



Economic impact of world mining

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Abstract. Mining plays a vital role in the economic development of many countries. The emerging economies are now major players in the production and availability of key commodities such as copper (70%), bauxite (40%), iron ore and precious metals. Mining also has a positive impact on the economy of many countries. Another impact of mining can be measured in terms of employment opportunities and income generation. Commercial scale mining provides employment and skills transfer to more than 2 million workers. The multiplier effect increases this benefit by a factor of between 2 and 5. The World Bank Mining Department has carried out an in-depth study on economic and social impact of mining at the community level in Chile, Peru, Bolivia, Papua New Guinea and Mali. This study demonstrates that there are substantial social and economic benefits to the community. The most positive cases are related to the growth of local small- and micro-enterprise activities. However, mining remains controversial, as true sustainable development is not only a matter of financial flows. Mining has also been associated with a number of economic and social problems. As a result there are questions about the sustainability of the economic outcome of mining. The contribution of mining to sustainable development needs to be considered in terms of economic and technical viability, ecological sustainability and social equity. To achieve this, governments, mining companies and local communities must work together to address these issues.

Mining plays a vital role in the economic development of many countries. Historically this has been the case in many parts of the developed world, and while mineral development is an important factor for economic growth it can also, if done responsibly, be a catalyst for social growth in developing countries.

The present economic impact of mining needs to be assessed within the perspective of the industry's present tendencies. For example, emerging economies are now major player in the production and availability of key commodities, such as copper (70%) and bauxite (40%) and with iron ore, precious metals, lead and others within this range. Also, the continuous declining trend of real metals price during the past 35 years represents a difficult challenge for mining companies to reduce production costs through technical and financial management.

Another key trend is globalization and the dominance of market economy, with three important elements: (i) the creation of global capital, goods and service markets; (ii) the creation of global communications and information space; and (iii), the emergence of global values. While the mining sector has operated at a global level for a long time, the establishment of global information and communication has had enormous consequences on the mining industry as it has meant that positive and negative impacts and experiences in the sector are quickly reported and transmitted throughout the globe. The emergence of global values is to a large extent the result of the changes in communications and information, but it is also due to the increasing realization that actions in one country can have profound effects on other countries at the economic, social and environmental levels. For the mining industry, the increase in shared environmental values throughout the world has been the most important change to date, although the recent emergence of shared socio-cultural values is likely to have an even more profound impact.

Other recent developments, such as the Asian financial crisis, and the down-turn in metal prices, in combination with the continued globalization, especially with respect to access to mineral deposits on a global scale, has resulted in an unprecedented competitive environment and the need for competitiveness at all levels. In the area of environment and social protection, the industry's exposure to an increased focus and awareness by the public at large, results in a need to address and integrate those factors in project design and operations at the earliest stage of development. In particular, the emphasis has moved away from the narrow environmental definition of sustainability to one of "sustainable communities"; that is, communities which are able to turn part of the wealth generated by mining into an asset base which not only results in wide-spread benefits from the operation of the mine but ensures that the community will have a continued economic future once the mine is closed. As a consequence, the discourse on politics and economics of mining are shifting from a primarily central government focus to include both regional governments and communities as well as the international community.

Most economic research on mining still deals mainly with the macro-economic impact of the industry, looking at the benefits – or lack of – to the national economy. And there is no doubt that mining can be an important source of foreign exchange and fiscal receipts for governments, providing an adequate legal and fiscal framework is in place. When well-managed, these resources can be used as an engine for overall economic growth and the outcome of mining operations can thus produce a significant impact on national economies, as in the cases, for example, of Chile, Peru, Botswana, Ghana, Mali, Papua New Guinea and others.

Another important economic impact of mining can be measured in terms of employment and income generation. Commercial-scale mining provides employment and skills transfer to more than 2 million workers with, in addition, an employment multiplier effect by a factor from 2 to 5. While mostly a poverty-driven activity, small-scale mining provides income to about 13 million workers and their families worldwide, in countries such as Bolivia, Brazil, Colombia, Venezuela, Burkina Faso, Ghana, Madagascar, Mozambique, Tanzania and Indonesia, among many others.

Taking into consideration the present trends affecting the mining industry, it is increasingly important to assess the economic and social impacts of mining at the community level. Recently, the World Bank Mining Department has been carrying out an in depth study in Chile, Peru and Bolivia, as well as other studies of mines in Papua New Guinea and Mali, West Africa, to assess such impacts. The studies demonstrate clearly that there are substantial social and economic benefits to local communities, but they do not come automatically and their sustainability is a key issue. The most positive cases are related to the growth of local small and micro-enterprise activity, providing supplies and related services to mining companies; and to local economic development and activity diversification. On the other hand, there is a clear need also to redistribute more tax revenues to local governments and to build capacity at the community level.

However, the position of mining remains controversial and true sustainable development is not just a matter of financial flows. While mining is a major contributor towards economic development, it has also been associated with causing a number of economic, environmental and social problems, which has led many to question the sustainability of the economic outcome of mining and propounded the resource curse theory. The industry is therefore challenged to (i) mitigate its negative impacts - in terms of environment, socio-cultural, health

and human development, governance, macro-economic management and corruption, as well as economic barriers to restructuring and real impacts on poverty reduction; and (ii) further improve and promote concepts and actions aiming at industry-community co-participation in the mine building process. The industry needs to ensure that its benefits are harnessed at both the local and national level in a sustainable fashion.

The contribution of mining to sustainable development needs to be considered in terms of economic and technical viability, ecological sustainability and social equity. In order to achieve this, governments, mining companies and local communities must work and cooperate on these issues through the different stages of a mining project and over a considerable time span, covering the period from exploration to mine operation, and to post-mine closure.