Economic and Fiscal Impact of Royalty Rates of Coal and Lignite in India

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Preface

Almost all the coal producing States, except Maharashtra are economically backward and about half of the people in such States are below poverty level. The economically backward States of Madhya Pradesh, Chattisgarh, Bihar/ Jharkhand, Orissa and West Bengal account for nearly 75% of the country's coal production. Other than mineral royalty, of whom the coal royalty is a major part, the source of non-tax revenue of all the coal producing States is insignificant. The coal producing States of Bihar (Including Jharkhand), West Bengal and Madhya Pradesh (Including Chatisgarh) repeatedly expressed that except coal royalty the other sources of their revenue collection are inadequate and therefore they will have problems in financing their developmental expenditure if coal royalty rates are not revised upward. The Plan document (Ninth Plan) emphasizes the need to examine the non-tax source namely Royalty on coal to augment the revenue resources of the coal rich backward states. The Planning Commission feels, "The revision of royalty rates of major minerals is another measure which will go a long way to improve the resources of the States".

However, revenue maximization is not the only goal to be kept in mind while formulating policies relating to royalty. It is equally important to assess the impact of any such measure on the economy. Royalty policy should not result in economic distortions. Hence, the Planning Commission entrusted the present Study to us with the objective of examining the fiscal and economic impact of coal royalty in India. The study, accordingly focussed on various issues that emerged in the field of Royalty on coal, the revenue implication of royalty for the coal producing states, the impact of any upward revision on the coal producing companies, consumers, imports and coal prices and so on.

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I am highly thankful to the officials of the Coal Authority of India and its seven subsidiaries namely: SECL, NCL, MCL, ECL, CCL, WCL, and BCCL. I am also thankful to the officials of the SCCL and NLC. I have gained a lot through discussions with the officials of NTPC at Shaktinagar U.P., NTPC at Koraba Chatisgarh, NTPC at Vindhyachal M.P., UPSEB at Anpara U.P., HINDALCO at Renusagar, U.P., NALCO at Bhubaneswar and several other coal consuming units in the country.

During the study I got an opportunity to discuss with the officials at the Department of Coal/Mines, Government of India, New Delhi. I thank: Mr. Vinod Thakral, Director (CPD), Mr. A. P. V N Sarma, Joint Secretary, Mrs. Aditi S Ray, Director (Policy), Department of Mines, Dr. Sutanu Behuria, Joint Secretary & Financial Adviser, Department of Mines and Mr. Sujit Gulati, who spared their precious time and enlightened me about issues relating to coal.

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There is hardly any literature available in India on Coal royalty. In fact data is also not available in ready to use form. This work involved extensive data collection from the published and unpublished reports and files. Information could be gathered mainly through detailed discussions and by listening to the experience of the highly knowledgeable officials at the CIL and its Subsidiaries, NTPCs and other PSUs. My Team members and I have personally gained a lot from discussions with Mr. S. S. Thakur, CGM (Sales Marketing), Mr. Rajesh Bhushan, Sales Manager Mr. A. P. Singh, Deputy CSM (C), Mr. Biplav Mukarjee, Deputy CFM (SA), Mr. Ashok Kumar, Central Accounts and Budget at BCCL, Mr. L. Prasad, CGM/TS to CMD and Mr. Y. P. Gupta, CMD Office, CCL, Mr. P. K. Kanchan, Chief General Manager (P&P), Mr. Y. P. Singh, CGM (Finance), Mr. P. K. Lall, Deputy Sales Manager, Mr. Choudhary (Sales Department) of Eastern Coal Fields Limited, Mr. Prakash Chowdhari, Deputy CE (E & M), CTS Department MCL, Mr. K. Ranganath, General Manager (Finance), Mr. L. N. Aggarwal, Chief Technical Secretary to CMD, Mr. Ramesh Chandra Sahoo, Superintendent of Mines, CTS to CMD Department, MCL, Mr. Rajendra Singh, Deputy Chief Sales Manager and Mr. S. C. Kapoor, Chief General Manager, NCL, Nigahi Coal Project.

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Hemlata Rao 15th May 2003
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CHAPTER I

ISSUES IN ROYALTY ON COAL IN INDIA

Section I

1. Introduction

The fiscal health of the country both at the Central and at the State level is far from satisfactory. In fact, over the years, there has been worsening of the situation. Even after a decade of the initiation of economic reform process, fiscal consolidation has remained only on paper. The fiscal deficits of states have grown in huge proportion.

The tax revenues of states have slowed down. The growth rate of tax revenue of all the states came down from 15.60 per cent during the period 1980-1990 to 14.29 per cent during the period 1995-96 to 1999-2000. For a State like Orissa the same declined from 15.71 per cent to 11.71 per cent in the above period. The performance of non-tax revenue is worse than that of the tax revenue.

Given the precarious condition of the Central finances, it is unlikely that the Central transfers will register a much faster growth than in the past. The Ninth Plan document states that the net flow of grants and loans to States has declined over a period of time as a percentage of Gross Domestic Products (GDP). Net revenue flow has become negative in the case of a number of States and the net capital flow has also substantially declined.

The above issues have to be looked at in a larger perspective taking into account the growing needs of the States. It is necessary to adopt a holistic approach to the problem and work out a positive solution. This implies that fiscal adjustments will have to be achieved and this could be done mainly by accelerating the growth of States own revenues and here more attention needs to be paid to the non- tax revenue.

Some of the States, which are less developed and deficient in fiscal resources are gifted with natural resources. Most of the States with coal deposits are less developed. Coal sector has huge revenue potential. The coal reserves are in

abundance and are expected to last for more than 150 years.[1] This provides a good revenue base to the coal producing States.

Coal mining in India started some 228 years i.e., in 1774. Initially for more than a century nothing significant happened in terms of demand for coal. After the introduction of steam locomotives in 1853 demand for coal picked up. The production got further boost during the First World War.

After Independence, the country embarked upon the Five-Year Plans. Setting up of the National Coal Development Corporation (NCDC), a Government of India Undertaking in 1956, with the collieries owned by railways as its nucleus was the first major step towards planned development of Indian coal industry. The Singareni Collieries Company Ltd. (SCCL) in Andhra Pradesh was already in operation since 1945. This company became a Government company under the control of Government of Andhra Pradesh from the year 1956. India thus had two government owned coal companies in the 1950s. SCCL at present is a joint undertaking of the Government of Andhra Pradesh and Government of India sharing its equity in 51:49 ratio.

Until 1971 coal was mainly within the domain of private sector. On account of the growing needs of the steel industry, a thrust had to be given on systematic exploitation of coking coal reserves in Jharia Coalfield. Adequate capital investment to meet the burgeoning energy needs of the country was not forthcoming from the private coal mine owners. Therefore, the Central Government took a decision to nationalise the private coal -mines. The nationalisation was done in two phases, the first with the coking coal mines in 1971-72 and then with the non-coking coal mines in the year 1973.

In October 1971, the Coking Coal Mines (Emergency Provisions) Act, 1971 provided for taking over of the management of coking coal mines and coke oven plants pending nationalisation. This was followed by the Coking Coal Mines (Nationalisation) Act, 1972. Under this Act, the coking coal mines and the coke oven plants other than those with the Tata Iron and Steel Company Limited and Indian Iron

[1] See Appendix Note AN 1.1.

and Steel Company Limited, were nationalised on 1.5.1972 and all of them were brought under the control of Bharat Coking Coal Limited (BCCL), a new Central Government Undertaking. Another enactment, namely the Coal Mines (Taking Over of Management) Act, 1973, extended the right of the Government of India to take over the management of the coking and non-coking coal mines in seven States including the coking coal mines taken over in 1971. This was followed by the nationalisation of all these mines on 1.5.1973 with the enactment of the Coal Mines (Nationalisation) Act, 1973 which now is the piece of Central legislation determining the eligibility of coal mining in India. A new Government Company namely, Coal Mines Authority Limited (CMAL) with headquarters at Calcutta, was set up by the government in May, 1973 to manage non-coking coal mines. In September 1975 Coal India Limited (CIL) was formed as a Holding Company with five subsidiaries namely Bharat Coking Coal Limited (BCCL), Central Coalfields Limited (CCL), Eastern Coalfields Limited (ECL), Western Coalfields Limited (WCL) and Central Mine Planning and Design Institute Limited (CMPDIL) under it.

In view of the projected increase in production and investment contemplated for CCL and WCL group of coal mines and also of their extensive geographical spread resulted in day to day administrative, technical and communication problems and as such two more coal companies, namely, Northern Coalfields Limited (NCL) and South Eastern Coalfields Limited (SECL) were formed w.e.f. 28-11-1985. Considering the prospects of Orissa Coalfields, being the growth centre for the VIII and IX Plan periods, a new coal company was formed bifurcating South Eastern Coalfields Limited (SECL). The new company Mahanadi Coalfields Limited (MCL) was incorporated on 3rd April, 1992 with its headquarters at Sambalpur (Orissa) as fully owned subsidiary of Coal India Limited to manage the Talcher and IB-Valley Coalfields in Orissa. Chronological development of coal in India is shown in Table 1.1.

CIL has now 8 subsidiaries viz. Bharat Coking Coal Limited (BCCL), Central Coalfields Limited (CCL), Eastern Coalfields Limited (ECL), Western Coalfields Limited (WCL), South-Eastern Coalfields Limited (SECL), Northern Coalfields Limited (NCL), Mahanadi Coalfields Limited (MCL) and Central Mine Planning and Design Institute Limited (CMPDIL). The first seven subsidiaries of CIL are coal producing companies.

CIL and its subsidiaries are incorporated under the Companies Act, 1956 and are wholly owned by the Central government. The coal mines in Assam and its neighbouring areas are controlled directly by CIL in the name of North Eastern Coalfields Limited (NECL). In addition to CIL and its subsidiaries there is another coal company in public sector namely Singareni Collieries Company Limited (SCCL).

The planned development of the coal industry was taken up since nationalisation by infusing massive investments mainly through budgetary support, and enabled the coal sector in making commendable strides in the last three decades or so of organized mining. Along with the development of the coal sector the potential of this sector to contribute to the States and Central exchequers has also gone up. There are various types of levies in vogue on coal. Royalty on coal is one of the very important sources of revenue to the States. The growing importance of coal as source of revenue is increasingly being recognised in the country.

Table 1.1: Development of Coal in India: Historical View

- 1774: Warren Hastings initiates commercial coal mining at Ranigunj (West Bengal)
- 1815-1820: First Shaft Mine opened at Ranigunj
- 1835: Carr, Tagore & Company takes over the Ranigunj Coal Mines
- 1843: Bengal Coal Company takes over Ranigunj Coal Mines and others; is first Joint Stock Coal Company in India.
- Up to 1900: Minimal development; River transportation used to transport coal to Calcutta; railway lines at Calcutta leads to expansion of Coal Production
- Early 1900s:Capacity at 6 million tonnes per annum
- 1955-56:Focus on Coal Industry; capacity up to 38.4 million tonnes.
- 1956:National Coal Development Corporation formed to explore and expand coal mining
- 1972:Coking Coal Industry nationalised, Bharat Coking Coal Limited formed to manage operations of all Coking Coal mines in Jharia Coalfield.
- 1973:Non-coking coal nationalised; Coal Mine Authority Limited set up to manage these mines; NCDC operations bought under the ambit of CMAL.

- 1975:Coal India Limited formed as holding Company with 5 subsidiaries viz. Bharat Coking Coal Limited (BCCL), Central Coalfields Limited (CCL), Western Coalfields Limited (WCL), Eastern Coalfields Limited (ECL) and Central Mine Planning and Design Institute Limited (CMPDIL).
- 1985:Northern Coalfields Limited (NCL) and South Eastern Coalfields Limited (SECL) carved out of CCL and WCL
- 1992: Mahanadi Coalfields Limited (MCL) formed out of SECL to manage the Talcher and IB Valley Coalfields in Orissa.
- 1997: Partial De-regulation of Coal pricing and distribution of coal.
- 1998: Second round of de-regulation, coal mining opened up to private sector for captive consumption; Coal India Limited contract US $ 1.06 billion loan from IBRD and JEXIM Bank for Expansion and Reforms.

2. Coal as a source of Revenue to the States:

The Plan document (Ninth Plan) emphasises the need to examine the non-tax source namely royalty on coal to augment the revenue resources of the coal rich backward States. The Planning Commission was of the view that, "the revision of royalty rates of major minerals is another measure which will go a long way to improve the resources of the States". Considering the fact that the mineral rich States like Jharkhand (Bihar), Orissa, Madhya Pradesh, Chattisgarh, and so are resource-scarce States and are relatively backward. Rationalisation of royalty rates and the frequency of its revision will go a long way to help these backward States to improve their non-tax revenues.

However, revenue maximisation is not the only goal to be kept in mind while formulating policies relating to royalty. It is equally important to assess the impact of any such measure on the economy. Royalty policy should not result in economic distortions. Royalty may wield influence on demand, production, export and import of coal and on price. Hence, it is important to examine the issues relating to royalty objectively.

3. Review of Literature:

This field relating to royalty on coal in India is not much explored from the point of research and hence no specific research study is available. However, various Expert Committees have looked into the problems of mineral royalties. The Commission on Centre-State Relations (Sarkaria Committee) has raised important issues relating to coal and other mineral royalties. Mines and Minerals Regulation and Development Act, 1957 (MMRD) provides information about the mines and mineral regulations. Ministry of Steel and Mines, Central Government had published – "Report of the Study Group on Revision of Royalty Rates of Major Minerals". But there was not much of discussion on coal royalty. There were Study Teams appointed to look into the coal royalty by the Department of Coal. However, these reports are treated as highly confidential and are not available to researchers and public even for study purposes. Thus, there is no study readily available on royalty on coal in India.

In order to understand the problems relating to royalty on coal in India and to study its fiscal and economic impact it is important to understand the concept of royalty itself and to identify major issues and irritants between the Centre and the States relating to coal royalty. These are discussed in section II.

Section II

Concept and Issues in Royalty

A. What is Royalty Income?

The appellation "royalty" can be traced to the share of mined gold or silver that was due to the crown under English Common Law. In England, a royalty share was commonly remitted either in kind or in value, to Lords who held lands under grant from king as payment for the right to market minerals and mine. Historically, in the context of minerals, royalty is simply a share of mineral product payable in kind or in value to the Crown, Sovereign or Landholder. "In its most common form, royalty served as a payment for the right to mine," says Owen. [2]

Royalty is a share in production, free of the costs of production. This is a sharing arrangement created by a lease contract between the owner of mineral deposits (the lessor) and one who is given the right to go onto the lands of the lessor and explore for and develop these minerals (the lessee). In return for allowing the lessee to develop the minerals, the lessor is given a share of any minerals produced.

Royalty may also be looked at as the price paid to the lessor for the mineral extracted or consumed by the lessee. Thus, price of mineral is of two kinds:

1. Price paid by the lessee to the lessor, and
2. Price charged by the seller (lessee) to the consumers.

The bases for arriving at the two prices are different. The price paid by the lessee to the lessor for the extraction and use of the mineral is royalty. While determining the pit head price of coal, royalty and other levies are not included in the cost of production of coal. Even the transport cost handling charges, demurrages and other expenses incurred after the despatch of coal from the pit head are excluded from the estimation of cost for arriving at the pit head or basic price of coal. Thus, after fixing the pit head price, royalty is collected by the operator from the coal consuming

[2] Owen L. Anderson, 1997, Royalty Valuation, Part-I in Natural Resources Journal, Vol.37, Summer 1997, pp.695-706.

entities. Royalty and other levies are taken into consideration while arriving at the final consumer price charged by the seller.

Some lessors prefer to take royalty in the form of a share of the mineral produce. Generally, majority of the lessors wants a share of the proceeds received for product when it is sold. In some cases, lessors prefer to adopt, what is called the "Marketable Condition Rule". They take the position that the implied covenant to market in minerals requires the lessee or operator to put mineral in marketable condition at no expenses to the lessor or royalty interest owner. Under this, the definition of "production" gets extended from the pit (mine) where the product is in an unprocessed state to the point where a marketable product is obtained that could be far downstream from the well or other point of valuation set by the lease. Accordingly, under the Marketable Condition Rule, additional costs are imposed on the lessee or operator by prohibiting it from sharing the costs of post-production value adding activities with its lessor.

Based on the above one can summarise:

1. Royalty is a payment made by the lessee to a lessor. The lessor charges royalty for allowing the lessee the right to explore, extract and utilise (market) the mineral wealth of the lessor.
2. The share of the produced mineral is returned to the lessor free of the costs of production.
3. Royalty can be paid in the form of a share of the mineral produce. However, generally, it is paid as a share of the proceeds received for product where it is sold.
4. Royalty can also be fixed on tonnage (quantity) basis or on the basis of the price of coal.

It should be remembered that the royalty is not a tax levied by the government. Tax is a levy imposed on the entire citizens. 'Royalty' is a payment made by the lessee to the lessor based on an agreement.

Royalty is also not a rent. Rent is charged for letting the premises to be used. The land does not get depleted. Royalty is charged for letting the lessee to consume the wealth belonging to the lessor. The wealth gets depleted over time.

Royalty is also not a 'profit sharing arrangement between the lessor and the lessee. Whether the lessee has profit or loss - royalty has to be paid to the lessor. It is also not a profit sharing because while calculating royalty, the cost is not passed on to the lessor.

Mineral royalty is payable on market price or on market value(determined at the pit head). The price or value is determined at the time mineral is physically severed from the ground and used or marketed.

In almost all countries, the issue of 'royalty' is riddled with complications. There are always some sort of disputes between the lessor and the lessee, over how the royalties are calculated and paid. The issues, which generally crop up, are:

i) the basis of calculating royalty payment or the method of determining the value of the produced mineral (i.e., should royalty be based on the proceeds of sale of the mineral, or on the intrinsic value of the product etc.);
ii) the point of valuation of the product (i.e., at the despatch point, at the pit head, etc.); and
iii) the quality or condition of the product (i.e., in raw state at the mouth of the well (pit head) or if not marketable at the pit, after placed in a marketable condition).

These issues very often give rise to irritants between the lessor and the lessee.

B. Royalty Issues in India:

The Mines and Mineral Development Sector is under the concurrent control of the Central and the State governments. Entry 54 in the Union List and entries 23 and 50 in the State List have stipulated that both Central and State governments are competent to regulate mines and mineral development in the public interest. Minerals are classified into major and minor. Major minerals are with the Central Government while the minor categories are with the State Governments.

The issues relating to royalty on major minerals in India are somewhat different from those in most of the other countries. The Mines and Minerals

(Development and Regulation) Act 1957[♣] empowers the Union government to take under its control the regulation of mines and the development of minerals. In India - major minerals, their prices, distribution and royalty are governed and fixed by the Central Government. Royalty accrues to the States. Thus, there are three players involved in royalty on minerals:–

1. the Central Government which fixes the royalty rate, mode and frequency of revision;
2. the State Government, which collects and appropriates royalty; and
3. the lessee: the public sector or private undertaking.

The lessee pays royalty according to the rates and terms fixed by the Centre to the State, which own the mineral resources. Thus, in India, the system of fixing royalty is not a simple affair.

Low royalty rates and their infrequent revision has become an important irritant in the realm of Centre-State financial relations. While the Centre is under no compulsion to periodically revise royalty rates, the States on the other, plea for an upward revision of the rates on the ground that they lose heavily if rates are not commensurate with the revision in the administered prices of Coal and Lignite.

The Centralists argue emphatically that the ratio of coal royalty rates to the coal prices in India is relatively on higher side compared to other countries. And hence, the Centre need not revise royalty rates frequently. It is also held by the Centralists that frequent upward revision of royalty leads to economic inefficiency. Some of the arguments put forth by the Centralists in this regard are:

- The major consumers of domestic coal in the country are the State Electricity Boards (SEBs). The coal producing States are also having their own respective SEBs. In the event of an increase in the coal royalty rates, the Coal Company will only act as a conduit to collect the enhanced royalty basically from the SEB and return it to the same State government controlling the SEB. Therefore, it will not be pragmatic for the State Electricity Boards/Government Power Companies at their none too happy state of health, to absorb a higher fuel cost consequent on

[♣] See Appendix AN 1.2 on Mines and Minerals Act 1957.

hike in the coal royalty rates. Another argument of the Central Government is that it cannot afford to further out-price domestic coal against the imported coal by enhancing the coal royalty rates. The imported coal is not subjected to the levies like royalty and sales tax.

- It is expressed by the CIL subsidiaries that the financial health of the nationalised coal industry has been severally affected by payment of coal royalty even on the unpaid coal supplies. Hence it is felt that any further enhancement of the rates will not be in the interest of the domestic coal industry. These are examined in chapter V.

- India exports coal to the neighbouring countries to meet their demand for coal. The traditional buyers of Indian coal are Nepal, Bangladesh and Bhutan. Export to Nepal and Bhutan is done in rupee exchange as per the protocol between the two countries and with Bangladesh it is done in US Dollar. Any upward revision of royalty, it is alleged will affect export of coal to these countries. It is so in view of the falling international price of coal. This aspect is examined elsewhere in the text.

- As per the present import policy, coal can freely be imported (under OGL) by the consumers themselves considering their needs and exercising their own commercial judgements. Coal based power stations and cement plants are also importing small quantity of non-cocking coal on consideration of transport logistics and commercial prudence as well as against export entitlements.

- There has been a rising trend of imports for the last few years in case of non-coking coal especially in coastal regions through which consumers are in a position to directly import for further transshipment to the plant sites. Under these circumstances any enhancement in the royalties will make domestic coal to lose in the domestic market also.
- To meet country's growing demand for coal, foreign collaboration with advanced coal producing countries are pursued. Joint Working Group on coal had been set up with France, Germany, Russia, Canada, Australia and China. Ministry of Coal is also the nodal Ministry for the Joint Commission with Poland. The change in royalty rate will have impact on these ventures also.

- Government of India, with a view to encouraging private sector participation and inviting foreign investment in the coal sector, has brought out a report on the new Integrated Coal Policy[3]. The highlight of the new coal policy is that it proposes to allow the Indian companies to do coal mining in the country in new coal blocks without the existing restriction of captive consumption. This new policy will be sensitive to changes in the royalty rates.

- The Central government feels that royalty is a form of rent and hence there should be some restriction on its revision.

Contrary to the above, the States put forth their own arguments for frequent upward revision of royalty. These are:

- Royalty from minerals is an important source of revenue for mineral producing States. Hence, there is need to enhance resources of mineral rich but financially poor and economically backward States. The revision of royalty rates of major minerals is a measure, which will go a long way to improve the resources of the States. Two general issues raised by the mineral producing States, in this connection are:
    1. frequency in the revision of royalty rates; and
    2. fixing the rates on ad valorem basis.

- Stability in royalty over a reasonable period is desirable. However, there should also be some proximate relationship between price increase and royalty rates. The States argue that if the price of coal increases by fivefold – and the rate of royalty does not change commensurately, it is not justified.

- Similarly, there is a case for shifting specific duties on coal to ad valorem duties to avoid erosion of the resources of the States in real terms. This may lead to some administrative problems in fixing ex-factory price, which need to be tackled appropriately in order to avoid revenue leakage.

[3] Chari Committee Report 1994. Not yet adopted in the country. See reference.

The tensions in Centre-State political and financial relations are nothing new in India. The Conference of State Ministers of Mines and Geology highlighted the issues of the quantum of royalty on mineral resources (which every State, probably with justice, feels is inadequate), the rate at which these royalties are revised, and the periodicity of such revision.

The general demand of the States was that there should be a review once in two years on both royalty and the ground rent of the leased areas. The State of Bihar further demanded that the authority to revise the royalty rates should be vested in an independent tribunal and not with the Centre as at present. There was also a demand that royalty should be linked to the current prices ruling internationally. However, both the demands were summarily turned down by the Centre. The Centre has only conceded that the rates of royalty till now subjected to revision once in every four years, would now be revised once in every three years, and the revised rates would be operative retrospectively irrespective of the time taken to complete the actual process of the revision of rates.

Interestingly, Bihar State also had another grievance and i.e., the exploration data collected by Central agencies like the Mineral Exploration Corporation, the Geological Survey of India (GSI), etc., were not being made available to the State Governments even when the State specifically asked for such information.

Coal price was administered by the Central Government till 1999-2000 (now the companies themselves can do so). The prices were frequently increased to benefit the companies and the Central government. Centre also earned through coal freight. There is heavy cross subsidisation of freight charges for other goods at the cost of coal. If the government is interested in lowering the price of coal, Centre can adjust the coal freight and or fix lower pit head prices of coal while allowing the States to get more through royalty.

The following points emerge out of the above views:

1. The concerned states have complained that the rates of royalty do not reflect the rising value of the minerals. They feel that they are deprived of additional revenue and are in favour of fixation of royalty on *ad valorem* basis, which will automatically adjust the royalty rates to the value of minerals.

2. The MMRD Act earlier restrained the Union Government from enhancing the rates of royalty more than once in any period of four years. Following an amendment to the Act in 1986, this period was reduced to three years. The State Governments contend that while there is no restriction on increase of prices of minerals, the restrictions imposed on enhancement under the MMRD Act is against the interests of the States.

3. Another issue for consideration is the imposition of cesses, surcharges and other charges by State governments by virtue of their powers under entries 49 and 50 in the List II of the Seventh Schedule, which directly or indirectly affects the prices of miners. In addition to cesses, surcharges are also levied under entry 49 of List II. This may have adverse impact on the development of minerals. This affects uniformity and introduces uncertainty in mineral prices; some may have to compete in the national and international market. Cesses are levied as a percentage of royalty, and therefore, when levied at different rates in different States they distort uniformity in royalty rates.

4. There is also a conflict of interest between the Centre and the States. Most of the coal companies are Central Government Undertakings. The Centre gets dividend from these public sector undertakings. Any increase in profit of these companies is financially beneficial to the Central Government. An increase in royalty on the one hand enhances the resources of the States and on the other it reduces dividend accruing to the Centre.

Thus, on the one hand, the states are complaining about the inadequacy of royalty rates, as they do not reflect the increasing prices of minerals. On the other hand, Centre has complained against the imposts levied by the States under Entries 49 and 50 as they directly and indirectly affect the prices of minerals.

The question of royalty cannot be considered in isolation. The royalty influences pricing, compositions of landed cost, competitiveness of domestic coal *vis-à-vis* imported coal, export of coal, captive mining and private participation. Revision of royalty needs to be viewed along with the movement of prices, production and productivity. Royalty also needs to be studied along with various other levies on coal

such as sales tax, Stowing Excise Duties (SED), environmental cess, forest cess and so on. These levies along with royalty influence the landed price of coal and the final incidence on the consumer. A comprehensive analysis of these issues will help formulation of policies relating to royalty rates, royalty base (tonnage basis or ad valorem), frequency and extent of revision of royalties. Thus a study of fiscal and economic impact of royalty is important for policy formulation. The entire question of royalty has emotive value. These require assessment of divergent views.

Keeping the above arguments in mind it is proposed to make an in-depth analysis of the above issues pertaining to coal royalty in the selected States such as Jharkhand/Bihar, Orissa, Madhya Pradesh, Chattisgarh, Maharashtra, Andhra Pradesh and West Bengal, which are the important coal producing states. Analysis of issues pertaining to other states will be incidental. The arguments put forth both by the Central government and the coal producing States will be examined in detail in the succeeding chapters. These are issues, which have policy implications.

C. Objectives:

The study attempts to analyse the fiscal and economic impact of coal royalty in India. The main objectives of the study are:

- To examine the prevailing system of coal royalty in India and the rationale of fixing and revising royalty rates;
- To analyse the revenue implications of revision of royalty and the methods of fixing the quantum of royalty and its rate on state finances;
- To examine the effect of royalty on prices of coal, performance of the coal companies, on major coal consuming firms, exports and imports of coal; and
- To suggest policy measures needed to rationalise coal royalty policy of India.

Methodology:

The study is based on information gathered through detailed discussions with the officials of CIL and its seven subsidiaries, NLC, SCCL, Coal Department, Controller of Coal and Finance Departments of some of the coal producing States and officials of NTPCs, UPSEB, NALCO and HINDALCO. Secondary information was also collected from various coal companies and the Finance departments of coal producing states through a structured questionnaire. First hand information was

obtained by visiting SECL, NCL, ECL, BCCL, CCL, WCL, MCL, NLC, SCCL, and CIL headquarter, NTPC Koraba, NTPC Shaktinagar, NTPC Vindhyachal, UPSEB Anpara, HINDALCO Renusagar and NALCO Bhubaneshwar. Study has extensively used the data collected from these offices. Besides, the reports and data directly collected from the coal companies, study has also used secondary data collected from Coal Controller's Office, Coal Department, and CMIE Publications[4]. Information available on Internet was also used in the study. Study uses a simple descriptive method and has made time trend analysis.

Data processing required lot of care. Data on coal (production, despatch, reserves, stock, prices and royalty) were available according to the type and grades of coal (coking and non-coking and about 15 grades belonging to these two types). These are available company-wise for different years. Data on these aspects at the aggregate level and at the State level were not available in the ready to use form. Hence, these variables are estimated by us.

The States of Bihar/Jharkhand, Andhra Pradesh, Maharashtra, Madhya Pradesh, Chattisgarh Uttar Pradesh, Orissa, West Bengal, Tamil Nadu are the major States producing coal and lignite getting royalty. State-wise data on royalty were available to us only for the period between 1994-95 and 1998-99. In order to generate the data series, we took company wise information on royalty paid by the companies and allocated the same to the state to which these companies belonged. However, this exercise was not simple as some companies served more than one State and similarly one State was also served by more than one company. ECL paid royalty to West Bengal and to Bihar (now Jharkhand). Similarly, Bihar got royalty from CCL, BCCL and ECL. Company-wise data was available for more than ten years.

Based on the State-wise location of the companies, we estimated the royalty collected by States. The following chart was used to estimate the royalty contribution made by coal companies to different States.

[4] See references.

