Overview of the seminar

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One of the major structural-organizational changes that has taken place in the world mineral sector over the last 25 years has been the explosive growth in mining and mineral processing by state enterprises, particularly in developing countries. Though there are some differences in the size of the state-owned share, depending on how state enterprise is defined, there is no disagreement that state enterprises have acquired a major role in international mineral development. Their activities have a powerful impact on the state of the world's metals markets and they affect both producers and consumers of minerals.

The rapid growth and powerful market impact of the *State Mining Enterprises* (SMEs) raise a number of fundamental questions. What are the basic reasons for the establishment of SMEs? What are the distinctive operational characteristics of these enterprises? How different are they in terms of objectives and operational strategies compared to private mineral firms? What is the effect of state mining enterprises on national economic development, and to what extent are the goals assigned to state enterprises achieved in practice? How can we evaluate the performance efficiency of SMEs given the multiplicity of commercial and non-commercial objectives typically encountered in these firms? What are the reasons for the frequently inadequate commercial performances of many SMEs? How are SMEs reacting, compared with private companies, to the recent depression in metals prices due to the rehabilitation of mines, the restructuring of mining operations, the refinancing of debt and other policies and methods? How are and can SMEs increase their economic and financial performances? - eg, by restructuring management and workforce, by streamlining operations, by focusing on the most profitable projects, by careful selection of new investment, by concentrating on the most promising markets, by market promotion, or by specializing in new technologies? What are the contractual forms used to rehabilitate and restructure mining operations in trouble? How is and will the relationship between the government as such and the state mining enterprises be structured in order to achieve both the required level of performance and the fulfillment of the socio-economic objectives assigned to state mining enterprises? Will dormant, under-utilized and run-down mines and projects be closed or will rehabilitation take place? Under what conditions? How relevant are new management, financing, privatization, investment and marketing techniques to government decision-makers and state enterprise managers? What is the net world market impact of the SMEs? Do they indeed raise production costs permanently? Are they more inflexible over the business cycle than their private counterparts, thus aggravating the instability of world mineral markets? More specifically, are SMEs reacting to depressed prices with increased production and thus contributing towards more oversupply, or is there no difference between state and private mining companies?

The seminar on the Role of State Enterprises in the Solid Mineral Industry of Developing Countries addressed principally these issues by providing a forum for the exchange of experience between policy-makers from developing countries, managers of state and private mining companies, private and public financing institutions, international organizations and internationally recognized experts. This volume contains a selected set of papers submitted to the seminar which deal, from various angles, with most of the questions referred to above.

The plan of the volume is the following. This first section is devoted to a general discussion of the evolution and current role and significance of SMEs in developing countries. Papers address, inter alia, such important issues as the quantitative assessment of the significance of SMEs in world and developing country mineral industries, the distinctiveness of SME behaviour relative to that of private actors, linkages between the state-owned mineral sector and the rest of the economy, and the impact of the SMEs on the equilibrium of the world mineral markets.

Section two discusses the response of SMEs to the pressures of mineral market depression and low metal prices which characterizes the 1980s. The papers in this section cover a wide range of responses such as technical, managerial, contractual, and financial restructuring. Some of the authors compare the effectiveness of the SME restructuring response with that of the private mining companies in the course of the current decade.

The concluding section provides a rich collection of country and company-level experiences concerning the behaviour and operation of the state mineral sector. What makes this chapter particularly useful is that it covers the experiences of both successful and unsuccessful cases and although the focus is on individual developing countries, some experiences of developed country SMEs are also highlighted.

State mining enterprises in developing countries: dimensions, behavioral characteristics and market impact

Papers by J Bognar, M Radetzki, M Ericsson and A Tegen and I Dobozi present abundant factual information on the quantitative aspects of the significance of SMEs in the mineral sector both in the context of developing countries and in the world as a whole.

Although the various estimates of the state-owned share differ, depending on how SME is defined, the general conclusion is that the SMEs have become important, and in some mineral sectors, dominant actors. According to Radetzki‘s assessment, government equity holdings, from being insignificant in the early 1950s, have grown to cover about half the metallic mineral production capacity in the developing countries. In 1981, the state-owned sector (measured in proportion to government equity holdings) accounted for 41.1% of bauxite mining capacity, 57.8% of copper mining capacity and 61.8% of iron ore production.

In the probably most extensive statistical survey on the quantitative significance of the state-owned share so far, Ericsson and Tegen report that among the 25 minerals studied the level of state control was typically between 10 and 30% of Western world total mine production in 1984. In the same year, SMEs of developing countries controlled 13% of the value of total non-socialist world mine production. For most minerals, the level of state control is found to be significantly higher in developing countries than in the non-socialist industrialized countries.

