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DEVELOPMENT PROBLEMS OF MINERAL EXPORTING COUNTRIES

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A number of structural features associated with the historical, technical and institutional development of the mining industry distinguish the mineral-exporting countries (the mineral economies) from other developing countries, especially the predominantly agricultural nations, and present these countries with a special set of development opportunities and problems. The essential advantage of the mineral economies lies in their possession of a resource that is readily converted into a large financial flow, much of it in the form of foreign exchange. However, the mineral economies must contend with the fundamental fact that their mineral wealth is exhaustible. This peculiar combination of circumstances gives rise to various problems of economic management, the discussion of which forms the core of this paper. Thus, mineral economies tend to be especially characterized by technological and wage dualism; they are prone to neglect their non-mineral sectors (particularly agriculture); their export earnings are often marked by instability; and they are subject to strong inflationary pressures. Further, to maximize their benefits they must exact the economic rents inherent in the production and sale of their mineral resources, thus requiring to pay special attention to mineral taxation, participation in the mining industry, and negotiations with foreign mining companies. Finally, the mineral economies need to adopt a strategy which, through an efficient sequencing and sectoral distribution of investments, will create a diversified and growing economy before their mineral rents wither away. These problems and objectives, the paper concludes, require a wide array of policy changes that are largely institutional in nature, and the appropriate setting at the earliest possible stage, of two key 'prices' - 'the' mining sector wage-rate and 'the' exchange-rate.

Prepared by:
Gobind Nankani
Public and Private Finance Division
Development Economics Department

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The World Bank
1818 H Street, N.W.
Washington, D.C. 20433
USA

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SUMMARY AND CONCLUSIONS

This paper is designed to provide a perspective on the development problems of the mineral economies 1/ and to offer recommendations on policy choices to confront these problems. In a more conjectural vein, an attempt is made to assess the long-term prospects of the mineral economies.

The major working hypothesis of the study is that the mineral economie share enough common characteristics to have economic advantages and problems th set them apart from other developing countries. These differences arise in the first place because the mineral economies differ from the non-mineral economies structurally. In the second place, there is evidence to suggest also that the economic performance of the mineral economies, along various dimensions, also differs from that of a control group of non-mineral economies. These differenc of structure and performance suggest the elements of a policy framework that could remedy the major development problems of the mineral economies.

The number of mineral economies has been growing in recent years, and there is reason to expect many more developing countries to become mineral exporters in future. An additional concern of this study has therefore been to offer informed conjectures on the development prospects of the mineral economie

More specifically, this paper permits the following propositions, eac of which is dealt with in greater detail below:

Proposition 1: The mineral economies differ structurally from other developing countries, and in particular, from other primary-exporting (i.e., agricultural) developing countries.

Proposition 2: These structural differences, and the typical policy responses to them, tend to render the mineral economies more prone to a number of economic problems as compared to non-mineral economies.

Proposition 3: The recent economic performance of the mineral economies suggests that their long-term prospects are moderately favorable, but depend critically on the choice of policy objectives and instruments.

Proposition 4: To sustain vigorous economic growth and diversify their economies as their mineral reserves are depleted, and to increase employment, will require: (a) a wide array of changes that are largely institutional in nature, and (b) the appropriate setting of two key 'prices' - 'the' mining sector wage rate and 'the' exchange rate.

1/ The term 'mineral economies' is meant to capture those developing countries in which the high share of mineral production in GDP and of mineral exports in total exports render the mineral sector the keystone of the economy; some discretion is used in the choice of countries but the guiding threshol are: 10 percent or more of GDP in 1967-75 and 40 percent of total merchanc exports in 1973-76. The countries considered are Algeria, Angola, Bolivia, Chile, Congo P.R., Ecuador, Gabon, Guinea, Guyana, Indonesia, Iran, Iraq, Jamaica, Kuwait, Liberia, Libyan A.R., Mauritania, Morocco, Nigeria, Peru, Saudi Arabia, Sierra Leone, Syrian A.R., Togo, Trinidad and Tobago, Venezue Zaire, Zambia. Minerals are defined to include bauxite, copper, iron ore, Manganese ore, petroleum, phosphate rock, tin and zinc.