Companies serving the States

Company	State 1	State 2
ECL	West Bengal	Bihar
BCCL	West Bengal	Bihar
CCL	Bihar/Jharkhand	
NCL	Madhya Pradesh (62.3%)	Uttar Pradesh (37.7%)
WCL	Madhya Pradesh (17.2%)	Maharashtra (82.8%)
SECL	Madhya Pradesh/ Chatisgarh (100%)	
MCL	Orissa (100%)	
SCCL	Andhra Pradesh (100%)	
NLC	Tamil Nadu (100%)	
NEC	Assam (100%)	

Note: *Figures inside bracket shows the percentage of royalty received by the state from the particular company. For West Bengal and Bihar, we could not calculate the share because the data given by companies and the states show huge difference.* In West Bengal, royalty is negligence and cess is prominent.

States Served by the Companies

State	Company 1	Company 2	Company 3
West Bengal	ECL	BCCL	
Bihar/Jharkhand	ECL	BCCL	CCL
Uttar Pradesh	NCL (37.7%)		
Madhya Pradesh (Including Chatisgarh)	WCL (17.2%)	NCL(62.3%)	SECL(100%)
Maharashtra	WCL (82.8%)		
Orissa	MCL (100%)		
Andhra Pradesh	SCCL(100%)		
Tamil Nadu	NLC (100%)		
Assam	NEC (100%)		

Note: figures inside bracket shows the percentage of royalty paid by the company to that particular state out of the total royalty paid by it to different states.

SCCL is the only one Coal Company located in Andhra Pradesh. SCCL did not have any coal mine outside Andhra Pradesh. Hence entire royalty paid by SCCL accrues to Andhra Pradesh.

Neyveli Lignite Corporation is the major Lignite Company situated in Tamil Nadu. Besides NLC, there exists some minor private Lignite companies but their contribution to royalty income of the state is negligible. We have the data on the royalty paid by NLC but we did not have any data on the royalty collected by Tamil Nadu State.

MCL is the only Coal Company situated in Orissa and MCL did not have any mine in other states. Entire royalty paid by MCL goes to Orissa State.

Madhya Pradesh has three coal companies. They are SECL, NCL and WCL. NCL and WCL have their mines in other states also. NCL also has its mines in Uttar Pradesh and WCL has its mines in Maharashtra. Royalty paid by SECL goes to Chatisgarh and to Madhya Pradesh. NCL has its mines both in Uttar Pradesh and in Madhya Pradesh. Out of the total amount of royalty paid by NCL 62.3% goes to Madhya Pradesh and remaining goes to Uttar Pradesh. WCL has its mines both in M.P and in Maharashtra. Out of the total royalty paid by WCL 17.2% goes to Madhya Pradesh and the rest goes to Maharashtra. Thus, royalty collected by Madhya Pradesh = (100% of the royalty paid by SECL + 62.3% of the royalty paid by NCL + 17.2% of the total royalty paid by WCL.)

Maharashtra gets royalty only from WCL. However, as WCL also pays royalty to Madhya Pradesh the share of Maharashtra was culled out of the total royalty paid by WCL. 82.8% of the royalty paid by WCL goes to Maharashtra.

Uttar Pradesh gets royalty only from NCL. Since NCL is paying royalty to both Uttar Pradesh and Madhya Pradesh with the available data, we can segregate the share of both the States. 37.7% of the royalty paid by NCL goes to Uttar Pradesh.

Royalty collected by Uttar Pradesh from NCL = (Royalty collected by U.P/Total royalty paid by NCL) X 100. Likewise, royalty income of all the states were worked out.

Simple statistical methods are applied for analysing the time trend and relative performance of various variables used in the study.

Chapter II examines the various levies and royalty on coal, which benefit the State exchequer and also the Central Government. This chapter is followed by the chapter on the analysis of the prevailing royalty policies pursued in the country and the revenue implications of royalty for the coal producing States.

CHAPTER II

ROYALTY AND OTHER LEVIES ON COAL

I.A) Coal as source of Revenue:

Coal is an important mineral, which contributes significantly to the gross domestic product. Hence, this natural resource has good revenue potential. Both the Centre and the coal producing States derive revenue from various types of levies imposed on coal under different legislations. States collect revenue through royalty, sales tax, various types of cess, environmental protection fee (Cess), forest conservation cess, levy on transport of coal through forests, lease fee on mines and so on. The coal sector also pays in the form of Central Sales Tax (CST) and Stowing Excise Duties (SED). These levies are briefly explained below:

1. Sales Taxes:

Coal is subjected to General Sales Tax (GST) on intra-state sale and to Central Sales Tax (CST) on inter-state sale of coal.

a) State Sales Tax (GST):

This is a single point tax payable on sale of product (coal). When coal is marketed, the first sale is subjected to the State Sales Tax. Sales tax is levied on the assessable value of coal. Assessable value means basic price i.e. the pit head value plus royalty payable plus all statutory levies including transport charges where it is recovered at a fixed rate but excludes sales tax i.e., landed price - sales tax. The operator (seller) charges sales tax from the purchaser. The sales tax rate varies from State to State. In some States, there are surcharges on sales tax liabilities in addition to turnover tax and additional tax. In some states, sales tax incidence also varies from dealer to dealer (registered/unregistered).

b) Central Sales Tax:

CST is charged at the rate of 4 per cent of sale price in case the deal is covered by declaration form 'C'. Otherwise GST of the state at full rate is charged, if the sale transaction is effected on inter-state basis.

2. Road Tax:

Most of the States levy road tax for common transport trucks and trucks with trailers. When coal is transported through roadways the tax is to be paid.

3. Reconnaissance Permit Fee:

This is a non-tax levy starting from the reconnaissance stage* when an area is demarcated as a possible mineral bearing area and the mine lease is to be awarded, first a Reconnaissance Permit is granted. The applicant has to apply with a non-refundable fee at rate specified by the respective State (e.g. Rs.5/-) per sq. km to the State Government. Along with this a refundable security for the observance of the terms and conditions of the permit is required to be paid at the specified rate per sq. km or part thereof.

4. Prospecting and Mining Lease Fee:

After successful reconnaissance of the area it is proposed by the bidder to pay annually in advance, a prospecting fee in respect of the ensuing year or part of the year at such rates and time as may be fixed by the State Government. Opening of new mine and subsequent operations require statutory permission from Coal Controller, Government of India and Director General of Mine Safety. Labour and safety aspects are strictly required to be adhered to. A Mining Lease which allows for the development and exploitation of coal needs to be obtained before undertaking any mining operations. It is granted by the State Government after it is approved by the Government of India under Mines and Minerals (Regulation and Development) Act, 1957. Mining Leases are granted for 20-30 years initially and can be renewed for a further period of 20 years with the government's approval. The lease is ordinarily subject to a ceiling of 10-sq. kms. of area. This is fixed on per hectare of land basis. The payment is independent of mineral extraction activities.

5. Dead Rent:

Dead rent is charged based on area of mining lease granted irrespective of the mineral. The rate of dead rent is fixed on the assumption that the lessee can sustain certain minimum yearly production. The rate of dead rent is also fixed by the Central

* Grant of Reconnaissance permits started with effect from 18.12.1999 (MMRD Act Amendment, January 2000).

Government and revised along with royalty rates. The rates are specified in the third schedule. The Central Government by gazette notification may amend the third schedule so as to enhance or reduce the rate at which the dead rent shall be payable in respect of any area covered by a mining lease and such enhancement or reduction shall take effect from such date as may be specified in the notification by the Centre.

Dead rent is a deterrent against the tendency of the lessee to corner leases and keeps them idle to prevent competition from accessing mineral bearing areas. The rate of dead rent varies according to the lease period and according to the area brought under lease. The holder of mining lease pays the dead rent to the State Government every year. The holder of mining lease with 'dead rent' provision becomes liable to pay royalty for the minerals when removed or consumed. He shall be liable to pay 'royalty' or 'dead rent' whichever is higher. The Centre is not supposed to enhance the 'dead rent' rate in respect of such area more than once during any period of three years.

6. Royalty Linked Cess:

Apart from royalty, State Governments also used to levy several cesses/taxes called by different names on major minerals. Cess is a kind of levy charged for meeting some specified expenditure like welfare, education, construction of road etc. It is levied based on either royalty payable or the quantity of mineral production. Royalty linked cesses were struck down by the Supreme Court except for the State of West Bengal.

Some of these cesses/taxes were existing for a long time even prior to framing of the Constitution as protected under Article 277 of the Constitution. Levy of those cesses/taxes continued even after coming in force of Mines and Minerals (Regulation and Development) Act 1957.

7. Surface Rent:

In addition to royalty or dead rent, a coal lessee is required to pay a surface rent in respect of area used by him for mining operation at a rate not exceeding the land revenue as may be specified by the State Government in the mining lease. It is levied on the basis of area assessed as non-agricultural area and used for mining activities.

8. Other Levies:

Different states have different types of other levies like, State Water Pollution Consent Fee, State Air Pollution Fee, and so on. However, these are not important or substantial levies.

9. Other Levies by Local Bodies:

Coal-mines also come under the jurisdiction of local level government and some general levies touch this sector too. Coal companies are also required to pay environmental and pollution levies, cess for afforestation, transport fee for passing through the forest areas and so on. In Madhya Pradesh, transport fee is to be paid to the Forest Office at the district level at the rate of Rs. 7/- per ton of coal transported through the forest area.

10. Stowing Excise Duties:

This is a Central levy on the use of sand in the coal mines. SED is payable on the basis of despatch of coal at a rate depending upon the grade of coal despatched. Presently, it is levied at a rate of Rs.4.25 per ton for the Steel-1, Steel-2, Washery-II, III and IV grades and Rs.3.50 per ton of other grades of coal.

11. Revenue Mobilization through Environment Protection Measures:

Coal mining projects in India are required to address environmental and social mitigation issues related to projects. Environmental Action Plan (ERP), Re-habilitation Action Plan (RAP) and Indigenous People's Development Plan (IPDP) are now integral parts of coal project.

In order to tackle the problems of environmental pollution as far back as in 1983, the Bureau of Industrial Costs and Prices (BICP) had recommended for a separate body to be created and given the responsibility for environment restoration for all open cast mining projects. Apparently, the coal mining companies favoured the levy of the cess but wanted to appropriate it themselves. Thus, the coal companies are required to pay for the protection of the environment in the form of environmental cess or levy.

12. Fee for Forest Conservation: Pratyansha Shulk:

Apart from the above, in Madhya Pradesh and Chattisgarh States, there is another levy called: "Pratyansha Shulk" (in Hindi). This is a levy to help forest conservation in the State. The applicants aspiring for going for mining in the forest area are required to pay this expected fee as shown in Table 2.1. Had there been no mining what would have been the yield from the forest, is worked out and based on this estimates the fee is charged.

Table 2.1: Details of Pratyansha Shulk
(Expected value of the forest land)

Sl. No.	Quality of Forest	Density of Forest	Expected Fee per hectare (Rs. in lakh)
1	II and III	• Dense forest	9.20
		• Medium forest	8.60
		• Open and empty forest	7.00
2	V	• Dense forest	8.40
		• Medium forest	7.80
		• Open and empty forest	6.20
3	V	• Dense forest	8.00
		• Medium forest	7.40
		• Open and empty forest	5.80

13. Royalty:

Section 9 (1 and 2) of the MMRD Act outlines the royalty procedure. According to the Act, the holder of a mining lease granted before or after the commencement of this Act, shall pay royalty in respect of any mineral removed or consumed by him or by his agent, manager, employees, contractor or sub-lessee from the leased area, at the rate as specified in the second schedule in respect of that mineral. Royalty is not required to be paid in respect of any coal consumed by a workman engaged in a colliery provided that such consumption by the workman does not exceed one-third of a ton per month.

I.B) Royalty, Cess and various Levies in West Bengal

West Bengal mainly depends upon various types of cess. Until 1998 the cess levied by West Bengal was as high as 45 per cent. West Bengal Government decided to reduce coal cess to 25 per cent from 45 per cent ad valorem. Presently, the State levies 25 per cent cess and in addition gets 6 per cent royalty. (The leave petition filed by West Bengal is still pending before the court for final judgement.) Other coal mining States followed a royalty regime. Bharat Coking Coal Ltd. (BCCL) paid around Rs.135 per ton as royalty on prime grade coal mined from the State compared with Rs.250 per ton, which ECL had to dish out at the reduced cess rate in 1998.

Some of the important cesses and other levies prevailing in West Bengal on coal are given below:

1. Royalty on Coal (Payable to West Bengal and Jharkhand Governments):

This is payable in respect of coal removed from leased hold land and consumed by lessee for its own consumption. However, in case of free issue of coal to employees a basic exemption at the rate of 1/3 ton per employee per month is available. Amount of royalty paid per annum comes to Rs.64.00 crores (Jharkhand State) and Rs.10.00 crores (West Bengal State).

2. Rural Employment (RE) Cess and Primary Education (PE) Cess (Payable to West Bengal Government only):

RE and PE cesses are payable at the rate of 20.5 per cent and 5 per cent respectively on annual value of coal bearing land. The term annual value of coal bearing land is defined in the Act in relation to a financial year. One half of the value of coal produced from such coal bearing land during the two years immediately preceding that financial year, the value of coal is being that as could have been fetched by the entire production of coal during the said two immediately preceding years, had the owner of such coal bearing land sold such coal at the price or prices excluding the amount of tax, cess, fee, duty, royalty, crushing charges, washing charges, transport charges or any other amount as may be prescribed, that prevailed on the date immediately preceding the first day of that financial year.

The amount paid or payable under this head to the Government of West Bengal comes to Rs.430.80 crores per annum.

3. Asansol Mines Board of Health Cess: (*Payable to Asansol Mines Board of Health an autonomous body under the control of Government of West Bengal)*

This is payable at the rate of Re.1 per ton on the average raising of coal during 3 (three) calendar years immediately preceding the relevant financial years. The amount paid or payable on this account comes to Rs.1.50 crores per annum.

4. PWD and Road Cess *(payable to Government of West Bengal)*:

Payable at the rate of Re.1 per ton on the average production of coal during 3 (three)-calendar years immediately preceding the relevant financial years. The amount paid or payable on this account comes to Rs.1.50 crores per annum.

5. Stowing Excise Duty *(payable to the Central Government)*:

Sand stowing in underground mines is an effective means of coal conservation, which is widely in use for extraction of coal pillars from underground coal seams and coal seams lying underneath built up area, such as surface structures, railway lines, roads, rivers, nallahs, Jores, etc. Sand stowing is also used for protection against fire in coal seams.

Sand stowing excise duty is payable on the basis of despatch of coal at a rate depending upon the grade of coal despatched. The amount paid or payable on this head comes to Rs.9.20 crores per annum.

As a result of change in the technology, mines have switched over to construction of beams and pillars and reduced using sand in the mines. However, SEB continues as an infrastructure levy.

6. Cess on Stowing Sand *(payable to Government of West Bengal)*:

Payable at the rate of Rs.2.50 per metric ton of sand stowed. Annual payment on this head comes to Rs.1.70 crores (approximately).

7. Royalty on Sand *(payable to Government of West Bengal)*:

Payable at the rate of Rs.0.40 per metric ton of sand lifted from riverbed for the purpose of sand stowing. Amount on this account comes to Rs.27.00 lakh (approximately).

8. Dead Rent:

It is payable at a rate which is higher of the followings:

(a) Royalty payable on actual removal of coal from leased hold area and consumption of coal for own purpose, or

(b) Rates as prescribed in the Third Schedule of Mines and Minerals (Regulation Development) Act, 1957.

9. Surface Rent:

It is payable at the rate of Rs.45.00 per acre of land. Annual amount payable under this head comes to Rs.20.00 lakh (approximately).

10. Sales Tax:

The rates of sales tax differ from dealer to dealer and from location to location. This is shown in Table 2.2.

The amount paid or payable under this head:

To the State of West Bengal Rs.96.00 crores (approximate) per annum

To the State of Jharkhand Rs.24.00 crores (approximate) per annum

Table 2.2 Rates of Sales Tax in West Bengal and Jharkhand

	Registered dealer	Unregistered dealer
Despatched from Collieries situated within West Bengal to a destination within West Bengal	35% of assessable value	4% of assessable value
Despatch from Collieries situated within West Bengal to a destination outside West Bengal	4% of assessable value	8% of assessable value
Despatch from Collieries situated within Jharkhand to a destination within Jharkhand	4% of assessable value	4% of assessable value
Despatch from Collieries situated within Jharkhand to a destination outside Jharkhand	4% of assessable value	8% of assessable value

11. Consent Fees under West Bengal Pollution Control Board:

The amount payable under this head depending upon the capital investment in land, building, plant and machinery and category of industry zones namely red, orange and green. For the purpose of paying consent fees coal industry has been grouped under red category, and the Act prescribed highest rate of consent fees in respect of industries groups under category red. The rate of consent fees is varying from Rs.50.00 per annum to Rs.1, 20,000 per annum.

12. Water Cess:

It is payable at the rate of 1.50 paise per kilo litre of water consumed for industrial purpose and at the rate of 2.00 paise per kilo litre of water consumed for domestic purpose.

I.C) Revenue Composition:

Some of the important sources of revenue from coal and extent of their contribution to the revenues of the coal producing States are shown in Table 2.3. Table 2.3 highlights the importance of royalty among the various types of levies on coal. As is clear from the table among all the sources of revenue from coal sector the most important source is royalty (in case of West Bengal it is the cess).

Contribution made by ECL and BCCL to West Bengal in the form of Cess are given in Table 2.4. Royalty accounts for about 60 per cent of revenue mobilised by various States from coal. This is followed by cess. As described elsewhere in the text, cess is far more in importance in the State of West Bengal. Next to these two sources is the sales tax on coal followed by SED and other levies. It should be remembered that the final landed price of coal is influenced not only by changes in the royalty rates but also by other levies which account for 40 per cent of the revenue accruing to the States from coal.

Table 2.3: Sources and Composition of Revenue from Coal (CIL and its Subsidiaries)[5]

Year	Royalty	Cess**	Sales Tax	SED	Other levies	Total
1996-97	196834	62379.19	63534.17	8849.23	779.02	332375.6

[5] Company-wise, Year-wise details are given in Appendix Table A 2.1.

	(59.22)	(18.77)	(19.12)	(2.66)	(0.23)	(100.00)
1997-98	197586	66532.66	72995.9	8521.82	880.83	346517.2
	(57.02)	(19.20)	(21.07)	(2.46)	(0.25)	(100.00)
1998-99*	194785	62395	73584.41	8075.37	659.85	339499.6
	(57.37)	(18.38)	(21.67)	(2.38)	(0.19)	(100.00)
1999-00	198416	43838.22	77712.88	8395.61	741.56	329104.3
	(60.29)	(13.32)	(23.61)	(2.55)	(0.23)	(100.00)
2000-01	229612	47789.52	80138.01	8751.25	909.39	367200.2
	(62.53)	(13.01)	(21.82)	(2.38)	(0.25)	(100.00)
Average	203446.6	56586.92	73593.07	8518.656	794.13	342939.4
	(59.32)	(16.50)	(21.46)	(2.48)	(0.23)	(100.00)

Source: *Computed from the data given in the Annual Reports of the Coal India Ltd.*

Note: *1. * Average of two years (1997-98 and 1999-00) for two subsidiaries.*
*2. ** Major part of Cess belongs to West Bengal.*
3. Figures in parentheses are percentages to the respective row totals.

Table 2.4: Cess in West Bengal (Rs. in lakhs)

Year	Cess* Current prices
1996-97	60342.23
1997-98	64448.48
1999-00	42224.88
2000-01	46135.51

Royalty is an important source of non-tax revenue to the coal producing States. The potential to increase revenue through royalty is quite significant. However, the present level of utilisation of this source of non- tax revenue is very low. The categorisation of coal, the rates of royalty, periodicity of revision of royalty rates, the basis of royalty and the type of royalty all influence the level of revenue accruing to a coal producing State.

The policies pursued after the nationalisation of coal mines are examined in the following chapter.

CHAPTER III

COAL CESS AND ROYALTY POLICIES IN INDIA

Royalty and Cess are viewed together while analyzing the revenue implication for the States. Cess occupied important place till the Supreme Court struck it down. As explained earlier Cess on coal is almost like a substitute of Royalty on coal.

I. Cess on Coal

All the coal producing States except Maharashtra, Assam and Meghalaya were levying number of Cesses in mid- eighties. The Cesses in vogue in different States as mentioned by them to the Study Group in 1984 is given in Table 3.1. With the revised rates of Royalty coming into effect from 1-8-1991, all States except West Bengal and Assam stopped collecting Cesses.

The rates of these Cesses/taxes varied widely from State to State. Some States enhanced the Cesses to an extent where the Cess was more than twenty-five times the rate of royalty and the income to State Government from the Cess far exceeded the rate of royalty. In a number of States, the proceeds of the Cess were also not being utilized for any specific purpose and it became a source of general revenue for the State Governments. Cesses on coal were exceptionally high in Bihar and West Bengal.

The rates at which the Cesses were levied on coal varied so widely that the Central Government found it difficult to revise the rate of royalty on coal, which was due for revision in February 1985. The levy was challenged before several courts. In October 1989 in the case of India Cements Ltd. etc. vs. State of Tamil Nadu the Supreme Court had held that the State Governments have no competence to levy such Cesses. Thereafter, several High Courts struck-down State enactment levying such Cesses. The High Court also ordered that the Cesses collected after 25-10-1989 (the date of Supreme Court judgement in India Cements Case) should be refunded with interest.

There were some changes in the levy of Cess. At the time new rates of Royalty were notified on 1-8-91, the State Governments were collecting Cesses in addition to prevailing rates of Royalty rates as shown in Table 3.2.

Table 3.1 Cesses in vogue in different States till 1984

State	Name of Cess	Rate of Cess
West Bengal	1. Public Works Cess	Rs.0.50 per ton.
	2. Road Cess (Both leviable under Cess Act. 1980)	Rs.0.50 per ton.
	3. Rural Employment Cess (West Bengal Rural Employment and Production Act, 1976)	17% of the value of coal
	4. Primary Education Cess (West Bengal Primary Education Act, 1973)	3% of the value of coal
Bihar	Cess on Coal	20% of the pit mouth value
Madhya Pradesh	Cess on Coal	400% of the royalty
Orissa	Cess on Royalty	100% of the royalty
Andhra Pradesh	Mineral Rights Tax,	300% of the royalty
	Tax on non-agricultural use	…
	District Board Cess	25% of royalty

The Supreme Court decision and judgements of various High Courts striking off Cess gave rise to two issues. The State Governments had pleaded difficulties both financial and administrative in refunding the Cesses already collected and therefore, requested that the Cesses already collected should be validated. In view of the several judgements passed by different courts on the subject, it was suggested that the only remedy available to the Parliament was to validate the Cesses already collected as Government of India alone had the competence to levy such taxes on major minerals.

The second issue related to loss of revenue to State Governments. Representations were made by State Governments that the Central Government should increase the rates of royalty especially on coal, which was last enhanced on 13-2-1981 and could not be enhanced thereafter in view of high rates of Cesses levied by State Governments. In view of these Cess laws having been declared ultra vires, the Central Government could suitably enhance the rates of royalty thereby levying a uniform tax on each major mineral, especially coal and at least partly make good the loss of revenue to State Governments.

Table 3.2 Rates of Cess in different States

State and Type of Coal	Rate
Bihar	
Cess on Royalty	40% of pit head price
Royalty Cess	5% of royalty
Jharia Mines Board Health Cess	Rs.3.50 per ton
Jharia Water Board Cess	Rs.0.10 per ton
Orissa	
Mineral Area Development Cess	30% pit head price
Madhya Pradesh	
Mineral Area Development Cess	125% of royalty
Storage Cess	Rs.5 per ton
Maharashtra	
Cess on Royalty	10% of royalty
West Bengal	
Rural Employment & Production Cess	35% of pit head price
Primary Education Cess	5% of pit head price
Public Works and Road Cess	Re.1.00 per ton
Asansol Mines Board of Health Cess	Re.0.40 per ton
Assam	
State Cess	Rs.100 per ton

It was argued that unless a decision to enhance royalty was taken immediately, State Governments would have no revenue to implement their plan programmes. However, there were still some State enactments levying Cesses on major minerals, which were in force and were to be struck down by Courts. It was held that in case both the enhanced rate of royalty as well as Cess were collected on major minerals in some States, it would result in double taxation and would virtually bring to a sudden halt the mining, processing and availability of some minerals.

It was therefore suggested that the Parliament may by law repeal the State enactment levying Cesses on major minerals in line with the decision of Supreme Court in India Cements case while validating the Cess which had already been collected. After the abolition of Cess in most of the States (except West Bengal) royalty on coal became more important than in the past.

II. Royalty Policy:

As mentioned in the previous section, the rates of royalty on minerals are specified in the Second Schedule to the Mines and Minerals (Regulation and Development) Act, 1957. Under Section 9(3) of the Act, the Central Government by notification in the official gazette may amend the Second Schedule. Centre can enhance or reduce the rates at which royalty shall be payable in respect of any mineral with effect from such date as may be specified in the notification. It was also provided in the said section prior to 10.2-87 that the rates of royalty should not be changed more than once in 4 years. The periodicity of the enhancement of rates of royalty has been reduced from 4 years to 3 years after the amendment of the Act.

1. Royalty Rates since Nationalization of Coal Mines:

Royalty rates have not undergone changes very frequently. The rates remained unchanged for a long time. The rates, which prevailed in 1971, continued even after the nationalization of coal- mines. After the nationalization of coal mines the first revision of royalty rates was done in 1975. The nomenclature of the gradation had been changed w.e.f. 17-7-79. But the royalty rates remained unrevised. As such the royalty was charged on the basis of U.H.V (Useful Heat Value) as was stipulated in the price structure of 1-7-1975 onwards. The second revision of rates of royalty on coal was notified w.e.f. 13-2-1981. As per the Act the next revision was due in 1985. For this purpose the Central Government, the Department of Coal, constituted the first Study Group[6] to consider the question of revision of the rates of royalty on coal on 7-11-1984. However, due to complexities arising out of levy of Cess by different States, the royalty rates remained unchanged during the decade 1981-1991. Royalty rates were revised in 1991 and later on in 1994 on the basis of the recommendations of the second Study Group[7].

2. Latest Revision in Royalty Rates:

Royalty on coal, which was last revised in 1994, became due for revision in 1997. But Government of India did not revise the rates in spite of reminders from the State Governments from time to time. Because of non-revision of royalty on coal the State Governments had been losing additional royalty of Rs.180 crores per annum.

[6] See Appendix Note AN.1
[7] See Appendix Note AN.2

Till mid August 2002 the same royalty rates prevailed which were fixed in 1994. On 31st July 2002, the new rates of royalty were discussed and a gazette notification was issued on 16th August 2002 announcing the new royalty rates to be applicable from the date of gazette notification.

With the Cabinet deciding to increase coal royalty up to 19 per cent from 12.76 per cent, the coal producing States, except West Bengal, are set to gain nearly Rs 500 crore annually. The new rates will not be applicable to West Bengal, as the State Government has levied a 25 per cent Cess on coal.

The Cabinet Committee on Economic Affairs (CCEA) approved the Coal and Mines Ministry's proposal to revise coal royalty, which would continue to be on per ton basis. At current prices, the new royalty ranges from 15 per cent to 19 per cent as against the prevailing average rate of 12.76 per cent.

The royalty revision would benefit States like Orissa, Madhya Pradesh, Jharkhand, Andhra Pradesh and Maharashtra. It is expected that the royalty payable to these States would go up from nearly Rs 2,000 crore to over Rs 2,500 crore annually and would rise further with increasing production.

In the case of West Bengal[8], the State Government was collecting a 25 per cent Cess, despite it being struck down by the Calcutta High Court. The State Government had filed a special leave petition in the Supreme Court.

3. Royalty Rates on Lignite

The erstwhile Ministry of Coal, Ministry of Energy, fixed the exiting rate of royalty of Rs.2.50 per ton for lignite in 1990 on the ground that the Useful Heat Value (UHV) of lignite is equivalent to F and G grades of non-coking coal. In 1990, the royalty rate for F and G grades of non-coking coal was Rs. 2.50 per ton. A Study Group was set up by the Ministry of Coal on 16-3-1995 to consider the revision of royalty rates on lignite. On 14-9-1997, the Study Group made a recommendation that royalty rate on lignite should be linked with royalty rates on the grades of non-coking coal of equivalent heat value. Since, the Ministry of Coal was examining the issue of revision of coal royalty rates as well as the lignite royalty rate together, the Cabinet

Secretariat was informed in May 1999 that it would be advisable to defer the issue of revision of coal royalty rates as well as the lignite royalty rate.

Except the State of Gujarat, the lignite reserves in the rest of the country i.e. in Tamil Nadu and Rajasthan are equivalent to F & G grades of non-coking coal on the basis of UHV. The lignite reserves in Gujarat are equivalent to E grade of non-coking coal. The existing royalty rates for E, F & G grades of non-coking coal are given below:-

Grade of non-coking coal	Existing royalty rate fixed in 1994
E Grade	Rs. 70.00 per ton
F Grade	Rs. 50.00 per ton
G Grade	Rs. 50.00 per ton

While the entire lignite production (by Neyveli Lignite Corporation) in Tamil Nadu is consumed for power generation, the lignite production in Gujarat is used for power generation as well as for cement production. The lignite production in Rajasthan has a wide range of consumers in the power sector, cement sector and brick manufacturing sector. On the basis of lignite production in Tamil Nadu, Gujarat and Rajasthan, the existing coal royalty rates for E, F & G grades of non-coking coal and the possible impact of a reasonable enhancement in the rate of lignite royalty on the prices of power, cement, etc., a proposal for enhancement in the lignite royalty rate is being considered in the Ministry of Coal for submission before the Cabinet Committee on Economic Affairs.

