clean it, burden and produce coke using mostly take-and-give schemes.

Figure 4. Prices for concentrated coking coal in January 2001 (rank of coal g)



Source: Ministry of Economy of Ukraine

The question is, why mines sell their coal to lower prices to intermediaries if they could achieve better prices by selling their coal directly to the metallurgical plants? At glance their considerable market power would be an explanation. In addition, there is a historical development behind this market power. They gave commodity credits in

[14] Source:Gorodnichenko Y. and Y. Grigorenko. "Relative Property Rights in Transition Economies: The Case of the Ukrainian Ferrous Metal Industry", 2001, EERC annual confrence.

[15] The market share of all others is rather small but four next enterprises (concerning the volume of production) are also among the top hundred enterprises of Ukraine ranked by revenues.

[16] Not all Ukrainian enterprises provided required data, therefore, the difference is selling price of mines and purchasing prices of the metallurgical plants from coal mines exists.

the form of equipment to the coal mines in a time when the mines where cash striped because of non-payment for the coal supplied and because of the non-payment of planned subsidies from the budget. Now the coal mines are obliged to deliver coal to the intermediaries in order to pay for the credits. As there was no transparency in granting these credits and there were no open tenders in order to obtain the necessary equipment, their value might be substantially exaggerated. As a result, coal mines accumulated a huge debts to the commercial structures and might be bankrupted in case of auctions' introduction. However, this is not the whole story. Even more important seems the fact, that the reference price, set by the government plays the crucial role.

Thus in January 2001 coke and metallurgical plants in direct contracts with the mines bought raw coking coal of rank j at a price of 143.66 UAH/t and concentrated coking coal of rank j at a price 207.3 UAH/t whereas coal mines sold it to the intermediaries at a price of UAH 92.3 and 179.7 per ton respectively. At the same time the respective **reference prices** were set by the state at a level of 83.3 UAH/t and 160 UAH/t respectively, which almost equals the level of the prices at which coking coal is sold to intermediaries. As a consequence of these low reference prices coal mines do not have any incentives to sell coking coal at market prices.

As a result, coal mines loose the part of their potential revenue that the state has to cover. In fact, this money goes to the intermediaries. Therefore, if coal mines would start selling concentrated coking coal at the level of the contract prices with metallurgical plants and reference prices would be increased up to this level, they would not only significantly increase their revenue but the amount of subsidies could also be reduced.

5. Proposals of the government

In order to abolish the price distortions and to make the transactions in the coal market more transparent the Ukrainian government intended to introduce obligatory auctions for the sales of all kinds of coking coal. However, the first government attempt to sell coke through an auction failed due to the refusal of the metallurgical enterprises to participate in it. Later on other auction was not held. Metallurgical enterprises justified their position with the following arguments:

- An auction procedure would not take into account the peculiarities of metallurgical production. Compared with steam coal, coking coal were not a homogeneous product. The metallurgical technology would require certain determined furnace charge that has to be produced at a specific coke-oven battery which in turn would use coking coal from some specific coal mine. As a consequence, coal mines, coking plant and metallurgical plant would have long-term relationships and auctions could not be introduced instantaneously.

  This argument to a certain extent is true. However, international experiences show, that spot markets play a certain role, especially as reference for price setting mechanisms in long term contracts.

- Metallurgical enterprises should distribute coking coal equally between themselves according to the demand of each enterprise. The difference between total demand and domestic supply will be covered by import of each metallurgical plant. In order to introduce such coking coal distributions the special balance of coking coal should be created in Ukraine.

  This argument seems to result from a planned-economy-behaviour where distribution of resources was the ordinary mechanism. In a market economy instead, there is freedom of contract and market prices are determined by demand and supply. Why, for example should a mine sell its coal below market prices and thus, loss profits? The case is even worse, if such prices would not cover costs of production, as it is the case in Ukraine, and the mines make losses, which have to be covered by huge budget subsidies. Thus, in fact, this argument of the metallurgical plants, is an argument for an indirect subsidisation of the metallurgical production at the expense of the coal industry or the budget respectively.

6. International experiences

Until now there is no central coal exchange, nor a futures market, because most long term contracts are for physical deliveries of a certain quality of coal. The price of coal is highly segmented and there is no „World price" of coal but only prices for special quality of coal in regional markets (Europe-Atlantic and Asia-Pacific markets). Yet some indicators exist for orientation. One is the estimate of maximum prices for certain coals: for example, the maximum price of coking coal is defined by the long-

term marginal cost curve of US-American coal mines[17], which are acting as „residual suppliers" on international markets. Some „benchmark prices" also exist internationally, the most prominent being the JSM-price (Japanese Steel Mill price) for coking coal. For steam coal the ENEL price is an important reference in contract negotiations in the Asian market. Also European importers are a major influence on steam coal price, since they are swing buyers. South Africa plays an important role in transmitting the price established in the European market to the Asian market.