I

Proposition 1, which argues that the mineral economies differ structurally from other developing countries, rests on five interrelated sub-propositions arising from the nature of the mining industry. These are:
Sub-Proposition 1.1: The mineral economies are characterized by an overwhelming dominance of the fiscal linkage over production and consumption linkages; this structural feature underlines the importance (a) of maximizing the fiscal linkage and (b) of the state's role in transforming the economy.

Historically, export-led development has been characterized by the presence of production and consumption linkages between the export industry and secondary and tertiary industries. Thus, through the external effects of inputs demanded, outputs supplied, consumer markets created, and education provided or stimulated by the export industry, development has spread through the initially export-oriented economy.

Studies of the linkage effects of mining activities in numerous mineral economies such as Zambia, Chile, Zaire, Nigeria, Saudi Arabia, Iran, Venezuela and Sierra Leone unequivocally support the conclusion that mining, unlike other historical staples, has been notably deficient in production and consumption linkages, while fiscal linkages make a strong showing. The difference between production and consumption linkages on the one hand, and fiscal linkages on the other hand, is that the former share an automaticity that is glaringly absent in the latter. Production and consumption linkages work themselves out through the market, assuming the social milieu and policy environment are supportive. But the success of the fiscal linkage depends on the willingness and ability of governments to tax or otherwise participate in the incomes originating in mining; and in addition, the ability to tax must be combined with an ability to invest productively. It is in this lack of automaticity that the major weakness of the fiscal linkage lies. The dominance of the fiscal linkage in mineral economies implies (a) that maximizing the magnitude of the fiscal linkage is a critical problem for the mineral economies; and (b) that more than for the typical developing country, the role of the state in the sectoral allocation of investments largely determines the direction in which the transformation of the economy proceeds.

Sub-Proposition 1.2: The mineral economies differ from non-mineral economies also because the mining industry is characterized (a) by the presence of large foreign mining companies (FMCs) and (b) by the existence of a large element of rent in the market value of minerals. 1/ The rent element, if not tapped, tends to migrate out of the mineral economy because of the dominant role of FMCs in the industry and the high proportion of mining output that is exported.

1/ The concept of economic rent refers to the surplus earned by factors of production over and above the minimum earnings necessary to induce their employment.

The presence of large FMCs in the mining industry is a well establishe fact, despite the increasing participation of state owned enterprises in mining activity. It is also well known that five types of rent may be distinguished in the mining industry: scarcity, differential, quasi, windfall and monopolistic. The objective of mineral economies is simple: it is to capture all rents while letting the investor make the return necessary to induce him to invest. But collecting all of rent, however desirable, is generally not possible, since its size is not easily established. In principle the easiest way to capture all rents is to mine, process and market the mineral, but this requires large investments and highly sophisticated skills.

The weakness of production and consumption linkages and the difficulties of capturing rents imply that mineral economies must pay particular attention to mineral taxation, participation in the mining industry and, in general, to negotiations with FMCs. The complexity of these tasks sets the mineral economies apart from many non-mineral economies, particularly the agricultural exporting countries.

Sub-Proposition 1.3: The mineral economies are less likely to be subject to fiscal and/or foreign exchange gaps for a reasonable range of growth rates, at least while their mineral reserves last.

The mineral economies, as noted above, tend to reap substantial fiscal resources from the mining sector,and since minerals are internationally traded these are received in the form of foreign exchange. The relative ease with which mineral economies have access to this flow of fiscal revenue in the form of foreign exchange arises principally because (a) unlike the agricultural primary exporters, the mineral economies export products with high income elasticities of demand and (b) taxes on the mining sector, which is easily identified and often foreign-owned, are easier to levy and to administer relative to taxes on agricultural or other incomes.

However, this is not an unmixed blessing. Their greater dependence on a single sector for large shares of their fiscal and foreign exchange resources gives rise to periodic instabilities in the levels of these resources.

Sub-Proposition 1.4: The mineral economies, to a somewhat greater degree than other developing countries, have the option of pursuing a resource-based industrialization strategy.

Of the four strategies of industrialization that are being undertaken or advocated for the developing countries, namely import substitution, exports of labor-intensive manufactures, resource-based processing, and basic goods production, the latter two are based on the domestic processing of natural resources, in particular minerals and agricultural commodities.