III. Royalty and its Revenue implications to the Coal Producing States:

States have right over minerals. Royalty is the amount payable to the State Government as a compensation for the depletion of a non-renewable mineral resource. In the years before nationalization, the coal producers paid the amounts payable to the State Governments on this account. These amounts were very small ranging from a high of Rs.5 per ton for the best qualities of coal to Rs.2 for coals of the poorest quality. The royalty used to be included in the coal production costs and realized

[8] See Appendix Note AN.3.3.

through sale prices. After nationalization, payments made to State Governments towards Royalty are not included in the coal production costs. The amounts due to the State Governments are realized from the consumers and made over to them.

i) Trends in Royalty Revenue:

Royalty as source of revenue to the coal producing States is losing importance since nationalization of coal-mines. Royalty revenue improves only in the years when the rates are revised. Soon after the revision the relative yield from this source starts declining. To illustrate this data on royalty is taken for the latest six years. The trend is examined in relation to NSDP, Gross Value Added by Fuels and Minerals, total revenue and non-tax revenue of the coal producing States. These are displayed in Table 3.3. The picture for lignite is not different from this because the rate of royalty on lignite has also remained stagnant all these years.

Table 3.3: Royalty in Relation to Macro Variables

YEAR	Royalty as percent of Total NSDP of Coal and Lignite Producing States	Royalty as percent of Gross Value Added by Fuels	Royalty as Percent of Total Revenue of Coal and Lignite Producing States	Royalty as percent of Total Non-tax Revenue of Coal and Lignite Producing States
1996-97	0.40	10.19	2.70	10.72
1997-98	0.37	9.32	2.43	10.37
1998-99	0.29	8.94	2.30	10.31
1999-00	0.24	8.99	1.98	7.89
2000-01	0.23	N.A	1.97	8.14
2001-02	0.16	N.A	1.62	7.33

Source: *See Appendix Table A 3.1.*

As may be seen from Table 3.3 Royalty as percentage of NSDP of coal producing States shows a continuous decline. Royalty which was 0.40% of NSDP in 1996-97 declined to 0.16% by 2001-02. Royalty also declined as per cent of gross value added by the fuel sector to NSDP. It declined from 10.19% in 1996 to 8.99 % in 1999. Similar trend is discernible for royalty as proportion of total revenue and State non-tax revenue. Royalty constituted 2.70 % of revenue and 10.72% of non-tax revenue in 1996 and the same declined to 1.62 % and 7.33 % respectively in 2001.

CHAPTER IV

REVENUE IMPLICATIONS OF ROYALTY ON COAL

One of the major factors responsible for the downward trend of royalty is the policy relating to revision of royalty rates. Royalty rates were revised during the past 27 years four times only. After nationalization first revision was done in 1975, and subsequently in 1981, 1991 and in 1994. Recently in August 2002 the rates were further revised.

The increase during 1975 and 1981 was less than 7% per annum for the best grade coal and for the low grade the increase was 5.5 % per annum. The royalty rate increased significantly in 1991 in relation to the rates prevailing in 1981. For Group-I coking coal the rate of royalty was Rs. 7 in 1981 which increased to Rs.150 in 1991. This meant an annual increase of 204%. At the same time the rate of royalty for the lowest grade, which was Rs 4.30 in 1981 increased to Rs 70 in 1991. This led to an annual increase of 152.79%.

Again in 1994 coal royalty rates were revised. During this period of 3 years the increase was to the tune of 10% per annum for Grade-1 coking coal and 33.3% per annum for the low-grade i.e. F and G grade of non-coking coal. The Royalty rates as revised in different years are shown in Table 4.1.

It is evident from the table that except for the year immediately after the revision of rates in the subsequent years the annual change in the growth of royalty showed a declining trend. In fact during 1998-99 the annual change in the royalty over the previous level was negative almost for all the States.

Non-revision of royalty rates for many years lead to decline in the real royalty income of the States. Due to general rise in the price level or in other words due to inflation the money value goes down. Hence, the rate of royalty if remains unchanged for long the real value of royalty income declines significantly and the States lose. This is evident from Table 4.2 in which royalty is estimated at constant prices.

Royalty in real terms as shown in Table 3.5 goes down significantly as proportion of NSDP, States own tax revenue and States own non tax revenue. Royalty is a price for the use of coal by the extractors paid to the lessor i.e. the State. Theoretically this price should increase with the depletion of the coal reserves. On the contrary, in the case of coal producing States in India royalty has been going down in real terms. The fall in the real value of royalty is much more than shown for a few years in Table 4.1. The royalty rates remained unrevised for long causing the States to lose income from royalty heavily. The difference in the nominal value and real value of royalty for coal producing States are shown in Figure 4.1. Appendix Tables showing the royalty rates both in current and constant prices since 1971 to 2002 confirm this. The trend line drawn on the basis of royalty rates at constant price shows that only during the year royalty rates are revised there is a rise and in the subsequent years the line starts sloping down wards.

Table 4.1: Revised Rates of Royalty 1975 to 2002 (Rs. per ton)

Sl.No.	Grade of Coal	1975	Sl.No..	New nomenclature	1981	1991	1994
1 (a) (b)	Coking Coal-A,B,C Non-coking coal-A	5/-	a.1Group Coking Coal	Coking Coal SGI, SGII , and WGI. b. Hand Picked selected states	7/-	150/-	195/-
2.A B	Coking Coal –D,E ,ST B	4.50/-	2.GroupII Coal	Coking Coal :WGII,WG III S CII, Non coking coal Grade A,B Ungraded R.C.M selected states	6.50/-	125/-	135/-
3.A B	Coking Coal -F, G,H,HH Non-coking coal-I	4/-	iii) Group III	Coking Coal WG-IV Non-coking Coal Grade C	5.50/-	75/-	95/-
4 a b	Coking Coal – j,k Non-Coking coal II,III,IIIA,III B	3.50/-	iv) Group IV	Non-Coking- Grade –D, –E	4.30/-	45/-	70/-
5	Ungraded Coal	2/-	v) Group V	Non-Coking- Grade –F, G, Lignite	2.50/-	25/- 2.50/-	50/-
6.	Rejects	1/-	vi) Group VI	Coal Produced in A.P.SCCL	5/-	70/-	75/-

Table 4.2: Royalty by states 1994-95 to 1998-1999 (Rs. in crores)

State	**WPI**	**112.5**	**121.6**	**127.2**	**132.8**	**140.7**
	Year	**1994-95**	**1995-96**	**1996-97**	**1997-98**	**1998-99**
Bihar	Current	613.05	658.33	682.77	658.95	607.91
	Constant	544.93	541.39	536.77	496.20	432.06
Orissa	Current	104.08	180.79	185.38	227.59	228.9
	Constant	92.52	148.68	145.74	171.38	162.69
Maharashtra	Current	159.7	217.9	200.29	204.79	184.62
	Constant	141.96	179.19	157.46	154.21	131.22
Madhya Pradesh	Current	438.91	666.77	684.14	663.63	675.13
	Constant	390.14	548.33	537.85	499.72	479.84
Uttar Pradesh	Current	87.39	113.5	121.41	102.35	86.78
	Constant	77.68	93.34	95.45	77.07	61.68
Andhra Pradesh	Current	144.53	175.28	197.14	278.11	200.16
	Constant	128.47	144.14	154.98	209.42	142.26
West Bengal	Current	9.59	7.82	10.87	12.64	9.76
	Constant	8.52	6.43	8.55	9.52	6.94
Total	Current	3104.91	3809.34	3785.23	3904.16	3552.62
	Constant	1384.60	1679.26	1644.59	1622.12	1420.35

Note: Wholesale Price Index : Base 1993-94 = 100

Figure 4.1

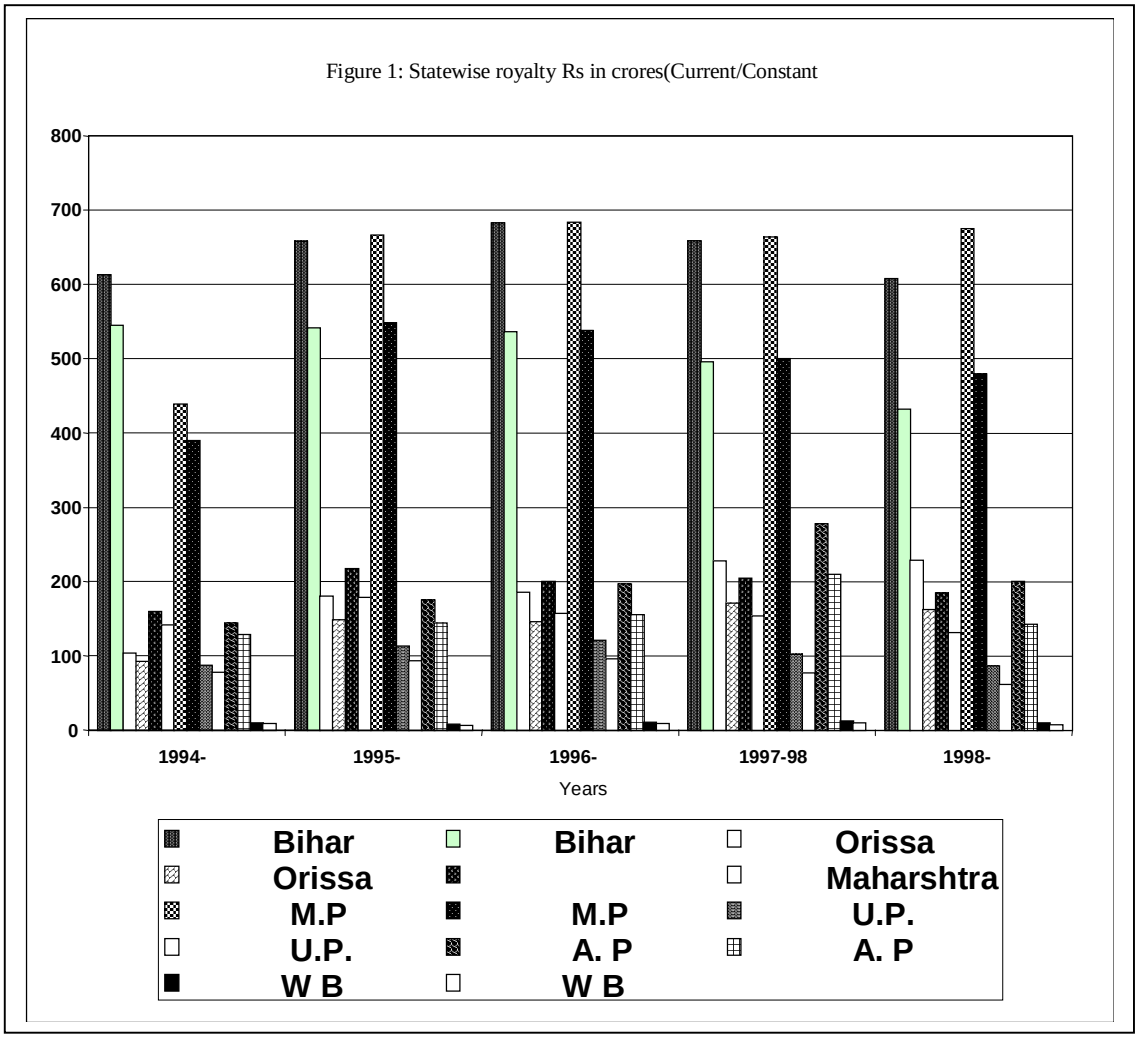
Figure 1: Statewise royalty Rs in crores(Current/Constant
800
700
600
500
400
300
200
100
0
1994-
1995-
1996-
1997-98
1998-
Years
Bihar
Orissa
M.P
U.P.
W B
Bihar
M.P
A. P
W B
Orissa
Maharshtra
U.P.
A. P

Similar trend is discernible for Cess collected by West Bengal. It is presented in Table 4.3

Table 4.3 Cess in West Bengal at Current and Constant Prices (Rs. in lakhs)

Year	Cess* Current prices	WPI(Base 1993-94=100	Cess at Constant Prices
1996-97	62379.19	121.6	51298.66
1997-98	66532.66	127.2	52305.55
1998-99	64243.92	132.8	48376.44
1999-00	43838.22	140.7	29060.48
2000-01	47789.52	145.3	32890.24

*Note: * Cess paid by ECL and BCCL only*

The table shows that in West Bengal the revenue from Cess has declined between 1997 and 1999. The decline is steeper in terms of constant prices. It implies that in West Bengal the production of coal and despatch have been on decline. Cess rate is constant and due to inflation Cess recorded a fall both in terms of nominal and real values.

iii) Base of Royalty:

Base for the estimation of royalty is very important for determining the amount of royalty to be raised. Royalty can be estimated on the basis of production or on the basis of despatch (excluding the part of the coal consumed by the companies which are exempt from royalty).

Under the Mines and Minerals (Regulation and Development) Act 1972 of Government of Bihar, the royalty is payable on the quantity of monthly production, after deduction of quantity of coal used for domestic consumption at 1/3 ton per worker per month. The royalty is payable on the quantity of coal used for colliery consumption i.e., used for boiler, workshop, canteen etc. The royalty is payable at the rate for the grade of the Coal notified by the Coal India Ltd. Coal companies report to the district mining officer, the grade and production. The quantity of opening stock, production, despatch and stock shown in the Table should conform to the notified

grades and the quantity indicated in the monthly report and physical verification of stock. Then the rate notified for respective grade is applied for calculation of royalty[9].

Another problem noticeable relates to the basis of calculation of royalty. There is some difference in the actual amount of royalty accruing to the States and the amount that should have accrued had the royalty been calculated on the basis of production or even despatch as reported by the companies.

Actual royalty received by the major coal producing States (Bihar, Orissa, M.P, U.P Maharashtra and West Bengal) are compared with the estimates based on despatch and production basis (Table 4.4). If the royalty is calculated on the basis of production the revenue of the States improve by 13 % and 18 % for coking and non-coking coal respectively. Even when despatch is taken as the base the royalty revenue improves. Though as per the Act royalty is charged on the basis of production, there are several exemptions and concessions allowed and hence the actual royalty falls below the optimum level of royalty to the States.

The difference between the actual and the estimated revenue from royalty is significant. States lose about Rs.250 crores per annum when compared with despatch as the royalty base and Rs.300 crores when compared to royalty based on production. The difference between the despatch and production base comes down when adjustment is made for that part of production, which is exempt from royalty.

In fact, it is very difficult to arrive at one despatch or production value, because, the useful heat value which is often used for arriving at local basic price - varies from one grade to the other. True base for fixing the rate of royalty per ton needs an elaborate exercise involving several technical coefficients. The above two bases - despatch and production only indicate the revenue implications of change in the royalty base for the States. There is need to examine the royalty base in more scientific way keeping in mind the technical parameters.

[9] Source: Report of the Committee on Integrated Coal Policy, Planning Commission, Government of India, May 1996, pp.94-97.

Table 4.4: Comparison of Estimated Royalty and Actual Royalty to be paid by the companies

(Rs. in crores)

Year	Royalty A	Royalty B	Royalty C	Difference between A & B	Difference between A and C
1994-95	1403.01	1903.943	1,935.16	500.93	532.1
%variation		35	27.5		
1995-96	1824.949	1956.973	1,974.34	132.02	149.50
1996-97	1863.294	2043.798	2,054.43	180.50	193.14
1997-98	1848.064	2146.233	2,171.99	298.17	323.93
1998-99	1771.666	2051.221	2,091.05	297.56	319.39
% variation		13.62	18		

Note:
Royalty A =Actual Royalty Collected by major coal producing States
Royalty B =Royalty estimated on the basis of despatches
Royalty C =Royalty estimated on the basis of production
Estimates exclude royalty paid by private coal mines.
Coal consumed by the companies on which there is no royalty is not excluded.
Despatches may not tally with production due to unsold stock/ release of previous stock
Source: See Appendix Note 4 for detail methodology.

iv) Grading of Coal and Royalty[10]

The royalty rates also differ from one grade to the other. There is no rational basis for fixing royalty by grade. This is evident from Table 4.5. The price of SGII is almost 14% less than the price of coal of SI grade, but the royalty fixed is same for both categories. Similarly, the price of WGI is 30% less than the price of SGI, but the royalty rate is same for both the grades. Thus, States with better quality reserves of coal lose in terms of royalty.

Table 4.5: Royalty Rates and Price of Coal in 2000-2001 (in Rs.)

	SGI	SGII	WGI	WGII	WGIII	WGIV	SC1	SC2
Price	1690.25	1411.50	1177.00	990.42	732.00	681.17	1164.08	963.42
Royalty	195	195	195	135	135	95	135	135
Ratio	1:8.66	1:7:40	1:60	1:7.33	5.42	1.72	1:8.62	1:14
% of Royalty	11.53	13.81	16.56	13.60	18.44	13.94	11.59	14.01

[10] See Appendix Note AN 3.4.

to Price								
	A	**B**	**C**	**D**	**E**	**F**	**G**	
Price	1043.50	945.58	785.58	665.86	484.26	388.19	279.30	
Royalty	135	135	95	75	70	50	50	
Ratio	1:7.72	1.70	1:8.27	1:7.88	1:6.9	1:7.76	1:5.59	
% of Royalty to Price	12.93	14.27	12.09	11.26	14.45	12.88	17.90	

Note: It should be noted that after the price liberalisation, price of coal varies from grade to grade and from company to company, while the royalty rate is uniform across the companies.

The above analysis shows that under the prevailing system of fixing royalty by grade adversely affect the interests of those States where the deposit of coal is of high grade. Thus, States like West Bengal and Bihar lose where there is predominance of underground coal mines with superior coal deposits. The ratio of royalty to price has nothing to do with the grade or quality of coal. e.g. for grade WGII while the ratio is 1:7.33 or the percentage of royalty to price is 13.60 for WG III it is 1: 5.42 or 18.44%, for WGI the ratio is 1:60 and the percentage of royalty is 16.56. Similarly while the ratio for F grade is 1:7.76 and the percentage of royalty is 12.88. For G grade the ratio is 1:5.59 and the percentage of royalty is 17.90. As against this for better grades of coal the royalty is less than 15 % of the price. This shows the lack of rationale in fixing the rate of royalty by categories.

Therefore, the basis for fixing the rate of royalty according to the category of coal also requires rationalization. For royalty purposes different categories are clubbed together this affects different States differently. States with higher grade coal e.g. 'E' grade get same royalty as a State with inferior 'G' grade coal. The intrinsic value and the price of coal differs based on the grading but the royalty rate does not vary from grade to grade when 2 or 3 grades are clubbed together.

The above analysis clearly establishes the need for the rationalization of coal royalty system in India. It is not sufficient to recommend for frequent revision of royalty rates. It is more important to arrive at a scientific base for arriving at royalty rates. This needs to be followed by an estimation of the quantum of royalty to be mobilized by the States. This should be based on some economic rationale rather than on *ad hoc* decisions or on the basis of consensus arrived at in some meeting or by the members of a Study Team. As we have seen above, if royalty is fixed per tonne, it loses the built-in-flexibility. In fact, due to inflation the real value of royalty declines

and more so when rates remain unaltered for long. Hence, it is worth examining the possibility of making coal royalty ad valorem.

Thus the prevailing system of royalty on coal and lignite need rationalization, The base, the rate, the categorization of coal for royalty purposes and link between royalty and pit head price of coal need to be examined rationally and accordingly the royalty system needs to be evolved.

However, before making any attempt at rationalization of coal royalty system, it is crucial to examine the economic implications of such measures for coal consuming sectors, for the coal producing companies, for competitiveness of domestic companies vis-à-vis imports, and also the impact on the final landed price of coal. These are examined in brief in the following chapter.

CHAPTER V

ECONOMIC IMPLICATIONS OF ROYALTY ON COAL

Revision of royalty rates and the frequency of the revision are the two issues often discussed at the State and at the Central level. As outlined in Chapter I major issues pertain to the impact of royalty on coal on the performance of major coal consumers like the state electricity board, steel and cement companies. This may also have some impact on exports and imports, on the process of privatization of coal - mines and on the foreign investment in the coal sector. It is strongly argued that a rise in the price of coal due to increase in the royalty rates makes the domestic coal industry lose its market. It is feared that increased royalty diverts demand from one company to the other or from domestic to the foreign coal. However, the price effect on the market of coal and the economic impact of increased royalty very much depend upon the demand and supply position of coal in India.

1. Demand for and Supply of Coal:

The public sector, which controls the major portion of coal reserves in India, enjoys a monopoly position. The supply side is having stronger forces than the demand side. As may be seen from Table 5.1, thermal power sector accounts for the largest portion of offtake of raw coal. It constitutes more than 78 % of total offtake. Its coal requirement largely impacts the overall coal demand and supply position. The demand for coal by this sector is not only large but is also increasing. It is followed by steel and cement sectors. Non- core sector together accounts for about 11 % of the total offtake. Demand for coal far exceeds the supply of coal. This is clear from various estimates given by the Planning Commission and different Study Groups.

Planning Commission has estimated the demand and supply of coal by important coal consuming sectors. These are shown in Table 5.2. The gap between the demand and supply shows an increase over time. The gap was estimated to be about 83.37 million tons by the end of 2001-02. The gap is glaring in the case of power and steel sectors. In fact the consumption of coal is expected to grow further during the 10^{th} plan period.

Table 5.1: Sector wise Offtake of Raw Coal during 2000-2001(in million tons)

Industry	2000-2001	%
All Industries	319.668	100
Cement	10.328	3.23
Fertilizer	3.18	0.99
Iron & Steel	19.668	6.15
Thermal Power	250.532	78.37
Other Non-Core Industries (Chemical, Paper, Textiles, Bricks and Kilns etc.)	35.959	11.24

Source: *Coal Controller's Organisation, Coal Directory of India 2000-2001, Government of India, Based on Table 4.17, p. I.75.*

The Working Group on Coal and Lignite for the 10th Five Year plan (2002-07) made projections of demand and production of coal, for the terminal years of 9th, 10th and 11th Plan periods. These are given in Table 5.3. This points at the weak bargaining power of the consumers of coal (demand side).

As against the above demand the availability of coal from Coal India Ltd., Singareni Collieries Company Ltd., and the present captive mines of TISCO/IISCO and DVC are likely to fall short of the requirement resulting in huge gaps. Table 5.4 displays this scenario.

Table 5.2 All India Coal Demand - Supply Gap during Ninth Plan Period (in million tons)

Sector	1998-99			1999-2000			2000-01 (Provisional)			2001-02 (Anticipated)		
	Demand	Supply	Gap	Demand	Supply	Gap	Demand	Supply	Gap	Demand	Supply	Gap
Power	220.30	204.74	15.56	223.59	222.64	0.95	223.63	234.62	10.99	262.00	238.69	23.31
Fertilizer	3.70	3.02	0.68	3.80	2.11	1.69	3.37	2.49	0.88	5.00	3.27	1.73
Cement	15.00	8.62	6.38	16.25	9.50	6.75	15.42	10.32	5.10	21.40	10.99	10.41
Steel	36.83	22.87	13.96	39.70	19.88	19.82	37.50	18.20	19.30	51.60	19.61	31.99
Others	57.05	57.63	-0.6	53.59	57.66	-4.07	58.95	58.51	.44	79.90	61.21	18.69
Total	325.38	291.87	33.51	331.03	307.53	23.50	333.85	319.61	14.24	412.20	328.83	83.37

Source: Working Group on Coal and Lignite for the Ninth Five-Year Plan

Table 5.3: Sector-wise Projected Demand (million tons)

Sector	1996-97 (Actual)	2001-02	2006-07	2011-12
Steel	34.70	46.90	64.0	78.0
Power	201.80	277.10	447.0	559.0
Cement	11.30	22.30	30.0	45.0
Others	50.80	60.40	112.0	153.0
Total	298.60	406.70	653.0	835.0

Source: Working Group on Coal and Lignite for the Ninth Five-Year Plan

Table 5.4 Gap between Supply and Demand (in million tons)

	2001-02	2006-07	2011-12
Demand	46.70	653	835
Availability	346.60	418	572
Gap	60.10	235	263

There is a gap between demand and availability of coal and the gap is 60.10 million tons towards the end of the IX Plan, which may increase to 235 million tons by the end of the X Plan and 263 million tons by the end of XI Plan. PSUs alone will not be able to meet the demand in full. To meet the projected demand the coal production has to be increased by over 500 million tons in next 15 years The Public Sector companies are expected to increase their production level by over 250 million tons by 2011-12. A gap of over 260 million tons would still remain, which would have to be met by imports in the short-run and by new investments in the long run.

Table 5.5 shows demand for coal including the demand for imported coal and the total gap is shown as per the estimation made by the Ministry of Coal for the Tenth Five year Plan period. Even a conservative estimate points at the demand and supply gap that is going to be significant in the coming years. As the demand far exceeds the total supply price impact is going to be insignificant on demand for coal at the present level of technology with the coal consuming industries.

Table 5.5 Demand for and Supply of Coal and the Gap in the Tenth Five-Year Plan Period

Year	Demand*	Supply	Gap
2002-2003	373.32	320.44	52.88
2003-2004	402.84	335.54	67.30
2004-2005	454.91	350.87	104.04
2005-2006	488.05	366.57	121.48
2006-2007	453.29	399.73	53.56

*Note: *Including requirement of imported coal.*
Source: Ministry of Coal, Report of the Working Group On Coal & Lignite For the Tenth Five Year Plan (2002-07), November 2001, Government of India, 3.10 .1 p 46

The estimates made by different Study Groups, though give different magnitudes of demand and supply gap these groups express unanimously that there is a yawning gap between the supply of and demand for coal. The above estimates of demand from coal consuming units bring forth that the major consumers of coal have to absorb any increase in the price of coal either due to increase in the pit head price or due to an increase in the landed price. Since power is the major coal consuming sector and power consumption is spread across millions of consumers, the burden of increased price can easily be passed on to the final consumers as the burden will be thinly spread. The shortages of supply of domestic coal strengthens the supply side influence on coal pricing. This implies that the price of coal is not driven by demand but by the supply. Keeping this gap in supply and demand in mind, the impact of any change in the price of coal or in the rate of royalty on domestic coal producing companies or on the major coal consuming units or on imports etc. should be analyzed.

2. Coal Royalty and Price of Coal

As discussed earlier there is a dialogue between the coal producing States and the Centre with regard to enhancement of the rate of royalty and the frequency of rate revision. The States want more frequent changes and rise in royalty rates commensurate with the increase in coal price both due to market forces (demand and supply) and due to inflation. The Centre argues for keeping the royalty rate low and stable.

It is held that an increase in the rates of royalty leads to an increase in the landed price of coal. It is worth mentioning here that there are two prices of coal. One Pit head price or basic price and the second the final landed price. Pit head Value of coal is the value of coal at pit head (of the collieries). It is computed on the basis of basic price - thus it does not involve any cost of sizing, transportation from pit head, loading, Cess, Royalty, Sales tax, Stowing Excise Duty etc. This is followed for all non-captive coal companies viz., CIL subsidiaries, SCCL, BSMDCL and JKML.[11]

[11] In case of captive collieries, however, it depends upon their accounting policy. If the costing of coal is done on no profit no loss basis then pit head value should be on the basis of such cost price. This practice is found to be followed in captive collieries of public sector units.
On the other hand, if the captive colliery is treated as independent commercial unit then pit head value is calculated on the basis of unit value of realisation which includes cost price and profit/loss per unit but excludes any transportation cost from pit head, Cess, Royalty, Sales tax, Stowing Excise Duty etc. This is particularly followed in Private captive colliery which is in contract to supply coal to any priority sector for which captive colliery is permitted (Steel/Iron, Power, Cement etc.)

The landed price is basic price plus all levies, royalty, transport cost and other costs. In fact, the price of coal depends not only on royalty but also on various other factors, which affect the final price of coal more strongly. This makes coal companies less competitive and also puts lot of burden on the coal consuming industries.

The impact of increase in price either due to revision of pit head (Basic) price of coal or due to increase in the landed price of coal should have similar economic impact on the performance of the coal consuming industries. This should also affect the demand for coal in the similar manner. However, it is not clear, why the same view is not taken when the landed price of coal increases due to increase in the basic coal price (pit head price) or due to increase in the railway freight charges or other levies imposed both by the Centre and the States. The coal producing states rightly feel that the coal prices are frequently increased to benefit the companies and the Central Government. Centre also earns through coal freight.

Most of the coal companies are Central Government undertakings. The Centre gets dividend from these public sector undertakings. Any increase in profit of these companies is financially beneficial to the Central Government. It is argued by non centralists that if the government is interested in lowering the price of coal, Centre can adjust the coal freight and or fix lower pit head prices of coal, while allowing the States to get more through royalty.

However, this has not happened. The trend in the basic price during the past two and a half decade clearly shows that the Centre has been revising the price very frequently[12] and this has led to an increase in the final landed price of coal. Table 5.6 depicts the trend in the pit head price. It is evident from the table that the price of coal has been revised almost every year (some time more than once in a year) and the revision was also quite steep. The Ministry of Coal felt " in India, unit value of coal in terms of per kilo calorie of useful heat value has been increasing more rapidly than being exhibited by simple unit value comparison over the years"[13].

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[12] See Appendix Note AN.4.
[13] Ministry of Coal, Coal Directory of India, p. I.97, 2000-01.

Table 5.6: Average Pithead Price of Coal (Rs./tonne)

Year	Weighted Basic Price (in Rs/Ton)	
	Coking Coal	Non Coking Coal
1971	35.80	33.40
1975	79.14	51.04
1979	134.19	90.07
1980	134.19	90.07
1981	174.63	116.29
1982	196.63	133.71
1984	291.13	173.14
1986	323.13	197.21
1987	384.13	234.29
1989	436.75	265.29
1990	436.75	265.29
1991	564.75	341.00
1992	564.75	341.00
1993	668.50	402.00
1994	703.50	422.71
1996	936.03	524.21
1997	954.15	572.95
1998	1003.31	619.26
1999	1020.61	637.77
2000	1102.23	656.04
2001	1159.09	699.98

Note: 1) In 1993, prices are revised two times (17-2-1993 and 17-6-1993). We have taken only the revised prices of 17-6-1993
2) In 1996, prices are revised two times (1-4-1996 and 19-10-1996). We have taken only the revised prices of 19-10-1996
3) For grade wise revision of prices see Appendix Table A 5.1.