There was an agreement among seminar participants that the period of fast growth of state ownership may now be over and that in the decade to come an increasingly mature group of SMEs will be supplying a substantial, but relatively static, proportion of developing country mineral production.

What are the basic reasons for the establishment of SMEs? Though authors assign different weights to the factors underlying the establishment of SMEs, in general ideology, economic decolonization, control of the "commanding heights", natural resource rent appropriation, capital intensiveness, the perception of improved domestic capabilities to manage mining operations, maximization of government revenues and foreign exchange earnings, and various social goals are offered as rationales for SME creation and expansion.

What are the distinctive behavioral characteristics of SMEs in developing countries? Is it legitimate to treat developing country SMEs as a special group of enterprises? Polemizing with M Radetzki, EW Machens questions the usefulness of treating developing country SMEs as a distinct group of actors by claiming that SMEs have strong behavioral similarities worldwide. However, the dominant view emerging from most of the papers included in this volume attributes distinctive behavioral features to SMEs operating in developing countries that reflect the particular economic, political and social circumstances prevailing in these countries.

The mandate of the state mineral sector in developing countries frequently reflects a multiplicity of national objectives as formulated by the governments. Thus the developing country SMEs are frequently called upon to pursue a mix of commercial and non-commercial objectives which can include such diverse goals as making a profit, redistributing income, earning foreign exchange, promoting particular regions and industrial sectors, generating employment, reducing dependence on foreign capital, etc.

The multiple objectives of SMEs reflect their dual character: they possess on the one hand a public dimension expressed in public ownership, management and control and the furtherance of broader social interests, and on the other an entrepreneurial dimension which reflects the business character of the mining operations.

It is observed by several authors that these multiple and conflicting goals derive in many instances from the failure of governments to clarify and rank the objectives of their SMEs. Existing conflicts and trade-offs among the different objectives usually have not been fully sorted out and the enterprises have not been given a clear sense of priorities.

In the face of such a complex set of goals, it is legitimate to ask how we can realistically evaluate the performance of SMEs. It is suggested by several authors that multiple objectives and various domestic environmental factors make evaluation of their performance very difficult. There are great difficulties of finding a base with which to measure SME performance. Opinions differ concerning the usefulness and feasibility of applying social profitability as the criterion that government should use to evaluate performance. A major problem is that it is exceedingly difficult, or impossible, to quantify non-commercial benefits due to such factors as distorted prices and the intangible nature of some of these benefits.

Notwithstanding the difficulty of evaluating SME performance, most analysts claim that the majority of these enterprises are characterized by low efficiency compared with private firms, no matter how this comparison is carried out. In this volume this point is particularly stressed by M Radetzki, T Wälde and AK Ghose. Another perspective is provided by EW Machen who challenges the opinion that SMEs are inferior in any way to private mining companies. Those who express concern about the comparatively low performance efficiency of many developing country SMEs usually refer to the following specific factors: shortcomings related to the infancy of some SMEs; multiple goals with no clear sense of priorities; overcentralization and bureaucratic structures of decision-making; weaknesses of external public control; distorted and administered prices; little care over minimizing costs; overemployment; overinvestment in capacity.

The fact that SMEs have become an important factor in world mineral supply, understandably generates a considerable interest in finding out about their actual or potential market impact. Particularly the papers by M. Radetzki and I. Dobozi address this issue. The findings by Radetzki, based on limited empirical evidence, suggest that nationalizations have permanently reduced the extent of vertical integration in non-socialist world mineral industries; the inexperience of SMEs raised production costs temporarily and resulted in an inability to increase capacity; production costs have been raised permanently by the pursuit of multiple objectives; social considerations reduce variations in capacity utilization in response to price changes which in turn should lead to greater price volatility on world markets.

Restructuring the response of SMEs to the crisis of mining industries in the 1980s

There was a consensus among seminar participants that the world mining industry is going through its most severe crisis since the Second World War, following an extended period of mineral consumption growth and relatively high prices. The crisis is characterized by low prices, worldwide overcapacity and low profitability. As H Roberts puts it, "A 'decade of change' has...fundamentally altered the parameters under which the international mining industry operates and it will be the ability of companies to come to terms with the new external environment which will determine their success or failure as they enter the 1990s."

It is clear that SMEs have not been insulated from these unfavourable and unexpected market developments. In fact, the crisis has exposed many of the long-standing weaknesses of SMEs in developing countries. In a number of developing countries SMEs are now struggling for survival after having been hit by low metal prices and by the increasingly harsh conditions in domestic public subsidies. In these circumstances, in many countries, SMEs are now confronted with a great pressure to restructure their operation.