The case for mineral processing as the centerpiece of an industrialization strategy must be distinguished from a selective emphasis on mineral processing. The former type of strategy, being highly capital intensive, is suited primarily to mineral economies with extremely high mineral wealth per

capita. The development strategies adopted by many mineral economies, for example, Algeria, Iran and Trinidad and Tobago, suggest that there has been an overemphasis on mineral-based industrialization. The relevance and merit of the mineral-based industrialization option, although deserving of emphasis, have clearly been exaggerated. Selective mineral processing, on the other hand, is easily justified on value-added grounds for one or more of the following reasons: the raw material cost shares of such industries, the relative abundance of critical complementary inputs (such as natural gas or hydropower for aluminum smelting), or as a mechanism for exacting mineral rents.

Sub-Proposition 1.5: The mineral economies have an exhaustible resource and thus transforming and diversifying their economies (before the mineral wealth is entirely depleted) are objectives of greater priority for them than for predominantly agricultural countries.

Though the distinction is not a rigid one, since new mineral finds are often made, and since some mineral economies have reserves that are not expected to be depleted for a hundred or more years (e.g. Guinea and Jamaica for bauxite), it does identify a structural feature that would be expected to affect the development strategy of mineral economies vis-a-vis predominantly agricultural countries.

II

Proposition 2 suggests that the preceding structural differences, in conjunction with typical policy choices that have been made in the mineral economies, render these economies more prone to a number of economic problems. To test the underlying hypotheses a control group comprising all non-mineral middle income countries was used. The hypotheses and the degree of support they receive are summarized below. 1/

Hypothesis 2.1: The saving performance of the mineral economies is poorer than that of non-mineral economies.

This hypothesis is difficult to test, not least because the mineral economies' mineral wealth is of uncertain magnitude, but also because the evidence is mixed: average as well as incremental national saving rates are higher in the mineral than in the non-mineral economies, but incremental saving rates are lower in the non-fuel mineral economies than in the non-mineral economies. A third test, which compares the saving rates of the mineral and

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1/ These hypotheses are only superficially tested here. A thorough statistical test would require that for each dependent variable we demonstrate a statistically significant difference between the mineral and non-mineral economies. Time constraints have made this impracticable.

non-mineral economies with their respective "norm" saving rates, 1/ also confirms that the non-fuel mineral economies have under-saved in recent years. In contrast, the saving record of the petroleum economies compares very favorably with their respective "norms". It is noteworthy that neither the non-mineral economies nor the latter "norms" provide a measuring rod for evaluating the post-1973 saving behavior of the petroleum economies. Thus, we are uncertain about the relative saving performance of the petroleum economies, but that of the non-fuel mineral economies seems to compare unfavorably with the non-mineral economies.

Hypothesis 2.2: The mineral economies are characterized by greater technological and wage dualism, higher unemployment, and lower school enrollment ratios than the non-mineral economies.

The literature is replete with evidence supporting the view that the mining industry has been highly capital-intensive and is becoming increasingly so, while mineral processing and related industries are also among the most capital-intensive manufacturing activities. A major empirical correlate of technological dualism in the mineral economies is wage dualism, evidence of which exists in the literature and is revealed by a study of the mining-manufacturing wage differentials in mineral economies. Not all mineral economies have highly dualistic wage structures: around 1970, Algeria, Nigeria and Bolivia had a low mining-manufacturing wage differential, while Zambia, Venezuela, Chile, Jamaica had very high wage dualism. The tendency does exist however, and is a major obstacle for the development of the mineral economies. The evidence on unemployment is also mixed, but there is again a tendency for mineral economies to exhibit high unemployment: among the mineral economies for which data are available, Bolivia, Zambia, Morocco, Algeria, Trinidad and Tobago and Jamaica have open unemployment rates greater than 10 percent of the labor force, while Syria, Iraq, Iran, Indonesia and Venezuela have an average unemployment rate of 4 percent.

Finally, data on school enrollment indicate that the mineral economies lag significantly behind the non-mineral economies. Despite large increases in school enrollment in mineral economies over the past fifteen years, the gap between them and the non mineral economies has not narrowed.

Hypothesis 2.3: Inflation rates tend to be higher in the mineral economies than in the non-mineral economies.