Coal producing States always make a plea for the revision of royalty rates by pointing at the frequent changes in the pit head price of coal. The royalty increase was not commensurate with this increase. It is clearly brought out in the previous chapter that

the increase in royalty both in terms of nominal increase and real increase were very insignificant compared to increase in the basic price of coal. In fact if royalty is calculated at constant price and there has been a decline in the real value of royalty accruing to States over the observed period. Royalty as per cent of price of coal (constant price) has declined sharply.

There have been frequent upward changes in the basic price of coal but the royalty rates remained stagnant for long duration. During the past twenty seven years i.e. between 1975 and 2002 royalty rates were revised only five times. The latest revision was effected in August 2002. Table 5.7 depicts the relative position of royalty vis a vis basic price of coal.

The ratio of royalty to price has been increasing continuously[14]. However after 1991 the ratio showed a decline and after 1994 the ratio further declined but again it stared increasing.

Table 5.7: Ratio of Pit head coal price to Royalty

Year	Weighted Basic Price (in Rs/tonne)		Weighted Royalty Rate (in Rs/tonne)		Ratio of Royalty Rate to Price	
	Coking Coal	Non Coking Coal	Coking Coal	Non Coking Coal	Coking Coal	Non Coking Coal
1971	35.80	33.40	1.92	1.71	18.657	19.562
1975	79.14	51.04	4.63	3.43	17.111	14.888
1981	174.63	116.29	6.56	4.59	26.610	25.358
1991	564.75	341.00	125.63	65.00	4.496	5.246
1994	703.50	422.71	152.50	86.43	4.613	4.891
2001	*1159.09*	*699.98*	*152.50*	*86.43*	*7.601*	*8.099*

***Note**: See* Appendix Table A5.2 for company-wise, year-wise and grade-wise details.

To get a clearer picture percentage of royalty to coal price (pit head price + royalty) is worked out and shown in Table 5.8. It is interesting to find that the share of royalty has fallen continuously. Royalty as percentage of total price improved in 1991 but again it took a declining trend. This is clearly depicted in Figure 5.1. Royalty on coking coal and non- coking coal both have recorded a similar trend. However the changes are steeper in the case of coking coal.

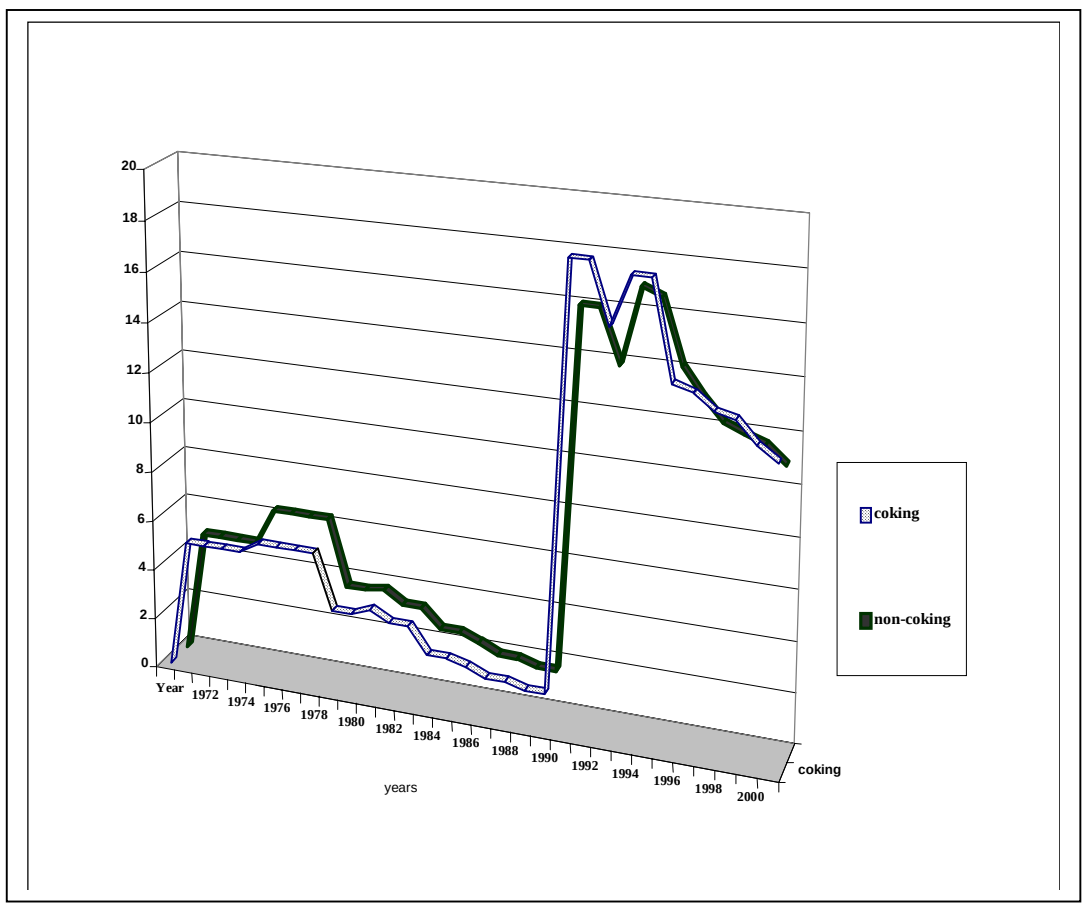
Table 5.8: Total Price (Rs./tonne) inclusive of Royalty (Rs./tonne) and per cent of Royalty in Total Price

	Total Price*	Total Price*	Royalty	Royalty	Coking	Non-coking
Year	Coking	Non-coking	Coking	Non-coking	% of Royalty	% of Royalty
1971	37.72	35.10	1.92	1.71	5.087	4.863
1972	37.72	35.10	1.92	1.71	5.087	4.863
1973	37.72	35.10	1.92	1.71	5.087	4.863
1974	37.72	35.10	1.92	1.71	5.087	4.863
1975	83.76	54.47	4.63	3.43	5.522	6.294
1976	83.76	54.47	4.63	3.43	5.522	6.294
1977	83.76	54.47	4.63	3.43	5.522	6.294
1978	83.76	54.47	4.63	3.43	5.522	6.294
1979	138.81	93.50	4.63	3.43	3.332	3.667
1980	138.81	93.50	4.63	3.43	3.332	3.667
1981	181.19	120.87	6.56	4.59	3.622	3.794
1982	203.19	138.30	6.56	4.59	3.230	3.316
1983	203.19	138.30	6.56	4.59	3.230	3.316
1984	297.69	177.73	6.56	4.59	2.204	2.580
1985	297.69	177.73	6.56	4.59	2.204	2.580
1986	329.69	201.80	6.56	4.59	1.991	2.272
1987	390.69	238.87	6.56	4.59	1.680	1.920
1988	390.69	238.87	6.56	4.59	1.680	1.920
1989	443.31	269.87	6.56	4.59	1.480	1.699
1990	443.31	269.87	6.56	4.59	1.480	1.699
1991	690.38	406.00	125.63	65.00	18.197	16.010
1992	690.38	406.00	125.63	65.00	18.197	16.010
1993	794.13	467.00	125.63	65.00	15.819	13.919
1994	856.00	509.14	152.50	86.43	17.815	16.975
1995	856.00	519.00	152.50	86.43	17.815	16.653
1996	1088.53	610.64	152.50	86.43	14.010	14.154
1997	1106.65	659.37	152.50	86.43	13.780	13.108
1998	1155.81	705.69	152.50	86.43	13.194	12.247
1999	1173.11	724.20	152.50	86.43	13.000	11.934
2000	1254.73	742.47	152.50	86.43	12.154	11.641
2001	1311.59	786.41	152.50	86.43	11.627	10.990

* Total price = Basic price of coal per ton + royalty. per ton (in Rs.)
Note: See Appendix Table A4.3 for weighted price and royalty.

[14] See Appendix Table A 5.4: Ratio of Royalty to Price by Grades.

Figure 5.1: Percentage of Royalty in the Total Price (Coking and Non-Coking Coal)



3. Royalty vis-à-vis Landed Price of Coal:

Final price of coal actually paid by the consumers is composed of basic price, royalty, transport cost on site, railway/ surface transport charges, handling charges, royalty and cess and other statutory levies and other miscellaneous charges. The composition of landed price is given in Table 5.9. Grade-wise royalty rate, pit head price and other levies remain the same irrespective of the distance for the transport of coal. The railway freight changes according to the distance. Final landed price is worked out by adding the grade-wise royalty rate per ton, rate of stowing excise, sales tax, cess and other levies per ton across the States, grade-wise pit head price and freight charges according to distance. Thus distance-wise and grade-wise final landed price is estimated. We have not included handling charges and other incidental expenses while estimating landed price mainly due to non-availability of such data. Landed price of coal is displayed in Table 5.9.

The landed price of coal increase according to the distance between the pit head and the location of the coal consuming company. The Rail freight cost works out to be 1 rupee and 3 paise per ton and per km for a distance up to 100 Kms. and for a distance of above 1500 Kms, it works out to be around 0.73 paise per ton per kilometer. Thus the unit cost of transport goes down with an increase in the distance. As the royalty, pit head price and other levies are not associated with distance the unit cost on account of these remain the same. The percentage composition of landed price varies according to the distance and quality of coal. As may be seen from Table 5.10, the share of royalty, pit head price and other levies decline when the distance increases and on the contrary, the share of Railway freight goes up. In the case of coking coal, the share of freight is less than 8% up to a distance of 100 kilometers, the same goes up to 46% for a distance of 1500 kilometers. The share of freight is more for the inferior grade of coal. For a distance of 100 kilometers it is 12.58% and the same increases to about 59 % for more than 1500 kilometers.

Table 5.9 : Royalty, Pit head Price, Other Levies and Freight according to Distance (Rs. Per tonne)

Distance (in kms.)										
				100	250	500	700	1000	1200	1500
Rail freight										
				103.8	**209.3**	**391.9**	**533**	**761.1**	**900.7**	**1096.1**
Coking coal	**Royalty**	**Pit head price**	**Other levies**	**Landed price**						
ST-I	195	1804.50	30.5	2133.80	2239.30	2421.90	2563.00	2791.10	2930.70	3126.10
ST-II	195	1507.00	30.5	1836.30	1941.80	2124.40	2265.50	2493.60	2633.20	2828.60
W-I	195	1215.20	30.5	1544.50	1650.00	1832.60	1973.70	2201.80	2341.40	2536.80
W-II	135	1006.50	30.5	1275.80	1381.30	1563.90	1705.00	1933.10	2072.70	2268.10
W-III	135	773.10	30.5	1042.40	1147.90	1330.50	1471.60	1699.70	1839.30	2034.70
W-IV	95	701.80	30.5	931.10	1036.60	1219.20	1360.30	1588.40	1728.00	1923.40
SC-I	135	1239.00	30.5	1508.30	1613.80	1796.40	1937.50	2165.60	2305.20	2500.60
SC-II	135	1025.63	30.5	1294.93	1400.43	1583.03	1724.13	1952.23	2091.83	2287.23
Non-Coking										
Long Flame										
A	135	1073.57	30.5	1342.87	1448.37	1630.97	1772.07	2000.17	2139.77	2335.17
B	135	979.82	30.5	1249.12	1354.62	1537.22	1678.32	1906.42	2046.02	2241.42
C	95	828.82	30.5	1058.12	1163.62	1346.22	1487.32	1715.42	1855.02	2050.42
D	70	713.81	30.5	918.11	1023.61	1206.21	1347.31	1575.41	1715.01	1910.41
E	70	544.81	30.5	749.11	854.61	1037.21	1178.31	1406.41	1546.01	1741.41
F	50	439.29	30.5	623.59	729.09	911.69	1052.79	1280.89	1420.49	1615.89
G	50	319.76	30.5	504.06	609.56	792.16	933.26	1161.36	1300.96	1496.36

Table 5.10: Percentage composition of Landed Price (%)

Coking Distance	Weighted Royalty	Weighted Pit head Price	Weighted Other levies	Weighted Freight	Landed Price
100	10.69	79.39	2.27	7.66	100.00
250	9.91	73.72	2.08	14.29	100.00
500	8.81	65.69	1.84	23.66	100.00
700	8.12	60.64	1.69	29.55	100.00
1000	7.21	53.97	1.50	37.32	100.00
1200	6.76	50.59	1.40	41.26	100.00
1500	6.21	46.52	1.28	45.99	100.00
Non coking Distance	**Weighted Royalty**	**Weighted Pit head Price**	**Weighted Other Levies**	**Weighted Freight**	**Landed Price**
100	9.25	74.44	3.73	12.58	100.00
250	8.22	66.27	3.24	22.27	100.00
500	6.92	55.91	2.68	34.48	100.00
700	6.18	49.99	2.37	41.46	100.00
1000	5.29	42.75	2.00	49.96	100.00
1200	4.86	39.30	1.83	54.01	100.00
1500	4.37	35.33	1.64	58.67	100.00

Note: For category-wise details of components of landed price. See Appendix Tables A 5.6, A 5.7, A5.8 and A 5.9.

The composition of landed price given in Table 5.11 shows that the final price is greatly influenced by the basic price and railway freight. Figures 5.2 and 5.3 demonstrates the relative share of royalty and pit head prices, freight and other levies in the final landed costs. Royalty constitutes just 8.24 % of landed price of coking coal for an average distance of 750 kms and 6.44 % of landed price of non- coking coal. Other levies account for less than 2.5 % of the landed price. The basic price and railway freight together account for more than 89 % of landed price of coking coal and 91% of the landed price of non-coking coal.

Table 5.11: Percentage composition of Landed Price

Coking	Royalty	Pithead price	Other levies	Freight
Per cent	8.24	61.50	1.72	28.53
Non-Coking				
Per cent	6.44	52.00	2.50	39.06

Figure 5.2

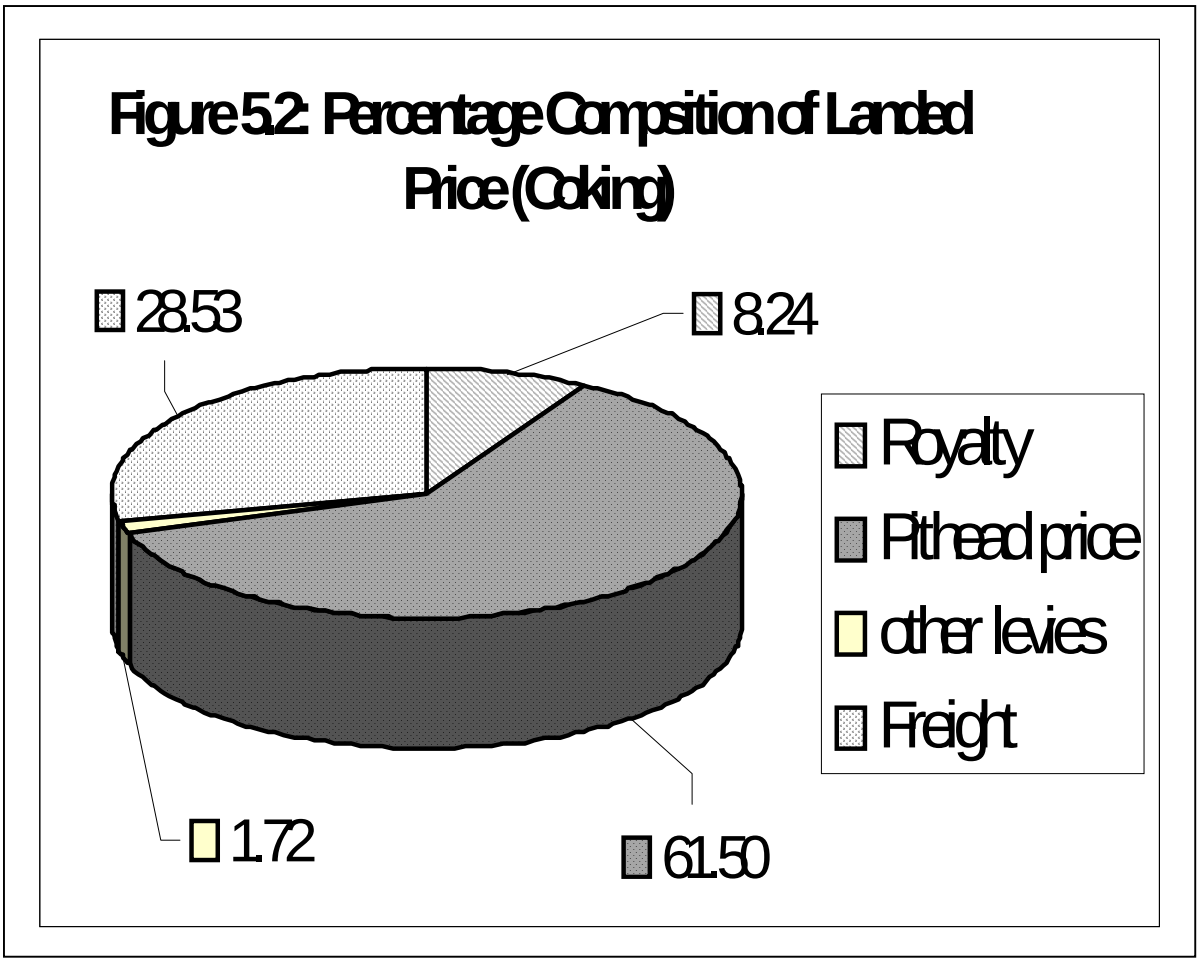


Figure 5.2: Percentage Composition of Landed Price (Coking)
28.53
8.24
1.72
61.50
Royalty
Pithead price
other levies
Freight

Figure 5.3

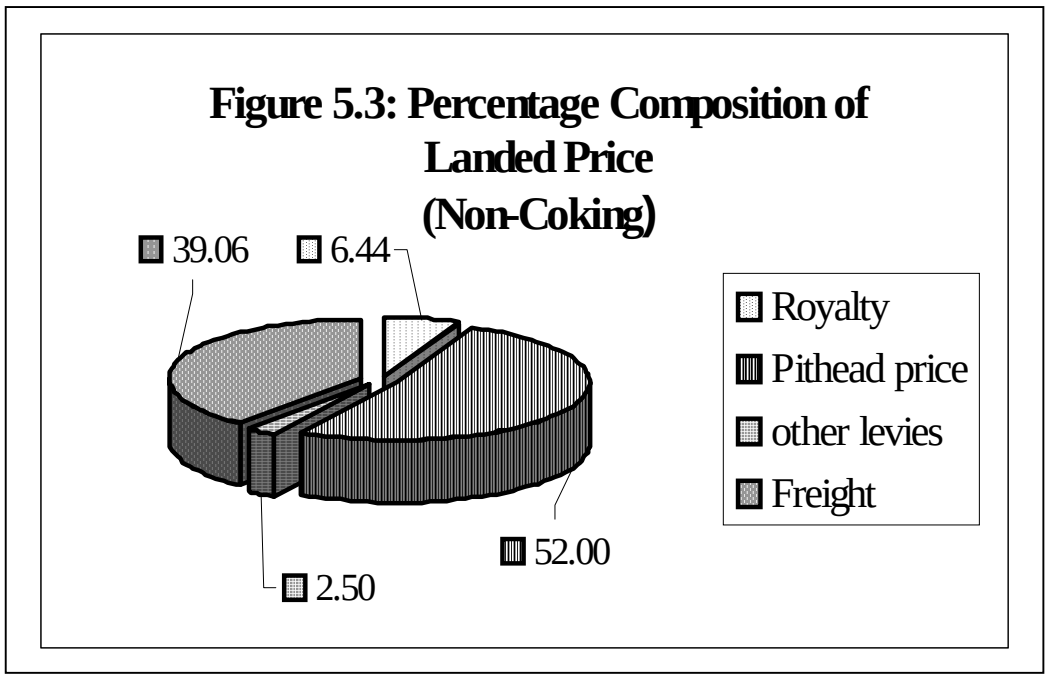


Figure 5.3: Percentage Composition of Landed Price (Non-Coking)
39.06
6.44
52.00
2.50
Royalty
Pithead price
other levies
Freight

Royalty as percentage of final landed price (distance-wise) is presented category-wise in Appendix Table A5.6. Royalty as percentage of landed price varies from distance to distance. As the distance increases, the royalty as % of total price declines.

The above analysis clearly shows that there are several other factors influencing the final price of coal and the royalty has very negligible influence. In fact, over a period of time, royalty as percentage of landed price has come down, as the royalty rates remained unaltered for long while there has been frequent increase in the pit head price, railway freight and other levies. This is corroborated with the Appendix Tables A5.7, A5.8 and A5.9.

4. Royalty vis-à-vis Rail Freight:

As stated above railway continues to be the most popular mode of transportation of coal particularly for bulk consumers and railway freight continues to be the major component in the overall delivered price of the coal. Between 1981-2000, as may be seen from Table 5.12 the element of rail freight in power grade coal at 750 kms has increased from 43.7% to 58%. After the budget of 2001 the share of rail freight in destination price of the Talcher coal, hauled over 750 kms. comes to as high as 60%.

Table: 5.12: Trends in Average Rail Freight, Average Weighted Pit head Price and Average Weighted Royalty (Rs. per tonne)

Date	Basic Price	Rail Freight	Royalty	Total
01-04-1981	75	59.00 (43%)	2.50(1.83%)	136.50
01-08-1991	160	274.00 (60%)	25.00(5.44%)	459.00
11-10-1994	257	387.00 (56%)	50.00(7.20%)	694.00
01-10-1999	355	549.00 (58%)	50.00(5.24%)	954.00
01-08-2000	355	560.20 (58%)	50.00(5.18%)	965.20

Thus, the high cost of transportation by rail and its corresponding increase with increase of the hauls is making the domestic coal un-competitive.

The above analysis brings forth that increase or decrease in royalty rate is not so effective as to alter the landed price significantly. Royalty accounted for just 1.83% during 1981 and in fact it declined considerably as the royalty remained unchanged. In 1994 royalty component in the landed price increased mainly because during that year the rates were revised. However, soon after that it took a downward trend. This apart, the magnitude of royalty itself is very small. It hardly accounts for less than 10 % of rail freight. The landed price is sensitive to freight and not to royalty.

Railways earn maximum freight from coal sector, constituting about 48% of revenue from freight traffic. The discussion with the officials of the department of coal, and CIL and its subsidiaries led us to understand that the railway freight while constitutes on an average about 6% of the basic price of steel, 13% of the basic price of oil, in the case of coal it constitutes 57% of the basic price. As may be seen from Table 5.13, the freight cost as percentage of landed price varies from place to place. As can be seen from Table 5.13 freight as percent of landed price is as high as 71 % for coal consumed at Gandhinagar, and it is 47% for Nasik.

Table 5.13 Destination-wise Freight Share in Landed Price

Destination	Grade & Source	Distance	Rail Freight	Total Landed Price	Freight as % of Landed Price
Gandhinagar	F/Korba	1500	1097	1615	68%
	F/IB	1605	1158	1631	71%
Sikka	C/K-Rewa	1848	1278	2329	55%
Nasik	C/K-Rewa	1235	939	1990	47%
Vijayawada	F/Talcher	927	723	1196	60%

It is understood that railway uses a substantial part of net revenue earned from coal sector to subsidize passenger traffic. Moreover, considering the increased demand of coal for new power projects etc., domestic coal require substantive relief

from the burden it has long borne for cross subsidizing the other operation of the Indian Railway.

The freight, which constitutes a significant factor of delivered price makes domestic coal un-competitive vis-à-vis imported coal at least at the disaggregated level. Specific quality of domestic coal has lost its market share amongst coastal and nearby consumers. Moreover, the existing freight structures do not provide level playing ground for distant power stations. This calls for critical examination of introduction of the option of "delivery price" system, which may include uniform rate of freight for all consumers by operation of freight equalization fund.

5. Royalty Freight and Import/Export of Coal:

The Centralists feel that any increase in the rates of royalty out-price domestic coal against the imported coal. Since the imported coal is not subjected to the levies like royalty and sales tax domestic coal will lose if higher rate of royalty is imposed. Moreover, India exports coal to the neighbouring countries like Nepal, Bhutan and Bangladesh to meet their demand for coal. Any upward revision of royalty will affect export of coal to these countries, as there has been a fall in the international price of coal. After the liberalization under the present import policy, coal can freely be imported (under OGL) by the consumers themselves considering their needs and exercising their own commercial judgements. This will divert domestic demand for coal to imported coal.

It is true that there is increase in the import of coal. But it is important to keep in mind that the quantum of import is not so significant as to make domestic coal redundant. As it was described earlier there is a yawning gap between the supply and demand for coal in India. In order to fill this gap import of coal is resorted to. It means import of coal is complementary to domestic coal and not a substitute. Under these circumstances, there is no question of domestic coal losing competitiveness.

There has been a rising trend of imports for the last few years in case of non-coking coal especially in coastal regions through which consumers are in a position to directly import for further transshipment to the plant sites. However it is not correct to

say " Under these circumstances any enhancement in the royalties will make domestic coal to lose in the domestic market". Table 5.14 and Table 5.15 display purchase of coal by North Chennai and Sikka thermal plant from Domestic companies and from Indonesia and South Africa. Relative costs are shown in the tables.

Table 5.14 Observations on Purchasing Coal from Indian Companies and on Importing Coal from Indonesia for North Chennai Thermal Power Station

Particulars	ECL/RNG	MCL/Tal	Indonesia
GCV (in Kcal /Kg)	6049	3750	6000
Billed Price(in Rs./Tonne)	1775.28	472.68	2156.58
Handling/Freight(in Rs./Tonne)	913.45	930.15	210.85
Landed Cost at TPS(in Rs./Tonne)	2688.73	1402.83	2367.43
Landed Price (in Rs./MKCal)	444.49	374.09	394.57
% of Railway freight cost in total landed cost	13.59	17.97	3.29
% of Royalty(import duty) in total landed cost	0.24	3.56	21.15
% cess in total landed cost	12.46	0	0.15
% of stowing excise duty in total landed cost	0.13	0.25	0
% sales tax in total landed cost	2.54	1.3	0
Ratio of GCV (in Kcal /Kg)	1	0.62	0.99
Ratio of Billed Price (in Rs./Tonne)	1	0.27	1.21
Ratio of Handling/Freight (in Rs./Tonne)	1	1.02	0.23
Ratio of Landed Cost at TPS (in Rs./Tonne)	1	0.52	0.88
Ratio Landed Price (in Rs./MKCal)	1	0.84	0.89

Source: CIL, Subsidiaries, information supplied by CIL to Lok Sabha.

The above table shows that the calorie value of coal supplied by ECL is higher than MCL coal and imported coal from Indonesia. However, the billed price (Rs./tonne) is less in MCL compared to ECL and Indonesia. Billed price in Indonesia is more than 4 times higher than MCL and the billed price of ECL coal is costlier than MCL coal because both the pit head price and Cess charged on ECL coal are very

high compared to royalty on MCL coal. The pit head price of ECL coal is Rs.1312 per ton, whereas in MCL it is only Rs.351 per ton.

Handling/freight (Rs./ton) charges are very high on coal purchased from both ECL and MCL compared to Indonesian coal. Handling/freight (Rs./ton) charges of ECL Coal are Rs.913.45 and Rs.930.15 for MCL coal. While, it was just Rs.210.85 for the coal imported from Indonesia. This is the main reason for the high landed cost and landed price of Indian coal. The cost varies from place to place. The same Indonesian coal if brought to the land locked interior state will become costlier and the cost of transportation will go up enormously due to freight and handling charges. The freight and handling charges are the least and almost nil for the coal used by NTPC located near the pit head. E.g. NTPC, Shaktinagar or Vindhyachal located near NCL in Madhya Pradesh.

Landed cost at Thermal Power Station (TPS) is less on the coal purchased from MCL i.e., Rs 1402.83 per tonne. It was Rs. 2688.73 for the coal purchased from ECL and Rs 2367.43 on the coal imported from Indonesia. High freight charges and high rate of cess charged on ECL coal is the main cause for the high landed cost of ECL coal. Because of this reason, importing coal to North Chennai Thermal Power Station from Indonesia becomes cheaper.

Landed price (Rs/M.KCal) of MCL coal is cheaper to that of ECL and to imported coal. It is only 374.09 (Rs/M.KCal) for MCL Coal but it is 444.49 (Rs/M.KCal) for ECL coal and 394.57 (Rs/M.KCal) for the coal imported from Indonesia.

If we look at the break up of billed price of coal we can see that instead of 4% sales tax a rate of above 5% was imposed on coal purchased from ECL and MCL.

Break up of handling/freight charges shows that, not only rail freight but also load and unload port charges are more for the domestic coal (coal purchased from ECL and MCL). In this table, no sea freight charges are shown on coal imported from both Indonesia and South Africa.

Table 5.15 Observations on Purchasing Coal from SECL and on Importing Coal from South Africa for Sikka Thermal Power Station

Particulars	SECL/ROM	SECL/KRB	South Africa
GCV (in Kcal /Kg)	5567	3865	6400
Billed Price(in Rs./Tonne)	1050.92	519.48	2346.55
Handling/Freight (in Rs./Tonne)	1277.6	1333.7	288
Landed Cost at TPS (in Rs./Tonne)	2328.52	1853.18	2634.55
Landed Price (in Rs./MKCal)	416.03	479.48	411.65
% of Railway freight cost in total landed cost	54.87	71.97	0
% of Royalty(import duty) in total landed cost	4.08	2.7	20.68
% cess in total landed cost	0	0	0.13
% of stowing excise duty in total landed cost	0.15	0.19	0
% sales tax in total landed cost	1.74	1.08	0
Ratio of GCV (in Kcal /Kg)	1	0.69	1.15
Ratio of Billed Price (in Rs./Tonne)	1	0.49	2.23
Ratio of Handling/Freight (in Rs./Tonne)	1	1.04	0.23
Ratio of Landed Cost at TPS (in Rs./Tonne)	1	0.8	1.13
Ratio Landed Price (in Rs./MKCal)	1	1.15	0.99

Source: CIL, Subsidiaries, information supplied by CIL to Lok Sabha.

