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GROWTH AND EMPLOYMENT PROSPECTS IN THE PHILIPPINE MINING SECTOR

INTRODUCTION

The mining industry in the Philippines plays a crucial role in industrial development because of its ability to provide mineral resources that serve as raw materials for manufacturing, construction, the utilities, and the transportation & communications sectors. It is a major contributor of foreign currency through export of mineral ore and other processed mineral products. It provides employment to communities in remote areas where the only source of economic activity is mining. The Philippines has rich mineral resources and has one of the largest reserves of gold, copper, nickel, chromium, iron, bauxite, marble and limestone among others (Rovillos, Ramo and Corpus, 2003). Nickel is currently the country's most economically important mineral resource. The US Geological Survey Report says the Philippines accounts for 5% of global production in 2007. Its complex geologic history and diverse rock types, renders the country a source of an equally diverse group of mineral deposits (Tujan and Guzman, 2002). It possesses abundant deposits of metallic minerals such as iron, lead, zinc, platinum, and manganese. The non-metallic minerals of economic significance are gypsum, salt, sand & gravel, marble, clay, limestone, feldspar, dolomite, magnesite, phosphate rock, guano and sulfur (Chamber of Mines in the Philippines, 1991). Since 2004, the government has been promoting over 60 mining, exploration, and processing projects. These could bring up to \$14.8 billion in investments until 2013 (DENR - Mines and Geosciences Bureau (MGB) Report, 2009).

Written by
Roberto Raymundo, Ph.D.
School of Economics,
De La Salle University

OUTPUT GROWTH PERFORMANCE

The Philippine mining industry's output for 2010 was estimated at P143.4 billion. The sector's contribution to the economy was roughly 1.7 percent of gross domestic product (GDP). For the same year, the mining industry significantly contributed to foreign currency receipts, with total minerals and mineral product exports at \$1.870 billion. This accounts for approximately 3.7% of total exports. Minerals and

mineral products export grew by 27.2% in 2010 from 2009's \$1.470 billion.

Despite the 2010 growth, these levels are way below those recorded in 2007 and 2008, at \$2.605 and \$2.498 billion respectively. In 2009, minerals and mineral product exports contributed 3.9% of total exports. Non-metallic mineral manufactures contributed 0.4% (Bangko Sentral ng Pilipinas, 2011).

Large scale metallic mining accounted for P42.8 billion in 2009, followed by small scale gold mining at P36.8 billion, and non-metallic mining at P26.5 billion. Preliminary estimates for 2010 indicated an increase in the gross production value in mining to P111.1 billion. Large scale mining operations in the Philippines have at least \$50 million worth of investments (or its peso equivalent for a local firm), and is granted 81,000 hectares of land for mineral extraction for a period of 25 years per contract, renewable for another maximum of 25 years. Improving the competitiveness of the Philippine mining sector is necessary to boost industrial growth because of its role as a source of raw materials for the metals and metal products manufacturing sectors. It likewise enhances the ability to create jobs not just in mining and quarrying but in both the upstream and downstream industries linked to it.

MINING AND QUARRYING EMPLOYMENT

Between 2003 and 2008, direct employment in the mining industry increased from 104,000 (0.3% of the national workforce) to 158,000 (0.5%), or 54,000 mining jobs generated in five years (Ramos, 2010). The contribution of the mining and quarrying sector to total employment has remained stable at 0.5 percent during the last three years. According to the Department of Labor and Employment (DOLE), the 158,000 workers employed in this sector in 2008, has grown to 169,000 in 2009 and 197,000 by 2010. These figures include workers directly employed by the mining and quarrying firms involved in the four stages namely: 1) exploration; 2) development and construction; 3) utilization and commercial operation and; 4) decommissioning, final mining stage and rehabilitation.

THE SHORT SUPPLY OF MINING PROFESSIONALS AND OTHER MANPOWER REQUIREMENTS OF THE INDUSTRY

Mining industry professionals are scarce in the Philippines. Mining firms have been experiencing difficulty in the recruitment of people particularly those with adequate work experience. Mining industry professionals should have completed a four year course and are required to take a board exam given by the Professional Regulation Commission. This includes: 1) Mining Engineers; 2) Metallurgical Engineers; 3) Geodetic Engineers and; 4) Geologists.

Schools offering training in these academic disciplines decreased. Among the proprietary type of schools, the academic departments offering these disciplines have become cost centers due to lack of enrollment. Proprietary schools offer these courses due to stockholders' sense of social responsibility.