Between 1960 and 1970, inflation rates were of the same order of magnitude in the mineral and non-mineral economies, but they were significantly higher than these average rates in the non-fuel mineral economies. In recent years (1970-76) inflation has been higher in the mineral than the non-mineral economies, but this difference is accounted for primarily by the petroleum economies. Thus it may be inferred that mineral economies tend to exhibit

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1/ Based on Chenery-Syrquin (1975), Table 4, Equation (1a), p. 30.

higher inflation rates, and in particular that the larger investments made by the petroleum economies in recent years have been highly inflationary. In this regard, the experiences of Iran and Nigeria are noteworthy.

Hypothesis 2.4: Agriculture tends to grow more slowly, and food constitutes a larger share of total imports, in mineral than in non-mineral economies.

The evidence clearly confirms both these hypotheses. Although individual mineral economies may have reason to shift resources out of agriculture, this is unlikely to be true for all mineral economies.

Hypothesis 2.5: Mineral economies are more subject to export earnings instability that non-mineral economies.

An examination of indices of export earnings instability shows the evidence to be mixed: export earnings were less stable, on the average, in the mineral than in the non-mineral economies in both 1961-72 and 1968-73, but in the latter period, earnings were more stable in the non-fuel mineral economies than in the non-mineral economies. It is well known that agricultural product exporters are subject to similarly high export earnings instability. Once again, however, the tendency does seem to be unmistakable. Also suggestive is the finding that debt GNP ratios are significantly higher among mineral than among non-mineral economies, but though these high ratios are associated with unstable export earnings, they may also be due to poor saving performance and almost certainly reflect poor macro-economic management.

Hypothesis 2.6: The exports of mineral economies tend to remain more concentrated than those of non-mineral economies.

Between 1960 and 1975, the petroleum economies and the non-fuel mineral economies increased their dependence on exports of minerals and of primary commodities generally. The evidence on the poorer export-diversification performance of the mineral economies thus seems incontrovertible.

It may be concluded that there is substantial support for the view that mineral economies, relative to non-mineral economies, perform poorly in agriculture, export diversification and inflation; and that the evidence suggests a greater tendency for the mineral economies to be characterised by poorer saving performance, greater technological/wage dualism, higher unemployment, higher external indebtedness and higher export earnings instability.

III

Proposition 3 alludes to the nature of the recent economic performance of the mineral economies, and suggests that their long-term prospects are moderately favorable. The basis of this judgement is essentially that the recent economic performance of these economies has been very mixed. Proposition 3 rests on two sub-propositions, the first factual and the second both factual and conjectural, that are summarised below:

Sub-Proposition 3.1: The economic performance of the mineral economies, judged by reference to the five indices of saving, growth in agricultural production, export diversification, inflation and the choice of investment priorities, shows no clear country patterns, and exhibits both positive and negative findings.

Although, on the average, the mineral economies' performances in agriculture and inflation may be described as poor, and those in saving, export diversification and investment priorities as moderate, there are sufficient differences in their achievements to suggest that the basis for a successful transformation is being laid in some of them -- notably Venezuela, Morocco and Algeria. On the other hand, there is enough evidence of poor performance on the part of others to suggest that their transformation is unlikely to occur if present trends continue. This group includes countries such as Zaire, Zambia, Indonesia, Ecuador, Trinidad and Tobago, Congo P.R., Chile and Bolivia.

Some of the most encouraging findings are that: agricultural production has grown faster in countries with large agricultural potential, such as Bolivia, Guinea, Zambia and Ecuador; incremental saving rates are higher in countries in the middle stages of their mineral exploitation such as Gabon, Iran and Nigeria; and export diversification has been most successful in countries in the late stages of mineral exploitation, notably Venezuela and Peru.

The discouraging findings include the conclusion that the incremental saving rate is lowest in the least well-endowed of the mineral economies (those with low capital resources); although this may be understandable, it suggests that these countries are not making the saving effort required to attain their growth and transformation objectives. In this respect, the saving performance of countries such as Peru, Congo P.D.R., Syria and Togo has been disappointing. Also unsettling is the finding that mineral economies of long standing have done no better at export diversification than have the newer ones. 1/ Thus the continued high dependence on minerals of countries such as Bolivia, Chile, Zambia, Iran and Iraq is similar to that of newer mineral economies such as Libya and Nigeria. Finally, inflation, which has been high in most mineral economies, has been particularly high in the larger mineral economies and in countries at the late mineral-exploitation stage; examples of the former group are Iran, Nigeria, Indonesia, Peru and Zaire, while the latter group includes Trinidad and Tobago, Bolivia, Syria and Venezuela.