There are as many coal price averages as there are coal qualities, market types, sales conditions, sales location and included costs (i.e. FOB, FAS, CIF). Long-term contracts with annual price reviews are the norm in the Asia-Pacific market. Spot markets are still limited in their operation because the variable part of demand is limited but do influence contract prices in the Europe-Atlantic market. Nevertheless, the practice of spot purchasing is increasing among many major utilities due to the greater number of supply alternatives and reduced concern over security of supply.

The coking and steam coal markets are linked, and the products potentially substitutes. In the Japanese market steam coking and steam coal prices have been linked by reference to a price for „semi-soft" coking coal.

(On the international level the method of coal prices formation follows the principle of long-term marginal costs (including transport costs).Transport costs have a significant share in prices for internationally traded coal. In overseas coal imports to Germany the share of transport costs may amount to more then 50% of the final price free power station.[18]

As long as coal reserves in relation to the international demand are so huge royalties are not an important pricing factor. Increasing demand would allow to further reduce transportation costs. But, as coal competes with oil and gas in power generation price orientation is also given by these energy resources.

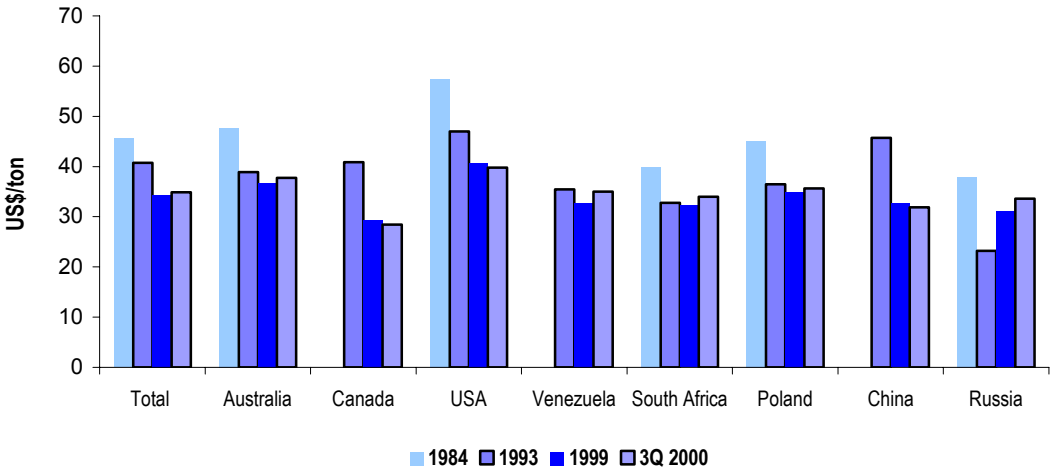
World coal prices have declined in both real and nominal terms over the last 20 years as productivity has improved. Steam and coking coal import costs from non EU countries (average unit value, current prices CIF in US$/ton) declined substantially since 1984 but stabilized in 1999 and 2000. During all the time prices fluctuated

[17] Long term marginal costs of US coal CIF Western Europe are estimated at about 60-65 US$/ton. See: Giraud, Pierre-Noel: La logique de formation des prix des energies primaires. in: Economies et societets, Serie economie de l'energie, EN n°5, 01-02 1992, p. 39-68, here: p. 57

[18] See. Hensing, Pfaffenberger, Ströbele, Energiewirtschaft, München, 1998, p. 53

slightly between individual supplier countries. The average price for imported steam coal in the 3th quarter of 2000 was 34.85 US$/ton and the average price for coking coal was 47.54 US$/ton (See Figures 5. and 6.). According to experts there is a slight increase of coal prices expected because of increasing demand of coal, increasing oil and gas prices and to a certain extent also because of increasing concentration of coal extraction companies.[19]