Table 5.15 shows that the calorific value of coal supplied by SECL is lower than that of imported coal. Billed price (Rs./ton) is less in SECL compared to imported coal. However, the calorific value of SECL coal as stated above is less compared to imported coal. Billed price of coal imported from South Africa is more than 2 times higher than SECL coal. The pit head price of SECL coal is Rs.862 and Rs 396 per ton. Pit head price of imported coal is Rs 1798.2 per ton.

Landed price (Rs/M.KCal) of imported coal is cheaper to that of SECL coal. The landed price of coal imported from South Africa is Rs.411.65 (Rs/M.KCal) however, landed price of SECL coal is Rs.416.03 and Rs.479.48 (Rs/M.KCal).

If we look at the break up of billed price of coal we can see that 4% sales tax is charged on Indian coal. However, actual figure shows that a rate of above 5% was imposed on coal purchased from SECL.

Regulated imports of coal may be required for the country on grounds of non-availability of required grade of coal, especially in the coking category and low-ash non-coking category. In view of environmental considerations, some high quality imported non-coking coal are also required for blending with high-ash Indian coal. Similarly, import of low ash metallurgical coke (LAMC) if sourced at a competitive price may also be beneficial for the pig-iron/steel producers in the country using the blast furnace and mini-blast furnace process since the LAMC is not produced indigenously.

The present import is around 6% of total indigenous coal consumption. It is felt that the same may go up to 10% in the long-run for sustaining all-round industrial growth.

However, for regulating imports, along with rationalization of import duties, government has kept the provisions of levying the surcharges, additional duty, special customs duty and countervailing duty etc., in tune with WTO provisions so that subsidized imports of coal and coal products can be precluded. The weapons like safeguard duty, anti-dumping duty and tariff quota are also in the hands of government so as to preclude injury to domestic producers of coal.

One of the major physical constraints for the growth of imports is the capacity of Indian ports to handle freight traffic. For the import of coal, development of port

and the connecting them through rail or road to the coal consuming centres are essential. As against the anticipated movement of 15.70 MT by coastal shipping during 2001-02, the requirement of coastal shipping by 2006-07 has been anticipated as 17.809 MT by the Working Group of the Planning Commission. Similarly against the anticipated import of 15.05 of coking and 7.42 of non-coking coal during 2001-02 the projected import during 2006-07 has been assessed at 34 MT.

The total requirement of port capacity including coastal shipping has been assessed at about 52 MT during the terminal year of X^{th} Plan as against anticipated requirement of 38 MT in the terminal year of IX^{th} Plan.

The coal capacity that was available in 2001 for coal movement at major ports was:

Major Ports	**Capacity of Coal in MT.**
Haldia	6.30
Paradeep	4.80
Vizag	7.50
Chennai	3.75
Ennore	20.00
Tuticorn	5.20
Total	44.05

Expansion of the port capacity is capital intensive and hence one has to keep in mind these costs also while comparing imported coal with the domestic coal.

Another major constraint is the foreign exchange component. Though cement and steel industries are permitted to import against their own foreign exchange earning, at the macro level the loss is for the country.

The above points make it clear that the import of coal is not a threat to the domestic companies at the aggregate level. Of course some of the old underground

coal mines may incur losses, it is important to understand their problems. In fact they do not become un-competitive due to increase in royalty rate. But they become so due to over-employment, influence of coal mafia, old and obsolete mining technology and due to the fact that they have to go for deep mining and are not permitted to go for open-cast mining. These apart our mining legislation, environmental laws, land acquisition procedures, forest laws and social welfare requirements are so demanding and rigid that some companies find it difficult to survive. However the solution does not lie in non- revision of royalty but in rectifying other problems. Thus the proposition that royalty on coal if revised makes the domestic coal companies uncompetitive cannot be justified.

6. Royalty and Major Coal Consuming Companies and Coal Producing Companies

During the study we contacted a few major consumers of coal, viz., NTPC, Koraba; NTPC, Shaktinagar; NTPC, Vindhyachal; UPSEB, Renusagar, Anpara; Hindalco at Anpara, U.P. and NALCO at Bhubaneswar. We also had discussions with individuals dealing with steel and cement. These consumers expressed that the royalty does not alter their production decision. The demand for their products is high and the end users are large in number. Any increase in royalty therefore is very small and the incidence of it on the final consumers is insignificant and hence it does not affect their demand. As these coal-consuming companies can easily pass on the royalty, it does not put any burden on them. During the course of the discussion with HINDALCO and NALCO it was made clear that the price of Aluminum is guided by London Metal price and irrespective of the cost and profit margin implications these companies have to adopt the same price as fixed by them. Therefore, royalty does not affect the sale price of their product. Similarly, the price of electricity is fixed on different basis and royalty is not taken into consideration. In fact royalty is collected from the final consumers and passed on to the government. As the incidence is widely spread on the final consumers it does not affect the price of electricity.

However, the real problem for NTPCs is with the arrears from the immediate user, e.g. State Electricity Boards. SEBs owe more than Rs.6000 crore. There is cash

and carry transaction between the CIL and NTPC, but the same system does not exist between the SEBs and NTPC. In spite of huge arrears NTPC cannot stop electricity supply to SEBs.

The coal consuming companies have no grievance about royalty but they are sore about several other levies imposed on them. HINDALCO reported that though there is no forest, government levies forest fee. If the cost of production goes up, it leads to poor performance in the international market. The consuming companies also expressed that the sales tax on coal has cascading effect. Sales tax is levied on price inclusive of royalty and freight.

The cost of CIL coal goes up not due to royalty but due to various levies. In Madhya Pradesh the coal company has to pay Rs.9 lakh per hectare of land used for mining purpose (expectation value). In addition to the company has to pay forest charges i.e., aforestation cost is borne in the ratio of 1:2, (for one hectare of land acquired for mining– plant 2 hectares of forest). They have to pay lease rent, Rs. 7/- per ton for despatch of coal, sales tax, SED, Corporation tax, property tax, wealth tax and so on. Royalty is a small item. Besides this, the company has to take up social works – provide roads, schools, etc., and this adds to the total cost.

The coal companies have to pay royalty on the unpaid coal supply. Many times, they have piled up inventory (15 days stock). Coal companies sell coal at low price (as prescribed) but brokers and small agents buy cheap coal and sell at high prices. There is huge loss due to mafia – illegal mining. The loss is for both the company and for the State.

It is argued that the major consumers of domestic coal in the country are the State Electricity Boards (SEBs). The coal producing States are also having their own respective SEBs. The unique feature of levy and payment of coal royalty in the country is that it is mainly a cash flow from the State Government to the same State Government since 60% of the coal based thermal generation is done by the SEBs, controlled by the State Governments. The major part of coal royalty is collected form the SEBs and paid to the State Governments who in turn have to spend heavily

on the SEBs. Since private IPPs and other core and non-core coal consuming industries are few in number, private consumption of coal in the country is insignificant. Even the steel industry is mostly nationalised. In the event of an increase in the coal royalty rates, the Coal Company will only act as a conduit to collect the enhanced royalty basically from the SEB and return it to the same State Government controlling the SEB. Therefore, it will not be pragmatic for the State Electricity Boards/Government Power Companies at their none too happy state of health, to absorb a higher fuel cost consequent on hike in the coal royalty rates.

However, this contention will be true only if the SEB belongs only to the coal producing State. But it is not true. For instance, NCL sells coal to NTPC, Shaktinagar and NTPC, Vindhyachal, they in turn sell power not only to SEBs of Madhya Pradesh but also to SEBs belonging to U.P., Punjab, Haryana, Delhi, Maharashtra and so on. These are not the coal producing States and hence it is not right to say that the arrears of these SEBs are financed by the coal producing States. In fact, there is no logic in allowing the arrears to grow and asking the coal producing States to lose royalty income because of the inefficiency of Electricity Boards of non-coal producing States. Royalty is the price paid by the lessee to the lessor for getting the right to use the natural resource which belongs to the State. Hence, no consideration like profit or loss of coal companies or of power sector or the arrears not paid by SEBs should come in the way of royalty. Royalty is independent of these considerations.

Looking at the fiscal condition of the coal producing States, which is pathetic it is important to explore how this major mineral can be made to help the States to mobilize resources.

CHAPTER VI

MAJOR FINDINGS

In India some of the States, which are less developed and deficient in fiscal resources are gifted with natural resources. Chapter 1 brings forth that most of the States with coal deposits are less developed. Coal sector has huge revenue potential. The coal reserves are in abundance and are expected to last for more than 150 years. This provides a good revenue base to the coal producing States.

History of Coal in India reveals that only after the nationalization, planned development of the coal industry was taken up by infusing massive investments mainly through budgetary support, and enabled the coal sector in making commendable strides. Along with the development of the coal sector the potential of this sector to contribute to the States and Central exchequers has also gone up.

Coal mineral belongs to the states. However the price of coal and the royalty rates are fixed by the Central government. Royalty is an important source of non-tax revenue of the coal producing states.

Royalty is a 'share in the production, free of the costs of production'. This is a sharing arrangement created by a lease contract between the owner of mineral deposits (the lessor) and one who is given the right to go onto the lands of the lessor and explore for and develop these minerals (the lessee). In return for allowing the lessee to develop the minerals, the lessor is given a share of any minerals produced. It is important to note that Royalty is not a tax levied by the government. Royalty is also not a rent. Rent is charged for letting the premises to be used.

Royalty Issues in India:

In chapter 1 various issues pertaining to royalty on coal are raised both from the angle of coal producing states and from the angle of the central government. The issues relating to royalty on major minerals in India are somewhat different from those in most of the other countries. In India - major minerals, their prices,

distribution and royalty are governed and fixed by the Central Government. Royalty accrues to the States. Thus, there are three players involved in royalty on minerals: –

The Central Government, which fixes the royalty rate, mode and frequency of revision;
The State Government, which collects and appropriates royalty; and
The lessee: the public sector or private undertaking.

Low royalty rates and their infrequent revision has become an important irritant in the realm of Centre-State financial relations.

The Plan document (Ninth Plan) emphasizes the need to examine the non-tax source namely royalty on coal to augment the revenue resources of the coal rich backward States. The Planning Commission was of the view that, "the revision of royalty rates of major minerals is another measure which will go a long way to improve the resources of the States".

Chapter II outlines the revenue contribution of the coal sector to the government in the form of various levies, taxes and royalty and Cess. The coal sector pays to the governments in the form of Central Sales Tax (CST) and Stowing Excise Duties (SED). Road Tax:,. Reconnaissance Permit Fee:. Prospecting and Mining Lease Fee: Dead Rent:. Royalty Linked Cess: . Surface Rent:. Other Levies: Levies by Local Bodies,. Stowing Excise Duties: Revenue Mobilization through Environment Protection Measures: and Royalty: Royalty accounts for about 60 per cent of revenue mobilized by various States from coal. This is followed by cess. Next to these two sources is the sales tax on coal followed by SED and other levies. The final landed price of coal is influenced not only by changes in the royalty rates but also by other levies which account for 40 per cent of the revenue accruing to the States from coal.

The study brings forth that the Royalty is an important source of non-tax revenue to the coal producing States. However, the present level of utilization of this source of non- tax revenue is very low. The categorization of coal, the rates of royalty,

periodicity of revision of royalty rates, the basis of royalty and the type of depends up on the policies pursued by the central government.

As may seen from Chapter III, the rates of royalty on minerals are specified in the Second Schedule to the Mines and Minerals (Regulation and Development) Act, 1957. Royalty rates have not undergone changes very frequently. The rates remained unchanged for a long time..

Even the royalty rates for Lignite remained unchanged for long. Royalty Rate was fixed at Rs.2.50 per ton for lignite in 1990 on the ground that the Useful Heat Value (UHV) of lignite is equivalent to F and G grades of non-coking coal. In 1990, the royalty rate for F and G grades of non-coking coal was Rs. 2.50 per ton. A Study Group was set up by the Ministry of Coal on 16-3-1995 to consider the revision of royalty rates on lignite. It made a recommendation that royalty rate on lignite should be linked with royalty rates on the grades of non-coking coal of equivalent heat value.

Chapter IV highlights the revenue implications of coal royalty. States have right over minerals. The chapter brigs forth the Royalty as source of revenue to the coal producing States is losing importance since nationalization of coal-mines. Royalty revenue improves only in the years when the rates are revised. Soon after the revision the relative yield from this source starts declining. The picture for lignite is not different from this because the rate of royalty on lignite has also remained stagnant all these years.

One of the major factors responsible for the downward trend of royalty is the policy relating to revision of rates. Royalty rates were revised only four times during the past 27 years. The study reveals that except for the year immediately after the revision of rates in the subsequent years the annual change in the growth of royalty showed a declining trend. In fact during 1998-99 the annual change in the royalty over the previous level was negative almost for all the States.

Non-revision of royalty rates for many years lead to decline in the real royalty income of the States mainly due to overall increase in the inflation rate. Royalty in

real terms as shown in chapter IV declined significantly as proportion of NSDP, States own tax revenue and States own non tax revenue.

Base for the estimation of royalty is very important for determining the amount of royalty to be raised. Royalty can be estimated on the basis of production or on the basis of despatch. The royalty is payable at a s rate for the grade of the Coal notified by the Coal India Ltd.

Another problem noticeable relates to the basis of calculation of royalty. There is some difference in the actual amount of royalty accruing to the States and the amount that should have accrued had the royalty been calculated on the basis of production or even despatch as reported by the companies.

Actual royalty received by the major coal producing States (Bihar, Orissa, M.P, U.P Maharashtra and West Bengal) are compared with the estimates based on despatch and production basis. If the royalty is calculated on the basis of production the revenue of the States improve by 13 % and 18 % for coking and non-coking coal respectively. Even when despatch is taken as the base the royalty revenue improves. Though as per the Act royalty is charged on the basis of production, there are several exemptions and concessions allowed and hence the actual royalty falls below the optimum level of royalty to the States.

The difference between the actual and the estimated revenue from royalty is significant. States lose about Rs.250 crores per annum when compared with despatch as the royalty base and Rs.300 crores when compared to royalty based on production. The difference between the despatch and production base comes down when adjustment is made for that part of production, which is exempt from royalty.

In fact, it is very difficult to arrive at one despatch or production value, because, the useful heat value which is often used for arriving at local basic price - varies from one grade to the other.

The royalty rates also differ from one grade to the other. There is no rational basis for fixing royalty by grade. It may be seen from Chapter IV that the prevailing

system of fixing royalty by grade adversely affect the interests of those States where the deposit of coal is of high grade. Thus, States like West Bengal and Bihar lose where there is predominance of underground coal mines with superior coal deposits. The ratio of royalty to price is not related to the grade or quality of coal e.g. the ratio for F grade is 1:7.76 and the percentage of royalty is 12.88. For G grade the ratio is 1:5.59 and the percentage of royalty is 17.90. As against this for better grades of coal the royalty is less than 15 % of the price. This shows the lack of rationale in fixing the rate of royalty by categories.

Further it may be observed, for royalty purposes different categories are clubbed together this affects different States differently. States with higher grade coal e.g. 'E' grade get same royalty as a State with inferior 'G' grade coal. The intrinsic value and the price of coal differs based on the grading but the royalty rate does not vary from grade to grade when 2 or 3 grades are clubbed together. Therefore, the basis for fixing the rate of royalty according to the category of coal also requires rationalization.

. In chapter V Economic Impact of royalty on coal is assessed. As outlined in Chapter I major issues pertain to the impact of royalty on coal on the performance of major coal consumers like the state electricity board, steel and cement companies. This may also have some impact on exports and imports, on the process of privatization of coal -mines and on the foreign investment in the coal sector. It is strongly argued that a rise in the price of coal due to increase in the royalty rates makes the domestic coal industry lose its market. It is feared that increased royalty diverts demand from one company to the other or from domestic to the foreign coal. However, it is noted from chapter V, the price effect on the market of coal and the economic impact of increased royalty very much depend upon the demand and supply position of coal in India.

The public sector, which controls the major portion of coal reserves in India, enjoys a monopoly position. The supply side is having stronger forces than the demand side. Coal supply is short of demand for coal.

Discussion in chapter V shows that an increase in the rates of royalty leads to an increase in the landed price of coal. It is worth mentioning here that there are two prices of coal. One Pit head price or basic price and the second the final landed price. In fact, the price of coal depends not only on royalty but also on various other factors, which affect the final price of coal more strongly. This makes coal companies less competitive and also puts lots of burden on the coal consuming industries.

The impact of increase in price either due to revision of pit head (Basic) price of coal or due to increase in the landed price of coal should have similar economic impact on the performance of the coal consuming industries. This should also affect the demand for coal in the similar manner. However, it is not clear, why the same view is not taken when the landed price of coal increases due to increase in the basic coal price (pit head price) or due to increase in the railway freight charges or other levies imposed both by the Centre and the States. The coal producing states rightly feel that the coal prices are frequently increased to benefit the companies and the Central Government. Centre also earns through coal freight.

Coal producing States always make a plea for the revision of royalty rates by pointing at the frequent changes in the pit head price of coal. The royalty increase was not commensurate with this increase. There have been frequent upward changes in the basic price of coal but the royalty rates remained stagnant for long duration.

The landed price of coal due to freight charges increases according to the distance between the pit head and the location of the coal consuming company. The unit cost of transport goes down with an increase in the distance. As the royalty, pit head price and other levies are not associated with distance the unit cost on account of these remain the same. The percentage composition of landed price varies according to the distance and quality of coal. Chapter V brings forth that the share of royalty, pit head price and other levies decline when the distance increases and on the contrary, the share of freight goes up. In the case of coking coal, the share of freight is less than 8% up to a distance of 100 kilometers, the same goes up to 46% for a distance of 1500 kilometers. The share of freight is more for the inferior grade of coal. For a distance of 100 kilometers it is 12.58% and the same increases to about 59 % for more

than 1500 kilometers. The composition of landed price shows that the final price is greatly influenced by the basic price and railway freight.

The chapter brings forth that there are several other factors influencing the final price of coal and actually the royalty has very negligible influence. In fact, over a period of time, royalty as percentage of landed price has come down. The study brings forth that the railway continues to be the most popular mode of transportation of coal particularly for bulk consumers and railway freight continues to be the major component in the overall delivered price of the coal.

Railways earn maximum freight from coal sector, constituting about 48% of revenue from freight traffic. The freight, which constitutes a significant factor of delivered price makes domestic coal un-competitive vis-à-vis imported coal at least at the disaggregated level.

It is true that there is increase in the import of coal. But it is important to keep in mind that the quantum of import is not so significant as to make domestic coal redundant. Regulated imports of coal may be required for the country on grounds of non-availability of required grade of coal, especially in the coking category and low-ash non-coking category.

Interaction with major consumers as outlined in Chapter V reveals that the royalty does not alter their production decision. The demand for their products is high and the end users are large in number. Any increase in royalty therefore is very small and the incidence of it on the final consumers is insignificant and hence it does not affect their demand. As these coal-consuming companies can easily pass on the royalty, it does not put any burden on them. During the course of the discussion with HINDALCO and NALCO it was made clear that the price of Aluminum is guided by London Metal price and irrespective of the cost and profit margin implications these companies have to adopt the same price as fixed by them. Therefore, royalty does not affect the sale price of their product. Similarly, the price of electricity is fixed on different basis and royalty is not taken into consideration. In fact royalty is collected from the final consumers and passed on to the government. As the incidence is widely spread on the final consumers it does not affect the price of electricity. The cost of CIL coal goes up not due to royalty but due to various levies.

It is argued that the major consumers of domestic coal in the country are the State Electricity Boards (SEBs). The unique feature of levy and payment of coal royalty in the country is that it is mainly a cash flow from the State Government to the same State Government since 60% of the coal based thermal generation is done by the SEBs, controlled by the State Governments. The major part of coal royalty is collected form the SEBs and paid to the State Governments who in turn have to spend heavily on the SEBs. However, this contention is not true. For instance, NCL sells coal to NTPC, Shaktinagar and NTPC, Vindhyachal, they in turn sell power not only to SEBs of Madhya Pradesh but also to SEBs belonging to U.P., Punjab, Haryana, Delhi, Maharashtra and so on. These are not the coal producing States. It implies that the loss of SEB's of other states are borne by the coal producing states.

To conclude, the study of the revenue and the economic impact of royalty on coal clearly points at the shortcomings in the royalty system prevailing in the country. Royalty rates are fixed on *ad hoc* basis without any economic rationale. Even these rates remain unrevised for years sometimes for decades. The rate of royalty differs across different categories of coal and many a times 2 or 3 categories are clubbed together for royalty purposes while they carry different prices, thus affecting the interests of the companies and different States differently. Several apprehensions about the adverse impact of increase in the rates of royalty on the final consumer prices of coal consuming products, on domestic coal's competitiveness, on coal production, on exports and imports do not get any logical support.

Therefore coal producing States have been insisting on two general issues, (i) frequency in the revision of royalty rates and (ii) fixing the rates on ad valorem basis. It is necessary to have frequent revisions in the royalty rates in order to augment the revenue resources of the States. Similarly there is a case for shifting specific royalty on coal to ad valorem royalty to avoid erosion of the coal resource base of the States in real terms. Considering the fact that Mineral rich States like Bihar, Orissa, Madhya Pradesh, Andhra Pradesh and West Bengal are resource-scarce States and relatively backward, these two measures need to be taken up as early as possible.

The system of royalty as prevailing in the country is riddled with complications. There are several grades and types of coal and the royalty rates differ from one category to the other. Sometimes rates differ even from company to company. The lignite rates are different from coal rates. SCCL rates differ from CIL coal rates. Royalty rate is different in some States like the States of Meghalaya and West Bengal. The rates are fixed on *ad hoc* basis and remain unrevised for long period. There is no uniformity in levying other taxes and duties across the States. Thus the total incidence on coal differs from place to place and from grade to grade of coal and from time to time. There is need to reform the system and to simplify and rationalize coal royalty in India.

The coal producing State Governments are in urgent need of additional revenue to augment their resources for execution of several developmental projects and for undertaking relief measures. The finances are so precarious that these States repeatedly requested for the release of *ad hoc* grants from the Central Government to tide over the revenue shortage situation. The Eleventh Finance Commission had recommended that if mineral royalty cannot be revised for some reasons, the Centre should compensate the States through an equivalent grant-in-aid.

Thus the study drives one to conclude that there is need to reform the royalty system and derive rational rates of royalty, which can provide stable source of income to the coal producing States without distorting the consumer preferences, domestic coal market and exports and imports.

CHAPTER VII

POLICY RECOMMENDATIONS

The foregoing analysis of the revenue and economic impact of royalty on coal clearly points at the shortcomings in the royalty system prevailing in the country. Royalty rates are fixed on *ad hoc* basis without any economic rationale. Even these rates remain unrevised for years sometimes for decades. The rate of royalty differs across different categories of coal and many a times 2 or 3 categories are clubbed together for royalty purposes while they carry different prices, thus affecting the interests of the companies and different States differently. Several apprehensions about the adverse impact of increase in the rates of royalty on the final consumer prices of coal consuming products, on domestic coal's competitiveness, on coal production, on exports and imports do not get any logical support.

Therefore coal producing States have been insisting on two general issues, (i) frequency in the revision of royalty rates and (ii) fixing the rates on ad valorem basis. It is necessary to have frequent revisions in the royalty rates in order to augment the revenue resources of the States. Similarly there is a case for shifting specific royalty on coal to ad valorem royalty to avoid erosion of the coal resource base of the States in real terms. Considering the fact that Mineral rich States like Bihar, Orissa, Madhya Pradesh, Andhra Pradesh and West Bengal are resource-scarce States and relatively backward, these two measures need to be taken up as early as possible. These State Governments are in urgent need of additional revenue to augment their resources for execution of several developmental projects and for undertaking relief measures. The finances are so precarious that these States repeatedly requested for the release of *ad hoc* grants from the Central Government to tide over the revenue shortage situation. A State like Orissa had suffered a huge revenue loss whenever royalty rates remained stagnant for a long period. State Government had lost about Rs.465 crores during the late nineties. The Eleventh Finance Commission had recommended that if mineral royalty cannot be revised for some reasons, the Centre should compensate the States through an equivalent grant-in-aid. A sum of Rs.465.00 crore was thus due to the Government of Orissa from the Centre towards compensation for non-revision of royalty on coal since 1997.

The royalty on coal should not be linked with the competitiveness of the Coal Industry. Royalty is fixed through an agreement between the lessor and the lessee. And as per the agreement, whether the coal producing company has profit or loss or is in a position to compete with imported coal royalty has to be paid to the lessor. In case the Central Government feels that increase in the royalty rate may be injurious to the health of coal companies, either it should subsidize companies or pay special grants to revenue losing States on account of non-revision of royalty. It will be rational to de-link royalty from the performance of the coal companies. Royalty is a price paid by the companies for extracting coal and using the same in any manner they deem it fit. Hence royalty has to be paid as per the agreement. Often it is argued that in the recent years owing to the implementation of the alternative scheme of devolution of central taxes to States, after the 89th Constitution Amendment Act has been passed the resources are transferred to the tune of 29% of net proceeds of central taxes to States. It is argued that it should take care of revenue need of the States. However devolution and royalty are two different issues and should not be clubbed together.

Thus the study drives one to conclude that there is need to reform the royalty system and derive rational rates of royalty, which can provide stable source of income to the coal producing States without distorting the consumer preferences, domestic coal market and exports and imports.

Base of Royalty:

In order to arrive at a rational royalty system, it is important to choose the royalty base properly. It is also important to determine the level of royalty revenue that can be mobilized without altering the economic decisions of the consumers and the producers of coal. The rates of royalty should be derived in an objective manner and finally the royalty need to be based on the value of coal produced rather than on the quantum of production. This necessitates changing over from the existing royalty system, which fixes the rate of royalty on per ton basis to the value of the coal production. In other words royalty needs to be on the ad valorem basis. The royalty

rates on coal and lignite in the country are presently on tonnage basis. There are six specific rates of coal royalty, which were fixed in October 1994. The royalty rate on lignite was fixed way back in 1990. The royalty rates on coal all over the world except in India and the Australian State of New South Wales are on ad valorem basis.

Reform of Coal Royalty System

The system of royalty as prevailing in the country is riddled with complications. There are several grades of coal, type of coal and the royalty rates differ from one category to the other. Sometimes rates differ even from company to company. The lignite rates are different from coal rates. SCCL rates differ from CIL coal rates. Royalty rate is different in some States like the States of Meghalaya and West Bengal. The rates are fixed on *ad hoc* basis and remain unrevised for long period. There is no uniformity in levying other taxes and duties across the States. Thus the total incidence on coal differs from place to place and from grade to grade of coal and from time to time. There is need to reform the system and to simplify and rationalize coal royalty in India.

What should be the rate of royalty? Whether Royalty should be linked with the price of coal at pit head or should be fixed on per ton basis or royalty should be based on a percentage share in the total production of coal? These are important questions need to be answered. Whether the rate of royalty is based on ad valorem or on specific quantity i.e. rate per ton of coal or based on a percentage share in the total production, it should be such that the coal producing companies can recover the cost and earn a reasonable percentage of profit. This requires an in-depth study of the cost structure of the coal companies and the reasonable level of profit that should be permitted to these companies.

Reform of the system of coal royalty should be carried out in such a way that it causes least distortion in economic decision making by the coal producers and consumers and at the same time yields fairly good revenue to the exchequer. In order to introduce simplicity and some rationale in fixing the rate of royalty following issues need to be tackled.

Under the existing system pit head price is exclusive of the cost emerging out of royalty. Royalty becomes a part of the final landed cost. Hence it is understood that royalty has no influence on the pit head price of coal. But this proposition needs to be examined critically.

Though royalty has no direct influence on the pit head price of coal it does affect it indirectly. Different methods of calculation of royalty have different indirect impact on pit head price. It is illustrated here:

Suppose the companies are not required to pay any royalty the entire production of coal will accrue to the companies. Suppose the total production of coal is 100 million tons the cost of producing this is around 5000 million rupees, the cost per ton will be about Rs. 50 per ton. To this the company can add its profit of 20 per cent so that the pit head price becomes Rs.60 per ton. If the Coal Company has to pay royalty say 20 per cent to the government, in that case, the share of coal of the company will be 80 million-ton. The cost will be around Rs 62.5 per ton (Rs.5000/80) and to this a profit of 20 per cent (12,5/-) may be added. Thus the pit head price goes up from Rs 60 to Rs.75 per ton.

Under this system States get 20 million tons of coal or value for 20 million tons of coal. If this quantity is sold at a rate of Rs.75 /-per ton the states get Rs.1500 million. In this case 20 per cent of the production accruing to the State is released in the market at Rs. 75/ per ton. In this case while cost is excluded the profit of the coal company which is included in the pit head price is added. Hence the market values of total coal production 80+20 million tons goes up and becomes Rs.75 per ton. This method of estimating royalty leads to an increase in the pit head price from Rs.60 per ton to Rs.75 per ton. Under this method, States gain but the companies lose. Further selling of 20% coal by the State involves cost and that may not be an efficient way of handling coal.

Alternatively, if royalty is fixed on per ton basis and if the ratio between pit head price and royalty is 1:5 then the pit head price is Rs.60 while royalty is Rs.12 per ton. The pit head price plus royalty will be Rs.72 per ton.

In case the royalty is fixed on per ton basis without linking it to the pit head price or even to the total value of coal the royalty will not have significant indirect influence on the basic price of coal but it will form a part of landed price of coal.

Under the system of royalty based on ad valorem principle, royalty increases along with an increase in the price of coal in some definite proportion, but it will not influence the basic price of coal. Royalty becomes a part of the landed cost.

While introducing reform measures it is important to keep in mind what type of royalty system we are going to adopt. India has two options in this regard:

(1) Reforms within the existing legislation. To continue with the existing system of royalty rate fixed on per ton basis and reviewing the same after a period of three years,

(2) To switch over to a simple ad valorem system

1. Reforms within the existing Legislation

If the existing system of royalty, wherein royalty rate is based on the quantity i.e. on per ton basis and is reviewed not before three years, the following questions should be answered while taking steps to rationalize the royalty system:

How much Revenue should be mobilized through Royalty?