Several participants pointed out, however, that while many SMEs have been slow in taking serious adjustment actions to cope with the depressed market conditions and the harsher competitive climate of the current decade, some of them have demonstrated clearly that they are able to compete on identical terms with the successful private mining companies and have emerged as important actors from the recession in the international mineral markets. The most frequently cited cases in this context are CODELCO in Chile, CVRD in Brazil, Outokumpu in Finland, SOQUEM in Canada. How impressive cost-saving results can be achieved by even short-term but well-designed cost reduction programs is shown by R Wiriosudarno who reported a 30% cut in production costs for the Indonesian P.T. Timah in 1986 under the pressure of the severe international tin crisis.

These companies have shown that it is possible to change structures, technology and management and they will enter the next decade stronger and more capable of meeting the challenge of the market place. H Roberts words well reflect the prevailing attitude at the seminar: "Any attempt to remain aloof from external market challenges will carry a high risk of failure... The medium-term viability of many of the presently troubled SMEs will depend on the strategic decisions taken now and it must be hoped that they will be such as to encourage a return to stability and profitability or surplus, sufficient to underwrite the investment required for the future... Many different strategies can be adopted and if the political climate is appropriate, state enterprises could benefit from the more open and adventurous approach to mining as displayed by the smaller, privately owned companies." Although SMEs are probably not able to emulate all of the successful methods (such as drastic cost-cutting, de-bureaucratization, an emphasis on new technological and financial innovations, greater proximity to consumers, etc.) employed for restructuring in the private sector, it hard to see, as T. Wälde points out, how SMEs without unusually attractive orebodies will be able keep afloat if they do not follow this lead.

A number of specific recommendations for restructuring actions have emerged from the seminar discussions, the most important of which are the following.

1. Improving government-SME relations

A need was felt by a number of participants to clarify the relationship between the SME and the government. Many governments have not yet found ways to control their SMEs without damaging the entrepreneurial nature of these companies. Frequently, excessive and poorly coordinated governmental interference makes it difficult for SMEs to perform successfully. Thus, the strengthening of the operational autonomy of SMEs by reducing occasional excessive government interference is deemed necessary. It is proposed that relations between the government (and its various agencies) and the SMEs should be defined more clearly. Clearer legal statutes will have to be drafted for the various public agencies, stating their aims and operational mandates unequivocally. The same ground rules should be established for SMEs as for private firms. SMEs should accordingly be subject to full disclosure requirements concerning their performance, and full accountability to the owners.

2. Setting clear-cut and attainable objectives

The SMEs are frequently called upon to pursue a mix of commercial and non-commercial objectives which can include very diverse goals. The fact that SMEs in the developing countries are expected to pursue a multiplicity of goals (often without clear-cut priorities attached) makes their performance evaluation very difficult: low or negative profitability can be and is often justified by referring, rightly or wrongly, to the accomplishment of social goals.

Therefore, setting clear-cut and attainable objectives is imperative for improving and measuring SME performance. The costs of non-commercial constraints placed on SMEs should be calculated and weighed against benefits to society. It is essential that SMEs be explicit about the multiplicity of their goals. Once non-commercial constraints have been identified and evaluated, governments can require SMEs to maximize their profits. Objectives that reduce profits can be balanced by the expedient of reimbursing companies or by lowering their profit targets. It is important that SMEs be compensated explicitly for the social services they are obliged to provide. After this compensation, enterprises can legitimately be held accountable for achieving profit targets. It has been suggested that if a SME is required to assume responsibilities it would not undertake on the basis of its commercial interests, it should be reimbursed on the basis of specific services contracts concluded between the government and the SMEs.

3. Management reorganization within SME

Faulty incentive structures are often responsible for low efficiency. Frequently SMEs suffer from over-bureaucratization of internal management. Managerial ability is a prerequisite for the performance improvement of SMEs. Efficiency increases depend on how closely managerial rewards are linked to managerial efforts to maximize efficiency. Compensation and training should be geared to create a corps of competent SME managers with appropriate skills. Lesser security of management tenure, a performance-oriented career system, a constant rotation of top and specialized management and exclusion of negative external influences such as political patronage, are proposed as steps towards achieving better managerial performance. As Walde points out, modern management theories emphasize the advantages of companies with few hierarchical levels. Decentralization through the delegation of decision-making responsibility is an option which minimizes bureaucratic internal management structure.