Sub-Proposition 3.2: The economic performance of the mineral economies, when evaluated against alternative pessimistic and optimistic scenarios, suggests that their prospects are moderately favorable.

Two criteria underlie the conceptualization of pessimistic and optimisti scenarios for the mineral economies: the size of the country's mineral wealth per

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1/ Mineral economies of long standing are not necessarily also in the late stages of mineral exploitation, and vice versa. Thus Iran, Chile and Zambia are 'old' mineral economies but are in their middle stage of exploitation, while Ecuador and Indonesia are 'new' but in their last stage of mineral exploitation.

capita and the country's stage of mineral exploitation. The optimistic view contends (a) that although the prospects of mineral economies with more mineral wealth per capita are better than those with less mineral wealth per capita, the relative economic performance of the latter group will be superior to that of the former; 1/ and (b) that economic performance will improve with the stage of mineral exploitation. 2/ The pessimistic view contends (a) that the economic performance of the lower per capita mineral wealth countries will be relatively poorer than that of the other mineral economies, and will thus reinforce the differences between the two groups; and (b) that economic performance will remain generally poor through the various stages of mineral exploitation.

The actual economic performance of the mineral economies in recent years is found to be superior to that in the pessimistic scenario, but falls short of that in the optimistic scenario. Although this is interpreted as suggesting moderate optimism for the mineral economies' long-term prospects, it is clear that much will depend on improving performance in saving, in increasing agricultural growth rates, in keeping down inflation and, perhaps most importantly, in choosing the right investment priorities and diversifying exports.

The task ahead is not an easy one. But the rewards to informed economic choices and policies are likely to be high, for some mineral economies have done better than others.

IV

Proposition 4 deals with the policy framework for mineral economies and rests largely on the preceding propositions. Thus, the differences of structure and performance between mineral and non-mineral economies suggest the policy objectives that ought to be adopted by the mineral economies. Proposition 3 suggests that differences in economic performance across mineral economies may be attributed to differences in their policy choices.

1/ Thus the optimistic view would suggest that the economic performance of low-capital group countries such as Liberia, Zaire, Nigeria, Peru, Syria, Indonesia, Togo would be superior to that of high-capital group countries such as Kuwait, Saudi Arabia and Libya, where economic performance denotes saving, agricultural growth, export diversification, inflation and choice of investment priorities.

2/ Again, the optimistic view would predict that along the same five dimensions, the economic performance of late mineral-exploitation stage countries such as Venezuela, Trinidad and Tobago, Peru, Syria, Congo P.R., Bolivia and Indonesia would be superior to that of early or middle-stage countries such as Liberia, Iran, Nigeria, Zaire, Chile, Jamaica, Morocco and Guyana.

The paper identifies three sets of major policy objectives for the mineral economies (see chart on page xviii). First, arising from their structural features and from their peculiar incentive-wage-consumption dynamic, 1/ the paper emphasizes the following objectives: fiscal and foreign exchange stability, higher marginal savings, more rapid employment growth, greater price stability, faster agricultural growth, more stable export earnings, and more export diversification. Secondly, with respect to investment priorities and sequencing, mineral economies have been apt to overstress mineral based processing and under-emphasize labor-intensive manufacturing, agriculture, small-scale enterprise development and expenditure on research and development, while inappropriate sequencing of investments has led to some waste of resources. It is important to note, however, that although the benefits of mineral-processing are often exaggerated, there is still substantial scope for such processing in the mineral economies, and surmounting entry barriers in this highly oligopolistic industry remains an important policy objective. Thirdly, it is argued that given the importance of the fiscal linkage, maximizing the exaction of mineral rents must remain an important objective; in particular, there are substantial differences in the degree to which different mineral economies are successfully tapping their rents, as is clearly suggested by a comparison of Indonesia, Zambia, Chile and Peru (high rent-exaction) with Bolivia, Liberia and Zaire (low rent-exaction).