The shortage of mining professionals has affected both the private and public sectors. Optimism bolstered by the Supreme Court decision allowing foreign ownership in the industry triggered an increase in mining investments and demand for mining professionals. The Mines and Geosciences Bureau has been hit by an exodus of geologists to private companies offering higher pay. Some 70 positions have become vacant during the last few years (Ramos, H. Business World, 2008). Currently, engineering graduates from the remaining schools offering the programs is insufficient. Executives from the large scale mining corporations in the Philippines revealed that "poaching" of mining professionals was rampant in the industry (Martinez, 2011 and De Jesus, 2011). Officials of licensed overseas labor recruiters also attested to the difficulties of recruiting mining professionals. They were unable to hire mining engineers for clients abroad due to the lack of qualified candidates with experience specified by the principal. (Lavado, 2011).

BRIDGING PROGRAMS TO ADDRESS THE SHORTAGE

Schools currently offering programs which produce skills indispensable in the mining industry may consider offering “bridging courses” to enable graduates of other engineering fields, to take subjects which may be credited as course work for a second degree in either mining engineering, metallurgy, geology or geodetic engineering. Civil engineering, for example, is closely related to mining and geodetic engineering. Four semesters and two summer terms may be enough for engineers to take additional courses in geodetic or mining engineering, with Board Exam preparation. A four year program to prepare a student to be a mining engineer could be shortened to two years.

There are common subjects in Materials Engineering and Metallurgical Engineering programs. Bridging courses could train graduates of Materials Engineering to be Metallurgical Engineers and prepare them work and the Board Examination. Presently, there are six schools offering Materials Science Engineering. It is estimated that it will take one school-year for a Materials Engineering graduate to take up courses which will qualify them to become Metallurgical Engineers.

There are mining companies in the Philippines which provide scholarships for employees with college degrees related to mining engineering. They were sent back to school to complete mining related courses, and consequently earn a mining engineering degree over a two year period (De Jesus, 2011).

PROSPECTS FOR EMPLOYMENT

The global economic crisis in 2008 and the concomitant fall in demand for metals posed a negative impact on the Philippine mining industry. However, prospects for employment expansion for 2011 and beyond are moderately good, considering that mining output is expected to grow at an annual average rate of 2.57% along with increasing investments (Wood, 2010).

The increase in the number of operating mines from fourteen to twenty eight in 2003 and 2010 respectively, shows the continuing efforts of expansion being undertaken by the private sector (along with government support) that is expected to boost output and employment growth. The increase in the production volume of the country’s top three minerals namely: gold, copper and nickel provide a good indication of prospects within the medium term. The operation of new mines, higher mineral product demand and favorable prices raised copper and nickel production to over 49,000 and 137,000 metric tons respectively, in 2009. The scale of untapped natural resources in the country (with an estimated value of over \$ 1 trillion) should make the country a key target for foreign mining concerns over the long term. (Business Monitor International, 2011).

Because of the number of projects being developed, along with ongoing exploration activities, gold and copper output is expected to increase within the next three to four years (Ramos, 2010). The country has seen an upsurge in foreign mining investment since 2005, when the Supreme Court upheld the constitutionality of the Financial or Technical Assistance Agreement and the Mining Act of 1995, allowing 100% foreign ownership of Philippine mining companies.

Over 30 foreign companies have investments in the Philippine mining sector and some 24 flagship projects are expected to be operational before 2016 (Mining Journal 2009). Government’s efforts to revitalize the mining industry should continue to encourage more investment expected to boost the demand for both professionals and production workers (Halcon, 2005). It is important to consider issues raised by special interest groups campaigning against mining operations. Several local governments banned open pit mining operations because of the environmental damage it creates and its negative spill-over effects on the agricultural sector. Open pit mining operations creates damaging effects on water resources/supply and its quality. This worsens living conditions for residents of downstream communities. In addition, are the activities of communist rebels which raid mine sites and damage equipment, manifesting their response to stop unregulated mining operations or extort payments from mining firms.

These issues should immediately be addressed by government to achieve a reasonable compromise reaching environmental protection goals, and at the same time meeting environmentally sound and acceptable mining practices. The mining industry has immense potential. It complements industrial development. This potential is necessary if the country wants to attain its economic development goals within the next decade. Responsible mining protects the environment, and restores mine sites to their original condition through reforestation efforts. A good compromise between sound environmental protection and effective regulation of mining activities reduce the hostility coming from anti-mining advocates, and promotes efforts to tap the country's unused mineral potential. Such efforts continue to encourage investment in mining along with job creation and the development of upstream and downstream mineral processing activities.

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CONTACT INFORMATION

DLSU - Angelo King Institute

Room 223, St. La Salle Hall
2401 Taft Avenue
1004 Manila

Angelo King International Center
Corner of Arellano Avenue and Estrada Street
1004 Manila

+63-2-524-4611 loc. 287,
+63-2-524-5333, +63-2-5245347 (Fax)
<http://aki.dlsu.edu.ph>
AKI@dlsu.edu.ph