Figure 5.: EU 15 Steam Coal Import Costs from Non-EU Countries in US$/ton



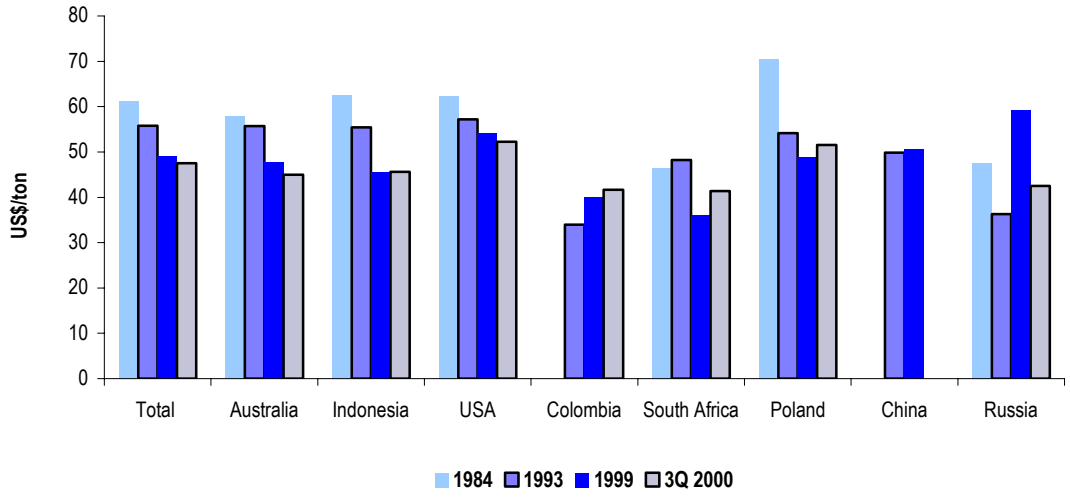
(Average Unit Value, CIF)

Source: IEA Statistics, Energy Prices & Taxes, Quarterly Statistics, First Quarter 2001, p. 19.

Figure 6. EU15 Coking Coal Import Costs from Non-EU Countries in US$/ton

(Average Unit Value, CIF)

[19] Couser, Sue and D. Goldsack, Konzentrationstendenzen in der internationalen Kohleindustrie, in: Zeitschrift für Energiewirtschaft, 1/2001, S. 43-52.



Source: IEA Statistics, Energy Prices & Taxes, Quarterly Statistics, First Quarter 2001, p. 24.

7. Conclusions and Policy Recommendations

- As far as **actual market prices** (prices of direct bilateral contracts with metallurgical plants) **for coking coal are above the determined reference prices**, as a **first step**, current **reference prices should be raised up to this level.** This would **reduce the respective subsides** (difference between costs and reference price). Otherwise, coal mines will continue to sell their coking coal to intermediaries at the prices below market prices.

- On a second stage, reference prices should be increased up to international market prices (prices at which Ukrainian metallurgical and coke plants could import coking coal). This would enable a larger number of coal mines to cover their costs and to improve the performance of the whole sector.

- There is a relative but not an absolute technological dependence between metallurgical enterprises and the respective characteristics of coking coal. Although the organization of the whole coking coal market via auctions would not be realistic **spot markets of surplus coal could play a certain role, especially as reference for price setting mechanisms in long term contracts**. Spot markets could be organized as voluntary auctions of surplus coal (i.e. amounts not sold under long term contracts), but would not function until dependence of mines from intermediaries is reduced by raising the reference prices up to the contract

prices. Such auction would also help to increase transparency of transactions of the Ukrainian coal market.

- **Privatization of profitable and potentially profitable coal mines** would also increase transparency of transactions and would allow mines to become independent from the intermediaries. **Restructuring of the current debts** of the mines would be a precondition for privatization. It would also help to make the mines independent from the intermediaries, but only if **simultaneously bankruptcy procedures** would **be consequently carried out** in order to avoid accumulation of new debts.

- Ukrainian government along with the Verchovna Rada should also **abolish cross-subsidization of the coal sector by other industries**. If the coal mines cannot pay regresses by themselves then they should be paid from the state budget. Such procedure not only increase the transparence of the sector performance but also increase the optimality of resource allocation.

- **Distribution of subsidized coking coke in accordance with a coking coal balance is a measure of soviet time planning** and is far apart form market mechanisms. In a market economy instead, there is freedom of contract and market prices are determined by demand and supply. **Selling coal at subsidized prices would in fact mean an indirect subsidization of the metallurgical production at the expense of the mining industry or the budget respectively.**

- **In cases where subsidies would still be necessary** - for example for mine closing and retraining of miners or until a mine would be closed - **they should follow a determined and transparent procedure and schedule and should be subject to public control**.

Kyiv, May 2001
P.O., B.D., Lektor: CvH