Turning to the policy instruments recommended for the mineral economies, the paper clearly reveals that there are two 'prices' whose influences pervade the mineral economy, and which must receive early attention if the incentive-wage-consumption dynamic is not to lead the mineral economy astray. These two

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1/ The phrase '<u>incentive-wage-consumption dynamic</u>' refers to what were found to be typical policy responses to economic problems that most mineral economies face early in their mineral-rent cycles. Thus, typically, the mineral economy begins its mineral-rent cycle by permitting incentives to the domestic production of non-mineral exports and agricultural commodities to wither away by allowing the mining sector wage rate to lead wages in the rest of the economy and by increasing its incremental consumption ratio. In effect, there is a tendency for incentives, wages and consumption to evolve <u>as if</u> the mineral resources were not depletable. This has certainly been true of Chile, Trinidad and Tobago, Oman and Congo P.R. But other mineral economies do indicate a clear awareness of the depletable nature of their minerals and attempt to plan for their post-mineral era, including countries such as Algeria, Iran, Saudi Arabia and Kuwait. For these latter countries one cannot overemphasize the importance of appropriately choosing the level and sequence of investments if these resources are to be productively used.

prices are: (a) 'the' mining sector wage rate and (b) 'the' exchange rate. 1/ In particular, these policy tools are seen as exerting crucial influences on saving, unemployment, inflation, agricultural production, export diversification and, through the latter, export earnings stability. Inattention to these major 'prices' can only be perilous to the mineral economy, and hence to its objectives of growth and transformation on the one hand, and employment and distribution on the other. The long-term prospects of most mineral economies are bleak if an appropriate wages policy and a carefully designed foreign trade regime are not instituted as early as possible in the mineral-rent cycle.

A second characteristic of the recommended policy instruments is noteworthy: apart from the two key prices noted above, they are primarily institutional in nature. 2/ In a developing economy, institutional change is of the essence. The problem is that it is much more difficult to bring about institutional change than to modify a few prices. The task ahead is therefore a difficult one. This can only increase the importance that must attach to the mining wage rate and the exchange rate.

The chart (page xix) in addition to listing policy objectives and corresponding policy instruments, identifies sub-groups of mineral economies to which each of these policy objectives is most relevant, and gives country examples.

At the end of three major studies of economic policy making in Latin America, an astute observer wrote: "in fine, the roads to reform are narrow and perilous, they appear quite unsafe to the outside observer however sympathetic he may be, but they exist". 3/ The success of the mineral economies in attaining their goals rests in large measure on the size of their respective mineral reserves, but perhaps even more importantly on whether they can tread the roads to reform that are summarised below.

1/ High mining sector wage rates tend to render the mineral economy a high wage/ high unemployment economy (the Gulf countries are an obvious exception to the high unemployment character of these economies, but only because international migration is more easily controlled). The exchange rate problem in mineral economies is that foreign exchange has a low shadow price in the short to medium term but a much higher one in the long term, when the mineral resources are depleted, and unless the foreign trade regime is made to reflect this peculiar time profile of the exchange rate, the transformation of the mineral economy is unlikely to occur. But the very pervasiveness of these two prices is also a major reason why they are likely to be difficult instruments to use. Throughout, policy recommendations are offered on the basis of the 'rational actor' model of policy-making. An alternative and more realistic conceptualization of the policy-making process is the 'incrementalist' model which recognizes, in particular, that policy-making is plagued by uncertainty and conflict. Although the paths of reform are narrow it is to be hoped that Hirschmanian reform-mongers in the mineral economies will rise to the occasion. See Lindblom (1958) and Hirschman (1973).

2/ The chart on page xviii classifies all policy instruments recommended into micro-economic, macro-economic and institutional.

3/ Hirschman (1973), p. 275.