The Government of West Bengal suggested that royalty on coal should be 15 per cent of the pit head prices and the Governments of Bihar, Orissa, Madhya Pradesh and Assam suggested 10 per cent ad valorem. Some other State Governments suggested a fixed rate of royalty. The representative of the Government of Maharashtra suggested that coal being grouped into three categories with royalty rates of Rs.15/-, Rs.12.5 and Rs.6/- per ton. Some other States also suggested royalty to be on per ton basis only. The representative of Andhra Pradesh suggested that the State Government would recommend a rate of Rs.7/- per ton. The Government of Meghalaya suggested Rs.9/- per ton on run-of-mine coal and Rs.10 per ton for hand picked coal. The rate need to be fixed only after studying the cost of coal production

and the likely level of profit of the companies and the final impact on the pit head coal price.

Once the percentage share of States in the coal value to be received in the form of royalty is fixed, the future increase in the royalty rate needs to be calculated. This requires an estimation of the future absolute amount of royalty to be mobilized by the States. Following suggestion may be considered while fixing the absolute level of revenue to be mobilized through royalty on coal.

In order to rationalise the royalty system one should examine the following:

How much should be the increase in the revenue from royalty after a gap of few years (e.g. 5 years)?

How should additional revenue be mobilized?

What should be the additional rate of royalty to enable the government to reach the desirable target of royalty revenue? These are explained below.

1. How much Revenue should be mobilized through Royalty?

There is no definite way to decide how much should be the States share in the coal production in the form of Royalty. While fixing the royalty rate it is useful to bear in mind the cost of production and the ability of the consumers to pay the final price. A rate of about 20 per cent of the basic price should be reasonable. This needs to be arrived at on the basis of the cost of production of coal, the marginal utility of coal which changes with the extraction of coal and the consumers ability to bear the price burden without adversely affecting their production decisions.

2. How much should be the increase in the revenue from royalty after a gap of few years (e.g. 5 years)?

Increase in revenue from royalty should be linked with the growth rate of GDP coming from the fuel and mineral sector (Gwy) and with the rate of inflation (Pr). The benefit from the value added by the fuel and mineral sector to the GDP should also benefit the coal-producing sector and hence while fixing the target for revenue mobilization, the expected growth of GDP through coal (fuel) sector should be taken into consideration. The future revenue to be mobilized should also take into account

the inflationary rate. Thus, royalty should increase at the same rate as GDP from fuel sector at current prices e.g. if the Gross Domestic Product from fuel sector (Gwy) is expected to grow at an average rate of 3.5% and the expected inflation rate (Pr) is 7.5% during the coming five years, the royalty earnings will increase by 55% at the end of 5 years i.e., at the rate of 11% per annum. Thus, if the present level of royalty income is Rs.100 lakh by the end of 5 years it should be Rs.155 lakh. The increase of Rs.55 lakh should come partly from the increase in the legal base of royalty i.e., production and partly from the increase in the royalty rate.

Symbolically the same may be expressed in the following manner:

R^* = Revenue from royalty in future

Gwy = Growth rate of GDP coming from fuel and mine sector

Pr = Inflation rate

R^* = Ro X (Gwy + Pr) x T----------1

Ro = Current level of revenue from royalty

T= time (1,2,3…..)

If

Ro = Rs.100 lakh

Gwy = 3.5%

Pr = 7.5%

R* = 100 lakh X (3.5+7.5) X 5 =155 lakh

The desirable level of revenue mobilization through royalty from coal will be Rs. 155 lakh arrived at by following the above method.

3. How should additional revenue be mobilized?

Next task is to decide, how this additional revenue of Rs.55 lakh be mobilised. R* can be raised by increase in the royalty base (production) and by increase in the rate. Thus:

R* = *f*(Rb +Rr)----------2

Rb = royalty base = coal production[15]

[15] See Appendix Note 5.1 on Base of Coal Royalty

Rr = rate of royalty

Δ Rb = Rbo – RbT---------- 3

Δ Rb = change in the royalty base

Rbo = Current Royalty base

RbT = Royalty base in time T

Suppose:

Ro =100 lakh

R* = 155 lakh

Rbo =100crore rupees

RbT = 120 crore rupees

Δ Rb = 20 crore = 120 crore-100 crore

$\hat{R}$ = Rbo + (ΔRb X Rro) ----------4

120 lakh = 100 crore + (20 crore X 10%)

$\hat{R}$ =120 lakh = Current royalty base +royalty on additional base at current royalty rate

$\hat{R}$ = Royalty revenue on future base and at current rate

ΔR = R*- $\hat{R}$ ----------5

35 lakh = 155 lakh-120 lakh

In order to mobilize Rs 35 lakh through royalty the rate needs to be revised upwards.

4. What should be the revised rate of royalty?

R* =Rs.155 lakh

Rbo = 100 crore

RbT = 120 crore

Rr1 = R* / RbT----------6

155lakh /120 crore = 12.92%

ΔRr = Rr- Rr1

2.92% =10% –12.92%

2.92% increase in the royalty rate will be able to mobilize additional royalty revenue to the tune of Rs.35 lakh. Thus, increased production is able to finance Rs.20 lakh, in order to mobilize the balance of Rs.35 lakh the royalty rate should be revised

(Rr) upward accordingly. The expected revenue yield R* divided by the expected legal base (production or RbT) will determine the royalty rate.

One can work out grade wise rates of royalty and royalty revenue by applying the above method and replacing the royalty base by taking the production of coal of different grades and the prevailing grade-wise rates.

The next important issue pertains to how to arrive at the estimated growth of GDP from fuel sector, future inflationary rate and the future production level. These are explained below.

Existing rates of royalty are available in the published documents. The future base of royalty i.e. production (either at aggregate level or grade-wise) can be arrived at by way of making projections or the plan estimates prepared by the respective companies or the Ministry of Coal can be used.

The growth rate of GDP through fuel and mineral sector and inflation rate can be obtained from RBI Bulletins and National Accounts Statistics (NAS).

The benefit from the value added by the coal sector to the GDP should also benefit the coal producing sector and hence while fixing the target for revenue mobilization through royalty for the future five years, the expected growth of GDP through coal (fuel) sector should be taken into consideration. The future revenue to be mobilized should also take into account the inflationary rate. Thus, royalty should increase at the same rate as GDP from fuel sector at current prices.

Ad valorem rates of royalty on coal and lignite

The second alternative is to simplify the coal royalty system by making it ad valorem. The royalty rates on coal and lignite in the country are presently on tonnage basis. The royalty rates on coal all over the world except in India and the Australian State of New South Wales are on ad valorem basis.

According to the data collected in 1995 by the Study Group set up by the Ministry of Mines in January 1995 to study the question of revision of rates of major minerals (other than coal, lignite and sand for stowing), the ad valorem incidence of mineral royalty rates in other countries varies from 1 to 15per cent. In fact, no other foreign country except Brazil levies a royalty of more than 15 per cent on ad valorem basis on minerals. In the Canadian provinces of Ontario and Quebec, royalty at the rate of 18 to 20% on 'net profits' is being levied. An ad valorem royalty rate of 20% in respect of coal will be the highest in the world. Even in the third world countries except Brazil, the mineral royalty rates vary from as low as 2% to a high of 105%. The 10% rate is for the high value minerals like diamond and the rate is only prevalent in the diamond producing African countries of Angola, Botswana, Guinea, Namibia, Nigeria and Tanzania.

Some of the coal producing States of the country asked for coal royalty rates to be fixed on ad valorem basis. During our field visits, different views were obtained on the rates of royalty to be fixed on ad valorem basis. There was no unanimity across the States, coal companies and subject experts. The rates suggested are shown below:

State	Ad valorem rates asked for
MadhyaPradesh	30% for A, B, E and G grades of non-coking coal 25% for C, D and F grades of non-coking coal
Maharashtra	20% of base prices (revised to 30% in oral presentation on 17-4-97)
Orissa	15% on A and B grades of non-coking coal. 16% on D and E grades of non-coking coal. 25% on F and G grades of non-coking coal
Uttar Pradesh	15 to 20% of sale price

In case ad valorem basis is adopted, there would not be any need to keep six groups of coal as is the arrangement at present. One option was to have two groups,

coking and non-coking coals. However, it may be noted that at present, A & B grades of non-coking coal are included in Group II along with coking coals of Washery Grades II and III and semi-coking coals of Grades I and II. Similarly, C grade of non-coking is included in Group II along with coking coal Washery Grade IV. Keeping in view these existing arrangements, there can be two rates of coal royalty 20 % royalty rate on ad valorem basis on Group I coals and 15 per cent royalty rate on ad valorem basis on Group II coals. In other words, the recommended rate of coal royalty will be:

Royalty Rates as Per cent of Pit head Price (%)

Group and Grades of Coal	Rate (%)
Group I. Coals Coking Coal, Steel Grades I and II Washery Grades I, II, III & IV	20% at the base price of respective grades of coal
Semi coking coal Grades I & II	- do-
Hand picked coal produced in Assam, Arunachal Pradesh and Nagaland	- do -
A, B and C grades of non-coking coal	- do -
Ungraded and O.M. coal produced in Assam, Arunachal Pradesh and Nagaland	- do -
Group II Coals	
D, E, F and G grades of non-coking coal	15% of base prices of the respective grades of coal
Coal produced in Andhra Pradesh (Singareni Collieries Company Limited)	- do -

Switching over to ad valorem system has several advantages. Especially now when the country is contemplating to adopt Value Added Tax system from April 2003. All indirect commodity taxes are going to be based on the concept of Valued Added. Hence, if royalty is also based on the concept of ad valorem it will strengthen

the economy. Under the present regime there is lot of evasion of royalty. Private companies/ Captive mining companies often mix up the different grades and royalty applicable to the lowest grade is paid to the government.

Ad valorem based royalty has the advantage of simplifying the royalty system. There will be only one rate or at the most two rates one for coking and the other for non-coking coal. This will stop the practice of recording sale of high grade coal under the category of low grade coal. Even the estimation procedure becomes very simple. There is no need for the States to keep requesting the Centre to revise royalty rates. The ad valorem based royalty has built in flexibility and as and when the price of coal increases the revenue from royalty also increases. The Centre can review the ad valorem rate once in five years and can re-fix the share of the States.

Looking at the advantages of the royalty system based on ad valorem principle, it is high time that the Centre takes a definite measure to switchover to this system. However, there is need to examine the rationale behind fixing the royalty amount and rate of royalty in a scientific manner with least subjectivity. The rate should be neutral to the decisions of the economic agents. A system, which is simple, transparent and easy to estimate the quantum of royalty, is desirable for the country.

Economic and Fiscal Impact of Royalty Rates of Coal and Lignite in India

APPENDIX NOTES

Appendix Note - Chapter I

AN1.1:

Reserves of Coal:

There are three ways to estimate the coal reserves.

i. proven reserve

ii. indicated reserve

iii. inferred reserve

These reserves indicate net in situ geological reserves. Categorization of coal reserves in the above manner is based on the degree of confidence of the exploratory data. The reserves that have been calculated within a radius of 200 meters from a known point (location of borehole etc.) are known as *proven reserves*. Reserves calculated within a radius of 1000 meters from a known point are known as *indicated reserves* and the reserves which have been estimated based on the geological continuity are known as *inferred reserves*.[16] However, the entire in situ reserves are not extractable, because some of them are locked beneath towns, villages, railway lines, roads and riverbeds.

AN1.2:

Mines and Minerals (Development and Regulation) Act, 1957

An Act to provide for the[17] (development and regulation of mines and minerals) under the control of the Union.

BE it enacted by Parliament in the Eighth Year of the Republic of India as follows:

PRELIMINARY

Short title, extent and commencement

1 (1) This Act may be called the Mines and Minerals[18] (Development and Rregulation) Act, 1957.

[16] EIS, India's Energy Sector, September 1996, CMIE, Chapter 3, p.153.
[17] Substituted by MM(RD) Amendment Act 1999 *vide* Government of India Ext. Part-II Section I dated 20.12.1999 (effective from 18.12.1999).
[18] Ibid.

It extends to the whole of India.

(3) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint.

Declaration as to the expediency of Union control

2 It is hereby declared that it is expedient in the public interest that the Union should take under its control the regulation of mines and the development of minerals to the extent herein after provided.

Definitions

3 In this Act, unless the context otherwise requires:

(a) "minerals" includes all minerals except minerals oils;

(b) " minerals oils" includes natural gas and petroleum;

(c) "mining lease" means a lease granted for the purpose of undertaking mining operations, and includes a sub-lease granted for such purpose;

(d) "mining operations" means any operations undertaken for the purpose of wining any mineral;

(e) "minor minerals" means building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes, and any other mineral which the Central Government may, by notification in the Official Gazette, declare to be a minor mineral;

(f) "prescribed" means prescribed by rules made under this Act;

(g) "prospecting licence" means a licence granted for the purpose of undertaking prospecting operations;

(h) " prospecting operations" means any operations undertaken for the purpose of exploring, locating or proving mineral deposits;

(ha) "reconnaissance operations" means any operations undertaken for preliminary prospecting of a mineral through regional, aerial, geophysical or geochemical surveys and geological mapping, but does not include pitting, trenching, drilling (except drilling of boreholes on a grid specified from time to time by the Central Government) or sub-surface excavation;

Further:

Royalties in respect of mining lease

9 (1) The holder of a mining lease granted before the commencement of this Act shall, notwithstanding anything contained in the instrument of lease or in any law in force at such commencement, pay royalty in respect of any mineral removed or consumed by him or by his agent, manager, employee, contractor or sub-lessee from the leased area after such commencement, at the rate for the time being specified in the Second Schedule in respect of that mineral.

(2) The holder of a mining lease granted on or after the commencement of this Act shall pay royalty in respect of any mineral removed or consumed by him or by his agent, manager, employee, contractor or sub-lessee from the leased area at the rate for the time being specified in the Second Schedule in respect of that mineral.

(2A) The holder of a mining lease, whether granted before or after the commencement of the Mines and Minerals (Regulation and Development) Amendment Act, 1972, shall not be liable to pay any royalty in respect of coal consumed by a workman engaged in a colliery provided that such consumption by the workman does not exceed one-third of a tonne per month.

(3) The Central Government may, by notification in the Official Gazette amend the Second Schedule so as to enhance or reduce the rate at which royalty shall be payable in respect of any mineral with effect from such date as may be specified in the notification:

Provided that the Central Government shall not enhance the rate of royalty in respect of any mineral more than once during any period of three years.

Dead rent to be paid by the lessee

9A(1) The holder of a mining lease, whether granted before or after the commencement of the Mines and Minerals (Regulation and Development) Amendment Act, 1972, shall notwithstanding anything contained in the instrument of lease or in any other law for the time being in force, pay to the State Government, every year, dead rent at such rate as may be specified, for

the time being, in the Third Schedule, for all the areas included in the instrument of lease:

Provided that where the holder of such mining lease becomes liable, under Section 9, to pay royalty for any mineral removed or consumed by him or by his agent, manager, employee, contractor or sub-lessee from the leased area, she shall be liable to pay either such royalty, or the dead rent in respect of that area, whichever is greater.

(2) The Central Government may, by notification in the Official Gazette amend the Third Schedule so as to enhance or reduce the rate at which the dead rent shall be payable in respect of any area covered by a mining lease and such enhancement or reduction shall take effect from such date as may be specified in the notification:

Provided that the Central Government shall not enhance the rate of dead rent in respect of any such area more than once during any period of three years.

Appendix Notes - Chapter III

AN 3.1:

The first Study group and its recommendations regarding Royalty on Coal:

A study Group was appointed to deal with the issues relating to coal royalty rates. This Study Group finalized its report in April 1985. It had been decided in 1980-81 after ascertaining the views of the State Governments that the average rate of royalty should be fixed at 5% of the weighted average pit head price of each group of coal. The average rate of royalty recommended by them was Rs.5.30 per ton, which were about 5% of the average price of Rs.101 per ton prevailing then. The average pit head price of coal produced by CIL was around Rs.183 per ton. Singareni's average price was Rs.192 per ton. Consequently the royalty yield had gone down from 5% to about 2.9% of the pit head price of coal. The Study Group opted to retain the average rate of royalty at a level corresponding to 5% of the pit head price of coal. In order to mitigate the diminishing percentage of royalty consequent on upward revisions in the price of coal, the Study Group recommended that instead of calculating the average

rate of royalty at 5% of the then prevailing average price of Rs.183 per ton, which would have been Rs.9.15 per ton) it might be fixed at Rs.10 per ton. This represented an increase of about 90% over the prevailing average rate of Rs.5.30 per ton.

The Study Group did not recommend any change in the prevailing methodology of notifying the royalty on a 'per ton' basis to 'ad valorem' basis until the procedure of levying Cesses on coal was discussed between the Central Government and State Governments and a standard procedure evolved.

The recommendations made by the Study Group were not given effect because most of the State Governments had continued to levy Cesses on Coal, the incidence of which was as high as twenty five times the rate of royalty (e.g. in case of Bihar). Since, State Governments could change the rate of Cesses the rates of royalty fixed by Government of India lost much of its meaning. Hence no revision in the rates were effected on the basis of the study Group recommendations.

AN 3.2:

The Report of the Second Study Group on Revision of Rate of Royalty on Coal:

The situation relating to Cesses imposed by the states had changed by the time the second study group came into existence. Consequently States, which suffered huge losses of revenues due to these decisions approached Government of India to enhance rates of royalty on coal. Subsequently, Department of Coal appointed another Study Group on 6.2.1991 to consider the requests of the States for enhancement in rates of royalty and regulation of Cesses already collected.

It was resolved that the Cesses already collected by the State Governments till the date of the legislation to discontinue the Cesses or till the date when the statute levying such Cesses was struck off should be regularized the Parliament by law. Department of Mines would take action to bring about the necessary legislation. An ordinance could also be promulgated in view of the urgency. Simultaneously State Governments might also be persuaded to withdraw the disputed legislation.

The suggested rate of royalty at Rs.70 per ton of coal was 13.2 times then prevailing average rate of Rs.5.30. Hence the new grade-wise royalty was worked out

by multiplying the existing rates by this multiple of 13.2 and rounded off to nearest ten paise.

The Study Group recommended that the new rates of royalty and the laws discontinuing the levy and collection of Cesses should be brought into effect simultaneously. Coal royalty rates revised in 1991 and 1994 were not extended to West Bengal as this state continued to levy their coal Cess. At present, no State Government, other than the Government of West Bengal, is levying any major coal Cess.

AN 3.3:

West Bengal and Cess on Coal:

The Cess Acts of Government of West Bengal are subjudice before the Supreme Court. The state government had filed a special leave petition in the Supreme Court.

However, the 1981 coal royalty rates (average Rs. 5.30 per ton) are still applicable to West Bengal. The Government of West Bengal is also levying coal Cess at the rate of 25% of the coal prices (earlier it was as high as 45%) While the average rate of coal royalty to the coal prices vary from 11 to 14% in the coal producing States other than West Bengal, the consolidated rates of coal royalty and coal Cess in West Bengal to the coal prices is about 26% i.e., the highest in the country.

AN 3.4

Categorization and Grading of Coal:

In order to fix price and /or royalty or any type of levy on coal, the most important task is the categorization and grading of coal. Categorization and grading of coal indicates the intrinsic value of the coal. The categorization of coal depends upon the heat content as measured by Kilocalories (Kcal).

Coal can broadly be put under two categories: (1) Coking Coal, (2) Non-Coking Coal. Coking coals are those type, which when heated without contact with air, result in formation of a carbonaceous, nearly volatile free, strong and porous mass. These are further classified on the basis of the quality of coke produced. These

are suitable for blast furnace use. All coals, which are either poor or feebly caking or non-coking, be they of high or low volatile types have been grouped under the category of Non coking coal.

The grading of coal depends upon the commercial degree of purity of coal as assessed from the chief impurities present that is ash and moisture. Useful Heat Value determines the grade of coal and is based on the ash and moisture content. UHV is measured in the following way:

Useful heat value (UHV) = 8900 - 138 x (A Plus M)

A = ash content; M = moisture

Categorization of Coal as per grade depends upon the useful heat value per kilocalories per kilogram. The coal is further grouped as ROM, Steam, Slack and Crushed ROM.

ROM: Run of Mine coal is comprising of all sizes comes out of the mine without any crushing or screening.

Steam Coal: The fraction of ROM as is retained on a screen when subjected to screening or is picked out by a fork-shovel during loading is called 'steam coal'.

Slack Coal: The fraction that remains after steam coal has been removed from ROM is called 'slack coal'.

Crushed Coal: When the top size is being limited to any maximum limit within the range of 200-250 mm through manual facilities or mechanical facilities is called 'crushed ROM coal'.

Coking coal (ROM, steam, crushed ROM, slack) is again classified as Steel Grade (SG) I, SG II, Washery Grade (WG) I. Similarly non-coking coal also has ROM, steam, slack and Washery middling and is further divided into long flame and other than long flame coal.

Coking coal grade as SG I, SG II etc depends upon the ash contents specified below:

SG I up to 15% ash content

SG II up to 15-18% ash content

Washery Grade I up to 18-21% ash content

Washery Grade II up to 21-24% ash content

Washery Grade III up to 24-28% ash content

Washery Grade IV up to more than 28% ash content

As per the Gazette of India notification dated December 27, 1991, grading is done in the following manner:

Category	Grade	Useful heat value In Kcal/Kg
Except the States Assam, Meghalaya, Nagaland, Arunachal Pradesh in all other States	A	Exceeding 6200 kcal.
	B	Between 5600-6200 kcal.
	C	Between 4940-5600 kcal
	D	Between 4200-4940 kcal
	E	Between 3360-4200 kcal
	F	Between 2400-3360 kcal
	G	Between 1300-2400 kcal

Just after the nationalisation of coal mines, the Coal Royalty rates were revised and fixed as per the grading displayed in Table1:

Table1: Royalty Rates - 1.8.75

Type: Coking Grade	Rate in Rs. per tonne
A	5.00
B	5.00
C	5.00
D	4.50
E	4.50
F	4.00
G	4.00
H	4.00
HH	4.00
J	3.50
K	3.50
Non-Coking Coal	
A	5.00
B	4.50
I	4.00
Grade II, III, III A & B	3.50
Ungraded	2.00
Rejects	1.00

The above categorization was changed subsequently in 1981 when royalty rates were revised. The nomenclature of the gradation was changed with effect from (w.e.f.) 17.7.1979, yet no revision of royalty was issued till 1981. The royalty had to be based on UHV as stipulated in the price structure of 1-7.1975 onwards based on that the rate of royalty was specified as followed in 1981:

Grade A	Rs.5.00 per tonne
Grade B	Rs.4.50 per tonne
Grade C	Rs.4.00 per tonne
Grade D	Rs.3.50 per tonne
Grade E, F and G	Rs.2.00 per tonne

Royalty on Ungraded coal was fixed at Rs.2.00 per tonne for 2500 to 3700 UHV.

The price of coal and the royalty depends upon the above categorization.

Appendix Note AN.4: Coal pricing Policy in India

Prior to 1.1.2000 the Central Government was empowered under section 4 of the Colliery Control Order, 1945, as continued in force by the Essential Commodities Act, 1955 to fix the grade-wise and colliery-wise prices of coal. Thus, since nationalization of coal mines till April 1996 the coal was entirely under the administered price regime. The pricing policy had differential impact upon different subsidiaries of CIL. Under the administered price regime, while the superior coal was over priced the inferior grades mainly used for thermal power was under priced. Due to the price sensitivity of the superior grade coal and high cost of its production, an artificially high price of this grade of coal hit the competitiveness of the subsidiaries of CIL like BCCL and ECL. This acted as a disincentive factor in the production of good quality coal.

In spite of increase in the demand for coal the growth rate of coal production was declining .The administered price regime led to financial problems for the coal companies. In order to mitigate the financial very often the coal prices were revised upward.

The prices of the administered grades of coal were revised w.e.f. 17.6.94. The price notification had been amended in December 1995, January 1996 and April 1996 to enhance the differential between run of mine, steam and slack coal, to increase the transportation charges and also to provide for additional prices for coal produced from Ramagundam OCP of SCCL and Rajmahal OCP of Eastern Coalfields Limited.

Following the recommendations of Bureau of Industrial Costs and Prices (BICP), a decision was taken by the Government to deregulate the prices of all grades of coking coal and A, B and C grades of non-coking coal and this decision was implemented with effect from 22.3.96. Armed with this notification CIL, for the first time, independently fixed the prices of the deregulated grades with effect from April 1996. The system of Coal Price Regulation Account (CPRA) adjustments for public sector coal companies was modified significantly in India. Deregulation of coal prices was introduced. CPRA adjustments were followed by the subsidiaries of CIL in the initial period of deregulation. Under this process, the loss making units were helped to

meet the difference between their production cost and price realization from the funds of profit making subsidiaries. The prices were further revised after six months the same year. In the post-decontrol regime, the scope of sharing income between profit-making and loss-making subsidiaries is virtually negligible. These apart, profit-making subsidiaries are now required to pay taxes.

A minor correction in the revised prices was done in March 1997. CIL's fourth revision of prices of the deregulated categories was done in 1997. The Government also decided to allow CIL and SCCL to fix prices of E, F and G grades of non-coking coal once in every six months by updating the cost indices as per the escalation formula contained in the 1987 report of the BICP. And necessary instructions to this effect were issued to CIL and SCCL on 13.3.97. The Coal India Limited and Singareni Collieries Company Limited were allowed to fix prices of their E, F & G grades of non-coking coal till the end of 1999 on the basis of the 1987 escalation formula prescribed by the Bureau of Industrial Costs and Prices. Prices fixed by various subsidiaries of CIL by grade of coal since 1996 are displayed in Appendix table A 4.2. The deregulation of prices of the remaining regulated grades of coals i.e. E, F & G grades of non-coking coal had taken place with effect from 1st January, 2000. The Government of India had notified a new Colliery Control Order, 2000 with effect from the same date i.e. 1st January 2000. The captive mining parties had long been made eligible to fix on their own, the transfer prices of coal that they mine from the captive coal blocks and supply to the end-user plants on exclusive basis. The Central Government now has no powers to regulate the price of coal. As per the BICP norms, coal companies are allowed to raise prices by a maximum of 10 per cent of the last prices per annum to neutralize the production cost escalation, if any.

APPENDIX TABLES

Appendix Tables: Chapter II

Appendix: Table A 2.1: Company-wise, Year-wise Royalty, Cess, Sales Tax, Stowing Excise Duty and Other Levies paid (Rs in lakh)

Continued..