4. Financial restructuring

The international mining crisis has led to dramatic financial difficulties for a large number of SMEs. Large debts have been incurred in the previous decade. A variety of conventional and nonconventional techniques are available for financial restructuring. Unless real management changes are made, recapitalization will be difficult for a considerable period to come. Fresh equity injections may merely compound the financial problem. However, where meaningful change has been effected in management and operations, financial restructuring can proceed. In today‘s mineral markets, fresh equity injections by the original private participants or by retained earnings are in most cases unlikely. For most developing nations, the local capital markets are too thin to support new equity issues. As has been pointed out, particularly by DA Gulley, this leaves the following routes for recapitalization:

(i) the government can recapitalize, by assuming some or all of the project‘s existing debt;

(ii) existing private debt-holders can sell or swap their debts;

(iii) project debt can be transformed into project equity, or

(iv) new participants can invest equity in the form of real or financial capital.

The renegotiation of existing external contractual arrangements is a possible method for financial restructuring. Renegotiation has to focus on long-term contractual commitments, particularly in cases where the contractors (suppliers of equipment, power and services, etc.) did not participate in the commercial risk the operation. The linking of labour rates and debt servicing to metal prices may, under certain conditions, provide the means of alleviating current financial difficulties. One financial restructuring option may be to liquidate nonviable units or to de-nationalize unsuccessful SMEs.

5. Technological restructuring

Technological restructuring is one of the decisive factors in lowering cost, in achieving a better product mix and in speeding up decision-making and information processing. However, due to lack of expertise as well as to lack of research, and to the relatively undeveloped nature of domestic industries, technological restructuring may be difficult and costly. The seminar drew the attention of the United Nations and other international organizations to this problem and requested an immediate urgent review of possible solutions.

6. Improving marketing techniques and finding and enlarging final markets for metals through market development

Successful enterprises are more closely attuned to the market than most mining companies have traditionally been. In the recent past there have been few instances of geographical and product diversification on the part of most SMEs, and only small progress towards more effective marketing and market development. In the seminar it was pointed out that there has been only limited investment in downstream processing abroad. Most of SMEs are short of capital and find it difficult to set funds aside for market development. The base metals have thus lost market share to various substitutes, notably to plastics. This has exacerbated the reductions in demand that occur during a recession. Successful product and market development could have to a certain degree offset these reductions. Therefore, as Ch. Stobart and J Bognar in particular have stressed, considerably more resources have to be allocated by state-owned metal producers for the development of end-use markets. A cooperative approach has to be taken in the use of these resources. Industry associations exist in many developing countries for this purpose but their management and style of operation has to be reformed. They must unite metal producers, semi-fabricators and end product manufacturers, and they must allow the financiers to decide which projects should be financed, and to assess the results of each project. Many producers in developing countries have difficulty in finding funds for market development outside their own countries and also in supervising the use of these funds, since they may lack adequate international representation. Nevertheless, the demand for their products will suffer if they neglect market development. A few developing countries have potentially large domestic markets for metal products. Here it can be easier for local metal producers to justify investing in market development, especially if they enjoy some tariff protection.

Certain marketing strategies were proposed by Stobart and others as means by which SMEs in developing countries could minimalize damage from the downturn in metal demand and prices. Hedging can be used to assure or stabilize income; a similar effect can be achieved by the purchase of put options and the sale of call options, where applicable. This provides the security of a floor price and the knowledge that the selling price will not exceed a certain level. Trading can be used to gain additional sales revenues. SMEs may undertake, for example, switch deals in order to save on transport costs when delivering refined metal to their customers. Any producers who are not yet familiar with these modern trading techniques are ignoring the opportunity to make a small but useful addition to their profit margins. These aspects of marketing requi special skills and first-hand knowled of international markets. These skil and knowledge are as important as t technical skills in mining and metal pr duction which SMEs have already to large extent acquired.

7. Overall economic policies of government

Many attempts at restructuring ha failed because they focused exclusive on a particular enterprise and its inn workings. However, as Wälde poin out, macroeconomic government pol cies seem in many developing countri to have been a significant factor in f nancial failure at the company leve Factors such as overvalued national cu rencies, restrictions of a regulatory bureaucratic nature on the import of e sential equipment and spare parts, ove taxation and mandatory overemployme and wage rates, and inflexible pricir rules have played an important part rendering basically viable mineral pr jects commercially unprofitable. It proposed that these aspects of macroec nomic policies should be reconsidere by responsible government agencie and that the implementation of polic should not compromise the financi performance of SMEs. In case appropr ate policy shifts cannot be carried out f some reason or other, or if they are slo to materialize, SMEs should receive a equate and timely compensation if loss can clearly be shown to be the result specific public policies imposed on t SME by the government.