List of Policy Instruments Recommended

No.	Type	Policy Instrument	Section N
1	Micro/macro	Mining wage-rate/Incomes Policy	II.5
2	Micro/macro	Exchange-rate/Foreign Trade Regime	II.9
3	Institutional	Appropriate Sequencing of Investments	III.4
4	Macro/Institutional	Short-run macro-economic management and Reserve Fund.	II.1; I
5	Institutional	Measures to reduce sectoral wage-gaps	II.5
6	Institutional	Reform of Labor Markets	II.5
7	Institutional	Agricultural Extension, Credit Infrastructure and Research	III.3
8	Micro	Producer prices for Food	II.7
9	Micro/Macro	Interest Rate Level and Structure	II.4
10	Institutional	Infant Industry and Wage Subsidies	II.9
11	Institutional	Increased reliance on Income and Profits Taxes, Resource-rent taxes and Production Sharing and Contracting	IV.4
12	Institutional	Widening of Tax Base	II.4
13	Micro	Taxes on luxury goods	II.4
14	Institutional	Reform of Financial Institutions and Instruments	II.4
15	Institutional	Producer Co-operation in processing, R&D and tax policy	IV.5
16	Institutional	Rate of Exploitation and Investment in Assets Abroad	IV.3
17	Institutional	Mineral Price Stabilization	II.8
18	Institutional	Government Recurrent Expenditure Budgeting	II.4
19	Institutional	Allowing for Periodic Tax Renegotiation in Original Contracts with FMCS.	IV.4

Policy Recommendations for the Mineral Economies

Specific Policy Objectives	Code for Policy Instruments Recommended 1/	Groups of Mineral Economies most Relevant for	Country Examples
.. Fiscal and foreign exchange stability	2; 3; 4; 10.	(i) Non-fuel mineral exporters.	Bolivia, Chile, Guinea, Guyana, Jamaica, Liberia, Mauritania, Morocco, Peru, Zaire, Zambia.
.. High Marginal Savings	1; 9; 12; 13; 14; 18.	(i) Low-capital group; (ii) Late Exploitation-stage group; (iii) Small countries.	Liberia, Nigeria, Zaire, Peru, Syria, Congo P.R., Ecuador, Bolivia, Indonesia Togo.
.. Employment	1; 2; 5; 6; 7; 8; 10.	(i) Low- and moderate-capital groups; (ii) Large countries.	Guyana, Iraq, Morocco, Jamaica, Iran, Chile Zambia, Trinidad & Tobago, Liberia, Nigeria, Zaire, Indonesia, Congo P.R.
). Price Stability	1; 2; 3; 4; 7; 8; 18.	(i) All mineral economies, but for different reasons.	not applicable.
.. Agricultural Growth	1; 2; 5; 6; 7; 8.	(i) Low- and moderate-capital groups; (ii) Small countries.	Iraq, Morocco, Jamaica, Chile, Nigeria, Zaire, Algeria, Peru, Congo P.R.
.. Export Earnings Stability	2; 4; 17.	(i) Low- and moderate-capital groups;	Guyana, Morocco, Jamaica, Chile, Zambia, Peru, Bolivia.
.. Export-Diversification	1; 2; 3; 10.	(i) All mineral economies.	not applicable.
.. Not Overstressing Mineral-based Processing	1; 2; 5; 6; 10. (and Institutional)	(i) Low- and Moderate-Capital groups.	Guyana, Iraq, Morocco, Jamaica, Iran, Chile, Trinidad & Tobago, Nigeria, Zaire, Algeria, Congo P.R., Indonesia.
I. Appropriate Priority to Labor-intensive Manufacturing	1; 2; 5; 6; 9; 10.	(i) Low- and moderate-capital groups; (ii) Large countries.	Guyana, Iraq, Morocco, Jamaica, Iran, Chile, Trinidad & Tobago, Nigeria, Zaire, Algeria, Congo P.R., Indonesia.
J. Appropriate Priority to Small-scale Enterprise Development	1; 2; 5; 6; 9.	(i) Low- and moderate-capital groups; (ii) Large countries.	Guyana, Iraq, Morocco, Jamaica, Iran, Chile Trinidad & Tobago, Nigeria, Zaire, Algeria, Congo P.R., Indonesia.
.. Appropriate Priority to R & D Expenditure	(Institutional)	(i) High and moderate-capital groups;	Kuwait, S. Arabia, Libya, Iraq, Iran, Venezuela.
L. Maximizing Mineral-rent Exaction	11; 15; 16; 19.	(i) All mineral economies.	not applicable.
M. Surmounting Entry Barriers in Mineral-processing	15.	(i) All mineral economies.	not applicable.

1/ See accompanying chart.