Year/Company	Royalty	Cess	Sales Tax	SED	Other Levies	Total
1996-97						
NCL	30269	0	7560.83	1294.64	108.46	39232.93
CCL	28945	0	8227.04	1155.73	11.26	38339.03
MCL	19790	0	5683	13.03	391	25877.03
SECL	44332	0	5441.1	2112	68.86	51953.96
SCCL	21613	0	8260.99	1008.8	0	30882.79
NLC	430	0	0	0	0	430
BCCL	19288	2037.12	8582.08	1223.49	0	31130.69
ECL	8046	60342.07	9668.54	984.08	0	79040.69
WCL	24121	0	10110.59	1057.46	199.44	35488.49
Total	196834	62379.19	63534.17	8849.23	779.02	332375.6
1997-98	Royalty	Cess	Sales Tax	SED	Other Levies	Total
NCL	30372	0	8303.73	1311.37	560.19	40547.29
CCL	28456	0	9308.1	1277.81	18.15	39060.06
MCL	22759	0	7556	15.13	227	30557.13
SECL	40225	0	6553.92	2042	75.49	48896.41
SCCL	21773	0	10454.77	1016.19	0	33243.96
NLC	453	0	0	0	0	453
BCCL	21217	2084.34	9429.76	849.42	0	33580.52
ECL	7582	64448.32	10181.65	935.72	0	83147.69
WCL	24749	0	11207.97	1074.18	0	37031.15
Total	197586	66532.66	72995.9	8521.82	880.83	346517.2
1998-99	Royalty	Cess	Sales Tax	SED	Other Levies	Total
NCL	29019	0	8236.15	1240.93	542.95	39039.03
CCL	27015	0	9228.33	1186.5	35.19	37465.02
MCL	22740	0	7667	15.23	0	30422.23
SECL	42439	0	6889.6	1807	81.71	51217.31
SCCL	20030	0	10200.93	934.77	0	31165.7
NLC	452	0	0	0	0	452
BCCL	21000	0	9683	854.5	0	31537.5
ECL	7359	62395	10274.5	904	0	80932.5
WCL	24731	0	11405.5	1132.44	0	37268.94
Total	194785	62395	73584.41	8075.37	659.85	339499.6

Appendix: Table A 2.1: Company-wise, Year-wise Royalty, Cess, Sales Tax, Stowing Excise Duty and Other Levies paid (Rs in lakh)

Concluded

Year/Company	Royalty	Cess	Sales Tax	SED	Other Levies	Total
1999-00						
NCL	31649	0	9475.78	1353.93	637.05	43115.76
CCL	25982	0	9505.08	1193.8	0	36680.88
MCL	22682	0	7604	14.44	20	30320.44
SECL	42339	0	7418.07	1833	84.51	51674.58
SCCL	22308	0	11799.31	1041	0	35148.31
NLC	435	0	0	0	0	435
BCCL	20783	1613.5	9937.95	860.68	0	33195.13
ECL	7194	42224.72	10368.61	908.06	0	60695.39
WCL	25044	0	11604.08	1190.7	0	37838.78
Total	198416	43838.22	77712.88	8395.61	741.56	329104.3
2000-01	Royalty	Cess	Sales Tax	SED	Other Levies	Total
NCL	34355	0	10337.65	1472	820.85	46985.5
CCL	25749	0	9947.78	1218.06	0	36914.84
MCL	25395	0	8866	8.42	0	34269.42
SECL	43532	0	6381.06	2024	88.54	52025.6
SCCL	22735	0	12321	1062	0	36118
NLC	25955	0	0	0	0	25955
BCCL	18500	1654.48	9275.38	780.74	0	30210.6
ECL	7921	46135.04	11148.1	973.31	0	66177.45
WCL	25470	0	11861.04	1212.72	0	38543.76
Total	229612	47789.52	80138.01	8751.25	909.39	367200.2

Source: Annual Reports of Coal India Limited

Appendix Tables - Chapter III

Appendix Table A 3.1: Royalty Vis a Vis Macro variables

YEAR	Total Royalty Collected by Coal & Lignite Producing States	Total NSDP of Coal & Lignite Producing States at 1980-81 Prices(old Series)	Royalty as percent of Total NSDP of Coal and Lignite Producing States	Gross Value Added by Fuels at 1993-94 Prices	Royalty as percent of Gross Value added by Fuels	Total Revenue of Coal & Lignite Producing States	Royalty as Percent of Total Revenue of Coal and Lignite Producing States	Total Non Tax Revenue of Coal & Lignite Producing States	Royalty as percent of Total Non Tax Revenue of Coal and Lignite Producing States
1996-97	1968.34	490102.00	0.40	19312.00	10.19	72976.00	2.70	18361.00	10.72
1997-98	1975.86	532592.00	0.37	21208.00	9.32	81354.00	2.43	19059.00	10.37
1998-99	1947.85	665591.38	0.29	21792.00	8.94	84816.00	2.30	18887.00	10.31
1999-00	1984.16	822752.56	0.24	22081.00	8.99	100277.00	1.98	25137.00	7.89
2000-01	2296.12	1010703.90	0.23	N.A	N.A	116652.00	1.97	28199.00	8.14
2001-02	2034.47	1237023.12	0.16	N.A	N.A	125438.00	1.62	27769.00	7.33

Source: ***1) RBI, Handbook of Statistics on Indian Economy, 2001 (for NSDP)***
2) National Accounts Statistics of India, 1950-51 to 2000-01, EPW Research Foundation (for Value added by Fuels)
3) RBI Bulletins (Revenue and Non-tax Revenue)

Note: ***1) NSDP for the years 1998-99, 1999-2000, 2000-01 and 2001-02 are estimated on the basis of Compound Growth rate of the previous years.***
2) Revenue and Non Tax Revenue for the years 2000-01 and 2001-02 are Revised and Budget Estimates

Appendix Table A 3.2: Royalty Rates on Coal (Rs./ton) in current prices

Coking Coal								
Years	**Steel Grade- I**	**Steel Grade- II**	**Washery Grade-I**	**Washery Grade-II**	**Washery Grade-III**	**Washery Grade-IV**	**SC I**	**SC II**
19.2.1971	2	2	2	1.9	1.9	1.75	1.9	1.9
1972	2	2	2	1.9	1.9	1.75	1.9	1.9
1973	2	2	2	1.9	1.9	1.75	1.9	1.9
1974	2	2	2	1.9	1.9	1.75	1.9	1.9
14.7.1975	5	5	5	4.5	4.5	4	4.5	4.5
1976	5	5	5	4.5	4.5	4	4.5	4.5
1977	5	5	5	4.5	4.5	4	4.5	4.5
1978	5	5	5	4.5	4.5	4	4.5	4.5
1979	5	5	5	4.5	4.5	4	4.5	4.5
1980	5	5	5	4.5	4.5	4	4.5	4.5
12.2.1981	7	7	7	6.5	6.5	5.5	6.5	6.5
1982	7	7	7	6.5	6.5	5.5	6.5	6.5
1983	7	7	7	6.5	6.5	5.5	6.5	6.5
1984	7	7	7	6.5	6.5	5.5	6.5	6.5
1985	7	7	7	6.5	6.5	5.5	6.5	6.5
1986	7	7	7	6.5	6.5	5.5	6.5	6.5
1987	7	7	7	6.5	6.5	5.5	6.5	6.5
1988	7	7	7	6.5	6.5	5.5	6.5	6.5
1989	7	7	7	6.5	6.5	5.5	6.5	6.5
1990	7	7	7	6.5	6.5	5.5	6.5	6.5
1.8.1991	150	150	150	120	120	75	120	120
1992	150	150	150	120	120	75	120	120
1993	150	150	150	120	120	75	120	120
1993	150	150	150	120	120	75	120	120
11.10.94	195	195	195	135	135	95	135	135
1995	195	195	195	135	135	95	135	135
2.9.1996	195	195	195	135	135	95	135	135
1977	195	195	195	135	135	95	135	135
1998	195	195	195	135	135	95	135	135
1999	195	195	195	135	135	95	135	135
2000	195	195	195	135	135	95	135	135
2001	195	195	195	135	135	95	135	135
16.8.2002	250	250	250	165	165	115	165	165

Appendix Table A 3.3: Coal Royalty rates in current prices

Non-Coking coal							
Year	**Grade A**	**Grade B**	**Grade C**	**Grade D**	**Grade E**	**Grade F**	**Grade G**
19.2.1971	1.9	1.9	1.75	1.7	1.7	1.5	1.5
1972	1.9	1.9	1.75	1.7	1.7	1.5	1.5
1973	1.9	1.9	1.75	1.7	1.7	1.5	1.5
1974	1.9	1.9	1.75	1.7	1.7	1.5	1.5
14.7.1975	4.5	4.5	4	3.5	3.5	2	2
1976	4.5	4.5	4	3.5	3.5	2	2
1977	4.5	4.5	4	3.5	3.5	2	2
1978	4.5	4.5	4	3.5	3.5	2	2
1979	4.5	4.5	4	3.5	3.5	2	2
1980	4.5	4.5	4	3.5	3.5	2	2
12.2.1981	6.5	6.5	5.5	4.3	4.3	2.5	2.5
1982	6.5	6.5	5.5	4.3	4.3	2.5	2.5
1983	6.5	6.5	5.5	4.3	4.3	2.5	2.5
1984	6.5	6.5	5.5	4.3	4.3	2.5	2.5
1985	6.5	6.5	5.5	4.3	4.3	2.5	2.5
1986	6.5	6.5	5.5	4.3	4.3	2.5	2.5
1987	6.5	6.5	5.5	4.3	4.3	2.5	2.5
1988	6.5	6.5	5.5	4.3	4.3	2.5	2.5
1989	6.5	6.5	5.5	4.3	4.3	2.5	2.5
1990	6.5	6.5	5.5	4.3	4.3	2.5	2.5
1.8.1991	120	120	75	45	45	25	25
1992	120	120	75	45	45	25	25
1993	120	120	75	45	45	25	25
1993	120	120	75	45	45	25	25
11.10.94	135	135	95	70	70	50	50
1995	135	135	95	70	70	50	50
2.9.1996	135	135	95	70	70	50	50
1977	135	135	95	70	70	50	50
1998	135	135	95	70	70	50	50
1999	135	135	95	70	70	50	50
2000	135	135	95	70	70	50	50
2001	135	135	95	70	70	50	50
16.8.2002	165	165	115	85	85	65	65

Appendix Table A 3.4: Royalty Rate in Constant Prices: (1970-71, 1981-82 and 1993-94)

COKING COAL

Base	WPI	Year	ST-I	ST-II	W-I	W-II	W-III	W-IV	SC-I	SC-II
1970-71	100	1971	2	2	2	1.9	1.9	1.75	1.9	1.9
	105.6	1972	1.89	1.89	1.89	1.8	1.8	1.66	1.8	1.8
	116.2	1973	1.72	1.72	1.72	1.64	1.64	1.51	1.64	1.64
	139.7	1974	1.43	1.43	1.43	1.36	1.36	1.25	1.36	1.36
	174.9	1975	2.86	2.86	2.86	2.57	2.57	2.29	2.57	2.57
	173	1976	2.89	2.89	2.89	2.6	2.6	2.31	2.6	2.6
	176.6	1977	2.83	2.83	2.83	2.55	2.55	2.27	2.55	2.55
	185.8	1978	2.69	2.69	2.69	2.42	2.42	2.15	2.42	2.42
	185.8	1979	2.69	2.69	2.69	2.42	2.42	2.15	2.42	2.42
	217.6	1980	2.3	2.3	2.3	2.07	2.07	1.84	2.07	2.07
	257.3	1981	2.72	2.72	2.72	2.53	2.53	2.14	2.53	2.53
1981-82	100	1982	7	7	7	6.5	6.5	5.5	6.5	6.5
	104.9	1983	6.67	6.67	6.67	6.2	6.2	5.24	6.2	6.2
	112.8	1984	6.21	6.21	6.21	5.76	5.76	4.88	5.76	5.76
	120.1	1985	5.83	5.83	5.83	5.41	5.41	4.58	5.41	5.41
	125.4	1986	5.58	5.58	5.58	5.18	5.18	4.39	5.18	5.18
	132.7	1987	5.28	5.28	5.28	4.9	4.9	4.14	4.9	4.9
	143.5	1988	4.88	4.88	4.88	4.53	4.53	3.83	4.53	4.53
	154.2	1989	4.54	4.54	4.54	4.22	4.22	3.57	4.22	4.22
	165.7	1990	4.22	4.22	4.22	3.92	3.92	3.32	3.92	3.92
	182.7	1991	82.1	82.1	82.1	65.68	65.68	41.05	65.68	65.68
	207.8	1992	72.18	72.18	72.18	57.75	57.75	36.09	57.75	57.75
	228.7	17.2.93	65.59	65.59	65.59	52.47	52.47	32.79	52.47	52.47
	228.7	19.6.93	65.59	65.59	65.59	52.47	52.47	32.79	52.47	52.47
1993-94	100	1994	195	195	195	135	135	95	135	135
	112.5	1995	173.33	173.33	173.33	120	120	84.44	120	120
	121.6	1.4.96	160.36	160.36	160.36	111.02	111.02	78.13	111.02	111.02
	121.6	19.10.96	0	0	0	0	0	0	0	0
	127.2	1997	153.3	153.3	153.3	106.13	106.13	74.69	106.13	106.13
	132.8	1998	146.84	146.84	146.84	101.66	101.66	71.54	101.66	101.66
	140.7	1999	138.59	138.59	138.59	95.95	95.95	67.52	95.95	95.95
	145.3	2000	134.21	134.21	134.21	92.91	92.91	65.38	92.91	92.91

Appendix Table A 3.4: Royalty Rate in Constant Prices: (1970-71, 1981-82 and 1993-94) NON-COKING COAL

Base	WPI	Year	A	B	C	D	E	F	G
1970-71	100	1971	1.9	1.9	1.75	1.7	1.7	1.5	1.5
	105.6	1972	1.8	1.8	1.66	1.61	1.61	1.42	1.42
	116.2	1973	1.64	1.64	1.51	1.46	1.46	1.29	1.29
	139.7	1974	1.36	1.36	1.25	1.22	1.22	1.07	1.07
	174.9	1975	2.57	2.57	2.29	2	2	1.14	1.14
	173	1976	2.6	2.6	2.31	2.02	2.02	1.16	1.16
	176.6	1977	2.55	2.55	2.27	1.98	1.98	1.13	1.13
	185.8	1978	2.42	2.42	2.15	1.88	1.88	1.08	1.08
	185.8	1979	2.42	2.42	2.15	1.88	1.88	1.08	1.08
	217.6	1980	2.07	2.07	1.84	1.61	1.61	0.92	0.92
	257.3	1981	2.53	2.53	2.14	1.67	1.67	0.97	0.97
1981-82	100	1982	6.5	6.5	5.5	4.3	4.3	2.5	2.5
	104.9	1983	6.2	6.2	5.24	4.1	4.1	2.38	2.38
	112.8	1984	5.76	5.76	4.88	3.81	3.81	2.22	2.22
	120.1	1985	5.41	5.41	4.58	3.58	3.58	2.08	2.08
	125.4	1986	5.18	5.18	4.39	3.43	3.43	1.99	1.99
	132.7	1987	4.9	4.9	4.14	3.24	3.24	1.88	1.88
	143.5	1988	4.53	4.53	3.83	3	3	1.74	1.74
	154.2	1989	4.22	4.22	3.57	2.79	2.79	1.62	1.62
	165.7	1990	3.92	3.92	3.32	2.6	2.6	1.51	1.51
	182.7	1991	65.68	65.68	41.05	24.63	24.63	13.68	13.68
	207.8	1992	57.75	57.75	36.09	21.66	21.66	12.03	12.03
	228.7	17.2.93	52.47	52.47	32.79	19.68	19.68	10.93	10.93
	228.7	19.6.93	52.47	52.47	32.79	19.68	19.68	10.93	10.93
1993-94	100	1994	135	135	95	70	70	50	50
	112.5	1995	120	120	84.44	62.22	62.22	44.44	44.44
	121.6	1.4.96	111.02	111.02	78.13	57.57	57.57	41.12	41.12
	121.6	19.10.96	0	0	0	0	0	0	0
	127.2	1997	106.13	106.13	74.69	55.03	55.03	39.31	39.31
	132.8	1998	101.66	101.66	71.54	52.71	52.71	37.65	37.65
	140.7	1999	95.95	95.95	67.52	49.75	49.75	35.54	35.54
	145.3	2000	92.91	92.91	65.38	48.18	48.18	34.41	34.41

Appendix Table A 3.5: Total Royalty to be paid by all the companies on the basis of Production (Rs in Crores)

Year	Total royalty to be paid by all companies (Except NLC, SCCL and ECL to West Bengal)	Royalty to be paid by ECL to West Bengal	Royalty to be paid by SCCL to Andhra Pradesh	Royalty to be paid by NLC to Tamil Nadu	Total Royalty to be paid by all companies
					Prod.
1990-91	82.95	7.4	9.74	2.94	103.03
1991-92	1,114.95	7.6	144.08	3.14	1,269.77
1992-93	1,681.52	7.52	157.58	3.33	1,849.95
1993-94	1,720.00	7.11	176.46	3.54	1,907.12
1994-95	1,731.45	7.49	192.38	3.85	1,935.16
1995-96	1,761.19	8.08	200.78	4.3	1,974.34
1996-97	1,826.17	8.42	215.51	4.34	2,054.43
1997-98	1,942.62	7.79	217.06	4.53	2,171.99
1998-99	1,873.71	7.85	204.95	4.54	2,091.05
1999-2000	1,875.25	7.18	221.67	4.39	2,108.50
2000-2001	1,897.55	7.85	227.06	4.54	2,137.00

Note: The share of private companies is not included.

Appendix Table A 3.6: Total Royalty to be paid by all the companies on the basis of Despatches (Rs in crores)

Year	Total royalty to be paid by all companies (Except NLC, SCCL and ECL to West Bengal)	Royalty to be paid by ECL to West Bengal	Royalty to be paid by SCCL to Andhra Pradesh	Royalty to be paid by NLC to Tamil Nadu	Total Royalty to be paid by all companies
1990-91	77.11	6.961	9.386	2.968	96.425
1991-92	1,055.64	7.036	140.028	3.111	1,205.82
1992-93	1,640.54	6.774	151.956	3.103	1,802.38
1993-94	1,692.80	6.789	172.697	3.504	1,875.79
1994-95	1,705.10	7.024	187.763	4.052	1,903.94
1995-96	1,758.75	7.367	186.525	4.331	1,956.97
1996-97	1,815.43	7.779	216.285	4.302	2,043.80
1997-98	1,916.48	7.466	217.725	4.566	2,146.23
1998-99	1,839.00	7.177	200.513	4.529	2,051.22
1999-2000	1,897.67	7.305	223.088	4.23	2,132.29
2000-2001	1,928.47	7.577	227.355	4.683	2,168.09

Appendix Table A 3.7: Coal royalty income of coal producing State from 1994-95 to 1998-99

Coal producing State	Income in 1994-95	Income in 1995-96 & % increase over 1994-95	Income in 1996-97 & % increase over 1995-96	Income In 1997-98 & % increase over 1996-97	Income in 1998-99 &% increase over 1997-98
Bihar	613.05	658.33 (7.38%)	682.77 (3.71%)	658.95 (-3.48%)	607.91 (-7.74%)
Orissa	104.08	180.79 (73.70%)	185.38 (2.53%)	227.59 (22.76%)	228.90 (0.57%)
Maharashtra	159.70	217.90 (36.44%)	200.29 (-8.08%)	204.79 (2.24%)	184.62 (-9.84%)
Madhya Pradesh	438.91	666.77 (51.91%)	684.14 (2.60%)	663.63 (-2.99%)	675.13 (1.73%)
Uttar Pradesh	87.39	113.50 (29.87%)	121.41 (6.96%)	102.35 (-15.69%)	86.78 (-15.21%)
Assam	0.42	21.59 (50.40%)	9.92 (-54.05%)	6.11 (-38.40%)	5.17 (-15.38%)
Andhra Pradesh	144.53	175.28 (21.27%)	197.14 (12.47%)	278.11 (41.07%)	200.16 (-28.02%)
West Bengal	9.59	7.82 (-18.45%)	10.87 (39.00%)	12.64 (16.28%)	9.76 (-22.78%)
Total	1557.67	2041.98	2091.92	2154.17	1998.43

Appendix Table A 5.1: Price of coal by grade 1971-2000 (Rs. Per ton)

Continued

COKING COAL

Years	ST-I	ST-II	W-I	W-II	W-III	W-IV	SC-I	SC-II
15.10.71	42.09	39.87	38.48	36.88	34.6	30.98	38.48	25
1972	42.09	39.87	38.48	36.88	34.6	30.98	38.48	25
1973	42.09	39.87	38.48	36.88	34.60	30.98	38.48	25
1974	42.09	39.87	38.48	36.88	34.60	30.98	38.48	25
1.7.75	96.70	91	87.7	81.95	73.80	63.1	72.4	66.45
1976	96.70	91	87.7	81.95	73.80	63.1	72.4	66.45
1977	96.70	91	87.7	81.95	73.80	63.1	72.4	66.45
1978	96.70	91	87.7	81.95	73.80	63.1	72.4	66.45
17.7.79	151.50	146.5	141.5	133.5	136.50	113.5	131.5	119
1980	151.50	146.5	141.5	133.5	136.50	113.5	131.5	119
13.2.81	192.00	186	180	173	165.00	156	177	168
27.5.82	216.00	210	202	195	186.00	172	201	191
1983	216	210	202	195	186	172	201	191
8.1.84	450	370	315	257	190	175	315	257
1985	450	370	315	257	190	175	315	257
9.1.86	482	402	347	289	222	207	347	289
23.12.87	573	478	413	343	264	246	413	343
1988	573	478	413	343	264	246	413	343
1.1.89	651	543	470	390	300	280	470	390
1990	651	543	470	390	300	280	470	390
28.12.91	842	702	608	504	388	362	608	504
1992	842	702	608	504	388	362	608	504
17.2.93	950	792	686	569	438	408	686	569
19.6.93	996	831	720	597	459	428	720	597
17.6.94	1048	875	758	628	483	450	758	628
29.12.95	1048	875	758	628	483	450	758	628
1.4.96	1310	1074	948	785	580	540	948	785
19.10.96	1389	1160	1031.6	854.4	659.2	597	1024	773
31.3.97	1468	1226	1031.6	854.4	659.2	597	1024	773
21.8.98	1599	1335.5	1060.8	878.5	677.1	613.6	1059.63	802.38
1.6.99	1644.63	1373.5	1069.75	886	689.5	620.5	1070.25	810.75
21.4.2000	1690.25	1411.5	1177	990.42	732	689.17	1164.08	963.42
31.1.2001	1805	1507	1215	1007	773	702	1239	1026

Appendix Table A 5.1: Price of coal by grade 1971-2000 (Rs. Per ton)

Concluded

NON-COKING COAL

Years	A	B	C	D	E	F	G
15.10.71	36.39	33.74	32.56	30.89	NA	NA	NA
1972	36.39	33.74	32.56	30.89	NA	NA	NA
1973	36.39	33.74	32.56	30.89	NA	NA	NA
1974	36.39	33.74	32.56	30.89	NA	NA	NA
1.7.75	76.8	66.45	59.1	50.2	44.05	37.9	22.8
1976	76.8	66.45	59.1	50.2	44.05	37.9	22.8
1977	76.8	66.45	59.1	50.2	44.05	37.9	22.8
1978	76.8	66.45	59.1	50.2	44.05	37.9	22.8
17.7.79	136.5	121.5	106.5	91.5	76.5	56.5	41.5
1980	136.5	121.5	106.5	91.5	76.5	56.5	41.5
13.2.81	167	157	140	122	101	77	50
27.5.82	200	179	160	139	115	87	56
1983	200	179	160	139	115	87	56
8.1.84	276.5	249.5	215.5	189.5	125	95	61
1985	276.5	249.5	215.5	189.5	125	95	61
9.1.86	308.5	281.5	247.5	221.5	138.5	108.5	74.5
23.12.87	363.5	332.5	292.5	234.5	176	141	100
1988	363.5	332.5	292.5	234.5	176	141	100
1.1.89	411.5	376.5	330.5	264.5	200	160	114
1990	411.5	376.5	330.5	264.5	200	160	114
28.12.91	528.5	483.5	423.5	338.5	259	207	147
1992	528.5	483.5	423.5	338.5	259	207	147
17.2.93	594.5	543.5	486.5	380.5	292	233	166
19.6.93	622.5	569.5	499.5	398.5	306	244	174
17.6.94	654.5	598.5	525.5	418.5	322	257	183
29.12.95	672	617	543	434	322	257	183
1.4.96	769	693	595	436	322	257	183
19.10.96	889.18	785.71	682.21	467.93	352.24	284.95	207.24
31.3.97	902.46	797.71	688.93	574.08	436.81	353.52	257.1
21.8.98	952.86	865.21	731.21	632.23	481.29	388.86	283.14
1.6.99	976.88	890.13	754.92	652.79	495.5	400.83	293.33
21.4.2000	1043.5	945.58	785.58	665.86	484.26	388.19	279.3

Note: *To derive the weighted average price, the following method was used.*

1. Avg. price was obtained at the company level i.e., different rates charged for the same grade was converted to average price.

2. The prices across the mines within the company were converted to average price.

3. The prices of different companies for the similar/nearest years were converted to average price.

Appendix Table A 5.2: Company-wise, grade-wise and year-wise revision of coal prices

BCCL										
Coking coal	**19.10.96**	**31.3.97**	**30.9.97**	**21.8.98**	**21.8.98**	**11.4.2000**	**11.4.2000**	**31.1.2001**	**31.1.2001**	**1.2.2001**
				Other Purpose	Power Utility	Other Purpose	Power Utility	Other Purpose	Power Utility	
ST-I	1468	1468	1541	1599	1657	1641	1740	1805	1914	1695
ST-II	1,226.00	1226	1287	1336	1,384.00	1370	1453	1507	1698	1416
W-I	1,062.00	1062	1115	1157	1,199.00	1187	1259	1306	1385	1227
W-II	880.00	880	924	959	993.00	984	1043	1082	1147	1016
W-III	650.00	650	683	709	734.00	727	771	800	848	751
W-IV	605.00	605	635	659	683.00	676	767	744	789	699
SC-I	1,024.00	1024	1075	1116	1,156.00	1145	1214	1259	1335	1183
SC-II	848.00	848	890	924	957.00	948	1005	1043	1106	979
Non-Coking										
Long Flame										
A	924	924	924	970		1019		1121		1121
B	836	836	836	878		922		1014		1014
C	698	698	698	733		770		847		847
D	466	584	584	625		656		722		722
Non-Long Flame										
A	864	864	864	907		952		1047		1047
B	776	776	776	815		856		942		942
C	638	636	636	670		704		774		774
D	406	524	524	561		589		648		648
E	322	416	416	445		467		514		514
F	257	332	332	355		373		410		410
G	183	237	237	254		267		294		294

Appendix Table A 5.2: Company-wise, grade-wise and year-wise revision of coal prices

Continued

CCL	19.10.96	31.3.97	21.8.98	31.5.99	14.7.2000	31.1.2001
Coking coal						
ST-I						
ST-II						
W-I	1,024.00	1024	1075	1116	1,115.00	1287
W-II	848.00	848	890	924	970.00	1067
W-III	627.00	627	658	683	717.00	789
W-IV	584.00	584	613	635	667.00	734
SC-I	1,024.00	1024	1075	1075	1,075.00	1241
SC-II	848.00	848	890	890	890.00	1027
Non-Coking	19.10.96	31.3.97	21.8.98	31.5.99	14.7.2000	31.1.2001
Long Flame						
A	924	924	970	1019	1070	1177
B	836	836	878	922	968	1065
C	698	698	733	770	809	890
D	466	584	625	656	689	758
Non-Long Flame						
A	864	864	907	952	1000	1100
B	776	776	815	858	899	969
C	638	638	670	704	739	813
D	406	524	561	589	618	680
E	322	416	445	467	490	539
F	257	332	356	373	392	431
G	183	237	254	267	280	308

Appendix Table A 5.2: Company-wise, grade-wise and year-wise revision of coal prices

Continued

MCL					
Non-Coking	**19.10.96**	**31.3.97**	**21.8.98**	**1.6.99**	**31.1.2001**
Long Flame					
A	888.00	888	932	932	979.00
B	803.00	803	843	843	885.00
C	671.00	671	705	705	740.00
D	466.00	564	603	603	633.00
Non-Long Flame					
A	828.00	828	869	869	912.00
B	743.00	743	780	780	819.00
C	611.00	611	642	642	674.00
D	406.00	504	539	539	566.00
E	322	400	428	428	445
F	257	319	341	341	351
G	183	227	243		250

Appendix Table A 5.2: Company-wise, grade-wise and year-wise revision of coal prices

Continued

WCL	22.3.96	31.3.96	19.10.96	31.3.97	30.9.97	21.8.98	1.6.99	31.1.2001
Coking coal								
ST-I	1,048.00	1310						
ST-II	875.00	1094						
W-I	758.00	948	1024	1024	1,024.00	1024	1024	1075
W-II	628.00	785	848	848	848.00	848	848	890
W-III	483.00	580	765	765	765.00	765	765	803
W-IV	450.00	540	628	628	628.00	628	628	659
SC-I	758.00	948	1024	1024	1,024.00	1024	1024	1096
SC-II	628.00	785	548	548	548.00	548	548	907
Non-Coking	22.3.96	31.3.96	19.10.96	31.3.97	30.9.97	21.8.98	1.6.99	31.1.2001
Long Flame								
A	702	849	996	996	996	1036	1036	1083
B	646	793	640	640	940	978	978	1022
C	573	720	855	855	879	914	914	955
D	644	644	644	814	814	863	863	902
Non-Long Flame	22.3.96	31.3.96	19.10.96	31.3.97	30.9.97	21.8.98	1.6.99	31.1.2001
A	642	789	936	936	936	973	973	1017
B	586	733	880	880	880	916	916	956
C	513	660	795	795	819	852	852	890
D	584	584	584	754	754	799	799	835
E	486	486	486	624	627	665	665	708
F	405	405	405	523	523	554	554	590
G	306	305	305	394	394	418	418	445

Appendix Table A 5.2: Company-wise, grade-wise and year-wise revision of coal

prices

Continued

SECL	**19.10.96**	**31.3.97**	**31.3.98**	**21.8.98**	**1.6.99**	**31.1.2001**
Coking coal						
ST-II			1094			
W-I	1024	1024	948	1024	1024	1096
W-II	848	848	785	848	848	907
W-III	627	627	580	627	627	671
W-IV	584	584	540	584	584	625
SC-I	1024	1024	948	1024	1024	1096
SC-II	848	848	785	848	848	907
Non-Coking	19.10.96	31.3.97	31.3.98	21.8.98	1.6.99	31.1.2001
Long Flame						
A	831	924	924	970	970	999
B	752	836	836	878	878	939
C	650	698	698	733	733	784
D	466	466	584	625	625	669
Non-Long Flame	19.10.96	31.3.97	31.3.98	21.8.98	1.6.99	31.1.2001
A	771	864	864	907	907	934
B	692	776	776	815	815	872
C	590	638	638	670	670	717
D	406	406	524	561	561	600
E	322	322	416	445	445	497
F	257	257	332	355	355	396
G	183	183	237	254	254	283

Appendix Table A 5.2: Company-wise, grade-wise and year-wise revision of coal prices

Continued

NCL	**31.3.96**	**19.10.96**	**31.3.97**	**21.8.98**	**31.6.99**	**31.1.2001**
Coal Grade						
Non-Coking						
Long Flame						
A	831.00	924	924	970	1,028.00	1147
B	752.00	836	836	878	931.00	1039
C	650.00	698	698	733	777.00	867
D	466.00	466	584	625	663.00	740
Non-Long Flame						
A	771.00	864	864	907	961.00	1072
B	692	776	776	815	864	964
C	590	638	638	670	710	792
D	406	406	524	561	595	664
E	322	322	416	445	472	527
F	257	257	332	355	376	420
G	**183**	**183**	**237**	**254**	**269**	**300**

Appendix Table A 5.2: Company-wise, grade-wise and year-wise revision of coal prices

Continued

ECL	**29-12-95**	**1.4.96**	**19.10.96**	**31.3.97**	**1/10/97**	**31.8.98**	**6.1.1999**	**21.4.2000**	**1.2.2001**
Coal Grade									
Coking coal									
ST-I	1048	1310							
ST-II	875.00	1094							
W-I	758.00	948	1024	1024	1,024.00	1024	1115	1193	1312
W-II	626.00	785	848	848	848.00	848	924	988	1087
W-III	483.00	580	627	627	627.00	627	683	730	803
W-IV	450.00	540	584	584	584.00	584	635	679	747
SC-I	758.00	948	1024	1024	1,024.00	1024	1158	1238	1360
SC-II	628.00	785	848	848	848.00	848	957	1024	1126
Non-Coking	29-12-95	1/4/96	19.10.96	31.3.97	35,440.00	31.8.98	6.1.199	21.4.2000	1.2.2001
Long Flame									
A	737	873	971	971	1019	1070	1100	1176	1294
B	678	790	878	878	922	968	1019	1090	1199
C	602	683	733	733	770	808	860	920	1012
D	489	489	489	614	614	657	698	756	820
Non-Long Flame									
A	642	771	864	864	907	952	976	1044	1149
B	636	692	776	776	815	856	878	939	1033
C	513	590	638	638	670	704	722	772	849
D	426	474	474	592	592	647	643	688	756
E	322	370	370	464	464	496	496	530	584
F	**257**	**305**	**305**	**380**	**380**	**406**	**406**	**434**	**477**
G	**183**	**231**	**231**	**285**	**285**	**305**	**305**	**326**	**358**

*Note**: The mine-wise price of ECL was converted to average prices.***

Appendix Table A 5.3: Year-wise Weighted Basic Price of Coal and Weighted Royalty Rate of Coal (Rs/Tonne)

Year	Weighted Basic Price (in Rs/Tonne)		Weighted Royalty Rate (in Rs / Tonne)		Ratio of Royalty Rate to Price	
	Coking Coal	Non Coking Coal	Coking Coal	Non Coking Coal	Coking Coal	Non Coking Coal
1971	35.8	33.4	1.92	1.71	18.657	19.562
1972	35.80	33.4	1.92	1.71	18.66	19.562
1973	35.80	33.4	1.92	1.71	18.66	19.562
1974	35.80	33.4	1.92	1.71	18.66	19.562
1975	79.14	51.04	4.63	3.43	17.11	14.888
1976	79.14	51.04	4.63	3.43	17.11	14.888
1977	79.14	51.04	4.63	3.43	17.11	14.888
1978	79.14	51.04	4.63	3.43	17.11	14.888
1979	134.19	90.07	4.63	3.43	29.01	26.271
1980	134.19	3/30/00	4.63	3.43	29.01	26.271
1981	174.63	116.29	6.56	4.59	26.61	25.358
1982	196.63	133.71	6.56	4.59	29.962	29.159
1983	196.63	133.71	6.56	4.59	29.962	29.159
1984	291.13	173.14	6.56	4.59	44.362	37.757
1985	291.13	173.14	6.56	4.59	44.362	37.757
1986	323.13	197.21	6.56	4.59	49.238	43.006
1987	384.13	234.29	6.56	4.59	58.533	51.09
1988	384.13	234.29	6.56	4.59	58.533	51.09
1989	436.75	265.29	6.56	4.59	66.552	57.85
1990	436.75	265.29	6.56	4.59	66.552	57.85
1991	564.75	341	125.63	65	4.496	5.246
1992	564.75	341	125.63	65	4.496	5.246
1993	668.5	402	125.63	65	5.321	6.185
1994	703.5	422.71	152.5	86.43	4.613	4.891
1995	703.5	432.57	152.5	86.43	4.613	5.005
1996	936.03	524.21	152.5	86.43	6.138	6.065
1997	954.15	572.95	152.5	86.43	6.257	6.629
1998	1003.31	619.26	152.5	86.43	6.579	7.165
1999	1020.61	637.77	152.5	86.43	6.693	7.379
2000	1102.23	656.04	152.5	86.43	7.228	7.591
2001	1159.09	699.98	152.5	86.43	7.601	8.099

Note: 1) In 1993 Prices are revised two times (17.2.1993 and 17.6.1993). We have taken only the revised prices of 17.6.1993

2) In 1996 Prices are revised two times (1.4.1996 and 19.10.1996). We have taken only the revised prices of 19.10.1996

Appendix Table A 5.4: Ratio of Royalty to Pit head price (Coking Coal to royalty) Grade-wise

YEARS	ST-I	ST-II	W-I	W-II	W-III	W-IV	SC-I	SC-II
15.10.71	21.05	19.94	19.24	19.41	18.21	17.70	20.25	13.16
1.7.75	19.34	18.20	17.54	18.21	16.40	15.78	16.09	14.77
13.2.81	27.43	26.57	25.71	26.62	25.38	28.36	27.23	25.85
1985	64.29	52.86	45.00	39.54	29.23	31.82	48.46	39.54
9.1.86	68.86	57.43	49.57	44.46	34.15	37.64	53.38	44.46
23.12.87	81.86	68.29	59.00	52.77	40.62	44.73	63.54	52.77
1990	93.00	77.57	67.14	60.00	46.15	50.91	72.31	60.00
28.12.91	5.61	4.68	4.05	4.20	3.23	4.83	5.07	4.20
17.2.93	6.33	5.28	4.57	4.74	3.65	5.44	5.72	4.74
19.6.93	6.64	5.54	4.80	4.98	3.83	5.71	6.00	4.98
17.6.94	5.37	4.49	3.89	4.65	3.58	4.74	5.61	4.65
29.12.95	5.37	4.49	3.89	4.65	3.58	4.74	5.61	4.65
1.4.96	6.72	5.51	4.86	5.81	4.30	5.68	7.02	5.81
19.10.96	7.12	5.95	5.29	6.33	4.88	6.28	7.59	5.73
31.3.97	7.53	6.29	5.29	6.33	4.88	6.28	7.59	5.73
21.8.98	8.20	6.85	5.44	6.51	5.02	6.46	7.85	5.94
1.6.99	8.20	6.85	5.58	6.67	5.14	6.61	8.10	6.15
21.4.2000	8.67	7.24	6.04	7.34	5.42	7.25	8.62	7.14
31.1.2001	7.22	6.03	4.86	6.10	4.69	6.10	7.51	6.22

Appendix Table A5.5: Ratio of Price to Royalty (Coking Coal to royalty) Grade-wise, Year wise

YEARS	ST-I	ST-II	W-I	W-II	W-III	W-IV	SC-I	SC-II
15.10.71	21.05	19.94	19.24	19.41	18.21	17.7	20.25	13.16
1972	21.05	19.94	19.24	19.41	18.21	17.7	20.25	13.16
1973	21.05	19.94	19.24	19.41	18.21	17.7	20.25	13.16
1974	21.05	19.94	19.24	19.41	18.21	17.7	20.25	13.16
1.7.75	19.34	18.2	17.54	18.21	16.40	15.78	16.09	14.77
1976	19.34	18.2	17.54	18.21	16.40	15.78	16.09	14.77
1977	19.34	18.2	17.54	18.21	16.40	15.78	16.09	14.77
1978	19.34	18.2	17.54	18.21	16.40	15.78	16.09	14.77
17.7.79	30.30	29.3	28.3	29.67	30.33	28.38	29.22	26.44
1980	30.30	29.3	28.3	29.67	30.33	28.38	29.22	26.44
13.2.81	27.43	1/26/00	25.71	26.62	25.38	28.36	27.23	25.85
27.5.82	30.86	30	28.86	30	28.62	31.27	30.92	29.38
1983	30.86	30	28.86	30	28.62	31.27	30.92	29.38
8.1.84	64.29	52.86	45	39.54	29.23	31.82	48.46	39.54
1985	64.29	52.86	45	39.54	29.23	31.82	48.46	39.54
9.1.86	68.86	57.43	49.57	44.46	34.15	37.64	53.38	44.46
23.12.87	81.86	68.29	59	52.77	40.62	44.73	63.54	52.77
1988	81.86	68.29	59	52.77	40.62	44.73	63.54	52.77
1.1.89	93	77.57	67.14	60	46.15	50.91	72.31	60
1990	93	77.57	67.14	60	46.15	50.91	72.31	60
28.12.91	5.61	4.68	4.05	4.2	3.23	4.83	5.07	4.2
1992	5.61	4.68	4.05	4.2	3.23	4.83	5.07	4.2
17.2.93	6.33	5.28	4.57	4.74	3.65	5.44	5.72	4.74
19.6.93	6.64	5.54	4.8	4.98	3.83	5.71	6	4.98
17.6.94	5.37	4.49	3.89	4.65	3.58	4.74	5.61	4.65
29.12.95	5.37	4.49	3.89	4.65	3.58	4.74	5.61	4.65
1.4.96	6.72	5.51	4.86	5.81	4.3	5.68	7.02	5.81
19.10.96	7.12	5.95	5.29	6.33	4.88	6.28	7.59	5.73
31.3.97	7.53	6.29	5.29	6.33	4.88	6.28	7.59	5.73
21.8.98	8.2	6.85	5.44	6.51	5.02	6.46	7.85	5.94
1.6.99	8.2	6.85	5.58	6.67	5.14	6.61	8.1	6.15
21.4.2000	8.67	7.24	6.04	7.34	5.42	7.25	8.62	7.14
31.1.2001	7.22	6.03	4.86	6.1	4.69	6.1	7.51	6.22

Appendix Tables A 5.6

	Royalty as percent of landed price						
Distance	**100**	**250**	**500**	**700**	**9/26/02**	**1200**	**1500**
Coking coal							
ST-I	9.14	8.71	8.05	7.61	6.99	6.65	6.24
ST-II	10.62	10.04	9.18	8.61	7.82	7.41	6.89
W-I	12.63	11.82	10.64	9.88	8.86	8.33	7.69
W-II	10.58	9.77	8.63	7.92	6.98	6.51	5.95
W-III	12.95	11.76	10.15	9.17	7.94	7.34	6.63
W-IV	10.20	9.16	7.79	6.98	5.98	5.5	4.94
SC-I	8.95	8.37	7.52	6.97	6.23	5.86	5.4
SC-II	10.43	9.64	8.53	7.83	6.92	6.45	5.9
Non-Coking	Royalty as percent of landed price						
Long Flame							
A	10.05	9.32	8.28	7.62	6.75	6.31	5.78
B	10.81	9.97	8.78	8.04	7.08	6.6	6.02
C	8.98	8.16	7.06	6.39	5.54	5.12	4.63
D	7.62	6.84	5.8	5.2	4.44	4.08	3.66
E	9.34	8.19	6.75	5.94	4.98	4.53	4.02
F	8.02	6.86	5.48	4.75	3.9	3.52	3.09
G	9.92	8.2	6.31	5.36	4.31	3.84	3.34

Appendix Table A 5.7: Railway Freight as percent of landed price

Distance	100	250	500	700	1000	1200	1500
Rail freight	**103.8**	**209.3**	**391.9**	**533**	**761.1**	**900.7**	**1096.1**
Coking coal							
ST-I	4.86	9.35	16.18	20.80	27.27	30.73	35.06
ST-II	5.64	10.78	18.45	23.53	30.52	34.21	38.75
W-I	6.71	12.68	21.38	27.01	34.57	38.47	43.20
W-II	8.12	15.15	25.06	31.26	39.37	43.46	48.32
W-III	9.94	18.23	29.46	36.22	44.78	48.97	53.87
W-IV	11.13	20.19	32.14	39.18	47.92	52.12	56.98
SC-I	6.87	12.97	21.82	27.51	35.14	39.07	43.83
SC-II	8.00	14.95	24.76	30.91	38.99	43.06	47.92
Non-Coking							
Long Flame							
A	7.71	14.45	24.03	30.08	38.05	42.09	46.93
B	8.29	15.45	25.49	31.76	39.92	44.02	48.90
C	9.79	17.99	29.11	35.84	44.37	48.55	53.45
D	11.28	20.45	32.49	39.56	48.31	52.52	57.37
E	13.83	24.49	37.78	45.23	54.12	58.26	62.94
F	16.61	28.71	42.99	50.63	59.42	63.41	67.83
G	20.55	34.34	49.47	57.11	65.54	69.23	73.24

Appendix Table A 5.8: Pithead Price as percent of landed price

Distance	**100**	**250**	**500**	**700**	**1000**	**1200**	**1500**
Rail freight	**103.8**	**209.3**	**391.9**	**533**	**761.1**	**900.7**	**1096.1**
Coking coal							
ST-I	4.86	9.35	16.18	20.8	27.27	30.73	35.06
ST-II	5.64	10.78	18.45	23.53	30.52	34.21	38.75
W-I	6.71	12.68	21.38	27.01	34.57	38.47	43.2
W-II	8.12	15.15	25.06	31.26	39.37	43.46	48.32
W-III	9.94	18.23	29.46	36.22	44.78	48.97	53.87
W-IV	11.13	20.19	32.14	39.18	47.92	52.12	56.98
SC-I	6.87	12.97	21.82	27.51	35.14	39.07	43.83
SC-II	8	14.95	24.76	30.91	38.99	43.06	47.92
Non-Coking							
Long Flame							
A	7.71	14.45	24.03	30.08	38.05	42.09	46.93
B	8.29	15.45	25.49	31.76	39.92	44.02	48.9
C	9.79	17.99	29.11	35.84	44.37	48.55	53.45
D	11.28	20.45	32.49	39.56	48.31	52.52	57.37
E	13.83	24.49	37.78	45.23	54.12	58.26	62.94
F	16.61	28.71	42.99	50.63	59.42	63.41	67.83
G	20.55	34.34	49.47	57.11	65.54	69.23	73.24

Appendix Table A 5.9 Other Levies as percent of landed price

Distance	**100**	**250**	**500**	**700**	**1000**	**1200**	**1500**
Coking coal							
ST-I	1.44	1.36	1.26	1.19	1.09	1.04	0.98
ST-II	1.67	1.57	1.44	1.35	1.22	1.16	1.08
W-I	1.99	1.85	1.66	1.55	1.39	1.3	1.21
W-II	2.41	2.21	1.95	1.79	1.58	1.47	1.35
W-III	2.95	2.66	2.29	2.07	1.79	1.66	1.5
W-IV	3.3	2.94	2.5	2.24	1.92	1.77	1.59
SC-I	2.04	1.89	1.7	1.57	1.41	1.32	1.22
SC-II	2.37	2.18	1.93	1.77	1.56	1.46	1.34
Non-Coking							
Long Flame							
A	2.29	2.11	1.87	1.72	1.52	1.43	1.31
B	2.46	2.25	1.98	1.82	1.6	1.49	1.37
C	2.9	2.62	2.27	2.05	1.78	1.64	1.49
D	3.34	2.98	2.53	2.26	1.94	1.78	1.6
E	4.1	3.57	2.94	2.59	2.17	1.97	1.76
F	4.92	4.18	3.35	2.9	2.38	2.15	1.89
G	6.09	5	3.85	3.27	2.63	2.34	2.04

Appendix Table A 5.10: Coal off-take in million tonnes by sector-wise Continued

Year	Power (raw coal)	Power middling	Steel	Loco	Cement	Ferti-liser	S/Coke making	Export	Others	Colly Consm.	Total
1991-92	120.6	2.33	21.42	3.96	7.84	3.65	0.97	0.12	36.36	3.51	200.76
1992-93	105.87	2.48	21.1	2.86	8.49	3.99	0.63	0.14	36.31	3.4	185.27
1993-94	144.39	2.9	21.48	1.78	8.29	4.13	0.57	0.09	32.52	3.27	219.42
1994-95	148.29	2.7	21.3	0.59	8.53	3.86	0.33	0.09	36.39	3.17	225.25
1995-96	184.52	2.35	26.42	0.27	11	4.33	0.32	0.09	40.71	3.4	273.41
1996-97	199	2.58	25.55	0.13	11.34	4.38	0.09	0.13	44.55	3.39	291.14
1997-98	212.92	3.62	23.61	0.05	10.13	4.64	0.04	0.06	49.45	3.06	307.58
1998-99	204.68	3.02	24.98	0.03	8.61	4.11	0.01	0.79	43.17	2.95	292.35
Percentage growth of coal off-take by sector wise											
Year											
1991-92 to 1992-92	-13.91	6.05	-1.52	-38.46	7.66	8.52	-53.97	14.29	-0.14	-3.24	-8.36
1992-93 to 1993-94	26.68	14.48	1.77	-60.67	-2.41	3.39	-10.53	-55.56	-11.65	-3.98	15.56
1993-94 to 1994-95	2.63	-7.41	-0.85	-201.69	2.81	-6.99	-72.73	0	10.63	-3.15	2.59
1994-95 to 1995-96	19.63	-14.89	19.38	-118.52	22.45	10.85	-3.13	0	10.61	6.76	17.61
1995-96 to 1996-97	7.28	8.91	-3.41	-107.69	3	1.14	-255.56	30.77	8.62	-0.29	6.09
1996-97 to 1997-98	6.54	28.73	-8.22	-160	-11.94	5.6	-125	-116.67	9.91	-10.78	5.34
1997-98 to 1998-99	-4.03	-19.87	5.48	-66.67	-17.65	-12.9	-300	92.41	-14.55	-3.73	-5.21
1991-92 to 1998-99	9.97	3.83	2.83	-75.06	3.25	2.23	-61.16	11.97	4.53	-1.86	7.39

Appendix Table A 5.10: Coal off-take in million tonnes by sector-wise

Concluded

Percentage composition of coal offtake by sector wise											
Year	**Power (raw coal)**	**Power middling**	**Steel**	**Loco**	**Cement**	**Ferti-liser**	**S/Coke making**	**Export**	**Others**	**Colly Consm.**	**Total**
1991-92	60.07	1.16	10.67	1.97	3.91	1.82	0.48	0.06	18.11	1.75	100
1992-93	57.14	1.34	11.39	1.54	4.58	2.15	0.34	0.08	19.6	1.84	100
1993-94	65.81	1.32	9.79	0.81	3.78	1.88	0.26	0.04	14.82	1.49	100
1994-95	65.83	1.2	9.46	0.26	3.79	1.71	0.15	0.04	16.16	1.41	100
1995-96	67.49	0.86	9.66	0.1	4.02	1.58	0.12	0.03	14.89	1.24	100
1996-97	68.35	0.89	8.78	0.04	3.9	1.5	0.03	0.04	15.3	1.16	100
1997-98	69.22	1.18	7.68	0.02	3.29	1.51	0.01	0.02	16.08	0.99	100
1998-99	70.01	1.03	8.54	0.01	2.95	1.41	0	0.27	14.77	1.01	100

Appendix Table A 5.11: Cost composition and Profit/Loss in 2000-01
(Al subsidiaries)

	OVERALL		OVERALL		OVERALL	
	UG		OC		TOTAL	
PARTICULAR	**Rs.lakh**	**Rs./t**	**Rs.lakh**	**Rs./t**	**Rs.lakh**	**Rs./t**
EXPENDITURE						
1.TOT.SAL & WAGES	464373	948.89	209048	96.37	673421	253.31
2. Admn. Expenses	33396	68.24	59863	27.60	93259	35.08
3TOT.STORES	48168	98.43	196495	90.59	244663	92.03
4. Power	77790	158.96	61994	28.58	139784	52.58
5. Transport-coal & sand	9326	19.06	27432	12.65	36758	13.83
6.Miscellaneous	39213	74.01	113584	52.36	149797	56.34
Major Exp Total	672266	1367.59	668416	308.15	1337682	503.17
Other Expenditure	42672	87.19	151409	69.79	194081	73.00
22.TOTAL COST	714938	1454.78	819825	377.94	1531763	576.17
23. Sale Value of coal	458747	937.41	1200163	553.31	1658910	624.01
24. Profit/Loss on coal	**-253191**	**-517.37**	**380338**	**175.35**	**127147**	**47.83**

Appendix Table A 5.11 a: Cost structure of HINDALCO

Major inputs
100 Mega watt or 1 unit of power requires 8 ton of coal
Cost of despatch of ash
Cost of freight cost of MGR Rs.12/- per ton km
Other costs
Total cost Rs.906/-

Renusagar	Plant A	3x210 mw
Coal cost	62% of total cost	
Oil cost	1%	
Establishment	5%	
O&M		6%
Depreciation	14%	
Interest		12%
Average cost	97.03 paise per unit	
Renusagar	Plant B	3x500 mw
Coal cost	40%	
Oil cost	negligible	
Establishment	1%	
O&M		2%
Depreciation	34%	
Interest		23%
Average cost	160.23 paise per unit, i.e., one rupee sixty paise	
		A+B
Coal cost	46.60%	
Oil cost	1.00	
Establishment	2.00	
O&M		3.00
Depreciation	28.00	
Interest		20.00
Average cost		
Per unit	137.53 one kilo watt per hour	
Billing is for 4.53		

There are five plants – Billing is based on the average of these five plants

They get coal from Bina, Kharia and Kakari mines.
They have spent Rs.35 crore for MGR scheme. They have to pay additional Rs.30/- per ton on transport from yard to MGR point

Appendix Table A 5.12: State-wise, Company-wise Coal Production (in lakh tonnes)

State & Company	1996-97	1997-98	1998-99	1999-2000	2000-01
W.B	171.03	157.87	161.23	146.52	162.96
Bihar	125.46	116.53	110.4	104.72	117.35
Total (ECL)	296.49	274.4	271.63	251.24	280.31
W.B	5.58	6.93	5.5	6.29	6.06
Bihar	265.78	302.25	266.25	272.67	253.63
Total(BCCL)	271.36	309.18	271.75	278.96	259.69
Bihar(CCL)	321.83	330.72	321.76	324.02	317.46
U.P	153.97	156.78	156.46	162.2	187.4
M.P	216.13	214.45	208.72	222.08	226.6
Total (NCL)	370.1	371.23	365.18	384.28	414
M.P	63.67	63.39	64.66	61.62	64.46
M.H	248.58	261.73	252.79	276.98	287.54
Total(WCL)	312.25	325.12	317.45	338.6	352
M.P(SECL)	553.04	566.34	575.62	587.5	603.31
Orissa(MCL)	373.65	421.75	435.12	435.54	448.03
Assam (NEC)	7.52	6.87	6.37	5.72	6.6
W.B	176.61	164.8	166.73	152.81	169.02
Bihar	713.07	749.5	698.41	701.41	688.44
Orissa	373.65	421.75	435.12	435.54	448.03
U.P	153.97	156.78	156.46	162.2	187.4
M.P	832.84	844.18	849	871.2	894.37
M.H	248.58	261.73	252.79	276.98	287.54
Assam	7.52	6.87	6.37	5.72	6.6
Total (CIL)	2506.24	2605.61	2564.88	2605.86	2681.4

Source: *Annual Sales and Marketing Report, 2000-01*

Appendix Table A 5.13: State-wise Total Coal Production (in million tonnes)

Year	W.B	Bihar	Orissa	M.P	M.R	U.P	Assam	Total
1986-87	20.16	54.58	7.08	44.8	12.3	4.91	0.91	144.74
1987-88	20.17	60.21	8.96	48.76	14.21	5.72	1	159.03
1988-89	21	63.5	10.93	53.87	15.11	6.19	0.9	171.5
1989-90	17.44	62.25	13.26	59.78	16.34	8.69	0.84	178.6
1990-91	16.87	63.39	16.27	65.16	16.85	10.46	0.68	189.68
1991-92	17.9	64.84	20.7	69.19	18.88	11.7	0.95	204.16
1992-93	17.81	66.68	23.14	70.49	19.68	12.32	1.1	211.22
1993-94	16.33	68.82	24.3	72.86	20.45	12.14	1.2	216.1
1994-95	16.72	68.08	27.32	74.86	21.07	13.82	1.19	223.06
1995-96	17.5	68.87	32.7	79.76	22.82	14.8	0.82	237.27
1996-97	17.66	71.31	37.36	83.28	24.86	15.4	0.75	250.62
1997-98	16.48	74.95	42.17	84.41	26.17	15.68	0.69	260.55
1998-99	16.67	69.84	43.51	84.9	25.28	15.64	0.64	256.48
1999-2000	15.28	70.14	43.55	87.12	27.7	16.22	0.57	260.58

Source: Annul Performance Report, CIL, 1992-93 and 1999-2000

Appendix Table A 5.14: Companywise Total Coal Production (In million ton)

Year	ECL	BCCL	CCL	NCL	WCL	SECL	MCL	NEC	Total (CIL)	SECL	Others	Total
1987-88	27.99	25.11	27.28	16.5	21.2	N.A	39.95	1	159.03	16.38	4.25	179.66
1988-89	30.13	26.3	28.07	19.63	22.06	N.A	44.41	0.9	171.5	18.6	4.26	194.36
1989-90	24.49	26.61	28.59	23.28	23.01	N.A	51.78	0.84	178.6	17.8	4.5	200.9
1990-91	23.47	26.7	30.09	27.88	22.78	N.A	58.08	0.68	189.68	17.71	4.27	211.66
1991-92	24.51	27	31.22	30.89	24.74	44.15	20.7	0.95	204.16	20.59	4.61	229.36
1992-93	24.05	28.06	32.38	30.7	25.75	46.04	23.14	1.1	211.22	22.51	4.61	238.34
1993-94	22.61	29.04	33.51	31.41	26.5	47.5	24.3	1.2	216.07	25.21	4.73	246.01
1994-95	24.85	28.75	31.2	32.5	27.24	50	27.33	1.19	223.06	25.65	5.01	253.72
1995-96	27.8	27.81	30.76	35.2	29.01	53.17	32.7	0.82	237.27	26.77	6.08	270.12
1996-97	29.65	27.13	32.18	37.01	31.23	55.13	37.37	0.75	250.45	28.73	6.28	285.46
1997-98	27.44	30.92	33.07	37.12	32.51	56.63	42.17	0.69	260.55	28.94	6.31	295.8
1998-99	27.16	27.17	32.17	36.52	31.75	57.56	43.51	0.64	256.48	27.33	8.46	292.27
1999-2000	25.12	27.9	32.4	38.43	33.86	58.75	43.55	0.57	260.58	29.56	8.73	298.87

Source: ***Annul Performance Report, CIL, 1992-93 and 1999-2000.***

Appendix Table- A 5.15 Company-wise, Grade-wise Coal Production (in million tons)

	1996-97				1997-98				1998-99				1999-00			
Year	**Coking**	**Coking**	**Non**		**Coking**	**Coking**	**Non**		**Coking**	**Coking**	**Non**		**Coking**	**Coking**	**Non**	
	Met.	**Non-Met.**	**Coking**	**Total**	**Met.**	**Non-Met.**	**Coking**	**Total**	**Met.**	**Non-Met.**	**Coking**	**Total**	**Met.**	**Non-Met.**	**Coking**	**Total**
ECL	0.15	0.22	29.28	29.65	0.08	0.22	27.11	27.41	0.08	0.21	26.87	27.16	0.06	0.17	21.89	22.12
BCCL	8.74	12.64	5.45	26.83	8.71	16.14	6.07	30.92	8.75	13.216	5.16	27.126	8.34	8.57	10.98	27.89
CCL	8.94	2.81	20.44	32.19	8.23	4.23	20.92	33.38	8.49	1.54	22.14	32.17	6.38	2.61	23.42	32.41
NCL	0	0	37.01	37.01	0	0	37.12	37.12	0	0	36.52	36.52	0	0	38.43	38.43
WCL	0.62	0.08	30.52	31.22	0.63	0.11	31.78	32.52	0.65	0	31.1	31.75	0.63	0	33.23	33.86
SECL	0.18	0.3	54.83	55.31	0.17	0.3	56.15	56.62	0.17	0.29	57.1	57.56	0.15	0.33	58.55	59.03
MCL	0	0	37.37	37.37	0	0	42.17	42.17	0	0	43.51	43.51	0	0	43.55	43.55
NEC	0	0	0.75	0.75	0	0	0.69	0.69	0	0	0.64	0.64	0	0	0.57	0.57
Total (CIL)	18.63	16.05	215.65	250.33	17.82	21	222.01	260.83	18.14	15.256	223.04	256.436	15.56	11.68	230.62	257.86

Source: ***Annul Performance Report, CIL, 1997-98 and 1999-2000.***

Appendix Table A 5.16: Company-wise, Grade-wise Production During 1999-2000 to 2000-01 (lakh tons)

Company	C.I.L		E.C.L		B.C.C.L		C.C.L		N.C.L		W.C.L		S.E.C.L		M.C.L		N.E.C	
Grade	**2000-01**	**1999-00**	**2000-01**	**1999-00**	**2000-01**	**1999-00**	**2000-01**	**1999-00**	**2000-01**	**1999-00**	**2000-01**	**1999-00**	**2000-01**	**1999-00**	**2000-01**	**1999-00**	**2000-01**	**1999-00**
Coking																		
Semi coking	2.63	2.6	1.14	1.15	0	0	0	0	0	0	0	0	1.49	1.45	0	0	0	0
Other coking	23.53	23.26	1.04	1.69	22.49	21.57	0	0	0	0	0	0	0	0	0	0	0	0
Steel/ Wash	159.16	176.61	0	0	69.11	83.43	86.47	89.85	0	0	0	0	3.58	3.33	0	0	0	0
NLW	57.06	61.22	0	0	57.06	61.22	0	0	0	0	0	0	0	0	0	0	0	0
MED/COK (N/MET)	5.93	6.32	0	0	0	0	0	0	0	0	5.93	6.32	0	0	0	0	0	0
MED/COK (N/MET)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(N/MET) SLV	1.78	2.99	0	0	1.78	2.99	0	0	0	0	0	0	0	0	0	0	0	0
Total	250.09	273	2.18	2.84	150.44	169.21	86.47	89.85	0	0	5.93	6.32	5.07	4.78	0	0	0	0
Non-Coking																		
Grade A	35.48	35.6	11.05	11.46	0	0.01	2.07	1.96	0	0	0	0	15.76	16.65	0	0	6.6	5.52
Grade B	201.51	202.95	111.26	104.73	0.54	0.49	7.61	8.46	0	0	5.83	8.63	73.6	77.72	2.67	2.72	0	0.2
Grade C	411.98	387.13	39.01	31.65	27.69	28.21	17.98	17.72	194.27	179.32	33.79	32.66	95.99	94.19	3.25	3.38	0	0
Grade D	323.36	328.21	12.31	13.8	62.81	63.77	1.5	2.08	31.55	33.74	160.77	160.25	36.1	36.53	18.32	18.04	0	0
Grade E	519	450.22	4.88	6.06	18.14	16.93	106.36	104.67	188.18	171.22	145.68	125.38	0	0	55.76	25.96	0	0
Grade F	939.98	928.75	99.62	80.7	0.07	0.34	95.47	99.28	0	0	0	5.36	376.79	357.63	368.03	385.44	0	0
Grade G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D/F & E/F U/G/NSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2431.31	2332.86	278.13	248.4	109.25	109.75	230.99	234.17	414	384.28	346.07	332.28	598.24	582.72	448.03	435.54	6.6	5.72
Overall	2681.4	2605.86	280.31	251.24	259.69	278.96	317.46	324.02	414	384.28	352	338.6	603.31	587.5	448.03	435.54	6.6	5.72

Source: *Annual Sales and Marketing Report, 2000-01*

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